ANNUAL CCR GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

Peg's Hill Landfill

January 31, 2023

Reporting Year – 2022

EAST KENTUCKY POWER COOPERATIVE

A Touchstone Energy® Cooperative

Executive Summary

This annual report documents the status of the groundwater monitoring and corrective action program for Spurlock Station's proposed Coal Combustion Residual (CCR) Landfill (herein "Peg's Hill Landfill", "Landfill", or "the Unit") pursuant to 40 Code of Federal Regulations (CFR) §257.90(e). Table 1-1 provides an overview of the status of the groundwater monitoring and corrective action program for the Unit during the reporting period.

Table 1-1 Overview of the Status of the Groundwater Monitoring & Corrective Action Program for the Unit

Information Required by 40 CFR §257.90(e)(6)	Unit Information
Identify whether the unit was operating at the start of the reporting period under the detection monitoring program or the assessment monitoring program.	Not applicable. Unit has not been fully constructed and no CCR waste has been placed. Only background, or baseline, sampling is being conducted.
Identify whether the unit was operating at the end of the reporting period under the detection monitoring program or the assessment monitoring program.	Not applicable. Unit has not been fully constructed and no CCR waste has been placed. Only background, or baseline, sampling is being conducted.
If applicable, list all Appendix III (statistically significant increases (SSIs) pursuant to §257.94(e) and the associated monitoring location(s).	Not Applicable
If applicable, provide date when the assessment monitoring program was initiated.	Not Applicable
If applicable, list all Appendix IV statistically significant levels (SSLs) pursuant to §257.95(g) and the associated monitoring location(s).	Not Applicable
If applicable, provide the date when the assessment of corrective measures was initiated.	Not Applicable
If applicable, provide the date when the public meeting was held for the assessment of corrective measures.	Not Applicable
If applicable, provide the date when the assessment of corrective measures was completed.	Not Applicable
If applicable, provide the date when a remedy was selected pursuant to §257.97.	Not Applicable
If applicable, provide the date when remedial activities were initiated or identify if they are ongoing.	Not Applicable

Table of Contents

1.0 Introduction

On April 17, 2015, the EPA issued the final version of the federal Coal Combustion Residual (CCR) Rule to regulate the disposal of CCR materials generated at coal-fired units. The CCR Rule is administered as part of the Resource Conservation and Recovery Act (RCRA, 42 United States Code [U.S.C.] §6901 et seq.) using the Subtitle D approach.

East Kentucky Power Cooperative (EKPC) is subject to the CCR Rule and as such must prepare an annual groundwater monitoring and corrective action report for all CCR Units per 40 Code of Federal Regulations (CFR) §257.90(e). 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 problems, and project key activities for the upcoming year.

This document has been prepared to meet those requirements for the proposed Peg's Hill CCR Landfill at H.L. Spurlock Power Station (Spurlock) located near Maysville, Kentucky. This report covers the 2022 reporting period, January 1, 2022 through December 31, 2022.

2.0 CCR Rule Compliance

In accordance with 40 CFR §257.90(e), EKPC is required to, at a minimum, provide the following information, to the extent available:

- A map, aerial image, or diagram showing the CCR unit and all background and downgradient monitoring wells/locations that are a part of the groundwater monitoring system, including identification numbers;
- Identify any monitoring wells/locations that were installed and/or decommissioned during the reporting period, along with a narrative description of why those actions were taken;
- Monitoring data obtained under §257.90 through §257.98, including a summary of the number of samples collected, the dates sampling occurred, and which program those samples were required by;
- A narrative description of any transition between monitoring programs (dates, circumstances, and identifying constituents detected at a SSI over background levels); and
- Other information required to be included in the annual report as specified in §257.90 through §257.98, such as:
    - Alternative monitoring frequency
    - Alternate Source Demonstrations
    - Assessment monitoring concentrations
    - Demonstrations of additional time to complete the assessment of corrective measures due to site-specific conditions; and
    - A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the unit that contains all the information specified by §257.90(e)(6).

Other information being provided in this report includes, but is not limited to:

- Groundwater elevation data; and
- Laboratory analytical reports and quantification limits.

3.0 Facility Information

The proposed Peg's Hill CCR Landfill at Spurlock is located adjacent to (i.e., north of) the existing Spurlock CCR Landfill which is along South Ripley Road in Mason County. The site is located approximately five miles northwest of Maysville, Kentucky, and on the United States Geological Survey's Maysville West, Kentucky topographic map. The moderately rolling to hilly topography of the project area is typical for this region unless along a stream where erosion creates steeper slopes. Topographic relief across Peg's Hill is approximately 360 ft., with a natural topographic high of nearly 900 ft. above mean sea level (AMSL) occurring along the western portion of Peg's Hill, and with a topographic low in the valley bottom at approximately 540 ft. AMSL just downgradient of the proposed Landfill footprint. The Landfill is located within a stream valley, and is situated in a tributary to Lawrence Creek. As a newly proposed CCR Unit, Peg's Hill CCR Landfill has its own certified groundwater monitoring network that will be used to monitor groundwater under the CCR Rule. **Appendix A**, prepared by Geosyntec Consultants, Inc. (Geosyntec), shows the proposed Peg's Hill Landfill property, depicting the groundwater monitoring system present. Monitoring wells PH-MW-1 and PH-MW-2 are background monitoring locations in an adjacent valley, and wells PH-MW-3/PH-MW-3A[1], PH-MW-4, and PH-MW-5 are downgradient monitoring locations. The background wells are located in the adjacent valley because they are more representative of background conditions for the compliance wells than upgradient wells within the same valley. The background wells are completed in the same stratigraphic horizon (the Kope Formation), and at similar depth (shallow, more highly fractured bedrock), as the compliance wells. If shallow monitoring wells were installed upgradient of the proposed landfill, they would be screened in a different (overlying) stratigraphic horizon than the downgradient wells, which is not recommended. If deeper upgradient wells were installed in the Kope Formation, they would be screened in a more saline zone and therefore would not be representative of background conditions for the downgradient wells. Hence, background wells were located in an adjacent valley in a similar hydrogeologic setting and screened in the shallow Kope Formation to be representative of background conditions.

4.0 Status of Groundwater Monitoring and Corrective Action Program

The CCR Unit did not undergo any program transition in 2022 and is currently collecting additional baseline groundwater samples pursuant to 40 CFR §257.94 prior to completion of construction and authorization of CCR placement.

5.0 Summary of Key Actions Completed

This Section provides a narrative of the key actions completed at the CCR Unit during the reporting period.

5.1 Design and Installation of the Groundwater Monitoring Network

The CCR Rule requires the certification of a Groundwater Monitoring System that meets the requirements of 40 CFR §257.91. The initial Groundwater Monitoring System for the Peg's Hill Landfill was installed during the fall of 2018 and later certified in February 2019 based on the

[1] In 2021, PH-MW-3 was abandoned and replaced with PH-MW-3A. See Section 5.1 for more information.

results of a hydrogeologic study. The study and certification of the Groundwater Monitoring System were prepared by Geosyntec.

Based on the groundwater elevations and potentiometric surface map generated by Geosyntec during the hydrogeologic investigation, Geosyntec installed three downgradient wells, PH-MW-3, PH-MW-4, and PH-MW-5, and two background (upgradient) wells, PH-MW-1 and PH-MW-2. See **Appendix A** for well locations.

In 2021, based on further design activities, EKPC determined that monitoring location PH-MW-3 was within the planned area of disturbance of the Landfill's sedimentation pond. EKPC identified an alternative location for a replacement well, PH-MW-3A, outside the area of disturbance. Existing well PH-MW-3 was then abandoned according to Kentucky's well abandonment requirements, and PH-MW-3A was installed as its replacement. These activities all occurred in April 2021, and the Groundwater Monitoring System was recertified by Geosyntec in May 2021. The required certification is available on the Unit's public CCR website.

5.2 Background Groundwater Monitoring Activities

The CCR Rule requires reporting of monitoring data obtained under 40 CFR §257.90 through §257.98 during the reporting year, including a summary of the number of samples collected, the dates sampling occurred, and which program those samples were required by (background, detection, or assessment). **Table 5-1** summarizes those sampling events that occurred during the reporting period. The sampling results obtained from the November and December 2021 background sampling events, which were not available during the 2021 reporting period, and the laboratory analytical results received before December 31, 2022 are summarized in **Table B-1** in **Appendix B**, and the laboratory analytical reports are included in **Appendix C**. The sampling results from October, November, and December 2022 background sampling events were not complete as of December 31, 2022. Therefore, these sampling results will be included in the 2023 annual report.

Since the Landfill is a proposed CCR Landfill in the Commonwealth of Kentucky which has received authorization to be constructed from the Commonwealth, but has not yet been constructed or received authorization to place CCR in the Landfill, EKPC continued to collect additional independent background samples (until waste placement is authorized) during 2022. Groundwater flow maps and velocity calculations from those events are in **Appendix D**.

Table 5-1: Annual Sampling & Analysis Summary

Collection Date	Number of Samples Collected	Location of Collected Samples	Monitoring Program
01/27/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
02/25/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
03/28/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
04/28/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
05/25/22 – 05/26/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
06/27/22 – 06/28/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
07/29/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
08/29/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background

09/29/22	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
10/27/22*	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
11/22/22*	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background
12/29/22*	5	PH-MW-01, PH-MW-02, PH-MW-03A, PH-MW-04, & PH-MW-05	Background

* The laboratory analytical results for these sampling events were not available on or before December 31, 2022, and therefore those sampling results are not included in this report.

6.0 Problems Encountered and Actions Taken

This section describes any problems encountered with the groundwater monitoring program during the reporting period and the actions taken in response.

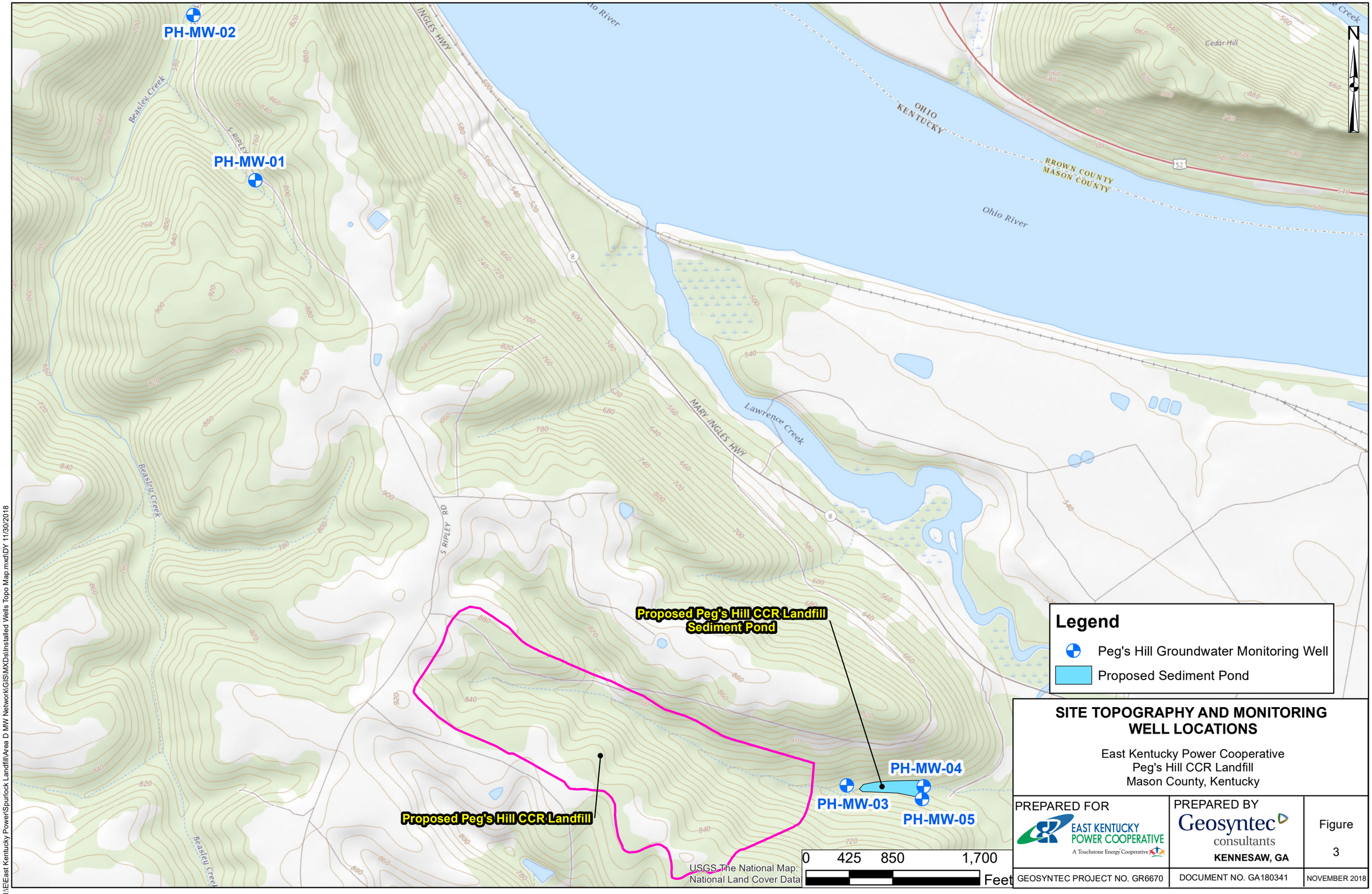
No significant problems were encountered in the groundwater monitoring program for the Peg's Hill Landfill in 2022.

7.0 Key Activities Projected for 2023

In 2023, EKPC will continue collecting background samples. Once the Landfill has been constructed and CCR is placed, EKPC will commence detection monitoring. In addition, EKPC will re-evaluate the certified statistical methodology and background limits prior to waste placement to look for opportunities to enhance the monitoring network's ability to detect a release from the CCR Unit based on additional pre-disposal background collected.

Additionally, EKPC continues to evaluate the existing groundwater monitoring systems at its CCR units to identify opportunities for continuous improvement. This evaluation includes consideration of recent comments made by U.S. EPA concerning groundwater monitoring under the CCR Rule in the context of EPA's evaluation of demonstrations filed by various owners/operators pursuant to EPA's Part A (40 CFR 257.103(f)(1)) process, including the demonstration filed by EKPC for its Spurlock Impoundment. EKPC will provide updates on these efforts in the 2023 Groundwater Monitoring and Corrective Action annual reports for its CCR units.

APPENDIX A – Groundwater Monitoring Locations Map



SITE TOPOGRAPHY AND MONITORING WELL LOCATIONS

East Kentucky Power Cooperative
Peg's Hill CCR Landfill
Mason County, Kentucky

PREPARED FOR	PREPARED BY	Figure
EAST KENTUCKY POWER COOPERATIVE, A Touchstone Energy Cooperative	Geosyntec consultants, KENNESAW, GA	3
GEOSYNTEC PROJECT NO. GR6670	DOCUMENT NO. GA180341	NOVEMBER 2018

N:\E\East Kentucky Power\Spurlock Landfill\Area D MW Network\GIS\MXDs\Installed Wells Topo Map.mxd\DY 11/30/2018

APPENDIX B – Summary of Analytical Results

H.L. Spurlock Station Peg's Hill Landfill

Annual Reporting Year 2022
Table B-1: Summary of Analytical Results

Appendix 3 Constituents

Well ID	Sample Date	Event Type	GW Elevation (ft. MSL)	Boron (µg/L)		Calcium (µg/L)		Chloride (mg/L)		Fluoride (mg/L)		pH (S.U.)	Sulfate (mg/L)		TDS (mg/L)
PH-MW-01	11/30/2021	Background	701.92	1320		312000	D	76.6	D	< 0.50	D	6.12	344	D	1750
PH-MW-01	12/29/2021	Background	702.28	1400		350000		66		< 0.10		6.05	310		1700
PH-MW-01	1/27/2022	Background	702.84	1200		350000		35		< 0.10		6.10	270		1700
PH-MW-01	2/25/2022	Background	704.15	993		342000		24		< 0.10		6.12	220		1300
PH-MW-01	3/28/2022	Background	704.50	657		262000		45		< 0.10		6.04	190		1200
PH-MW-01	4/28/2022	Background	704.04	829		300000		99		< 0.10		6.12	310		1300
PH-MW-01	5/25/2022	Background	703.70	938		301000		182	D	< 0.10		6.17	265	D	1750
PH-MW-01	6/27/2022	Background	703.68	617		280000	D	14.9		0.10		6.10	226	D	1270
PH-MW-01	7/29/2022	Background	702.83	742		330000	D	24.0		0.11		6.07	266	D	1320
PH-MW-01	8/29/2022	Background	702.28	1230	D	335000	D	45.5	D	< 0.25	D	6.09	272	D	1690
PH-MW-01	9/29/2022	Background	701.91	1330		323000	D	62.1		< 0.10		6.11	280	D	1830
PH-MW-02	11/30/2021	Background	546.75	1070		39600	D	239	D	< 0.50	D	7.60	36.3	D	816
PH-MW-02	12/29/2021	Background	546.78	1300		40000		210		0.24		7.48	31		800
PH-MW-02	1/27/2022	Background	546.02	1400		41000		240		0.23		7.53	31		1000
PH-MW-02	2/25/2022	Background	546.31	1430		40900		260		0.18		7.63	30		910
PH-MW-02	3/28/2022	Background	546.36	1260		38800		290		< 0.10		7.61	80		950
PH-MW-02	4/28/2022	Background	546.07	1310		39600		460		< 4.0	H	7.56	36	H	940
PH-MW-02	5/25/2022	Background	546.03	1110		46500		220	D	0.34		7.54	33.7		808
PH-MW-02	6/27/2022	Background	545.93	1120		45600	D	228	D	0.37		7.69	31.6		832
PH-MW-02	7/29/2022	Background	545.75	1150		42800	D	244	D	0.41		7.45	32.0		834
PH-MW-02	8/29/2022	Background	545.66	1250	D	45000	D	242	D	0.49	D	7.41	31.6	D	908
PH-MW-02	9/29/2022	Background	545.88	1200		43700	D	229	D	0.36		7.42	33.2		962
PH-MW-03A	11/30/2021	Background	578.57	2540		40200	D	392	D	0.92	D	7.59	420	D	1650
PH-MW-03A	12/29/2021	Background	579.81	3300		34000		390		0.7		7.66	390		1700
PH-MW-03A	1/27/2022	Background	580.90	3200		33000		480		0.42		7.78	440		1900
PH-MW-03A	2/25/2022	Background	581.82	3560		32400		460		0.27		7.91	380		1700
PH-MW-03A	3/28/2022	Background	582.75	3130		29300		570		0.29		7.72	330		1700
PH-MW-03A	4/28/2022	Background	583.61	3380		28000		430	H	0.21	B	7.74	400		1700
PH-MW-03A	5/26/2022	Background	583.90	2990		27200		401	D	1.1		7.78	300	D	1680
PH-MW-03A	6/28/2022	Background	584.98	3320	D	24500	D	404	D	1.2		7.57	270	D	1520
PH-MW-03A	7/29/2022	Background	584.97	3160	D	22100	D	393	D	1.3		7.57	256	D	1540
PH-MW-03A	8/29/2022	Background	585.10	3030	D	20500	D	370	D	1.4	D	7.81	239	D	1480
PH-MW-03A	9/29/2022	Background	585.10	3010	D	17800	D	333	D	1.4		7.82	210	D	1450
PH-MW-04	11/30/2021	Background	522.56	762		183000	D	18.8	D	< 0.50	D	6.32	249	D	976
PH-MW-04	12/29/2021	Background	522.51	930		180000		22		< 0.10		6.24	250		1000
PH-MW-04	1/27/2022	Background	523.02	970		180000		30		0.11		6.31	260		NA
PH-MW-04	2/25/2022	Background	521.84	1160		197000		33		< 0.10		6.18	280		1000
PH-MW-04	3/28/2022	Background	521.06	871		204000		47		< 0.10		6.07	300		1200
PH-MW-04	4/28/2022	Background	521.01	948		210000		70		1.7	B	6.16	400		1200
PH-MW-04	5/26/2022	Background	521.11	794		198000		19.6		0.19		6.19	325	D	1200
PH-MW-04	6/28/2022	Background	520.35	776		203000	D	21.8		0.21		6.27	293	D	1050
PH-MW-04	7/29/2022	Background	523.37	701		195000	D	17.1		0.23		6.10	212	D	944
PH-MW-04	8/29/2022	Background	523.71	725	D	199000	D	15.6	D	0.35	D	6.16	181	D	942
PH-MW-04	9/29/2022	Background	523.24	742		181000	D	16.3		0.20		6.16	176		970
PH-MW-05	11/30/2021	Background	528.27	219		115000	D	11.2	D	< 0.50	D	7.07	180	D	522
PH-MW-05	12/29/2021	Background	528.92	230		120000		11		< 0.10		7.15	180		580
PH-MW-05	1/27/2022	Background	529.15	260		130000		17		< 0.10		7.31	220		670
PH-MW-05	2/25/2022	Background	528.92	231		119000		14		< 0.10		7.34	170		540
PH-MW-05	3/28/2022	Background	528.72	220		119000		34		< 0.10		7.35	150		600
PH-MW-05	4/28/2022	Background	528.16	278		119000		71		0.43	B	7.29	230		600
PH-MW-05	5/26/2022	Background	528.28	217		109000		11.7		0.13		7.29	189		568
PH-MW-05	6/28/2022	Background	527.54	235		112000	D	11.4		0.17		7.26	188		602
PH-MW-05	7/29/2022	Background	528.03	241		121000	D	11.5		0.16		7.18	181		528
PH-MW-05	8/29/2022	Background	528.04	261	D	120000	D	10.7	D	0.30	D	7.20	161	D	590
PH-MW-05	9/29/2022	Background	527.87	173		105000	D	10.6		0.17		7.20	156		616

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	H - Holding time exceeded	B - Analyte detected in method blank	
	NA - Not available	D - Result reported from dilution	
Result Units :	mg/L - milligram per liter	µg/L - microgram per liter	S.U. - Standard Units
	ft. MSL - feet above mean sea level	pCi/L - picocurie per liter	
Event Type Abbreviations :	A3 - Appendix III Constituents for Detection Monitoring	A4 - Appendix IV Constituents for Assessment Monitoring	
	ASD - Alternative Source Demonstration		
Event Type Constituents :	Background - A3 and A4	Detection - A3	Annual Screen - A4
	Assessment - A3 (All) and A4 (Detected in annual screen).		ASD - Tested A3 and A4 parameters

H.L. Spurlock Station Peg's Hill Landfill

Annual Reporting Year 2022
Table B-1: Summary of Analytical Results

Appendix 4 Constituents

Well ID	Sample Date	Event Type	GW Elevation (ft. MSL)	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Fluoride (µg/L)	Lead (µg/L)	Lithium (µg/L)	Mercury (µg/L)	Molybdenum (µg/L)	Radium (pCi/L)	Selenium (µg/L)	Thallium (µg/L)
PH-MW-01	11/30/2021	Background	701.92	< 1.0	< 1.0	48.7	< 1.0	< 0.10	< 1.0	4.6	< 0.50 D	< 1.0	79.4	< 0.0200 D	< 1.0	1.07	1.5	< 0.10
PH-MW-01	12/29/2021	Background	702.28	< 5.0	< 5.0	49	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	87	0.00084	< 5.0	1.53	< 5.0	< 5.0
PH-MW-01	1/27/2022	Background	702.84	< 5.0	29	57	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	80	0.00064	< 5.0	0.371	< 5.0	< 5.0
PH-MW-01	2/25/2022	Background	704.15	< 5.0	< 5.0	52.7	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	61.4	0.00091	< 5.0	0.220	< 5.0	< 5.0
PH-MW-01	3/28/2022	Background	704.50	< 1.0	< 1.0	45.2	< 1.0	< 0.20	< 1.0	< 1.0	< 0.10	< 1.0	52.5	0.0011	< 1.0	1.08	< 1.0	< 1.0
PH-MW-01	4/28/2022	Background	704.04	< 1.0	< 1.0	49.4	< 1.0	< 0.20	< 1.0	1.09	< 0.10	< 1.0	61.3	0.00057	< 1.0	0.556	< 1.0	< 1.0
PH-MW-01	5/25/2022	Background	703.70	< 10	< 10	46.7	< 10	< 2.0	< 10.0	< 10	< 0.10	< 10	< 100	0.0017	< 10.0	0.0795	< 10	< 10
PH-MW-01	6/27/2022	Background	703.68	< 1.0	< 1.0	51.3	< 1.0	< 0.25	< 1.0	1.1	0.10	< 1.0	51.0	< 0.0200 D	< 1.0	0.594	< 1.0	< 0.10
PH-MW-01	7/29/2022	Background	702.83	< 1.0	< 1.0	49.2	< 1.0	< 0.25	< 1.0	1.8	0.11	< 1.0	55.6	< 0.0200 D	< 1.0	1.49	< 1.0	< 0.10
PH-MW-01	8/29/2022	Background	702.28	< 1.0 D	< 1.0	47.9	< 1.0	< 0.25	< 1.0	2.7	< 0.25 D	< 1.0	69.4	< 0.0200 D	< 1.0	1.17	1.1	< 0.10
PH-MW-01	9/29/2022	Background	701.91	< 1.0	< 1.0	43.8	< 1.0	< 0.25	< 1.0	2.8	< 0.10	< 1.0	82.0	< 0.0200 D	< 1.0	2.13	< 1.0	< 0.10
PH-MW-02	11/30/2021	Background	546.75	< 1.0	1.5	76.8	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50 D	< 1.0	74.8	< 0.0050 D	1.7	0.401	< 1.0	< 0.10
PH-MW-02	12/29/2021	Background	546.78	< 5.0	< 5.0	79	< 2.0	< 0.20	< 5.0	< 5.0	0.24	< 5.0	80	< 0.0005	< 5.0	1.04	< 5.0	< 5.0
PH-MW-02	1/27/2022	Background	546.02	< 5.0	11	83	< 2.0	< 0.20	< 5.0	< 5.0	0.23	< 5.0	86	< 0.0005	< 5.0	0.943	< 5.0	< 5.0
PH-MW-02	2/25/2022	Background	546.31	< 5.0	< 5.0	81.8	< 2.0	< 0.20	< 5.0	< 5.0	0.18	< 5.0	86	< 0.0005	< 5.0	0.000	< 5.0	< 5.0
PH-MW-02	3/28/2022	Background	546.36	< 1.0	1.49	80.1	< 1.0	< 0.20	< 1.0	< 1.0	< 0.10	< 1.0	87.2	0.00082	1.69	0.890	< 1.0	< 1.0
PH-MW-02	4/28/2022	Background	546.07	< 1.0	1.53	79.7	< 1.0	< 0.20	< 1.0	< 1.0	< 4.0 H	< 1.0	90.4	< 0.0005	1.70	0.536	< 1.0	< 1.0
PH-MW-02	5/25/2022	Background	546.03	< 10	< 10	79.3	< 10	< 2.0	< 10.0	< 10	0.34	< 10	< 100	< 0.0005	< 10.0	0.241	< 10	< 10
PH-MW-02	6/27/2022	Background	545.93	< 1.0	< 1.0	89.0	< 1.0	< 0.25	< 1.0	< 1.0	0.37	< 1.0	71.0	< 0.0050 D	1.3	0.563	< 1.0	< 0.10
PH-MW-02	7/29/2022	Background	545.75	< 1.0	< 1.0	82.7	< 1.0	< 0.25	< 1.0	< 1.0	0.41	< 1.0	74.9	< 0.0050 D	1.3	1.40	< 1.0	< 0.10
PH-MW-02	8/29/2022	Background	545.66	< 1.0 D	< 1.0	79.3	< 1.0	< 0.25	< 1.0	< 1.0	0.49 D	< 1.0	76.3	< 0.0050 D	1.3	1.37	< 1.0	< 0.10
PH-MW-02	9/29/2022	Background	545.88	< 1.0	< 1.0	77.1	< 1.0	< 0.25	< 1.0	< 1.0	0.36	< 1.0	80.9	< 0.0050 D	1.2	0.929	< 1.0	< 0.10
PH-MW-03A	11/30/2021	Background	578.57	< 1.0	< 1.0	62.1	< 1.0	< 0.10	< 1.0	< 1.0	0.92 D	< 1.0 D	115	< 0.0050 D	23.2	0.308	1.9	< 0.20 D
PH-MW-03A	12/29/2021	Background	579.81	< 5.0	< 5.0	57	< 2.0	< 0.20	< 5.0	< 5.0	0.7	< 5.0	130	0.0015	23.0	1.23	< 5.0	< 5.0
PH-MW-03A	1/27/2022	Background	580.90	< 5.0	11	58	< 2.0	< 0.20	< 5.0	< 5.0	0.42	< 5.0	140	0.0013	24.0	0.655	< 5.0	< 5.0
PH-MW-03A	2/25/2022	Background	581.82	< 5.0	< 5.0	54.4	< 2.0	< 0.20	< 5.0	< 5.0	0.27	< 5.0	127	0.0018	23.0	0.230	< 5.0	< 5.0
PH-MW-03A	3/28/2022	Background	582.75	< 1.0	< 1.0	54.8	< 1.0	< 0.20	< 1.0	< 1.0	0.29	< 1.0	125	0.0041	24.5	0.835	< 1.0	< 1.0
PH-MW-03A	4/28/2022	Background	583.61	< 1.0	< 1.0	53.5	< 1.0	< 0.20	< 1.0	< 1.0	0.21 B	< 1.0	128	0.0017	25.8	1.44	< 1.0	< 1.0
PH-MW-03A	5/26/2022	Background	583.90	< 10	< 10	47.5	< 10	< 2.0	< 10.0	< 10	1.1	< 10	< 100	0.0014	< 10.0	1.35	< 10	< 10
PH-MW-03A	6/28/2022	Background	584.98	< 1.0	< 1.0	55.8	< 1.0	< 0.25	< 1.0	< 1.0	1.2	< 1.0	108	< 0.0050 D	26.3	0.592	1.2	< 0.10
PH-MW-03A	7/29/2022	Background	584.97	< 1.0	< 1.0	52.1	< 1.0	< 0.25	< 1.0	< 1.0	1.3	< 1.0	108	< 0.0050 D	27.3	1.81	< 1.0	< 0.10
PH-MW-03A	8/29/2022	Background	585.10	< 1.0 D	< 1.0	48.3	< 1.0	< 0.25	< 1.0	< 1.0	1.4 D	< 1.0	105	< 0.0050 D	28.3	0.447	1.1	< 0.10
PH-MW-03A	9/29/2022	Background	585.10	< 1.0	< 1.0	41.9	< 1.0	< 0.25	< 1.0	< 1.0	1.4	< 1.0	103	< 0.0050 D	27.7	0.795	< 1.0	< 0.10
PH-MW-04	11/30/2021	Background	522.56	< 1.0	< 1.0	77.0	< 1.0	< 0.10	< 1.0	1.6	< 0.50 D	< 1.0	33.1	< 0.0200 D	< 1.0	0.467	< 1.0	< 0.10
PH-MW-04	12/29/2021	Background	522.51	< 5.0	< 5.0	76	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	38	0.00075	< 5.0	0.516	< 5.0	< 5.0
PH-MW-04	1/27/2022	Background	523.02	< 5.0	< 5.0	75	< 2.0	< 0.20	< 5.0	< 5.0	0.11	< 5.0	40	< 0.0005	< 5.0	1.35	< 5.0	< 5.0
PH-MW-04	2/25/2022	Background	521.84	< 5.0	< 5.0	72.5	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	38.3	0.00061	< 5.0	0.019	< 5.0	< 5.0
PH-MW-04	3/28/2022	Background	521.06	< 1.0	< 1.0	73.9	< 1.0	< 0.20	< 1.0	1.48	< 0.10	< 1.0	40.5	0.00075	< 1.0	0.686	< 1.0	< 1.0
PH-MW-04	4/28/2022	Background	521.01	< 1.0	< 1.0	73.8	< 1.0	< 0.20	< 1.0	1.27	1.7 B	< 1.0	43.9	0.001	< 1.0	0.661	< 1.0	< 1.0
PH-MW-04	5/26/2022	Background	521.11	< 10	< 10	62.8	< 10	< 2.0	< 10.0	< 10	0.19	< 10	< 100	0.00059	< 10.0	0.427	< 10	< 10
PH-MW-04	6/28/2022	Background	520.35	< 1.0	< 1.0	79.9	< 1.0	< 0.25	< 1.0	1.2	0.21	< 1.0	38.0	< 0.0200 D	< 1.0	1.46	< 1.0	< 0.10
PH-MW-04	7/29/2022	Background	523.37	< 1.0	< 1.0	73.6	< 1.0	< 0.25	< 1.0	1.0	0.23	< 1.0	33.5	< 0.0200 D	< 1.0	0.925	< 1.0	< 0.10
PH-MW-04	8/29/2022	Background	523.71	< 1.0 D	< 1.0	75.3	< 1.0	< 0.25	< 1.0	< 1.0	0.35 D	< 1.0	30.7	< 0.0200 D	< 1.0	0.631	< 1.0	< 0.10
PH-MW-04	9/29/2022	Background	523.24	< 1.0	< 1.0	65.5	< 1.0	< 0.25	< 1.0	1.1	0.20	< 1.0	33.2	< 0.0200 D	< 1.0	1.39	< 1.0	< 0.10
PH-MW-05	11/30/2021	Background	528.27	< 1.0	< 1.0	75.9	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50 D	< 1.0	< 25.0	< 0.0050 D	< 1.0	0.821	< 1.0	< 0.10
PH-MW-05	12/29/2021	Background	528.92	< 5.0	< 5.0	75	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	22	0.00052	< 5.0	0.220	< 5.0	< 5.0
PH-MW-05	1/27/2022	Background	529.15	< 5.0	< 5.0	80	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	25	0.00059	< 5.0	0.389	< 5.0	< 5.0
PH-MW-05	2/25/2022	Background	528.92	< 5.0	< 5.0	72.2	< 2.0	< 0.20	< 5.0	< 5.0	< 0.10	< 5.0	21.6	< 0.0005	< 5.0	0.08	< 5.0	< 5.0
PH-MW-05	3/28/2022	Background	528.72	< 1.0	< 1.0	71.9	< 1.0	< 0.20	< 1.0	< 1.0	< 0.10	< 1.0	21.5	< 0.0005	< 1.0	1.20	< 1.0	< 1.0
PH-MW-05	4/28/2022	Background	528.16	< 1.0	< 1.0	76.3	< 1.0	< 0.20	< 1.0	< 1.0	0.43 B	< 1.0	24.9	< 0.0005	< 1.0	0.376	< 1.0	< 1.0
PH-MW-05	5/26/2022	Background	528.28	< 10	< 10	64.8	< 10	< 2.0	< 10.0	< 10	0.13	< 10	< 100	< 0.0005	< 10.0	0.129	< 10	< 10
PH-MW-05	6/28/2022	Background	527.54	< 1.0	< 1.0	84.4	< 1.0	< 0.25	< 1.0	< 1.0	0.17	< 1.0	25.0	< 0.0050 D	< 1.0	1.26	< 1.0	< 0.10
PH-MW-05	7/29/2022	Background	528.03	< 1.0	< 1.0	77.1	< 1.0	< 0.25	< 1.0	< 1.0	0.16	< 1.0	23.5	< 0.0050 D	< 1.0	1.65	< 1.0	< 0.10
PH-MW-05	8/29/2022	Background	528.04	< 1.0 D	< 1.0	73.5	< 1.0	< 0.25	< 1.0	< 1.0	0.30 D	< 1.0	21.1	< 0.0050 D	< 1.0	0.175	< 1.0	< 0.10
PH-MW-05	9/29/2022	Background	527.87	< 1.0	< 1.0	50.9	< 1.0	< 0.25	< 1.0	< 1.0	0.17	< 1.0	16.7	< 0.0050 D	< 1.0	0.834	< 1.0	< 0.10

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	H - Holding time exceeded	B - Analyte detected in method blank	
	NA - Not available	D - Result reported from dilution	
Result Units :	mg/L - milligram per liter	µg/L - microgram per liter	S.U. - Standard Units
	ft. MSL - feet above mean sea level	pCi/L - picocurie per liter	
Event Type Abbreviations :	A3 - Appendix III Constituents for Detection Monitoring	A4 - Appendix IV Constituents for Assessment Monitoring	
	ASD - Alternative Source Demonstration		
Event Type Constituents :	Background - A3 and A4	Detection - A3	Annual Screen - A4
	Assessment - A3 (All) and A4 (Detected in annual screen).		ASD - Tested A3 and A4 parameters

APPENDIX C – Laboratory Analytical Reports

EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 27, 2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2021
Well ID No:	PH-MW-01	Sample Collection Time:	9:51 AM
AKGW No.:	8006-4554	Sample Collected By:	BTB
Well Depth (Ft.):	37.57	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	736.38	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	701.92	MSL		11/30/2021	9:51 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2021	9:51 AM	BTB
Conductivity	2409	µS/cm	SM 2510, B-2011	11/30/2021	9:51 AM	BTB
Temperature	51.44	°F	SM 2550, B-2010	11/30/2021	9:51 AM	BTB
Oxidation-Reduction Potential	69.8	mV	SM 2580, B-2011	11/30/2021	9:51 AM	BTB
pH	6.12	S.U.	SM 4500-H+, B-2011	11/30/2021	9:51 AM	BTB
Oxygen, dissolved	1.11	mg/L	SM 4500-O	11/30/2021	9:51 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100894

Sample Received Date:	12/01/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:20 AM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Barium	48.7	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Boron	1320	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Calcium	312000	µg/L	5100	12500	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	2:44 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Cobalt	4.6	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Lithium	79.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Selenium	1.5	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:18 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	12/7/2021	12:42 PM	JD
Chloride	76.6	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:28 PM	JD
Fluoride	< 0.50	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:28 PM	JD
Sulfate	344	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:28 PM	JD
Solids, Total Dissolved	1750	mg/L		50.0	SM 2540, C-2011	12/6/2021	1:44 PM	JD

Pace

Lab Identification #: 30456703001

Sample Received Date:	12/10/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.07 ± 1.07 (1.77)	pCi/L			Total Radium Calculation	1/25/2022	5:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Electronically Approved By :

Jared Daugherty - Chemist

01:40 PM 01/27/2022

Eric Hamilton - QA/QC Chemist

01:53 PM 01/27/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 27, 2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2021
Well ID No:	PH-MW-02	Sample Collection Time:	11:48 AM
AKGW No.:	8006-4555	Sample Collected By:	BTB
Well Depth (Ft.):	43.02	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	570.93	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	546.75	MSL		11/30/2021	11:48 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2021	11:48 AM	BTB
Conductivity	1706	µS/cm	SM 2510, B-2011	11/30/2021	11:48 AM	BTB
Temperature	54.32	°F	SM 2550, B-2010	11/30/2021	11:48 AM	BTB
Oxidation-Reduction Potential	-160.4	mV	SM 2580, B-2011	11/30/2021	11:48 AM	BTB
pH	7.60	S.U.	SM 4500-H+, B-2011	11/30/2021	11:48 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	11/30/2021	11:48 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100895

Sample Received Date:	12/01/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:20 AM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Arsenic	1.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Barium	76.8	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Boron	1070	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Calcium	39600	µg/L	5100	12500	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	2:48 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Lithium	74.8	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Molybdenum	1.7	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:21 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	12/7/2021	12:53 PM	JD
Chloride	239	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:47 PM	JD
Fluoride	< 0.50	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:47 PM	JD
Sulfate	36.3	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	12/7/2021	5:47 PM	JD
Solids, Total Dissolved	816	mg/L		50.0	SM 2540, C-2011	12/6/2021	1:44 PM	JD

Pace

Lab Identification #: 30456703002

Sample Received Date:	12/10/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.401 ± 0.999 (2.09)	pCi/L			Total Radium Calculation	1/25/2022	5:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Electronically Approved By :

Jared Daugherty - Chemist
02:00 PM 01/27/2022

Eric Hamilton - QA/QC Chemist
02:25 PM 01/27/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707
Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 27, 2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2021
Well ID No:	PH-MW-03A	Sample Collection Time:	4:13 PM
AKGW No.:		Sample Collected By:	BTB
Well Depth (Ft.):	40	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	614.98	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	578.57	MSL		11/30/2021	4:13 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2021	4:13 PM	BTB
Conductivity	3522	µS/cm	SM 2510, B-2011	11/30/2021	4:13 PM	BTB
Temperature	50.00	°F	SM 2550, B-2010	11/30/2021	4:13 PM	BTB
Oxidation-Reduction Potential	81.5	mV	SM 2580, B-2011	11/30/2021	4:13 PM	BTB
pH	7.59	S.U.	SM 4500-H+, B-2011	11/30/2021	4:13 PM	BTB
Oxygen, dissolved	1.05	mg/L	SM 4500-O	11/30/2021	4:13 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100896

Sample Received Date:	12/01/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:20 AM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Barium	62.1	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Boron	2540	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Calcium	40200	µg/L	5100	12500	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	2:52 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	5:10 PM	JD
Lithium	115	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Molybdenum	23.2	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Selenium	1.9	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:25 PM	JD
Thallium	< 0.20	µg/L	0.06	0.20	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	5:10 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	12/7/2021	12:56 PM	JD
Chloride	392	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:06 PM	JD
Fluoride	0.92	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:06 PM	JD
Sulfate	420	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:06 PM	JD
Solids, Total Dissolved	1650	mg/L		50.0	SM 2540, C-2011	12/6/2021	1:44 PM	JD

Pace

Lab Identification #: 30456703003

Sample Received Date:	12/10/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.308 ± 0.852 (1.76)	pCi/L			Total Radium Calculation	1/25/2022	5:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Electronically Approved By :

Jared Daugherty - Chemist

01:40 PM 01/27/2022

Eric Hamilton - QA/QC Chemist

01:53 PM 01/27/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 27, 2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2021
Well ID No:	PH-MW-04	Sample Collection Time:	1:34 PM
AKGW No.:	8006-4557	Sample Collected By:	BTB
Well Depth (Ft.):	37.32	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	548.56	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	522.56	MSL		11/30/2021	1:34 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2021	1:34 PM	BTB
Conductivity	1622	µS/cm	SM 2510, B-2011	11/30/2021	1:34 PM	BTB
Temperature	56.84	°F	SM 2550, B-2010	11/30/2021	1:34 PM	BTB
Oxidation-Reduction Potential	56.9	mV	SM 2580, B-2011	11/30/2021	1:34 PM	BTB
pH	6.32	S.U.	SM 4500-H+, B-2011	11/30/2021	1:34 PM	BTB
Oxygen, dissolved	2.48	mg/L	SM 4500-O	11/30/2021	1:34 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100897

Sample Received Date:	12/01/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:20 AM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Barium	77.0	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Boron	762	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Calcium	183000	µg/L	5100	12500	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	2:56 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Cobalt	1.6	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Lithium	33.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:29 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	12/7/2021	12:59 PM	JD
Chloride	18.8	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:25 PM	JD
Fluoride	< 0.50	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:28 PM	JD
Sulfate	249	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:25 PM	JD
Solids, Total Dissolved	976	mg/L		50.0	SM 2540, C-2011	12/6/2021	1:44 PM	JD

Pace

Lab Identification #: 30456703004

Sample Received Date:	12/10/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.467 ± 0.866 (1.78)	pCi/L			Total Radium Calculation	1/25/2022	5:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Electronically Approved By :

Jared Daugherty - Chemist

01:40 PM 01/27/2022

Eric Hamilton - QA/QC Chemist

01:53 PM 01/27/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 27, 2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2021
Well ID No:	PH-MW-05	Sample Collection Time:	3:04 PM
AKGW No.:	8006-4558	Sample Collected By:	BTB
Well Depth (Ft.):	37.45	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	560.32	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	528.27	MSL		11/30/2021	3:04 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2021	3:04 PM	BTB
Conductivity	881.0	µS/cm	SM 2510, B-2011	11/30/2021	3:04 PM	BTB
Temperature	52.34	°F	SM 2550, B-2010	11/30/2021	3:04 PM	BTB
Oxidation-Reduction Potential	101.3	mV	SM 2580, B-2011	11/30/2021	3:04 PM	BTB
pH	7.07	S.U.	SM 4500-H+, B-2011	11/30/2021	3:04 PM	BTB
Oxygen, dissolved	6.63	mg/L	SM 4500-O	11/30/2021	3:04 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100898

Sample Received Date:	12/01/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:20 AM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Barium	75.9	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Boron	219	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Calcium	115000	µg/L	5100	12500	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	3:00 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	4:33 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	12/7/2021	1:02 PM	JD
Chloride	11.2	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:44 PM	JD
Fluoride	< 0.50	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:44 PM	JD
Sulfate	180	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	12/7/2021	6:44 PM	JD
Solids, Total Dissolved	522	mg/L		50.0	SM 2540, C-2011	12/6/2021	1:44 PM	JD

Pace

Lab Identification #: 30456703005

Sample Received Date:	12/10/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.821 ± 0.984 (1.84)	pCi/L			Total Radium Calculation	1/25/2022	5:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Electronically Approved By :

Jared Daugherty - Chemist

01:40 PM 01/27/2022

Eric Hamilton - QA/QC Chemist

01:53 PM 01/27/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

11-Feb-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **Pegs Hill Landfill** Work Order: **22010076**

Dear Jared,

ALS Environmental received 7 samples on 04-Jan-2022 09:57 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 46.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 11-Feb-22

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Work Order: **22010076**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22010076-01	2200001 PH-MW-01 Grab	Groundwater		12/29/2021 10:14	1/4/2022 09:57	☐
22010076-01	2200001 PH-MW-01 Grab	Groundwater		12/29/2021 10:14	1/5/2022 11:30	☐
22010076-02	2200002, 2200007, 2200008 PH-MW-02 Grab	Groundwater		12/29/2021 11:55	1/4/2022 09:57	☐
22010076-02	2200002, 2200007, 2200008 PH-MW-02 Grab	Groundwater		12/29/2021 11:55	1/5/2022 11:30	☐
22010076-03	2200003 PH-MW-03A Grab	Groundwater		12/29/2021 15:26	1/4/2022 09:57	☐
22010076-03	2200003 PH-MW-03A Grab	Groundwater		12/29/2021 15:26	1/5/2022 11:30	☐
22010076-04	2200004 PH-MW-04 Grab	Groundwater		12/29/2021 14:37	1/4/2022 09:57	☐
22010076-04	2200004 PH-MW-04 Grab	Groundwater		12/29/2021 14:37	1/5/2022 11:30	☐
22010076-05	2200005 PH-MW-05 Grab	Groundwater		12/29/2021 13:18	1/4/2022 09:57	☐
22010076-05	2200005 PH-MW-05 Grab	Groundwater		12/29/2021 13:18	1/5/2022 11:30	☐
22010076-06	2200006 Field Duplicate Grab	Groundwater		12/29/2021 11:55	1/4/2022 09:57	☐
22010076-06	2200006 Field Duplicate Grab	Groundwater		12/29/2021 11:55	1/5/2022 11:30	☐
22010076-07	2200009 Field Blank Grab	Water		12/29/2021 15:15	1/5/2022 11:30	☐

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Work Order: 22010076

Case Narrative

Samples for the above noted Work Order were received on 01/04/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
Batch R335824, Method E300.0, Sample 22010076-02C MS: MS and/or MSD was outside upper limit of calibration. Processed at equivalent dilution level as the parent. Chloride

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
WorkOrder: **22010076**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200001 PH-MW-01 Grab
Collection Date: 12/29/2021 10:14 AM

Work Order: 22010076
Lab ID: 22010076-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00084**		**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 15:25
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	1/7/2022 18:41
Arsenic	**0.00074**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 18:41
Barium	**0.049**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 18:41
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 18:41
Boron	**1.4**		**0.015**	**0.020**	**mg/L**	1	1/7/2022 18:41
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 18:41
Calcium	**350**		**2.2**	**5.0**	**mg/L**	10	1/10/2022 14:15
Chromium	**0.00077**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 18:41
Cobalt	**0.0040**	J	**0.00027**	**0.0050**	**mg/L**	1	1/7/2022 18:41
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 18:41
Lithium	**0.087**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 18:41
Molybdenum	U		0.00033	0.0050	mg/L	1	1/7/2022 18:41
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 18:41
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 18:41
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**66**		**12**	**40**	**mg/L**	40	1/5/2022 15:25
Fluoride	U		0.067	0.10	mg/L	1	1/5/2022 15:10
Sulfate	**310**		**7.6**	**40**	**mg/L**	40	1/5/2022 15:25
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**1,700**		**74**	**100**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200002, 2200007, 2200008 PH-MW-02 Grab
Collection Date: 12/29/2021 11:55 AM

Work Order: 22010076
Lab ID: 22010076-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method: **E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00049**	J	**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 15:41
METALS BY ICP-MS			Method: **E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	1/7/2022 18:43
Arsenic	**0.0013**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 18:43
Barium	**0.079**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 18:43
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 18:43
Boron	**1.3**		**0.015**	**0.020**	**mg/L**	1	1/7/2022 18:43
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 18:43
Calcium	**40**		**0.22**	**0.50**	**mg/L**	1	1/7/2022 18:43
Chromium	**0.00084**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 18:43
Cobalt	U		0.00027	0.0050	mg/L	1	1/7/2022 18:43
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 18:43
Lithium	**0.080**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 18:43
Molybdenum	**0.0014**	J	**0.00033**	**0.0050**	**mg/L**	1	1/7/2022 18:43
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 18:43
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 18:43
ANIONS BY ION CHROMATOGRAPHY			Method: **E300.0**				Analyst: **QTN**
Chloride	**210**		**5.0**	**16**	**mg/L**	16	1/6/2022 11:55
Fluoride	**0.24**		**0.067**	**0.10**	**mg/L**	1	1/5/2022 15:41
Sulfate	**31**		**3.0**	**16**	**mg/L**	16	1/6/2022 11:55
TOTAL DISSOLVED SOLIDS			Method: **A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**800**		**74**	**100**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method: **SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200003 PH-MW-03A Grab
Collection Date: 12/29/2021 03:26 PM

Work Order: 22010076
Lab ID: 22010076-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.0015**		**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 16:04
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	**0.00053**	J	**0.00042**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Arsenic	**0.00050**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Barium	**0.057**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 17:00
Boron	**3.3**		**0.15**	**0.20**	**mg/L**	10	1/10/2022 14:02
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 17:00
Calcium	**34**		**0.22**	**0.50**	**mg/L**	1	1/7/2022 17:00
Chromium	**0.00074**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Cobalt	**0.00064**	J	**0.00027**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 17:00
Lithium	**0.13**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 17:00
Molybdenum	**0.023**		**0.00033**	**0.0050**	**mg/L**	1	1/7/2022 17:00
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 17:00
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 17:00
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**390**		**12**	**40**	**mg/L**	40	1/5/2022 17:48
Fluoride	**0.70**		**0.067**	**0.10**	**mg/L**	1	1/5/2022 17:32
Sulfate	**390**		**7.6**	**40**	**mg/L**	40	1/5/2022 17:48
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**1,700**		**110**	**150**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200004 PH-MW-04 Grab
Collection Date: 12/29/2021 02:37 PM

Work Order: 22010076
Lab ID: 22010076-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00075**		**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 16:12
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	1/7/2022 17:01
Arsenic	**0.00056**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 17:01
Barium	**0.076**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 17:01
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 17:01
Boron	**0.93**		**0.015**	**0.020**	**mg/L**	1	1/7/2022 17:01
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 17:01
Calcium	**180**		**0.22**	**0.50**	**mg/L**	1	1/7/2022 17:01
Chromium	**0.00080**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 17:01
Cobalt	**0.0016**	J	**0.00027**	**0.0050**	**mg/L**	1	1/7/2022 17:01
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 17:01
Lithium	**0.038**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 17:01
Molybdenum	U		0.00033	0.0050	mg/L	1	1/7/2022 17:01
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 17:01
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 17:01
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**22**		**5.0**	**16**	**mg/L**	16	1/6/2022 12:55
Fluoride	**0.084**	J	**0.067**	**0.10**	**mg/L**	1	1/5/2022 18:33
Sulfate	**250**		**7.6**	**40**	**mg/L**	40	1/5/2022 18:49
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**1,000**		**74**	**100**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200005 PH-MW-05 Grab
Collection Date: 12/29/2021 01:18 PM

Work Order: 22010076
Lab ID: 22010076-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00052**		**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 16:27
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	1/7/2022 17:07
Arsenic	**0.00043**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 17:07
Barium	**0.075**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 17:07
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 17:07
Boron	**0.23**		**0.015**	**0.020**	**mg/L**	1	1/7/2022 17:07
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 17:07
Calcium	**120**		**0.22**	**0.50**	**mg/L**	1	1/7/2022 17:07
Chromium	**0.00077**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 17:07
Cobalt	U		0.00027	0.0050	mg/L	1	1/7/2022 17:07
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 17:07
Lithium	**0.022**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 17:07
Molybdenum	U		0.00033	0.0050	mg/L	1	1/7/2022 17:07
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 17:07
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 17:07
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**11**		**0.31**	**1.0**	**mg/L**	1	1/5/2022 19:04
Fluoride	**0.074**	J	**0.067**	**0.10**	**mg/L**	1	1/5/2022 19:04
Sulfate	**180**		**7.6**	**40**	**mg/L**	40	1/5/2022 19:19
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**580**		**37**	**50**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200006 Field Duplicate Grab
Collection Date: 12/29/2021 11:55 AM

Work Order: 22010076
Lab ID: 22010076-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00045**	J	**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 16:35
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 1/7/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	1/7/2022 17:08
Arsenic	**0.0013**	J	**0.00019**	**0.0050**	**mg/L**	1	1/7/2022 17:08
Barium	**0.081**		**0.00057**	**0.0050**	**mg/L**	1	1/7/2022 17:08
Beryllium	U		0.00013	0.0020	mg/L	1	1/7/2022 17:08
Boron	**1.3**		**0.015**	**0.020**	**mg/L**	1	1/7/2022 17:08
Cadmium	U		0.00014	0.00020	mg/L	1	1/7/2022 17:08
Calcium	**40**		**0.22**	**0.50**	**mg/L**	1	1/7/2022 17:08
Chromium	**0.00085**	J	**0.00061**	**0.0050**	**mg/L**	1	1/7/2022 17:08
Cobalt	U		0.00027	0.0050	mg/L	1	1/7/2022 17:08
Lead	U		0.00022	0.0050	mg/L	1	1/7/2022 17:08
Lithium	**0.081**		**0.0017**	**0.010**	**mg/L**	1	1/7/2022 17:08
Molybdenum	**0.0012**	J	**0.00033**	**0.0050**	**mg/L**	1	1/7/2022 17:08
Selenium	U		0.00048	0.0050	mg/L	1	1/7/2022 17:08
Thallium	U		0.00032	0.0050	mg/L	1	1/7/2022 17:08
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**220**		**12**	**40**	**mg/L**	40	1/5/2022 20:20
Fluoride	**0.26**		**0.067**	**0.10**	**mg/L**	1	1/5/2022 20:05
Sulfate	**30**		**3.0**	**16**	**mg/L**	16	1/6/2022 13:11
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 1/5/22		Analyst: **SRN**
Total Dissolved Solids	**820**		**74**	**100**	**mg/L**	1	1/10/2022 13:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	2/6/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Feb-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200009 Field Blank Grab
Collection Date: 12/29/2021 03:15 PM

Work Order: 22010076
Lab ID: 22010076-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 1/7/22		Analyst: **STP**
Mercury	**0.00046**	J	**0.00020**	**0.00050**	**µg/L**	1	1/7/2022 16:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

QC BATCH REPORT

Batch ID: **189992** Instrument ID: **HG3** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-189992-189992** Units: **ng/L** Analysis Date: **1/7/2022 01:12 PM**

Client ID: Run ID: **HG3_220107A** SeqNo: **8092953** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-189992-189992** Units: **ng/L** Analysis Date: **1/7/2022 02:23 PM**

Client ID: Run ID: **HG3_220107A** SeqNo: **8092962** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.42	0.2	0.50	0	0	0		0			J

MBLK3 Sample ID: **MBLK3-189992-189992** Units: **ng/L** Analysis Date: **1/7/2022 03:33 PM**

Client ID: Run ID: **HG3_220107A** SeqNo: **8092971** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **21122564-01JMS** Units: **ng/L** Analysis Date: **1/7/2022 02:38 PM**

Client ID: Run ID: **HG3_220107A** SeqNo: **8092964** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.95	0.2	0.50	4	1.24	92.8	71-125	0			

MS Sample ID: **22010076-02BMS** Units: **ng/L** Analysis Date: **1/7/2022 03:48 PM**

Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **HG3_220107A** SeqNo: **8092973** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.69	0.2	0.50	4	0.49	105	71-125	0			

MSD Sample ID: **21122564-01JMSD** Units: **ng/L** Analysis Date: **1/7/2022 02:46 PM**

Client ID: Run ID: **HG3_220107A** SeqNo: **8092965** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.74	0.2	0.50	4	1.24	87.5	71-125	4.95	4.33	24	

MSD Sample ID: **22010076-02BMSD** Units: **ng/L** Analysis Date: **1/7/2022 03:56 PM**

Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **HG3_220107A** SeqNo: **8092974** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.57	0.2	0.50	4	0.49	102	71-125	4.69	2.59	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **189992** Instrument ID: **HG3** Method: **E1631E**

LCS-OPR-START	Sample ID: **OPR-START-189992-189992**				Units: **ng/L**			Analysis Date: **1/7/2022 01:05 PM**			
Client ID:		Run ID: **HG3_220107A**			SeqNo: **8092952**			Prep Date: **1/7/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.16	0.2	0.50	5	0	103	77-123	0			

LCS-OPR-END	Sample ID: **OPR-END-189992-189992**				Units: **ng/L**			Analysis Date: **1/7/2022 06:29 PM**			
Client ID:		Run ID: **HG3_220107A**			SeqNo: **8092985**			Prep Date: **1/7/2022**		DF: **1**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.46	0.2	0.50	5	0	109	77-123	0			

The following samples were analyzed in this batch:

22010076-01B	22010076-02B	22010076-03B
22010076-04B	22010076-05B	22010076-06B
22010076-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190021** Instrument ID: **ICPMS4** Method: **E200.8**

MBLK Sample ID: **MBLK-190021-190021** Units: **mg/L** Analysis Date: **1/7/2022 05:28 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092109** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.000693	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-190021-190021** Units: **mg/L** Analysis Date: **1/7/2022 05:30 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092110** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09439	0.00042	0.0050	0.1	0	94.4	85-115	0			
Arsenic	0.08665	0.00019	0.0050	0.1	0	86.7	85-115	0			
Barium	0.09408	0.00057	0.0050	0.1	0	94.1	85-115	0			
Beryllium	0.09107	0.00013	0.0020	0.1	0	91.1	85-115	0			
Boron	0.478	0.015	0.020	0.5	0	95.6	85-115	0			
Cadmium	0.09538	0.00014	0.00020	0.1	0	95.4	85-115	0			
Calcium	9.278	0.22	0.50	10	0	92.8	85-115	0			
Chromium	0.09164	0.00061	0.0050	0.1	0	91.6	85-115	0			
Cobalt	0.08837	0.00027	0.0050	0.1	0	88.4	85-115	0			
Lead	0.09056	0.00022	0.0050	0.1	0	90.6	85-115	0			
Lithium	0.09156	0.0017	0.010	0.1	0	91.6	85-115	0			
Molybdenum	0.09058	0.00033	0.0050	0.1	0	90.6	85-115	0			
Selenium	0.08746	0.00048	0.0050	0.1	0	87.5	85-115	0			
Thallium	0.08839	0.00032	0.0050	0.1	0	88.4	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **190021** Instrument ID: **ICPMS4** Method: **E200.8**

MS Sample ID: **22010033-01BMS** Units: **mg/L** Analysis Date: **1/7/2022 05:50 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092122** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09237	0.00042	0.0050	0.1	0	92.4	70-130	0			
Arsenic	0.09012	0.00019	0.0050	0.1	0.0009823	89.1	70-130	0			
Barium	0.102	0.00057	0.0050	0.1	0.008526	93.4	70-130	0			
Beryllium	0.09004	0.00013	0.0020	0.1	0	90	70-130	0			
Boron	14.13	0.015	0.020	0.5	14.14	-1.54	70-130	0			SEO
Cadmium	0.08962	0.00014	0.00020	0.1	0	89.6	70-130	0			
Calcium	476.3	0.22	0.50	10	490	-138	70-130	0			SEO
Chromium	0.08991	0.00061	0.0050	0.1	0.001863	88	70-130	0			
Lead	0.08995	0.00022	0.0050	0.1	0	90	70-130	0			
Lithium	0.5034	0.0017	0.010	0.1	0.4246	78.8	70-130	0			O
Molybdenum	0.5204	0.00033	0.0050	0.1	0.45	70.4	70-130	0			O
Selenium	0.1047	0.00048	0.0050	0.1	0.004858	99.9	70-130	0			
Thallium	0.08911	0.00032	0.0050	0.1	0	89.1	70-130	0			

MS Sample ID: **22010076-02AMS** Units: **mg/L** Analysis Date: **1/7/2022 06:45 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **ICPMS4_220107A** SeqNo: **8092154** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09137	0.00042	0.0050	0.1	0.0000132	91.4	70-130	0			
Arsenic	0.09314	0.00019	0.0050	0.1	0.001282	91.9	70-130	0			
Barium	0.1692	0.00057	0.0050	0.1	0.07875	90.4	70-130	0			
Beryllium	0.09469	0.00013	0.0020	0.1	-0.0000033	94.7	70-130	0			
Boron	1.713	0.015	0.020	0.5	1.254	91.9	70-130	0			
Cadmium	0.09021	0.00014	0.00020	0.1	-0.0000022	90.2	70-130	0			
Calcium	47.2	0.22	0.50	10	39.75	74.4	70-130	0			
Chromium	0.09229	0.00061	0.0050	0.1	0.0008393	91.4	70-130	0			
Cobalt	0.09048	0.00027	0.0050	0.1	0.0002563	90.2	70-130	0			
Lead	0.09042	0.00022	0.0050	0.1	0.0000286	90.4	70-130	0			
Lithium	0.1705	0.0017	0.010	0.1	0.07987	90.7	70-130	0			
Molybdenum	0.09401	0.00033	0.0050	0.1	0.001351	92.7	70-130	0			
Selenium	0.08951	0.00048	0.0050	0.1	0	89.5	70-130	0			
Thallium	0.08908	0.00032	0.0050	0.1	-0.0000055	89.1	70-130	0			

MS Sample ID: **22010033-01BMS** Units: **mg/L** Analysis Date: **1/10/2022 02:23 PM**
Client ID: Run ID: **ICPMS4_220110A** SeqNo: **8093839** Prep Date: **1/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cobalt	0.1247	0.0027	0.050	0.1	0.02019	104	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190021** Instrument ID: **ICPMS4** Method: **E200.8**

MSD Sample ID: **22010033-01BMSD** Units: **mg/L** Analysis Date: **1/7/2022 05:52 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092123** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09234	0.00042	0.0050	0.1	0	92.3	70-130	0.09237	0.0345	20	
Arsenic	0.08979	0.00019	0.0050	0.1	0.0009823	88.8	70-130	0.09012	0.364	20	
Barium	0.1027	0.00057	0.0050	0.1	0.008526	94.2	70-130	0.102	0.702	20	
Beryllium	0.09074	0.00013	0.0020	0.1	0	90.7	70-130	0.09004	0.77	20	
Boron	14.13	0.015	0.020	0.5	14.14	-2.66	70-130	14.13	0.0396	20	SEO
Cadmium	0.09018	0.00014	0.00020	0.1	0	90.2	70-130	0.08962	0.623	20	
Calcium	477.7	0.22	0.50	10	490	-123	70-130	476.3	0.297	20	SEO
Chromium	0.08843	0.00061	0.0050	0.1	0.001863	86.6	70-130	0.08991	1.66	20	
Lead	0.09104	0.00022	0.0050	0.1	0	91	70-130	0.08995	1.2	20	
Lithium	0.5076	0.0017	0.010	0.1	0.4246	83	70-130	0.5034	0.823	20	O
Molybdenum	0.5286	0.00033	0.0050	0.1	0.45	78.6	70-130	0.5204	1.55	20	O
Selenium	0.104	0.00048	0.0050	0.1	0.004858	99.1	70-130	0.1047	0.726	20	
Thallium	0.09	0.00032	0.0050	0.1	0	90	70-130	0.08911	0.99	20	

MSD Sample ID: **22010076-02AMSD** Units: **mg/L** Analysis Date: **1/7/2022 06:47 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **ICPMS4_220107A** SeqNo: **8092155** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09027	0.00042	0.0050	0.1	0.0000132	90.3	70-130	0.09137	1.22	20	
Arsenic	0.09125	0.00019	0.0050	0.1	0.001282	90	70-130	0.09314	2.05	20	
Barium	0.1688	0.00057	0.0050	0.1	0.07875	90.1	70-130	0.1692	0.214	20	
Beryllium	0.09392	0.00013	0.0020	0.1	-0.0000033	93.9	70-130	0.09469	0.815	20	
Boron	1.699	0.015	0.020	0.5	1.254	89.1	70-130	1.713	0.831	20	
Cadmium	0.08932	0.00014	0.00020	0.1	-0.0000022	89.3	70-130	0.09021	0.983	20	
Calcium	47.25	0.22	0.50	10	39.75	75	70-130	47.2	0.111	20	
Chromium	0.09199	0.00061	0.0050	0.1	0.0008393	91.1	70-130	0.09229	0.327	20	
Cobalt	0.08947	0.00027	0.0050	0.1	0.0002563	89.2	70-130	0.09048	1.12	20	
Lead	0.08952	0.00022	0.0050	0.1	0.0000286	89.5	70-130	0.09042	0.996	20	
Lithium	0.1693	0.0017	0.010	0.1	0.07987	89.5	70-130	0.1705	0.691	20	
Molybdenum	0.09359	0.00033	0.0050	0.1	0.001351	92.2	70-130	0.09401	0.443	20	
Selenium	0.0903	0.00048	0.0050	0.1	0	90.3	70-130	0.08951	0.879	20	
Thallium	0.08795	0.00032	0.0050	0.1	-0.0000055	88	70-130	0.08908	1.28	20	

MSD Sample ID: **22010033-01BMSD** Units: **mg/L** Analysis Date: **1/10/2022 02:25 PM**
Client ID: Run ID: **ICPMS4_220110A** SeqNo: **8093840** Prep Date: **1/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cobalt	0.1268	0.0027	0.050	0.1	0.02019	107	70-130	0.1247	1.69	20	

The following samples were analyzed in this batch: 22010076-01A 22010076-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190022** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MBLK Sample ID: **MBLK-190019-190022** Units: **mg/L** Analysis Date: **1/7/2022 04:46 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092078** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.001626	0.00042	0.0050								J
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.0007227	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

MBLK Sample ID: **MBLK-190022-190022** Units: **mg/L** Analysis Date: **1/7/2022 04:50 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092080** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	0.01782	0.015	0.020								J
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	U	0.00061	0.0050								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190022** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

LCS Sample ID: **LCS-190019-190022** Units: **mg/L** Analysis Date: **1/7/2022 04:48 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092079** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09542	0.00042	0.0050	0.1	0	95.4	85-115	0			
Arsenic	0.08962	0.00019	0.0050	0.1	0	89.6	85-115	0			
Barium	0.09348	0.00057	0.0050	0.1	0	93.5	85-115	0			
Beryllium	0.09212	0.00013	0.0020	0.1	0	92.1	85-115	0			
Boron	0.4784	0.015	0.020	0.5	0	95.7	85-115	0			
Cadmium	0.09481	0.00014	0.00020	0.1	0	94.8	85-115	0			
Calcium	9.334	0.22	0.50	10	0	93.3	85-115	0			
Chromium	0.09541	0.00061	0.0050	0.1	0	95.4	85-115	0			
Cobalt	0.09179	0.00027	0.0050	0.1	0	91.8	85-115	0			
Lead	0.09108	0.00022	0.0050	0.1	0	91.1	85-115	0			
Lithium	0.09196	0.0017	0.010	0.1	0	92	85-115	0			
Molybdenum	0.09292	0.00033	0.0050	0.1	0	92.9	85-115	0			
Selenium	0.08648	0.00048	0.0050	0.1	0	86.5	85-115	0			
Thallium	0.08918	0.00032	0.0050	0.1	0	89.2	85-115	0			

LCS Sample ID: **LCS-190022-190022** Units: **mg/L** Analysis Date: **1/7/2022 04:51 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092087** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09158	0.00042	0.0050	0.1	0	91.6	85-115	0			
Arsenic	0.08787	0.00019	0.0050	0.1	0	87.9	85-115	0			
Barium	0.09115	0.00057	0.0050	0.1	0	91.2	85-115	0			
Beryllium	0.09064	0.00013	0.0020	0.1	0	90.6	85-115	0			
Boron	0.4724	0.015	0.020	0.5	0	94.5	85-115	0			
Cadmium	0.09319	0.00014	0.00020	0.1	0	93.2	85-115	0			
Calcium	9.214	0.22	0.50	10	0	92.1	85-115	0			
Chromium	0.09343	0.00061	0.0050	0.1	0	93.4	85-115	0			
Cobalt	0.08986	0.00027	0.0050	0.1	0	89.9	85-115	0			
Lead	0.08965	0.00022	0.0050	0.1	0	89.7	85-115	0			
Lithium	0.09158	0.0017	0.010	0.1	0	91.6	85-115	0			
Molybdenum	0.09039	0.00033	0.0050	0.1	0	90.4	85-115	0			
Selenium	0.088	0.00048	0.0050	0.1	0	88	85-115	0			
Thallium	0.08792	0.00032	0.0050	0.1	0	87.9	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190022** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MS Sample ID: **22010260-02AMS** Units: **mg/L** Analysis Date: **1/7/2022 04:56 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092090** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09276	0.00042	0.0050	0.1	0.0003267	92.4	70-130	0			
Arsenic	0.09142	0.00019	0.0050	0.1	0.001295	90.1	70-130	0			
Barium	0.1104	0.00057	0.0050	0.1	0.01928	91.1	70-130	0			
Beryllium	0.0922	0.00013	0.0020	0.1	0.0000209	92.2	70-130	0			
Boron	0.5425	0.015	0.020	0.5	0.07429	93.6	70-130	0			
Cadmium	0.09267	0.00014	0.00020	0.1	-0.0000044	92.7	70-130	0			
Calcium	39.08	0.22	0.50	10	30.93	81.4	70-130	0			
Chromium	0.09393	0.00061	0.0050	0.1	0.001044	92.9	70-130	0			
Cobalt	0.08968	0.00027	0.0050	0.1	0.0001265	89.6	70-130	0			
Lead	0.09063	0.00022	0.0050	0.1	0.0002596	90.4	70-130	0			
Lithium	0.09478	0.0017	0.010	0.1	0.005066	89.7	70-130	0			
Molybdenum	0.09829	0.00033	0.0050	0.1	0.005802	92.5	70-130	0			
Selenium	0.09088	0.00048	0.0050	0.1	0.0000583	90.8	70-130	0			
Thallium	0.08854	0.00032	0.0050	0.1	0.0000594	88.5	70-130	0			

MS Sample ID: **22010091-02DMS** Units: **mg/L** Analysis Date: **1/7/2022 05:12 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092099** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09419	0.00042	0.0050	0.1	0.0001507	94	70-130	0			
Arsenic	0.08788	0.00019	0.0050	0.1	0.0004026	87.5	70-130	0			
Barium	0.1355	0.00057	0.0050	0.1	0.04403	91.4	70-130	0			
Beryllium	0.09093	0.00013	0.0020	0.1	0.0000077	90.9	70-130	0			
Boron	0.4854	0.015	0.020	0.5	0.02938	91.2	70-130	0			
Cadmium	0.09421	0.00014	0.00020	0.1	0.0000022	94.2	70-130	0			
Calcium	24.54	0.22	0.50	10	15.81	87.3	70-130	0			
Chromium	0.09305	0.00061	0.0050	0.1	0.0008052	92.2	70-130	0			
Cobalt	0.0895	0.00027	0.0050	0.1	0.0000726	89.4	70-130	0			
Lead	0.09	0.00022	0.0050	0.1	0.000088	89.9	70-130	0			
Lithium	0.09191	0.0017	0.010	0.1	0.0009603	90.9	70-130	0			
Molybdenum	0.09204	0.00033	0.0050	0.1	0.0004411	91.6	70-130	0			
Selenium	0.08644	0.00048	0.0050	0.1	-0.0001529	86.6	70-130	0			
Thallium	0.08809	0.00032	0.0050	0.1	0.0000044	88.1	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **190022** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MSD Sample ID: **22010260-02AMSD** Units: **mg/L** Analysis Date: **1/7/2022 04:58 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092091** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09347	0.00042	0.0050	0.1	0.0003267	93.1	70-130	0.09276	0.768	20	
Arsenic	0.0911	0.00019	0.0050	0.1	0.001295	89.8	70-130	0.09142	0.345	20	
Barium	0.1107	0.00057	0.0050	0.1	0.01928	91.4	70-130	0.1104	0.307	20	
Beryllium	0.0927	0.00013	0.0020	0.1	0.0000209	92.7	70-130	0.0922	0.543	20	
Boron	0.5445	0.015	0.020	0.5	0.07429	94	70-130	0.5425	0.368	20	
Cadmium	0.09249	0.00014	0.00020	0.1	-0.0000044	92.5	70-130	0.09267	0.191	20	
Calcium	38.76	0.22	0.50	10	30.93	78.2	70-130	39.08	0.812	20	
Chromium	0.09455	0.00061	0.0050	0.1	0.001044	93.5	70-130	0.09393	0.655	20	
Cobalt	0.09049	0.00027	0.0050	0.1	0.0001265	90.4	70-130	0.08968	0.9	20	
Lead	0.09072	0.00022	0.0050	0.1	0.0002596	90.5	70-130	0.09063	0.0995	20	
Lithium	0.09476	0.0017	0.010	0.1	0.005066	89.7	70-130	0.09478	0.0279	20	
Molybdenum	0.09772	0.00033	0.0050	0.1	0.005802	91.9	70-130	0.09829	0.583	20	
Selenium	0.09188	0.00048	0.0050	0.1	0.0000583	91.8	70-130	0.09088	1.1	20	
Thallium	0.08894	0.00032	0.0050	0.1	0.0000594	88.9	70-130	0.08854	0.456	20	

MSD Sample ID: **22010091-02DMSD** Units: **mg/L** Analysis Date: **1/7/2022 05:13 PM**
Client ID: Run ID: **ICPMS4_220107A** SeqNo: **8092100** Prep Date: **1/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09517	0.00042	0.0050	0.1	0.0001507	95	70-130	0.09419	1.03	20	
Arsenic	0.08919	0.00019	0.0050	0.1	0.0004026	88.8	70-130	0.08788	1.49	20	
Barium	0.1368	0.00057	0.0050	0.1	0.04403	92.8	70-130	0.1355	1	20	
Beryllium	0.09256	0.00013	0.0020	0.1	0.0000077	92.6	70-130	0.09093	1.78	20	
Boron	0.4959	0.015	0.020	0.5	0.02938	93.3	70-130	0.4854	2.14	20	
Cadmium	0.0952	0.00014	0.00020	0.1	0.0000022	95.2	70-130	0.09421	1.05	20	
Calcium	24.65	0.22	0.50	10	15.81	88.4	70-130	24.54	0.458	20	
Chromium	0.09485	0.00061	0.0050	0.1	0.0008052	94	70-130	0.09305	1.91	20	
Cobalt	0.09067	0.00027	0.0050	0.1	0.0000726	90.6	70-130	0.0895	1.29	20	
Lead	0.09178	0.00022	0.0050	0.1	0.000088	91.7	70-130	0.09	1.96	20	
Lithium	0.09279	0.0017	0.010	0.1	0.0009603	91.8	70-130	0.09191	0.956	20	
Molybdenum	0.09362	0.00033	0.0050	0.1	0.0004411	93.2	70-130	0.09204	1.7	20	
Selenium	0.09059	0.00048	0.0050	0.1	-0.0001529	90.7	70-130	0.08644	4.69	20	
Thallium	0.08999	0.00032	0.0050	0.1	0.0000044	90	70-130	0.08809	2.14	20	

The following samples were analyzed in this batch:

22010076-03A	22010076-04A	22010076-05A
22010076-06A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **189949** Instrument ID: **TDS** Method: **A2540 C-11**

MBLK Sample ID: **MBLK-189949-189949** Units: **mg/L** Analysis Date: **1/10/2022 01:37 PM**
Client ID: Run ID: **TDS_220110A** SeqNo: **8093709** Prep Date: **1/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30								

LCS Sample ID: **LCS-189949-189949** Units: **mg/L** Analysis Date: **1/10/2022 01:37 PM**
Client ID: Run ID: **TDS_220110A** SeqNo: **8093708** Prep Date: **1/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	490	22	30	495	0	99	85-109	0			

DUP Sample ID: **22010073-01A DUP** Units: **mg/L** Analysis Date: **1/10/2022 01:37 PM**
Client ID: Run ID: **TDS_220110A** SeqNo: **8093692** Prep Date: **1/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	913.3	74	100	0	0	0	0-0	880	3.72	10	

DUP Sample ID: **22010076-02C DUP** Units: **mg/L** Analysis Date: **1/10/2022 01:37 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **TDS_220110A** SeqNo: **8093699** Prep Date: **1/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	806.7	74	100	0	0	0	0-0	800	0.83	10	

The following samples were analyzed in this batch:

22010076-01C	22010076-02C	22010076-03C
22010076-04C	22010076-05C	22010076-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R335824** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/5/2022 12:08 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088133** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/5/2022 06:18 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088145** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3138	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/5/2022 09:21 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088155** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/5/2022 10:22 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088169** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3158	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/5/2022 11:53 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088178** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.4793	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R335824** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **MBLK/CCB-R335824** Units: **mg/L** Analysis Date: **1/6/2022 12:39 AM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088182** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3422	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R335824** Units: **mg/L** Analysis Date: **1/5/2022 11:52 AM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088132** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.396	0.31	1.0	10	0	94	90-110	0			
Fluoride	1.912	0.067	0.10	2	0	95.6	90-110	0			
Sulfate	9.785	0.19	1.0	10	0	97.9	90-110	0			

LCS Sample ID: **MLCCV/LCS-R335824** Units: **mg/L** Analysis Date: **1/5/2022 06:03 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088144** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.445	0.31	1.0	10	0	94.5	90-110	0			
Fluoride	2.13	0.067	0.10	2	0	107	90-110	0			
Sulfate	9.9	0.19	1.0	10	0	99	90-110	0			

LCS Sample ID: **MLCCV/LCS-R335824** Units: **mg/L** Analysis Date: **1/5/2022 09:06 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088154** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.445	0.31	1.0	10	0	94.4	90-110	0			
Fluoride	2.123	0.067	0.10	2	0	106	90-110	0			
Sulfate	9.835	0.19	1.0	10	0	98.4	90-110	0			

LCS Sample ID: **MLCCV/LCS-R335824** Units: **mg/L** Analysis Date: **1/5/2022 10:07 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088167** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.506	0.31	1.0	10	0	95.1	88-110	0			
Fluoride	2.107	0.067	0.10	2	0	105	82-116	0			
Sulfate	9.8	0.19	1.0	10	0	98	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R335824** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R335824** Units: **mg/L** Analysis Date: **1/5/2022 11:38 PM**
Client ID: Run ID: **IC3_220105A** SeqNo: **8088176** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.848	0.31	1.0	10	0	98.5	88-110	0			
Fluoride	2.235	0.067	0.10	2	0	112	82-116	0			
Sulfate	9.927	0.19	1.0	10	0	99.3	90-110	0			

MS Sample ID: **22010076-02C MS** Units: **mg/L** Analysis Date: **1/5/2022 05:02 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **IC3_220105A** SeqNo: **8088140** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	973.3	12	40	400	519.2	114	80-120	0			E
Fluoride	74.45	2.7	4.0	80	0	93.1	80-120	0			
Sulfate	459	7.6	40	400	82.33	94.2	80-120	0			

MS Sample ID: **22010076-05C MS** Units: **mg/L** Analysis Date: **1/5/2022 07:34 PM**
Client ID: **2200005 PH-MW-05 Grab** Run ID: **IC3_220105A** SeqNo: **8088150** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	377.1	12	40	400	21.21	89	80-120	0			
Fluoride	76.7	2.7	4.0	80	0	95.9	80-120	0			
Sulfate	565	7.6	40	400	175.5	97.4	80-120	0			

MSD Sample ID: **22010076-02C MSD** Units: **mg/L** Analysis Date: **1/5/2022 05:17 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **IC3_220105A** SeqNo: **8088141** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	964.5	12	40	400	519.2	111	80-120	973.3	0.911	20	E
Fluoride	74	2.7	4.0	80	0	92.5	80-120	74.45	0.604	20	
Sulfate	457.6	7.6	40	400	82.33	93.8	80-120	459	0.318	20	

MSD Sample ID: **22010076-05C MSD** Units: **mg/L** Analysis Date: **1/5/2022 07:50 PM**
Client ID: **2200005 PH-MW-05 Grab** Run ID: **IC3_220105A** SeqNo: **8088151** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	377.4	12	40	400	21.21	89	80-120	377.1	0.071	20	
Fluoride	76.3	2.7	4.0	80	0	95.4	80-120	76.7	0.528	20	
Sulfate	566.1	7.6	40	400	175.5	97.6	80-120	565	0.193	20	

The following samples were analyzed in this batch:

22010076-01C	22010076-02C	22010076-03C
22010076-04C	22010076-05C	22010076-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R335896** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **MBLK/CCB-R335896** Units: **mg/L** Analysis Date: **1/6/2022 11:39 AM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8089992** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335896** Units: **mg/L** Analysis Date: **1/6/2022 04:08 PM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8090004** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.351	0.31	1.0								J
Sulfate	U	0.19	1.0								

MBLK Sample ID: **MBLK/CCB-R335896** Units: **mg/L** Analysis Date: **1/6/2022 06:55 PM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8090015** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.4141	0.31	1.0								J
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R335896** Units: **mg/L** Analysis Date: **1/6/2022 11:24 AM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8089991** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.302	0.31	1.0	10	0	93	90-110	0			
Sulfate	9.677	0.19	1.0	10	0	96.8	90-110	0			

LCS Sample ID: **MLCCV/LCS-R335896** Units: **mg/L** Analysis Date: **1/6/2022 03:53 PM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8090003** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.32	0.31	1.0	10	0	93.2	90-110	0			
Sulfate	9.716	0.19	1.0	10	0	97.2	90-110	0			

MS Sample ID: **22010076-02C MS** Units: **mg/L** Analysis Date: **1/6/2022 12:25 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **IC3_220106A** SeqNo: **8089995** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	598.4	12	40	400	202.3	99	80-120	0			
Sulfate	411.9	7.6	40	400	31.98	95	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22010076
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R335896** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22010248-02B MS** Units: **mg/L** Analysis Date: **1/6/2022 04:38 PM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8090006** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	486.7	12	40	400	114.8	93	80-120	0			
Sulfate	902.1	7.6	40	400	510.2	98	80-120	0			E

MSD Sample ID: **22010076-02C MSD** Units: **mg/L** Analysis Date: **1/6/2022 12:40 PM**
Client ID: **2200002, 2200007, 2200008 PH-MW-02 Grab** Run ID: **IC3_220106A** SeqNo: **8089996** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	601.6	12	40	400	202.3	99.8	80-120	598.4	0.53	20	
Sulfate	412.5	7.6	40	400	31.98	95.1	80-120	411.9	0.166	20	

MSD Sample ID: **22010248-02B MSD** Units: **mg/L** Analysis Date: **1/6/2022 04:54 PM**
Client ID: Run ID: **IC3_220106A** SeqNo: **8090007** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	486.9	12	40	400	114.8	93	80-120	486.7	0.0444	20	
Sulfate	904.8	7.6	40	400	510.2	98.6	80-120	902.1	0.299	20	E

The following samples were analyzed in this batch: 22010076-02C 22010076-04C 22010076-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

EAST KENTUCKY POWER COOPERATIVE CHAIN OF CUSTODY

22010076

Facility:	Sampling Event Type:
Peg's Hill Landfill East Kentucky Power Cooperative H.L. Spurlock Station 1301 West Second Street Maysville, KY 41056	Background Monitoring
	Sample Matrix: Groundwater
	Collected By: Benjamin Bray (Kenvirons)

Laboratory ID #	COLLECTION DATE	TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	Sample Type: Grab or Composite
2200001	12/29/2021	10:14	PH-MW-01	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200002	12/29/2021	11:55	PH-MW-02	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200003	12/29/2021	15:26	PH-MW-03A	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200004	12/29/2021	14:37	PH-MW-04	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200005	12/29/2021	13:18	PH-MW-05	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200006	12/29/2021	11:55	Field Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200007	12/29/2021	11:55	Matrix Spike	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
2200008	12/29/2021	11:55	Matrix Spike Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
2200009	12/29/2021	15:14	Field Blank	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	Grab

Relinquished by: (Signature:)	DATE	TIME	Received by: (Signature)
[signature]	1/3/2022	1200	SEALED
FedEx	1/4/22	0957	[signature]
[signature] 1/4/22 1700			FedEx
FedEx	1/5/22	1130	[signature]

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory ☐ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.) <6°C ALSZL

<6.0°C IR1 pH30 ALSHN

CONDITIONS UPON RECEIPT

Custody seals intact on shipping container/cooler?	☐ Yes	☐ No	☐ Not Present	Notes:
Custody seals intact on sample bottles?	☐ Yes	☐ No	☐ Not Present	
Chain of custody agrees with sample labels?	☐ Yes	☐ No		
Samples collected in proper containers & intact?	☐ Yes	☐ No		
Samples received on ice?	☐ Yes	☐ No	Sample Temp (°C):	
Samples received within holding time?	☐ Yes	☐ No	Checklist Completed by:	
pH acceptable upon receipt?	☐ Yes	☐ No	Checklist Completed Date:	

22010076

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janet Smith
Date/Time:	1/4/2022 0957
Carrier Name:	Fed Ex
Shipping container/cooler in good condition?	(Yes) / No / Not Present
Custody seals intact on shipping container/cooler?	(Yes) / No / Not Present
Custody seals intact on sample bottles?	Yes / No / (Not Present)
Chain of Custody present?	(Yes) / No
COC signed when relinquished and received?	(Yes) / No
COC agrees with sample labels?	(Yes) / No
Samples in proper container/bottle?	(Yes) / No
Sample containers intact?	(Yes) / No
Sufficient sample volume for indicated test?	(Yes) / No
All samples received within holding time?	(Yes) / No
All sample temperatures verified to be in compliance?	(Yes) / No
Temperature(s) (°C):	<6°2
Thermometer(s):	IR
Sample(s) received on ice?	(Yes) / No
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #: _____	
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

LL Hg received in HCl preserved 250mL amber bottles. These were placed in unsealed ziploc bags loose in cooler, not in double-ziploc bags. Sample duplicates not provided for each site. Client provided MS/MSD samples but did not list associated with master sample, but separate. Samples logged w/main sample collected same date and time.

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **04-Jan-22 09:57**

Work Order: **22010076** Received by: **LYS**

Checklist completed by: Lydia Sweet (eSignature) 05-Jan-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 27-Jan-22 (Date)

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/5/2022 1:21:02 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

February 04, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22010076
Pace Project No.: 30458814

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22010076
Pace Project No.: 30458814

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22010076
Pace Project No.: 30458814

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30458814001	**22010076-01D**	Water	12/29/21 10:14	01/10/22 11:00
30458814002	**22010076-02D**	Water	12/29/21 11:55	01/10/22 11:00
30458814003	**22010076-03D**	Water	12/29/21 15:26	01/10/22 11:00
30458814004	**22010076-04D**	Water	12/29/21 14:37	01/10/22 11:00
30458814005	**22010076-05D**	Water	12/29/21 13:18	01/10/22 11:00
30458814006	**22010076-06D**	Water	12/29/21 11:15	01/10/22 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22010076
Pace Project No.: 30458814

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30458814001	**22010076-01D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30458814002	**22010076-02D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30458814003	**22010076-03D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30458814004	**22010076-04D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30458814005	**22010076-05D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30458814006	**22010076-06D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22010076
Pace Project No.: 30458814

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: February 04, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22010076
Pace Project No.: 30458814

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: February 04, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22010076
Pace Project No.: 30458814

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: February 04, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22010076
Pace Project No.: 30458814

Sample: 22010076-01D **Lab ID: 30458814001** Collected: 12/29/21 10:14 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.339 ± 0.566 (0.983) C:NA T:100%**	pCi/L	02/03/22 13:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.19 ± 0.459 (0.662) C:66% T:86%**	pCi/L	01/31/22 14:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.53 ± 1.03 (1.65)**	pCi/L	02/04/22 15:47	7440-14-4	

Sample: 22010076-02D **Lab ID: 30458814002** Collected: 12/29/21 11:55 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.232 ± 0.394 (0.696) C:NA T:85%**	pCi/L	02/03/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.810 ± 0.460 (0.843) C:68% T:87%**	pCi/L	01/31/22 14:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 0.854 (1.54)**	pCi/L	02/04/22 15:47	7440-14-4	

Sample: 22010076-03D **Lab ID: 30458814003** Collected: 12/29/21 15:26 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.506 ± 0.458 (0.675) C:NA T:93%**	pCi/L	02/03/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.724 ± 0.496 (0.959) C:67% T:80%**	pCi/L	01/31/22 14:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.23 ± 0.954 (1.63)**	pCi/L	02/04/22 15:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22010076
Pace Project No.: 30458814

Sample: 22010076-04D **Lab ID: 30458814004** Collected: 12/29/21 14:37 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.248 ± 0.487 (0.875) C:NA T:92%**	pCi/L	02/03/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.268 ± 0.322 (0.676) C:68% T:89%**	pCi/L	01/31/22 14:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.516 ± 0.809 (1.55)**	pCi/L	02/04/22 15:47	7440-14-4	

Sample: 22010076-05D **Lab ID: 30458814005** Collected: 12/29/21 13:18 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.220 ± 0.457 (0.824) C:NA T:96%**	pCi/L	02/03/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.310 ± 0.652 (1.59) C:69% T:82%**	pCi/L	01/31/22 19:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.220 ± 1.11 (2.41)**	pCi/L	02/04/22 15:47	7440-14-4	

Sample: 22010076-06D **Lab ID: 30458814006** Collected: 12/29/21 11:15 Received: 01/10/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.336 ± 0.493 (0.842) C:NA T:89%**	pCi/L	02/03/22 13:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.27 ± 0.852 (1.63) C:63% T:83%**	pCi/L	01/31/22 19:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.61 ± 1.35 (2.47)**	pCi/L	02/04/22 15:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22010076
Pace Project No.: 30458814

QC Batch: 479190 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30458814001, 30458814002, 30458814003, 30458814004, 30458814005, 30458814006

METHOD BLANK: 2315327 Matrix: Water
Associated Lab Samples: 30458814001, 30458814002, 30458814003, 30458814004, 30458814005, 30458814006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0439 ± 0.228 (0.472) C:NA T:92%	pCi/L	02/03/22 13:18	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22010076
Pace Project No.: 30458814

QC Batch: 479192
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30458814001, 30458814002, 30458814003, 30458814004, 30458814005, 30458814006

METHOD BLANK: 2315336 Matrix: Water
Associated Lab Samples: 30458814001, 30458814002, 30458814003, 30458814004, 30458814005, 30458814006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.221 ± 0.325 (0.701) C:76% T:90%	pCi/L	01/31/22 14:23	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22010076
Pace Project No.: 30458814

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

☑ ALS Environmental
1740 Union Carbide Drive
South Charleston, WV 25303
(Tel) 304.356.3168

Chain of Custody Form

Page _____ of _____

☐ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22010076	A	Ra226 (903.1), Ra 228 (904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Environmental	Bill To Company		C	
Send Report To	Rebecca Kiser	Invoice Attn.		D	
Address	1740 Union Carbide Drive	Address		E	
City/State/Zip	South Charleston, WV 25303	City/State/Zip		F	
Phone	304-356-3168	Phone		G	
Fax	304-205-6262	Fax		H	
e-Mail Address	rebecca.kiser@alsglobal.com			I	
				J	

WO# : 30458814

30458814

No.	Sample Description	Comp / Grab	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	22010076-01D	G	12/29/2021	10:14	Groundwater	2	2	X										001
2	22010076-02D	G	12/29/2021	11:55	Groundwater	2	2	X										002
3	22010076-03D	G	12/29/2021	15:26	Groundwater	2	2	X										003
4	22010076-04D	G	12/29/2021	14:37	Groundwater	2	2	X										004
5	22010076-05D	G	12/29/2021	13:18	Groundwater	2	2	X										005
6	22010076-06D	G	12/29/2021	11:15	Groundwater	2	2	X										006
7																		
8																		
9																		
10																		

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Temp:
[signature]	1/5/2022	17 00	[signature] 1/10/22 11:00	
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	Temp:
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: Kentucky Samples

Sampler: B. Bray.

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Standard QC + Raw Data
- ☐ Level IV: SW846 Methods/CLP
- ☐ Other: _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS

Project # #-30458814

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label# AR

LIMS Login VR

Tracking #: 7756 7357 8971

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used _____ Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10028011 / Date and Initials of person examining contents: AR 1/10/22
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT		X		5. all sample labels begin with 22010076 samples 2-6 on COC begin with 21120352-
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X /	/ X		10.
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Hex Cr Aqueous sample field filtered			X	13.
Organic Samples checked for dechlorination:			X	14.
Filtered volume received for Dissolved tests			X	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	X			16. 2.5mL HNO_3 added to 2 BP1N for 22010076-010 & 1 BP1N for 22010076-040
All containers meet method preservation requirements.		X		Initial when completed: AR Date/time of preservation: 1/11/22 1330
				Lot # of added preservative: HL21-1409
Headspace in VOA Vials (>6mm):			X	17.
Trip Blank Present:			X	18.
Trip Blank Custody Seals Present			X	
Rad Samples Screened < 0.5 mrem/hr	X			Initial when completed: AR Date: 1/10/22 Survey Meter SN: 15163

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: revised chain received 1/11/22

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

Client _____

Site _____

Profile Number 5573

Notes 2 BP1N for each

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																						#	3045881				4		
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Chain of Custody Form

☑ ALS Environmental
1740 Union Carbide Drive
South Charleston, WV 25303
(Tel) 304.356.3168

Page ______ of ______

☐ ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22010076	A	Ra226 (903.1), Ra 228 (904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Environmental	Bill To Company		C	
Send Report To	Rebecca Kiser	Invoice Attn.		D	
Address	1740 Union Carbide Drive	Address		E	
				F	# 30458814
City/State/Zip	South Charleston, WV 25303	City/State/Zip		G	
Phone	304-356-3168	Phone		H	
Fax	304-205-6262	Fax		I	
e-Mail Address	rebecca.kiser@alsglobal.com			J	

No.	Sample Description	Comp / Grab	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	22010076-01D	G	12/29/2021	10:14	Groundwater	2	2	X										
2	21120352-02D	G	12/29/2021	11:55	Groundwater	2	2	X										
3	21120352-03D	G	12/29/2021	15:26	Groundwater	2	2	X										
4	21120352-04D	G	12/29/2021	14:37	Groundwater	2	2	X										
5	21120352-05D	G	12/29/2021	13:18	Groundwater	2	2	X										
6	21120352-06D	G	12/29/2021	11:15	Groundwater	2	2	X										
7																		
8																		
9																		
10																		

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ______

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Temp:
[signature]	1/5/2022	1700		
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	Temp:
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: Kentucky Samples

Sampler: B. Bray.

QC Package: (Check Box Below)

Level II: Standard QC
Level III: Standard QC + Raw Data
Level IV: SW846 Methods/CLP
Other: ______

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

11-Mar-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **Peg's Hill-Background Monitoring** Work Order: **22011915**

Dear Jared,

ALS Environmental received 7 samples on 31-Jan-2022 02:15 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 11-Mar-22

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Work Order: **22011915**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22011915-01	2200101 PH-MW-01 Grab	Groundwater		1/27/2022 12:16	1/31/2022 14:15	☐
22011915-01	2200101 PH-MW-01 Grab	Groundwater		1/27/2022 12:16	2/1/2022 14:30	☐
22011915-02	2200102 PH-MW-02 Grab	Groundwater		1/27/2022 13:30	1/31/2022 14:15	☐
22011915-02	2200102 PH-MW-02 Grab	Groundwater		1/27/2022 13:30	2/1/2022 14:30	☐
22011915-03	2200103 PH-MW-03A Grab	Groundwater		1/27/2022 16:43	1/31/2022 14:15	☐
22011915-03	2200103 PH-MW-03A Grab	Groundwater		1/27/2022 16:43	2/1/2022 14:30	☐
22011915-04	2200104/2200107/2200108 PH-MW-04 Grab	Groundwater		1/27/2022 15:55	1/31/2022 14:15	☐
22011915-04	2200104/2200107/2200108 PH-MW-04 Grab	Groundwater		1/27/2022 15:55	2/1/2022 14:30	☐
22011915-05	2200105 PH-MW-05 Grab	Groundwater		1/27/2022 14:26	1/31/2022 14:15	☐
22011915-05	2200105 PH-MW-05 Grab	Groundwater		1/27/2022 14:26	2/1/2022 14:30	☐
22011915-06	2200106 Field Duplicate Grab	Groundwater		1/27/2022 15:55	1/31/2022 14:15	☐
22011915-06	2200106 Field Duplicate Grab	Groundwater		1/27/2022 15:55	2/1/2022 14:30	☐
22011915-07	2200109 Field Blank Grab	Groundwater		1/27/2022 15:25	2/1/2022 14:30	☐

Client:	East Kentucky Power Cooperative
Project:	Peg's Hill-Background Monitoring
Work Order:	22011915

Case Narrative

Samples for the above noted Work Order were received on 01/31/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Batch 191496, Method E200.8, Sample 22011915-03AMS: The MS and/or MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: B

Batch 191498, Method E200.8, Sample MBLK-191498: The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Cr

Batch 191498, Method E200.8, Sample 22011915-04AMSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Cr

Batch 191498, Method E200.8, Sample 22011915-04AMSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Cr

Batch 191498, Method E200.8, Sample 22011915-04AMS: The MS and/or MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca

Wet Chemistry:
Batch R337730, Method E300.0, Sample 22011915-03C MS: MS and MSD values were

outside the upper limit of calibration. Processed at equivalent dilution level as the parent.
Chloride

Batch R337730, Method E300.0, Sample 22011915-04C MS: MS and MSD values were outside the upper limit of calibration. Processed at equivalent dilution level as the parent.
Sulfate

Subcontracted analytical data has been appended to this report in its entirety.

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
WorkOrder: **22011915**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter
none	

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200101 PH-MW-01 Grab
Collection Date: 1/27/2022 12:16 PM

Work Order: 22011915
Lab ID: 22011915-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00064**		**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 11:53
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	2/9/2022 16:51
Arsenic	**0.029**		**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 16:51
Barium	**0.057**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 16:51
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 18:45
Boron	**1.2**		**0.015**	**0.020**	**mg/L**	1	2/9/2022 16:51
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 16:51
Calcium	**350**		**2.2**	**5.0**	**mg/L**	10	2/9/2022 18:38
Chromium	**0.0019**	J	**0.00061**	**0.0050**	**mg/L**	1	2/9/2022 16:51
Cobalt	**0.0029**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 16:51
Lead	U		0.00022	0.0050	mg/L	1	2/9/2022 16:51
Lithium	**0.080**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 16:51
Molybdenum	U		0.00033	0.0050	mg/L	1	2/9/2022 16:51
Selenium	U		0.00048	0.0050	mg/L	1	2/9/2022 16:51
Thallium	U		0.00032	0.0050	mg/L	1	2/9/2022 16:51
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**35**		**3.1**	**10**	**mg/L**	10	2/8/2022 12:43
Fluoride	U		0.067	0.10	mg/L	1	2/7/2022 11:55
Sulfate	**270**		**7.6**	**40**	**mg/L**	40	2/8/2022 12:54
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**			Prep: FILTER / 2/3/22		Analyst: **SRN**
Total Dissolved Solids	**1,700**		**74**	**100**	**mg/L**	1	2/7/2022 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200102 PH-MW-02 Grab
Collection Date: 1/27/2022 01:30 PM

Work Order: 22011915
Lab ID: 22011915-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00027**	J	**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 12:01
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	2/9/2022 16:53
Arsenic	**0.011**		**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 16:53
Barium	**0.083**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 16:53
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 18:47
Boron	**1.4**		**0.015**	**0.020**	**mg/L**	1	2/9/2022 16:53
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 16:53
Calcium	**41**		**0.22**	**0.50**	**mg/L**	1	2/9/2022 16:53
Chromium	**0.00094**	J	**0.00061**	**0.0050**	**mg/L**	1	2/9/2022 16:53
Cobalt	**0.00031**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 16:53
Lead	U		0.00022	0.0050	mg/L	1	2/9/2022 16:53
Lithium	**0.086**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 16:53
Molybdenum	**0.0014**	J	**0.00033**	**0.0050**	**mg/L**	1	2/9/2022 16:53
Selenium	U		0.00048	0.0050	mg/L	1	2/9/2022 16:53
Thallium	U		0.00032	0.0050	mg/L	1	2/9/2022 16:53
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**240**		**12**	**40**	**mg/L**	40	2/8/2022 14:02
Fluoride	**0.23**		**0.067**	**0.10**	**mg/L**	1	2/7/2022 12:56
Sulfate	**31**		**1.9**	**10**	**mg/L**	10	2/8/2022 13:51
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**			Prep: FILTER / 2/3/22		Analyst: **SRN**
Total Dissolved Solids	**1,000**		**74**	**100**	**mg/L**	1	2/7/2022 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200103 PH-MW-03A Grab
Collection Date: 1/27/2022 04:43 PM

Work Order: 22011915
Lab ID: 22011915-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.0013**		**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 12:09
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	**0.00050**	J	**0.00042**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Arsenic	**0.011**		**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Barium	**0.058**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 18:48
Boron	**3.2**		**0.15**	**0.20**	**mg/L**	10	2/9/2022 18:40
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 16:55
Calcium	**33**		**0.22**	**0.50**	**mg/L**	1	2/9/2022 16:55
Chromium	**0.00073**	J	**0.00061**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Cobalt	**0.00063**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Lead	U		0.00022	0.0050	mg/L	1	2/9/2022 16:55
Lithium	**0.14**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 16:55
Molybdenum	**0.024**		**0.00033**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Selenium	**0.0011**	J	**0.00048**	**0.0050**	**mg/L**	1	2/9/2022 16:55
Thallium	U		0.00032	0.0050	mg/L	1	2/9/2022 16:55
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**480**		**12**	**40**	**mg/L**	40	2/7/2022 13:20
Fluoride	**0.42**		**0.067**	**0.10**	**mg/L**	1	2/7/2022 13:07
Sulfate	**440**		**7.6**	**40**	**mg/L**	40	2/7/2022 13:20
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**			Prep: FILTER / 2/3/22		Analyst: **SRN**
Total Dissolved Solids	**1,900**		**110**	**150**	**mg/L**	1	2/7/2022 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200104/2200107/2200108 PH-MW-04 Grab
Collection Date: 1/27/2022 03:55 PM

Work Order: 22011915
Lab ID: 22011915-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00043**	J	**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 12:16
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	2/9/2022 15:01
Arsenic	**0.00039**	J	**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 17:37
Barium	**0.075**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 15:01
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 15:01
Boron	**0.97**		**0.015**	**0.020**	**mg/L**	1	2/9/2022 15:01
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 15:01
Calcium	**180**		**0.22**	**0.50**	**mg/L**	1	2/9/2022 15:01
Chromium	**0.0013**	J	**0.00061**	**0.0050**	**mg/L**	1	2/9/2022 15:01
Cobalt	**0.0014**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 15:01
Lead	U		0.00022	0.0050	mg/L	1	2/9/2022 15:01
Lithium	**0.040**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 15:01
Molybdenum	**0.00050**	J	**0.00033**	**0.0050**	**mg/L**	1	2/9/2022 15:01
Selenium	U		0.00048	0.0050	mg/L	1	2/9/2022 15:01
Thallium	**0.00043**	J	**0.00032**	**0.0050**	**mg/L**	1	2/9/2022 15:01
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**30**		**5.0**	**16**	**mg/L**	16	2/3/2022 16:46
Fluoride	**0.11**		**0.067**	**0.10**	**mg/L**	1	2/7/2022 14:07
Sulfate	**260**		**3.0**	**16**	**mg/L**	16	2/3/2022 16:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200105 PH-MW-05 Grab
Collection Date: 1/27/2022 02:26 PM

Work Order: 22011915
Lab ID: 22011915-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00059**		**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 12:48
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	2/9/2022 15:06
Arsenic	**0.00043**	J	**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 17:42
Barium	**0.080**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 15:06
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 15:06
Boron	**0.26**		**0.015**	**0.020**	**mg/L**	1	2/9/2022 15:06
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 15:06
Calcium	**130**		**0.22**	**0.50**	**mg/L**	1	2/9/2022 15:06
Chromium	**0.0013**	J	**0.00061**	**0.0050**	**mg/L**	1	2/9/2022 15:06
Cobalt	**0.00041**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 15:06
Lead	**0.00049**	J	**0.00022**	**0.0050**	**mg/L**	1	2/9/2022 15:06
Lithium	**0.025**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 15:06
Molybdenum	U		0.00033	0.0050	mg/L	1	2/9/2022 15:06
Selenium	U		0.00048	0.0050	mg/L	1	2/9/2022 15:06
Thallium	**0.00037**	J	**0.00032**	**0.0050**	**mg/L**	1	2/9/2022 15:06
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**17**		**5.0**	**16**	**mg/L**	16	2/3/2022 17:33
Fluoride	**0.076**	J	**0.067**	**0.10**	**mg/L**	1	2/7/2022 15:38
Sulfate	**220**		**3.0**	**16**	**mg/L**	16	2/3/2022 17:33
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**			Prep: FILTER / 2/3/22		Analyst: **SRN**
Total Dissolved Solids	**670**		**37**	**50**	**mg/L**	1	2/7/2022 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200106 Field Duplicate Grab
Collection Date: 1/27/2022 03:55 PM

Work Order: 22011915
Lab ID: 22011915-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00039**	J	**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 12:55
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 2/9/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	2/9/2022 15:08
Arsenic	**0.00043**	J	**0.00019**	**0.0050**	**mg/L**	1	2/9/2022 17:44
Barium	**0.075**		**0.00057**	**0.0050**	**mg/L**	1	2/9/2022 15:08
Beryllium	U		0.00013	0.0020	mg/L	1	2/9/2022 15:08
Boron	**0.98**		**0.015**	**0.020**	**mg/L**	1	2/9/2022 15:08
Cadmium	U		0.00014	0.00020	mg/L	1	2/9/2022 15:08
Calcium	**180**		**0.22**	**0.50**	**mg/L**	1	2/9/2022 15:08
Chromium	**0.00094**	J	**0.00061**	**0.0050**	**mg/L**	1	2/11/2022 17:19
Cobalt	**0.0014**	J	**0.00027**	**0.0050**	**mg/L**	1	2/9/2022 15:08
Lead	U		0.00022	0.0050	mg/L	1	2/9/2022 15:08
Lithium	**0.039**		**0.0017**	**0.010**	**mg/L**	1	2/9/2022 15:08
Molybdenum	**0.00045**	J	**0.00033**	**0.0050**	**mg/L**	1	2/9/2022 15:08
Selenium	U		0.00048	0.0050	mg/L	1	2/9/2022 15:08
Thallium	U		0.00032	0.0050	mg/L	1	2/9/2022 15:08
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**29**		**5.0**	**16**	**mg/L**	16	2/3/2022 17:44
Fluoride	**0.096**	J	**0.067**	**0.10**	**mg/L**	1	2/7/2022 15:49
Sulfate	**270**		**3.0**	**16**	**mg/L**	16	2/3/2022 17:44
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 2/3/22		Analyst: **SRN**
Total Dissolved Solids	**1,100**		**74**	**100**	**mg/L**	1	2/7/2022 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *11-Mar-22*

Client: East Kentucky Power Cooperative
Project: Peg's Hill-Background Monitoring
Sample ID: 2200109 Field Blank Grab
Collection Date: 1/27/2022 03:25 PM

Work Order: 22011915
Lab ID: 22011915-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 2/11/22		Analyst: **ABL**
Mercury	**0.00027**	J	**0.00020**	**0.00050**	**µg/L**	1	2/11/2022 13:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **191592** Instrument ID: **HG3** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-191592-191592** Units: **ng/L** Analysis Date: **2/11/2022 11:37 AM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171141** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-191592-191592** Units: **ng/L** Analysis Date: **2/11/2022 12:24 PM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171147** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-191592-191592** Units: **ng/L** Analysis Date: **2/11/2022 01:11 PM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171153** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22011915-04BMS** Units: **ng/L** Analysis Date: **2/11/2022 12:32 PM**

Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **HG3_220211A** SeqNo: **8171148** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.87	0.2	0.50	4	0.43	111	71-125	0			

MS Sample ID: **22020171-02JMS** Units: **ng/L** Analysis Date: **2/11/2022 01:50 PM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171158** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.5	0.2	0.50	4	0.3	105	71-125	0			

MSD Sample ID: **22011915-04BMSD** Units: **ng/L** Analysis Date: **2/11/2022 12:40 PM**

Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **HG3_220211A** SeqNo: **8171149** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.73	0.2	0.50	4	0.43	108	71-125	4.87	2.92	24	

MSD Sample ID: **22020171-02JMSD** Units: **ng/L** Analysis Date: **2/11/2022 02:06 PM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171160** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.56	0.2	0.50	4	0.3	106	71-125	4.5	1.32	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191592** Instrument ID: **HG3** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-191592-191592** Units: **ng/L** Analysis Date: **2/11/2022 11:30 AM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171140** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.37	0.2	0.50	5	0	107	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-191592-191592** Units: **ng/L** Analysis Date: **2/11/2022 02:52 PM**

Client ID: Run ID: **HG3_220211A** SeqNo: **8171166** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.25	0.2	0.50	5	0	105	77-123	0			

The following samples were analyzed in this batch:

22011915-01B	22011915-02B	22011915-03B
22011915-04B	22011915-05B	22011915-06B
22011915-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191496** Instrument ID: **ICPMS3** Method: **E200.8**

MBLK Sample ID: **MBLK-191496-191496** Units: **mg/L** Analysis Date: **2/9/2022 04:16 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163474** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	0.004369	0.00019	0.0050								J
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	U	0.00061	0.0050								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-191496-191496** Units: **mg/L** Analysis Date: **2/9/2022 04:17 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163475** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1017	0.00042	0.0050	0.1	0	102	85-115	0			
Arsenic	0.09102	0.00019	0.0050	0.1	0	91	85-115	0			
Barium	0.09474	0.00057	0.0050	0.1	0	94.7	85-115	0			
Beryllium	0.09976	0.00013	0.0020	0.1	0	99.8	85-115	0			
Boron	0.5036	0.015	0.020	0.5	0	101	85-115	0			
Cadmium	0.09487	0.00014	0.00020	0.1	0	94.9	85-115	0			
Calcium	9.6	0.22	0.50	10	0	96	85-115	0			
Chromium	0.08782	0.00061	0.0050	0.1	0	87.8	85-115	0			
Cobalt	0.08887	0.00027	0.0050	0.1	0	88.9	85-115	0			
Lead	0.09361	0.00022	0.0050	0.1	0	93.6	85-115	0			
Lithium	0.09566	0.0017	0.010	0.1	0	95.7	85-115	0			
Molybdenum	0.0941	0.00033	0.0050	0.1	0	94.1	85-115	0			
Selenium	0.08773	0.00048	0.0050	0.1	0	87.7	85-115	0			
Thallium	0.09045	0.00032	0.0050	0.1	0	90.4	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **191496** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22020457-16AMS** Units: **mg/L** Analysis Date: **2/9/2022 04:37 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163486** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1019	0.00042	0.0050	0.1	0	102	70-130	0			
Arsenic	0.09758	0.00019	0.0050	0.1	0.007905	89.7	70-130	0			
Barium	0.1142	0.00057	0.0050	0.1	0.01979	94.5	70-130	0			
Beryllium	0.09553	0.00013	0.0020	0.1	0	95.5	70-130	0			
Boron	0.5131	0.015	0.020	0.5	0.0456	93.5	70-130	0			
Cadmium	0.09587	0.00014	0.00020	0.1	0	95.9	70-130	0			
Calcium	42.51	0.22	0.50	10	34.35	81.6	70-130	0			
Chromium	0.09023	0.00061	0.0050	0.1	0.001021	89.2	70-130	0			
Cobalt	0.08999	0.00027	0.0050	0.1	0	90	70-130	0			
Lead	0.09469	0.00022	0.0050	0.1	0	94.7	70-130	0			
Lithium	0.09818	0.0017	0.010	0.1	0.003267	94.9	70-130	0			
Molybdenum	0.09731	0.00033	0.0050	0.1	0.001246	96.1	70-130	0			
Selenium	0.08995	0.00048	0.0050	0.1	0	90	70-130	0			
Thallium	0.09352	0.00032	0.0050	0.1	0	93.5	70-130	0			

MS Sample ID: **22011915-03AMS** Units: **mg/L** Analysis Date: **2/9/2022 04:56 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS3_220209A** SeqNo: **8163650** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1002	0.00042	0.0050	0.1	0.0005005	99.7	70-130	0			
Arsenic	0.1003	0.00019	0.0050	0.1	0.01127	89	70-130	0			
Barium	0.1507	0.00057	0.0050	0.1	0.05774	93	70-130	0			
Cadmium	0.09355	0.00014	0.00020	0.1	-0.0000055	93.6	70-130	0			
Calcium	41.16	0.22	0.50	10	33.04	81.2	70-130	0			
Chromium	0.08841	0.00061	0.0050	0.1	0.0007293	87.7	70-130	0			
Cobalt	0.08875	0.00027	0.0050	0.1	0.0006292	88.1	70-130	0			
Lead	0.09394	0.00022	0.0050	0.1	0.0000319	93.9	70-130	0			
Lithium	0.2256	0.0017	0.010	0.1	0.1387	86.9	70-130	0			
Molybdenum	0.1206	0.00033	0.0050	0.1	0.02438	96.3	70-130	0			
Selenium	0.09324	0.00048	0.0050	0.1	0.001076	92.2	70-130	0			
Thallium	0.09336	0.00032	0.0050	0.1	0.0000242	93.3	70-130	0			

MS Sample ID: **22011915-03AMS** Units: **mg/L** Analysis Date: **2/9/2022 06:41 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS4_220209A** SeqNo: **8163749** Prep Date: **2/9/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	3.474	0.15	0.20	0.5	3.277	39.4	70-130	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191496** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22011915-03AMS** Units: **mg/L** Analysis Date: **2/9/2022 06:50 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS4_220209A** SeqNo: **8163754** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09175	0.00013	0.0020	0.1	0.0000033	91.7	70-130	0			

MSD Sample ID: **22020457-16AMSD** Units: **mg/L** Analysis Date: **2/9/2022 04:39 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163487** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1016	0.00042	0.0050	0.1	0	102	70-130	0.1019	0.249	20	
Arsenic	0.09688	0.00019	0.0050	0.1	0.007905	89	70-130	0.09758	0.726	20	
Barium	0.1132	0.00057	0.0050	0.1	0.01979	93.4	70-130	0.1142	0.922	20	
Beryllium	0.09695	0.00013	0.0020	0.1	0	97	70-130	0.09553	1.48	20	
Boron	0.5254	0.015	0.020	0.5	0.0456	96	70-130	0.5131	2.36	20	
Cadmium	0.09531	0.00014	0.00020	0.1	0	95.3	70-130	0.09587	0.586	20	
Calcium	42.78	0.22	0.50	10	34.35	84.2	70-130	42.51	0.63	20	
Chromium	0.08949	0.00061	0.0050	0.1	0.001021	88.5	70-130	0.09023	0.828	20	
Cobalt	0.08888	0.00027	0.0050	0.1	0	88.9	70-130	0.08999	1.24	20	
Lead	0.09399	0.00022	0.0050	0.1	0	94	70-130	0.09469	0.744	20	
Lithium	0.09714	0.0017	0.010	0.1	0.003267	93.9	70-130	0.09818	1.07	20	
Molybdenum	0.09669	0.00033	0.0050	0.1	0.001246	95.4	70-130	0.09731	0.641	20	
Selenium	0.08991	0.00048	0.0050	0.1	0	89.9	70-130	0.08995	0.0453	20	
Thallium	0.09354	0.00032	0.0050	0.1	0	93.5	70-130	0.09352	0.02	20	

MSD Sample ID: **22011915-03AMSD** Units: **mg/L** Analysis Date: **2/9/2022 04:58 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS3_220209A** SeqNo: **8163651** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1008	0.00042	0.0050	0.1	0.0005005	100	70-130	0.1002	0.562	20	
Arsenic	0.1009	0.00019	0.0050	0.1	0.01127	89.7	70-130	0.1003	0.649	20	
Barium	0.1513	0.00057	0.0050	0.1	0.05774	93.5	70-130	0.1507	0.358	20	
Cadmium	0.09362	0.00014	0.00020	0.1	-0.0000055	93.6	70-130	0.09355	0.0764	20	
Calcium	41.32	0.22	0.50	10	33.04	82.8	70-130	41.16	0.391	20	
Chromium	0.08821	0.00061	0.0050	0.1	0.0007293	87.5	70-130	0.08841	0.227	20	
Cobalt	0.08903	0.00027	0.0050	0.1	0.0006292	88.4	70-130	0.08875	0.318	20	
Lead	0.0942	0.00022	0.0050	0.1	0.0000319	94.2	70-130	0.09394	0.276	20	
Lithium	0.22	0.0017	0.010	0.1	0.1387	81.3	70-130	0.2256	2.51	20	
Molybdenum	0.1205	0.00033	0.0050	0.1	0.02438	96.1	70-130	0.1206	0.139	20	
Selenium	0.09367	0.00048	0.0050	0.1	0.001076	92.6	70-130	0.09324	0.453	20	
Thallium	0.09414	0.00032	0.0050	0.1	0.0000242	94.1	70-130	0.09336	0.828	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191496** Instrument ID: **ICPMS3** Method: **E200.8**

MSD Sample ID: **22011915-03AMSD** Units: **mg/L** Analysis Date: **2/9/2022 06:43 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS4_220209A** SeqNo: **8163750** Prep Date: **2/9/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	3.507	0.15	0.20	0.5	3.277	46	70-130	3.715	5.76	20	SO

MSD Sample ID: **22011915-03AMSD** Units: **mg/L** Analysis Date: **2/9/2022 06:52 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **ICPMS4_220209A** SeqNo: **8163755** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09111	0.00013	0.0020	0.1	0.0000033	91.1	70-130	0.09634	5.58	20	

The following samples were analyzed in this batch: 22011915-01A 22011915-02A 22011915-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191498** Instrument ID: **ICPMS3** Method: **E200.8**

MBLK Sample ID: **MBLK-191498-191498** Units: **mg/L** Analysis Date: **2/9/2022 02:57 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163068** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	0.001041	0.00048	0.0050								J
Thallium	U	0.00032	0.0050								

MBLK Sample ID: **MBLK-191498-191498** Units: **mg/L** Analysis Date: **2/9/2022 05:35 PM**
Client ID: Run ID: **ICPMS4_220209A** SeqNo: **8163724** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.00019	0.0050								
Chromium	0.008609	0.00061	0.0050								

LCS Sample ID: **LCS-191498-191498** Units: **mg/L** Analysis Date: **2/9/2022 02:59 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163069** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09887	0.00042	0.0050	0.1	0	98.9	85-115	0			
Arsenic	0.09954	0.00019	0.0050	0.1	0	99.5	85-115	0			B
Barium	0.09622	0.00057	0.0050	0.1	0	96.2	85-115	0			
Beryllium	0.107	0.00013	0.0020	0.1	0	107	85-115	0			
Boron	0.5391	0.015	0.020	0.5	0	108	85-115	0			
Cadmium	0.09856	0.00014	0.00020	0.1	0	98.6	85-115	0			
Calcium	9.955	0.22	0.50	10	0	99.5	85-115	0			
Chromium	0.1024	0.00061	0.0050	0.1	0	102	85-115	0			B
Cobalt	0.09551	0.00027	0.0050	0.1	0	95.5	85-115	0			
Lead	0.09675	0.00022	0.0050	0.1	0	96.8	85-115	0			
Lithium	0.09876	0.0017	0.010	0.1	0	98.8	85-115	0			
Molybdenum	0.09785	0.00033	0.0050	0.1	0	97.9	85-115	0			
Selenium	0.09476	0.00048	0.0050	0.1	0	94.8	85-115	0			
Thallium	0.09494	0.00032	0.0050	0.1	0	94.9	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191498** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22011915-04AMS** Units: **mg/L** Analysis Date: **2/9/2022 03:02 PM**

Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **ICPMS3_220209A** SeqNo: **8163071** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1041	0.00042	0.0050	0.1	0.0001177	104	70-130	0			
Arsenic	0.1114	0.00019	0.0050	0.1	0.01927	92.2	70-130	0			B
Barium	0.1674	0.00057	0.0050	0.1	0.07518	92.2	70-130	0			
Beryllium	0.1034	0.00013	0.0020	0.1	0.0000209	103	70-130	0			
Boron	1.476	0.015	0.020	0.5	0.9707	101	70-130	0			
Cadmium	0.09723	0.00014	0.00020	0.1	0.0000143	97.2	70-130	0			
Calcium	185.2	0.22	0.50	10	181.8	34.1	70-130	0			SO
Chromium	0.1042	0.00061	0.0050	0.1	0.001286	103	70-130	0			B
Cobalt	0.09116	0.00027	0.0050	0.1	0.001437	89.7	70-130	0			
Lead	0.0962	0.00022	0.0050	0.1	0.0001254	96.1	70-130	0			
Lithium	0.1341	0.0017	0.010	0.1	0.03956	94.5	70-130	0			
Molybdenum	0.09876	0.00033	0.0050	0.1	0.0004972	98.3	70-130	0			
Selenium	0.09744	0.00048	0.0050	0.1	0.0000858	97.4	70-130	0			
Thallium	0.09587	0.00032	0.0050	0.1	0.000429	95.4	70-130	0			

MS Sample ID: **22020241-01BMS** Units: **mg/L** Analysis Date: **2/9/2022 03:21 PM**

Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163081** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1045	0.00042	0.0050	0.1	0.0003399	104	70-130	0			
Arsenic	0.09869	0.00019	0.0050	0.1	0.009374	89.3	70-130	0			B
Barium	0.1099	0.00057	0.0050	0.1	0.01513	94.8	70-130	0			
Beryllium	0.1001	0.00013	0.0020	0.1	0.0000682	100	70-130	0			
Boron	0.5212	0.015	0.020	0.5	0.01824	101	70-130	0			
Cadmium	0.09855	0.00014	0.00020	0.1	-0.0000121	98.6	70-130	0			
Calcium	37.9	0.22	0.50	10	29.41	84.9	70-130	0			
Chromium	0.1163	0.00061	0.0050	0.1	0.02023	96.1	70-130	0			B
Cobalt	0.09196	0.00027	0.0050	0.1	0.0004169	91.5	70-130	0			
Lead	0.09608	0.00022	0.0050	0.1	0.0009383	95.1	70-130	0			
Lithium	0.09916	0.0017	0.010	0.1	0.002028	97.1	70-130	0			
Molybdenum	0.09773	0.00033	0.0050	0.1	0.000704	97	70-130	0			
Selenium	0.09097	0.00048	0.0050	0.1	-0.000297	91.3	70-130	0			
Thallium	0.09403	0.00032	0.0050	0.1	0.0000341	94	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **191498** Instrument ID: **ICPMS3** Method: **E200.8**

MSD Sample ID: **22011915-04AMSD** Units: **mg/L** Analysis Date: **2/9/2022 03:04 PM**
Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **ICPMS3_220209A** SeqNo: **8163072** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1027	0.00042	0.0050	0.1	0.0001177	103	70-130	0.1041	1.28	20	
Arsenic	0.1092	0.00019	0.0050	0.1	0.01927	89.9	70-130	0.1114	2.03	20	B
Barium	0.1652	0.00057	0.0050	0.1	0.07518	90	70-130	0.1674	1.31	20	
Beryllium	0.1023	0.00013	0.0020	0.1	0.0000209	102	70-130	0.1034	1.02	20	
Boron	1.473	0.015	0.020	0.5	0.9707	101	70-130	1.476	0.205	20	
Cadmium	0.09508	0.00014	0.00020	0.1	0.0000143	95.1	70-130	0.09723	2.24	20	
Calcium	187.2	0.22	0.50	10	181.8	54.7	70-130	185.2	1.1	20	SO
Chromium	0.1356	0.00061	0.0050	0.1	0.001286	134	70-130	0.1042	26.2	20	BSR
Cobalt	0.08984	0.00027	0.0050	0.1	0.001437	88.4	70-130	0.09116	1.45	20	
Lead	0.09485	0.00022	0.0050	0.1	0.0001254	94.7	70-130	0.0962	1.41	20	
Lithium	0.1337	0.0017	0.010	0.1	0.03956	94.2	70-130	0.1341	0.287	20	
Molybdenum	0.09854	0.00033	0.0050	0.1	0.0004972	98	70-130	0.09876	0.23	20	
Selenium	0.09458	0.00048	0.0050	0.1	0.0000858	94.5	70-130	0.09744	2.98	20	
Thallium	0.09437	0.00032	0.0050	0.1	0.000429	93.9	70-130	0.09587	1.57	20	

MSD Sample ID: **22020241-01BMSD** Units: **mg/L** Analysis Date: **2/9/2022 03:23 PM**
Client ID: Run ID: **ICPMS3_220209A** SeqNo: **8163082** Prep Date: **2/9/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1045	0.00042	0.0050	0.1	0.0003399	104	70-130	0.1045	0.0182	20	
Arsenic	0.09917	0.00019	0.0050	0.1	0.009374	89.8	70-130	0.09869	0.479	20	B
Barium	0.112	0.00057	0.0050	0.1	0.01513	96.9	70-130	0.1099	1.92	20	
Beryllium	0.1024	0.00013	0.0020	0.1	0.0000682	102	70-130	0.1001	2.27	20	
Boron	0.5375	0.015	0.020	0.5	0.01824	104	70-130	0.5212	3.09	20	
Cadmium	0.09915	0.00014	0.00020	0.1	-0.0000121	99.2	70-130	0.09855	0.608	20	
Calcium	38	0.22	0.50	10	29.41	85.9	70-130	37.9	0.266	20	
Chromium	0.123	0.00061	0.0050	0.1	0.02023	103	70-130	0.1163	5.6	20	B
Cobalt	0.09152	0.00027	0.0050	0.1	0.0004169	91.1	70-130	0.09196	0.472	20	
Lead	0.09674	0.00022	0.0050	0.1	0.0009383	95.8	70-130	0.09608	0.691	20	
Lithium	0.09964	0.0017	0.010	0.1	0.002028	97.6	70-130	0.09916	0.484	20	
Molybdenum	0.0982	0.00033	0.0050	0.1	0.000704	97.5	70-130	0.09773	0.481	20	
Selenium	0.09119	0.00048	0.0050	0.1	-0.000297	91.5	70-130	0.09097	0.244	20	
Thallium	0.09483	0.00032	0.0050	0.1	0.0000341	94.8	70-130	0.09403	0.852	20	

The following samples were analyzed in this batch: 22011915-04A 22011915-05A 22011915-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **191625** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MBLK Sample ID: **MBLK-191611-191625** Units: **mg/L** Analysis Date: **2/11/2022 05:13 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169860** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.002385	0.00042	0.0050								J
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.001054	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Thallium	U	0.00032	0.0050								

MBLK Sample ID: **MBLK-191625-191625** Units: **mg/L** Analysis Date: **2/11/2022 05:16 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169862** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.002545	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191625** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

LCS Sample ID: **LCS-191611-191625** Units: **mg/L** Analysis Date: **2/11/2022 05:14 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169861** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09339	0.00042	0.0050	0.1	0	93.4	85-115	0			
Arsenic	0.08765	0.00019	0.0050	0.1	0	87.6	85-115	0			
Barium	0.09076	0.00057	0.0050	0.1	0	90.8	85-115	0			
Cadmium	0.09364	0.00014	0.00020	0.1	0	93.6	85-115	0			
Calcium	9.358	0.22	0.50	10	0	93.6	85-115	0			
Chromium	0.09075	0.00061	0.0050	0.1	0	90.8	85-115	0			
Cobalt	0.08958	0.00027	0.0050	0.1	0	89.6	85-115	0			
Lead	0.08977	0.00022	0.0050	0.1	0	89.8	85-115	0			
Lithium	0.0871	0.0017	0.010	0.1	0	87.1	85-115	0			
Molybdenum	0.08982	0.00033	0.0050	0.1	0	89.8	85-115	0			
Thallium	0.08676	0.00032	0.0050	0.1	0	86.8	85-115	0			

LCS Sample ID: **LCS-191625-191625** Units: **mg/L** Analysis Date: **2/11/2022 05:18 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169863** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09167	0.00042	0.0050	0.1	0	91.7	85-115	0			
Arsenic	0.08791	0.00019	0.0050	0.1	0	87.9	85-115	0			
Barium	0.09016	0.00057	0.0050	0.1	0	90.2	85-115	0			
Cadmium	0.09248	0.00014	0.00020	0.1	0	92.5	85-115	0			
Calcium	9.409	0.22	0.50	10	0	94.1	85-115	0			
Chromium	0.09102	0.00061	0.0050	0.1	0	91	85-115	0			
Cobalt	0.08924	0.00027	0.0050	0.1	0	89.2	85-115	0			
Lead	0.08886	0.00022	0.0050	0.1	0	88.9	85-115	0			
Lithium	0.08754	0.0017	0.010	0.1	0	87.5	85-115	0			
Molybdenum	0.08926	0.00033	0.0050	0.1	0	89.3	85-115	0			
Selenium	0.08507	0.00048	0.0050	0.1	0	85.1	85-115	0			
Thallium	0.08721	0.00032	0.0050	0.1	0	87.2	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191625** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MS Sample ID: **22020433-01CMS** Units: **mg/L** Analysis Date: **2/11/2022 05:31 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169871** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09493	0.00042	0.0050	0.1	0.0000693	94.9	70-130	0			
Arsenic	0.09063	0.00019	0.0050	0.1	0.0006358	90	70-130	0			
Barium	0.1181	0.00057	0.0050	0.1	0.02645	91.7	70-130	0			
Cadmium	0.09252	0.00014	0.00020	0.1	0	92.5	70-130	0			
Calcium	260.7	0.22	0.50	10	258.8	19.6	70-130	0			SEO
Chromium	0.09141	0.00061	0.0050	0.1	0.00345	88	70-130	0			
Cobalt	0.08993	0.00027	0.0050	0.1	0.001184	88.7	70-130	0			
Lead	0.09017	0.00022	0.0050	0.1	0.0000946	90.1	70-130	0			
Lithium	0.9187	0.0017	0.010	0.1	0.8519	66.7	70-130	0			SO
Molybdenum	0.1016	0.00033	0.0050	0.1	0.009131	92.5	70-130	0			
Selenium	0.1006	0.00048	0.0050	0.1	0.01025	90.3	70-130	0			
Thallium	0.08845	0.00032	0.0050	0.1	0.0000066	88.4	70-130	0			

MS Sample ID: **22020680-03BMS** Units: **mg/L** Analysis Date: **2/11/2022 06:02 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169889** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.08995	0.00042	0.0050	0.1	0.0003091	89.6	70-130	0			
Arsenic	0.08902	0.00019	0.0050	0.1	0.0008613	88.2	70-130	0			
Barium	0.09607	0.00057	0.0050	0.1	0.007119	89	70-130	0			
Cadmium	0.08386	0.00014	0.00020	0.1	0.0002343	83.6	70-130	0			
Calcium	246.7	0.22	0.50	10	245.3	13.5	70-130	0			SEO
Chromium	0.09094	0.00061	0.0050	0.1	0.004762	86.2	70-130	0			
Cobalt	0.08591	0.00027	0.0050	0.1	0.0006985	85.2	70-130	0			
Lead	0.09109	0.00022	0.0050	0.1	0.0009295	90.2	70-130	0			
Lithium	0.08695	0.0017	0.010	0.1	0.003831	83.1	70-130	0			
Molybdenum	0.09068	0.00033	0.0050	0.1	0.004318	86.4	70-130	0			
Selenium	0.08726	0.00048	0.0050	0.1	0.0002871	87	70-130	0			
Thallium	0.08873	0.00032	0.0050	0.1	0.0000638	88.7	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191625** Instrument ID: **ICPMS4** Method: **E200.8** **(Dissolve)**

MSD Sample ID: **22020433-01CMSD** Units: **mg/L** Analysis Date: **2/11/2022 05:33 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169872** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09421	0.00042	0.0050	0.1	0.0000693	94.1	70-130	0.09493	0.769	20	
Arsenic	0.0905	0.00019	0.0050	0.1	0.0006358	89.9	70-130	0.09063	0.146	20	
Barium	0.117	0.00057	0.0050	0.1	0.02645	90.6	70-130	0.1181	0.956	20	
Cadmium	0.09238	0.00014	0.00020	0.1	0	92.4	70-130	0.09252	0.144	20	
Calcium	259.2	0.22	0.50	10	258.8	4.57	70-130	260.7	0.579	20	SEO
Chromium	0.09142	0.00061	0.0050	0.1	0.00345	88	70-130	0.09141	0.0132	20	
Cobalt	0.08905	0.00027	0.0050	0.1	0.001184	87.9	70-130	0.08993	0.991	20	
Lead	0.08948	0.00022	0.0050	0.1	0.0000946	89.4	70-130	0.09017	0.762	20	
Lithium	0.916	0.0017	0.010	0.1	0.8519	64	70-130	0.9187	0.294	20	SO
Molybdenum	0.1003	0.00033	0.0050	0.1	0.009131	91.2	70-130	0.1016	1.29	20	
Selenium	0.1007	0.00048	0.0050	0.1	0.01025	90.4	70-130	0.1006	0.0805	20	
Thallium	0.08805	0.00032	0.0050	0.1	0.0000066	88	70-130	0.08845	0.459	20	

MSD Sample ID: **22020680-03BMSD** Units: **mg/L** Analysis Date: **2/11/2022 06:07 PM**
Client ID: Run ID: **ICPMS4_220211A** SeqNo: **8169892** Prep Date: **2/11/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09282	0.00042	0.0050	0.1	0.0003091	92.5	70-130	0.08995	3.14	20	
Arsenic	0.09141	0.00019	0.0050	0.1	0.0008613	90.6	70-130	0.08902	2.65	20	
Barium	0.09801	0.00057	0.0050	0.1	0.007119	90.9	70-130	0.09607	2	20	
Cadmium	0.08957	0.00014	0.00020	0.1	0.0002343	89.3	70-130	0.08386	6.59	20	
Calcium	245.6	0.22	0.50	10	245.3	2.04	70-130	246.7	0.464	20	SEO
Chromium	0.09352	0.00061	0.0050	0.1	0.004762	88.8	70-130	0.09094	2.79	20	
Cobalt	0.08993	0.00027	0.0050	0.1	0.0006985	89.2	70-130	0.08591	4.57	20	
Lead	0.09171	0.00022	0.0050	0.1	0.0009295	90.8	70-130	0.09109	0.675	20	
Lithium	0.0922	0.0017	0.010	0.1	0.003831	88.4	70-130	0.08695	5.87	20	
Molybdenum	0.09368	0.00033	0.0050	0.1	0.004318	89.4	70-130	0.09068	3.26	20	
Selenium	0.08714	0.00048	0.0050	0.1	0.0002871	86.8	70-130	0.08726	0.144	20	
Thallium	0.09002	0.00032	0.0050	0.1	0.0000638	90	70-130	0.08873	1.44	20	

The following samples were analyzed in this batch: 22011915-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **191293** Instrument ID: **TDS** Method: **A2540 C-11**

MBLK Sample ID: **MBLK-191293-191293** Units: **mg/L** Analysis Date: **2/7/2022 04:08 PM**
Client ID: Run ID: **TDS_220207A** SeqNo: **8156767** Prep Date: **2/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30								

LCS Sample ID: **LCS-191293-191293** Units: **mg/L** Analysis Date: **2/7/2022 04:08 PM**
Client ID: Run ID: **TDS_220207A** SeqNo: **8156766** Prep Date: **2/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	522	22	30	495	0	105	85-109	0			

DUP Sample ID: **22011915-01C DUP** Units: **mg/L** Analysis Date: **2/7/2022 04:08 PM**
Client ID: **2200101 PH-MW-01 Grab** Run ID: **TDS_220207A** SeqNo: **8156745** Prep Date: **2/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1693	74	100	0	0	0	0-0	1673	1.19	10	

DUP Sample ID: **22011915-02C DUP** Units: **mg/L** Analysis Date: **2/7/2022 04:08 PM**
Client ID: **2200102 PH-MW-02 Grab** Run ID: **TDS_220207A** SeqNo: **8156747** Prep Date: **2/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1027	74	100	0	0	0	0-0	1007	1.97	10	

The following samples were analyzed in this batch:

22011915-01C	22011915-02C	22011915-03C
22011915-05C	22011915-06C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R337648** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/3/2022 04:01 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154466** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/3/2022 06:18 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154478** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/3/2022 08:32 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154490** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/3/2022 09:17 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154494** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/3/2022 11:32 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154504** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337648** Units: **mg/L** Analysis Date: **2/4/2022 12:17 AM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154508** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337648** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/3/2022 03:50 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154465** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.999	0.31	1.0	10	0	100	90-110	0			
Sulfate	9.817	0.19	1.0	10	0	98.2	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/3/2022 06:06 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154477** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.992	0.31	1.0	10	0	99.9	90-110	0			
Sulfate	10.04	0.19	1.0	10	0	100	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/3/2022 08:21 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154489** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.08	0.31	1.0	10	0	101	90-110	0			
Sulfate	9.986	0.19	1.0	10	0	99.9	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/3/2022 09:06 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154493** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.12	0.31	1.0	10	0	101	90-110	0			
Sulfate	9.898	0.19	1.0	10	0	99	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/3/2022 11:21 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154503** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.05	0.31	1.0	10	0	101	90-110	0			
Sulfate	9.967	0.19	1.0	10	0	99.7	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337648** Units: **mg/L** Analysis Date: **2/4/2022 12:06 AM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154507** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.06	0.31	1.0	10	0	101	90-110	0			
Sulfate	9.899	0.19	1.0	10	0	99	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337648** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22011915-04C MS** Units: **mg/L** Analysis Date: **2/3/2022 05:10 PM**
Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **IC3_220203A** SeqNo: **8154472** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1022	31	100	1000	52.28	97	80-120	0			
Sulfate	1258	19	100	1000	258.2	100	80-120	0			

MS Sample ID: **22020093-06D MS** Units: **mg/L** Analysis Date: **2/3/2022 07:03 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154482** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	155.5	3.1	10	100	53.15	102	80-120	0			
Sulfate	239.8	1.9	10	100	133.7	106	80-120	0			E

MS Sample ID: **22020216-04B MS** Units: **mg/L** Analysis Date: **2/3/2022 09:40 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154496** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	346.8	5	16	160	180.9	104	80-120	0			E
Sulfate	875.9	3	16	160	713.2	102	80-120	0			EO

MSD Sample ID: **22011915-04C MSD** Units: **mg/L** Analysis Date: **2/3/2022 05:21 PM**
Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **IC3_220203A** SeqNo: **8154473** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1022	31	100	1000	52.28	97	80-120	1022	0.045	20	
Sulfate	1261	19	100	1000	258.2	100	80-120	1258	0.209	20	

MSD Sample ID: **22020093-06D MSD** Units: **mg/L** Analysis Date: **2/3/2022 07:14 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154483** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	156.1	3.1	10	100	53.15	103	80-120	155.5	0.399	20	
Sulfate	238.5	1.9	10	100	133.7	105	80-120	239.8	0.55	20	E

MSD Sample ID: **22020216-04B MSD** Units: **mg/L** Analysis Date: **2/3/2022 09:51 PM**
Client ID: Run ID: **IC3_220203A** SeqNo: **8154497** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	346.7	5	16	160	180.9	104	80-120	346.8	0.0205	20	E
Sulfate	875.9	3	16	160	713.2	102	80-120	875.9	0.008	20	EO

The following samples were analyzed in this batch:

22011915-01C	22011915-02C	22011915-03C
22011915-04C	22011915-05C	22011915-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 11:09 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157356** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 02:52 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157368** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.387	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 05:12 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157380** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3589	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 05:57 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157384** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3627	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 08:12 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157396** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3478	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 09:42 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157404** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/7/2022 10:27 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157408** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.382	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/8/2022 12:42 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157420** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3438	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/8/2022 02:57 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157432** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3747	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337730** Units: **mg/L** Analysis Date: **2/8/2022 03:42 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157436** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3788	0.31	1.0								J
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 10:58 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157355** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.841	0.31	1.0	10	0	98.4	90-110	0			
Fluoride	1.955	0.067	0.10	2	0	97.8	90-110	0			
Sulfate	9.686	0.19	1.0	10	0	96.9	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 02:41 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157367** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.559	0.31	1.0	10	0	95.6	90-110	0			
Fluoride	2.096	0.067	0.10	2	0	105	90-110	0			
Sulfate	9.548	0.19	1.0	10	0	95.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 05:01 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157379** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.726	0.31	1.0	10	0	97.3	90-110	0			
Fluoride	2.058	0.067	0.10	2	0	103	90-110	0			
Sulfate	9.744	0.19	1.0	10	0	97.4	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 05:46 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157383** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.496	0.31	1.0	10	0	95	90-110	0			
Fluoride	2.045	0.067	0.10	2	0	102	90-110	0			
Sulfate	9.351	0.19	1.0	10	0	93.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 08:01 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157395** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.483	0.31	1.0	10	0	94.8	90-110	0			
Fluoride	2.05	0.067	0.10	2	0	102	90-110	0			
Sulfate	9.587	0.19	1.0	10	0	95.9	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 09:31 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157403** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.483	0.31	1.0	10	0	94.8	90-110	0			
Fluoride	2.055	0.067	0.10	2	0	103	90-110	0			
Sulfate	9.627	0.19	1.0	10	0	96.3	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/7/2022 10:16 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157407** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.518	0.31	1.0	10	0	95.2	88-110	0			
Fluoride	2.014	0.067	0.10	2	0	101	82-116	0			
Sulfate	9.469	0.19	1.0	10	0	94.7	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/8/2022 12:31 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157419** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.478	0.31	1.0	10	0	94.8	88-110	0			
Fluoride	2.221	0.067	0.10	2	0	111	82-116	0			
Sulfate	9.626	0.19	1.0	10	0	96.3	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/8/2022 02:45 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157431** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.495	0.31	1.0	10	0	94.9	88-110	0			
Fluoride	2.231	0.067	0.10	2	0	112	82-116	0			
Sulfate	9.647	0.19	1.0	10	0	96.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337730** Units: **mg/L** Analysis Date: **2/8/2022 03:30 AM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157435** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.534	0.31	1.0	10	0	95.3	88-110	0			
Fluoride	2.165	0.067	0.10	2	0	108	82-116	0			
Sulfate	9.53	0.19	1.0	10	0	95.3	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22011915-03C MS** Units: **mg/L** Analysis Date: **2/7/2022 01:32 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **IC3_220207A** SeqNo: **8157364** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	847.9	12	40	400	482.2	91.4	80-120	0			E
Fluoride	87.87	2.7	4.0	80	0	110	80-120	0			
Sulfate	765.4	7.6	40	400	435.8	82.4	80-120	0			

MS Sample ID: **22011915-04C MS** Units: **mg/L** Analysis Date: **2/7/2022 03:16 PM**
Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **IC3_220207A** SeqNo: **8157370** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	116.9	3.1	10	100	22.53	94.4	80-120	0			
Fluoride	22	0.67	1.0	20	0	110	80-120	0			
Sulfate	376.7	1.9	10	100	291.4	85.3	80-120	0			E

MS Sample ID: **22020288-03A MS** Units: **mg/L** Analysis Date: **2/7/2022 07:05 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157390** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	780.3	12	40	400	339.1	110	80-120	0			
Fluoride	86.69	2.7	4.0	80	0	108	80-120	0			
Sulfate	3176	7.6	40	400	2529	162	80-120	0			SEO

MS Sample ID: **22020216-05B MS** Units: **mg/L** Analysis Date: **2/7/2022 08:34 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157398** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	585.2	12	40	400	179.5	101	80-120	0			
Fluoride	85.84	2.7	4.0	80	0	107	80-120	0			
Sulfate	1149	7.6	40	400	705.9	111	80-120	0			E

MS Sample ID: **22020287-01A MS** Units: **mg/L** Analysis Date: **2/7/2022 10:49 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157410** Prep Date: DF: **4**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	45.88	1.2	4.0	40	8.654	93.1	88-110	0			
Fluoride	8.865	0.27	0.40	8	0	111	82-116	0			
Sulfate	43.86	0.76	4.0	40	5.687	95.4	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337730** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22011915-03C MSD** Units: **mg/L** Analysis Date: **2/7/2022 01:43 PM**
Client ID: **2200103 PH-MW-03A Grab** Run ID: **IC3_220207A** SeqNo: **8157365** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	857	12	40	400	482.2	93.7	80-120	847.9	1.06	20	E
Fluoride	85.7	2.7	4.0	80	0	107	80-120	87.87	2.49	20	
Sulfate	774.1	7.6	40	400	435.8	84.6	80-120	765.4	1.13	20	

MSD Sample ID: **22011915-04C MSD** Units: **mg/L** Analysis Date: **2/7/2022 03:27 PM**
Client ID: **2200104/2200107/2200108 PH-MW-04 Grab** Run ID: **IC3_220207A** SeqNo: **8157371** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	116.5	3.1	10	100	22.53	94	80-120	116.9	0.338	20	
Fluoride	22.09	0.67	1.0	20	0	110	80-120	22	0.431	20	
Sulfate	375.6	1.9	10	100	291.4	84.2	80-120	376.7	0.284	20	E

MSD Sample ID: **22020288-03A MSD** Units: **mg/L** Analysis Date: **2/7/2022 07:16 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157391** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	781	12	40	400	339.1	110	80-120	780.3	0.0851	20	
Fluoride	81.46	2.7	4.0	80	0	102	80-120	86.69	6.23	20	
Sulfate	3184	7.6	40	400	2529	164	80-120	3176	0.251	20	SEO

MSD Sample ID: **22020216-05B MSD** Units: **mg/L** Analysis Date: **2/7/2022 08:46 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157399** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	585	12	40	400	179.5	101	80-120	585.2	0.041	20	
Fluoride	86.12	2.7	4.0	80	0	108	80-120	85.84	0.321	20	
Sulfate	1149	7.6	40	400	705.9	111	80-120	1149	0.0235	20	E

MSD Sample ID: **22020287-01A MSD** Units: **mg/L** Analysis Date: **2/7/2022 11:01 PM**
Client ID: Run ID: **IC3_220207A** SeqNo: **8157411** Prep Date: DF: **4**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	45.89	1.2	4.0	40	8.654	93.1	88-110	45.88	0.0235	20	
Fluoride	9.035	0.27	0.40	8	0	113	82-116	8.865	1.9	20	
Sulfate	44.02	0.76	4.0	40	5.687	95.8	90-110	43.86	0.361	20	

The following samples were analyzed in this batch:

22011915-01C	22011915-02C	22011915-03C
22011915-04C	22011915-05C	22011915-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R337822** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 10:41 AM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160607** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 01:39 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160619** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 04:06 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160631** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 04:51 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160635** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 07:06 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160647** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 08:25 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160654** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337822** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 09:10 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160658** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 11:03 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160668** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R337822** Units: **mg/L** Analysis Date: **2/8/2022 11:48 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160672** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 10:29 AM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160606** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.879	0.31	1.0	10	0	98.8	90-110	0			
Sulfate	9.859	0.19	1.0	10	0	98.6	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 01:28 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160618** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.813	0.31	1.0	10	0	98.1	90-110	0			
Sulfate	9.906	0.19	1.0	10	0	99.1	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 03:54 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160630** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.77	0.31	1.0	10	0	97.7	90-110	0			
Sulfate	9.953	0.19	1.0	10	0	99.5	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337822** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 04:40 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160634** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.619	0.31	1.0	10	0	96.2	90-110	0			
Sulfate	9.712	0.19	1.0	10	0	97.1	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 06:55 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160646** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.599	0.31	1.0	10	0	96	90-110	0			
Sulfate	9.855	0.19	1.0	10	0	98.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 08:14 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160653** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.631	0.31	1.0	10	0	96.3	90-110	0			
Sulfate	9.812	0.19	1.0	10	0	98.1	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 08:59 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160657** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.68	0.31	1.0	10	0	96.8	88-110	0			
Sulfate	9.744	0.19	1.0	10	0	97.4	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 10:51 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160667** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	9.889	0.19	1.0	10	0	98.9	90-110	0			

LCS Sample ID: **MLCCV/LCS-R337822** Units: **mg/L** Analysis Date: **2/8/2022 11:36 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160671** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.645	0.31	1.0	10	0	96.4	88-110	0			
Sulfate	9.803	0.19	1.0	10	0	98	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337822** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22011915-01C MS** Units: **mg/L** Analysis Date: **2/8/2022 01:06 PM**
Client ID: **2200101 PH-MW-01 Grab** Run ID: **IC3_220208A** SeqNo: **8160616** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	423	12	40	400	41.92	95.3	80-120	0			
Sulfate	682.2	7.6	40	400	274.4	102	80-120	0			

MS Sample ID: **22011915-02C MS** Units: **mg/L** Analysis Date: **2/8/2022 02:13 PM**
Client ID: **2200102 PH-MW-02 Grab** Run ID: **IC3_220208A** SeqNo: **8160622** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	653.6	12	40	400	239.2	104	80-120	0			
Sulfate	429.1	7.6	40	400	33.51	98.9	80-120	0			

MS Sample ID: **22020323-04D MS** Units: **mg/L** Analysis Date: **2/8/2022 05:25 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160638** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	125.2	3.1	10	100	27.78	97.4	80-120	0			
Sulfate	314	1.9	10	100	211.5	102	80-120	0			E

MS Sample ID: **22020211-01B MS** Units: **mg/L** Analysis Date: **2/8/2022 07:51 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160651** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	108.4	3.1	10	100	13.88	94.6	80-120	0			
Sulfate	124.2	1.9	10	100	25.33	98.9	80-120	0			

MS Sample ID: **22020084-06A MS** Units: **mg/L** Analysis Date: **2/8/2022 09:33 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160660** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	309.1	5	16	160	153.8	97.1	88-110	0			
Sulfate	263.9	3	16	160	111.7	95.2	90-110	0			

MSD Sample ID: **22011915-01C MSD** Units: **mg/L** Analysis Date: **2/8/2022 01:17 PM**
Client ID: **2200101 PH-MW-01 Grab** Run ID: **IC3_220208A** SeqNo: **8160617** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	423.1	12	40	400	41.92	95.3	80-120	423	0.0416	20	
Sulfate	681.9	7.6	40	400	274.4	102	80-120	682.2	0.0457	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22011915
Project: Peg's Hill-Background Monitoring

QC BATCH REPORT

Batch ID: **R337822** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22011915-02C MSD** Units: **mg/L** Analysis Date: **2/8/2022 02:24 PM**
Client ID: **2200102 PH-MW-02 Grab** Run ID: **IC3_220208A** SeqNo: **8160623** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	655.3	12	40	400	239.2	104	80-120	653.6	0.249	20	
Sulfate	429.6	7.6	40	400	33.51	99	80-120	429.1	0.119	20	

MSD Sample ID: **22020323-04D MSD** Units: **mg/L** Analysis Date: **2/8/2022 05:36 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160639** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	125.5	3.1	10	100	27.78	97.7	80-120	125.2	0.207	20	
Sulfate	314.6	1.9	10	100	211.5	103	80-120	314	0.183	20	E

MSD Sample ID: **22020211-01B MSD** Units: **mg/L** Analysis Date: **2/8/2022 08:03 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160652** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	108	3.1	10	100	13.88	94.2	80-120	108.4	0.379	20	
Sulfate	124	1.9	10	100	25.33	98.6	80-120	124.2	0.182	20	

MSD Sample ID: **22020084-06A MSD** Units: **mg/L** Analysis Date: **2/8/2022 09:44 PM**
Client ID: Run ID: **IC3_220208A** SeqNo: **8160661** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	308.4	5	16	160	153.8	96.6	88-110	309.1	0.243	20	
Sulfate	263.4	3	16	160	111.7	94.9	90-110	263.9	0.179	20	

The following samples were analyzed in this batch: 22011915-01C 22011915-02C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

220195

EAST KENTUCKY POWER COOPERATIVE CHAIN OF CUSTODY

EAST KENTUCKY POWER COOPERATIVE
A Touchstone Energy Cooperative

Facility:
East Kentucky Power Cooperative
H.L. Spurlock Station
1301 West Second Street
Maysville, KY 41056

Sampling Event Type:
Peg's Hill - Background Monitoring

Sample Matrix:
Groundwater

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	MS/MSD Collected	Sample Type: Grab or Composite
2200101	1/27/22	1216	PH-MW-01	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200102	1/27/22	1330	PH-MW-02	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200103	1/27/22	1643	PH-MW-03A	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200104	1/27/22	1555	PH-MW-04	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☒	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☒	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☒	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200105	1/27/22	1426	PH-MW-05	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200106	1/27/22	1555	Field Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
2200107	1/27/22	1555	Matrix Spike	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
2200108	1/27/22	1555	Matrix Spike Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
2200109	1/27/22	1525	Field Blank	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		Grab

Collected by: (Signature)	DATE 1/28/22	TIME 1336	Received by: (Signature)
Relinquished by: (Signature)	DATE 1/31/22	TIME 11:10	Received by: (Signature) 1/31/22 11:6
Relinquished by: (Signature)	DATE 1/31/22	TIME 14:15	Received by: (Signature)
Relinquished by: (Signature)	DATE 1/31/22	TIME 1700	Received by: (Signature) FED EX 2/1/22 1430

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory: ☒ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.)

26°C ARSTL

ALSHN
<6.0°C
IR1
pH31

EKPC ds
CC2201030
CC2201020

ALS Environmental

2201915

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janita Smith
Date/Time:	1/31/22 1415
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	4.2
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #:	
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **31-Jan-22 14:15**

Work Order: **22011915** Received by: **DS**

Checklist completed by: Diane Shaw (eSignature) 02-Feb-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 06-Feb-22 (Date)

Matrices: Groundwater

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	2/2/2022 10:15:52 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 06, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22011915
Pace Project No.: 30465700

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22011915
Pace Project No.: 30465700

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22011915
Pace Project No.: 30465700

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30465700001	**22011915-04**	Water	01/27/22 15:55	02/09/22 11:00
30465700002	**22011915-01**	Water	01/27/22 12:16	02/09/22 11:00
30465700003	**22011915-02**	Water	01/27/22 13:30	02/09/22 11:00
30465700004	**22011915-03**	Water	01/27/22 16:43	02/09/22 11:00
30465700005	**22011915-05**	Water	01/27/22 14:26	02/09/22 11:00
30465700006	**22011915-06**	Water	01/27/22 15:55	02/09/22 11:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22011915
Pace Project No.: 30465700

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30465700001	**22011915-04**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30465700002	**22011915-01**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30465700003	**22011915-02**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30465700004	**22011915-03**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30465700005	**22011915-05**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30465700006	**22011915-06**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22011915
Pace Project No.: 30465700

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: March 06, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22011915
Pace Project No.: 30465700

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: March 06, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 484759

1c: Method Blank activity less than MDC, but MDC is elevated due to low tracer yield. Method Blank sample was spilled during analysis. Batch samples are not impacted by lost MB sample.

- BLANK (Lab ID: 2344471)
  - Radium-228

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22011915
Pace Project No.: 30465700

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: March 06, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22011915
Pace Project No.: 30465700

Sample: 22011915-04 **Lab ID: 30465700001** Collected: 01/27/22 15:55 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample is labeled as 2201915-8 CS ID's match

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.114 ± 0.460 (0.803) C:NA T:92%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.257 ± 0.324 (0.687) C:81% T:83%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.371 ± 0.784 (1.49)**	pCi/L	03/06/22 21:28	7440-14-4	

Sample: 22011915-01 **Lab ID: 30465700002** Collected: 01/27/22 12:16 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.518 ± 0.627 (0.942) C:NA T:91%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.425 ± 0.325 (0.635) C:83% T:88%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.943 ± 0.952 (1.58)**	pCi/L	03/06/22 21:28	7440-14-4	

Sample: 22011915-02 **Lab ID: 30465700003** Collected: 01/27/22 13:30 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.367 ± 0.557 (0.871) C:NA T:89%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.288 ± 0.326 (0.682) C:82% T:88%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.655 ± 0.883 (1.55)**	pCi/L	03/06/22 21:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22011915
Pace Project No.: 30465700

Sample: 22011915-03 **Lab ID: 30465700004** Collected: 01/27/22 16:43 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.649 ± 0.673 (0.983) C:NA T:93%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.698 ± 0.403 (0.729) C:82% T:81%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.35 ± 1.08 (1.71)**	pCi/L	03/06/22 21:28	7440-14-4	

Sample: 22011915-05 **Lab ID: 30465700005** Collected: 01/27/22 14:26 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.315 ± 0.518 (1.05) C:NA T:85%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.389 ± 0.324 (0.643) C:78% T:87%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.389 ± 0.842 (1.69)**	pCi/L	03/06/22 21:28	7440-14-4	

Sample: 22011915-06 **Lab ID: 30465700006** Collected: 01/27/22 15:55 Received: 02/09/22 11:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.380 ± 0.649 (1.02) C:NA T:94%**	pCi/L	03/04/22 11:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.726 ± 0.385 (0.680) C:81% T:87%**	pCi/L	03/02/22 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.11 ± 1.03 (1.70)**	pCi/L	03/06/22 21:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22011915
Pace Project No.: 30465700

QC Batch: 484758
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30465700001, 30465700002, 30465700003, 30465700004, 30465700005, 30465700006

METHOD BLANK: 2344470 Matrix: Water
Associated Lab Samples: 30465700001, 30465700002, 30465700003, 30465700004, 30465700005, 30465700006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0619 ± 0.364 (0.638) C:NA T:97%	pCi/L	03/04/22 11:52	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22011915
Pace Project No.: 30465700

QC Batch: 484759
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30465700001, 30465700002, 30465700003, 30465700004, 30465700005, 30465700006

METHOD BLANK: 2344471 Matrix: Water
Associated Lab Samples: 30465700001, 30465700002, 30465700003, 30465700004, 30465700005, 30465700006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	2.53 ± 1.58 (2.84) C:76% T:16%	pCi/L	03/02/22 14:28	1c

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22011915
Pace Project No.: 30465700

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1c	Method Blank activity less than MDC, but MDC is elevated due to low tracer yield. Method Blank sample was spilled during analysis. Batch samples are not impacted by lost MB sample.

REPORT OF LABORATORY ANALYSIS

ALS Environmental

Subcontractor:
Pace Analytical Services, Inc.
1638 Roseytown Rd
Suites 2,3 & 4
Greensburg, PA 15601
TEL: (724) 850-5600
FAX:
Acct #:

Salesperson: Paul Painter

CHAIN-OF-CUSTODY RECORD

Date: 04-Feb-22
COC ID: 18805
Due Date: 02-Mar-22

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22011915	A	Ra226(903.1); Ra228(904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J	
22011915-04D	2200104/2200107/2200108 PH-MW-04 Grab	Groundwater	27/Jan/2022 15:55	(1)	X										001
22011915-01D	2200101 PH-MW-01 Grab	Groundwater	27/Jan/2022 12:16	(2) 1LPHNO3	X										002
22011915-02D	2200102 PH-MW-02 Grab	Groundwater	27/Jan/2022 13:30	(2) 1LPHNO3	X										003
22011915-03D	2200103 PH-MW-03A Grab	Groundwater	27/Jan/2022 16:43	(2) 1LPHNO3	X										004
22011915-05D	2200105 PH-MW-05 Grab	Groundwater	27/Jan/2022 14:26	(2) 1LPHNO3	X										005
22011915-06D	2200106 Field Duplicate Grab	Groundwater	27/Jan/2022 15:55	(2) 1LPHNO3	X										006

WO# : 30465700

30465700

Comments:
KY Samples. Sampler: BR. Signature illegible.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
[signature]	2/4/22 1700	[signature]	2/9/22 1100		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS WV Project #

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace Other

Label

Tracking #: 775910049104 72

LIMS Login

Custody Seal on Cooler/Box Present: [ ] yes [ ] no Seals intact: [ ] yes [ ] no

Thermometer Used ~ Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp ~ °C Correction Factor: ~ °C Final Temp: ~ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# HC1109501 / Date and Initials of person examining contents: 2/16/22 RAE
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:		X		4. NO name or Signature
Sample Labels match COC: -Includes date/time/ID Matrix: WT		X		5. 220915-04 on COC is labeled as 220915-8. CS IDs match
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Hex Cr Aqueous sample field filtered			X	13.
Organic Samples checked for dechlorination:			X	14.
Filtered volume received for Dissolved tests			X	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	X			16. pH<2
All containers meet method preservation requirements.	X			Initial when completed / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	17.
Trip Blank Present:			X	18.
Trip Blank Custody Seals Present			X	
Rad Samples Screened < 0.5 mrem/hr	X			Initial when completed: RAE Date: 2/16/22 Survey Meter SN: 25043PR

WO#: 30469700

PM: KLS Due Date: 03/02/22

CLIENT: ALS-WV

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

[ ] **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

22-Mar-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **Pegs Hill - Background Monitoring** Work Order: **22022002**

Dear Jared,

ALS Environmental received 8 samples on 28-Feb-2022 through 01-Mar-2022 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 36.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

Certificate No: KY: 98004

ALS Group, USA

Date: 22-Mar-22

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Work Order: **22022002**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22022002-01	2200198 PH-MW-01 Grab	Groundwater		2/25/2022 10:48	2/28/2022 14:25	☐
22022002-01	2200198 PH-MW-01 Grab	Groundwater		2/25/2022 10:48	3/1/2022 10:30	☐
22022002-02	2200199 PH-MW-02 Grab	Groundwater		2/25/2022 12:00	2/28/2022 14:25	☐
22022002-02	2200199 PH-MW-02 Grab	Groundwater		2/25/2022 12:00	3/1/2022 10:30	☐
22022002-03	2200200 PH-MW-03A Grab	Groundwater		2/25/2022 15:37	2/28/2022 14:25	☐
22022002-03	2200200 PH-MW-03A Grab	Groundwater		2/25/2022 15:37	3/1/2022 10:30	☐
22022002-04	2200201 PH-MW-04 Grab	Groundwater		2/25/2022 14:33	3/1/2022 10:30	☐
22022002-05	2200201 PH-MW-04 Grab	Groundwater		2/25/2022 14:33	2/28/2022 14:25	☐
22022002-06	2200202 PH-MW-05 Grab	Groundwater		2/25/2022 13:04	2/28/2022 14:25	☐
22022002-06	2200202 PH-MW-05 Grab	Groundwater		2/25/2022 13:04	3/1/2022 10:30	☐
22022002-07	2200203 Field Duplicate Grab	Groundwater		2/25/2022 14:33	2/28/2022 14:25	☐
22022002-07	2200203 Field Duplicate Grab	Groundwater		2/25/2022 14:33	3/1/2022 10:30	☐
22022002-08	2200206 Field Blank Grab	Groundwater		2/25/2022 15:25	3/1/2022 10:30	☐

Client:	East Kentucky Power Cooperative
Project:	Pegs Hill - Background Monitoring
Work Order:	22022002

Case Narrative

Samples for the above noted Work Order were received on 02/28/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Batch 192485, Method E200.8, Sample 22022002-04AMS: The MS and/or MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: B

Batch 192485, Method E200.8, Sample 22022002-04AMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca

Batch 192487, Method E200.8, Sample 22022002-06AMS: The MS and/or MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca

Wet Chemistry:
Batch R339255, Method E300.0, Sample 22022002-04C MS: The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Fluoride

Batch R339255, Method E300.0, Sample 22022002-04C MS: MS and/or MSD was outside upper limit of calibration. Processed at equivalent dilution level as the parent.

Subcontracted analytical data has been appended to this report in its entirety.

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
WorkOrder: **22022002**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200198 PH-MW-01 Grab
Collection Date: 2/25/2022 10:48 AM

Work Order: 22022002
Lab ID: 22022002-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/3/22		Analyst: **ABL**
Mercury	**0.00091**		**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 14:41
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 3/2/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:34
Arsenic	**0.000437**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:34
Barium	**0.0527**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:34
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:34
Boron	**0.993**		**0.15**	**0.20**	**mg/L**	10	3/2/2022 17:50
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:34
Calcium	**342**		**2.2**	**5.0**	**mg/L**	10	3/2/2022 17:50
Chromium	**0.00185**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:34
Cobalt	**0.00133**	J	**0.00027**	**0.0050**	**mg/L**	1	3/2/2022 15:34
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:34
Lithium	**0.0614**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:34
Molybdenum	U		0.00033	0.0050	mg/L	1	3/2/2022 15:34
Selenium	U		0.00048	0.0050	mg/L	1	3/2/2022 15:34
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:34
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**24**		**5.0**	**16**	**mg/L**	16	3/1/2022 17:45
Fluoride	U		0.067	0.10	mg/L	1	3/2/2022 15:51
Sulfate	**220**		**3.0**	**16**	**mg/L**	16	3/1/2022 17:45
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 3/2/22		Analyst: **SRN**
Total Dissolved Solids	**1,300**		**74**	**100**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200199 PH-MW-02 Grab
Collection Date: 2/25/2022 12:00 PM

Work Order: 22022002
Lab ID: 22022002-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/3/22		Analyst: **ABL**
Mercury	**0.00023**	J	**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 14:49
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 3/2/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:36
Arsenic	**0.00155**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:36
Barium	**0.0818**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:36
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:36
Boron	**1.43**		**0.15**	**0.20**	**mg/L**	10	3/2/2022 17:52
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:36
Calcium	**40.9**		**0.22**	**0.50**	**mg/L**	1	3/2/2022 15:36
Chromium	**0.000898**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:36
Cobalt	**0.000336**	J	**0.00027**	**0.0050**	**mg/L**	1	3/2/2022 15:36
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:36
Lithium	**0.0860**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:36
Molybdenum	**0.00138**	J	**0.00033**	**0.0050**	**mg/L**	1	3/2/2022 15:36
Selenium	U		0.00048	0.0050	mg/L	1	3/2/2022 15:36
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:36
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**260**		**5.0**	**16**	**mg/L**	16	3/1/2022 18:30
Fluoride	**0.18**		**0.067**	**0.10**	**mg/L**	1	3/2/2022 16:02
Sulfate	**30**		**3.0**	**16**	**mg/L**	16	3/1/2022 18:30
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 3/2/22		Analyst: **SRN**
Total Dissolved Solids	**910**		**74**	**100**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200200 PH-MW-03A Grab
Collection Date: 2/25/2022 03:37 PM

Work Order: 22022002
Lab ID: 22022002-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/3/22		Analyst: **ABL**
Mercury	**0.0018**		**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 15:04
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 3/2/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:37
Arsenic	**0.000377**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Barium	**0.0544**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:37
Boron	**3.56**		**0.15**	**0.20**	**mg/L**	10	3/2/2022 17:54
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:37
Calcium	**32.4**		**0.22**	**0.50**	**mg/L**	1	3/2/2022 15:37
Chromium	**0.000878**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Cobalt	**0.000608**	J	**0.00027**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:37
Lithium	**0.127**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:37
Molybdenum	**0.0230**		**0.00033**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Selenium	**0.000814**	J	**0.00048**	**0.0050**	**mg/L**	1	3/2/2022 15:37
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:37
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**460**		**50**	**160**	**mg/L**	160	3/1/2022 20:11
Fluoride	**0.27**		**0.067**	**0.10**	**mg/L**	1	3/2/2022 16:18
Sulfate	**380**		**30**	**160**	**mg/L**	160	3/1/2022 20:11
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 3/2/22		Analyst: **SRN**
Total Dissolved Solids	**1,700**		**110**	**150**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200201 PH-MW-04 Grab
Collection Date: 2/25/2022 02:33 PM

Work Order: 22022002
Lab ID: 22022002-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 3/3/22			Analyst: **ABL**
Mercury	**0.00061**		**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 15:12
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 3/2/22			Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:39
Arsenic	**0.000362**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:39
Barium	**0.0725**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:39
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:39
Boron	**1.16**		**0.15**	**0.20**	**mg/L**	10	3/2/2022 17:55
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:39
Calcium	**197**		**0.22**	**0.50**	**mg/L**	1	3/2/2022 15:39
Chromium	**0.000846**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:39
Cobalt	**0.00157**	J	**0.00027**	**0.0050**	**mg/L**	1	3/2/2022 15:39
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:39
Lithium	**0.0383**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:39
Molybdenum	U		0.00033	0.0050	mg/L	1	3/2/2022 15:39
Selenium	U		0.00048	0.0050	mg/L	1	3/2/2022 15:39
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:39
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**33**		**5.0**	**16**	**mg/L**	16	3/1/2022 20:22
Fluoride	U		0.067	0.10	mg/L	1	3/2/2022 16:29
Sulfate	**280**		**3.0**	**16**	**mg/L**	16	3/1/2022 20:22
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 3/2/22			Analyst: **SRN**
Total Dissolved Solids	**1,000**		**74**	**100**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200201 PH-MW-04 Grab
Collection Date: 2/25/2022 02:33 PM

Work Order: 22022002
Lab ID: 22022002-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SUBCONTRACTED ANALYSES		Method:**SUBCONTRACT**					Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200202 PH-MW-05 Grab
Collection Date: 2/25/2022 01:04 PM

Work Order: 22022002
Lab ID: 22022002-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/3/22		Analyst: **ABL**
Mercury	**0.00048**	J	**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 15:36
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 3/2/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:53
Arsenic	**0.000235**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:53
Barium	**0.0722**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:53
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:53
Boron	**0.231**		**0.015**	**0.020**	**mg/L**	1	3/2/2022 15:53
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:53
Calcium	**119**		**0.22**	**0.50**	**mg/L**	1	3/2/2022 15:53
Chromium	**0.000868**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:53
Cobalt	U		0.00027	0.0050	mg/L	1	3/2/2022 15:53
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:53
Lithium	**0.0216**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:53
Molybdenum	U		0.00033	0.0050	mg/L	1	3/2/2022 15:53
Selenium	U		0.00048	0.0050	mg/L	1	3/2/2022 15:53
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:53
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **TJH**
Chloride	**14**		**0.31**	**1.0**	**mg/L**	1	3/2/2022 17:36
Fluoride	U		0.067	0.10	mg/L	1	3/2/2022 17:36
Sulfate	**170**		**3.0**	**16**	**mg/L**	16	3/1/2022 21:07
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 3/2/22		Analyst: **SRN**
Total Dissolved Solids	**540**		**37**	**50**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200203 Field Duplicate Grab
Collection Date: 2/25/2022 02:33 PM

Work Order: 22022002
Lab ID: 22022002-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/3/22		Analyst: **ABL**
Mercury	**0.00074**		**0.00020**	**0.00050**	**µg/L**	1	3/3/2022 15:43
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 3/2/22		Analyst: **STP**
Antimony	U		0.00042	0.0050	mg/L	1	3/2/2022 15:58
Arsenic	**0.000454**	J	**0.00019**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Barium	**0.0720**		**0.00057**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Beryllium	U		0.00013	0.0020	mg/L	1	3/2/2022 15:58
Boron	**0.969**		**0.015**	**0.020**	**mg/L**	1	3/2/2022 15:58
Cadmium	U		0.00014	0.00020	mg/L	1	3/2/2022 15:58
Calcium	**194**		**0.22**	**0.50**	**mg/L**	1	3/2/2022 15:58
Chromium	**0.000937**	J	**0.00061**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Cobalt	**0.00153**	J	**0.00027**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Lead	U		0.00022	0.0050	mg/L	1	3/2/2022 15:58
Lithium	**0.0375**		**0.0017**	**0.010**	**mg/L**	1	3/2/2022 15:58
Molybdenum	**0.000360**	J	**0.00033**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Selenium	**0.000556**	J	**0.00048**	**0.0050**	**mg/L**	1	3/2/2022 15:58
Thallium	U		0.00032	0.0050	mg/L	1	3/2/2022 15:58
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	3/21/2022
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**32**		**5.0**	**16**	**mg/L**	16	3/1/2022 21:30
Fluoride	U		0.067	0.10	mg/L	1	3/2/2022 17:48
Sulfate	**270**		**3.0**	**16**	**mg/L**	16	3/1/2022 21:30
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 3/2/22		Analyst: **SRN**
Total Dissolved Solids	**1,100**		**74**	**100**	**mg/L**	1	3/4/2022 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *22-Mar-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill - Background Monitoring
Sample ID: 2200206 Field Blank Grab
Collection Date: 2/25/2022 03:25 PM

Work Order: 22022002
Lab ID: 22022002-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 3/4/22		Analyst: **ABL**
Mercury	**0.00037**	J	**0.00020**	**0.00050**	**µg/L**	1	3/4/2022 12:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 22-Mar-22

Client: East Kentucky Power Cooperative

QC BATCH REPORT

Work Order: 22022002

Project: Pegs Hill - Background Monitoring

Batch ID: **192540** Instrument ID: **HG3** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-192540-192540** Units: **ng/L** Analysis Date: **3/3/2022 12:13 PM**

Client ID: Run ID: **HG3_220303A** SeqNo: **8215406** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-192540-192540** Units: **ng/L** Analysis Date: **3/3/2022 01:07 PM**

Client ID: Run ID: **HG3_220303A** SeqNo: **8215413** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-192540-192540** Units: **ng/L** Analysis Date: **3/3/2022 02:02 PM**

Client ID: Run ID: **HG3_220303A** SeqNo: **8215420** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22021992-05DMS** Units: **ng/L** Analysis Date: **3/3/2022 02:25 PM**

Client ID: Run ID: **HG3_220303A** SeqNo: **8215423** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	63.4	2	5.0	40	26.2	93	71-125	0			

MS Sample ID: **22022002-04BMS** Units: **ng/L** Analysis Date: **3/3/2022 03:20 PM**

Client ID: **2200201 PH-MW-04 Grab** Run ID: **HG3_220303A** SeqNo: **8215430** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.41	0.2	0.50	4	0.61	95	71-125	0			

MSD Sample ID: **22021992-05DMSD** Units: **ng/L** Analysis Date: **3/3/2022 02:33 PM**

Client ID: Run ID: **HG3_220303A** SeqNo: **8215424** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	63.6	2	5.0	40	26.2	93.5	71-125	63.4	0.315	24	

MSD Sample ID: **22022002-04BMSD** Units: **ng/L** Analysis Date: **3/3/2022 03:28 PM**

Client ID: **2200201 PH-MW-04 Grab** Run ID: **HG3_220303A** SeqNo: **8215431** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.65	0.2	0.50	4	0.61	101	71-125	4.41	5.3	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192540** Instrument ID: **HG3** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-192540-192540** Units: **ng/L** Analysis Date: **3/3/2022 12:05 PM**
Client ID: Run ID: **HG3_220303A** SeqNo: **8215405** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.41	0.2	0.50	5	0	108	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-192540-192540** Units: **ng/L** Analysis Date: **3/3/2022 03:51 PM**
Client ID: Run ID: **HG3_220303A** SeqNo: **8215434** Prep Date: **3/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.03	0.2	0.50	5	0	101	77-123	0			

The following samples were analyzed in this batch:

22022002-01B	22022002-02B	22022002-03B
22022002-04B	22022002-06B	22022002-07B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192589** Instrument ID: **HG3** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-192589-192589** Units: **ng/L** Analysis Date: **3/4/2022 12:03 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218824** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK Sample ID: **MBLK-192567-192589** Units: **ng/L** Analysis Date: **3/4/2022 12:11 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218825** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.36	0.2	0.50								J

MBLK2 Sample ID: **MBLK2-192589-192589** Units: **ng/L** Analysis Date: **3/4/2022 12:58 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218831** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.3	0.2	0.50	0	0	0		0			J

MBLK3 Sample ID: **MBLK3-192589-192589** Units: **ng/L** Analysis Date: **3/4/2022 01:52 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218838** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22030027-01AMS** Units: **ng/L** Analysis Date: **3/4/2022 01:13 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218833** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	17.6	0.2	0.50	4	13.4	105	71-125	0			

MS Sample ID: **22030027-03AMS** Units: **ng/L** Analysis Date: **3/4/2022 02:00 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218839** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	6.4	0.2	0.50	4	2.19	105	71-125	0			

MSD Sample ID: **22030027-01AMSD** Units: **ng/L** Analysis Date: **3/4/2022 01:21 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218834** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	17.7	0.2	0.50	4	13.4	108	71-125	17.6	0.567	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192589** Instrument ID: **HG3** Method: **E1631E**

MSD Sample ID: **22030027-03AMSD** Units: **ng/L** Analysis Date: **3/4/2022 02:08 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218840** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	6.35	0.2	0.50	4	2.19	104	71-125	6.4	0.784	24	

LCS-OPR-START Sample ID: **OPR-START-192589-192589** Units: **ng/L** Analysis Date: **3/4/2022 11:55 AM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218823** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.35	0.2	0.50	5	0	107	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-192589-192589** Units: **ng/L** Analysis Date: **3/4/2022 03:49 PM**
Client ID: Run ID: **HG3_220304A** SeqNo: **8218853** Prep Date: **3/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.38	0.2	0.50	5	0	108	77-123	0			

The following samples were analyzed in this batch: 22022002-08A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192485** Instrument ID: **ICPMS4** Method: **E200.8**

MBLK Sample ID: **MBLK-192485-192485** Units: **mg/L** Analysis Date: **3/2/2022 02:49 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8211284** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.0007359	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-192485-192485** Units: **mg/L** Analysis Date: **3/2/2022 02:50 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8211285** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09207	0.00042	0.0050	0.1	0	92.1	85-115	0			
Arsenic	0.09265	0.00019	0.0050	0.1	0	92.6	85-115	0			
Barium	0.09393	0.00057	0.0050	0.1	0	93.9	85-115	0			
Beryllium	0.08836	0.00013	0.0020	0.1	0	88.4	85-115	0			
Boron	0.4786	0.015	0.020	0.5	0	95.7	85-115	0			
Cadmium	0.09621	0.00014	0.00020	0.1	0	96.2	85-115	0			
Calcium	9.675	0.22	0.50	10	0	96.8	85-115	0			
Chromium	0.09968	0.00061	0.0050	0.1	0	99.7	85-115	0			
Cobalt	0.09915	0.00027	0.0050	0.1	0	99.2	85-115	0			
Lead	0.09315	0.00022	0.0050	0.1	0	93.1	85-115	0			
Lithium	0.0909	0.0017	0.010	0.1	0	90.9	85-115	0			
Molybdenum	0.09322	0.00033	0.0050	0.1	0	93.2	85-115	0			
Thallium	0.09085	0.00032	0.0050	0.1	0	90.9	85-115	0			

LCS Sample ID: **LCS-192485-192485** Units: **mg/L** Analysis Date: **3/2/2022 03:50 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8212052** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.08602	0.00048	0.0050	0.1	0	86	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **192485** Instrument ID: **ICPMS4** Method: **E200.8**

MS Sample ID: **22021910-04AMS** Units: **mg/L** Analysis Date: **3/2/2022 03:01 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8211292** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09572	0.00042	0.0050	0.1	0.0001496	95.6	70-130	0			
Arsenic	0.1005	0.00019	0.0050	0.1	0.005753	94.7	70-130	0			
Barium	0.2022	0.00057	0.0050	0.1	0.1094	92.8	70-130	0			
Beryllium	0.08823	0.00013	0.0020	0.1	0.0000374	88.2	70-130	0			
Boron	0.4991	0.015	0.020	0.5	0.01724	96.4	70-130	0			
Cadmium	0.09765	0.00014	0.00020	0.1	0.0000275	97.6	70-130	0			
Calcium	109.4	0.22	0.50	10	104.6	47.3	70-130	0			SO
Chromium	0.1027	0.00061	0.0050	0.1	0.002499	100	70-130	0			
Cobalt	0.09873	0.00027	0.0050	0.1	0.001392	97.3	70-130	0			
Lead	0.09693	0.00022	0.0050	0.1	0.0008272	96.1	70-130	0			
Lithium	0.1006	0.0017	0.010	0.1	0.01058	90	70-130	0			
Molybdenum	0.1003	0.00033	0.0050	0.1	0.004343	95.9	70-130	0			
Selenium	0.08916	0.00048	0.0050	0.1	0.0003586	88.8	70-130	0			
Thallium	0.0935	0.00032	0.0050	0.1	0.0000154	93.5	70-130	0			

MS Sample ID: **22022002-04AMS** Units: **mg/L** Analysis Date: **3/2/2022 03:41 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8211494** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09202	0.00042	0.0050	0.1	0	92	70-130	0			
Arsenic	0.09321	0.00019	0.0050	0.1	0.0003619	92.8	70-130	0			
Barium	0.1738	0.00057	0.0050	0.1	0.07246	101	70-130	0			
Beryllium	0.09524	0.00013	0.0020	0.1	0	95.2	70-130	0			
Cadmium	0.09903	0.00014	0.00020	0.1	0	99	70-130	0			
Calcium	207.7	0.22	0.50	10	196.9	108	70-130	0			EO
Chromium	0.09585	0.00061	0.0050	0.1	0.0008459	95	70-130	0			
Cobalt	0.09447	0.00027	0.0050	0.1	0.001574	92.9	70-130	0			
Lead	0.09945	0.00022	0.0050	0.1	0	99.4	70-130	0			
Lithium	0.1358	0.0017	0.010	0.1	0.03829	97.6	70-130	0			
Molybdenum	0.09935	0.00033	0.0050	0.1	0	99.3	70-130	0			
Selenium	0.08577	0.00048	0.0050	0.1	0	85.8	70-130	0			
Thallium	0.09713	0.00032	0.0050	0.1	0	97.1	70-130	0			

MS Sample ID: **22022002-04AMS** Units: **mg/L** Analysis Date: **3/2/2022 05:57 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8212110** Prep Date: **3/2/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.47	0.15	0.20	0.5	1.156	62.9	70-130	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192485** Instrument ID: **ICPMS4** Method: **E200.8**

MSD Sample ID: **22021910-04AMSD** Units: **mg/L** Analysis Date: **3/2/2022 03:03 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8211293** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0957	0.00042	0.0050	0.1	0.0001496	95.6	70-130	0.09572	0.0138	20	
Arsenic	0.1003	0.00019	0.0050	0.1	0.005753	94.6	70-130	0.1005	0.144	20	
Barium	0.202	0.00057	0.0050	0.1	0.1094	92.6	70-130	0.2022	0.0891	20	
Beryllium	0.09002	0.00013	0.0020	0.1	0.0000374	90	70-130	0.08823	2	20	
Boron	0.5094	0.015	0.020	0.5	0.01724	98.4	70-130	0.4991	2.04	20	
Cadmium	0.09842	0.00014	0.00020	0.1	0.0000275	98.4	70-130	0.09765	0.783	20	
Calcium	109.7	0.22	0.50	10	104.6	51	70-130	109.4	0.338	20	SO
Chromium	0.103	0.00061	0.0050	0.1	0.002499	100	70-130	0.1027	0.318	20	
Cobalt	0.1002	0.00027	0.0050	0.1	0.001392	98.9	70-130	0.09873	1.53	20	
Lead	0.09656	0.00022	0.0050	0.1	0.0008272	95.7	70-130	0.09693	0.376	20	
Lithium	0.09976	0.0017	0.010	0.1	0.01058	89.2	70-130	0.1006	0.809	20	
Molybdenum	0.1007	0.00033	0.0050	0.1	0.004343	96.3	70-130	0.1003	0.416	20	
Selenium	0.09002	0.00048	0.0050	0.1	0.0003586	89.7	70-130	0.08916	0.953	20	
Thallium	0.09367	0.00032	0.0050	0.1	0.0000154	93.7	70-130	0.0935	0.179	20	

MSD Sample ID: **22022002-04AMSD** Units: **mg/L** Analysis Date: **3/2/2022 03:42 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8211496** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09821	0.00042	0.0050	0.1	0	98.2	70-130	0.09202	6.51	20	
Arsenic	0.09968	0.00019	0.0050	0.1	0.0003619	99.3	70-130	0.09321	6.71	20	
Barium	0.1713	0.00057	0.0050	0.1	0.07246	98.8	70-130	0.1738	1.49	20	
Beryllium	0.0954	0.00013	0.0020	0.1	0	95.4	70-130	0.09524	0.168	20	
Cadmium	0.09833	0.00014	0.00020	0.1	0	98.3	70-130	0.09903	0.711	20	
Calcium	200	0.22	0.50	10	196.9	31.5	70-130	207.7	3.75	20	SEO
Chromium	0.1026	0.00061	0.0050	0.1	0.0008459	102	70-130	0.09585	6.8	20	
Cobalt	0.1008	0.00027	0.0050	0.1	0.001574	99.2	70-130	0.09447	6.5	20	
Lead	0.09877	0.00022	0.0050	0.1	0	98.8	70-130	0.09945	0.688	20	
Lithium	0.1341	0.0017	0.010	0.1	0.03829	95.9	70-130	0.1358	1.26	20	
Molybdenum	0.0989	0.00033	0.0050	0.1	0	98.9	70-130	0.09935	0.452	20	
Selenium	0.0951	0.00048	0.0050	0.1	0	95.1	70-130	0.08577	10.3	20	
Thallium	0.09642	0.00032	0.0050	0.1	0	96.4	70-130	0.09713	0.732	20	

MSD Sample ID: **22022002-04AMSD** Units: **mg/L** Analysis Date: **3/2/2022 05:59 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8212111** Prep Date: **3/2/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.475	0.15	0.20	0.5	1.156	63.8	70-130	1.47	0.306	20	S

The following samples were analyzed in this batch: 22022002-01A 22022002-02A 22022002-03A 22022002-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192487** Instrument ID: **ICPMS4** Method: **E200.8**

MBLK Sample ID: **MBLK-192487-192487** Units: **mg/L** Analysis Date: **3/2/2022 03:47 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8212045** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	0.0008591	0.00061	0.0050								J
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-192487-192487** Units: **mg/L** Analysis Date: **3/2/2022 03:49 PM**
Client ID: Run ID: **ICPMS4_220302A** SeqNo: **8212046** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09607	0.00042	0.0050	0.1	0	96.1	85-115	0			
Arsenic	0.09577	0.00019	0.0050	0.1	0	95.8	85-115	0			
Barium	0.09576	0.00057	0.0050	0.1	0	95.8	85-115	0			
Beryllium	0.09149	0.00013	0.0020	0.1	0	91.5	85-115	0			
Boron	0.5008	0.015	0.020	0.5	0	100	85-115	0			
Cadmium	0.0974	0.00014	0.00020	0.1	0	97.4	85-115	0			
Calcium	9.878	0.22	0.50	10	0	98.8	85-115	0			
Chromium	0.1015	0.00061	0.0050	0.1	0	101	85-115	0			
Cobalt	0.1012	0.00027	0.0050	0.1	0	101	85-115	0			
Lead	0.09546	0.00022	0.0050	0.1	0	95.5	85-115	0			
Lithium	0.09326	0.0017	0.010	0.1	0	93.3	85-115	0			
Molybdenum	0.09461	0.00033	0.0050	0.1	0	94.6	85-115	0			
Selenium	0.08796	0.00048	0.0050	0.1	0	88	85-115	0			
Thallium	0.09262	0.00032	0.0050	0.1	0	92.6	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192487** Instrument ID: **ICPMS4** Method: **E200.8**

MS Sample ID: **22022002-06AMS** Units: **mg/L** Analysis Date: **3/2/2022 03:55 PM**
Client ID: **2200202 PH-MW-05 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8212055** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09637	0.00042	0.0050	0.1	0.0000825	96.3	70-130	0			
Arsenic	0.09561	0.00019	0.0050	0.1	0.0002354	95.4	70-130	0			
Barium	0.1678	0.00057	0.0050	0.1	0.07225	95.5	70-130	0			
Beryllium	0.09152	0.00013	0.0020	0.1	0.0000033	91.5	70-130	0			
Boron	0.7281	0.015	0.020	0.5	0.2312	99.4	70-130	0			
Cadmium	0.09687	0.00014	0.00020	0.1	0.0000077	96.9	70-130	0			
Calcium	124.2	0.22	0.50	10	119.2	49.4	70-130	0			SO
Chromium	0.1002	0.00061	0.0050	0.1	0.0008679	99.3	70-130	0			
Cobalt	0.09779	0.00027	0.0050	0.1	0.0000605	97.7	70-130	0			
Lead	0.09606	0.00022	0.0050	0.1	0.000099	96	70-130	0			
Lithium	0.1156	0.0017	0.010	0.1	0.02156	94.1	70-130	0			
Molybdenum	0.09651	0.00033	0.0050	0.1	0.0001672	96.3	70-130	0			
Selenium	0.08848	0.00048	0.0050	0.1	0.0003124	88.2	70-130	0			
Thallium	0.09411	0.00032	0.0050	0.1	0.0000209	94.1	70-130	0			

MSD Sample ID: **22022002-06AMSD** Units: **mg/L** Analysis Date: **3/2/2022 03:57 PM**
Client ID: **2200202 PH-MW-05 Grab** Run ID: **ICPMS4_220302A** SeqNo: **8212056** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09496	0.00042	0.0050	0.1	0.0000825	94.9	70-130	0.09637	1.47	20	
Arsenic	0.09445	0.00019	0.0050	0.1	0.0002354	94.2	70-130	0.09561	1.22	20	
Barium	0.1669	0.00057	0.0050	0.1	0.07225	94.6	70-130	0.1678	0.517	20	
Beryllium	0.09124	0.00013	0.0020	0.1	0.0000033	91.2	70-130	0.09152	0.302	20	
Boron	0.7331	0.015	0.020	0.5	0.2312	100	70-130	0.7281	0.675	20	
Cadmium	0.09633	0.00014	0.00020	0.1	0.0000077	96.3	70-130	0.09687	0.565	20	
Calcium	123.5	0.22	0.50	10	119.2	42.1	70-130	124.2	0.586	20	SO
Chromium	0.1002	0.00061	0.0050	0.1	0.0008679	99.3	70-130	0.1002	0.027	20	
Cobalt	0.09692	0.00027	0.0050	0.1	0.0000605	96.9	70-130	0.09779	0.889	20	
Lead	0.09579	0.00022	0.0050	0.1	0.000099	95.7	70-130	0.09606	0.282	20	
Lithium	0.1143	0.0017	0.010	0.1	0.02156	92.7	70-130	0.1156	1.2	20	
Molybdenum	0.09639	0.00033	0.0050	0.1	0.0001672	96.2	70-130	0.09651	0.127	20	
Selenium	0.09005	0.00048	0.0050	0.1	0.0003124	89.7	70-130	0.08848	1.76	20	
Thallium	0.09357	0.00032	0.0050	0.1	0.0000209	93.5	70-130	0.09411	0.58	20	

The following samples were analyzed in this batch: 22022002-06A 22022002-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **192519** Instrument ID: **TDS** Method: **A2540 C-11**

MBLK Sample ID: **MBLK-192519-192519** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217125** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30								

MBLK Sample ID: **MBLK-192519-192519** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217158** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30	0	0	0	0-0	0			

LCS Sample ID: **LCS-192519-192519** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217124** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	496	22	30	495	0	100	85-109	0			

LCS Sample ID: **LCS-192519-192519** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217159** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	496	22	30	495	0	100	85-109	0			

DUP Sample ID: **22030065-04A DUP** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217116** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	2930	110	150	0	0	0	0-0	2880	1.72	10	

DUP Sample ID: **22030095-03A DUP** Units: **mg/L** Analysis Date: **3/4/2022 04:31 PM**
Client ID: Run ID: **TDS_220304A** SeqNo: **8217121** Prep Date: **3/2/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1033	74	100	0	0	0	0-0	1053	1.92	10	

The following samples were analyzed in this batch:

22022002-01C	22022002-02C	22022002-03C
22022002-04D	22022002-06C	22022002-07C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R339122** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 02:21 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208877** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 04:49 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208889** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3354	0.31	1.0								J
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 07:04 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208901** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 07:49 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208905** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 10:03 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208917** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/1/2022 11:45 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208926** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **R339122** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/2/2022 12:30 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208930** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/2/2022 01:27 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208936** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R339122** Units: **mg/L** Analysis Date: **3/2/2022 02:12 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208940** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 12:36 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208876** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.249	0.31	1.0	10	0	92.5	90-110	0			
Sulfate	9.943	0.19	1.0	10	0	99.4	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 04:37 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208888** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.289	0.31	1.0	10	0	92.9	90-110	0			
Sulfate	9.928	0.19	1.0	10	0	99.3	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 06:52 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208900** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.3	0.31	1.0	10	0	93	90-110	0			
Sulfate	10.06	0.19	1.0	10	0	101	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R339122** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 07:37 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208904** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	9.97	0.19	1.0	10	0	99.7	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 09:52 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208916** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.133	0.31	1.0	10	0	91.3	90-110	0			
Sulfate	9.932	0.19	1.0	10	0	99.3	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/1/2022 11:33 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208925** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.162	0.31	1.0	10	0	91.6	90-110	0			
Sulfate	9.895	0.19	1.0	10	0	98.9	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/2/2022 12:18 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208929** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.125	0.31	1.0	10	0	91.2	90-110	0			
Sulfate	9.812	0.19	1.0	10	0	98.1	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/2/2022 01:16 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208935** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.468	0.31	1.0	10	0	94.7	90-110	0			
Sulfate	10.45	0.19	1.0	10	0	105	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339122** Units: **mg/L** Analysis Date: **3/2/2022 02:01 AM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208939** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.44	0.31	1.0	10	0	94.4	90-110	0			
Sulfate	10	0.19	1.0	10	0	100	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R339122** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22022001-04E MS** Units: **mg/L** Analysis Date: **3/1/2022 03:54 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208885** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	493.6	12	40	400	150.6	85.8	80-120	0			
Sulfate	454	7.6	40	400	79.64	93.6	80-120	0			

MS Sample ID: **22022002-01C MS** Units: **mg/L** Analysis Date: **3/1/2022 06:07 PM**
Client ID: **2200198 PH-MW-01 Grab** Run ID: **IC3_220301A** SeqNo: **8208896** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1438	50	160	1600	69.86	85.5	80-120	0			
Sulfate	1775	30	160	1600	217.2	97.3	80-120	0			

MS Sample ID: **22022002-04C MS** Units: **mg/L** Analysis Date: **3/1/2022 08:45 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **IC3_220301A** SeqNo: **8208910** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1424	50	160	1600	79.47	84	80-120	0			
Sulfate	1846	30	160	1600	295.7	96.9	80-120	0			

MS Sample ID: **22030065-04A MS** Units: **mg/L** Analysis Date: **3/1/2022 11:00 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208922** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2549	50	160	1600	1227	82.6	80-120	0			

MSD Sample ID: **22022001-04E MSD** Units: **mg/L** Analysis Date: **3/1/2022 04:06 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208886** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	495.7	12	40	400	150.6	86.3	80-120	493.6	0.422	20	
Sulfate	454.4	7.6	40	400	79.64	93.7	80-120	454	0.081	20	

MSD Sample ID: **22022002-01C MSD** Units: **mg/L** Analysis Date: **3/1/2022 06:19 PM**
Client ID: **2200198 PH-MW-01 Grab** Run ID: **IC3_220301A** SeqNo: **8208897** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1434	50	160	1600	69.86	85.3	80-120	1438	0.26	20	
Sulfate	1769	30	160	1600	217.2	97	80-120	1775	0.335	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **R339122** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22022002-04C MSD** Units: **mg/L** Analysis Date: **3/1/2022 08:56 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **IC3_220301A** SeqNo: **8208911** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1421	50	160	1600	79.47	83.8	80-120	1424	0.201	20	
Sulfate	1853	30	160	1600	295.7	97.4	80-120	1846	0.393	20	

MSD Sample ID: **22030065-04A MSD** Units: **mg/L** Analysis Date: **3/1/2022 11:11 PM**
Client ID: Run ID: **IC3_220301A** SeqNo: **8208923** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2549	50	160	1600	1227	82.6	80-120	2549	0.0063	20	

The following samples were analyzed in this batch:

22022002-01C	22022002-02C	22022002-03C
22022002-04C	22022002-06C	22022002-07C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R339255** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/2/2022 02:49 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213614** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/2/2022 05:25 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213626** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3581	0.31	1.0								J
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/2/2022 07:40 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213638** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.4198	0.31	1.0								J
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/2/2022 08:25 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213642** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/2/2022 10:40 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213654** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R339255** Units: **mg/L** Analysis Date: **3/3/2022 12:55 AM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213666** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.3425	0.31	1.0								J
Fluoride	U	0.067	0.10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **R339255** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R339255** Units: **mg/L** Analysis Date: **3/2/2022 02:38 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213613** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.797	0.31	1.0	10	0	98	90-110	0			
Fluoride	2.053	0.067	0.10	2	0	103	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339255** Units: **mg/L** Analysis Date: **3/2/2022 05:14 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213625** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.85	0.31	1.0	10	0	98.5	90-110	0			
Fluoride	2.001	0.067	0.10	2	0	100	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339255** Units: **mg/L** Analysis Date: **3/2/2022 07:29 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213637** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.931	0.31	1.0	10	0	99.3	90-110	0			
Fluoride	2.173	0.067	0.10	2	0	109	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339255** Units: **mg/L** Analysis Date: **3/2/2022 08:14 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213641** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.914	0.31	1.0	10	0	99.1	90-110	0			
Fluoride	2.004	0.067	0.10	2	0	100	90-110	0			

LCS Sample ID: **MLCCV/LCS-R339255** Units: **mg/L** Analysis Date: **3/2/2022 10:29 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213653** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.936	0.31	1.0	10	0	99.4	90-110	0			
Fluoride	1.964	0.067	0.10	2	0	98.2	90-110	0			

MS Sample ID: **22022002-04C MS** Units: **mg/L** Analysis Date: **3/2/2022 04:51 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **IC3_220302A** SeqNo: **8213623** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	118	3.1	10	100	30.76	87.2	80-120	0			
Fluoride	24.01	0.67	1.0	20	0	120	80-120	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **R339255** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22030095-08B MS** Units: **mg/L** Analysis Date: **3/2/2022 06:21 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213631** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	186.2	5	16	160	52.59	83.5	80-120	0			
Fluoride	34.31	1.1	1.6	32	0	107	80-120	0			

MS Sample ID: **22030095-17B MS** Units: **mg/L** Analysis Date: **3/2/2022 08:59 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213645** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	191.5	5	16	160	42.35	93.2	80-120	0			
Fluoride	31.83	1.1	1.6	32	0	99.5	80-120	0			

MS Sample ID: **22030095-07B MS** Units: **mg/L** Analysis Date: **3/2/2022 11:14 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213657** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	213.9	5	16	160	67.67	91.4	80-120	0			
Fluoride	31.84	1.1	1.6	32	0	99.5	80-120	0			

MSD Sample ID: **22022002-04C MSD** Units: **mg/L** Analysis Date: **3/2/2022 05:03 PM**
Client ID: **2200201 PH-MW-04 Grab** Run ID: **IC3_220302A** SeqNo: **8213624** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	117.9	3.1	10	100	30.76	87.1	80-120	118	0.106	20	
Fluoride	22.62	0.67	1.0	20	0	113	80-120	24.01	5.98	20	

MSD Sample ID: **22030095-08B MSD** Units: **mg/L** Analysis Date: **3/2/2022 06:33 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213632** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	186.1	5	16	160	52.59	83.4	80-120	186.2	0.0892	20	
Fluoride	35.64	1.1	1.6	32	0	111	80-120	34.31	3.8	20	

MSD Sample ID: **22030095-17B MSD** Units: **mg/L** Analysis Date: **3/2/2022 09:10 PM**
Client ID: Run ID: **IC3_220302A** SeqNo: **8213646** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	188.9	5	16	160	42.35	91.6	80-120	191.5	1.34	20	
Fluoride	31.22	1.1	1.6	32	0	97.6	80-120	31.83	1.92	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22022002
Project: Pegs Hill - Background Monitoring

QC BATCH REPORT

Batch ID: **R339255** Instrument ID: **IC3** Method: **E300.0**

MSD	Sample ID: **22030095-07B MSD**				Units: **mg/L**			Analysis Date: **3/2/2022 11:25 PM**			
Client ID:		Run ID: **IC3_220302A**			SeqNo: **8213658**			Prep Date:		DF: **16**	
Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	214	5	16	160	67.67	91.5	80-120	213.9	0.0748	20	
Fluoride	34.68	1.1	1.6	32	0	108	80-120	31.84	8.52	20	

The following samples were analyzed in this batch:

22022002-01C	22022002-02C	22022002-03C
22022002-04C	22022002-06C	22022002-07C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

22022002

EKPC: East Kentucky Power Cooperative
Project: Peg's Hill - Background Monitoring

EAST KENTUCKY POWER COOPE

EAST KENTUCKY POWER COOPERATIVE
A Touchstone Energy® Cooperative

Facility:	
East Kentucky Power Cooperative **H.L. Spurlock Station** 1301 West Second Street Maysville, KY 41056	Peg
	Sample Matrix: Groundwater

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	MS/MSD Collected	Sample Type: Grab or Composite
	2/25/22	1048	PH-MW-01 2200198	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1200	PH-MW-02 2200199	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1537	PH-MW-03A 2200200	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1433	PH-MW-04 2200201	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☒	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☒	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☒	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1304	PH-MW-05 2200202	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1433	Field Duplicate 2200203	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1437	Matrix Spike 2200204	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	2/25/22	1433	Matrix Spike Duplicate 2200205	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	2/25/22	1525	Field Blank 2200206	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		Grab

	DATE	TIME	
Collected by: (Signature:)	2/28/22	0815	Received by: (Signature)
Relinquished by: (Signature:)	2/28/22	0915	Received by: (Signature)
Relinquished by: (Signature:)	2-25-22	1159	Received by: (Signature)
Relinquished by: (Signature:)	2-25-22	1425	Received by: (Signature)

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory: ☒ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.) 462 ARSC

PO# 0000154559

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janet Smith
Date/Time:	2/28/22 1425
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	6°C
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #:	*not checked
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

Client did not reference which is parent sample for MS/MSD - Logged as sample with same collection date and time - PH-MW-04

22022002

EKPC: East Kentucky Power Cooperative
Project: Peg's Hill - Background Monitoring

EAST KENTUCKY POWER COOPE

EAST KENTUCKY POWER COOPERATIVE
A Touchstone Energy Cooperative

Facility:
East Kentucky Power Cooperative
H.L. Spurlock Station
1301 West Second Street
Maysville, KY 41056

Peg'...

Sample Matrix: Groundwater

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	MS/MSD Collected	Sample Type: Grab or Composite
	2/25/22	1048	**PH-MW-01** 2200198	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1200	**PH-MW-02** 2200199	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1537	**PH-MW-03A** 2200200	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1433	**PH-MW-04** 2200201	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☒	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☒	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☒	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1304	**PH-MW-05** 2200202	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1433	**Field Duplicate** 2200203	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	2/25/22	1433	**Matrix Spike** 2200204	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	2/25/22	1433	**Matrix Spike Duplicate** 2200205	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	2/25/22	1525	**Field Blank** 2200206	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		Grab

Signature	DATE	TIME	Received by: (Signature)
Collected by: (Signature:) [signature]	2/28/22	0815	[signature]
Relinquished by: (Signature:) [signature]	2/28/22	0915	[signature]
Relinquished by: (Signature:) [signature]	2-28-22	1159	[signature] ACS
Relinquished by: (Signature:) [signature] ACS	2-28-22	1425	[signature]

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory: ☒ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.) <6°C ALS [illegible]

Relinquished By [signature] 2/28/22 1700

PO# 0000154559 [signature] 3/1/22 1030

Asun <6°C

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **28-Feb-22 14:25**

Work Order: **22022002** Received by: **KRW**

Checklist completed by: Keith Wierenga (eSignature) 01-Mar-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 02-Mar-22 (Date)

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/1/2022 12:45:08 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 21, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22022002
Pace Project No.: 30470337

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on March 02, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22022002
Pace Project No.: 30470337

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22022002
Pace Project No.: 30470337

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30470337001	**22022002-01D**	Water	02/25/22 10:48	03/02/22 10:00
30470337002	**22022002-02D**	Water	02/25/22 12:00	03/02/22 10:00
30470337003	**22022002-03D**	Water	02/25/22 15:37	03/02/22 10:00
30470337004	**22022002-05A**	Water	02/25/22 14:33	03/02/22 10:00
30470337005	**22022002-06D**	Water	02/25/22 13:04	03/02/22 10:00
30470337006	**22022002-07D**	Water	02/25/22 14:33	03/02/22 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22022002
Pace Project No.: 30470337

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30470337001	**22022002-01D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30470337002	**22022002-02D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30470337003	**22022002-03D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30470337004	**22022002-05A**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30470337005	**22022002-06D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30470337006	**22022002-07D**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22022002
Pace Project No.: 30470337

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: March 21, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22022002
Pace Project No.: 30470337

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: March 21, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22022002
Pace Project No.: 30470337

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: March 21, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22022002
Pace Project No.: 30470337

Sample: 22022002-01D **Lab ID: 30470337001** Collected: 02/25/22 10:48 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0649 ± 0.492 (0.974) C:NA T:94%**	pCi/L	03/15/22 15:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.156 ± 0.371 (0.826) C:75% T:88%**	pCi/L	03/14/22 15:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.221 ± 0.863 (1.80)**	pCi/L	03/21/22 17:07	7440-14-4	

Sample: 22022002-02D **Lab ID: 30470337002** Collected: 02/25/22 12:00 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.645 (1.26) C:NA T:96%**	pCi/L	03/15/22 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.145 ± 0.321 (0.786) C:74% T:87%**	pCi/L	03/14/22 15:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.966 (2.05)**	pCi/L	03/21/22 17:07	7440-14-4	

Sample: 22022002-03D **Lab ID: 30470337003** Collected: 02/25/22 15:37 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0678 ± 0.352 (0.730) C:NA T:98%**	pCi/L	03/15/22 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.162 ± 0.387 (0.862) C:71% T:86%**	pCi/L	03/14/22 15:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.230 ± 0.739 (1.59)**	pCi/L	03/21/22 17:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22022002
Pace Project No.: 30470337

Sample: 22022002-05A **Lab ID: 30470337004** Collected: 02/25/22 14:33 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.232 ± 0.266 (0.698) C:NA T:106%**	pCi/L	03/15/22 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0193 ± 0.299 (0.693) C:74% T:97%**	pCi/L	03/14/22 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0193 ± 0.565 (1.39)**	pCi/L	03/21/22 17:07	7440-14-4	

Sample: 22022002-06D **Lab ID: 30470337005** Collected: 02/25/22 13:04 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0645 ± 0.490 (1.02) C:NA T:97%**	pCi/L	03/15/22 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0804 ± 0.346 (0.789) C:74% T:85%**	pCi/L	03/14/22 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0804 ± 0.836 (1.81)**	pCi/L	03/21/22 17:07	7440-14-4	

Sample: 22022002-07D **Lab ID: 30470337006** Collected: 02/25/22 14:33 Received: 03/02/22 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0646 ± 0.522 (1.08) C:NA T:98%**	pCi/L	03/15/22 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.132 ± 0.356 (0.799) C:67% T:89%**	pCi/L	03/14/22 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.132 ± 0.878 (1.88)**	pCi/L	03/21/22 17:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22022002
Pace Project No.: 30470337

QC Batch: 488797 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30470337001, 30470337002, 30470337003, 30470337004, 30470337005, 30470337006

METHOD BLANK: 2363963 Matrix: Water
Associated Lab Samples: 30470337001, 30470337002, 30470337003, 30470337004, 30470337005, 30470337006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.249 (0.506) C:NA T:94%	pCi/L	03/15/22 15:17	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22022002
Pace Project No.: 30470337

QC Batch: 488799 | Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 | Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30470337001, 30470337002, 30470337003, 30470337004, 30470337005, 30470337006

METHOD BLANK: 2363966 Matrix: Water
Associated Lab Samples: 30470337001, 30470337002, 30470337003, 30470337004, 30470337005, 30470337006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0625 ± 0.285 (0.654) C:76% T:87%	pCi/L	03/14/22 15:50	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22022002
Pace Project No.: 30470337

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ALS Environmental

Subcontractor:
Pace Analytical Services, Inc.
1638 Roseytown Rd
Suites 2,3 & 4
Greensburg, PA 15601
TEL: (724) 850-5600
FAX:
Acct #:

CHAIN-OF-CUSTODY RECORD

Date: 01-Mar-22
COC ID: 18999
Due Date: 04-Mar-22

Salesperson: Paul Painter

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22022002	A	Ra226(903.1); Ra228(904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J	
22022002-01D	2200198 PH-MW-01 Grab	Groundwater	25/Feb/2022 10:48	(2) 1LPHNO3	X										001
22022002-02D	2200199 PH-MW-02 Grab	Groundwater	25/Feb/2022 12:00	(2) 1LPHNO3	X										002
22022002-03D	2200200 PH-MW-03A Grab	Groundwater	25/Feb/2022 15:37	(2) 1LPHNO3	X										003
22022002-05A	2200201 PH-MW-04 Grab	Groundwater	25/Feb/2022 14:33	(2) 1LPHNO3	X										004
22022002-06D	2200202 PH-MW-05 Grab	Groundwater	25/Feb/2022 13:04	(2) 1LPHNO3	X										005
22022002-07D	220200203 Field Duplicate Grab	Groundwater	25/Feb/2022 14:33	(2) 1LPHNO3	X										006

WO# : 30470337

30470337

Comments:
KY Samples. Sampler signature is illegible on COC.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
Janet Smith	3/1/22 1700	Z. Ashley	3-2-22 10:00		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS Environmental Project # 30470337

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label MJS
LIMS Login MJS

Tracking #: 7761 7118 6692

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used — Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# HC169501 Date and Initials of person examining contents: 3-5-22 JA

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:	✓			8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓	✓		10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH < 2
All containers meet method preservation requirements.	✓			Initial when completed JA Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JA Date: 3-5-22 Survey Meter SN: 1563

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

30470337

Client

Site 2202202

Profile Number 5573

Notes

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2												2																	
3												2																	
4												2																	
5												2																	
6												2																	
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserved
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

29-Apr-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **H.L. Spurlock Station** Work Order: **22032495**

Dear Jared,

ALS Environmental received 7 samples on 29-Mar-2022 02:55 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 29-Apr-22

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Work Order: **22032495**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22032495-01	PH-MW-01 Grab	Groundwater		3/28/2022 11:59	3/29/2022 14:55	☐
22032495-01	PH-MW-01 Grab	Groundwater		3/28/2022 11:59	3/30/2022 09:00	☐
22032495-01	PH-MW-01 Grab	Groundwater		3/28/2022 11:59	3/31/2022 12:30	☐
22032495-02	PH-MW-02 Grab	Groundwater		3/28/2022 13:13	3/29/2022 14:55	☐
22032495-02	PH-MW-02 Grab	Groundwater		3/28/2022 13:13	3/30/2022 09:00	☐
22032495-02	PH-MW-02 Grab	Groundwater		3/28/2022 13:13	3/31/2022 12:30	☐
22032495-03	PH-MW-03A Grab	Groundwater		3/28/2022 16:40	3/29/2022 14:55	☐
22032495-03	PH-MW-03A Grab	Groundwater		3/28/2022 16:40	3/30/2022 09:00	☐
22032495-03	PH-MW-03A Grab	Groundwater		3/28/2022 16:40	3/31/2022 12:30	☐
22032495-04	PH-MW-04 Grab	Groundwater		3/28/2022 15:35	3/29/2022 14:55	☐
22032495-04	PH-MW-04 Grab	Groundwater		3/28/2022 15:35	3/30/2022 09:00	☐
22032495-04	PH-MW-04 Grab	Groundwater		3/28/2022 15:35	3/31/2022 12:30	☐
22032495-05	PH-MW-05 Grab	Groundwater		3/28/2022 14:07	3/29/2022 14:55	☐
22032495-05	PH-MW-05 Grab	Groundwater		3/28/2022 14:07	3/30/2022 09:00	☐
22032495-06	Field Duplicate Grab	Groundwater		3/28/2022 15:35	3/29/2022 14:55	☐
22032495-06	Field Duplicate Grab	Groundwater		3/28/2022 15:35	3/30/2022 09:00	☐
22032495-07	Field Blank Grab	Groundwater		3/28/2022 16:30	3/30/2022 09:00	☐

ALS Group, USA

Date: 29-Apr-22

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Work Order: 22032495

Case Narrative

Samples for the above noted Work Order were received on 03/29/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
Batch R341367, Method E300.0, Sample 22032495-03C MS: The MS and/or MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Chloride

Batch R341174, Method E300.0, Sample 22032495-04C MS: MS and MSD were outside upper limit of calibration. Processed at equivalent dilution level as the parent. Sulfate

Subcontracted analytical data has been appended to this report in its entirety.

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
WorkOrder: **22032495**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: PH-MW-01 Grab
Collection Date: 3/28/2022 11:59 AM

Work Order: 22032495
Lab ID: 22032495-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 4/4/22			Analyst: **ABL**
Mercury	**0.0011**		**0.00020**	**0.00050**	**µg/L**	1	4/4/2022 14:59
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 4/1/22			Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	4/1/2022 19:27
Arsenic	**0.000256**	J	**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:27
Barium	**0.0452**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:27
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:27
Boron	**0.657**		**0.15**	**0.20**	**mg/L**	10	4/5/2022 15:13
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:27
Calcium	**262**		**2.2**	**5.0**	**mg/L**	10	4/4/2022 15:11
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:27
Cobalt	**0.000678**	J	**0.00027**	**0.0010**	**mg/L**	1	4/1/2022 19:27
Lead	U		0.00022	0.0010	mg/L	1	4/1/2022 19:27
Lithium	**0.0525**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:27
Molybdenum	U		0.00033	0.0010	mg/L	1	4/1/2022 19:27
Selenium	U		0.00048	0.0010	mg/L	1	4/1/2022 19:27
Thallium	U		0.00032	0.0010	mg/L	1	4/1/2022 19:27
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**45**		**5.0**	**16**	**mg/L**	16	3/31/2022 16:04
Fluoride	U		0.067	0.10	mg/L	1	4/1/2022 16:28
Sulfate	**190**		**3.0**	**16**	**mg/L**	16	3/31/2022 16:04
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 4/1/22			Analyst: **SRN**
Total Dissolved Solids	**1,200**		**74**	**100**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: PH-MW-02 Grab
Collection Date: 3/28/2022 01:13 PM

Work Order: 22032495
Lab ID: 22032495-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 4/4/22			Analyst: **ABL**
Mercury	**0.00082**		**0.00020**	**0.00050**	**µg/L**	1	4/4/2022 15:07
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 4/1/22			Analyst: **STP**
Antimony	**0.000449**	J	**0.00042**	**0.0010**	**mg/L**	1	4/1/2022 19:29
Arsenic	**0.00149**		**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:29
Barium	**0.0801**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:29
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:29
Boron	**1.26**		**0.15**	**0.20**	**mg/L**	10	4/5/2022 15:18
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:29
Calcium	**38.8**		**0.22**	**0.50**	**mg/L**	1	4/1/2022 19:29
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:29
Cobalt	U		0.00027	0.0010	mg/L	1	4/1/2022 19:29
Lead	U		0.00022	0.0010	mg/L	1	4/1/2022 19:29
Lithium	**0.0872**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:29
Molybdenum	**0.00169**		**0.00033**	**0.0010**	**mg/L**	1	4/1/2022 19:29
Selenium	U		0.00048	0.0010	mg/L	1	4/1/2022 19:29
Thallium	U		0.00032	0.0010	mg/L	1	4/1/2022 19:29
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**290**		**5.0**	**16**	**mg/L**	16	3/31/2022 16:15
Fluoride	U		0.067	0.10	mg/L	1	4/1/2022 17:29
Sulfate	**80**		**3.0**	**16**	**mg/L**	16	3/31/2022 16:15
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 4/1/22			Analyst: **SRN**
Total Dissolved Solids	**950**		**74**	**100**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: PH-MW-03A Grab
Collection Date: 3/28/2022 04:40 PM

Work Order: 22032495
Lab ID: 22032495-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 4/5/22			Analyst: **ABL**
Mercury	**0.0041**		**0.00020**	**0.00050**	**µg/L**	1	4/5/2022 14:59
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 4/1/22			Analyst: **STP**
Antimony	**0.000442**	J	**0.00042**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Arsenic	**0.000260**	J	**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Barium	**0.0548**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:30
Boron	**3.13**		**0.15**	**0.20**	**mg/L**	10	4/5/2022 15:19
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:30
Calcium	**29.3**		**0.22**	**0.50**	**mg/L**	1	4/1/2022 19:30
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:30
Cobalt	**0.000569**	J	**0.00027**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Lead	U		0.00022	0.0010	mg/L	1	4/1/2022 19:30
Lithium	**0.125**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:30
Molybdenum	**0.0245**		**0.00033**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Selenium	**0.000635**	J	**0.00048**	**0.0010**	**mg/L**	1	4/1/2022 19:30
Thallium	U		0.00032	0.0010	mg/L	1	4/1/2022 19:30
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**570**		**12**	**40**	**mg/L**	40	4/5/2022 00:31
Fluoride	**0.29**		**0.067**	**0.10**	**mg/L**	1	4/1/2022 17:39
Sulfate	**330**		**7.6**	**40**	**mg/L**	40	4/5/2022 00:31
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 4/1/22			Analyst: **SRN**
Total Dissolved Solids	**1,700**		**74**	**100**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: PH-MW-04 Grab
Collection Date: 3/28/2022 03:35 PM

Work Order: 22032495
Lab ID: 22032495-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 4/5/22			Analyst: **ABL**
Mercury	**0.00075**		**0.00020**	**0.00050**	**µg/L**	1	4/5/2022 15:07
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 4/1/22			Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	4/1/2022 19:32
Arsenic	**0.000267**	J	**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:32
Barium	**0.0739**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:32
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:32
Boron	**0.871**		**0.15**	**0.20**	**mg/L**	10	4/5/2022 15:21
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:32
Calcium	**204**		**2.2**	**5.0**	**mg/L**	10	4/4/2022 15:16
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:32
Cobalt	**0.00148**		**0.00027**	**0.0010**	**mg/L**	1	4/1/2022 19:32
Lead	**0.000737**	J	**0.00022**	**0.0010**	**mg/L**	1	4/1/2022 19:32
Lithium	**0.0405**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:32
Molybdenum	**0.000400**	J	**0.00033**	**0.0010**	**mg/L**	1	4/1/2022 19:32
Selenium	U		0.00048	0.0010	mg/L	1	4/1/2022 19:32
Thallium	U		0.00032	0.0010	mg/L	1	4/1/2022 19:32
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**47**		**5.0**	**16**	**mg/L**	16	3/31/2022 16:26
Fluoride	U		0.067	0.10	mg/L	1	4/1/2022 18:02
Sulfate	**300**		**3.0**	**16**	**mg/L**	16	3/31/2022 16:26
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 4/1/22			Analyst: **SRN**
Total Dissolved Solids	**1,200**		**74**	**100**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: PH-MW-05 Grab
Collection Date: 3/28/2022 02:07 PM

Work Order: 22032495
Lab ID: 22032495-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 4/5/22		Analyst: **ABL**
Mercury	**0.00048**	J	**0.00020**	**0.00050**	**µg/L**	1	4/5/2022 15:38
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 4/1/22		Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	4/1/2022 19:40
Arsenic	**0.000194**	J	**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:40
Barium	**0.0719**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:40
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:40
Boron	**0.220**		**0.015**	**0.020**	**mg/L**	1	4/5/2022 15:26
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:40
Calcium	**119**		**0.22**	**0.50**	**mg/L**	1	4/1/2022 19:40
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:40
Cobalt	U		0.00027	0.0010	mg/L	1	4/1/2022 19:40
Lead	**0.000656**	J	**0.00022**	**0.0010**	**mg/L**	1	4/1/2022 19:40
Lithium	**0.0215**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:40
Molybdenum	**0.000487**	J	**0.00033**	**0.0010**	**mg/L**	1	4/1/2022 19:40
Selenium	U		0.00048	0.0010	mg/L	1	4/1/2022 19:40
Thallium	**0.000333**	J	**0.00032**	**0.0010**	**mg/L**	1	4/1/2022 19:40
ANIONS BY ION CHROMATOGRAPHY			Method:**E300.0**				Analyst: **QTN**
Chloride	**34**		**5.0**	**16**	**mg/L**	16	3/31/2022 17:11
Fluoride	U		0.067	0.10	mg/L	1	4/1/2022 18:47
Sulfate	**150**		**3.0**	**16**	**mg/L**	16	3/31/2022 17:11
TOTAL DISSOLVED SOLIDS			Method:**A2540 C-11**		Prep: FILTER / 4/1/22		Analyst: **SRN**
Total Dissolved Solids	**600**		**37**	**50**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: Field Duplicate Grab
Collection Date: 3/28/2022 03:35 PM

Work Order: 22032495
Lab ID: 22032495-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 4/5/22			Analyst: **ABL**
Mercury	**0.00066**		**0.00020**	**0.00050**	**µg/L**	1	4/5/2022 15:46
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 4/1/22			Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	4/1/2022 19:42
Arsenic	**0.000216**	J	**0.00019**	**0.0010**	**mg/L**	1	4/1/2022 19:42
Barium	**0.0736**		**0.00057**	**0.0010**	**mg/L**	1	4/1/2022 19:42
Beryllium	U		0.00013	0.0010	mg/L	1	4/1/2022 19:42
Boron	**0.801**		**0.15**	**0.20**	**mg/L**	10	4/5/2022 15:27
Cadmium	U		0.00014	0.00020	mg/L	1	4/1/2022 19:42
Calcium	**198**		**2.2**	**5.0**	**mg/L**	10	4/4/2022 15:22
Chromium	U		0.00061	0.0010	mg/L	1	4/1/2022 19:42
Cobalt	**0.00144**		**0.00027**	**0.0010**	**mg/L**	1	4/1/2022 19:42
Lead	**0.000692**	J	**0.00022**	**0.0010**	**mg/L**	1	4/1/2022 19:42
Lithium	**0.0399**		**0.0017**	**0.010**	**mg/L**	1	4/1/2022 19:42
Molybdenum	**0.000427**	J	**0.00033**	**0.0010**	**mg/L**	1	4/1/2022 19:42
Selenium	U		0.00048	0.0010	mg/L	1	4/1/2022 19:42
Thallium	U		0.00032	0.0010	mg/L	1	4/1/2022 19:42
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**48**		**5.0**	**16**	**mg/L**	16	3/31/2022 17:22
Fluoride	U		0.067	0.10	mg/L	1	4/1/2022 18:58
Sulfate	**290**		**3.0**	**16**	**mg/L**	16	3/31/2022 17:22
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 4/1/22			Analyst: **SRN**
Total Dissolved Solids	**1,200**		**74**	**100**	**mg/L**	1	4/4/2022 15:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *29-Apr-22*

Client: East Kentucky Power Cooperative
Project: H.L. Spurlock Station
Sample ID: Field Blank Grab
Collection Date: 3/28/2022 04:30 PM

Work Order: 22032495
Lab ID: 22032495-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 4/5/22		Analyst: **ABL**
Mercury	**0.00069**		**0.00020**	**0.00050**	**µg/L**	1	4/5/2022 16:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 29-Apr-22

Client: East Kentucky Power Cooperative

QC BATCH REPORT

Work Order: 22032495

Project: H.L. Spurlock Station

Batch ID: **193995** Instrument ID: **HG2** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-193995-193995** Units: **ng/L** Analysis Date: **4/4/2022 11:52 AM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296176** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-193995-193995** Units: **ng/L** Analysis Date: **4/4/2022 12:46 PM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296183** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-193995-193995** Units: **ng/L** Analysis Date: **4/4/2022 01:41 PM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296190** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22032249-04AMS** Units: **ng/L** Analysis Date: **4/4/2022 01:02 PM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296185** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	348	2	5.0	40	300	120	71-125	0			O

MS Sample ID: **22032495-02BMS** Units: **ng/L** Analysis Date: **4/4/2022 03:14 PM**

Client ID: **PH-MW-02 Grab** Run ID: **HG2_220404A** SeqNo: **8296202** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.09	0.2	0.50	4	0.82	107	71-125	0			

MSD Sample ID: **22032249-04AMSD** Units: **ng/L** Analysis Date: **4/4/2022 01:10 PM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296186** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	346	2	5.0	40	300	115	71-125	348	0.576	24	O

MSD Sample ID: **22032495-02BMSD** Units: **ng/L** Analysis Date: **4/4/2022 03:22 PM**

Client ID: **PH-MW-02 Grab** Run ID: **HG2_220404A** SeqNo: **8296203** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.21	0.2	0.50	4	0.82	110	71-125	5.09	2.33	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **193995** Instrument ID: **HG2** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-193995-193995** Units: **ng/L** Analysis Date: **4/4/2022 11:44 AM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296175** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.31	0.2	0.50	5	0	106	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-193995-193995** Units: **ng/L** Analysis Date: **4/4/2022 03:30 PM**

Client ID: Run ID: **HG2_220404A** SeqNo: **8296204** Prep Date: **4/4/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.71	0.2	0.50	5	0	114	77-123	0			

The following samples were analyzed in this batch: 22032495-01B 22032495-02B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194157** Instrument ID: **HG2** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-194157-194157** Units: **ng/L** Analysis Date: **4/5/2022 12:31 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299369** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-194157-194157** Units: **ng/L** Analysis Date: **4/5/2022 01:26 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299380** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-194157-194157** Units: **ng/L** Analysis Date: **4/5/2022 02:20 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299391** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22032495-04BMS** Units: **ng/L** Analysis Date: **4/5/2022 03:23 PM**
Client ID: **PH-MW-04 Grab** Run ID: **HG2_220405A** SeqNo: **8299405** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.76	0.2	0.50	4	0.75	100	71-125	0			

MS Sample ID: **22032495-06BMS** Units: **ng/L** Analysis Date: **4/5/2022 03:54 PM**
Client ID: **Field Duplicate Grab** Run ID: **HG2_220405A** SeqNo: **8299412** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.67	0.2	0.50	4	0.66	100	71-125	0			

MSD Sample ID: **22032495-04BMSD** Units: **ng/L** Analysis Date: **4/5/2022 03:30 PM**
Client ID: **PH-MW-04 Grab** Run ID: **HG2_220405A** SeqNo: **8299407** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.77	0.2	0.50	4	0.75	100	71-125	4.76	0.21	24	

MSD Sample ID: **22032495-06BMSD** Units: **ng/L** Analysis Date: **4/5/2022 04:02 PM**
Client ID: **Field Duplicate Grab** Run ID: **HG2_220405A** SeqNo: **8299413** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.57	0.2	0.50	4	0.66	97.8	71-125	4.67	2.16	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194157** Instrument ID: **HG2** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-194157-194157** Units: **ng/L** Analysis Date: **4/5/2022 12:23 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299367** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.35	0.2	0.50	5	0	107	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-194157-194157** Units: **ng/L** Analysis Date: **4/5/2022 04:09 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299415** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.17	0.2	0.50	5	0	103	77-123	0			

The following samples were analyzed in this batch:

22032495-03B 22032495-04B 22032495-05B
22032495-06B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194158** Instrument ID: **HG2** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-194158-194158** Units: **ng/L** Analysis Date: **4/5/2022 04:25 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299418** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-194158-194158** Units: **ng/L** Analysis Date: **4/5/2022 05:20 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299429** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-194158-194158** Units: **ng/L** Analysis Date: **4/5/2022 05:59 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299437** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22032671-01CMS** Units: **ng/L** Analysis Date: **4/5/2022 04:48 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299423** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.36	0.2	0.50	4	0.35	100	71-125	0			

MS Sample ID: **22032687-01FMS** Units: **ng/L** Analysis Date: **4/5/2022 05:27 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299431** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	11.1	0.2	0.50	4	7.41	92.2	71-125	0			

MSD Sample ID: **22032671-01CMSD** Units: **ng/L** Analysis Date: **4/5/2022 04:56 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299425** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.38	0.2	0.50	4	0.35	101	71-125	4.36	0.458	24	

MSD Sample ID: **22032687-01FMSD** Units: **ng/L** Analysis Date: **4/5/2022 05:35 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299432** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	11.4	0.2	0.50	4	7.41	99.8	71-125	11.1	2.67	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194158** Instrument ID: **HG2** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-194158-194158** Units: **ng/L** Analysis Date: **4/5/2022 04:17 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299416** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.08	0.2	0.50	5	0	102	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-194158-194158** Units: **ng/L** Analysis Date: **4/5/2022 07:17 PM**
Client ID: Run ID: **HG2_220405A** SeqNo: **8299453** Prep Date: **4/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.28	0.2	0.50	5	0	106	77-123	0			

The following samples were analyzed in this batch: 22032495-07A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194039** Instrument ID: **ICPMS3** Method: **E200.8**

MBLK Sample ID: **MBLK-194039-194039** Units: **mg/L** Analysis Date: **4/1/2022 07:04 PM**
Client ID: Run ID: **ICPMS3_220401A** SeqNo: **8293138** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	U	0.00061	0.0050								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

MBLK Sample ID: **MBLK-194039-194039** Units: **mg/L** Analysis Date: **4/4/2022 02:53 PM**
Client ID: Run ID: **ICPMS3_220404A** SeqNo: **8294311** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	U	0.015	0.020								

LCS Sample ID: **LCS-194039-194039** Units: **mg/L** Analysis Date: **4/1/2022 07:05 PM**
Client ID: Run ID: **ICPMS3_220401A** SeqNo: **8293139** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1031	0.00042	0.0050	0.1	0	103	85-115	0			
Arsenic	0.09783	0.00019	0.0050	0.1	0	97.8	85-115	0			
Barium	0.1035	0.00057	0.0050	0.1	0	103	85-115	0			
Beryllium	0.1072	0.00013	0.0020	0.1	0	107	85-115	0			
Cadmium	0.104	0.00014	0.00020	0.1	0	104	85-115	0			
Calcium	10.3	0.22	0.50	10	0	103	85-115	0			
Chromium	0.0987	0.00061	0.0050	0.1	0	98.7	85-115	0			
Cobalt	0.09889	0.00027	0.0050	0.1	0	98.9	85-115	0			
Lead	0.1014	0.00022	0.0050	0.1	0	101	85-115	0			
Lithium	0.09968	0.0017	0.010	0.1	0	99.7	85-115	0			
Molybdenum	0.102	0.00033	0.0050	0.1	0	102	85-115	0			
Selenium	0.09754	0.00048	0.0050	0.1	0	97.5	85-115	0			
Thallium	0.09925	0.00032	0.0050	0.1	0	99.2	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194039** Instrument ID: **ICPMS3** Method: **E200.8**

LCS Sample ID: **LCS-194039-194039** Units: **mg/L** Analysis Date: **4/5/2022 03:00 PM**
Client ID: Run ID: **ICPMS3_220405A** SeqNo: **8298078** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5113	0.015	0.020	0.5	0	102	85-115	0			

MS Sample ID: **22032494-06BMS** Units: **mg/L** Analysis Date: **4/1/2022 07:17 PM**
Client ID: Run ID: **ICPMS3_220401A** SeqNo: **8293146** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09574	0.0042	0.050	0.1	0.0000847	95.7	70-130	0			
Arsenic	0.09177	0.0019	0.050	0.1	0.00137	90.4	70-130	0			
Barium	0.1964	0.0057	0.050	0.1	0.1105	85.8	70-130	0			
Beryllium	0.09102	0.0013	0.020	0.1	0.0000726	90.9	70-130	0			
Cadmium	0.09025	0.0014	0.0020	0.1	0.0001298	90.1	70-130	0			
Chromium	0.09396	0.0061	0.050	0.1	0.001368	92.6	70-130	0			
Cobalt	0.09539	0.0027	0.050	0.1	0.004459	90.9	70-130	0			
Lead	0.09022	0.0022	0.050	0.1	0.0000374	90.2	70-130	0			
Lithium	0.1894	0.017	0.10	0.1	0.1051	84.3	70-130	0			
Molybdenum	0.09808	0.0033	0.050	0.1	0.006294	91.8	70-130	0			
Selenium	0.486	0.0048	0.050	0.1	0.3997	86.3	70-130	0			
Thallium	0.08945	0.0032	0.050	0.1	0.0005951	88.9	70-130	0			

MS Sample ID: **22032495-04AMS** Units: **mg/L** Analysis Date: **4/1/2022 07:37 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220401A** SeqNo: **8293158** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09954	0.00042	0.0050	0.1	0.0001155	99.4	70-130	0			
Arsenic	0.09793	0.00019	0.0050	0.1	0.0002673	97.7	70-130	0			
Barium	0.1721	0.00057	0.0050	0.1	0.07391	98.2	70-130	0			
Beryllium	0.1005	0.00013	0.0020	0.1	0.0000022	101	70-130	0			
Cadmium	0.09765	0.00014	0.00020	0.1	0.0000803	97.6	70-130	0			
Chromium	0.09498	0.00061	0.0050	0.1	0.0003421	94.6	70-130	0			
Cobalt	0.09609	0.00027	0.0050	0.1	0.001475	94.6	70-130	0			
Lead	0.09835	0.00022	0.0050	0.1	0.000737	97.6	70-130	0			
Lithium	0.1351	0.0017	0.010	0.1	0.04051	94.6	70-130	0			
Molybdenum	0.09977	0.00033	0.0050	0.1	0.0004004	99.4	70-130	0			
Selenium	0.09972	0.00048	0.0050	0.1	0.0000671	99.7	70-130	0			
Thallium	0.0959	0.00032	0.0050	0.1	0.0000143	95.9	70-130	0			

MS Sample ID: **22032494-06BMS** Units: **mg/L** Analysis Date: **4/4/2022 02:58 PM**
Client ID: Run ID: **ICPMS3_220404A** SeqNo: **8294314** Prep Date: **4/1/2022** DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	3276	22	50	10	3859	-5830	70-130	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194039** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22032495-04AMS** Units: **mg/L** Analysis Date: **4/4/2022 03:17 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220404A** SeqNo: **8294326** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	197.5	2.2	5.0	10	203.9	-63.8	70-130	0			SO

MS Sample ID: **22032494-06BMS** Units: **mg/L** Analysis Date: **4/5/2022 03:03 PM**
Client ID: Run ID: **ICPMS3_220405A** SeqNo: **8298080** Prep Date: **4/1/2022** DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	46.07	15	20	0.5	53.04	-1400	70-130	0			SO

MS Sample ID: **22032495-04AMS** Units: **mg/L** Analysis Date: **4/5/2022 03:22 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220405A** SeqNo: **8298092** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.289	0.15	0.20	0.5	0.8713	83.6	70-130	0			

MSD Sample ID: **22032494-06BMSD** Units: **mg/L** Analysis Date: **4/1/2022 07:19 PM**
Client ID: Run ID: **ICPMS3_220401A** SeqNo: **8293147** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09549	0.0042	0.050	0.1	0.0000847	95.4	70-130	0.09574	0.265	20	
Arsenic	0.097	0.0019	0.050	0.1	0.00137	95.6	70-130	0.09177	5.55	20	
Barium	0.2016	0.0057	0.050	0.1	0.1105	91	70-130	0.1964	2.61	20	
Beryllium	0.09379	0.0013	0.020	0.1	0.0000726	93.7	70-130	0.09102	3	20	
Cadmium	0.0944	0.0014	0.0020	0.1	0.0001298	94.3	70-130	0.09025	4.5	20	
Chromium	0.09547	0.0061	0.050	0.1	0.001368	94.1	70-130	0.09396	1.6	20	
Cobalt	0.09782	0.0027	0.050	0.1	0.004459	93.4	70-130	0.09539	2.51	20	
Lead	0.09248	0.0022	0.050	0.1	0.0000374	92.4	70-130	0.09022	2.47	20	
Lithium	0.1985	0.017	0.10	0.1	0.1051	93.4	70-130	0.1894	4.72	20	
Molybdenum	0.1004	0.0033	0.050	0.1	0.006294	94.1	70-130	0.09808	2.35	20	
Selenium	0.4863	0.0048	0.050	0.1	0.3997	86.6	70-130	0.486	0.0609	20	
Thallium	0.09334	0.0032	0.050	0.1	0.0005951	92.7	70-130	0.08945	4.26	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194039** Instrument ID: **ICPMS3** Method: **E200.8**

MSD Sample ID: **22032495-04AMSD** Units: **mg/L** Analysis Date: **4/1/2022 07:38 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220401A** SeqNo: **8293159** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1023	0.00042	0.0050	0.1	0.0001155	102	70-130	0.09954	2.73	20	
Arsenic	0.1	0.00019	0.0050	0.1	0.0002673	99.7	70-130	0.09793	2.09	20	
Barium	0.1754	0.00057	0.0050	0.1	0.07391	102	70-130	0.1721	1.89	20	
Beryllium	0.1048	0.00013	0.0020	0.1	0.0000022	105	70-130	0.1005	4.21	20	
Cadmium	0.1015	0.00014	0.00020	0.1	0.0000803	101	70-130	0.09765	3.82	20	
Chromium	0.09806	0.00061	0.0050	0.1	0.0003421	97.7	70-130	0.09498	3.19	20	
Cobalt	0.09953	0.00027	0.0050	0.1	0.001475	98.1	70-130	0.09609	3.52	20	
Lead	0.1013	0.00022	0.0050	0.1	0.000737	101	70-130	0.09835	2.93	20	
Lithium	0.1413	0.0017	0.010	0.1	0.04051	101	70-130	0.1351	4.48	20	
Molybdenum	0.1032	0.00033	0.0050	0.1	0.0004004	103	70-130	0.09977	3.41	20	
Selenium	0.09971	0.00048	0.0050	0.1	0.0000671	99.6	70-130	0.09972	0.0165	20	
Thallium	0.09954	0.00032	0.0050	0.1	0.0000143	99.5	70-130	0.0959	3.72	20	

MSD Sample ID: **22032494-06BMSD** Units: **mg/L** Analysis Date: **4/4/2022 03:00 PM**
Client ID: Run ID: **ICPMS3_220404A** SeqNo: **8294315** Prep Date: **4/1/2022** DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	3634	22	50	10	3859	-2250	70-130	3276	10.4	20	SO

MSD Sample ID: **22032495-04AMSD** Units: **mg/L** Analysis Date: **4/4/2022 03:19 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220404A** SeqNo: **8294327** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	206.2	2.2	5.0	10	203.9	23.4	70-130	197.5	4.33	20	SO

MSD Sample ID: **22032494-06BMSD** Units: **mg/L** Analysis Date: **4/5/2022 03:05 PM**
Client ID: Run ID: **ICPMS3_220405A** SeqNo: **8298081** Prep Date: **4/1/2022** DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	48.6	15	20	0.5	53.04	-888	70-130	46.07	5.35	20	SO

MSD Sample ID: **22032495-04AMSD** Units: **mg/L** Analysis Date: **4/5/2022 03:24 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220405A** SeqNo: **8298093** Prep Date: **4/1/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.326	0.15	0.20	0.5	0.8713	90.9	70-130	1.289	2.81	20	

The following samples were analyzed in this batch:

22032495-01A	22032495-02A	22032495-03A
22032495-04A	22032495-05A	22032495-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **194041** Instrument ID: **TDS** Method: **A2540 C-11**

MBLK Sample ID: **MBLK-194041-194041** Units: **mg/L** Analysis Date: **4/4/2022 03:04 PM**
Client ID: Run ID: **TDS_220404A** SeqNo: **8294065** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30								

LCS Sample ID: **LCS-194041-194041** Units: **mg/L** Analysis Date: **4/4/2022 03:04 PM**
Client ID: Run ID: **TDS_220404A** SeqNo: **8294064** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	500	22	30	495	0	101	85-109	0			

DUP Sample ID: **22032495-01C DUP** Units: **mg/L** Analysis Date: **4/4/2022 03:04 PM**
Client ID: **PH-MW-01 Grab** Run ID: **TDS_220404A** SeqNo: **8294046** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1200	74	100	0	0	0	0-0	1220	1.65	10	

DUP Sample ID: **22032495-04C DUP** Units: **mg/L** Analysis Date: **4/4/2022 03:04 PM**
Client ID: **PH-MW-04 Grab** Run ID: **TDS_220404A** SeqNo: **8294050** Prep Date: **4/1/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1247	74	100	0	0	0	0-0	1213	2.71	10	

The following samples were analyzed in this batch:

22032495-01C	22032495-02C	22032495-03C
22032495-04C	22032495-05C	22032495-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341174** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 01:02 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289074** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 03:30 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289092** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 05:56 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289113** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 06:41 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289120** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 08:56 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289133** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 10:49 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289149** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341174** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **3/31/2022 11:34 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289155** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **4/1/2022 01:39 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289167** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **4/1/2022 03:42 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289178** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341174** Units: **mg/L** Analysis Date: **4/1/2022 04:27 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289182** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 12:48 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289072** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.683	0.31	1.0	10	0	96.8	90-110	0			
Sulfate	9.803	0.19	1.0	10	0	98	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 03:18 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289091** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.629	0.31	1.0	10	0	96.3	90-110	0			
Sulfate	10.17	0.19	1.0	10	0	102	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341174** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 05:45 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289112** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.648	0.31	1.0	10	0	96.5	90-110	0			
Sulfate	9.367	0.19	1.0	10	0	93.7	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 06:30 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289118** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.668	0.31	1.0	10	0	96.7	90-110	0			
Sulfate	9.459	0.19	1.0	10	0	94.6	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 08:45 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289132** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.569	0.31	1.0	10	0	95.7	90-110	0			
Sulfate	9.965	0.19	1.0	10	0	99.6	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 10:38 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289147** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.577	0.31	1.0	10	0	95.8	90-110	0			
Sulfate	9.74	0.19	1.0	10	0	97.4	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **3/31/2022 11:23 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289154** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.614	0.31	1.0	10	0	96.1	88-110	0			
Sulfate	9.448	0.19	1.0	10	0	94.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **4/1/2022 01:28 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289166** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	10.17	0.19	1.0	10	0	102	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341174** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **4/1/2022 03:31 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289177** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	10.05	0.19	1.0	10	0	101	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341174** Units: **mg/L** Analysis Date: **4/1/2022 04:16 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289181** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	9.965	0.19	1.0	10	0	99.7	90-110	0			

MS Sample ID: **22032237-01D MS** Units: **mg/L** Analysis Date: **3/31/2022 01:24 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289077** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	509.3	12	40	400	137.7	92.9	80-120	0			
Sulfate	397.9	7.6	40	400	7.252	97.7	80-120	0			

MS Sample ID: **22032495-04C MS** Units: **mg/L** Analysis Date: **3/31/2022 04:49 PM**
Client ID: **PH-MW-04 Grab** Run ID: **IC3_220331A** SeqNo: **8289104** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	176.5	5	16	160	47.12	80.8	80-120	0			
Sulfate	431.1	3	16	160	295.4	84.8	80-120	0			E

MS Sample ID: **22032235-01E MS** Units: **mg/L** Analysis Date: **3/31/2022 07:04 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289123** Prep Date: DF: **4**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	537.2	1.2	4.0	40	513.1	60	80-120	0			SEO
Sulfate	31.86	0.76	4.0	40	0	79.6	80-120	0			S

MS Sample ID: **22032500-01B MS** Units: **mg/L** Analysis Date: **3/31/2022 09:42 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289139** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	175	5	16	160	32.84	88.9	80-120	0			
Sulfate	216.1	3	16	160	107	68.2	80-120	0			S

MS Sample ID: **22032386-01A MS** Units: **mg/L** Analysis Date: **4/1/2022 12:09 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289159** Prep Date: DF: **4000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	39360	760	4,000	40000	0	98.4	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341174** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22032237-01D MSD** Units: **mg/L** Analysis Date: **3/31/2022 01:35 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289078** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	512.3	12	40	400	137.7	93.7	80-120	509.3	0.593	20	
Sulfate	392.9	7.6	40	400	7.252	96.4	80-120	397.9	1.27	20	

MSD Sample ID: **22032495-04C MSD** Units: **mg/L** Analysis Date: **3/31/2022 05:00 PM**
Client ID: **PH-MW-04 Grab** Run ID: **IC3_220331A** SeqNo: **8289106** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	177.1	5	16	160	47.12	81.2	80-120	176.5	0.347	20	
Sulfate	432.3	3	16	160	295.4	85.5	80-120	431.1	0.267	20	E

MSD Sample ID: **22032235-01E MSD** Units: **mg/L** Analysis Date: **3/31/2022 07:15 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289124** Prep Date: DF: **4**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	536.3	1.2	4.0	40	513.1	57.9	80-120	537.2	0.155	20	SEO
Sulfate	32.32	0.76	4.0	40	0	80.8	80-120	31.86	1.44	20	

MSD Sample ID: **22032500-01B MSD** Units: **mg/L** Analysis Date: **3/31/2022 09:53 PM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289140** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	175.1	5	16	160	32.84	88.9	80-120	175	0.0588	20	
Sulfate	215.5	3	16	160	107	67.8	80-120	216.1	0.285	20	S

MSD Sample ID: **22032386-01A MSD** Units: **mg/L** Analysis Date: **4/1/2022 12:20 AM**
Client ID: Run ID: **IC3_220331A** SeqNo: **8289160** Prep Date: DF: **4000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	38810	760	4,000	40000	0	97	90-110	39360	1.41	20	

The following samples were analyzed in this batch:

22032495-01C	22032495-02C	22032495-04C
22032495-05C	22032495-06C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R341268** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/1/2022 02:24 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292279** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/1/2022 05:17 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292292** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/1/2022 07:32 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292304** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/1/2022 08:17 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292308** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/1/2022 10:31 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292320** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/2/2022 12:46 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292332** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/2/2022 01:31 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292336** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341268** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/2/2022 06:01 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292360** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

MBLK Sample ID: **CCB/MBLK-R341268** Units: **mg/L** Analysis Date: **4/2/2022 06:46 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292364** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.067	0.10								

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/1/2022 02:12 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292278** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.019	0.067	0.10	2	0	101	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/1/2022 04:55 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292291** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.104	0.067	0.10	2	0	105	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/1/2022 07:20 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292303** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	1.963	0.067	0.10	2	0	98.2	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/1/2022 08:05 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292307** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.082	0.067	0.10	2	0	104	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/1/2022 10:20 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292319** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	1.934	0.067	0.10	2	0	96.7	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341268** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/2/2022 12:35 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292331** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.038	0.067	0.10	2	0	102	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/2/2022 01:20 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292335** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.186	0.067	0.10	2	0	109	82-116	0			

LCS Sample ID: **MLCCV/LCS-R341268** Units: **mg/L** Analysis Date: **4/2/2022 03:35 AM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292347** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2.207	0.067	0.10	2	0	110	82-116	0			

MS Sample ID: **22032492-01A MS** Units: **mg/L** Analysis Date: **4/1/2022 02:58 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292282** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	21.28	0.67	1.0	20	0	106	80-120	0			

MS Sample ID: **22032495-04C MS** Units: **mg/L** Analysis Date: **4/1/2022 06:24 PM**
Client ID: **PH-MW-04 Grab** Run ID: **IC3_220401A** SeqNo: **8292298** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	23.15	0.67	1.0	20	0	116	80-120	0			

MS Sample ID: **22032500-02B MS** Units: **mg/L** Analysis Date: **4/1/2022 09:58 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292317** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	78.44	2.7	4.0	80	0	98	80-120	0			

MS Sample ID: **22032596-01A MS** Units: **mg/L** Analysis Date: **4/1/2022 10:54 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292322** Prep Date: DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2019	67	100	2000	0	101	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341268** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22032492-01A MSD** Units: **mg/L** Analysis Date: **4/1/2022 03:09 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292283** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	21.15	0.67	1.0	20	0	106	80-120	21.28	0.584	20	

MSD Sample ID: **22032495-04C MSD** Units: **mg/L** Analysis Date: **4/1/2022 06:35 PM**
Client ID: **PH-MW-04 Grab** Run ID: **IC3_220401A** SeqNo: **8292299** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	22.7	0.67	1.0	20	0	114	80-120	23.15	1.95	20	

MSD Sample ID: **22032500-02B MSD** Units: **mg/L** Analysis Date: **4/1/2022 10:09 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292318** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	74.8	2.7	4.0	80	0	93.5	80-120	78.44	4.75	20	

MSD Sample ID: **22032596-01A MSD** Units: **mg/L** Analysis Date: **4/1/2022 11:05 PM**
Client ID: Run ID: **IC3_220401A** SeqNo: **8292323** Prep Date: DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	2102	67	100	2000	0	105	80-120	2019	3.99	20	

The following samples were analyzed in this batch:

22032495-01C	22032495-02C	22032495-03C
22032495-04C	22032495-05C	22032495-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341367** Instrument ID: **IC3** Method: **SW9056A**

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 12:14 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295668** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 03:19 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295680** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 06:20 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295692** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 07:05 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295696** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 09:20 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295708** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/4/2022 11:35 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295720** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341367** Instrument ID: **IC3** Method: **SW9056A**

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/5/2022 12:20 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295724** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/5/2022 02:34 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295736** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/5/2022 04:49 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295748** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.4685	0.31	1.0								J
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R341367** Units: **mg/L** Analysis Date: **4/5/2022 08:00 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295754** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 12:03 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295667** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.147	0.31	1.0	10	0	91.5	88-110	0			
Sulfate	9.771	0.19	1.0	10	0	97.7	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 03:08 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295679** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.391	0.31	1.0	10	0	93.9	88-110	0			
Sulfate	9.774	0.19	1.0	10	0	97.7	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341367** Instrument ID: **IC3** Method: **SW9056A**

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 06:09 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295691** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.406	0.31	1.0	10	0	94.1	88-110	0			
Sulfate	9.777	0.19	1.0	10	0	97.8	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 06:54 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295695** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.409	0.31	1.0	10	0	94.1	88-110	0			
Sulfate	9.853	0.19	1.0	10	0	98.5	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 09:08 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295707** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.475	0.31	1.0	10	0	94.7	88-110	0			
Sulfate	10.47	0.19	1.0	10	0	105	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/4/2022 11:23 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295719** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.414	0.31	1.0	10	0	94.1	88-110	0			
Sulfate	9.828	0.19	1.0	10	0	98.3	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/5/2022 12:08 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295723** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.445	0.31	1.0	10	0	94.4	90-110	0			
Sulfate	9.6	0.19	1.0	10	0	96	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/5/2022 02:23 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295735** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.373	0.31	1.0	10	0	93.7	90-110	0			
Sulfate	9.906	0.19	1.0	10	0	99.1	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341367** Instrument ID: **IC3** Method: **SW9056A**

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/5/2022 04:38 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295747** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.833	0.31	1.0	10	0	98.3	90-110	0			
Sulfate	10.81	0.19	1.0	10	0	108	90-110	0			

LCS Sample ID: **MLCCV/LCS-R341367** Units: **mg/L** Analysis Date: **4/5/2022 07:49 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295753** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.37	0.31	1.0	10	0	93.7	90-110	0			
Sulfate	9.871	0.19	1.0	10	0	98.7	90-110	0			

MS Sample ID: **22032386-01A MS** Units: **mg/L** Analysis Date: **4/4/2022 12:48 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295671** Prep Date: DF: **4000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	56500	1200	4,000	40000	30020	66.2	88-110	0			S

MS Sample ID: **22032182-01A MS** Units: **mg/L** Analysis Date: **4/4/2022 07:27 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295698** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	491.1	12	40	400	327.5	40.9	88-110	0			S
Sulfate	592.4	7.6	40	400	199.1	98.3	90-110	0			

MS Sample ID: **22032495-03C MS** Units: **mg/L** Analysis Date: **4/5/2022 12:42 AM**
Client ID: **PH-MW-03A Grab** Run ID: **IC3_220404A** SeqNo: **8295726** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	733.8	12	40	400	567.2	41.6	80-120	0			S
Sulfate	729.5	7.6	40	400	328.8	100	80-120	0			

MS Sample ID: **22040079-01C MS** Units: **mg/L** Analysis Date: **4/5/2022 02:57 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295738** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1431	31	100	1000	857.4	57.4	80-120	0			S

MSD Sample ID: **22032386-01A MSD** Units: **mg/L** Analysis Date: **4/4/2022 12:59 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295672** Prep Date: DF: **4000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	56200	1200	4,000	40000	30020	65.4	88-110	56500	0.543	20	S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22032495
Project: H.L. Spurlock Station

QC BATCH REPORT

Batch ID: **R341367** Instrument ID: **IC3** Method: **SW9056A**

MSD Sample ID: **22032182-01A MSD** Units: **mg/L** Analysis Date: **4/4/2022 07:39 PM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295699** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	489.1	12	40	400	327.5	40.4	88-110	491.1	0.417	20	S
Sulfate	592.4	7.6	40	400	199.1	98.3	90-110	592.4	0.0061	20	

MSD Sample ID: **22032495-03C MSD** Units: **mg/L** Analysis Date: **4/5/2022 12:53 AM**
Client ID: **PH-MW-03A Grab** Run ID: **IC3_220404A** SeqNo: **8295727** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	734.3	12	40	400	567.2	41.8	80-120	733.8	0.0698	20	S
Sulfate	731.1	7.6	40	400	328.8	101	80-120	729.5	0.217	20	

MSD Sample ID: **22040079-01C MSD** Units: **mg/L** Analysis Date: **4/5/2022 03:08 AM**
Client ID: Run ID: **IC3_220404A** SeqNo: **8295739** Prep Date: DF: **100**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1432	31	100	1000	857.4	57.4	80-120	1431	0.0678	20	S

The following samples were analyzed in this batch: 22032495-03C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janet Smith
Date/Time:	3/29/22 1455
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	4.6°C
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #:	* not checked
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

22032495

EKPC: East Kentucky Power Cooperative
Project: H.L. Spurlock Station

EAST KENTUCKY POWER (

EAST KENTUCKY POWER COOPERATIVE
A Touchstone Energy Cooperative

Facility:	Sampling Event Type:
East Kentucky Power Cooperative **H.L. Spurlock Station** 1301 West Second Street Maysville, KY 41056	Peg's Hill - Background Monitoring Sample Matrix: Groundwater

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	MS/MSD Collected	Sample Type: Grab or Composite
	3/28/22	1159	**PH-MW-01**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1313	**PH-MW-02**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1640	**PH-MW-03A**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1535	**PH-MW-04**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☒	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☒	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☒	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1407	**PH-MW-05**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	☐	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	☐	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	☐	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1535	**Field Duplicate**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3		
	3/28/22	1535	**Matrix Spike**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	3/28/22	1535	**Matrix Spike Duplicate**	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3		Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C		
	3/28/22	1630	**Field Blank**	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl		Grab

Signature	DATE	TIME	Received by: (Signature)
Collected by: (Signature:) [signature]	3/29/22	945	[signature]
Relinquished by: (Signature:) [signature]	3/29/22	11:30	[signature] 11:30 3/29/22
Relinquished by: (Signature:) [signature]	3/29/22	14:55	Janet Amith
Relinquished by: (Signature:) Janet Amith	3/29/22	1700	FedEx

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory ☒ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.) 3/29/22 945 Kenvirons, Inc <6°C Acsc

FedEx 3/30/22 0900 [signature] <6.0C IR1 pH<2 ALSHN

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **29-Mar-22 14:55**

Work Order: **22032495** Received by: **LYS**

Checklist completed by: Lydia Sweet (eSignature) 30-Mar-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 02-Apr-22 (Date)

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/30/2022 2:01:32 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

April 27, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22032495
Pace Project No.: 30477476

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22032495
Pace Project No.: 30477476

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22032495
Pace Project No.: 30477476

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30477476001	**22032495-01D**	Water	03/28/22 11:59	04/04/22 09:15
30477476002	**22032495-02D**	Water	03/28/22 13:13	04/04/22 09:15
30477476003	**22032495-03D**	Water	03/28/22 16:40	04/04/22 09:15
30477476004	**22032495-04D**	Water	03/28/22 15:35	04/04/22 09:15
30477476005	**22032495-05D**	Water	03/28/22 14:07	04/04/22 09:15
30477476006	**22032495-06D**	Water	03/28/22 15:35	04/04/22 09:15

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22032495
Pace Project No.: 30477476

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30477476001	**22032495-01D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30477476002	**22032495-02D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30477476003	**22032495-03D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30477476004	**22032495-04D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30477476005	**22032495-05D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30477476006	**22032495-06D**	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22032495
Pace Project No.: 30477476

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: April 27, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22032495
Pace Project No.: 30477476

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: April 27, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22032495
Pace Project No.: 30477476

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: April 27, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22032495
Pace Project No.: 30477476

Sample: 22032495-01D **Lab ID: 30477476001** Collected: 03/28/22 11:59 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.179 ± 0.215 (0.329) C:NA T:82%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.903 ± 0.411 (0.656) C:69% T:82%**	pCi/L	04/19/22 12:58	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.08 ± 0.626 (0.985)**	pCi/L	04/27/22 18:37	7440-14-4	

Sample: 22032495-02D **Lab ID: 30477476002** Collected: 03/28/22 13:13 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.170 ± 0.237 (0.395) C:NA T:79%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.720 ± 0.425 (0.773) C:69% T:79%**	pCi/L	04/19/22 12:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.890 ± 0.662 (1.17)**	pCi/L	04/27/22 18:37	7440-14-4	

Sample: 22032495-03D **Lab ID: 30477476003** Collected: 03/28/22 16:40 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.420 ± 0.371 (0.551) C:NA T:80%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.415 ± 0.306 (0.599) C:98% T:80%**	pCi/L	04/19/22 12:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.835 ± 0.677 (1.15)**	pCi/L	04/27/22 18:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22032495
Pace Project No.: 30477476

Sample: 22032495-04D **Lab ID: 30477476004** Collected: 03/28/22 15:35 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were preserved <2 within the required 5 days of collection.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.114 ± 0.317 (0.614) C:NA T:60%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.572 ± 0.456 (0.887) C:69% T:60%**	pCi/L	04/19/22 12:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.686 ± 0.773 (1.50)**	pCi/L	04/27/22 18:37	7440-14-4	

Sample: 22032495-05D **Lab ID: 30477476005** Collected: 03/28/22 14:07 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.192 (0.431) C:NA T:83%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.20 ± 0.621 (1.07) C:65% T:83%**	pCi/L	04/19/22 16:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.20 ± 0.813 (1.50)**	pCi/L	04/27/22 18:37	7440-14-4	

Sample: 22032495-06D **Lab ID: 30477476006** Collected: 03/28/22 15:35 Received: 04/04/22 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0869 ± 0.269 (0.612) C:NA T:76%**	pCi/L	04/27/22 12:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.743 ± 0.488 (0.902) C:77% T:76%**	pCi/L	04/19/22 16:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.743 ± 0.757 (1.51)**	pCi/L	04/27/22 18:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22032495
Pace Project No.: 30477476

QC Batch: 494938 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30477476001, 30477476002, 30477476003, 30477476004, 30477476005, 30477476006

METHOD BLANK: 2394248 Matrix: Water
Associated Lab Samples: 30477476001, 30477476002, 30477476003, 30477476004, 30477476005, 30477476006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0269 ± 0.317 (0.733) C:75% T:83%	pCi/L	04/19/22 12:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22032495
Pace Project No.: 30477476

QC Batch: 494937 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30477476001, 30477476002, 30477476003, 30477476004, 30477476005, 30477476006

METHOD BLANK: 2394247 Matrix: Water
Associated Lab Samples: 30477476001, 30477476002, 30477476003, 30477476004, 30477476005, 30477476006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0803 ± 0.249 (0.566) C:NA T:83%	pCi/L	04/27/22 12:08	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22032495
Pace Project No.: 30477476

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ALS Environmental

Subcontractor:
Pace Analytical Services, Inc.
1638 Roseytown Rd
Suites 2,3 & 4
Greensburg, PA 15601
TEL: (724) 850-5600
FAX:
Acct #:

Salesperson: Paul Painter

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 30-Mar-22
COC ID: 19294
Due Date: 04-Apr-22

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22032495	A	Ra226(903.1); Ra228(904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
22032495-01D	PH-MW-01 Grab	Groundwater	28/Mar/2022 11:59	(2) 1LPHNO3	X									
22032495-02D	PH-MW-02 Grab	Groundwater	28/Mar/2022 13:13	(2) 1LPHNO3	X									
22032495-03D	PH-MW-03A Grab	Groundwater	28/Mar/2022 16:40	(2) 1LPHNO3	X									
22032495-04D	PH-MW-04 Grab	Groundwater	28/Mar/2022 15:35	(2) 1LPHNO3	X									
22032495-05D	PH-MW-05 Grab	Groundwater	28/Mar/2022 14:07	(2) 1LPHNO3	X									
22032495-06D	Field Duplicate Grab	Groundwater	28/Mar/2022 15:35	(2) 1LPHNO3	X									

001
002
003
004
005
006

WO# : 30477476

30477476

Comments:

KY Samples. Sampler: B.B.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
[signature]	4/1/22 1700	[signature]	4/4/22 9:15		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS Environmental Project # _____

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label 2L
LIMS Login VPInc

Tracking #: 7764 7265 6150 29-Apr-22

Custody Seal on Cooler/Box Present: ☑ yes ☑ no Seals intact: ☑ yes ☐ no

Thermometer Used — Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10D2811 Date and Initials of person examining contents: 4-5-22 JA

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓	✓		10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. added 2.5 mL HNO3 to 004 (one bottle)
All containers meet method preservation requirements.		✓		Initial when completed JA Date/time of preservation 4-5-22 18:29 Lot # of added preservative DL22-0325
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JA Date: 4-5-22 Survey Meter SN: 1563

WO#: 30477476
PM: KLS Due Date: 04/25/22
CLIENT: ALS-MV

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab Sample Container Count

WO#: 30477476

PM: KLS **Due Date: 04/25/22**

CLIENT: ALS-WV

Client

Site 22032495

Profile Number 5573

Notes

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2												2																	
3												2																	
4												2																	
5												2																	
6	V											2																	
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

15-Jun-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **Pegs Hill Landfill** Work Order: **22050056**

Dear Jared,

ALS Environmental received 7 samples on 02-May-2022 03:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 29.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 15-Jun-22

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Work Order: **22050056**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22050056-01	2200350 PH-MW-01 Grab	Groundwater		4/28/2022 14:24	5/2/2022 15:00	☐
22050056-01	2200350 PH-MW-01 Grab	Groundwater		4/28/2022 14:24	5/4/2022 16:00	☐
22050056-02	2200351 PH-MW-02 Grab	Groundwater		4/28/2022 15:40	5/2/2022 15:00	☐
22050056-02	2200351 PH-MW-02 Grab	Groundwater		4/28/2022 15:40	5/4/2022 16:00	☐
22050056-03	2200352 PH-MW-03A Grab	Groundwater		4/28/2022 10:14	5/2/2022 15:00	☐
22050056-03	2200352 PH-MW-03A Grab	Groundwater		4/28/2022 10:14	5/4/2022 16:00	☐
22050056-04	2200353 PH-MW-04 Grab	Groundwater		4/28/2022 12:42	5/2/2022 15:00	☐
22050056-04	2200353 PH-MW-04 Grab	Groundwater		4/28/2022 12:42	5/4/2022 16:00	☐
22050056-05	2200354 PH-MW-05 Grab	Groundwater		4/28/2022 11:15	5/2/2022 15:00	☐
22050056-05	2200354 PH-MW-05 Grab	Groundwater		4/28/2022 11:15	5/4/2022 16:00	☐
22050056-06	2200355 Field Duplicate Grab	Groundwater		4/28/2022 12:42	5/2/2022 15:00	☐
22050056-06	2200355 Field Duplicate Grab	Groundwater		4/28/2022 12:42	5/4/2022 16:00	☐
22050056-07	2200358 Field Blank Grab	Groundwater		4/28/2022 15:00	5/4/2022 16:00	☐

ALS Group, USA

Date: 15-Jun-22

Client:	East Kentucky Power Cooperative
Project:	Pegs Hill Landfill
Work Order:	22050056

Case Narrative

Samples for the above noted Work Order were received on 05/02/2022. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
Batch R345535, Method E300.0, Sample 2200351 PH-MW-02 Grab (22050056-02C): Sample was analyzed outside of holding time due to laboratory error. Sample results should be considered as estimated. Sulfate, Fluoride

Batch R345535, Method E300.0, Sample 2200352 PH-MW-03A Grab (22050056-03C): Sample was analyzed outside of holding time due to laboratory error. Sample results should be considered as estimated. Chloride

Subcontracted analytical data has been appended to this report in its entirety.

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
WorkOrder: **22050056**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200350 PH-MW-01 Grab
Collection Date: 4/28/2022 02:24 PM

Work Order: 22050056
Lab ID: 22050056-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 6/3/22			Analyst: **ABL**
Mercury	**0.00057**		**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 11:01
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 5/31/22			Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:25
Arsenic	**0.000408**	J	**0.00019**	**0.0010**	**mg/L**	1	5/31/2022 21:25
Barium	**0.0494**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:25
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:25
Boron	**0.829**		**0.15**	**0.20**	**mg/L**	10	6/1/2022 13:42
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:25
Calcium	**300**		**2.2**	**5.0**	**mg/L**	10	6/1/2022 13:42
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:25
Cobalt	**0.00109**		**0.00027**	**0.0010**	**mg/L**	1	5/31/2022 21:25
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:25
Lithium	**0.0613**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:25
Molybdenum	U		0.00033	0.0010	mg/L	1	5/31/2022 21:25
Selenium	U		0.00048	0.0010	mg/L	1	5/31/2022 21:25
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:25
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **AML**
Chloride	**99**		**12**	**40**	**mg/L**	40	5/25/2022 17:35
Fluoride	U		0.067	0.10	mg/L	1	5/25/2022 17:27
Sulfate	**310**		**7.6**	**40**	**mg/L**	40	5/25/2022 17:35
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 5/5/22			Analyst: **SRN**
Total Dissolved Solids	**1,300**		**74**	**100**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200351 PH-MW-02 Grab
Collection Date: 4/28/2022 03:40 PM

Work Order: 22050056
Lab ID: 22050056-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method: **E1631E**		Prep: E1631E / 6/3/22		Analyst: **ABL**
Mercury	**0.00025**	J	**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 11:09
METALS BY ICP-MS			Method: **E200.8**		Prep: CEM-NPDES / 5/31/22		Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:30
Arsenic	**0.00153**		**0.00019**	**0.0010**	**mg/L**	1	5/31/2022 21:30
Barium	**0.0797**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:30
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:30
Boron	**1.31**		**0.15**	**0.20**	**mg/L**	10	6/1/2022 13:43
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:30
Calcium	**39.6**		**0.22**	**0.50**	**mg/L**	1	5/31/2022 21:30
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:30
Cobalt	U		0.00027	0.0010	mg/L	1	5/31/2022 21:30
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:30
Lithium	**0.0904**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:30
Molybdenum	**0.00170**		**0.00033**	**0.0010**	**mg/L**	1	5/31/2022 21:30
Selenium	**0.000713**	J	**0.00048**	**0.0010**	**mg/L**	1	5/31/2022 21:30
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:30
ANIONS BY ION CHROMATOGRAPHY			Method: **E300.0**				Analyst: **AML**
Chloride	**460**		**12**	**40**	**mg/L**	40	5/25/2022 17:52
Fluoride	U	H	2.7	4.0	mg/L	40	5/31/2022 15:11
Sulfate	**36**	H	**0.38**	**2.0**	**mg/L**	2	5/31/2022 15:02
TOTAL DISSOLVED SOLIDS			Method: **A2540 C-11**		Prep: FILTER / 5/5/22		Analyst: **SRN**
Total Dissolved Solids	**940**		**74**	**100**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200352 PH-MW-03A Grab
Collection Date: 4/28/2022 10:14 AM

Work Order: 22050056
Lab ID: 22050056-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 6/3/22			Analyst: **ABL**
Mercury	**0.0017**		**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 11:17
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 5/31/22			Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:32
Arsenic	**0.000352**	J	**0.00019**	**0.0010**	**mg/L**	1	5/31/2022 21:32
Barium	**0.0535**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:32
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:32
Boron	**3.38**		**0.15**	**0.20**	**mg/L**	10	6/1/2022 13:45
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:32
Calcium	**28.0**		**0.22**	**0.50**	**mg/L**	1	5/31/2022 21:32
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:32
Cobalt	**0.000582**	J	**0.00027**	**0.0010**	**mg/L**	1	5/31/2022 21:32
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:32
Lithium	**0.128**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:32
Molybdenum	**0.0258**		**0.00033**	**0.0010**	**mg/L**	1	5/31/2022 21:32
Selenium	U		0.00048	0.0010	mg/L	1	5/31/2022 21:32
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:32
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **QTN**
Chloride	**430**	H	**31**	**100**	**mg/L**	100	5/31/2022 14:46
Fluoride	**0.21**	B	**0.067**	**0.10**	**mg/L**	1	5/25/2022 15:31
Sulfate	**400**		**7.6**	**40**	**mg/L**	40	5/25/2022 15:40
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**		Prep: FILTER / 5/5/22			Analyst: **SRN**
Total Dissolved Solids	**1,700**		**74**	**100**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200353 PH-MW-04 Grab
Collection Date: 4/28/2022 12:42 PM

Work Order: 22050056
Lab ID: 22050056-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 6/3/22		Analyst: **ABL**
Mercury	**0.0010**		**0.00040**	**0.0010**	**µg/L**	1	6/3/2022 11:24
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 5/31/22		Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:34
Arsenic	**0.000321**	J	**0.00019**	**0.0010**	**mg/L**	1	5/31/2022 21:34
Barium	**0.0738**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:34
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:34
Boron	**0.948**		**0.15**	**0.20**	**mg/L**	10	6/1/2022 13:47
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:34
Calcium	**210**		**2.2**	**5.0**	**mg/L**	10	6/1/2022 13:47
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:34
Cobalt	**0.00127**		**0.00027**	**0.0010**	**mg/L**	1	5/31/2022 21:34
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:34
Lithium	**0.0439**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:34
Molybdenum	**0.000417**	J	**0.00033**	**0.0010**	**mg/L**	1	5/31/2022 21:34
Selenium	U		0.00048	0.0010	mg/L	1	5/31/2022 21:34
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:34
ANIONS BY ION CHROMATOGRAPHY		Method: **E300.0**					Analyst: **AML**
Chloride	**70**		**12**	**40**	**mg/L**	40	5/25/2022 16:13
Fluoride	**1.7**	B	**0.067**	**0.10**	**mg/L**	1	5/25/2022 16:04
Sulfate	**400**		**7.6**	**40**	**mg/L**	40	5/25/2022 16:13
TOTAL DISSOLVED SOLIDS		Method: **A2540 C-11**			Prep: FILTER / 5/5/22		Analyst: **SRN**
Total Dissolved Solids	**1,200**		**74**	**100**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200354 PH-MW-05 Grab
Collection Date: 4/28/2022 11:15 AM

Work Order: 22050056
Lab ID: 22050056-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method: **E1631E**		Prep: E1631E / 6/3/22		Analyst: **ABL**
Mercury	**0.00040**	J	**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 11:48
METALS BY ICP-MS			Method: **E200.8**		Prep: CEM-NPDES / 5/31/22		Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:36
Arsenic	U		0.00019	0.0010	mg/L	1	5/31/2022 21:36
Barium	**0.0763**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:36
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:36
Boron	**0.278**		**0.015**	**0.020**	**mg/L**	1	5/31/2022 21:36
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:36
Calcium	**119**		**0.22**	**0.50**	**mg/L**	1	5/31/2022 21:36
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:36
Cobalt	U		0.00027	0.0010	mg/L	1	5/31/2022 21:36
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:36
Lithium	**0.0249**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:36
Molybdenum	**0.000452**	J	**0.00033**	**0.0010**	**mg/L**	1	5/31/2022 21:36
Selenium	U		0.00048	0.0010	mg/L	1	5/31/2022 21:36
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:36
ANIONS BY ION CHROMATOGRAPHY			Method: **E300.0**				Analyst: **AML**
Chloride	**71**		**12**	**40**	**mg/L**	40	5/25/2022 15:56
Fluoride	**0.43**	B	**0.067**	**0.10**	**mg/L**	1	5/25/2022 15:48
Sulfate	**230**		**7.6**	**40**	**mg/L**	40	5/25/2022 15:56
TOTAL DISSOLVED SOLIDS			Method: **A2540 C-11**		Prep: FILTER / 5/5/22		Analyst: **SRN**
Total Dissolved Solids	**600**		**37**	**50**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200355 Field Duplicate Grab
Collection Date: 4/28/2022 12:42 PM

Work Order: 22050056
Lab ID: 22050056-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method: **E1631E**		Prep: E1631E / 6/3/22		Analyst: **ABL**
Mercury	**0.00043**	J	**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 12:03
METALS BY ICP-MS			Method: **E200.8**		Prep: CEM-NPDES / 5/31/22		Analyst: **STP**
Antimony	U		0.00042	0.0010	mg/L	1	5/31/2022 21:37
Arsenic	**0.000271**	J	**0.00019**	**0.0010**	**mg/L**	1	5/31/2022 21:37
Barium	**0.0738**		**0.00057**	**0.0010**	**mg/L**	1	5/31/2022 21:37
Beryllium	U		0.00013	0.0010	mg/L	1	5/31/2022 21:37
Boron	**0.901**		**0.15**	**0.20**	**mg/L**	10	6/1/2022 13:51
Cadmium	U		0.00014	0.00020	mg/L	1	5/31/2022 21:37
Calcium	**207**		**2.2**	**5.0**	**mg/L**	10	6/1/2022 13:51
Chromium	U		0.00061	0.0010	mg/L	1	5/31/2022 21:37
Cobalt	**0.00124**		**0.00027**	**0.0010**	**mg/L**	1	5/31/2022 21:37
Lead	U		0.00022	0.0010	mg/L	1	5/31/2022 21:37
Lithium	**0.0432**		**0.0017**	**0.010**	**mg/L**	1	5/31/2022 21:37
Molybdenum	**0.000461**	J	**0.00033**	**0.0010**	**mg/L**	1	5/31/2022 21:37
Selenium	U		0.00048	0.0010	mg/L	1	5/31/2022 21:37
Thallium	U		0.00032	0.0010	mg/L	1	5/31/2022 21:37
ANIONS BY ION CHROMATOGRAPHY			Method: **E300.0**				Analyst: **AML**
Chloride	**85**		**12**	**40**	**mg/L**	40	5/25/2022 17:02
Fluoride	**1.7**	B	**0.067**	**0.10**	**mg/L**	1	5/25/2022 16:54
Sulfate	**420**		**7.6**	**40**	**mg/L**	40	5/25/2022 17:02
TOTAL DISSOLVED SOLIDS			Method: **A2540 C-11**		Prep: FILTER / 5/5/22		Analyst: **SRN**
Total Dissolved Solids	**1,200**		**74**	**100**	**mg/L**	1	5/9/2022 15:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *15-Jun-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: 2200358 Field Blank Grab
Collection Date: 4/28/2022 03:00 PM

Work Order: 22050056
Lab ID: 22050056-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 6/3/22		Analyst: **ABL**
Mercury	**0.00061**		**0.00020**	**0.00050**	**µg/L**	1	6/3/2022 12:27

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 15-Jun-22

Client: East Kentucky Power Cooperative

QC BATCH REPORT

Work Order: 22050056

Project: Pegs Hill Landfill

Batch ID: **197169** Instrument ID: **HG2** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-197169-197169** Units: **ng/L** Analysis Date: **6/3/2022 10:45 AM**

Client ID: Run ID: **HG2_220603A** SeqNo: **8485483** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-197169-197169** Units: **ng/L** Analysis Date: **6/3/2022 11:55 AM**

Client ID: Run ID: **HG2_220603A** SeqNo: **8485492** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-197169-197169** Units: **ng/L** Analysis Date: **6/3/2022 01:06 PM**

Client ID: Run ID: **HG2_220603A** SeqNo: **8485501** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22050056-04BMS** Units: **ng/L** Analysis Date: **6/3/2022 11:32 AM**

Client ID: **2200353 PH-MW-04 Grab** Run ID: **HG2_220603A** SeqNo: **8485489** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	8.7	0.4	1.0	8	1	96.2	71-125	0			

MS Sample ID: **22050056-06BMS** Units: **ng/L** Analysis Date: **6/3/2022 12:11 PM**

Client ID: **2200355 Field Duplicate Grab** Run ID: **HG2_220603A** SeqNo: **8485494** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.35	0.2	0.50	4	0.43	98	71-125	0			

MSD Sample ID: **22050056-04BMSD** Units: **ng/L** Analysis Date: **6/3/2022 11:40 AM**

Client ID: **2200353 PH-MW-04 Grab** Run ID: **HG2_220603A** SeqNo: **8485490** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	8.84	0.4	1.0	8	1	98	71-125	8.7	1.6	24	

MSD Sample ID: **22050056-06BMSD** Units: **ng/L** Analysis Date: **6/3/2022 12:19 PM**

Client ID: **2200355 Field Duplicate Grab** Run ID: **HG2_220603A** SeqNo: **8485495** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.29	0.2	0.50	4	0.43	96.5	71-125	4.35	1.39	24	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197169** Instrument ID: **HG2** Method: **E1631E**

LCS-OPR-START Sample ID: **OPR-START-197169-197169** Units: **ng/L** Analysis Date: **6/3/2022 10:38 AM**
Client ID: Run ID: **HG2_220603A** SeqNo: **8485482** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.23	0.2	0.50	5	0	105	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-197169-197169** Units: **ng/L** Analysis Date: **6/3/2022 02:16 PM**
Client ID: Run ID: **HG2_220603A** SeqNo: **8485510** Prep Date: **6/3/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.23	0.2	0.50	5	0	105	77-123	0			

The following samples were analyzed in this batch:

22050056-01B	22050056-02B	22050056-03B
22050056-04B	22050056-05B	22050056-06B
22050056-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197150** Instrument ID: **ICPMS3** Method: **E200.8**

MBLK Sample ID: **MBLK-197150-197150** Units: **mg/L** Analysis Date: **5/31/2022 09:19 PM**
Client ID: Run ID: **ICPMS3_220531A** SeqNo: **8472699** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	U	0.00061	0.0050								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-197150-197150** Units: **mg/L** Analysis Date: **5/31/2022 09:20 PM**
Client ID: Run ID: **ICPMS3_220531A** SeqNo: **8472700** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.105	0.00042	0.0050	0.1	0	105	85-115	0			
Arsenic	0.09945	0.00019	0.0050	0.1	0	99.4	85-115	0			
Barium	0.1065	0.00057	0.0050	0.1	0	106	85-115	0			
Beryllium	0.1057	0.00013	0.0020	0.1	0	106	85-115	0			
Cadmium	0.1057	0.00014	0.00020	0.1	0	106	85-115	0			
Calcium	10.53	0.22	0.50	10	0	105	85-115	0			
Chromium	0.1021	0.00061	0.0050	0.1	0	102	85-115	0			
Cobalt	0.1018	0.00027	0.0050	0.1	0	102	85-115	0			
Lead	0.1034	0.00022	0.0050	0.1	0	103	85-115	0			
Lithium	0.1064	0.0017	0.010	0.1	0	106	85-115	0			
Molybdenum	0.1056	0.00033	0.0050	0.1	0	106	85-115	0			
Selenium	0.1031	0.00048	0.0050	0.1	0	103	85-115	0			
Thallium	0.1026	0.00032	0.0050	0.1	0	103	85-115	0			

LCS Sample ID: **LCS-197150-197150** Units: **mg/L** Analysis Date: **6/1/2022 01:40 PM**
Client ID: Run ID: **ICPMS3_220601A** SeqNo: **8474535** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5309	0.015	0.020	0.5	0	106	85-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197150** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22050056-04AMS** Units: **mg/L** Analysis Date: **5/31/2022 09:27 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **ICPMS3_220531A** SeqNo: **8472704** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1068	0.00042	0.0050	0.1	0.0001089	107	70-130	0			
Arsenic	0.1044	0.00019	0.0050	0.1	0.0003212	104	70-130	0			
Barium	0.1752	0.00057	0.0050	0.1	0.07384	101	70-130	0			
Beryllium	0.1088	0.00013	0.0020	0.1	0.0000033	109	70-130	0			
Cadmium	0.1037	0.00014	0.00020	0.1	0.000055	104	70-130	0			
Chromium	0.1031	0.00061	0.0050	0.1	0.0004598	103	70-130	0			
Cobalt	0.1023	0.00027	0.0050	0.1	0.00127	101	70-130	0			
Lead	0.1045	0.00022	0.0050	0.1	0.0001408	104	70-130	0			
Lithium	0.148	0.0017	0.010	0.1	0.04392	104	70-130	0			
Molybdenum	0.1089	0.00033	0.0050	0.1	0.0004169	108	70-130	0			
Selenium	0.1041	0.00048	0.0050	0.1	-0.0000275	104	70-130	0			
Thallium	0.1046	0.00032	0.0050	0.1	0.0000253	105	70-130	0			

MS Sample ID: **22052232-01AMS** Units: **mg/L** Analysis Date: **5/31/2022 09:59 PM**
Client ID: Run ID: **ICPMS3_220531A** SeqNo: **8472723** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1042	0.00042	0.0050	0.1	0.0001705	104	70-130	0			
Arsenic	0.1013	0.00019	0.0050	0.1	0.003315	98	70-130	0			
Barium	0.1348	0.00057	0.0050	0.1	0.03305	102	70-130	0			
Beryllium	0.1035	0.00013	0.0020	0.1	-0.0000022	103	70-130	0			
Boron	0.5335	0.015	0.020	0.5	0.0169	103	70-130	0			
Cadmium	0.103	0.00014	0.00020	0.1	0.0000297	103	70-130	0			
Calcium	27.44	0.22	0.50	10	18.1	93.4	70-130	0			
Chromium	0.09925	0.00061	0.0050	0.1	0.0007348	98.5	70-130	0			
Cobalt	0.09741	0.00027	0.0050	0.1	0.0002871	97.1	70-130	0			
Lead	0.1016	0.00022	0.0050	0.1	0.0005368	101	70-130	0			
Lithium	0.1068	0.0017	0.010	0.1	0.00265	104	70-130	0			
Molybdenum	0.1047	0.00033	0.0050	0.1	0.00109	104	70-130	0			
Selenium	0.09733	0.00048	0.0050	0.1	0.0001672	97.2	70-130	0			
Thallium	0.1002	0.00032	0.0050	0.1	-0.0000011	100	70-130	0			

MS Sample ID: **22050056-04AMS** Units: **mg/L** Analysis Date: **6/1/2022 01:48 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **ICPMS3_220601A** SeqNo: **8474540** Prep Date: **5/31/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.353	0.15	0.20	0.5	0.9484	80.9	70-130	0			
Calcium	205.9	2.2	5.0	10	209.7	-38.1	70-130	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197150** Instrument ID: **ICPMS3** Method: **E200.8**

MSD Sample ID: **22050056-04AMSD** Units: **mg/L** Analysis Date: **5/31/2022 09:29 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **ICPMS3_220531A** SeqNo: **8472705** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1035	0.00042	0.0050	0.1	0.0001089	103	70-130	0.1068	3.2	20	
Arsenic	0.1016	0.00019	0.0050	0.1	0.0003212	101	70-130	0.1044	2.68	20	
Barium	0.1758	0.00057	0.0050	0.1	0.07384	102	70-130	0.1752	0.357	20	
Beryllium	0.1071	0.00013	0.0020	0.1	0.0000033	107	70-130	0.1088	1.5	20	
Cadmium	0.102	0.00014	0.00020	0.1	0.000055	102	70-130	0.1037	1.69	20	
Chromium	0.1001	0.00061	0.0050	0.1	0.0004598	99.6	70-130	0.1031	3.02	20	
Cobalt	0.09979	0.00027	0.0050	0.1	0.00127	98.5	70-130	0.1023	2.52	20	
Lead	0.1021	0.00022	0.0050	0.1	0.0001408	102	70-130	0.1045	2.33	20	
Lithium	0.1464	0.0017	0.010	0.1	0.04392	102	70-130	0.148	1.06	20	
Molybdenum	0.1073	0.00033	0.0050	0.1	0.0004169	107	70-130	0.1089	1.53	20	
Selenium	0.1096	0.00048	0.0050	0.1	-0.0000275	110	70-130	0.1041	5.11	20	
Thallium	0.103	0.00032	0.0050	0.1	0.0000253	103	70-130	0.1046	1.54	20	

MSD Sample ID: **22052232-01AMSD** Units: **mg/L** Analysis Date: **5/31/2022 10:01 PM**
Client ID: Run ID: **ICPMS3_220531A** SeqNo: **8472724** Prep Date: **5/31/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1005	0.00042	0.0050	0.1	0.0001705	100	70-130	0.1042	3.61	20	
Arsenic	0.09723	0.00019	0.0050	0.1	0.003315	93.9	70-130	0.1013	4.12	20	
Barium	0.133	0.00057	0.0050	0.1	0.03305	100	70-130	0.1348	1.34	20	
Beryllium	0.1011	0.00013	0.0020	0.1	-0.0000022	101	70-130	0.1035	2.35	20	
Boron	0.5214	0.015	0.020	0.5	0.0169	101	70-130	0.5335	2.31	20	
Cadmium	0.09919	0.00014	0.00020	0.1	0.0000297	99.2	70-130	0.103	3.73	20	
Calcium	27.25	0.22	0.50	10	18.1	91.5	70-130	27.44	0.699	20	
Chromium	0.09684	0.00061	0.0050	0.1	0.0007348	96.1	70-130	0.09925	2.46	20	
Cobalt	0.09477	0.00027	0.0050	0.1	0.0002871	94.5	70-130	0.09741	2.74	20	
Lead	0.098	0.00022	0.0050	0.1	0.0005368	97.5	70-130	0.1016	3.61	20	
Lithium	0.1032	0.0017	0.010	0.1	0.00265	101	70-130	0.1068	3.34	20	
Molybdenum	0.1022	0.00033	0.0050	0.1	0.00109	101	70-130	0.1047	2.47	20	
Selenium	0.0987	0.00048	0.0050	0.1	0.0001672	98.5	70-130	0.09733	1.39	20	
Thallium	0.0986	0.00032	0.0050	0.1	-0.0000011	98.6	70-130	0.1002	1.58	20	

MSD Sample ID: **22050056-04AMSD** Units: **mg/L** Analysis Date: **6/1/2022 01:50 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **ICPMS3_220601A** SeqNo: **8474541** Prep Date: **5/31/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.358	0.15	0.20	0.5	0.9484	81.8	70-130	1.353	0.342	20	
Calcium	207.9	2.2	5.0	10	209.7	-18	70-130	205.9	0.97	20	SO

The following samples were analyzed in this batch:

22050056-01A	22050056-02A	22050056-03A
22050056-04A	22050056-05A	22050056-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **195848** Instrument ID: **TDS** Method: **A2540 C-11**

MBLK Sample ID: **MBLK-195848-195848** Units: **mg/L** Analysis Date: **5/9/2022 03:18 PM**
Client ID: Run ID: **TDS_220509A** SeqNo: **8400944** Prep Date: **5/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	U	22	30								

LCS Sample ID: **LCS-195848-195848** Units: **mg/L** Analysis Date: **5/9/2022 03:18 PM**
Client ID: Run ID: **TDS_220509A** SeqNo: **8400943** Prep Date: **5/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	488	22	30	495	0	98.6	85-109	0			

DUP Sample ID: **22050056-04C DUP** Units: **mg/L** Analysis Date: **5/9/2022 03:18 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **TDS_220509A** SeqNo: **8400925** Prep Date: **5/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1193	74	100	0	0	0	0-0	1187	0.56	10	

DUP Sample ID: **22050056-06C DUP** Units: **mg/L** Analysis Date: **5/9/2022 03:18 PM**
Client ID: **2200355 Field Duplicate Grab** Run ID: **TDS_220509A** SeqNo: **8400928** Prep Date: **5/5/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids	1207	74	100	0	0	0	0-0	1207	0	10	

The following samples were analyzed in this batch:

22050056-01C	22050056-02C	22050056-03C
22050056-04C	22050056-05C	22050056-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R345301b** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-B-R345301b** Units: **mg/L** Analysis Date: **5/25/2022 03:06 PM**
Client ID: Run ID: **IC3_220525A** SeqNo: **8463705** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	0.3314	0.067	0.10								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-B-R345301b** Units: **mg/L** Analysis Date: **5/25/2022 02:58 PM**
Client ID: Run ID: **IC3_220525A** SeqNo: **8463704** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.974	0.31	1.0	10	0	99.7	90-110	0			
Fluoride	2.08	0.067	0.10	2	0	104	90-110	0			B
Sulfate	10.02	0.19	1.0	10	0	100	90-110	0			

MS Sample ID: **22050056-04C MS** Units: **mg/L** Analysis Date: **5/25/2022 04:21 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **IC3_220525A** SeqNo: **8463714** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	406.6	12	40	400	69.8	84.2	80-120	0			
Sulfate	767.5	7.6	40	400	401.7	91.4	80-120	0			

MS Sample ID: **22050056-06C MS** Units: **mg/L** Analysis Date: **5/25/2022 05:11 PM**
Client ID: **2200355 Field Duplicate Grab** Run ID: **IC3_220525A** SeqNo: **8463721** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	409.5	12	40	400	85.23	81.1	80-120	0			
Sulfate	769.1	7.6	40	400	424.8	86.1	80-120	0			

MSD Sample ID: **22050056-04C MSD** Units: **mg/L** Analysis Date: **5/25/2022 04:29 PM**
Client ID: **2200353 PH-MW-04 Grab** Run ID: **IC3_220525A** SeqNo: **8463715** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	404.8	12	40	400	69.8	83.7	80-120	406.6	0.459	20	
Sulfate	767.7	7.6	40	400	401.7	91.5	80-120	767.5	0.0245	20	

MSD Sample ID: **22050056-06C MSD** Units: **mg/L** Analysis Date: **5/25/2022 05:19 PM**
Client ID: **2200355 Field Duplicate Grab** Run ID: **IC3_220525A** SeqNo: **8463722** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	408	12	40	400	85.23	80.7	80-120	409.5	0.359	20	
Sulfate	767.8	7.6	40	400	424.8	85.8	80-120	769.1	0.166	20	

The following samples were analyzed in this batch:

22050056-01C	22050056-02C	22050056-03C
22050056-04C	22050056-05C	22050056-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-A-R345535** Units: **mg/L** Analysis Date: **5/31/2022 12:09 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473501** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **5/31/2022 01:48 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473513** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **5/31/2022 04:36 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473525** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-B-R345535** Units: **mg/L** Analysis Date: **5/31/2022 05:20 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473529** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **5/31/2022 06:59 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473541** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **5/31/2022 08:38 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473553** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-C-R345535** Units: **mg/L** Analysis Date: **5/31/2022 09:11 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473557** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **5/31/2022 10:50 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473569** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-D-R345535** Units: **mg/L** Analysis Date: **5/31/2022 11:23 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473595** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **6/1/2022 01:02 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473607** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **6/1/2022 02:40 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473619** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

MBLK Sample ID: **CCB/MBLK-R345535** Units: **mg/L** Analysis Date: **6/1/2022 03:13 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473623** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.31	1.0								
Fluoride	U	0.067	0.10								
Sulfate	U	0.19	1.0								

LCS Sample ID: **MLCCV/LCS-A-R345535** Units: **mg/L** Analysis Date: **5/31/2022 12:01 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473500** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.227	0.31	1.0	10	0	92.3	90-110	0			
Fluoride	1.826	0.067	0.10	2	0	91.3	90-110	0			
Sulfate	10.04	0.19	1.0	10	0	100	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **5/31/2022 01:40 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473512** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.652	0.31	1.0	10	0	96.5	90-110	0			
Fluoride	2.011	0.067	0.10	2	0	101	90-110	0			
Sulfate	10.61	0.19	1.0	10	0	106	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **5/31/2022 04:28 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473524** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.02	0.31	1.0	10	0	100	90-110	0			
Fluoride	2.027	0.067	0.10	2	0	101	90-110	0			
Sulfate	10.76	0.19	1.0	10	0	108	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-B-R345535** Units: **mg/L** Analysis Date: **5/31/2022 05:12 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473528** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.09	0.31	1.0	10	0	101	90-110	0			
Fluoride	2.049	0.067	0.10	2	0	102	90-110	0			
Sulfate	10.62	0.19	1.0	10	0	106	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **5/31/2022 06:51 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473540** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.21	0.31	1.0	10	0	102	90-110	0			
Fluoride	2.199	0.067	0.10	2	0	110	90-110	0			
Sulfate	10.94	0.19	1.0	10	0	109	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **5/31/2022 08:30 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473552** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.37	0.31	1.0	10	0	104	90-110	0			
Sulfate	10.72	0.19	1.0	10	0	107	90-110	0			

LCS Sample ID: **MLCCV/LCS-C-R345535** Units: **mg/L** Analysis Date: **5/31/2022 09:03 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473556** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.39	0.31	1.0	10	0	104	90-110	0			
Fluoride	2.132	0.067	0.10	2	0	107	90-110	0			
Sulfate	10.52	0.19	1.0	10	0	105	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **5/31/2022 10:42 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473568** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.4	0.31	1.0	10	0	104	90-110	0			
Fluoride	2.149	0.067	0.10	2	0	107	90-110	0			
Sulfate	10.51	0.19	1.0	10	0	105	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

LCS Sample ID: **MLCCV/LCS-D-R345535** Units: **mg/L** Analysis Date: **5/31/2022 11:15 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473594** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.44	0.31	1.0	10	0	104	88-110	0			
Fluoride	2.149	0.067	0.10	2	0	107	84-120	0			
Sulfate	10.37	0.19	1.0	10	0	104	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **6/1/2022 12:53 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473606** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.41	0.31	1.0	10	0	104	88-110	0			
Sulfate	10.68	0.19	1.0	10	0	107	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **6/1/2022 02:32 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473618** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.35	0.31	1.0	10	0	104	88-110	0			
Sulfate	10.75	0.19	1.0	10	0	108	90-110	0			

LCS Sample ID: **MLCCV/LCS-R345535** Units: **mg/L** Analysis Date: **6/1/2022 03:05 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473622** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.36	0.31	1.0	10	0	104	88-110	0			
Sulfate	10.45	0.19	1.0	10	0	105	90-110	0			

MS Sample ID: **22051611-01A MS** Units: **mg/L** Analysis Date: **5/31/2022 01:07 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473508** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2590	50	160	1600	1008	98.9	80-120	0			
Sulfate	1679	30	160	1600	0	105	80-120	0			

MS Sample ID: **22051612-02A MS** Units: **mg/L** Analysis Date: **5/31/2022 02:23 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473517** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	296.1	5	16	160	129.8	104	80-120	0			
Fluoride	35.14	1.1	1.6	32	-2.045	116	80-120	0			
Sulfate	178.7	3	16	160	4.374	109	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

MS Sample ID: **22051986-02E MS** Units: **mg/L** Analysis Date: **5/31/2022 06:26 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473537** Prep Date: DF: **10000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	261300	3100	10,000	100000	139300	122	80-120	0			SE
Fluoride	20390	670	1,000	20000	0	102	80-120	0			
Sulfate	105200	1900	10,000	100000	925	104	80-120	0			

MS Sample ID: **22052341-01A MS** Units: **mg/L** Analysis Date: **5/31/2022 07:32 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473545** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	616.3	12	40	400	194.3	106	80-120	0			
Fluoride	86.04	2.7	4.0	80	0	108	80-120	0			
Sulfate	442.1	7.6	40	400	10.26	108	80-120	0			

MS Sample ID: **22052191-01A MS** Units: **mg/L** Analysis Date: **5/31/2022 09:52 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473562** Prep Date: DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19330	310	1,000	10000	8508	108	80-120	0			
Sulfate	12820	190	1,000	10000	1648	112	80-120	0			

MS Sample ID: **22052139-01A MS** Units: **mg/L** Analysis Date: **5/31/2022 11:56 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473599** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	116.1	3.1	10	100	14.62	102	88-110	0			
Sulfate	122.1	1.9	10	100	12.41	110	90-110	0			

MSD Sample ID: **22051611-01A MSD** Units: **mg/L** Analysis Date: **5/31/2022 01:15 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473509** Prep Date: DF: **160**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2599	50	160	1600	1008	99.4	80-120	2590	0.331	20	
Sulfate	1691	30	160	1600	0	106	80-120	1679	0.726	20	

MSD Sample ID: **22051612-02A MSD** Units: **mg/L** Analysis Date: **5/31/2022 02:38 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473518** Prep Date: DF: **16**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	280.6	5	16	160	129.8	94.2	80-120	296.1	5.38	20	
Fluoride	32.72	1.1	1.6	32	-2.045	109	80-120	35.14	7.14	20	
Sulfate	169.9	3	16	160	4.374	103	80-120	178.7	5.1	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22050056
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **R345535** Instrument ID: **IC3** Method: **E300.0**

MSD Sample ID: **22051986-02E MSD** Units: **mg/L** Analysis Date: **5/31/2022 06:34 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473538** Prep Date: DF: **10000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	256300	3100	10,000	100000	139300	117	80-120	261300	1.93	20	E
Fluoride	19730	670	1,000	20000	0	98.6	80-120	20390	3.29	20	
Sulfate	104200	1900	10,000	100000	925	103	80-120	105200	1	20	

MSD Sample ID: **22052341-01A MSD** Units: **mg/L** Analysis Date: **5/31/2022 07:40 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473546** Prep Date: DF: **40**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	617.3	12	40	400	194.3	106	80-120	616.3	0.167	20	
Fluoride	86.13	2.7	4.0	80	0	108	80-120	86.04	0.107	20	
Sulfate	447.4	7.6	40	400	10.26	109	80-120	442.1	1.19	20	

MSD Sample ID: **22052191-01A MSD** Units: **mg/L** Analysis Date: **5/31/2022 10:00 PM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473563** Prep Date: DF: **1000**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19340	310	1,000	10000	8508	108	80-120	19330	0.0326	20	
Sulfate	12800	190	1,000	10000	1648	111	80-120	12820	0.206	20	

MSD Sample ID: **22052139-01A MSD** Units: **mg/L** Analysis Date: **6/1/2022 12:04 AM**
Client ID: Run ID: **IC3_220531A** SeqNo: **8473600** Prep Date: DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	115.4	3.1	10	100	14.62	101	88-110	116.1	0.616	20	
Sulfate	120.4	1.9	10	100	12.41	108	90-110	122.1	1.46	20	

The following samples were analyzed in this batch: 22050056-02C 22050056-03C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

EAST KENTUCKY POWER COOPERATIVE CHAIN OF CUSTODY

Facility:	Sampling Event Type:
Peg's Hill Landfill East Kentucky Power Cooperative H.L. Spurlock Station 1301 West Second Street Maysville, KY 41056	Background Monitoring Sample Matrix: Groundwater Collected By : Benjamin Bray (Kenvirons)

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	Sample Type: Grab or Composite
2200350	4/28/2022	14:24	PH-MW-01	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200351	4/28/2022	15:40	PH-MW-02	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200352	4/28/2022	10:14	PH-MW-03A	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200353	4/28/2022	12:42	PH-MW-04	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200354	4/28/2022	11:15	PH-MW-05	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200355	4/28/2022	12:42	Field Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				TDS, Anions (Fluoride, Chloride, Sulfate)	SM2540C, EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
2200356	4/28/2022	12:42	Matrix Spike	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
2200357	4/28/2022	12:42	Matrix Spike Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Anions (Fluoride, Chloride, Sulfate)	EPA 300.0	Plastic (500 mL)	1	≤ 6°C	
2200358	4/28/2022	15:00	Field Blank	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	Grab

Relinquished by: (Signature:) ALS	DATE 4/2/22	TIME 1211	Received by: (Signature) ALS
Relinquished by: (Signature:) ALS	DATE 5-2-22	TIME 1500	Received by: (Signature)
Relinquished by: (Signature:) ALS	DATE 5/2/22	TIME 1700	Received by: (Signature)
Relinquished by: (Signature:)	DATE 5/4/22 1600	TIME	Received by: (Signature)

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory | ☐ Direct De

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.)

<2°-7°C - 2 Hg - Metals Rad Chem >12

<6.0°C (metals >6.0°C) IR1 pH>2 ALSHN

22050056

EKPC: East Kentucky Power Cooperative
Project: Peg's Hill Landfill

CONDITIONS UPON RECEIPT

Custody seals intact on shipping container/cooler?	☐ Yes	☐ No	☐ Not Present	Notes:
Custody seals intact on sample bottles?	☐ Yes	☐ No	☐ Not Present	
Chain of custody agrees with sample labels?	☐ Yes	☐ No		
Samples collected in proper containers & intact?	☐ Yes	☐ No		
Samples received on ice?	☐ Yes	☐ No	Sample Temp (°C):	
Samples received within holding time?	☐ Yes	☐ No	Checklist Completed by:	
pH acceptable upon receipt?	☐ Yes	☐ No	Checklist Completed Date:	

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

22050056

EKPC: East Kentucky Power Cooperative
Project: Pegs Hill Landfill

Received by:	Janet Smith
Date/Time:	5/2/22 1500
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	<6°C; >6°C
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No *
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #:	*not checked
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

TDS; Anions <6°C, rec'd on ice. LL Hg and Metals >6°C - noticed.

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **02-May-22 15:00**

Work Order: **22050056** Received by: **LYS**

Checklist completed by: Lydia Sweet (eSignature) 05-May-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 12-May-22 (Date)

Matrices: Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	5/5/2022 11:49:37 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

June 13, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22050056
Pace Project No.: 30489261

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Hollie Compton

Hollie M. Compton
hollie.compton@pacelabs.com
(724)850-5600
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22050056
Pace Project No.: 30489261

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22050056
Pace Project No.: 30489261

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30489261001	**22050056-01**	Water	04/28/22 14:24	05/05/22 14:50
30489261002	**22050056-02**	Water	04/28/22 15:40	05/05/22 14:50
30489261003	**22050056-03**	Water	04/28/22 10:14	05/05/22 14:50
30489261004	**22050056-04**	Water	04/28/22 12:42	05/05/22 14:50
30489261005	**22050056-05**	Water	04/28/22 11:15	05/05/22 14:50
30489261006	**22050056-06**	Water	04/28/22 12:42	05/05/22 14:50

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22050056
Pace Project No.: 30489261

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30489261001	**22050056-01**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489261002	**22050056-02**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489261003	**22050056-03**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489261004	**22050056-04**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489261005	**22050056-05**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489261006	**22050056-06**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22050056
Pace Project No.: 30489261

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: June 13, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22050056
Pace Project No.: 30489261

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: June 13, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22050056
Pace Project No.: 30489261

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: June 13, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22050056
Pace Project No.: 30489261

Sample: 22050056-01 **Lab ID: 30489261001** Collected: 04/28/22 14:24 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.259 ± 0.294 (0.464) C:NA T:103%**	pCi/L	06/07/22 12:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.297 ± 0.279 (0.567) C:80% T:93%**	pCi/L	05/31/22 11:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.556 ± 0.573 (1.03)**	pCi/L	06/13/22 17:09	7440-14-4	

Sample: 22050056-02 **Lab ID: 30489261002** Collected: 04/28/22 15:40 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.217 (0.487) C:NA T:97%**	pCi/L	06/07/22 12:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.536 ± 0.357 (0.681) C:72% T:95%**	pCi/L	05/31/22 11:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.536 ± 0.574 (1.17)**	pCi/L	06/13/22 17:09	7440-14-4	

Sample: 22050056-03 **Lab ID: 30489261003** Collected: 04/28/22 10:14 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.715 ± 0.350 (0.114) C:NA T:103%**	pCi/L	06/07/22 12:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.729 ± 0.367 (0.630) C:78% T:86%**	pCi/L	05/31/22 11:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.44 ± 0.717 (0.744)**	pCi/L	06/13/22 17:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22050056
Pace Project No.: 30489261

Sample: 22050056-04 **Lab ID: 30489261004** Collected: 04/28/22 12:42 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were not preserved <2 within the required 5 days of collection

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.136 ± 0.462 (0.892) C:NA T:99%**	pCi/L	06/07/22 12:56	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.525 ± 0.337 (0.619) C:77% T:96%**	pCi/L	05/31/22 11:59	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**0.661 ± 0.799 (1.51)**	pCi/L	06/13/22 17:09	7440-14-4	

Sample: 22050056-05 **Lab ID: 30489261005** Collected: 04/28/22 11:15 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**0.129 ± 0.369 (0.684) C:NA T:107%**	pCi/L	06/07/22 12:56	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.247 ± 0.279 (0.581) C:73% T:91%**	pCi/L	05/31/22 11:59	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**0.376 ± 0.648 (1.27)**	pCi/L	06/13/22 17:09	7440-14-4	

Sample: 22050056-06 **Lab ID: 30489261006** Collected: 04/28/22 12:42 Received: 05/05/22 14:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Radium-226	EPA 903.1	**-0.138 ± 0.271 (0.650) C:NA T:99%**	pCi/L	06/07/22 13:14	13982-63-3	
		Pace Analytical Services - Greensburg				
Radium-228	EPA 904.0	**0.644 ± 0.336 (0.584) C:75% T:95%**	pCi/L	05/31/22 11:59	15262-20-1	
		Pace Analytical Services - Greensburg				
Total Radium	Total Radium Calculation	**0.644 ± 0.607 (1.23)**	pCi/L	06/13/22 17:09	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22050056
Pace Project No.: 30489261

QC Batch: 504689 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30489261001, 30489261002, 30489261003, 30489261004, 30489261005, 30489261006

METHOD BLANK: 2444427 Matrix: Water
Associated Lab Samples: 30489261001, 30489261002, 30489261003, 30489261004, 30489261005, 30489261006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0656 ± 0.203 (0.394) C:NA T:105%	pCi/L	06/07/22 12:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22050056
Pace Project No.: 30489261

QC Batch: 504691 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30489261001, 30489261002, 30489261003, 30489261004, 30489261005, 30489261006

METHOD BLANK: 2444430 Matrix: Water
Associated Lab Samples: 30489261001, 30489261002, 30489261003, 30489261004, 30489261005, 30489261006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.221 ± 0.244 (0.510) C:85% T:101%	pCi/L	05/31/22 11:57	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22050056
Pace Project No.: 30489261

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ALS Environmental

Subcontractor:
Pace Analytical Services, Inc.
1638 Roseytown Rd
Suites 2,3 & 4
Greensburg, PA 15601
TEL: (724) 850-5600
FAX:
Acct #:

Salesperson: **Paul Painter**

CHAIN-OF-CUSTODY RECORD

Date: 04-May-22
COC ID: 19620
Due Date: 02-Jun-22

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22050056	A	Ra226(903.1); Ra228(904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
22050056-01D	2200350 PH-MW-01 Grab	Groundwater	28/Apr/2022 14:24	(2) 1LPHNO3	X									
22050056-02D	2200351 PH-MW-02 Grab	Groundwater	28/Apr/2022 15:40	(2) 1LPHNO3	X									
22050056-03D	2200352 PH-MW-03A Grab	Groundwater	28/Apr/2022 10:14	(2) 1LPHNO3	X									
22050056-04D	2200353 PH-MW-04 Grab	Groundwater	28/Apr/2022 12:42	(2) 1LPHNO3	X									
22050056-05D	2200354 PH-MW-05 Grab	Groundwater	28/Apr/2022 11:15	(2) 1LPHNO3	X									
22050056-06D	2200355 Field Duplicate Grab	Groundwater	28/Apr/2022 12:42	(2) 1LPHNO3	X									

WO# : 30489261

30489261

Comments:

KY Samples. Sampler: B. Bray.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
[signature]	5/4/22 1708	[signature]	5/5/22 1450		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Pace Analytical®

WO#: 30489261

le Container Count

PM: KLS Due Date: 05/26/22

CLIENT: ALS-WV

Client

Site 22050056

Profile Number 5573

Notes

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2												2																	
3												2																	
4												2																	
5												2																	
6	↓											2																	
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS

Project # 30148926

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label MJS

LIMS Login MJS

Tracking #: 776764831222

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used NA Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10D4611 / Date and Initials of person examining contents: MJS 5-15-22
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. added 2.5mL of HNO3 to one container of 22050056-04.
All containers meet method preservation requirements.		✓		Initial when completed MJS / Date/time of preservation 5-15-22 1415 / Lot # of added preservative DL22-0473
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: MJS / Date: 5-15-22 / Survey Meter SN: 1563

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

20-Jul-2022

Jared Daugherty
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40391

Re: **Pegs Hill Landfill** Work Order: **22052645**

Dear Jared,

ALS Environmental received 7 samples on 31-May-2022 03:45 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Rebecca Kiser

Electronically approved by: Rebecca Kiser

Rebecca Kiser
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 20-Jul-22

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Work Order: **22052645**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
22052645-01	PH-MW-01 Grab	Groundwater		5/25/2022 19:47	5/31/2022 15:45	☐
22052645-01	PH-MW-01 Grab	Groundwater		5/25/2022 19:47	6/2/2022 15:30	☐
22052645-02	PH-MW-02 Grab	Groundwater		5/25/2022 21:19	5/31/2022 15:45	☐
22052645-02	PH-MW-02 Grab	Groundwater		5/25/2022 21:19	6/2/2022 15:30	☐
22052645-03	PH-MW-03A Grab	Groundwater		5/26/2022 13:01	5/31/2022 15:45	☐
22052645-03	PH-MW-03A Grab	Groundwater		5/26/2022 13:01	6/2/2022 15:30	☐
22052645-04	PH-MW-04 Grab	Groundwater		5/26/2022 09:37	5/31/2022 15:45	☐
22052645-04	PH-MW-04 Grab	Groundwater		5/26/2022 09:37	6/2/2022 15:30	☐
22052645-05	PH-MW-05 Grab	Groundwater		5/26/2022 10:49	5/31/2022 15:45	☐
22052645-05	PH-MW-05 Grab	Groundwater		5/26/2022 10:49	6/2/2022 15:30	☐
22052645-06	Field Duplicate Grab	Groundwater		5/26/2022 09:37	5/31/2022 15:45	☐
22052645-06	Field Duplicate Grab	Groundwater		5/26/2022 09:37	6/2/2022 15:30	☐
22052645-07	Field Blank Grab	Water		5/26/2022 13:40	6/2/2022 15:30	☐

ALS Group, USA

Date: 20-Jul-22

Client:	East Kentucky Power Cooperative
Project:	Pegs Hill Landfill
Work Order:	22052645

Case Narrative

Samples for the above noted Work Order were received on .05/31/2022 The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Metals:
Batch 197547, Method E200.8, Samples 22052645-01A,-02A,-04A,-05A,-06A: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference. Sb, As, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl

Batch 197547, Method E200.8, Sample PH-MW-03A Grab (22052645-03A): The reporting limit is elevated due to dilution needed to eliminate matrix-related interference. Sb, As, Be, Cd, Cr, Co, Pb, Se, Tl

Wet Chemistry:
No other deviations or anomalies were noted.

Subcontracted analytical data has been appended to this report in its entirety.

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
WorkOrder: **22052645**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
µg/L	Micrograms per Liter
as noted	
mg/L	Milligrams per Liter

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: PH-MW-01 Grab
Collection Date: 5/25/2022 07:47 PM

Work Order: 22052645
Lab ID: 22052645-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 6/6/22			Analyst: **ABL**
Mercury	**0.0017**		**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 20:14
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 6/7/22			Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:19
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:19
Barium	**0.0467**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:19
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:19
Boron	**0.938**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:19
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:19
Calcium	**301**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:19
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:19
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:19
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:19
Lithium	**0.0639**	J	**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:19
Molybdenum	U		0.0033	0.010	mg/L	10	6/7/2022 22:19
Selenium	U		0.0048	0.010	mg/L	10	6/7/2022 22:19
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:19
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: PH-MW-02 Grab
Collection Date: 5/25/2022 09:19 PM

Work Order: 22052645
Lab ID: 22052645-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 6/6/22		Analyst: **ABL**
Mercury	**0.00049**	J	**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 20:22
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 6/7/22		Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:20
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:20
Barium	**0.0793**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:20
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:20
Boron	**1.11**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:20
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:20
Calcium	**46.5**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:20
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:20
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:20
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:20
Lithium	**0.0689**	J	**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:20
Molybdenum	U		0.0033	0.010	mg/L	10	6/7/2022 22:20
Selenium	U		0.0048	0.010	mg/L	10	6/7/2022 22:20
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:20
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: PH-MW-03A Grab
Collection Date: 5/26/2022 01:01 PM

Work Order: 22052645
Lab ID: 22052645-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 6/6/22		Analyst: **ABL**
Mercury	**0.0014**		**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 20:29
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 6/7/22		Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:22
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:22
Barium	**0.0475**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:22
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:22
Boron	**2.99**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:22
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:22
Calcium	**27.2**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:22
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:22
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:22
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:22
Lithium	**0.106**		**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:22
Molybdenum	**0.0229**		**0.0033**	**0.010**	**mg/L**	10	6/7/2022 22:22
Selenium	U		0.0048	0.010	mg/L	10	6/7/2022 22:22
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:22
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: PH-MW-04 Grab
Collection Date: 5/26/2022 09:37 AM

Work Order: 22052645
Lab ID: 22052645-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**			Prep: E1631E / 6/6/22		Analyst: **ABL**
Mercury	**0.00059**		**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 20:45
METALS BY ICP-MS		Method: **E200.8**			Prep: CEM-NPDES / 6/7/22		Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:23
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:23
Barium	**0.0628**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:23
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:23
Boron	**0.794**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:23
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:23
Calcium	**198**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:23
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:23
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:23
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:23
Lithium	**0.0357**	J	**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:23
Molybdenum	U		0.0033	0.010	mg/L	10	6/7/2022 22:23
Selenium	U		0.0048	0.010	mg/L	10	6/7/2022 22:23
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:23
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: PH-MW-05 Grab
Collection Date: 5/26/2022 10:49 AM

Work Order: 22052645
Lab ID: 22052645-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER			Method:**E1631E**		Prep: E1631E / 6/6/22		Analyst: **ABL**
Mercury	**0.00040**	J	**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 21:16
METALS BY ICP-MS			Method:**E200.8**		Prep: CEM-NPDES / 6/7/22		Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:32
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:32
Barium	**0.0648**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:32
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:32
Boron	**0.217**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:32
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:32
Calcium	**109**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:32
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:32
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:32
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:32
Lithium	**0.0206**	J	**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:32
Molybdenum	U		0.0033	0.010	mg/L	10	6/7/2022 22:32
Selenium	**0.00492**	J	**0.0048**	**0.010**	**mg/L**	10	6/7/2022 22:32
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:32
SUBCONTRACTED ANALYSES			Method:**SUBCONTRACT**				Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: Field Duplicate Grab
Collection Date: 5/26/2022 09:37 AM

Work Order: 22052645
Lab ID: 22052645-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 6/6/22			Analyst: **ABL**
Mercury	**0.00058**		**0.00020**	**0.00050**	**µg/L**	1	6/6/2022 21:24
METALS BY ICP-MS		Method: **E200.8**		Prep: CEM-NPDES / 6/7/22			Analyst: **STP**
Antimony	U		0.0042	0.010	mg/L	10	6/7/2022 22:33
Arsenic	U		0.0019	0.010	mg/L	10	6/7/2022 22:33
Barium	**0.0628**		**0.0057**	**0.010**	**mg/L**	10	6/7/2022 22:33
Beryllium	U		0.0013	0.010	mg/L	10	6/7/2022 22:33
Boron	**0.759**		**0.15**	**0.20**	**mg/L**	10	6/7/2022 22:33
Cadmium	U		0.0014	0.0020	mg/L	10	6/7/2022 22:33
Calcium	**195**		**2.2**	**5.0**	**mg/L**	10	6/7/2022 22:33
Chromium	U		0.0061	0.010	mg/L	10	6/7/2022 22:33
Cobalt	U		0.0027	0.010	mg/L	10	6/7/2022 22:33
Lead	U		0.0022	0.010	mg/L	10	6/7/2022 22:33
Lithium	**0.0361**	J	**0.017**	**0.10**	**mg/L**	10	6/7/2022 22:33
Molybdenum	U		0.0033	0.010	mg/L	10	6/7/2022 22:33
Selenium	U		0.0048	0.010	mg/L	10	6/7/2022 22:33
Thallium	U		0.0032	0.010	mg/L	10	6/7/2022 22:33
SUBCONTRACTED ANALYSES		Method: **SUBCONTRACT**					Analyst: **PACE**
Subcontracted Analyses	**See attached**		**0**		**as noted**	1	7/11/2022

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Jul-22*

Client: East Kentucky Power Cooperative
Project: Pegs Hill Landfill
Sample ID: Field Blank Grab
Collection Date: 5/26/2022 01:40 PM

Work Order: 22052645
Lab ID: 22052645-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY IN WATER		Method: **E1631E**		Prep: E1631E / 6/6/22			Analyst: **ABL**
Mercury	U		0.00020	0.00050	µg/L	1	6/6/2022 21:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 20-Jul-22

Client: East Kentucky Power Cooperative

QC BATCH REPORT

Work Order: 22052645

Project: Pegs Hill Landfill

Batch ID: **197409** Instrument ID: **HG2** Method: **E1631E**

MBLK1 Sample ID: **MBLK1-197409-197409** Units: **ng/L** Analysis Date: **6/6/2022 08:06 PM**

Client ID: Run ID: **HG2_220606A** SeqNo: **8489023** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK2 Sample ID: **MBLK2-197409-197409** Units: **ng/L** Analysis Date: **6/6/2022 08:37 PM**

Client ID: Run ID: **HG2_220606A** SeqNo: **8489028** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MBLK3 Sample ID: **MBLK3-197409-197409** Units: **ng/L** Analysis Date: **6/6/2022 09:09 PM**

Client ID: Run ID: **HG2_220606A** SeqNo: **8489033** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.2	0.50	0	0	0		0			

MS Sample ID: **22052645-04BMS** Units: **ng/L** Analysis Date: **6/6/2022 08:53 PM**

Client ID: **PH-MW-04 Grab** Run ID: **HG2_220606A** SeqNo: **8489030** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.53	0.2	0.50	4	0.59	98.5	71-125	0			

MSD Sample ID: **22052645-04BMSD** Units: **ng/L** Analysis Date: **6/6/2022 09:01 PM**

Client ID: **PH-MW-04 Grab** Run ID: **HG2_220606A** SeqNo: **8489031** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	4.53	0.2	0.50	4	0.59	98.5	71-125	4.53	0	24	

LCS-OPR-START Sample ID: **OPR-START-197409-197409** Units: **ng/L** Analysis Date: **6/6/2022 07:58 PM**

Client ID: Run ID: **HG2_220606A** SeqNo: **8489021** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.04	0.2	0.50	5	0	101	77-123	0			

LCS-OPR-END Sample ID: **OPR-END-197409-197409** Units: **ng/L** Analysis Date: **6/6/2022 09:40 PM**

Client ID: Run ID: **HG2_220606A** SeqNo: **8489037** Prep Date: **6/6/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	5.06	0.2	0.50	5	0	101	77-123	0			

The following samples were analyzed in this batch:

22052645-01B	22052645-02B	22052645-03B
22052645-04B	22052645-05B	22052645-06B
22052645-07A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22052645
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197547** Instrument ID: **ICPMS3** Method: **E200.8**

MBLK Sample ID: **MBLK-197547-197547** Units: **mg/L** Analysis Date: **6/7/2022 09:56 PM**
Client ID: Run ID: **ICPMS3_220607A** SeqNo: **8491308** Prep Date: **6/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00042	0.0050								
Arsenic	U	0.00019	0.0050								
Barium	U	0.00057	0.0050								
Beryllium	U	0.00013	0.0020								
Boron	U	0.015	0.020								
Cadmium	U	0.00014	0.00020								
Calcium	U	0.22	0.50								
Chromium	U	0.00061	0.0050								
Cobalt	U	0.00027	0.0050								
Lead	U	0.00022	0.0050								
Lithium	U	0.0017	0.010								
Molybdenum	U	0.00033	0.0050								
Selenium	U	0.00048	0.0050								
Thallium	U	0.00032	0.0050								

LCS Sample ID: **LCS-197547-197547** Units: **mg/L** Analysis Date: **6/7/2022 09:57 PM**
Client ID: Run ID: **ICPMS3_220607A** SeqNo: **8491309** Prep Date: **6/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.096	0.00042	0.0050	0.1	0	96	85-115	0			
Arsenic	0.09642	0.00019	0.0050	0.1	0	96.4	85-115	0			
Barium	0.09715	0.00057	0.0050	0.1	0	97.2	85-115	0			
Beryllium	0.09656	0.00013	0.0020	0.1	0	96.6	85-115	0			
Boron	0.4964	0.015	0.020	0.5	0	99.3	85-115	0			
Cadmium	0.097	0.00014	0.00020	0.1	0	97	85-115	0			
Calcium	10.01	0.22	0.50	10	0	100	85-115	0			
Chromium	0.0995	0.00061	0.0050	0.1	0	99.5	85-115	0			
Cobalt	0.09652	0.00027	0.0050	0.1	0	96.5	85-115	0			
Lead	0.09688	0.00022	0.0050	0.1	0	96.9	85-115	0			
Lithium	0.09565	0.0017	0.010	0.1	0	95.7	85-115	0			
Molybdenum	0.09833	0.00033	0.0050	0.1	0	98.3	85-115	0			
Selenium	0.09693	0.00048	0.0050	0.1	0	96.9	85-115	0			
Thallium	0.09483	0.00032	0.0050	0.1	0	94.8	85-115	0			

MS Sample ID: **22052643-05AMS** Units: **mg/L** Analysis Date: **6/7/2022 10:09 PM**
Client ID: Run ID: **ICPMS3_220607A** SeqNo: **8491316** Prep Date: **6/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5103	0.15	0.20	0.5	0.09108	83.8	70-130	0			
Chromium	0.09758	0.0061	0.050	0.1	0.0001584	97.4	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22052645
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197547** Instrument ID: **ICPMS3** Method: **E200.8**

MS Sample ID: **22052645-04AMS** Units: **mg/L** Analysis Date: **6/7/2022 10:28 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220607A** SeqNo: **8491328** Prep Date: **6/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09101	0.0042	0.050	0.1	0.0002222	90.8	70-130	0			
Arsenic	0.09223	0.0019	0.050	0.1	0.0000088	92.2	70-130	0			
Barium	0.1473	0.0057	0.050	0.1	0.06279	84.5	70-130	0			
Beryllium	0.08688	0.0013	0.020	0.1	-0.0000077	86.9	70-130	0			
Boron	1.151	0.15	0.20	0.5	0.7937	71.4	70-130	0			
Cadmium	0.08927	0.0014	0.0020	0.1	0.0000891	89.2	70-130	0			
Calcium	193.9	2.2	5.0	10	198.2	-43.2	70-130	0			SO
Chromium	0.09264	0.0061	0.050	0.1	0.0003652	92.3	70-130	0			
Cobalt	0.09262	0.0027	0.050	0.1	0.001243	91.4	70-130	0			
Lead	0.08716	0.0022	0.050	0.1	0.0004301	86.7	70-130	0			
Lithium	0.12	0.017	0.10	0.1	0.03572	84.3	70-130	0			
Molybdenum	0.08707	0.0033	0.050	0.1	-0.0001045	87.2	70-130	0			
Selenium	0.1037	0.0048	0.050	0.1	0.00343	100	70-130	0			
Thallium	0.08534	0.0032	0.050	0.1	-0.0000517	85.4	70-130	0			

MS Sample ID: **22052643-05AMS** Units: **mg/L** Analysis Date: **6/17/2022 07:44 PM**
Client ID: Run ID: **ICPMS3_220617A** SeqNo: **8531180** Prep Date: **6/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1075	0.00042	0.0050	0.1	0.0000363	107	70-130	0			
Arsenic	0.1009	0.00019	0.0050	0.1	0.0005984	100	70-130	0			
Barium	0.1244	0.00057	0.0050	0.1	0.01924	105	70-130	0			
Beryllium	0.1078	0.00013	0.0020	0.1	0.0000033	108	70-130	0			
Boron	0.5543	0.015	0.020	0.5	0.03526	104	70-130	0			
Cadmium	0.1031	0.00014	0.00020	0.1	0.0000297	103	70-130	0			
Calcium	52.31	0.22	0.50	10	44.78	75.3	70-130	0			O
Cobalt	0.09642	0.00027	0.0050	0.1	0.0001474	96.3	70-130	0			
Lead	0.09994	0.00022	0.0050	0.1	0.0001661	99.8	70-130	0			
Lithium	0.104	0.0017	0.010	0.1	0.002654	101	70-130	0			
Molybdenum	0.1054	0.00033	0.0050	0.1	0.001464	104	70-130	0			
Selenium	0.09829	0.00048	0.0050	0.1	-0.000528	98.8	70-130	0			
Thallium	0.09761	0.00032	0.0050	0.1	0.0000242	97.6	70-130	0			

MSD Sample ID: **22052643-05AMSD** Units: **mg/L** Analysis Date: **6/7/2022 10:11 PM**
Client ID: Run ID: **ICPMS3_220607A** SeqNo: **8491317** Prep Date: **6/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4698	0.15	0.20	0.5	0.09108	75.8	70-130	0.5103	8.26	20	
Chromium	0.09187	0.0061	0.050	0.1	0.0001584	91.7	70-130	0.09758	6.03	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: East Kentucky Power Cooperative
Work Order: 22052645
Project: Pegs Hill Landfill

QC BATCH REPORT

Batch ID: **197547** Instrument ID: **ICPMS3** Method: **E200.8**

MSD Sample ID: **22052645-04AMSD** Units: **mg/L** Analysis Date: **6/7/2022 10:30 PM**
Client ID: **PH-MW-04 Grab** Run ID: **ICPMS3_220607A** SeqNo: **8491329** Prep Date: **6/7/2022** DF: **10**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09127	0.0042	0.050	0.1	0.0002222	91	70-130	0.09101	0.278	20	
Arsenic	0.08953	0.0019	0.050	0.1	0.0000088	89.5	70-130	0.09223	2.97	20	
Barium	0.1466	0.0057	0.050	0.1	0.06279	83.8	70-130	0.1473	0.514	20	
Beryllium	0.08328	0.0013	0.020	0.1	-0.0000077	83.3	70-130	0.08688	4.24	20	
Boron	1.138	0.15	0.20	0.5	0.7937	68.8	70-130	1.151	1.14	20	S
Cadmium	0.08766	0.0014	0.0020	0.1	0.0000891	87.6	70-130	0.08927	1.81	20	
Calcium	196.3	2.2	5.0	10	198.2	-19.2	70-130	193.9	1.23	20	SO
Chromium	0.08933	0.0061	0.050	0.1	0.0003652	89	70-130	0.09264	3.64	20	
Cobalt	0.09156	0.0027	0.050	0.1	0.001243	90.3	70-130	0.09262	1.16	20	
Lead	0.08458	0.0022	0.050	0.1	0.0004301	84.1	70-130	0.08716	3.01	20	
Lithium	0.1176	0.017	0.10	0.1	0.03572	81.9	70-130	0.12	1.97	20	
Molybdenum	0.08599	0.0033	0.050	0.1	-0.0001045	86.1	70-130	0.08707	1.24	20	
Selenium	0.09505	0.0048	0.050	0.1	0.00343	91.6	70-130	0.1037	8.72	20	
Thallium	0.08314	0.0032	0.050	0.1	-0.0000517	83.2	70-130	0.08534	2.61	20	

MSD Sample ID: **22052643-05AMSD** Units: **mg/L** Analysis Date: **6/17/2022 07:45 PM**
Client ID: Run ID: **ICPMS3_220617A** SeqNo: **8531181** Prep Date: **6/7/2022** DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1051	0.00042	0.0050	0.1	0.0000363	105	70-130	0.1075	2.27	20	
Arsenic	0.09921	0.00019	0.0050	0.1	0.0005984	98.6	70-130	0.1009	1.66	20	
Barium	0.1229	0.00057	0.0050	0.1	0.01924	104	70-130	0.1244	1.17	20	
Beryllium	0.1061	0.00013	0.0020	0.1	0.0000033	106	70-130	0.1078	1.55	20	
Boron	0.5668	0.015	0.020	0.5	0.03526	106	70-130	0.5543	2.23	20	
Cadmium	0.1022	0.00014	0.00020	0.1	0.0000297	102	70-130	0.1031	0.891	20	
Calcium	51.25	0.22	0.50	10	44.78	64.7	70-130	52.31	2.04	20	SO
Cobalt	0.0957	0.00027	0.0050	0.1	0.0001474	95.6	70-130	0.09642	0.742	20	
Lead	0.09901	0.00022	0.0050	0.1	0.0001661	98.8	70-130	0.09994	0.931	20	
Lithium	0.1023	0.0017	0.010	0.1	0.002654	99.6	70-130	0.104	1.63	20	
Molybdenum	0.1043	0.00033	0.0050	0.1	0.001464	103	70-130	0.1054	1.03	20	
Selenium	0.1047	0.00048	0.0050	0.1	-0.000528	105	70-130	0.09829	6.29	20	
Thallium	0.09766	0.00032	0.0050	0.1	0.0000242	97.6	70-130	0.09761	0.0563	20	

The following samples were analyzed in this batch:

22052645-01A	22052645-02A	22052645-03A
22052645-04A	22052645-05A	22052645-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

22052645

EKPC: East Kentucky Power Cooperative
Project: Peg's Hill Landfill

EAST KENTUCKY POWER COOPERATIVE

EAST KENTUCKY POWER CO

Facility:	
Peg's Hill Landfill East Kentucky Power Cooperative H.L. Spurlock Station 1301 West Second Street Maysville, KY 41056	Background Monitoring Sample Matrix: Groundwater Collected By : Benjamin Bray (Kenvirons)

Laboratory ID #	COLLECTION DATE	COLLECTION TIME (24 HR)	SAMPLE DESCRIPTION:	SAMPLE ANALYSIS REQUESTED:	Analysis Method:	Container	# of Containers	Preservative	Sample Type: Grab or Composite
	5/25/2022	19:47	PH-MW-01	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/25/2022	21:19	PH-MW-02	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/26/2022	13:01	PH-MW-03A	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/26/2022	9:37	PH-MW-04	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/26/2022	10:49	PH-MW-05	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/26/2022	9:37	Field Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
				Radium 226 and 228 Combined	EPA 903.1 & EPA 904.0	Plastic (1000 mL)	2	HNO_3	
	5/26/2022	9:37	Matrix Spike	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
	5/26/2022	9:37	Matrix Spike Duplicate	Metals, Total (B, Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mo, Se, Tl)	EPA 200.8	Plastic (250 mL)	1	HNO_3	Grab
				Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	
	5/26/2022	13:40	Field Blank	Mercury, Total	EPA 245.7	Glass (250 mL)	1	HCl	Grab

Relinquished by: (Signature:)	DATE	TIME	Received by: (Signature)
[signature]	5/31/2022	12:41	[signature] 5/31/22 12:41
[signature]	5/31/22	16:55	[signature]
[signature]	6/1/22	1700	FedEx
FedEx	6/2/22	1530	[signature]

SHIPPING INFORMATION

Method of Sample Shipment to Laboratory ☐ Direct Delivery ☐ Commercial Courier ☐ In-House Courier

Notes: (Shipping Date & Time, Shipping Record Number, Commercial Courier Name, etc.) ≤6°C ACSTL

≤6.0°C IR1 pH≤2 ALSHN
metals >6.0°C

CONDITIONS UPON RECEIPT

Custody seals intact on shipping container/cooler?	☐ Yes	☐ No	☐ Not Present
Custody seals intact on sample bottles?	☐ Yes	☐ No	☐ Not Present
Chain of custody agrees with sample labels?	☐ Yes	☐ No	
Samples collected in proper containers & intact?	☐ Yes	☐ No	
Samples received on ice?	☐ Yes	☐ No	
Samples received within holding time?	☐ Yes	☐ No	
pH acceptable upon receipt?	☐ Yes	☐ No	

Notes:

Sample Temp (°C):	
Checklist Completed by:	
Checklist Completed Date:	

ALS Environmental

1740 Union Carbide Drive
South Charleston, WV 25303

Sample Receiving Checklist

Received by:	Janet Smith
Date/Time:	5/31/22 1655
Carrier Name:	ALS Courier
Shipping container/cooler in good condition?	Yes / No / Not Present
Custody seals intact on shipping container/cooler?	Yes / No / Not Present
Custody seals intact on sample bottles?	Yes / No / Not Present
Chain of Custody present?	Yes / No
COC signed when relinquished and received?	Yes / No
COC agrees with sample labels?	Yes / No
Samples in proper container/bottle?	Yes / No
Sample containers intact?	Yes / No
Sufficient sample volume for indicated test?	Yes / No
All samples received within holding time?	Yes / No
All sample temperatures verified to be in compliance?	Yes / No
Temperature(s) (°C):	4.6°
Thermometer(s):	IR
Sample(s) received on ice?	Yes / No
Matrix/Matrices:	Groundwater
Cooler(s)/Kit(s):	
Date/Time sample(s) sent to storage:	
Trip Blanks included? (for volatile analysis only)	Yes / No / N/A
Water – VOA vials have zero headspace?	Yes / No / No Vials
Water – pH acceptable upon receipt?	Yes / No / N/A
pH strip lot #:	not checked
pH adjusted (note adjustments below)?	Yes / No / N/A
pH adjusted by:	

Login Notes:

ALS Group, USA

Sample Receipt Checklist

Client Name: **EKPC** Date/Time Received: **31-May-22 15:45**

Work Order: **22052645** Received by: **LYS**

Checklist completed by: Lydia Sweet (eSignature) 03-Jun-22 (Date) Reviewed by: Rebecca Kiser (eSignature) 04-Jun-22 (Date)

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	<6.0c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	6/3/2022 9:25:02 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: pH check <2

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 12, 2022

Ms. Rebecca Kiser
ALS Environmental
1740 Union Carbide Drive
Charleston, WV 25303

RE: Project: 22052645
Pace Project No.: 30496785

Dear Ms. Kiser:

Enclosed are the analytical results for sample(s) received by the laboratory on June 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Hollie Compton

Hollie M. Compton
hollie.compton@pacelabs.com
(724)850-5600
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 22052645
Pace Project No.: 30496785

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 22052645
Pace Project No.: 30496785

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30496785001	**22052645-01C**	Water	05/25/22 19:47	06/07/22 09:50
30496785002	**22052645-02C**	Water	05/25/22 21:19	06/07/22 09:50
30496785003	**22052645-03C**	Water	05/26/22 13:01	06/07/22 09:50
30496785004	**22052645-04C**	Water	05/26/22 09:37	06/07/22 09:50
30496785005	**22052645-05C**	Water	05/26/22 10:49	06/07/22 09:50
30496785006	**22052645-06C**	Water	05/26/22 09:37	06/07/22 09:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 22052645
Pace Project No.: 30496785

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30496785001	**22052645-01C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30496785002	**22052645-02C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30496785003	**22052645-03C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30496785004	**22052645-04C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30496785005	**22052645-05C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30496785006	**22052645-06C**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22052645
Pace Project No.: 30496785

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: ALS Life Sciences Division | Environmental
Date: July 12, 2022

General Information:
6 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22052645
Pace Project No.: 30496785

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: ALS Life Sciences Division | Environmental
Date: July 12, 2022

General Information:
6 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 22052645
Pace Project No.: 30496785

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: ALS Life Sciences Division | Environmental
Date: July 12, 2022

General Information:
6 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22052645
Pace Project No.: 30496785

Sample: 22052645-01C **Lab ID: 30496785001** Collected: 05/25/22 19:47 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0795 ± 0.292 (0.560) C:NA T:91%**	pCi/L	07/12/22 12:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0379 ± 0.532 (1.25) C:67% T:91%**	pCi/L	07/05/22 19:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0795 ± 0.824 (1.81)**	pCi/L	07/12/22 17:34	7440-14-4	

Sample: 22052645-02C **Lab ID: 30496785002** Collected: 05/25/22 21:19 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.226 (0.490) C:NA T:92%**	pCi/L	07/12/22 12:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.241 ± 0.450 (0.989) C:72% T:92%**	pCi/L	07/05/22 19:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.241 ± 0.676 (1.48)**	pCi/L	07/12/22 17:34	7440-14-4	

Sample: 22052645-03C **Lab ID: 30496785003** Collected: 05/26/22 13:01 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.803 ± 0.438 (0.480) C:NA T:90%**	pCi/L	07/12/22 12:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.550 ± 0.515 (1.05) C:76% T:90%**	pCi/L	07/05/22 19:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.35 ± 0.953 (1.53)**	pCi/L	07/12/22 17:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 22052645
Pace Project No.: 30496785

Sample: 22052645-04C **Lab ID: 30496785004** Collected: 05/26/22 09:37 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0810 ± 0.251 (0.487) C:NA T:89%**	pCi/L	07/12/22 12:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.346 ± 0.502 (1.08) C:69% T:89%**	pCi/L	07/05/22 19:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.427 ± 0.753 (1.57)**	pCi/L	07/12/22 17:34	7440-14-4	

Sample: 22052645-05C **Lab ID: 30496785005** Collected: 05/26/22 10:49 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.129 ± 0.304 (0.564) C:NA T:85%**	pCi/L	07/12/22 12:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0753 ± 0.451 (1.08) C:75% T:85%**	pCi/L	07/05/22 19:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.129 ± 0.755 (1.64)**	pCi/L	07/12/22 17:34	7440-14-4	

Sample: 22052645-06C **Lab ID: 30496785006** Collected: 05/26/22 09:37 Received: 06/07/22 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0775 ± 0.240 (0.546) C:NA T:95%**	pCi/L	07/12/22 12:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.245 ± 0.451 (0.988) C:69% T:95%**	pCi/L	07/05/22 19:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.245 ± 0.691 (1.53)**	pCi/L	07/12/22 17:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22052645
Pace Project No.: 30496785

QC Batch: 511692 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30496785001, 30496785002, 30496785003, 30496785004, 30496785005, 30496785006

METHOD BLANK: 2480092 Matrix: Water
Associated Lab Samples: 30496785001, 30496785002, 30496785003, 30496785004, 30496785005, 30496785006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.536 ± 0.400 (0.778) C:73% T:94%	pCi/L	07/05/22 17:51	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 22052645
Pace Project No.: 30496785

QC Batch: 511691 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30496785001, 30496785002, 30496785003, 30496785004, 30496785005, 30496785006

METHOD BLANK: 2480090 Matrix: Water
Associated Lab Samples: 30496785001, 30496785002, 30496785003, 30496785004, 30496785005, 30496785006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.115 ± 0.249 (0.575) C:NA T:94%	pCi/L	07/12/22 12:03	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 22052645
Pace Project No.: 30496785

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ALS Environmental

Subcontractor:
Pace Analytical Services, Inc.
1638 Roseytown Rd
Suites 2,3 & 4
Greensburg, PA 15601

TEL: (724) 850-5600
FAX:
Acct #:

Salesperson: **Paul Painter**

CHAIN-OF-CUSTODY RECORD

Date: 06-Jun-22
COC ID: 19928
Due Date: 06-Jun-22

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	22052645	A	Ra226(903.1); Ra228(904.0) + Total 226/228
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Rebecca Kiser	Inv Attn	Accounts Payable	D	
Address	1740 Union Carbide Dr	Address	1740 Union Carbide Dr	E	
				F	
City/State/Zip	So Charleston, WV 25303	City/State/Zip	So Charleston, WV 25303	G	
Phone	(304) 356-3168	Phone	(304) 356-3168	H	
Fax		Fax		I	
eMail Address	rebecca.kiser@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J	
22052645-01C	PH-MW-01 Grab	Groundwater	25/May/2022 19:47	(2) 1LPHNO3	X										001
22052645-02C	PH-MW-02 Grab	Groundwater	25/May/2022 21:19	(2) 1LPHNO3	X										002
22052645-03C	PH-MW-03A Grab	Groundwater	26/May/2022 13:01	(2) 1LPHNO3	X										003
22052645-04C	PH-MW-04 Grab	Groundwater	26/May/2022 9:37	(2) 1LPHNO3	X										004
22052645-05C	PH-MW-05 Grab	Groundwater	26/May/2022 10:49	(2) 1LPHNO3	X										005
22052645-06C	Field Duplicate Grab	Groundwater	26/May/2022 9:37	(2) 1LPHNO3	X										006

WO# : 30496785

30496785

Comments:
KY Samples. Sampler: B. Bray.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
Janet Smith	6/6/22 1700		6/7/22 0950		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: ALS Environmental Project # _____

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label JA
LIMS Login VPInc

Tracking #: 7770 4654 1267

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no

Thermometer Used — Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10D4611 Date and Initials of person examining contents: 6-10-22 JA

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:		✓		
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH<2
All containers meet method preservation requirements.	✓			Initial when completed JA Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JA Date: 6-10-22 Survey Meter SN: 1563

WO#: 30496785
PM: HMC
CLIENT: ALS-WV
Due Date: 06/28/22

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

WO#: 30496785

PM: HMC Due Date: 06/28/22

CLIENT: ALS-WV

Client: ALS Environmental

Site: 22052645

Profile Number: 5513

Notes:

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2																													
3																													
4																													
5																													
6	WT											2																	
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

EAST KENTUCKY POWER COOPERATIVE

Report Date: 8/30/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	06/27/2022
Well ID No:	PH-MW-01	Sample Collection Time:	4:55 PM
AKGW No.:	8006-4554	Sample Collected By:	BTB
Well Depth (Ft.):	37.57	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	736.38	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	703.68	MSL		06/27/2022	4:55 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	06/27/2022	4:55 PM	BTB
Conductivity	1882	µS/cm	SM 2510, B-2011	06/27/2022	4:55 PM	BTB
Temperature	60.08	°F	SM 2550, B-2010	06/27/2022	4:55 PM	BTB
Oxidation-Reduction Potential	200	mV	SM 2580, B-2011	06/27/2022	4:55 PM	BTB
pH	6.10	S.U.	SM 4500-H+, B-2011	06/27/2022	4:55 PM	BTB
Oxygen, dissolved	1.28	mg/L	SM 4500-O	06/27/2022	4:55 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200594

Sample Received Date:	06/28/2022	Sample Receipt Temperatures (°C):	2.1
Sample Received Time:	2:41 PM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Barium	51.3		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:15 PM	JD
Boron	617		µg/L	29.5	10.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:15 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Calcium	280000	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	6:40 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Cobalt	1.1		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:15 PM	JD
Lithium	51.0		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:15 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:50 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	7/8/2022	12:54 PM	JD
Chloride	14.9		mg/L	0.1	0.5	EPA 300.0 Rev 2.1 (1993)	7/6/2022	9:05 PM	JD
Fluoride	0.10		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	7/7/2022	9:01 PM	JD
Sulfate	226	D	mg/L	0.20	5.0	EPA 300.0 Rev 2.1 (1993)	7/6/2022	5:55 PM	JD
Solids, Total Dissolved	1270		mg/L		50.0	SM 2540, C-2011	6/30/2022	2:23 PM	JD

Pace

Lab Identification #: 30503986001

Sample Received Date:	7/7/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	5:15 PM	Sample Received By:	PS

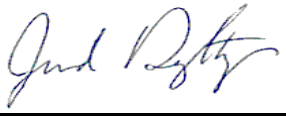
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.0910 ± 0.355 (0.679)		pCi/L			EPA 903.1	8/8/2022	11:50 AM	SLC
Radium-228	0.503 ± 0.459 (0.946)		pCi/L			EPA 904.0	8/1/2022	12:33 PM	VAL
Total Radium Calculation	0.594 ± 0.814 (1.63)		pCi/L			Total Radium Calculation	8/9/2022	9:28 AM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

04:20 PM 08/24/2022

Eric Hamilton - QA/QC Chemist

09:04 AM 08/25/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 8/30/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	06/27/2022
Well ID No:	PH-MW-02	Sample Collection Time:	6:25 PM
AKGW No.:	8006-4555	Sample Collected By:	BTB
Well Depth (Ft.):	43.02	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	570.93	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	545.93	MSL		06/27/2022	6:25 PM	BTB
Turbidity	1.47	NTU	SM 2130, B-2001	06/27/2022	6:25 PM	BTB
Conductivity	1882	µS/cm	SM 2510, B-2011	06/27/2022	6:25 PM	BTB
Temperature	58.82	°F	SM 2550, B-2010	06/27/2022	6:25 PM	BTB
Oxidation-Reduction Potential	-132.7	mV	SM 2580, B-2011	06/27/2022	6:25 PM	BTB
pH	7.69	S.U.	SM 4500-H+, B-2011	06/27/2022	6:25 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	06/27/2022	6:25 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200595

Sample Received Date:	06/28/2022	Sample Receipt Temperatures (°C):	2.1
Sample Received Time:	2:41 PM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Barium	89.0		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:19 PM	JD
Boron	1120		µg/L	29.5	10.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:19 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Calcium	45600	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	6:44 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:19 PM	JD
Lithium	71.0		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:19 PM	JD
Molybdenum	1.3		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:54 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2022	12:57 PM	JD
Chloride	228	D	mg/L	0.3	2.5	EPA 300.0 Rev 2.1 (1993)	7/6/2022	6:14 PM	JD
Fluoride	0.37		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	7/7/2022	9:20 PM	JD
Sulfate	31.6		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	7/7/2022	9:20 PM	JD
Solids, Total Dissolved	832		mg/L		50.0	SM 2540, C-2011	6/30/2022	2:23 PM	JD

Pace

Lab Identification #: 30503986002

Sample Received Date:	7/7/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	5:15 PM	Sample Received By:	PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.208 ± 0.337 (0.586)		pCi/L			EPA 903.1	8/8/2022	11:50 AM	SLC
Radium-228	0.355 ± 0.527 (1.14)		pCi/L			EPA 904.0	8/1/2022	12:33 PM	VAL
Total Radium Calculation	0.563 ± 0.864 (1.73)		pCi/L			Total Radium Calculation	8/9/2022	9:28 AM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

04:20 PM 08/24/2022

Eric Hamilton - QA/QC Chemist

09:04 AM 08/25/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 8/30/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	06/28/2022
Well ID No:	PH-MW-03A	Sample Collection Time:	11:40 AM
AKGW No.:		Sample Collected By:	BTB
Well Depth (Ft.):	40	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	614.98	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	584.98	MSL		06/28/2022	11:40 AM	BTB
Turbidity	1.62	NTU	SM 2130, B-2001	06/28/2022	11:40 AM	BTB
Conductivity	3533	µS/cm	SM 2510, B-2011	06/28/2022	11:40 AM	BTB
Temperature	68.18	°F	SM 2550, B-2010	06/28/2022	11:40 AM	BTB
Oxidation-Reduction Potential	184.8	mV	SM 2580, B-2011	06/28/2022	11:40 AM	BTB
pH	7.57	S.U.	SM 4500-H+, B-2011	06/28/2022	11:40 AM	BTB
Oxygen, dissolved	1.71	mg/L	SM 4500-O	06/28/2022	11:40 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200596

Sample Received Date:	06/28/2022	Sample Receipt Temperatures (°C):	2.1
Sample Received Time:	2:41 PM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Barium	55.8		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:23 PM	JD
Boron	3320	D	µg/L	14.4	200	EPA 200.8, Rev. 5.4 (1994)	7/13/2022	11:07 AM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Calcium	24500	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	6:48 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:23 PM	JD
Lithium	108		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:23 PM	JD
Molybdenum	26.3		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Selenium	1.2		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	8:58 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2022	1:00 PM	JD
Chloride	404	D	mg/L	0.5	5.0	EPA 300.0 Rev 2.1 (1993)	7/6/2022	6:33 PM	JD
Fluoride	1.2		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	7/7/2022	9:39 PM	JD
Sulfate	270	D	mg/L	0.41	10.0	EPA 300.0 Rev 2.1 (1993)	7/6/2022	6:33 PM	JD
Solids, Total Dissolved	1520		mg/L		50.0	SM 2540, C-2011	6/30/2022	2:23 PM	JD

Pace

Lab Identification #: 30503986003

Sample Received Date:	7/7/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	5:15 PM	Sample Received By:	PS

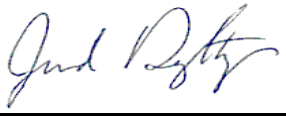
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.0780 ± 0.266 (0.512)		pCi/L			EPA 903.1	8/8/2022	11:50 AM	SLC
Radium-228	0.514 ± 0.495 (1.03)		pCi/L			EPA 904.0	8/1/2022	12:33 PM	VAL
Total Radium Calculation	0.592 ± 0.761 (1.54)		pCi/L			Total Radium Calculation	8/9/2022	9:28 AM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

04:20 PM 08/24/2022

Eric Hamilton - QA/QC Chemist

09:04 AM 08/25/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 8/30/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	06/28/2022
Well ID No:	PH-MW-04	Sample Collection Time:	9:20 AM
AKGW No.:	8006-4557	Sample Collected By:	BTB
Well Depth (Ft.):	37.32	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	548.56	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	520.35	MSL		06/28/2022	9:20 AM	BTB
Turbidity	2.19	NTU	SM 2130, B-2001	06/28/2022	9:20 AM	BTB
Conductivity	1746	µS/cm	SM 2510, B-2011	06/28/2022	9:20 AM	BTB
Temperature	58.64	°F	SM 2550, B-2010	06/28/2022	9:20 AM	BTB
Oxidation-Reduction Potential	205.2	mV	SM 2580, B-2011	06/28/2022	9:20 AM	BTB
pH	6.27	S.U.	SM 4500-H+, B-2011	06/28/2022	9:20 AM	BTB
Oxygen, dissolved	2.28	mg/L	SM 4500-O	06/28/2022	9:20 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200597

Sample Received Date:	06/28/2022	Sample Receipt Temperatures (°C):	2.1
Sample Received Time:	2:41 PM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Barium	79.9		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:27 PM	JD
Boron	776		µg/L	29.5	10.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:27 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Calcium	203000	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	6:52 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Cobalt	1.2		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:27 PM	JD
Lithium	38.0		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:27 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:02 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	7/8/2022	1:03 PM	JD
Chloride	21.8		mg/L	0.1	0.5	EPA 300.0 Rev 2.1 (1993)	7/6/2022	10:01 PM	JD
Fluoride	0.21		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	7/7/2022	9:58 PM	JD
Sulfate	293	D	mg/L	0.20	5.0	EPA 300.0 Rev 2.1 (1993)	7/6/2022	6:52 PM	JD
Solids, Total Dissolved	1050		mg/L		50.0	SM 2540, C-2011	6/30/2022	2:23 PM	JD

Pace

Lab Identification #: 30503986004

Sample Received Date:	7/7/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	5:15 PM	Sample Received By:	PS

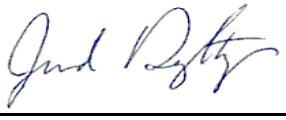
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.370 ± 0.270 (0.302)		pCi/L			EPA 903.1	8/8/2022	11:50 AM	SLC
Radium-228	1.09 ± 0.454 (0.731)		pCi/L			EPA 904.0	8/1/2022	12:26 PM	VAL
Total Radium Calculation	1.46 ± 0.724 (1.03)		pCi/L			Total Radium Calculation	8/9/2022	9:28 AM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

04:20 PM 08/24/2022

Eric Hamilton - QA/QC Chemist

09:04 AM 08/25/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 8/30/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	06/28/2022
Well ID No:	PH-MW-05	Sample Collection Time:	10:32 AM
AKGW No.:	8006-4558	Sample Collected By:	BTB
Well Depth (Ft.):	37.45	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	560.32	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	527.54	MSL		06/28/2022	10:32 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	06/28/2022	10:32 AM	BTB
Conductivity	930	µS/cm	SM 2510, B-2011	06/28/2022	10:32 AM	BTB
Temperature	62.78	°F	SM 2550, B-2010	06/28/2022	10:32 AM	BTB
Oxidation-Reduction Potential	261	mV	SM 2580, B-2011	06/28/2022	10:32 AM	BTB
pH	7.26	S.U.	SM 4500-H+, B-2011	06/28/2022	10:32 AM	BTB
Oxygen, dissolved	6.42	mg/L	SM 4500-O	06/28/2022	10:32 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200598

Sample Received Date:	06/28/2022	Sample Receipt Temperatures (°C):	2.1
Sample Received Time:	2:41 PM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Barium	84.4		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:31 PM	JD
Boron	235		µg/L	29.5	10.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:31 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Calcium	112000	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	7:04 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:31 PM	JD
Lithium	25.0		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/12/2022	6:31 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	7/11/2022	9:06 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2022	1:06 PM	JD
Chloride	11.4		mg/L	0.1	0.5	EPA 300.0 Rev 2.1 (1993)	7/6/2022	10:20 PM	JD
Fluoride	0.17		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	7/7/2022	10:16 PM	JD
Sulfate	188		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	7/7/2022	10:16 PM	JD
Solids, Total Dissolved	602		mg/L		50.0	SM 2540, C-2011	6/30/2022	2:23 PM	JD

Pace

Lab Identification #: 30503986005

Sample Received Date:	7/7/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	5:15 PM	Sample Received By:	PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	-0.0 ± 0.185 (0.436)		pCi/L			EPA 903.1	8/8/2022	11:50 AM	SLC
Radium-228	1.26 ± 0.669 (1.20)		pCi/L			EPA 904.0	8/1/2022	4:07 PM	VAL
Total Radium Calculation	1.26 ± 0.854 (1.64)		pCi/L			Total Radium Calculation	8/9/2022	9:28 AM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

04:20 PM 08/24/2022

Eric Hamilton - QA/QC Chemist

09:04 AM 08/25/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/23/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/29/2022
Well ID No:	PH-MW-01	Sample Collection Time:	4:09 PM
AKGW No.:	8006-4554	Sample Collected By:	BTB
Well Depth (Ft.):	37.57	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	736.38	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	702.83	MSL		07/29/2022	4:09 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	07/29/2022	4:09 PM	BTB
Conductivity	2031	µS/cm	SM 2510, B-2011	07/29/2022	4:09 PM	BTB
Temperature	64.76	°F	SM 2550, B-2010	07/29/2022	4:09 PM	BTB
Oxidation-Reduction Potential	171.2	mV	SM 2580, B-2011	07/29/2022	4:09 PM	BTB
pH	6.07	S.U.	SM 4500-H+, B-2011	07/29/2022	4:09 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	07/29/2022	4:09 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200738

Sample Received Date:	08/01/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:25 AM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Barium	49.2		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Boron	742		µg/L	29.5	25.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:32 PM	JD
Cadmium	< 0.25		µg/L	0.05	0.25	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Calcium	330000	D	µg/L	10200	50000	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:24 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Cobalt	1.8		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Lithium	55.6		µg/L	4.6	10.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:32 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:29 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	8/10/2022	10:46 AM	JD
Chloride	24.0		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:01 PM	JD
Fluoride	0.11		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:01 PM	JD
Sulfate	266	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	8/2/2022	7:51 PM	JD
Solids, Total Dissolved	1320		mg/L		50.0	SM 2540, C-2011	8/2/2022	12:23 PM	JD

Pace

Lab Identification #: 30512120001

Sample Received Date:	8/5/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.0860 ± 0.0720(0.421)		pCi/L			EPA 903.1	8/20/2022	2:19 PM	SLC
Radium-228	1.42 ± 0.481 (0.691)		pCi/L			EPA 904.0	8/26/2022	12:57 PM	VAL
Total Radium Calculation	1.49 ± 0.902 (1.55)		pCi/L			Total Radium Calculation	8/29/2022	10:55 AM	CMC

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

03:13 PM 09/16/2022

Eric Hamilton - QA/QC Chemist

09:05 AM 09/20/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/23/2022

Certificate of Analysis

Station: H.L. Spurlock Power Station
Well ID No: PH-MW-02
AKGW No.: 8006-4555
Well Depth (Ft.): 43.02
Well Elevation (Ft. MSL): 570.93
Gradient: Up

Sample Collection Date: 07/29/2022
Sample Collection Time: 5:47 PM
Sample Collected By: BTB
Sample Matrix: Ground Water
Laboratory Certification ID: KY# 08012

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	545.75	MSL		07/29/2022	5:47 PM	BTB
Turbidity	1.58	NTU	SM 2130, B-2001	07/29/2022	5:47 PM	BTB
Conductivity	1585	µS/cm	SM 2510, B-2011	07/29/2022	5:47 PM	BTB
Temperature	61.52	°F	SM 2550, B-2010	07/29/2022	5:47 PM	BTB
Oxidation-Reduction Potential	-75.8	mV	SM 2580, B-2011	07/29/2022	5:47 PM	BTB
pH	7.45	S.U.	SM 4500-H+, B-2011	07/29/2022	5:47 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	07/29/2022	5:47 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200739

Sample Received Date: 08/01/2022
Sample Received Time: 11:25 AM
Sample Receipt Temperatures (°C): < 6
Sample Received By: JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Barium	82.7		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Boron	1150		µg/L	29.5	25.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:43 PM	JD
Cadmium	< 0.25		µg/L	0.05	0.25	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Calcium	42800	D	µg/L	4080	20000	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:02 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Lithium	74.9		µg/L	4.6	10.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:43 PM	JD
Molybdenum	1.3		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:33 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/10/2022	10:49 AM	JD
Chloride	244	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	8/2/2022	8:10 PM	JD
Fluoride	0.41		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:20 PM	JD
Sulfate	32.0		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:20 PM	JD
Solids, Total Dissolved	834		mg/L		50.0	SM 2540, C-2011	8/2/2022	12:23 PM	JD

Pace

Lab Identification #: 30512120002

Sample Received Date: 8/5/2022
Sample Received Time: 10:00 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.478 ± 0.587 (0.964)		pCi/L			EPA 903.1	8/20/2022	2:34 PM	SLC
Radium-228	0.920 ± 0.413 (0.688)		pCi/L			EPA 904.0	8/26/2022	12:57 PM	VAL
Total Radium Calculation	1.40 ± 1.00 (1.65)		pCi/L			Total Radium Calculation	8/29/2022	10:55 AM	CMC

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.
Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist
03:13 PM 09/16/2022

Eric Hamilton - QA/QC Chemist
09:05 AM 09/20/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707
Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/23/2022

Certificate of Analysis

Station: H.L. Spurlock Power Station
Well ID No: PH-MW-03A
AKGW No.:
Well Depth (Ft.): 40
Well Elevation (Ft. MSL): 614.98
Gradient: Down

Sample Collection Date: 07/29/2022
Sample Collection Time: 2:21 PM
Sample Collected By: BTB
Sample Matrix: Ground Water
Laboratory Certification ID: KY# 08012

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	584.97	MSL		07/29/2022	2:21 PM	BTB
Turbidity	1.73	NTU	SM 2130, B-2001	07/29/2022	2:21 PM	BTB
Conductivity	3455	µS/cm	SM 2510, B-2011	07/29/2022	2:21 PM	BTB
Temperature	72.32	°F	SM 2550, B-2010	07/29/2022	2:21 PM	BTB
Oxidation-Reduction Potential	118.7	mV	SM 2580, B-2011	07/29/2022	2:21 PM	BTB
pH	7.57	S.U.	SM 4500-H+, B-2011	07/29/2022	2:21 PM	BTB
Oxygen, dissolved	1.78	mg/L	SM 4500-O	07/29/2022	2:21 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200740

Sample Received Date: 08/01/2022
Sample Received Time: 11:25 AM
Sample Receipt Temperatures (°C): < 6
Sample Received By: JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Barium	52.1		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Boron	3160	D	µg/L	148	125	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:28 PM	JD
Cadmium	< 0.25		µg/L	0.05	0.25	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Calcium	22100	D	µg/L	4080	20000	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:06 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Lithium	108		µg/L	4.6	10.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:47 PM	JD
Molybdenum	27.3		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:37 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/10/2022	10:52 AM	JD
Chloride	393	D	mg/L	2.4	5.0	EPA 300.0 Rev 2.1 (1993)	8/2/2022	8:29 PM	JD
Fluoride	1.3		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:38 PM	JD
Sulfate	256	D	mg/L	2.4	10.0	EPA 300.0 Rev 2.1 (1993)	8/2/2022	8:29 PM	JD
Solids, Total Dissolved	1540		mg/L		50.0	SM 2540, C-2011	8/2/2022	12:23 PM	JD

Pace

Lab Identification #: 30512120003

Sample Received Date: 8/5/2022
Sample Received Time: 10:00 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.303 ± 0.595 (1.07)		pCi/L			EPA 903.1	8/20/2022	2:34 PM	SLC
Radium-228	1.51 ± 0.488 (0.655)		pCi/L			EPA 904.0	8/26/2022	12:57 PM	VAL
Total Radium Calculation	1.81 ± 1.08 (1.73)		pCi/L			Total Radium Calculation	8/29/2022	10:55 AM	CMC

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.
Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist
03:13 PM 09/16/2022

Eric Hamilton - QA/QC Chemist
09:05 AM 09/20/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707
Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/23/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/29/2022
Well ID No:	PH-MW-04	Sample Collection Time:	11:07 AM
AKGW No.:	8006-4557	Sample Collected By:	BTB
Well Depth (Ft.):	37.32	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	548.56	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	523.37	MSL		07/29/2022	11:07 AM	BTB
Turbidity	3.65	NTU	SM 2130, B-2001	07/29/2022	11:07 AM	BTB
Conductivity	1462	µS/cm	SM 2510, B-2011	07/29/2022	11:07 AM	BTB
Temperature	61.34	°F	SM 2550, B-2010	07/29/2022	11:07 AM	BTB
Oxidation-Reduction Potential	202.3	mV	SM 2580, B-2011	07/29/2022	11:07 AM	BTB
pH	6.10	S.U.	SM 4500-H+, B-2011	07/29/2022	11:07 AM	BTB
Oxygen, dissolved	2.98	mg/L	SM 4500-O	07/29/2022	11:07 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200741

Sample Received Date:	08/01/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:25 AM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Barium	73.6		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Boron	701		µg/L	29.5	25.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:51 PM	JD
Cadmium	< 0.25		µg/L	0.05	0.25	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Calcium	195000	D	µg/L	4080	20000	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:10 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Cobalt	1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Lithium	33.5		µg/L	4.6	10.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	2:51 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:48 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	8/10/2022	10:55 AM	JD
Chloride	17.1		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:57 PM	JD
Fluoride	0.23		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	8/2/2022	11:57 PM	JD
Sulfate	212	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	8/2/2022	8:48 PM	JD
Solids, Total Dissolved	944		mg/L		50.0	SM 2540, C-2011	8/2/2022	12:23 PM	JD

Pace

Lab Identification #: 30512120004

Sample Received Date:	8/5/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.0630 ± 0.288 (0.587)		pCi/L			EPA 903.1	8/20/2022	2:34 PM	SLC
Radium-228	0.862 ± 0.399 (0.687)		pCi/L			EPA 904.0	8/26/2022	12:58 PM	VAL
Total Radium Calculation	0.925 ± 0.687 (1.27)		pCi/L			Total Radium Calculation	8/29/2022	10:55 AM	CMC

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

03:13 PM 09/16/2022

Eric Hamilton - QA/QC Chemist

09:05 AM 09/20/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/23/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/29/2022
Well ID No:	PH-MW-05	Sample Collection Time:	12:14 PM
AKGW No.:	8006-4558	Sample Collected By:	BTB
Well Depth (Ft.):	37.45	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	560.32	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	528.03	MSL		07/29/2022	12:14 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	07/29/2022	12:14 PM	BTB
Conductivity	925	µS/cm	SM 2510, B-2011	07/29/2022	12:14 PM	BTB
Temperature	71.78	°F	SM 2550, B-2010	07/29/2022	12:14 PM	BTB
Oxidation-Reduction Potential	240	mV	SM 2580, B-2011	07/29/2022	12:14 PM	BTB
pH	7.18	S.U.	SM 4500-H+, B-2011	07/29/2022	12:14 PM	BTB
Oxygen, dissolved	7.1	mg/L	SM 4500-O	07/29/2022	12:14 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200742

Sample Received Date:	08/01/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:25 AM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Barium	77.1		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Boron	241		µg/L	29.5	25.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	3:03 PM	JD
Cadmium	< 0.25		µg/L	0.05	0.25	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Calcium	121000	D	µg/L	4080	20000	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:14 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Lithium	23.5		µg/L	4.6	10.0	EPA 200.8, Rev. 5.4 (1994)	9/8/2022	3:03 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/7/2022	4:52 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/10/2022	10:58 AM	JD
Chloride	11.5		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/3/2022	12:16 AM	JD
Fluoride	0.16		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	8/3/2022	12:16 AM	JD
Sulfate	181		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	8/3/2022	12:16 AM	JD
Solids, Total Dissolved	528		mg/L		50.0	SM 2540, C-2011	8/2/2022	12:23 PM	JD

Pace

Lab Identification #: 30512120005

Sample Received Date:	8/5/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:00 AM	Sample Received By:	PS

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.790 ± 0.456 (0.178)		pCi/L			EPA 903.1	8/20/2022	2:34 PM	SLC
Radium-228	0.860 ± 0.400 (0.680)		pCi/L			EPA 904.0	8/26/2022	12:58 PM	VAL
Total Radium Calculation	1.65 ± 0.856 (0.860)		pCi/L			Total Radium Calculation	8/29/2022	10:55 AM	CMC

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

03:13 PM 09/16/2022

Eric Hamilton - QA/QC Chemist

09:05 AM 09/20/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 10/18/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	08/29/2022
Well ID No:	PH-MW-01	Sample Collection Time:	11:22 AM
AKGW No.:	8006-4554	Sample Collected By:	BTB
Well Depth (Ft.):	37.57	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	736.38	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	702.28	MSL		08/29/2022	11:22 AM	BTB
Turbidity	2.06	NTU	SM 2130, B-2001	08/29/2022	11:22 AM	BTB
Conductivity	2311	µS/cm	SM 2510, B-2011	08/29/2022	11:22 AM	BTB
Temperature	64.76	°F	SM 2550, B-2010	08/29/2022	11:22 AM	BTB
Oxidation-Reduction Potential	111.5	mV	SM 2580, B-2011	08/29/2022	11:22 AM	BTB
pH	6.09	S.U.	SM 4500-H+, B-2011	08/29/2022	11:22 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	08/29/2022	11:22 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200874

Sample Received Date:	08/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:45 PM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	D	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:39 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Barium	47.9		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Boron	1230	D	µg/L	14.4	100	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:39 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Calcium	335000	D	µg/L	56000	100000	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	1:45 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Cobalt	2.7		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Lithium	69.4		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Selenium	1.1		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:15 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	9/19/2022	11:26 AM	JD
Chloride	45.5	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:35 PM	JD
Fluoride	< 0.25	D	mg/L	0.24	0.25	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:35 PM	JD
Sulfate	272	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:35 PM	JD
Solids, Total Dissolved	1690		mg/L		50.0	SM 2540, C-2011	9/2/2022	11:58 AM	JD

Pace

Lab Identification #: 30520344001

Sample Received Date:	9/8/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:50 AM	Sample Received By:	PR

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.418 ± 0.592 (1.00)		pCi/L			EPA 903.1	9/17/2022	5:27 PM	SLC
Radium-228	0.752 ± 0.544 (1.05)		pCi/L			EPA 904.0	9/22/2022	6:37 PM	VAL
Total Radium Calculation	1.17 ± 1.14 (2.05)		pCi/L			Total Radium Calculation	9/23/2022	1:07 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

06:39 AM 10/17/2022

Eric Hamilton - QA/QC Chemist

09:16 AM 10/18/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 10/18/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	08/29/2022
Well ID No:	PH-MW-02	Sample Collection Time:	12:50 PM
AKGW No.:	8006-4555	Sample Collected By:	BTB
Well Depth (Ft.):	43.02	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	570.93	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	545.66	MSL		08/29/2022	12:50 PM	BTB
Turbidity	1.75	NTU	SM 2130, B-2001	08/29/2022	12:50 PM	BTB
Conductivity	1566	µS/cm	SM 2510, B-2011	08/29/2022	12:50 PM	BTB
Temperature	63.14	°F	SM 2550, B-2010	08/29/2022	12:50 PM	BTB
Oxidation-Reduction Potential	-24.1	mV	SM 2580, B-2011	08/29/2022	12:50 PM	BTB
pH	7.41	S.U.	SM 4500-H+, B-2011	08/29/2022	12:50 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	08/29/2022	12:50 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200875

Sample Received Date:	08/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:45 PM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	D	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:43 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Barium	79.3		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Boron	1250	D	µg/L	14.4	100	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:43 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Calcium	45000	D	µg/L	11200	20000	EPA 200.8, Rev. 5.4 (1994)	9/15/2022	2:01 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Lithium	76.3		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Molybdenum	1.3		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:19 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/19/2022	11:29 AM	JD
Chloride	242	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:54 PM	JD
Fluoride	0.49	D	mg/L	0.24	0.25	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:54 PM	JD
Sulfate	31.6	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	9/8/2022	4:54 PM	JD
Solids, Total Dissolved	908		mg/L		50.0	SM 2540, C-2011	9/2/2022	11:58 AM	JD

Pace

Lab Identification #: 30520344002

Sample Received Date:	9/8/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:50 AM	Sample Received By:	PR

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.597 ± 0.690 (1.12)		pCi/L			EPA 903.1	9/17/2022	5:42 PM	SLC
Radium-228	0.769 ± 0.549 (1.07)		pCi/L			EPA 904.0	9/22/2022	6:37 PM	VAL
Total Radium Calculation	1.37 ± 1.24 (2.19)		pCi/L			Total Radium Calculation	9/23/2022	1:07 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

06:39 AM 10/17/2022

Eric Hamilton - QA/QC Chemist

09:16 AM 10/18/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 10/18/2022

Certificate of Analysis

Station: H.L. Spurlock Power Station
Well ID No: PH-MW-03A
AKGW No.:
Well Depth (Ft.): 40
Well Elevation (Ft. MSL): 614.98
Gradient: Down

Sample Collection Date: 08/29/2022
Sample Collection Time: 1:45 PM
Sample Collected By: BTB
Sample Matrix: Ground Water
Laboratory Certification ID: KY# 08012

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	585.10	MSL		08/29/2022	1:45 PM	BTB
Turbidity	2.72	NTU	SM 2130, B-2001	08/29/2022	1:45 PM	BTB
Conductivity	3213	µS/cm	SM 2510, B-2011	08/29/2022	1:45 PM	BTB
Temperature	66.74	°F	SM 2550, B-2010	08/29/2022	1:45 PM	BTB
Oxidation-Reduction Potential	71.8	mV	SM 2580, B-2011	08/29/2022	1:45 PM	BTB
pH	7.81	S.U.	SM 4500-H+, B-2011	08/29/2022	1:45 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	08/29/2022	1:45 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200876

Sample Received Date: 08/30/2022
Sample Received Time: 2:45 PM
Sample Receipt Temperatures (°C): < 6
Sample Received By: JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	D	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:47 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Barium	48.3		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Boron	3030	D	µg/L	14.4	100	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:47 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Calcium	20500	D	µg/L	11200	20000	EPA 200.8, Rev. 5.4 (1994)	9/15/2022	2:05 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Lithium	105		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Molybdenum	28.3		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Selenium	1.1		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:23 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/19/2022	11:33 AM	JD
Chloride	370	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:13 PM	JD
Fluoride	1.4	D	mg/L	0.24	0.25	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:13 PM	JD
Sulfate	239	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:13 PM	JD
Solids, Total Dissolved	1480		mg/L		50.0	SM 2540, C-2011	9/2/2022	11:58 AM	JD

Pace

Lab Identification #: 30520344003

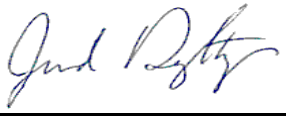
Sample Received Date: 9/8/2022
Sample Received Time: 9:50 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: PR

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	-0.0 ± 0.448 (1.04)		pCi/L			EPA 903.1	9/17/2022	5:42 PM	SLC
Radium-228	0.447 ± 0.501 (1.04)		pCi/L			EPA 904.0	9/22/2022	6:37 PM	VAL
Total Radium Calculation	0.447 ± 0.949 (2.08)		pCi/L			Total Radium Calculation	9/23/2022	1:07 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.
Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist
06:39 AM 10/17/2022

Eric Hamilton - QA/QC Chemist
09:16 AM 10/18/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707
Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 10/18/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	08/29/2022
Well ID No:	PH-MW-04	Sample Collection Time:	3:02 PM
AKGW No.:	8006-4557	Sample Collected By:	BTB
Well Depth (Ft.):	37.32	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	548.56	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	523.71	MSL		08/29/2022	3:02 PM	BTB
Turbidity	3.49	NTU	SM 2130, B-2001	08/29/2022	3:02 PM	BTB
Conductivity	1407	µS/cm	SM 2510, B-2011	08/29/2022	3:02 PM	BTB
Temperature	60.44	°F	SM 2550, B-2010	08/29/2022	3:02 PM	BTB
Oxidation-Reduction Potential	197.7	mV	SM 2580, B-2011	08/29/2022	3:02 PM	BTB
pH	6.16	S.U.	SM 4500-H+, B-2011	08/29/2022	3:02 PM	BTB
Oxygen, dissolved	2.76	mg/L	SM 4500-O	08/29/2022	3:02 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200877

Sample Received Date:	08/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:45 PM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	D	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:51 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Barium	75.3		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Boron	725	D	µg/L	14.4	100	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:51 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Calcium	199000	D	µg/L	11200	20000	EPA 200.8, Rev. 5.4 (1994)	9/15/2022	2:09 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Lithium	30.7		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:27 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	9/19/2022	11:36 AM	JD
Chloride	15.6	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:32 PM	JD
Fluoride	0.35	D	mg/L	0.24	0.25	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:32 PM	JD
Sulfate	181	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:32 PM	JD
Solids, Total Dissolved	942		mg/L		50.0	SM 2540, C-2011	9/2/2022	11:58 AM	JD

Pace

Lab Identification #: 30520344004

Sample Received Date:	9/8/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:50 AM	Sample Received By:	PR

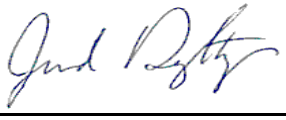
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	-0.0 ± 0.475 (0.993)		pCi/L			EPA 903.1	9/17/2022	5:42 PM	SLC
Radium-228	0.631 ± 0.450 (0.842)		pCi/L			EPA 904.0	9/22/2022	6:37 PM	VAL
Total Radium Calculation	0.631 ± 0.925 (1.84)		pCi/L			Total Radium Calculation	9/23/2022	1:07 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

06:39 AM 10/17/2022

Eric Hamilton - QA/QC Chemist

09:16 AM 10/18/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 10/18/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	08/29/2022
Well ID No:	PH-MW-05	Sample Collection Time:	4:08 PM
AKGW No.:	8006-4558	Sample Collected By:	BTB
Well Depth (Ft.):	37.45	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	560.32	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	528.04	MSL		08/29/2022	4:08 PM	BTB
Turbidity	1.71	NTU	SM 2130, B-2001	08/29/2022	4:08 PM	BTB
Conductivity	881	µS/cm	SM 2510, B-2011	08/29/2022	4:08 PM	BTB
Temperature	67.46	°F	SM 2550, B-2010	08/29/2022	4:08 PM	BTB
Oxidation-Reduction Potential	244.7	mV	SM 2580, B-2011	08/29/2022	4:08 PM	BTB
pH	7.20	S.U.	SM 4500-H+, B-2011	08/29/2022	4:08 PM	BTB
Oxygen, dissolved	6.29	mg/L	SM 4500-O	08/29/2022	4:08 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200878

Sample Received Date:	08/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:45 PM	Sample Received By:	JD

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0	D	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:55 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Barium	73.5		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Boron	261	D	µg/L	14.4	100	EPA 200.8, Rev. 5.4 (1994)	9/29/2022	12:55 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Calcium	120000	D	µg/L	11200	20000	EPA 200.8, Rev. 5.4 (1994)	9/15/2022	2:13 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Lithium	21.1		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/20/2022	4:31 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/19/2022	11:39 AM	JD
Chloride	10.7	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:51 PM	JD
Fluoride	0.30	D	mg/L	0.24	0.25	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:51 PM	JD
Sulfate	161	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	9/8/2022	5:51 PM	JD
Solids, Total Dissolved	590		mg/L		50.0	SM 2540, C-2011	9/2/2022	11:58 AM	JD

Pace

Lab Identification #: 30520344005

Sample Received Date:	9/8/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:50 AM	Sample Received By:	PR

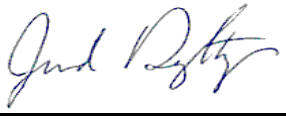
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	-0.2± 0.487 (1.10)		pCi/L			EPA 903.1	9/17/2022	5:42 PM	SLC
Radium-228	0.175± 0.411 (0.917)		pCi/L			EPA 904.0	9/22/2022	6:38 PM	VAL
Total Radium Calculation	0.175± 0.898 (2.02)		pCi/L			Total Radium Calculation	9/23/2022	1:07 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

06:39 AM 10/17/2022

Eric Hamilton - QA/QC Chemist

09:16 AM 10/18/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 11/4/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	09/29/2022
Well ID No:	PH-MW-01	Sample Collection Time:	12:40 PM
AKGW No.:	8006-4554	Sample Collected By:	BTB
Well Depth (Ft.):	37.57	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	736.38	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	701.91	MSL		09/29/2022	12:40 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	09/29/2022	12:40 PM	BTB
Conductivity	2373	µS/cm	SM 2510, B-2011	09/29/2022	12:40 PM	BTB
Temperature	58.10	°F	SM 2550, B-2010	09/29/2022	12:40 PM	BTB
Oxidation-Reduction Potential	126.1	mV	SM 2580, B-2011	09/29/2022	12:40 PM	BTB
pH	6.11	S.U.	SM 4500-H+, B-2011	09/29/2022	12:40 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	09/29/2022	12:40 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200949

Sample Received Date:	09/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	9:04 AM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:34 PM	JD
Barium	43.8		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Boron	1330		µg/L	3.6	50.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Calcium	323000	D	µg/L	56000	100000	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:07 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Cobalt	2.8		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Lithium	82.0		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:34 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:00 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	10/12/2022	10:08 AM	JD
Chloride	62.1		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/11/2022	5:13 PM	JD
Fluoride	< 0.10		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	10/11/2022	5:13 PM	JD
Sulfate	280	D	mg/L	1.2	5.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	2:04 PM	JD
Solids, Total Dissolved	1830		mg/L		50.0	SM 2540, C-2011	10/4/2022	10:06 AM	JE

Pace

Lab Identification #: 30528716001

Sample Received Date:	10/11/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:25 AM	Sample Received By:	TR

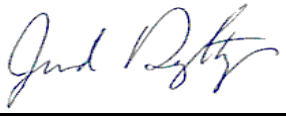
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	1.21 ± 0.872 (1.21)		pCi/L			EPA 903.1	10/21/2022	2:59 PM	GDH
Radium-228	0.915 ± 0.441 (0.747)		pCi/L			EPA 904.0	10/21/2022	3:13 PM	VAL
Total Radium Calculation	2.13 ± 1.31 (1.96)		pCi/L			Total Radium Calculation	10/24/2022	2:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

10:24 AM 11/02/2022

Eric Hamilton - QA/QC Chemist

01:47 PM 11/03/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 11/4/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	09/29/2022
Well ID No:	PH-MW-02	Sample Collection Time:	2:21 PM
AKGW No.:	8006-4555	Sample Collected By:	BTB
Well Depth (Ft.):	43.02	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	570.93	Laboratory Certification ID:	KY# 08012
Gradient:	Up		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	545.88	MSL		09/29/2022	2:21 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	09/29/2022	2:21 PM	BTB
Conductivity	1596	µS/cm	SM 2510, B-2011	09/29/2022	2:21 PM	BTB
Temperature	55.76	°F	SM 2550, B-2010	09/29/2022	2:21 PM	BTB
Oxidation-Reduction Potential	-69.4	mV	SM 2580, B-2011	09/29/2022	2:21 PM	BTB
pH	7.42	S.U.	SM 4500-H+, B-2011	09/29/2022	2:21 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	09/29/2022	2:21 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200950

Sample Received Date:	09/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	9:04 AM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:36 PM	JD
Barium	77.1		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Boron	1200		µg/L	3.6	50.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Calcium	43700	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:11 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Lithium	80.9		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Molybdenum	1.2		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:36 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:04 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/12/2022	9:56 AM	JD
Chloride	229	D	mg/L	1.2	2.5	EPA 300.0 Rev 2.1 (1993)	10/11/2022	2:22 PM	JD
Fluoride	0.36		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	10/11/2022	5:32 PM	JD
Sulfate	33.2		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	5:32 PM	JD
Solids, Total Dissolved	962		mg/L		50.0	SM 2540, C-2011	10/4/2022	10:06 AM	JE

Pace

Lab Identification #: 30528716002

Sample Received Date:	10/11/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:25 AM	Sample Received By:	TR

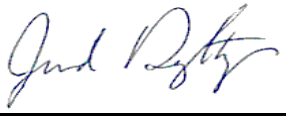
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.820 ± 0.725 (1.08)		pCi/L			EPA 903.1	10/21/2022	3:16 PM	GDH
Radium-228	0.109 ± 0.358 (0.807)		pCi/L			EPA 904.0	10/21/2022	3:13 PM	VAL
Total Radium Calculation	0.929 ± 1.08 (1.89)		pCi/L			Total Radium Calculation	10/24/2022	2:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

10:24 AM 11/02/2022

Eric Hamilton - QA/QC Chemist

01:47 PM 11/03/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 11/4/2022

Certificate of Analysis

Station: H.L. Spurlock Power Station
Well ID No: PH-MW-03A
AKGW No.:
Well Depth (Ft.): 40
Well Elevation (Ft. MSL): 614.98
Gradient: Down

Sample Collection Date: 09/29/2022
Sample Collection Time: 3:32 PM
Sample Collected By: BTB
Sample Matrix: Ground Water
Laboratory Certification ID: KY# 08012

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	585.10	MSL		09/29/2022	3:32 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	09/29/2022	3:32 PM	BTB
Conductivity	3072	µS/cm	SM 2510, B-2011	09/29/2022	3:32 PM	BTB
Temperature	58.46	°F	SM 2550, B-2010	09/29/2022	3:32 PM	BTB
Oxidation-Reduction Potential	87.5	mV	SM 2580, B-2011	09/29/2022	3:32 PM	BTB
pH	7.82	S.U.	SM 4500-H+, B-2011	09/29/2022	3:32 PM	BTB
Oxygen, dissolved	1.47	mg/L	SM 4500-O	09/29/2022	3:32 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200951

Sample Received Date: 09/30/2022
Sample Received Time: 9:04 AM
Sample Receipt Temperatures (°C): < 6
Sample Received By: TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:38 PM	JD
Barium	41.9		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Boron	3010	D	µg/L	36.1	500	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:15 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Calcium	17800	D	µg/L	5600	10000	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:15 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Lithium	103		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Molybdenum	27.7		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:38 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:08 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/12/2022	10:11 AM	JD
Chloride	333	D	mg/L	2.4	5.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	2:41 PM	JD
Fluoride	1.4		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	10/11/2022	5:51 PM	JD
Sulfate	210	D	mg/L	2.4	10.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	2:41 PM	JD
Solids, Total Dissolved	1450		mg/L		50.0	SM 2540, C-2011	10/4/2022	10:06 AM	JE

Pace

Lab Identification #: 30528716003

Sample Received Date: 10/11/2022
Sample Received Time: 9:25 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: TR

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.477 ± 0.626 (1.04)		pCi/L			EPA 903.1	10/21/2022	3:16 PM	GDH
Radium-228	0.318 ± 0.333 (0.689)		pCi/L			EPA 904.0	10/21/2022	3:13 PM	VAL
Total Radium Calculation	0.795 ± 0.959 (1.73)		pCi/L			Total Radium Calculation	10/24/2022	2:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.
Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist
10:24 AM 11/02/2022

Eric Hamilton - QA/QC Chemist
01:47 PM 11/03/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707
Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 11/4/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	09/29/2022
Well ID No:	PH-MW-04	Sample Collection Time:	5:59 PM
AKGW No.:	8006-4557	Sample Collected By:	BTB
Well Depth (Ft.):	37.32	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	548.56	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	523.24	MSL		09/29/2022	5:59 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	09/29/2022	5:59 PM	BTB
Conductivity	1409	µS/cm	SM 2510, B-2011	09/29/2022	5:59 PM	BTB
Temperature	59.18	°F	SM 2550, B-2010	09/29/2022	5:59 PM	BTB
Oxidation-Reduction Potential	200	mV	SM 2580, B-2011	09/29/2022	5:59 PM	BTB
pH	6.16	S.U.	SM 4500-H+, B-2011	09/29/2022	5:59 PM	BTB
Oxygen, dissolved	3.45	mg/L	SM 4500-O	09/29/2022	5:59 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200952

Sample Received Date:	09/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	9:04 AM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:43 PM	JD
Barium	65.5		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Boron	742		µg/L	3.6	50.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Calcium	181000	D	µg/L	28000	50000	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:19 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Cobalt	1.1		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Lithium	33.2		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:43 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:13 PM	JD
Mercury	< 0.0200	D	µg/L	0.0058	0.0200	EPA 245.7 Rev 2.0 (2005)	10/12/2022	10:14 AM	JD
Chloride	16.3		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:09 PM	JD
Fluoride	0.20		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:09 PM	JD
Sulfate	176		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:09 PM	JD
Solids, Total Dissolved	970		mg/L		50.0	SM 2540, C-2011	10/4/2022	10:06 AM	JE

Pace

Lab Identification #: 30528716004

Sample Received Date:	10/11/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:25 AM	Sample Received By:	TR

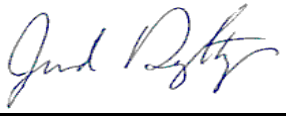
Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.736 ± 0.850 (1.38)		pCi/L			EPA 903.1	10/21/2022	3:16 PM	GDH
Radium-228	0.651 ± 0.445 (0.847)		pCi/L			EPA 904.0	10/21/2022	3:13 PM	VAL
Total Radium Calculation	1.39 ± 1.30 (2.23)		pCi/L			Total Radium Calculation	10/24/2022	2:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :



Jared Daugherty - Chemist

10:24 AM 11/02/2022

Eric Hamilton - QA/QC Chemist

01:47 PM 11/03/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: 11/4/2022

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	09/29/2022
Well ID No:	PH-MW-05	Sample Collection Time:	4:34 PM
AKGW No.:	8006-4558	Sample Collected By:	BTB
Well Depth (Ft.):	37.45	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	560.32	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	527.87	MSL		09/29/2022	4:34 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	09/29/2022	4:34 PM	BTB
Conductivity	855	µS/cm	SM 2510, B-2011	09/29/2022	4:34 PM	BTB
Temperature	59.18	°F	SM 2550, B-2010	09/29/2022	4:34 PM	BTB
Oxidation-Reduction Potential	227.3	mV	SM 2580, B-2011	09/29/2022	4:34 PM	BTB
pH	7.20	S.U.	SM 4500-H+, B-2011	09/29/2022	4:34 PM	BTB
Oxygen, dissolved	7.55	mg/L	SM 4500-O	09/29/2022	4:34 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2200953

Sample Received Date:	09/30/2022	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	9:04 AM	Sample Received By:	TY

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Arsenic	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:44 PM	JD
Barium	50.9		µg/L	1.0	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Boron	173		µg/L	3.6	50.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Cadmium	< 0.25		µg/L	0.10	0.25	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Calcium	105000	D	µg/L	14000	25000	EPA 200.8, Rev. 5.4 (1994)	10/17/202	3:23 PM	JD
Chromium	< 1.0		µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Lead	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Lithium	16.7		µg/L	6.2	10.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Molybdenum	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Selenium	< 1.0		µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/17/202	5:44 PM	JD
Thallium	< 0.10		µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/17/202	4:39 PM	JD
Mercury	< 0.0050	D	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/12/2022	10:18 AM	JD
Chloride	10.6		mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:28 PM	JD
Fluoride	0.17		mg/L	0.05	0.10	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:28 PM	JD
Sulfate	156		mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	10/11/2022	6:28 PM	JD
Solids, Total Dissolved	616		mg/L		50.0	SM 2540, C-2011	10/4/2022	10:06 AM	JE

Pace

Lab Identification #: 30528716005

Sample Received Date:	10/11/2022	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:25 AM	Sample Received By:	TR

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Radium-226	0.170 ± 0.526 (1.02)		pCi/L			EPA 903.1	10/21/2022	3:16 PM	GDH
Radium-228	0.664 ± 0.458 (0.879)		pCi/L			EPA 904.0	10/21/2022	3:13 PM	VAL
Total Radium Calculation	0.834 ± 0.984 (1.90)		pCi/L			Total Radium Calculation	10/24/2022	2:02 PM	JAL

Comments / Notes:

Sample Results are compliant with East Kentucky Power Cooperatives Quality Assurance program. Quality Control sample results achieved laboratory specification.

Result notes: D - Result from dilution, J - Estimated Value, R - Unusable Result (Quality Control Failure), NA - Not Available

Electronically Approved By :

Jared Daugherty - Chemist

10:24 AM 11/02/2022

Eric Hamilton - QA/QC Chemist

01:47 PM 11/03/2022

4775 Lexington Road 40391
P.O. Box 707, Winchester
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

A Touchstone Energy® Cooperative

APPENDIX D – Flow Calculations & Direction Maps

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **January 27th, 2022**

INPUT VARIABLES: Downgradient wells (1)

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	580.90	ft
Downgradient Well Water Elev (h_2) =	529.15	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	51.75	ft
Hyd. Grad.(i) =	0.052	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.74E-03	ft/day

INPUT VARIABLES: Background wells (2)

K_h =	3.67E-08	ft/s
h_1 =	702.84	ft
h_2 =	546.02	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.82	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.12E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

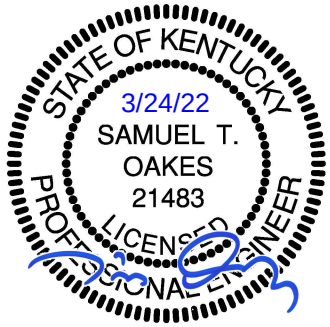
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.02
PH-MW-02

702.84
PH-MW-01

S. Ripley Road

Haul Road

523.02
PH-MW-04

580.90
PH-MW-3A

529.15
PH-MW-05

N:\P\2019047\Peg's Hill Surface Flow Map_11x17_2022_.dwg, 3/24/2022 5:26:20 PM, MAS

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

JANUARY 27, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	03-15-22
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **February 25th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	581.82	ft
Downgradient Well Water Elev (h_2) =	528.92	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	52.90	ft
Hyd. Grad.(i) =	0.053	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.80E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	704.15	ft
h_2 =	546.31	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.84	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.15E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

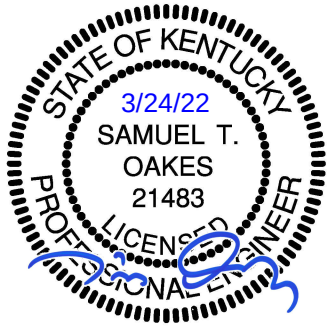
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.31
PH-MW-02

704.15
PH-MW-01

581.82
PH-MW-3A

521.84
PH-MW-04

528.92
PH-MW-05

S. Ripley Road

Haul Road

N

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

FEBRUARY 25, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	03-15-22
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

N:\P\2019047\Peg's Hill Surface Flow Map_11x17_2022_.dwg, 3/24/2022 5:27:23 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **March 28th, 2022**

INPUT VARIABLES: Downgradient wells (1)

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	582.75	ft
Downgradient Well Water Elev (h_2) =	528.72	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	54.03	ft
Hyd. Grad.(i) =	0.054	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.86E-03	ft/day

INPUT VARIABLES: Background wells (2)

K_h =	3.67E-08	ft/s
h_1 =	704.50	ft
h_2 =	546.36	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	158.14	ft
i =	0.079	ft/ft
(K_h*i)/n_e =	4.16E-03	ft/day

V =

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

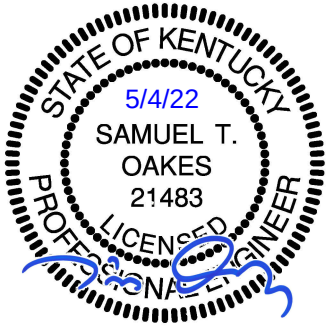
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.36
PH-MW-02

704.50
PH-MW-01

582.75
PH-MW-3A

521.06
PH-MW-04

528.72
PH-MW-05

S. Ripley Road

Haul Road

NORTH

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
5/4/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

MARCH 28, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project: 2019047
Checked By: STO
Date: 05-04-22
Scale: 1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

N:\P\2019047\Peg's Hill Surface Flow Map_11x17_2022_.dwg, 5/3/2022 2:41:14 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **April 28th, 2022**

INPUT VARIABLES: Downgradient wells [1]			**INPUT VARIABLES: Background wells** [2]		
Hydraulic Conductivity (K_h) =	3.67E-08	ft/s	K_h =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	583.61	ft	h_1 =	704.04	ft
Downgradient Well Water Elev (h_2) =	528.16	ft	h_2 =	546.07	ft
Flow Length (L) =	998	ft	L =	2,012	ft
Effective Porosity (n_e) =	0.06	unitless	n_e =	0.06	unitless
CALCULATIONS:			**CALCULATIONS:**		
dh =	55.45	ft	dh =	157.97	ft
Hyd. Grad.(i) =	0.056	ft/ft	i =	0.079	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.94E-03	ft/day	(K_h*i)/n_e =	4.15E-03	ft/day

V =

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

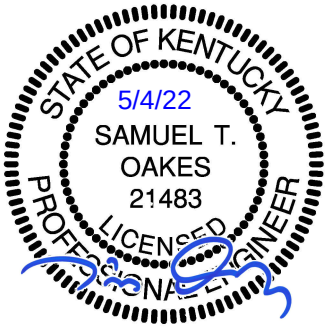
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.07
PH-MW-02

704.04
PH-MW-01

583.61
PH-MW-3A

521.01
PH-MW-04

528.16
PH-MW-05

S. Ripley Road

Haul Road

NORTH

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
5/4/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

APRIL 28, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	05-04-22
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

N:\P\2019047\Peg's Hill Surface Flow Map_11x17_2022_.dwg, 5/3/2022 2:48:03 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **May 25th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	583.90	ft
Downgradient Well Water Elev (h_2) =	528.28	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	55.62	ft
Hyd. Grad.(i) =	0.056	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.95E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	703.71	ft
h_2 =	546.03	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.68	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.15E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

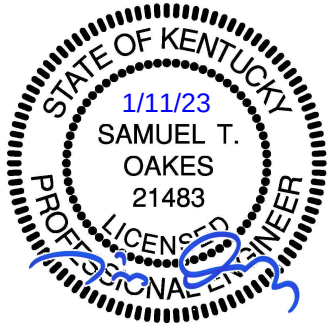
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.03
PH-MW-02

703.71
PH-MW-01

583.90
PH-MW-3A

521.11
PH-MW-04

528.28
PH-MW-05

S. Ripley Road

Haul Road

NORTH

STATE OF KENTUCKY
1/11/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

MAY 25, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	01-10-23
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **June 27th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	584.98	ft
Downgradient Well Water Elev (h_2) =	527.54	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	57.44	ft
Hyd. Grad.(i) =	0.058	ft/ft
GW Flow Velocity (K_h*i)/n_e =	3.04E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	703.68	ft
h_2 =	545.93	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.75	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.15E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

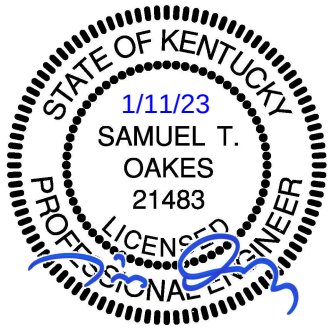
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



545.93
PH-MW-02

703.68
PH-MW-01

584.98
PH-MW-3A

520.35
PH-MW-04

527.54
PH-MW-05

S. Ripley Road

Haul Road

NORTH

STATE OF KENTUCKY
1/11/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

JUNE 27, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	01-10-23
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **July 29th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	584.97	ft
Downgradient Well Water Elev (h_2) =	528.03	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	56.94	ft
Hyd. Grad.(i) =	0.057	ft/ft
GW Flow Velocity (K_h*i)/n_e =	3.02E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.83	ft
h_2 =	545.75	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.08	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.13E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

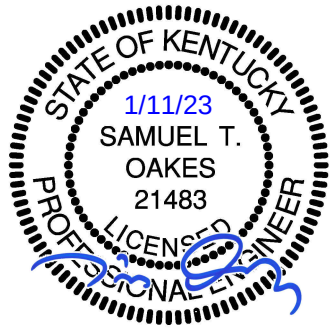
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



545.75
PH-MW-02

702.83
PH-MW-01

S. Ripley Road

Haul Road

523.37
PH-MW-04

584.97
PH-MW-3A

528.03
PH-MW-05

NORTH

STATE OF KENTUCKY
1/11/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

JULY 29, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project: 2019047
Checked By: STO
Date: 01-10-23
Scale: 1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **August 29th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	585.10	ft
Downgradient Well Water Elev (h_2) =	528.04	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	57.06	ft
Hyd. Grad.(i) =	0.057	ft/ft
GW Flow Velocity (K_h*i)/n_e =	3.02E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.28	ft
h_2 =	545.66	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.62	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.12E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

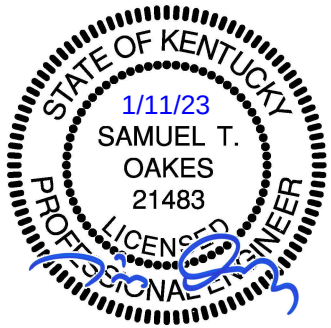
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



545.66
PH-MW-02

702.28
PH-MW-01

585.10
PH-MW-3A

523.71
PH-MW-04

528.04
PH-MW-05

S. Ripley Road

Haul Road

NORTH

STATE OF KENTUCKY
1/11/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

AUGUST 29, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	01-10-23
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **September 29th, 2022**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	585.10	ft
Downgradient Well Water Elev (h_2) =	527.87	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	57.23	ft
Hyd. Grad.(i) =	0.057	ft/ft
GW Flow Velocity (K_h*i)/n_e =	3.03E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	701.91	ft
h_2 =	545.88	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.03	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.10E-03	ft/day

$$V = \frac{K_h * i}{n_e}$$

V = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

K_h = Horizontal Hydraulic Conductivity $\left(\frac{feet}{day}\right)$

i = Horizontal hydraulic gradient $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

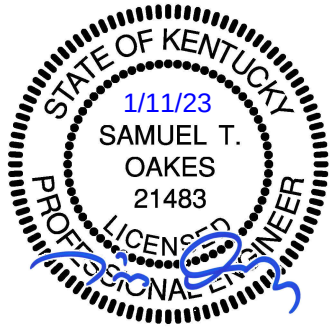
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03A used to determine h1. Groundwater elevation readings from downgradient well PH-MW-05 used to determine h2.
2. Groundwater elevation readings from background well PH-MW-01 used to determine h1. Groundwater elevation readings from background well PH-MW-02 used to determine h2.
3. Hydraulic conductivity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



545.88
PH-MW-02

701.91
PH-MW-01

S. Ripley Road

Haul Road

523.24
PH-MW-04

585.10
PH-MW-3A

527.87
PH-MW-05

NORTH

STATE OF KENTUCKY
1/11/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

LEGEND

- Existing Ground Contours
- Spurlock Landfill Permitted Waste Limit
- Peg's Hill Landfill Permitted Waste Limit
- Groundwater Monitoring Well (Downgradient)
- Groundwater Monitoring Well (Background)
- Inferred Groundwater Flow Direction
- Hydraulic gradient flow length

Note:

1.) Existing topography compiled from Aerial Survey performed in 2018 by GRW, Lexington, Kentucky.

2.) Topography Coordinate System is Kentucky State Plane Single Zone, NAD83, NAVD88

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

SEPTEMBER 29, 2022 EVENT

KENVIRONS
Civil & Environmental Engineers

Project:	2019047
Checked By:	STO
Date:	01-10-23
Scale:	1"=800'

PEG'S HILL LANDFILL
MASON COUNTY, KENTUCKY
GROUNDWATER FLOW MAP