ANNUAL CCR GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

Peg's Hill Landfill

January 31, 2022

Reporting Year – 2021
Revision 01

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 programs 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 constructed. 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 constructed. 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

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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 2021 reporting period, January 1, 2021 through December 31, 2021.

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);
- 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 stats 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. The background wells are completed in the same stratigraphic horizon (the Kope Formation), and 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 2021 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-3A, 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 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 in 2019 and the results from the October, November, and December 2020 background events, which were not available during the 2020 reporting period, are summarized in **Table B-1** in **Appendix B**, while the laboratory analytical reports are included in **Appendix C**.

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 2021. 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
01/29/21	5	PH-MW-01, PH-MW-02, PH-MW-03, PH-MW-04, & PH-MW-05	Background
02/25/21	5	PH-MW-01, PH-MW-02, PH-MW-03, PH-MW-04, & PH-MW-05	Background
03/31/21	5	PH-MW-01, PH-MW-02, PH-MW-03, PH-MW-04, & PH-MW-05	Background
04/28/21-04/29/21	4	PH-MW-01, PH-MW-02, PH-MW-04, & PH-MW-05	Background
05/27/21 – 5/28/21	4	PH-MW-01, PH-MW-02, PH-MW-04, & PH-MW-05	Background
06/20/21	1	PH-MW-3A	Background
07/06/21	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
07/29/21	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
08/19/21	1	PH-MW-3A	Background
08/30/21	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
09/16/21	1	PH-MW-3A	Background

09/30/21	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
10/14/21	1	PH-MW-3A	Background
10/28/21	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
11/30/21*	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background
12/29/21*	5	PH-MW-01, PH-MW-02, PH-MW-3A, PH-MW-04, & PH-MW-05	Background

* The laboratory analytical results for these sampling events were not available on or before December 31, 2021, 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.

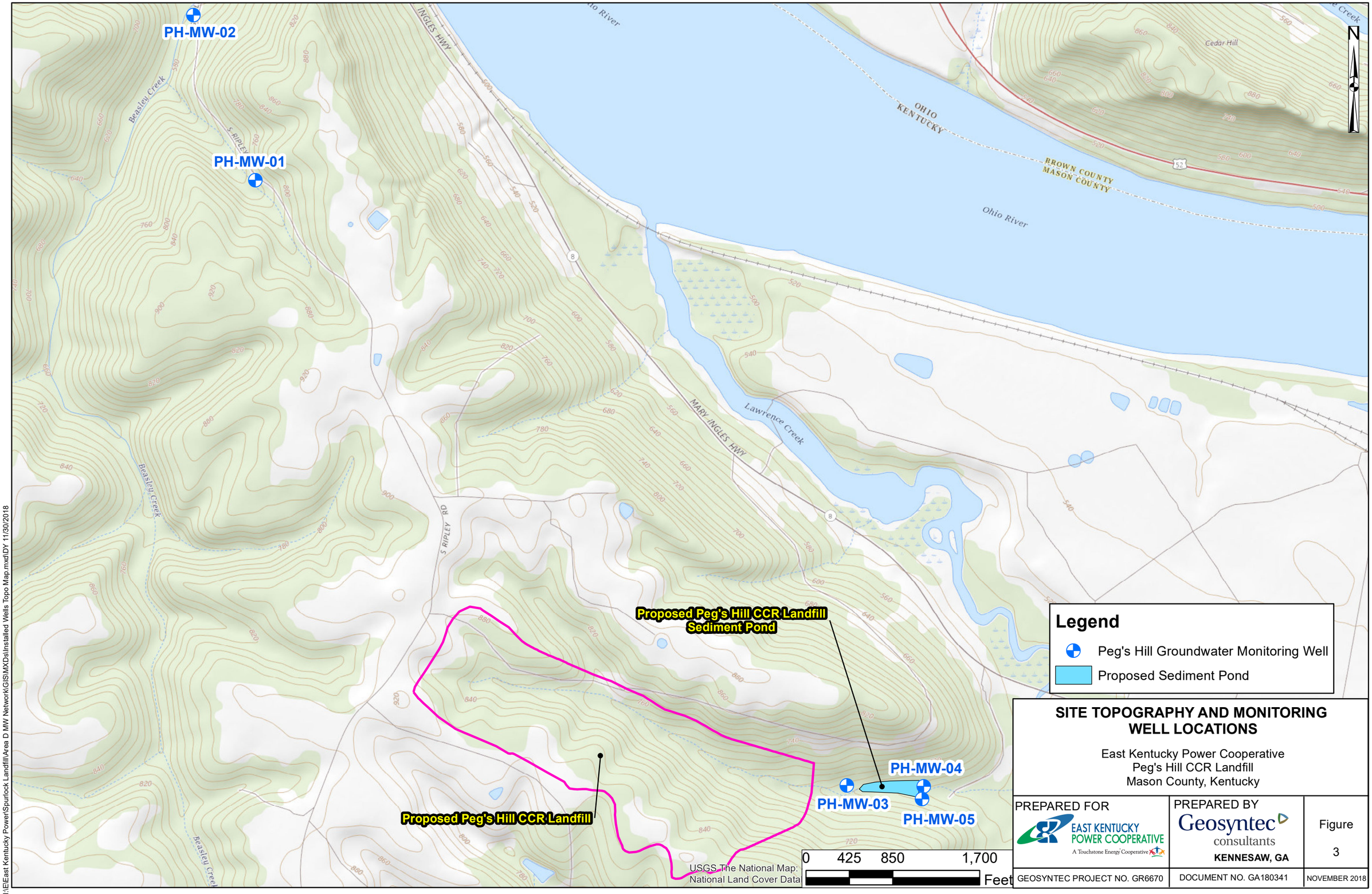
In 2021, based on further design refinements, EKPC recognized that PH-MW-3 was located in the area of disturbance of the proposed sedimentation pond for the Peg's Hill Landfill. EKPC identified an alternate location outside the disturbance area for a replacement well, and then proceeded to abandon PH-MW-3 and install the replacement well, PH-MW-3A. Subsequent to overseeing the installation of the replacement well, Geosyntec recertified the Groundwater Monitoring Network in May 2021, and EKPC began collecting background samples at the newly installed well pursuant to the CCR Rule. EKPC collected the required eight independent background samples within the first six months of sampling, as required by the CCR Rule. The groundwater quality at monitoring wells PH-MW-3 and PH-MW-3A is similar.

No other significant problems were encountered in the groundwater monitoring program for the Peg's Hill Landfill in 2021.

7.0 Key Activities Projected for 2022

In 2022, EKPC will continue collecting background samples. Once the Landfill has been constructed and waste 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.

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

Spurlock Peg's Hill

Annual Reporting Year 2021
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	10/30/2020	Background	702.06	1440	366000 D	73 D	< 0.20 D	6.16	400 D	1910
PH-MW-01	11/30/2020	Background	702.43	1270	332000 D	48.5	< 0.50	6.24	435 D	1860
PH-MW-01	12/28/2020	Background	702.56	1280	379000 D	44.3	< 0.50	6.02	398 D	1780
PH-MW-01	1/29/2021	Background	702.90	969	361000 D	22.3	< 0.50	5.78	354 D	1720
PH-MW-01	2/25/2021	Background	703.44	924	334000 D	19.9	< 0.50	5.63	312 D	1480
PH-MW-01	3/31/2021	Background	704.91	632	278000 D	14.6	< 0.50	5.75	260 D	1240
PH-MW-01	4/29/2021	Background	704.53	543	250000 D	16.8	< 0.50	5.96	265 D	1230
PH-MW-01	5/27/2021	Background	704.35	616	313000 D	15.6	< 0.50	5.93	244 D	1350
PH-MW-01	7/6/2021	Background	703.85	641	303000 D	14.2	< 0.50	5.94	279 D	1210
PH-MW-01	7/29/2021	Background	702.88	947	366000 D	24.6	< 0.50	5.89	250 D	1520
PH-MW-01	8/30/2021	Background	702.33	1230	342000 D	43.3	< 0.50	6.09	278 D	1650
PH-MW-01	9/30/2021	Background	702.09	1300	323000 D	59.2	< 0.50	6.05	311 D	1690
PH-MW-01	10/28/2021	Background	701.78	1560	323000 D	69.4	< 0.50	6.10	336 D	1640
PH-MW-02	10/30/2020	Background	546.57	1030	37500 D	190 D	0.46	7.69	35 D	868
PH-MW-02	11/30/2020	Background	547.88	1030	31900 D	211 D	0.60	7.72	37.1	894
PH-MW-02	12/28/2020	Background	547.08	1100	34500 D	214 D	0.59	7.7	36.9	870
PH-MW-02	1/29/2021	Background	547.33	1150	28300 D	232 D	0.60	7.5	34.9	950
PH-MW-02	2/25/2021	Background	546.66	1190	39200 D	187 D	0.52	7.34	35.7	796
PH-MW-02	3/31/2021	Background	547.06	1010	40400 D	153 D	< 0.50	7.33	33.8	718
PH-MW-02	4/29/2021	Background	547.51	762	43000 D	140 D	< 0.50	7.47	33.6	712
PH-MW-02	5/27/2021	Background	547.20	941	55700 D	144 D	< 0.50	7.31	33.8	718
PH-MW-02	7/6/2021	Background	546.93	894	49700 D	155 D	< 0.50	7.35	36.8	654
PH-MW-02	7/29/2021	Background	546.39	949	54800 D	168 D	< 0.50	7.27	35.0	734
PH-MW-02	8/30/2021	Background	545.96	1060	49200 D	171 D	< 0.50	7.45	32.9	724
PH-MW-02	9/30/2021	Background	546.42	1030	47000 D	200 D	< 0.50	7.49	34.2	778
PH-MW-02	10/28/2021	Background	546.59	1150	41200 D	227 D	< 0.50	7.51	35.3	776
PH-MW-03	10/30/2020	Background	558.85	3020	99600 D	640 D	0.82 D	7.21	480 D	2320
PH-MW-03	11/30/2020	Background	558.90	2910	88000 D	725 D	1.0	7.34	560 D	2490
PH-MW-03	12/28/2020	Background	559.34	3740 D	89500 D	734 D	1.0	7.23	545 D	2490
PH-MW-03	1/29/2021	Background	559.47	2840	96300 D	686 D	0.94	7.11	517 D	2380
PH-MW-03	2/25/2021	Background	559.85	3110	103000 D	620 D	1.0	7.14	403 D	2020
PH-MW-03	3/31/2021	Background	559.15	2640	93200 D	648 D	1.0	7.25	425 D	2150

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	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

Spurlock Peg's Hill

Annual Reporting Year 2021
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-03A	6/20/2021	Background	577.00	2150	27100 D	639 D	0.72	7.66	494 D	2070
PH-MW-03A	7/6/2021	Background	577.17	2240	28900 D	660 D	0.70	6.99	529 D	2120
PH-MW-03A	7/29/2021	Background	577.81	2460	42400 D	534 D	0.61	7.22	543 D	2080
PH-MW-03A	8/19/2021	Background	578.19	2770 D	35000	509 D	0.64	7.48	536 D	2030
PH-MW-03A	8/30/2021	Background	577.91	2600	45600 D	474 D	0.62	7.44	519 D	1990
PH-MW-03A	9/16/2021	Background	578.02	2890 D	47800 D	398 D	0.83	7.50	485 D	1880
PH-MW-03A	9/30/2021	Background	577.03	3080 D	49700 D	402 D	0.83	7.30	476 D	1750
PH-MW-03A	10/14/2021	Background	577.11	2710	53500 D	367 D	0.85	7.45	449 D	1800
PH-MW-03A	10/28/2021	Background	577.15	2640	49100 D	360 D	0.89	7.50	433 D	1510
PH-MW-04	10/30/2020	Background	522.94	970	216000 D	22 D	0.21 D	6.37	270 D	1160
PH-MW-04	11/30/2020	Background	523.49	934	182000 D	21.1	< 0.50	6.55	302 D	1220
PH-MW-04	12/28/2020	Background	523.54	912	191000 D	21.1	< 0.50	6.23	294 D	1160
PH-MW-04	1/29/2021	Background	523.80	888	185000 D	20.1	< 0.50	6.25	279 D	1160
PH-MW-04	2/25/2021	Background	523.65	1080	197000 D	20.4	< 0.50	6.19	281 D	1180
PH-MW-04	3/31/2021	Background	524.11	819	189000 D	18.9	< 0.50	6.15	261 D	1070
PH-MW-04	4/28/2021	Background	526.31	671	163000 D	18.3	< 0.50	6.33	236 D	1100
PH-MW-04	5/28/2021	Background	526.50	751	170000 D	16.0	< 0.50	5.97	218 D	1060
PH-MW-04	7/6/2021	Background	526.40	633	170000 D	15.0	< 0.50	6.07	191	924
PH-MW-04	7/29/2021	Background	525.55	615	176000 D	14.4	< 0.50	5.52	173	930
PH-MW-04	8/30/2021	Background	524.05	660	194000 D	14.4	< 0.50	6.18	187	958
PH-MW-04	9/30/2021	Background	524.31	714	181000 D	14.4	< 0.50	6.22	216 D	988
PH-MW-04	10/28/2021	Background	523.19	779	177000 D	16.5	< 0.50 D	6.19	229 D	832
PH-MW-05	10/30/2020	Background	526.61	263	137000 D	11	0.16	7.05	190 D	640
PH-MW-05	11/30/2020	Background	527.28	239	114000 D	10.3	< 0.50	7.16	197	586
PH-MW-05	12/28/2020	Background	527.91	224	121000 D	10.8	< 0.50	7.10	191	606
PH-MW-05	1/29/2021	Background	528.17	214	117000 D	10.6	< 0.50	6.90	176	586
PH-MW-05	2/25/2021	Background	528.83	248	116000 D	11.0	< 0.50	6.84	186	576
PH-MW-05	3/31/2021	Background	529.12	192	116000 D	10.6	< 0.50	7.07	183	608
PH-MW-05	4/28/2021	Background	528.86	179	104000 D	11.5	< 0.50	7.14	185	586
PH-MW-05	5/28/2021	Background	528.67	218	116000 D	11.8	< 0.50	7.12	192	618
PH-MW-05	7/6/2021	Background	528.50	201	116000 D	11.5	< 0.50	7.07	189	594
PH-MW-05	7/29/2021	Background	527.67	249	119000 D	11.8	< 0.50	6.92	182	572
PH-MW-05	8/30/2021	Background	527.15	238	122000 D	12.0	< 0.50	7.16	181	566
PH-MW-05	9/30/2021	Background	527.79	246	114000 D	11.9	< 0.50	7.02	178	546
PH-MW-05	10/28/2021	Background	527.90	241	112000 D	12.1	< 0.50	7.06	178	462

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	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

Spurlock Peg's Hill

Annual Reporting Year 2021
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	10/30/2020	Background	702.06	< 1.0	< 1.0	55.1	< 1.0	< 0.10	< 1.0	5.0	< 0.20 D	< 0.5 D	102	< 0.0200 D	< 1.0	2.48	1.3	< 0.20 D	
PH-MW-01	11/30/2020	Background	702.43	< 1.0	< 1.0	59.7	< 1.0	< 0.10	< 1.0	4.4	< 0.50	< 1.0	91.6	< 0.0200 D	< 1.0	2.83	1.0	< 0.10	
PH-MW-01	12/28/2020	Background	702.56	< 1.0	< 1.0	65.4	< 1.0	< 0.10	< 1.0	4.2	< 0.50	< 1.0	86.8	< 0.0200 D	< 1.0	1.51	1.5	< 0.10	
PH-MW-01	1/29/2021	Background	702.90	< 1.0	< 1.0	65.2	< 1.0	< 0.10	< 1.0	3.0	< 0.50	< 1.0	84.9	< 0.0200 D	< 1.0	1.93	1.0	< 0.10	
PH-MW-01	2/25/2021	Background	703.44	< 1.0	< 1.0	57.6	< 1.0	< 0.10	< 1.0	1.8	< 0.50	< 1.0	70.1	< 0.0200 D	< 1.0	0.581	1.2	< 0.10	
PH-MW-01	3/31/2021	Background	704.91	< 1.0	< 1.0	46.5	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	51.9	< 0.0200 D	< 1.0	0.975	1.1	0.10	
PH-MW-01	4/29/2021	Background	704.53	< 1.0	< 1.0	39.2	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	54.0	< 0.0200 D	< 1.0	1.78	1.5	0.14	
PH-MW-01	5/27/2021	Background	704.35	< 1.0	< 1.0	50.0	< 1.0	< 0.10	< 1.0	1.2	< 0.50	< 1.0	51.6	< 0.0200 D	< 1.0	0.331	< 1.0	0.13	
PH-MW-01	7/6/2021	Background	703.85	< 1.0	< 1.0	53.7	< 1.0	< 0.10	< 1.0	1.4	< 0.50	< 1.0	54.7	< 0.0200 D	< 1.0	0.614	1.4	< 0.10	
PH-MW-01	7/29/2021	Background	702.88	< 1.0	2.9	56.2	< 1.0	< 0.10	1.8	2.8	< 0.50	1.1	60.1	< 0.0200 D	< 1.0	0.377	4.1	< 0.10	
PH-MW-01	8/30/2021	Background	702.33	< 1.0	< 1.0	54.9	< 1.0	< 0.10	< 1.0	2.9	< 0.50	< 1.0	76.8	< 0.0200 D	< 1.0	2.87	< 1.0	< 0.10	
PH-MW-01	9/30/2021	Background	702.09	< 1.0	< 1.0	55.9	< 1.0	< 0.10	< 1.0	3.3	< 0.50	< 1.0	78.3	< 0.0200 D	< 1.0	1.93	< 1.0	< 0.10	
PH-MW-01	10/28/2021	Background	701.78	< 1.0	< 1.0	51.5	< 1.0	< 0.10	< 1.0	3.4	< 0.50	< 1.0	91.1	< 0.0200 D	< 1.0	2.93	1.4	< 0.10	
PH-MW-02	10/30/2020	Background	546.57	< 1.0	1.7	64.4	< 1.0	< 0.10	< 1.0	< 1.0	0.46	< 1.0	73.3	< 0.0050 D	3.6	1.38	< 1.0	< 0.10	
PH-MW-02	11/30/2020	Background	547.88	< 1.0	1.6	64.0	< 1.0	< 0.10	< 1.0	< 1.0	0.60	< 1.0	74.4	< 0.0050 D	3.0	1.59	< 1.0	< 0.10	
PH-MW-02	12/28/2020	Background	547.08	< 1.0	1.5	63.4	< 1.0	< 0.10	< 1.0	< 1.0	0.59	< 1.0	77.0	< 0.0050 D	3.0	1.48	< 1.0	< 0.10	
PH-MW-02	1/29/2021	Background	547.33	< 1.0	1.7	60.6	< 1.0	< 0.10	< 1.0	< 1.0	0.60	< 1.0	92.1	< 0.0050 D	3.5	0.215	< 1.0	< 0.10	
PH-MW-02	2/25/2021	Background	546.66	< 1.0	1.1	73.1	< 1.0	< 0.10	< 1.0	< 1.0	0.52	< 1.0	73.6	< 0.0050 D	1.9	0.546	1.0	< 0.10	
PH-MW-02	3/31/2021	Background	547.06	< 1.0	1.2	76.9	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	71.1	< 0.0050 D	1.7	0.991	< 1.0	< 0.10	
PH-MW-02	4/29/2021	Background	547.51	< 1.0	< 1.0	70.3	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	66.4	< 0.0050 D	1.5	0.901	1.8	< 0.10	
PH-MW-02	5/27/2021	Background	547.20	< 1.0	< 1.0	95.2	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	57.2	< 0.0050 D	1.3	1.26	< 1.0	< 0.10	
PH-MW-02	7/6/2021	Background	546.93	< 1.0	< 1.0	90.6	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	57.3	< 0.0050 D	1.4	0.701	< 1.0	< 0.10	
PH-MW-02	7/29/2021	Background	546.39	< 1.0	< 1.0	84.5	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	63.2	< 0.0050 D	1.5	0.455	1.3	< 0.10	
PH-MW-02	8/30/2021	Background	545.96	< 1.0	< 1.0	91.1	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	66.1	< 0.0050 D	1.6	0.403	< 1.0	< 0.10	
PH-MW-02	9/30/2021	Background	546.42	< 1.0	< 1.0	95.5	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	65.4	< 0.0050 D	1.5	1.01	< 1.0	< 0.10	
PH-MW-02	10/28/2021	Background	546.59	< 1.0	1.5	85.2	< 1.0	< 0.10	< 1.0	< 1.0	< 0.50	< 1.0	75.3	< 0.0050 D	1.7	1.24	< 1.0	< 0.10	
PH-MW-03	10/30/2020	Background	558.85	< 1.0	< 1.0	85.5	< 1.0	< 0.10	< 1.0	< 1.0	0.82 D	< 0.5 D	191	< 0.0100 D	2.6	1.45	2.3	< 0.20 D	
PH-MW-03	11/30/2020	Background	558.90	< 1.0	< 1.0	84.9	< 1.0	< 0.10	< 1.0	1.0	1.0	< 1.0 D	185	< 0.0100 D	2.5	1.08	2.7	< 0.20 D	
PH-MW-03	12/28/2020	Background	559.34	< 1.0	< 1.0	87.3	< 1.0	< 0.10	< 1.0	1.2	1.0	< 1.0 D	196	< 0.0100 D	2.7	0.980	2.8	< 0.20 D	
PH-MW-03	1/29/2021	Background	559.47	< 1.0	< 1.0	78.7	< 1.0	< 0.10	< 1.0	< 1.0	0.94	< 1.0	206	< 0.0100 D	2.3	1.04	1.9	< 0.10	
PH-MW-03	2/25/2021	Background	559.85	< 1.0	< 1.0	57.5	< 1.0	< 0.10	< 1.0	< 1.0	1.0	< 1.0 D	170	< 0.0100 D	1.3	0.510	2.2	< 0.40 D	
PH-MW-03	3/31/2021	Background	559.15	< 1.0	< 1.0	68.6	< 1.0	< 0.10	< 1.0	< 1.0	1.0	< 1.0	165	< 0.0100 D	2.1	1.26	2.0	< 0.10	

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	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

Spurlock Peg's Hill

Annual Reporting Year 2021
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-03A	6/20/2021	Background	577.00	< 1.0		1.6		121		< 1.0		< 0.10		< 1.0		< 1.0		0.72		< 1.0	D	176		< 0.0050	D	29.6		1.86	3.3		< 0.20	D
PH-MW-03A	7/6/2021	Background	577.17	< 1.0		1.7		129		< 1.0		< 0.10		< 1.0		< 1.0		0.70		< 1.0	D	188		< 0.0050	D	29.2		1.60	2.1		< 0.20	D
PH-MW-03A	7/29/2021	Background	577.81	< 1.0		1.1		87.6		< 1.0		< 0.10		< 1.0		< 1.0		0.61		< 1.0		166		< 0.0050	D	28.7		0.990	4.5		< 0.10	
PH-MW-03A	8/19/2021	Background	578.19	1.2		< 1.0		69.7		< 1.0		< 0.10		< 1.0		< 1.0		0.64		< 1.0	D	163	D	< 0.0050	D	28.6		0.687	4.1		< 0.20	D
PH-MW-03A	8/30/2021	Background	577.91	< 1.0		1.1		83.4		< 1.0		< 0.10		< 1.0		< 1.0		0.62		< 1.0	D	159		< 0.0050	D	27.6		0.932	2.5		< 0.20	D
PH-MW-03A	9/16/2021	Background	578.02	< 1.0		< 1.0		80.8		< 1.0		< 0.10		< 1.0		< 1.0		0.83		< 1.0	D	133		< 0.0050	D	24.2		1.70	2.1		< 0.20	D
PH-MW-03A	9/30/2021	Background	577.03	< 1.0		< 1.0		73.5		< 1.0		< 0.10		< 1.0		< 1.0		0.83		< 1.0	D	122		< 0.0050	D	22.5		1.54	1.7		< 0.20	D
PH-MW-03A	10/14/2021	Background	577.11	< 1.0		< 1.0		68.1		< 1.0		< 0.10		< 1.0		< 1.0		0.85		< 1.0		118		< 0.0050	D	21.8		1.98	2.0		< 0.10	
PH-MW-03A	10/28/2021	Background	577.15	< 1.0		< 1.0		68.0		< 1.0		< 0.10		< 1.0		< 1.0		0.89		< 1.0		107		< 0.0050	D	22.0		1.35	2.2		< 0.10	
PH-MW-04	10/30/2020	Background	522.94	< 1.0		< 1.0		88.2		< 1.0		< 0.10		< 1.0		2.8		0.21	D	< 1.0		38.8		< 0.0100	D	< 1.0		0.880	< 1.0		< 0.10	
PH-MW-04	11/30/2020	Background	523.49	< 1.0		< 1.0		86.9		< 1.0		< 0.10		< 1.0		2.3		< 0.50		< 1.0		37.9		< 0.0100	D	< 1.0		1.36	< 1.0		< 0.10	
PH-MW-04	12/28/2020	Background	523.54	< 1.0		< 1.0		87.8		< 1.0		< 0.10		< 1.0		2.1		< 0.50		< 1.0		36.4		< 0.0200	D	< 1.0		1.23	< 1.0		< 0.10	
PH-MW-04	1/29/2021	Background	523.80	< 1.0		< 1.0		88.9		< 1.0		< 0.10		< 1.0		2.3		< 0.50		< 1.0		42.4		< 0.0100	D	< 1.0		0.840	< 1.0		< 0.10	
PH-MW-04	2/25/2021	Background	523.65	< 1.0		< 1.0		92.5		< 1.0		< 0.10		< 1.0		2.1		< 0.50		< 1.0		40.6		< 0.0200	D	< 1.0		0.560	< 1.0		< 0.10	
PH-MW-04	3/31/2021	Background	524.11	< 1.0		< 1.0		86.9		< 1.0		< 0.10		< 1.0		2.2		< 0.50		< 1.0		37.2		< 0.0100	D	< 1.0		0.850	1.2		< 0.10	
PH-MW-04	4/28/2021	Background	526.31	< 1.0		< 1.0		69.7		< 1.0		< 0.10		< 1.0		2.4		< 0.50		< 1.0		38.2		< 0.0100	D	< 1.0		0.360	2.0		0.12	
PH-MW-04	5/28/2021	Background	526.50	< 1.0		< 1.0		78.6		< 1.0		< 0.10		< 1.0		1.4		< 0.50		< 1.0		33.1		< 0.0200	D	< 1.0		0.640	< 1.0		0.12	
PH-MW-04	7/6/2021	Background	526.40	< 1.0		< 1.0		79.3		< 1.0		< 0.10		< 1.0		1.5		< 0.50		< 1.0		29.2		< 0.0200	D	< 1.0		0.730	1.2		< 0.10	
PH-MW-04	7/29/2021	Background	525.55	< 1.0		< 1.0		71.9		< 1.0		< 0.10		< 1.0		1.6		< 0.50		< 1.0		26.5		< 0.0200	D	< 1.0		1.54	< 1.0		< 0.10	
PH-MW-04	8/30/2021	Background	524.05	< 1.0		< 1.0		80.7		< 1.0		< 0.10		< 1.0		1.6		< 0.50		< 1.0		30.0		< 0.0200	D	< 1.0		1.53	< 1.0		< 0.10	
PH-MW-04	9/30/2021	Background	524.31	< 1.0		< 1.0		83.8		< 1.0		< 0.10		< 1.0		1.6		< 0.50		< 1.0		29.6		< 0.0200	D	< 1.0		0000	< 1.0		< 0.10	
PH-MW-04	10/28/2021	Background	523.19	< 1.0		< 1.0		77.9		< 1.0		< 0.10		< 1.0		1.4		< 0.50	D	< 1.0		34.8		< 0.0200	D	< 1.0		0.390	< 1.0		< 0.10	
PH-MW-05	10/30/2020	Background	526.61	< 1.0		< 1.0		87.6		< 1.0		< 0.10		< 1.0		< 1.0		0.16		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.790	< 1.0		< 0.10	
PH-MW-05	11/30/2020	Background	527.28	< 1.0		< 1.0		86.1		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.510	< 1.0		< 0.10	
PH-MW-05	12/28/2020	Background	527.91	< 1.0		< 1.0		83.3		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.220	< 1.0		< 0.10	
PH-MW-05	1/29/2021	Background	528.17	< 1.0		< 1.0		82.1		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.480	< 1.0		< 0.10	
PH-MW-05	2/25/2021	Background	528.83	< 1.0		< 1.0		82.3		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		1.15	< 1.0		< 0.10	
PH-MW-05	3/31/2021	Background	529.12	< 1.0		< 1.0		73.2		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.150	< 1.0		< 0.10	
PH-MW-05	4/28/2021	Background	528.86	< 1.0		< 1.0		67.8		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.570	1.3		0.12	
PH-MW-05	5/28/2021	Background	528.67	< 1.0		< 1.0		80.8		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.260	< 1.0		0.11	
PH-MW-05	7/6/2021	Background	528.50	< 1.0		< 1.0		79.2		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.190	< 1.0		< 0.10	
PH-MW-05	7/29/2021	Background	527.67	< 1.0		< 1.0		75.7		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.680	< 1.0		< 0.10	
PH-MW-05	8/30/2021	Background	527.15	< 1.0		< 1.0		80.3		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.640	< 1.0		< 0.10	
PH-MW-05	9/30/2021	Background	527.79	< 1.0		< 1.0		82.4		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		< 25.0		< 0.0050	D	< 1.0		0.250	< 1.0		< 0.10	
PH-MW-05	10/28/2021	Background	527.90	< 1.0		< 1.0		79.2		< 1.0		< 0.10		< 1.0		< 1.0		< 0.50		< 1.0		25.4		< 0.0050	D	< 1.0		1.30	< 1.0		< 0.10	

Result Notes :	J - Estimated Value	R - Unusable (Quality Control Failure)	
	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: Wednesday, January 13, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/30/2020
Well ID No:	PH-MW-01	Sample Collection Time:	11:45 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	702.06	MSL		10/30/2020	11:45 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/30/2020	11:45 AM	BTB
Conductivity	2477	µS/cm	SM 2510, B-2011	10/30/2020	11:45 AM	BTB
Temperature	53.89	°F	SM 2550, B-2010	10/30/2020	11:45 AM	BTB
Oxidation-Reduction Potential	70	mV	SM 2580, B-2011	10/30/2020	11:45 AM	BTB
pH	6.16	S.U.	SM 4500-H+, B-2011	10/30/2020	11:45 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/30/2020	11:45 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000510

Sample Received Date:	11/2/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:40 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)	1/5/2021	2:31 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Barium	55.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:31 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Boron	1440	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:31 PM	JD
Calcium	366000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/1/2020	2:01 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Cobalt	5.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Lead	< 0.5	µg/L	0.2	0.5	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:08 PM	JD
Lithium	102	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Selenium	1.3	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:07 PM	JD
Thallium	< 0.20	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:08 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	11/16/2020	12:54 PM	JD
Solids, Total Dissolved	1910	mg/L		50.0	SM 2540, C-2011 (mod)	11/4/2020	10:14 AM	JD

ALS Environmental

Lab Identification #: 20111804-01

Sample Received Date:	11/19/2020	Sample Receipt Temperatures (°C):	3.8
Sample Received Time:	9:30 AM	Sample Received By:	DS

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Chloride	73	mg/L	12	40	EPA 300.0 Rev 2.1 (1993)	11/24/2020	8:53 PM	JDR
Fluoride	< 0.20	mg/L	0.13	0.20	EPA 300.0 Rev 2.1 (1993)	11/24/2020	8:34 PM	JDR
Sulfate	400	mg/L	7.6	40	EPA 300.0 Rev 2.1 (1993)	11/24/2020	8:53 PM	JDR

Pace

Lab Identification #: 30396364001

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	2.48 ± 1.06 (1.24)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:20 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:06 PM 01/13/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, January 13, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/30/2020
Well ID No:	PH-MW-02	Sample Collection Time:	1:00 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	546.57	MSL		10/30/2020	1:00 PM	BTB
Turbidity	1.23	NTU	SM 2130, B-2001	10/30/2020	1:00 PM	BTB
Conductivity	1688	µS/cm	SM 2510, B-2011	10/30/2020	1:00 PM	BTB
Temperature	54.01	°F	SM 2550, B-2010	10/30/2020	1:00 PM	BTB
Oxidation-Reduction Potential	-156.6	mV	SM 2580, B-2011	10/30/2020	1:00 PM	BTB
pH	7.69	S.U.	SM 4500-H+, B-2011	10/30/2020	1:00 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/30/2020	1:00 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000511

Sample Received Date:	11/2/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:40 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)	1/5/2021	2:35 PM	JD
Arsenic	1.7	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Barium	64.4	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:35 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Boron	1030	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:35 PM	JD
Calcium	37500	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/1/2020	2:05 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Lithium	73.3	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Molybdenum	3.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:11 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	11/16/2020	1:00 PM	JD
Solids, Total Dissolved	868	mg/L		50.0	SM 2540, C-2011 (mod)	11/4/2020	10:14 AM	JD

ALS Environmental

Lab Identification #: 20111804-02

Sample Received Date:	11/19/2020	Sample Receipt Temperatures (°C):	3.8
Sample Received Time:	9:30 AM	Sample Received By:	DS

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Chloride	190	mg/L	6.2	20	EPA 300.0 Rev 2.1 (1993)	11/24/2020	9:32 PM	JDR
Fluoride	0.46	mg/L	0.067	0.10	EPA 300.0 Rev 2.1 (1993)	11/24/2020	9:13 PM	JDR
Sulfate	35	mg/L	3.8	20	EPA 300.0 Rev 2.1 (1993)	11/24/2020	9:32 PM	JDR

Pace

Lab Identification #: 30396364002

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.38 ± 0.990 (1.66)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:20 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:06 PM 01/13/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, January 13, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/30/2020
Well ID No:	PH-MW-03	Sample Collection Time:	4:58 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	558.85	MSL		10/30/2020	4:58 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/30/2020	4:58 PM	BTB
Conductivity	3759	µS/cm	SM 2510, B-2011	10/30/2020	4:58 PM	BTB
Temperature	52.02	°F	SM 2550, B-2010	10/30/2020	4:58 PM	BTB
Oxidation-Reduction Potential	14.6	mV	SM 2580, B-2011	10/30/2020	4:58 PM	BTB
pH	7.21	S.U.	SM 4500-H+, B-2011	10/30/2020	4:58 PM	BTB
Oxygen, dissolved	1.18	mg/L	SM 4500-O	10/30/2020	4:58 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000512

Sample Received Date:	11/2/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:40 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)	1/5/2021	2:39 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Barium	85.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:39 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Boron	3020	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:39 PM	JD
Calcium	99600	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/1/2020	2:09 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Lead	< 0.5	µg/L	0.2	0.5	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:58 PM	JD
Lithium	191	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Molybdenum	2.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Selenium	2.3	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:15 PM	JD
Thallium	< 0.20	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:58 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	11/16/2020	1:06 PM	JD
Solids, Total Dissolved	2320	mg/L		50.0	SM 2540, C-2011 (mod)	11/4/2020	10:14 AM	JD

ALS Environmental

Lab Identification #: 20111804-03

Sample Received Date:	11/19/2020	Sample Receipt Temperatures (°C):	3.8
Sample Received Time:	9:30 AM	Sample Received By:	DS

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Chloride	640	mg/L	25	80	EPA 300.0 Rev 2.1 (1993)	11/24/2020	10:08 PM	JDR
Fluoride	0.82	mg/L	0.17	0.25	EPA 300.0 Rev 2.1 (1993)	11/24/2020	9:51 PM	JDR
Sulfate	480	mg/L	15	80	EPA 300.0 Rev 2.1 (1993)	11/24/2020	10:08 PM	JDR

Pace

Lab Identification #: 30396364003

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.45 ± 0.920 (1.45)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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
08:20 PM 01/12/2021

Eric Hamilton - QA/QC Chemist
01:07 PM 01/13/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, January 13, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/30/2020
Well ID No:	PH-MW-04	Sample Collection Time:	3:32 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	522.94	MSL		10/30/2020	3:32 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/30/2020	3:32 PM	BTB
Conductivity	2261	µS/cm	SM 2510, B-2011	10/30/2020	3:32 PM	BTB
Temperature	55.20	°F	SM 2550, B-2010	10/30/2020	3:32 PM	BTB
Oxidation-Reduction Potential	18.9	mV	SM 2580, B-2011	10/30/2020	3:32 PM	BTB
pH	6.37	S.U.	SM 4500-H+, B-2011	10/30/2020	3:32 PM	BTB
Oxygen, dissolved	1.3	mg/L	SM 4500-O	10/30/2020	3:32 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000513

Sample Received Date:	11/2/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:40 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)	1/5/2021	2:43 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Barium	88.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:43 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Boron	970	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:43 PM	JD
Calcium	216000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/1/2020	2:13 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Cobalt	2.8	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Lithium	38.8	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	12:19 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	11/16/2020	1:12 PM	JD
Solids, Total Dissolved	1160	mg/L		50.0	SM 2540, C-2011 (mod)	11/4/2020	10:14 AM	JD

ALS Environmental

Lab Identification #: 20111804-04

Sample Received Date:	11/19/2020	Sample Receipt Temperatures (°C):	3.8
Sample Received Time:	9:30 AM	Sample Received By:	DS

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Chloride	22	mg/L	0.62	2.0	EPA 300.0 Rev 2.1 (1993)	11/24/2020	10:26 PM	JDR
Fluoride	0.21	mg/L	0.13	0.20	EPA 300.0 Rev 2.1 (1993)	11/24/2020	10:26 PM	JDR
Sulfate	270	mg/L	7.6	40	EPA 300.0 Rev 2.1 (1993)	11/24/2020	10:43 PM	JDR

Pace

Lab Identification #: 30396364004

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.880 ± 0.703 (1.22)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:20 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:07 PM 01/13/2021

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Report Date: Wednesday, January 13, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/30/2020
Well ID No:	PH-MW-05	Sample Collection Time:	2:02 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	526.61	MSL		10/30/2020	2:02 PM	BTB
Turbidity	1.11	NTU	SM 2130, B-2001	10/30/2020	2:02 PM	BTB
Conductivity	916.0	µS/cm	SM 2510, B-2011	10/30/2020	2:02 PM	BTB
Temperature	54.05	°F	SM 2550, B-2010	10/30/2020	2:02 PM	BTB
Oxidation-Reduction Potential	62.4	mV	SM 2580, B-2011	10/30/2020	2:02 PM	BTB
pH	7.05	S.U.	SM 4500-H+, B-2011	10/30/2020	2:02 PM	BTB
Oxygen, dissolved	5.3	mg/L	SM 4500-O	10/30/2020	2:02 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000514

Sample Received Date:	11/2/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:40 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)	1/5/2021	2:47 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Barium	87.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:47 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Boron	263	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	2:47 PM	JD
Calcium	137000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/1/2020	2:16 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/2/2020	1:20 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	11/16/2020	1:15 PM	JD
Solids, Total Dissolved	640	mg/L		50.0	SM 2540, C-2011 (mod)	11/4/2020	10:14 AM	JD

ALS Environmental

Lab Identification #: 20111804-05

Sample Received Date:	11/19/2020	Sample Receipt Temperatures (°C):	3.8
Sample Received Time:	9:30 AM	Sample Received By:	DS

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Chloride	11	mg/L	0.31	1.0	EPA 300.0 Rev 2.1 (1993)	11/25/2020	12:26 AM	JDR
Fluoride	0.16	mg/L	0.067	0.10	EPA 300.0 Rev 2.1 (1993)	11/25/2020	12:26 AM	JDR
Sulfate	190	mg/L	3.8	20	EPA 300.0 Rev 2.1 (1993)	11/25/2020	12:43 AM	JDR

Pace

Lab Identification #: 30396364005

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.790 ± 0.906 (1.63)	pCi/L			Total Radium Calculation	12/30/2020	10:45 AM	CMC

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

08:20 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:07 PM 01/13/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 14, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2020
Well ID No:	PH-MW-01	Sample Collection Time:	10:30 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	702.43	MSL		11/30/2020	10:30 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2020	10:30 AM	BTB
Conductivity	2379	µS/cm	SM 2510, B-2011	11/30/2020	10:30 AM	BTB
Temperature	45.93	°F	SM 2550, B-2010	11/30/2020	10:30 AM	BTB
Oxidation-Reduction Potential	241.3	mV	SM 2580, B-2011	11/30/2020	10:30 AM	BTB
pH	6.24	S.U.	SM 4500-H+, B-2011	11/30/2020	10:30 AM	BTB
Oxygen, dissolved	5.5	mg/L	SM 4500-O	11/30/2020	10:30 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000567

Sample Received Date:	12/3/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	8:50 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)	12/15/2020	3:43 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Barium	59.7	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Boron	1270	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Calcium	332000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	2:10 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Cobalt	4.4	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Lithium	91.6	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Selenium	1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:43 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	12/18/2020	1:01 PM	JD
Chloride	48.5	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	12/20/2020	10:06 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	12/20/2020	10:06 PM	JD
Sulfate	435	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	12/23/2020	12:17 PM	JD
Solids, Total Dissolved	1860	mg/L		50.0	SM 2540, C-2011 (mod)	12/4/2020	9:35 AM	JD

Pace

Lab Identification #: 30396363001

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	2.83 ± 1.19 (1.56)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:36 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:06 PM 01/13/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Thursday, January 14, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2020
Well ID No:	PH-MW-02	Sample Collection Time:	11:57 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	547.88	MSL		11/30/2020	11:57 AM	BTB
Turbidity	1.08	NTU	SM 2130, B-2001	11/30/2020	11:57 AM	BTB
Conductivity	1670	µS/cm	SM 2510, B-2011	11/30/2020	11:57 AM	BTB
Temperature	48.11	°F	SM 2550, B-2010	11/30/2020	11:57 AM	BTB
Oxidation-Reduction Potential	-112.4	mV	SM 2580, B-2011	11/30/2020	11:57 AM	BTB
pH	7.72	S.U.	SM 4500-H+, B-2011	11/30/2020	11:57 AM	BTB
Oxygen, dissolved	2.6	mg/L	SM 4500-O	11/30/2020	11:57 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000568

Sample Received Date:	12/3/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	8:50 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)	12/15/2020	3:47 PM	JD
Arsenic	1.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Barium	64.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Boron	1030	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Calcium	31900	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	2:13 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Lithium	74.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Molybdenum	3.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:47 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	12/18/2020	12:55 PM	JD
Chloride	211	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	5:47 PM	JD
Fluoride	0.60	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	12/20/2020	11:04 PM	JD
Sulfate	37.1	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	12/20/2020	11:04 PM	JD
Solids, Total Dissolved	894	mg/L		50.0	SM 2540, C-2011 (mod)	12/4/2020	9:35 AM	JD

Pace

Lab Identification #: 30396363002

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.59 ± 0.980 (1.54)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:36 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:07 PM 01/13/2021

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Report Date: Thursday, January 14, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2020
Well ID No:	PH-MW-03	Sample Collection Time:	3:35 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	558.9	MSL		11/30/2020	3:35 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2020	3:35 PM	BTB
Conductivity	3999	µS/cm	SM 2510, B-2011	11/30/2020	3:35 PM	BTB
Temperature	48.02	°F	SM 2550, B-2010	11/30/2020	3:35 PM	BTB
Oxidation-Reduction Potential	1708	mV	SM 2580, B-2011	11/30/2020	3:35 PM	BTB
pH	7.34	S.U.	SM 4500-H+, B-2011	11/30/2020	3:35 PM	BTB
Oxygen, dissolved	2.26	mg/L	SM 4500-O	11/30/2020	3:35 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000569

Sample Received Date:	12/3/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	8:50 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)	12/15/2020	3:51 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Barium	84.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Boron	2910	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Calcium	88000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	2:17 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Cobalt	1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	4:40 PM	JD
Lithium	185	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Molybdenum	2.5	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Selenium	2.7	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:51 PM	JD
Thallium	< 0.20	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	4:40 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	12/18/2020	12:49 PM	JD
Chloride	725	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	6:06 PM	JD
Fluoride	1.03	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	12/20/2020	11:23 PM	JD
Sulfate	560	mg/L	18.00	40.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	6:06 PM	JD
Solids, Total Dissolved	2490	mg/L		50.0	SM 2540, C-2011 (mod)	12/4/2020	9:35 AM	JD

Pace

Lab Identification #: 30396363003

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.08 ± 1.03 (1.80)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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
02:54 PM 01/13/2021

Eric Hamilton - QA/QC Chemist
12:21 PM 01/14/2021

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Report Date: Thursday, January 14, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2020
Well ID No:	PH-MW-04	Sample Collection Time:	2:26 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	523.49	MSL		11/30/2020	2:26 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2020	2:26 PM	BTB
Conductivity	2307	µS/cm	SM 2510, B-2011	11/30/2020	2:26 PM	BTB
Temperature	48.74	°F	SM 2550, B-2010	11/30/2020	2:26 PM	BTB
Oxidation-Reduction Potential	84.3	mV	SM 2580, B-2011	11/30/2020	2:26 PM	BTB
pH	6.55	S.U.	SM 4500-H+, B-2011	11/30/2020	2:26 PM	BTB
Oxygen, dissolved	3.37	mg/L	SM 4500-O	11/30/2020	2:26 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000570

Sample Received Date:	12/3/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	8:50 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)	12/15/2020	3:55 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Barium	86.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Boron	934	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Calcium	182000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	2:21 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Cobalt	2.3	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Lithium	37.9	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:55 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	12/18/2020	12:43 PM	JD
Chloride	21.1	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	12/20/2020	11:42 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	12/20/2020	11:42 PM	JD
Sulfate	302	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	6:25 PM	JD
Solids, Total Dissolved	1220	mg/L		50.0	SM 2540, C-2011 (mod)	12/4/2020	9:35 AM	JD

Pace

Lab Identification #: 30396363004

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.36 ± 0.985 (1.77)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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
08:36 PM 01/12/2021

Eric Hamilton - QA/QC Chemist
01:07 PM 01/13/2021

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Report Date: Thursday, January 14, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	11/30/2020
Well ID No:	PH-MW-05	Sample Collection Time:	1:00 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	527.28	MSL		11/30/2020	1:00 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	11/30/2020	1:00 PM	BTB
Conductivity	892.0	µS/cm	SM 2510, B-2011	11/30/2020	1:00 PM	BTB
Temperature	41.61	°F	SM 2550, B-2010	11/30/2020	1:00 PM	BTB
Oxidation-Reduction Potential	168.3	mV	SM 2580, B-2011	11/30/2020	1:00 PM	BTB
pH	7.16	S.U.	SM 4500-H+, B-2011	11/30/2020	1:00 PM	BTB
Oxygen, dissolved	8.71	mg/L	SM 4500-O	11/30/2020	1:00 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000571

Sample Received Date:	12/3/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	8:50 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)	12/15/2020	3:59 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Barium	86.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Boron	239	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Calcium	114000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	2:25 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	12/15/2020	3:59 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	12/18/2020	12:40 PM	JD
Chloride	10.3	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	12:01 AM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	12/21/2020	12:01 AM	JD
Sulfate	197	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	12/21/2020	12:01 AM	JD
Solids, Total Dissolved	586	mg/L		50.0	SM 2540, C-2011 (mod)	12/4/2020	9:35 AM	JD

Pace

Lab Identification #: 30396363005

Sample Received Date:	12/9/2020	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:00 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.510 ± 0.733 (1.49)	pCi/L			Total Radium Calculation	12/30/2020	10:43 AM	CMC

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

08:36 PM 01/12/2021

Eric Hamilton - QA/QC Chemist

01:07 PM 01/13/2021

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A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, February 24, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	12/28/2020
Well ID No:	PH-MW-01	Sample Collection Time:	10:08 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	702.56	MSL		12/28/2020	10:08 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	12/28/2020	10:08 AM	BTB
Conductivity	2228	µS/cm	SM 2510, B-2011	12/28/2020	10:08 AM	BTB
Temperature	50.36	°F	SM 2550, B-2010	12/28/2020	10:08 AM	BTB
Oxidation-Reduction Potential	144.1	mV	SM 2580, B-2011	12/28/2020	10:08 AM	BTB
pH	6.02	S.U.	SM 4500-H+, B-2011	12/28/2020	10:08 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	12/28/2020	10:08 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000611

Sample Received Date:	12/29/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:02 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)	1/5/2021	1:33 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Barium	65.4	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Boron	1280	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Calcium	379000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	12:50 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Cobalt	4.2	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Lithium	86.8	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Selenium	1.5	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:33 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	12/29/2020	1:22 PM	JD
Chloride	44.3	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	1:03 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	1/20/2021	1:03 PM	JD
Sulfate	398	mg/L	8.45	20.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	4:12 PM	JD
Solids, Total Dissolved	1780	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30400721001

Sample Received Date:	1/12/2021	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:30 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.51 ± 0.995 (1.62)	pCi/L			Total Radium Calculation	1/27/2021	10:43 AM	CMC

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
02:42 PM 02/03/2021

Eric Hamilton - QA/QC Chemist
02:23 PM 02/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, February 24, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	12/28/2020
Well ID No:	PH-MW-02	Sample Collection Time:	11:36 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	547.08	MSL		12/28/2020	11:36 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	12/28/2020	11:36 AM	BTB
Conductivity	1578	µS/cm	SM 2510, B-2011	12/28/2020	11:36 AM	BTB
Temperature	52.16	°F	SM 2550, B-2010	12/28/2020	11:36 AM	BTB
Oxidation-Reduction Potential	-173.7	mV	SM 2580, B-2011	12/28/2020	11:36 AM	BTB
pH	7.7	S.U.	SM 4500-H+, B-2011	12/28/2020	11:36 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	12/28/2020	11:36 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000612

Sample Received Date:	12/29/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:02 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)	1/5/2021	1:36 PM	JD
Arsenic	1.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Barium	63.4	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Boron	1100	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Calcium	34500	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	12:54 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Lithium	77.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Molybdenum	3.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:36 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	12/29/2020	1:28 PM	JD
Chloride	214	mg/L	4.4	10.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	4:31 PM	JD
Fluoride	0.59	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	1/20/2021	1:22 PM	JD
Sulfate	36.9	mg/L	1.69	4.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	1:22 PM	JD
Solids, Total Dissolved	870	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30400721002

Sample Received Date:	1/12/2021	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:30 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.48 ± 0.850 (1.58)	pCi/L			Total Radium Calculation	1/27/2021	10:43 AM	CMC

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

02:42 PM 02/03/2021

Eric Hamilton - QA/QC Chemist

02:23 PM 02/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, February 24, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	12/28/2020
Well ID No:	PH-MW-03	Sample Collection Time:	2:54 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	559.34	MSL		12/28/2020	2:54 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	12/28/2020	2:54 PM	BTB
Conductivity	3754	µS/cm	SM 2510, B-2011	12/28/2020	2:54 PM	BTB
Temperature	50.00	°F	SM 2550, B-2010	12/28/2020	2:54 PM	BTB
Oxidation-Reduction Potential	87.2	mV	SM 2580, B-2011	12/28/2020	2:54 PM	BTB
pH	7.23	S.U.	SM 4500-H+, B-2011	12/28/2020	2:54 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	12/28/2020	2:54 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000613

Sample Received Date:	12/29/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:02 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)	1/5/2021	1:48 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Barium	87.3	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Boron	3740	µg/L	126	1000	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	12:58 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Calcium	89500	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	12:58 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Cobalt	1.2	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	1/6/2021	11:50 AM	JD
Lithium	196	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Molybdenum	2.7	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Selenium	2.8	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:48 PM	JD
Thallium	< 0.20	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	1/6/2021	11:50 AM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	12/29/2020	1:34 PM	JD
Chloride	734	mg/L	8.8	20.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	4:50 PM	JD
Fluoride	1.00	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	1/20/2021	1:41 PM	JD
Sulfate	545	mg/L	16.90	40.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	4:50 PM	JD
Solids, Total Dissolved	2490	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30400721003

Sample Received Date:	1/12/2021	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:30 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.980 ± 0.860 (1.56)	pCi/L			Total Radium Calculation	1/27/2021	10:43 AM	CMC

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
02:42 PM 02/03/2021

Eric Hamilton - QA/QC Chemist
02:23 PM 02/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, February 24, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	12/28/2020
Well ID No:	PH-MW-04	Sample Collection Time:	2:13 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	523.54	MSL		12/28/2020	2:13 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	12/28/2020	2:13 PM	BTB
Conductivity	1615	µS/cm	SM 2510, B-2011	12/28/2020	2:13 PM	BTB
Temperature	53.24	°F	SM 2550, B-2010	12/28/2020	2:13 PM	BTB
Oxidation-Reduction Potential	85.7	mV	SM 2580, B-2011	12/28/2020	2:13 PM	BTB
pH	6.23	S.U.	SM 4500-H+, B-2011	12/28/2020	2:13 PM	BTB
Oxygen, dissolved	1.56	mg/L	SM 4500-O	12/28/2020	2:13 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000614

Sample Received Date:	12/29/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:02 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)	1/5/2021	1:52 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Barium	87.8	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Boron	912	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Calcium	191000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:09 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Cobalt	2.1	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Lithium	36.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:52 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	12/29/2020	2:35 PM	JD
Chloride	21.1	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	2:00 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	1/20/2021	2:00 PM	JD
Sulfate	294	mg/L	8.45	20.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	5:09 PM	JD
Solids, Total Dissolved	1160	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30400721004

Sample Received Date:	1/12/2021	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:30 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.23 ± 0.858 (1.48)	pCi/L			Total Radium Calculation	1/27/2021	10:43 AM	CMC

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
02:42 PM 02/03/2021

Eric Hamilton - QA/QC Chemist
02:23 PM 02/15/2021

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Report Date: Wednesday, February 24, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	12/28/2020
Well ID No:	PH-MW-05	Sample Collection Time:	12:34 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	527.91	MSL		12/28/2020	12:34 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	12/28/2020	12:34 PM	BTB
Conductivity	824.0	µS/cm	SM 2510, B-2011	12/28/2020	12:34 PM	BTB
Temperature	48.92	°F	SM 2550, B-2010	12/28/2020	12:34 PM	BTB
Oxidation-Reduction Potential	95.6	mV	SM 2580, B-2011	12/28/2020	12:34 PM	BTB
pH	7.10	S.U.	SM 4500-H+, B-2011	12/28/2020	12:34 PM	BTB
Oxygen, dissolved	6.15	mg/L	SM 4500-O	12/28/2020	12:34 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2000615

Sample Received Date:	12/29/2020	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:02 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)	1/5/2021	1:56 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Barium	83.3	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Boron	224	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Calcium	121000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:13 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	1/5/2021	1:56 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	12/29/2020	1:43 PM	JD
Chloride	10.8	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	2:18 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	1/20/2021	2:18 PM	JD
Sulfate	191	mg/L	1.69	4.0	EPA 300.0 Rev 2.1 (1993)	1/20/2021	2:18 PM	JD
Solids, Total Dissolved	606	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30400721005

Sample Received Date:	1/12/2021	Sample Receipt Temperatures (°C):	N/A
Sample Received Time:	10:30 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.220 ± 0.724 (1.62)	pCi/L			Total Radium Calculation	1/27/2021	10:43 AM	CMC

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
02:42 PM 02/03/2021

Eric Hamilton - QA/QC Chemist
02:23 PM 02/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, March 26, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	1/29/2021
Well ID No:	PH-MW-01	Sample Collection Time:	10:49 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	702.9	MSL		1/29/2021	10:49 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	1/29/2021	10:49 AM	BTB
Conductivity	926.0	µS/cm	SM 2510, B-2011	1/29/2021	10:49 AM	BTB
Temperature	43.61	°F	SM 2550, B-2010	1/29/2021	10:49 AM	BTB
Oxidation-Reduction Potential	147.1	mV	SM 2580, B-2011	1/29/2021	10:49 AM	BTB
pH	5.78	S.U.	SM 4500-H+, B-2011	1/29/2021	10:49 AM	BTB
Oxygen, dissolved	1.15	mg/L	SM 4500-O	1/29/2021	10:49 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100063

Sample Received Date:	2/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:45 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)	2/4/2021	1:54 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Barium	65.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:17 PM	JD
Boron	969	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:17 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Calcium	361000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	2:38 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Cobalt	3.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Lithium	84.9	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	12:33 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Selenium	1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:17 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:54 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	2/17/2021	2:30 PM	JD
Chloride	22.3	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	2:55 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	2/17/2021	2:55 PM	JD
Sulfate	354	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	6:04 PM	JD
Solids, Total Dissolved	1720	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30407470001

Sample Received Date:	2/24/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	11:30 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.93 ± 1.07 (1.54)	pCi/L			Total Radium Calculation	3/11/2021	1:10 PM	CMC

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

10:55 AM 03/24/2021

Eric Hamilton - QA/QC Chemist

03:42 PM 03/25/2021

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Report Date: Friday, March 26, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	1/29/2021
Well ID No:	PH-MW-02	Sample Collection Time:	12:27 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	547.33	MSL		1/29/2021	12:27 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	1/29/2021	12:27 PM	BTB
Conductivity	854.0	µS/cm	SM 2510, B-2011	1/29/2021	12:27 PM	BTB
Temperature	44.49	°F	SM 2550, B-2010	1/29/2021	12:27 PM	BTB
Oxidation-Reduction Potential	-119.3	mV	SM 2580, B-2011	1/29/2021	12:27 PM	BTB
pH	7.5	S.U.	SM 4500-H+, B-2011	1/29/2021	12:27 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	1/29/2021	12:27 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100064

Sample Received Date:	2/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:45 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)	2/4/2021	1:58 PM	JD
Arsenic	1.7	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Barium	60.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:21 PM	JD
Boron	1150	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:21 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Calcium	28300	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	2:42 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Lithium	92.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	12:37 PM	JD
Molybdenum	3.5	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:21 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	1:58 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	2/17/2021	2:37 PM	JD
Chloride	232	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	6:23 PM	JD
Fluoride	0.60	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	2/17/2021	3:14 PM	JD
Sulfate	34.9	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	3:14 PM	JD
Solids, Total Dissolved	950	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30407470002

Sample Received Date:	2/24/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	11:30 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.215 ± 0.670 (1.44)	pCi/L			Total Radium Calculation	3/11/2021	1:10 PM	CMC

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

10:55 AM 03/24/2021

Eric Hamilton - QA/QC Chemist

03:42 PM 03/25/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, March 26, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	1/29/2021
Well ID No:	PH-MW-03	Sample Collection Time:	4:53 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	559.47	MSL		1/29/2021	4:53 PM	BTB
Turbidity	1.1	NTU	SM 2130, B-2001	1/29/2021	4:53 PM	BTB
Conductivity	4117	µS/cm	SM 2510, B-2011	1/29/2021	4:53 PM	BTB
Temperature	46.87	°F	SM 2550, B-2010	1/29/2021	4:53 PM	BTB
Oxidation-Reduction Potential	261.4	mV	SM 2580, B-2011	1/29/2021	4:53 PM	BTB
pH	7.11	S.U.	SM 4500-H+, B-2011	1/29/2021	4:53 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	1/29/2021	4:53 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100065

Sample Received Date:	2/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:45 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)	2/4/2021	2:02 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Barium	78.7	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:25 PM	JD
Boron	2840	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:25 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Calcium	96300	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	2:46 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Lithium	206	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	12:41 PM	JD
Molybdenum	2.3	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Selenium	1.9	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:25 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:02 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	2/17/2021	2:43 PM	JD
Chloride	686	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	6:42 PM	JD
Fluoride	0.94	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	2/17/2021	3:33 PM	JD
Sulfate	517	mg/L	18.00	40.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	6:42 PM	JD
Solids, Total Dissolved	2380	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30407470003

Sample Received Date:	2/24/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	11:30 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.04 ± 0.820 (1.35)	pCi/L			Total Radium Calculation	3/11/2021	1:10 PM	CMC

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
10:55 AM 03/24/2021

Eric Hamilton - QA/QC Chemist
03:42 PM 03/25/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, March 26, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	1/29/2021
Well ID No:	PH-MW-04	Sample Collection Time:	3:17 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	523.8	MSL		1/29/2021	3:17 PM	BTB
Turbidity	1.04	NTU	SM 2130, B-2001	1/29/2021	3:17 PM	BTB
Conductivity	1945	µS/cm	SM 2510, B-2011	1/29/2021	3:17 PM	BTB
Temperature	48.67	°F	SM 2550, B-2010	1/29/2021	3:17 PM	BTB
Oxidation-Reduction Potential	87.3	mV	SM 2580, B-2011	1/29/2021	3:17 PM	BTB
pH	6.25	S.U.	SM 4500-H+, B-2011	1/29/2021	3:17 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	1/29/2021	3:17 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100066

Sample Received Date:	2/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:45 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)	2/4/2021	2:05 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Barium	88.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:29 PM	JD
Boron	888	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:29 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Calcium	185000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	2:50 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Cobalt	2.3	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Lithium	42.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	12:45 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:29 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:05 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	2/17/2021	2:49 PM	JD
Chloride	20.1	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	3:51 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	2/17/2021	3:51 PM	JD
Sulfate	279	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	7:01 PM	JD
Solids, Total Dissolved	1160	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30407470004

Sample Received Date:	2/24/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	11:30 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.840 ± 0.717 (1.24)	pCi/L			Total Radium Calculation	3/11/2021	1:10 PM	CMC

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

10:55 AM 03/24/2021

Eric Hamilton - QA/QC Chemist

03:42 PM 03/25/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, March 26, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	1/29/2021
Well ID No:	PH-MW-05	Sample Collection Time:	1:44 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	528.17	MSL		1/29/2021	1:44 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	1/29/2021	1:44 PM	BTB
Conductivity	878.0	µS/cm	SM 2510, B-2011	1/29/2021	1:44 PM	BTB
Temperature	43.97	°F	SM 2550, B-2010	1/29/2021	1:44 PM	BTB
Oxidation-Reduction Potential	240.9	mV	SM 2580, B-2011	1/29/2021	1:44 PM	BTB
pH	6.90	S.U.	SM 4500-H+, B-2011	1/29/2021	1:44 PM	BTB
Oxygen, dissolved	5.54	mg/L	SM 4500-O	1/29/2021	1:44 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100067

Sample Received Date:	2/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:45 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)	2/4/2021	2:17 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Barium	82.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:32 PM	JD
Boron	214	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:32 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Calcium	117000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	2:54 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	12:48 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	2/22/2021	3:32 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	2/4/2021	2:17 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	2/17/2021	2:52 PM	JD
Chloride	10.6	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	4:10 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	2/17/2021	4:10 PM	JD
Sulfate	176	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	2/17/2021	4:10 PM	JD
Solids, Total Dissolved	586	mg/L		50.0	SM 2540, C-2011 (mod)	12/29/2020	3:16 PM	JD

Pace

Lab Identification #: 30407470005

Sample Received Date:	2/24/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	11:30 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.480 ± 0.791 (1.51)	pCi/L			Total Radium Calculation	3/11/2021	1:10 PM	CMC

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

10:55 AM 03/24/2021

Eric Hamilton - QA/QC Chemist

03:42 PM 03/25/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, April 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	2/25/2021
Well ID No:	PH-MW-01	Sample Collection Time:	10:07 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	703.44	MSL		2/25/2021	10:07 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	2/25/2021	10:07 AM	BTB
Conductivity	763.0	µS/cm	SM 2510, B-2011	2/25/2021	10:07 AM	BTB
Temperature	45.30	°F	SM 2550, B-2010	2/25/2021	10:07 AM	BTB
Oxidation-Reduction Potential	189.6	mV	SM 2580, B-2011	2/25/2021	10:07 AM	BTB
pH	5.63	S.U.	SM 4500-H+, B-2011	2/25/2021	10:07 AM	BTB
Oxygen, dissolved	2.7	mg/L	SM 4500-O	2/25/2021	10:07 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100103

Sample Received Date:	2/26/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:05 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)	3/3/2021	2:17 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Barium	57.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Boron	924	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Calcium	334000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:12 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Cobalt	1.8	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Lithium	70.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Selenium	1.2	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	3/17/2021	2:20 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:17 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	3/1/2021	10:39 AM	JD
Chloride	19.9	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	5:05 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	3/1/2021	5:05 PM	JD
Sulfate	312	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	9:30 PM	JD
Solids, Total Dissolved	1480	mg/L		50.0	SM 2540, C-2011 (mod)	3/1/2021	10:33 AM	JD

Pace

Lab Identification #: 30408677001

Sample Received Date:	3/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:50 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.581 ± 0.856 (1.61)	pCi/L			Total Radium Calculation	3/19/2021	2:02 PM	CMC

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

12:39 PM 04/05/2021

Eric Hamilton - QA/QC Chemist

01:30 PM 04/06/2021

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Report Date: Friday, April 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	2/25/2021
Well ID No:	PH-MW-02	Sample Collection Time:	12:00 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	546.66	MSL		2/25/2021	12:00 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	2/25/2021	12:00 PM	BTB
Conductivity	1547	µS/cm	SM 2510, B-2011	2/25/2021	12:00 PM	BTB
Temperature	50.00	°F	SM 2550, B-2010	2/25/2021	12:00 PM	BTB
Oxidation-Reduction Potential	-111.9	mV	SM 2580, B-2011	2/25/2021	12:00 PM	BTB
pH	7.34	S.U.	SM 4500-H+, B-2011	2/25/2021	12:00 PM	BTB
Oxygen, dissolved	1.08	mg/L	SM 4500-O	2/25/2021	12:00 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100104

Sample Received Date:	2/26/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:05 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)	3/3/2021	2:21 PM	JD
Arsenic	1.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Barium	73.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Boron	1190	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Calcium	39200	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:16 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Lithium	73.6	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Molybdenum	1.9	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Selenium	1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	3/17/2021	2:22 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:21 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	3/1/2021	10:45 AM	JD
Chloride	187	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	9:49 PM	JD
Fluoride	0.52	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	3/1/2021	5:24 PM	JD
Sulfate	35.7	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	5:24 PM	JD
Solids, Total Dissolved	796	mg/L		50.0	SM 2540, C-2011 (mod)	3/1/2021	10:33 AM	JD

Pace

Lab Identification #: 30408677002

Sample Received Date:	3/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:50 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.546 ± 0.990 (1.88)	pCi/L			Total Radium Calculation	3/19/2021	2:02 PM	CMC

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

12:39 PM 04/05/2021

Eric Hamilton - QA/QC Chemist

01:30 PM 04/06/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, April 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	2/25/2021
Well ID No:	PH-MW-03	Sample Collection Time:	3:45 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	559.85	MSL		2/25/2021	3:45 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	2/25/2021	3:45 PM	BTB
Conductivity	3804	µS/cm	SM 2510, B-2011	2/25/2021	3:45 PM	BTB
Temperature	52.30	°F	SM 2550, B-2010	2/25/2021	3:45 PM	BTB
Oxidation-Reduction Potential	209.5	mV	SM 2580, B-2011	2/25/2021	3:45 PM	BTB
pH	7.14	S.U.	SM 4500-H+, B-2011	2/25/2021	3:45 PM	BTB
Oxygen, dissolved	1.34	mg/L	SM 4500-O	2/25/2021	3:45 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100105

Sample Received Date:	2/26/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:05 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)	3/3/2021	2:25 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Barium	57.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Boron	3110	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Calcium	103000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:20 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Lead	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:54 PM	JD
Lithium	170	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Molybdenum	1.3	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:25 PM	JD
Selenium	2.2	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	3/17/2021	2:23 PM	JD
Thallium	< 0.40	µg/L	0.10	0.40	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:54 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	3/1/2021	10:51 AM	JD
Chloride	620	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	10:08 PM	JD
Fluoride	1.06	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	3/1/2021	5:43 PM	JD
Sulfate	403	mg/L	18.00	40.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	10:08 PM	JD
Solids, Total Dissolved	2020	mg/L		50.0	SM 2540, C-2011 (mod)	3/1/2021	10:33 AM	JD

Pace

Lab Identification #: 30408677003

Sample Received Date:	3/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:50 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.510 ± 0.830 (1.70)	pCi/L			Total Radium Calculation	3/19/2021	2:02 PM	CMC

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

12:39 PM 04/05/2021

Eric Hamilton - QA/QC Chemist

01:30 PM 04/06/2021

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Report Date: Friday, April 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	2/25/2021
Well ID No:	PH-MW-04	Sample Collection Time:	2:43 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	523.65	MSL		2/25/2021	2:43 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	2/25/2021	2:43 PM	BTB
Conductivity	1847	µS/cm	SM 2510, B-2011	2/25/2021	2:43 PM	BTB
Temperature	53.60	°F	SM 2550, B-2010	2/25/2021	2:43 PM	BTB
Oxidation-Reduction Potential	152.2	mV	SM 2580, B-2011	2/25/2021	2:43 PM	BTB
pH	6.19	S.U.	SM 4500-H+, B-2011	2/25/2021	2:43 PM	BTB
Oxygen, dissolved	3.02	mg/L	SM 4500-O	2/25/2021	2:43 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100106

Sample Received Date:	2/26/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:05 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)	3/3/2021	2:29 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Barium	92.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Boron	1080	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Calcium	197000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:24 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Cobalt	2.1	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Lithium	40.6	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	3/17/2021	2:25 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:29 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	3/1/2021	12:16 PM	JD
Chloride	20.4	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	6:02 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	3/1/2021	6:02 PM	JD
Sulfate	281	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	10:27 PM	JD
Solids, Total Dissolved	1180	mg/L		50.0	SM 2540, C-2011 (mod)	3/1/2021	10:33 AM	JD

Pace

Lab Identification #: 30408677004

Sample Received Date:	3/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:50 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.560 ± 0.678 (1.35)	pCi/L			Total Radium Calculation	3/19/2021	2:02 PM	CMC

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

12:39 PM 04/05/2021

Eric Hamilton - QA/QC Chemist

01:30 PM 04/06/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, April 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	2/25/2021
Well ID No:	PH-MW-05	Sample Collection Time:	1:15 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	528.83	MSL		2/25/2021	1:15 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	2/25/2021	1:15 PM	BTB
Conductivity	887.0	µS/cm	SM 2510, B-2011	2/25/2021	1:15 PM	BTB
Temperature	49.06	°F	SM 2550, B-2010	2/25/2021	1:15 PM	BTB
Oxidation-Reduction Potential	250.9	mV	SM 2580, B-2011	2/25/2021	1:15 PM	BTB
pH	6.84	S.U.	SM 4500-H+, B-2011	2/25/2021	1:15 PM	BTB
Oxygen, dissolved	6.38	mg/L	SM 4500-O	2/25/2021	1:15 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100107

Sample Received Date:	2/26/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:05 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)	3/3/2021	2:33 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Barium	82.3	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Boron	248	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Calcium	116000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	1:28 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	3/17/2021	2:26 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	3/3/2021	2:33 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	3/1/2021	11:01 AM	JD
Chloride	11.0	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	6:21 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	3/1/2021	6:21 PM	JD
Sulfate	186	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	3/1/2021	6:21 PM	JD
Solids, Total Dissolved	576	mg/L		50.0	SM 2540, C-2011 (mod)	3/1/2021	10:33 AM	JD

Pace

Lab Identification #: 30408677005

Sample Received Date:	3/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:50 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.15 ± 0.817 (1.46)	pCi/L			Total Radium Calculation	3/19/2021	2:02 PM	CMC

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

12:39 PM 04/05/2021

Eric Hamilton - QA/QC Chemist

01:30 PM 04/06/2021

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P.O. Box 707, Winchester
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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, May 5, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	3/31/2021
Well ID No:	PH-MW-01	Sample Collection Time:	11:13 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	704.91	MSL		3/31/2021	11:13 AM	BTB
Turbidity	2.28	NTU	SM 2130, B-2001	3/31/2021	11:13 AM	BTB
Conductivity	458.0	µS/cm	SM 2510, B-2011	3/31/2021	11:13 AM	BTB
Temperature	51.37	°F	SM 2550, B-2010	3/31/2021	11:13 AM	BTB
Oxidation-Reduction Potential	289.9	mV	SM 2580, B-2011	3/31/2021	11:13 AM	BTB
pH	5.75	S.U.	SM 4500-H+, B-2011	3/31/2021	11:13 AM	BTB
Oxygen, dissolved	2.72	mg/L	SM 4500-O	3/31/2021	11:13 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100123

Sample Received Date:	4/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:35 PM	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)	4/6/2021	1:53 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Barium	46.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Boron	632	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Calcium	278000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:02 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Lithium	51.9	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Selenium	1.1	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Thallium	0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	1:53 PM	JD
Mercury	< 0.0200	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	4/8/2021	1:15 PM	JD
Chloride	14.6	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	4/12/2021	2:16 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	4/12/2021	2:16 PM	JD
Sulfate	260	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	4/13/2021	1:10 PM	JD
Solids, Total Dissolved	1240	mg/L		50.0	SM 2540, C-2011 (mod)	4/2/2021	1:00 PM	JD

Pace

Lab Identification #: 30414310001

Sample Received Date:	4/7/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:15 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.975 ± 1.03 (1.93)	pCi/L			Total Radium Calculation	4/27/2021	10:48 AM	CMC

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
07:40 AM 05/03/2021

Eric Hamilton - QA/QC Chemist
10:02 AM 05/04/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, May 5, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	3/31/2021
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	547.06	MSL		3/31/2021	12:50 PM	BTB
Turbidity	2.1	NTU	SM 2130, B-2001	3/31/2021	12:50 PM	BTB
Conductivity	1140	µS/cm	SM 2510, B-2011	3/31/2021	12:50 PM	BTB
Temperature	51.35	°F	SM 2550, B-2010	3/31/2021	12:50 PM	BTB
Oxidation-Reduction Potential	-96.4	mV	SM 2580, B-2011	3/31/2021	12:50 PM	BTB
pH	7.33	S.U.	SM 4500-H+, B-2011	3/31/2021	12:50 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	3/31/2021	12:50 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100124

Sample Received Date:	4/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:35 PM	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)	4/6/2021	2:05 PM	JD
Arsenic	1.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Barium	76.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:18 PM	JD
Boron	1010	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:18 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Calcium	40400	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:04 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Lithium	71.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:18 PM	JD
Molybdenum	1.7	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:05 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	4/8/2021	1:21 PM	JD
Chloride	153	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	4/12/2021	5:05 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	4/12/2021	2:34 PM	JD
Sulfate	33.8	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	4/13/2021	1:29 PM	JD
Solids, Total Dissolved	718	mg/L		50.0	SM 2540, C-2011 (mod)	4/2/2021	1:00 PM	JD

Pace

Lab Identification #: 30414310002

Sample Received Date:	4/7/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:15 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.991 ± 0.910 (1.59)	pCi/L			Total Radium Calculation	4/27/2021	10:48 AM	CMC

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

07:40 AM 05/03/2021

Eric Hamilton - QA/QC Chemist

10:02 AM 05/04/2021

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Report Date: Wednesday, May 5, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	3/31/2021
Well ID No:	PH-MW-03	Sample Collection Time:	4:42 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.30	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	559.15	MSL		3/31/2021	4:42 PM	BTB
Turbidity	1.74	NTU	SM 2130, B-2001	3/31/2021	4:42 PM	BTB
Conductivity	3966	µS/cm	SM 2510, B-2011	3/31/2021	4:42 PM	BTB
Temperature	52.23	°F	SM 2550, B-2010	3/31/2021	4:42 PM	BTB
Oxidation-Reduction Potential	240	mV	SM 2580, B-2011	3/31/2021	4:42 PM	BTB
pH	7.25	S.U.	SM 4500-H+, B-2011	3/31/2021	4:42 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	3/31/2021	4:42 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100125

Sample Received Date:	4/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:35 PM	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)	4/6/2021	2:09 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Barium	68.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:19 PM	JD
Boron	2640	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:19 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Calcium	93200	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:05 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Lithium	165	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:19 PM	JD
Molybdenum	2.1	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Selenium	2.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:09 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	4/8/2021	1:34 PM	JD
Chloride	648	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	4/12/2021	6:02 PM	JD
Fluoride	1.01	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	4/12/2021	2:53 PM	JD
Sulfate	425	mg/L	18.00	40.0	EPA 300.0 Rev 2.1 (1993)	4/13/2021	1:48 PM	JD
Solids, Total Dissolved	2150	mg/L		50.0	SM 2540, C-2011 (mod)	4/2/2021	1:00 PM	JD

Pace

Lab Identification #: 30414310003

Sample Received Date:	4/7/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:15 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.26 ± 1.10 (2.05)	pCi/L			Total Radium Calculation	4/27/2021	10:48 AM	CMC

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
07:40 AM 05/03/2021

Eric Hamilton - QA/QC Chemist
10:02 AM 05/04/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, May 5, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	3/31/2021
Well ID No:	PH-MW-04	Sample Collection Time:	3:52 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	524.11	MSL		3/31/2021	3:52 PM	BTB
Turbidity	3.17	NTU	SM 2130, B-2001	3/31/2021	3:52 PM	BTB
Conductivity	1844	µS/cm	SM 2510, B-2011	3/31/2021	3:52 PM	BTB
Temperature	52.09	°F	SM 2550, B-2010	3/31/2021	3:52 PM	BTB
Oxidation-Reduction Potential	202.7	mV	SM 2580, B-2011	3/31/2021	3:52 PM	BTB
pH	6.15	S.U.	SM 4500-H+, B-2011	3/31/2021	3:52 PM	BTB
Oxygen, dissolved	1.55	mg/L	SM 4500-O	3/31/2021	3:52 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100126

Sample Received Date:	4/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:35 PM	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)	4/6/2021	2:13 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Barium	86.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:21 PM	JD
Boron	819	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:21 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Calcium	189000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:07 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Cobalt	2.2	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Lithium	37.2	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:21 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Selenium	1.2	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:13 PM	JD
Mercury	< 0.0100	µg/L	0.0090	0.0100	EPA 245.7 Rev 2.0 (2005)	4/8/2021	1:40 PM	JD
Chloride	18.9	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	4/12/2021	3:12 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	4/12/2021	3:12 PM	JD
Sulfate	261	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	4/13/2021	2:06 PM	JD
Solids, Total Dissolved	1070	mg/L		50.0	SM 2540, C-2011 (mod)	4/2/2021	1:00 PM	JD

Pace

Lab Identification #: 30414310004

Sample Received Date:	4/7/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:15 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.850 ± 1.07 (1.97)	pCi/L			Total Radium Calculation	4/27/2021	10:48 AM	CMC

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
07:40 AM 05/03/2021

Eric Hamilton - QA/QC Chemist
10:02 AM 05/04/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, May 5, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	3/31/2021
Well ID No:	PH-MW-05	Sample Collection Time:	2:18 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	529.12	MSL		3/31/2021	2:18 PM	BTB
Turbidity	1.72	NTU	SM 2130, B-2001	3/31/2021	2:18 PM	BTB
Conductivity	920.0	µS/cm	SM 2510, B-2011	3/31/2021	2:18 PM	BTB
Temperature	53.64	°F	SM 2550, B-2010	3/31/2021	2:18 PM	BTB
Oxidation-Reduction Potential	269.2	mV	SM 2580, B-2011	3/31/2021	2:18 PM	BTB
pH	7.07	S.U.	SM 4500-H+, B-2011	3/31/2021	2:18 PM	BTB
Oxygen, dissolved	6.17	mg/L	SM 4500-O	3/31/2021	2:18 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100127

Sample Received Date:	4/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:35 PM	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)	4/6/2021	2:16 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Barium	73.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:23 PM	JD
Boron	192	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:23 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Calcium	116000	µg/L	1230	2500	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:08 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	4:23 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	4/6/2021	2:16 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	4/8/2021	1:49 PM	JD
Chloride	10.6	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	4/12/2021	3:31 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	4/12/2021	3:31 PM	JD
Sulfate	183	mg/L	1.80	4.0	EPA 300.0 Rev 2.1 (1993)	4/13/2021	2:25 PM	JD
Solids, Total Dissolved	608	mg/L		50.0	SM 2540, C-2011 (mod)	4/2/2021	1:00 PM	JD

Pace

Lab Identification #: 30414310005

Sample Received Date:	4/7/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:15 AM	Sample Received By:	AF

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.150 ± 0.974 (2.07)	pCi/L			Total Radium Calculation	4/27/2021	10:48 AM	CMC

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

07:40 AM 05/03/2021

Eric Hamilton - QA/QC Chemist

10:02 AM 05/04/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, June 18, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	4/29/2021
Well ID No:	PH-MW-01	Sample Collection Time:	9:54 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	704.53	MSL		4/29/2021	9:54 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	4/29/2021	9:54 AM	BTB
Conductivity	1,623	µS/cm	SM 2510, B-2011	4/29/2021	9:54 AM	BTB
Temperature	59.04	°F	SM 2550, B-2010	4/29/2021	9:54 AM	BTB
Oxidation-Reduction Potential	148.90	mV	SM 2580, B-2011	4/29/2021	9:54 AM	BTB
pH	5.96	S.U.	SM 4500-H+, B-2011	4/29/2021	9:54 AM	BTB
Oxygen, dissolved	1.58	mg/L	SM 4500-O	4/29/2021	9:54 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100211

Sample Received Date:	4/29/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:20 PM	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)	5/11/2021	3:35 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:26 PM	JD
Barium	39.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Boron	543	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:26 PM	JD
Calcium	250,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	1:57 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Lithium	54.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:26 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/16/2021	6:25 PM	JD
Selenium	1.5	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Thallium	0.14	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:35 PM	JD
Mercury	< 0.020	µg/L	0.018	0.020	EPA 245.7 Rev 2.0 (2005)	5/11/2021	3:28 PM	JD
Chloride	16.8	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:03 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:03 PM	JD
Sulfate	265	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	4:53 PM	JD
Solids, Total Dissolved	1,230	mg/L		50.0	SM 2540, C-2011 (mod)	5/3/2021	11:10 AM	JD

Pace

Lab Identification #: 30419635001

Sample Received Date:	5/6/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:10 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.78 ± 0.910(1.32) pC/L				Total Radium Calculation	6/3/2021	3:37 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
09:34 AM 06/18/2021

Eric Hamilton - QA/QC Chemist
01:51 PM 06/18/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, June 18, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	4/29/2021
Well ID No:	PH-MW-02	Sample Collection Time:	11:30 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	547.51	MSL		4/29/2021	11:30 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	4/29/2021	11:30 AM	BTB
Conductivity	1,422	µS/cm	SM 2510, B-2011	4/29/2021	11:30 AM	BTB
Temperature	58.75	°F	SM 2550, B-2010	4/29/2021	11:30 AM	BTB
Oxidation-Reduction Potential	-127.70	mV	SM 2580, B-2011	4/29/2021	11:30 AM	BTB
pH	7.47	S.U.	SM 4500-H+, B-2011	4/29/2021	11:30 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	4/29/2021	11:30 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100212

Sample Received Date:	4/29/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:20 PM	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)	5/11/2021	3:39 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:31 PM	JD
Barium	70.3	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Boron	762	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:31 PM	JD
Calcium	43,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	2:01 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Lithium	66.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:31 PM	JD
Molybdenum	1.5	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/16/2021	6:29 PM	JD
Selenium	1.8	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:39 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	5/11/2021	3:35 PM	JD
Chloride	140	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	5/19/2021	2:37 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:22 PM	JD
Sulfate	33.6	mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:22 PM	JD
Solids, Total Dissolved	712	mg/L		50.0	SM 2540, C-2011 (mod)	5/3/2021	11:10 AM	JD

Pace

Lab Identification #: 30419635002

Sample Received Date:	5/6/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:10 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.901 ± 0.940(1.78) pC/L				Total Radium Calculation	6/3/2021	3:37 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
09:34 AM 06/18/2021

Eric Hamilton - QA/QC Chemist
01:51 PM 06/18/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, June 18, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	4/28/2021
Well ID No:	PH-MW-04	Sample Collection Time:	7:07 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	526.31	MSL		4/28/2021	7:07 PM	BTB
Turbidity	1.52	NTU	SM 2130, B-2001	4/28/2021	7:07 PM	BTB
Conductivity	2,080	µS/cm	SM 2510, B-2011	4/28/2021	7:07 PM	BTB
Temperature	58.64	°F	SM 2550, B-2010	4/28/2021	7:07 PM	BTB
Oxidation-Reduction Potential	25.40	mV	SM 2580, B-2011	4/28/2021	7:07 PM	BTB
pH	6.33	S.U.	SM 4500-H+, B-2011	4/28/2021	7:07 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	4/28/2021	7:07 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100214

Sample Received Date:	4/29/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:20 PM	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)	5/11/2021	3:43 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:35 PM	JD
Barium	69.7	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Boron	671	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:35 PM	JD
Calcium	163,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	2:05 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Cobalt	2.4	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Lithium	38.2	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:35 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/16/2021	6:33 PM	JD
Selenium	2.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Thallium	0.12	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:43 PM	JD
Mercury	< 0.010	µg/L	0.0090	0.010	EPA 245.7 Rev 2.0 (2005)	5/11/2021	3:38 PM	JD
Chloride	18.3	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:41 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:41 PM	JD
Sulfate	236	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	5:31 PM	JD
Solids, Total Dissolved	1,100	mg/L		50.0	SM 2540, C-2011 (mod)	5/3/2021	11:10 AM	JD

Pace

Lab Identification #: 30419635003

Sample Received Date:	5/6/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:10 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.360 ± 0.817(1.68) pC/L				Total Radium Calculation	6/3/2021	3:37 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
09:34 AM 06/18/2021

Eric Hamilton - QA/QC Chemist
01:51 PM 06/18/2021

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http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, June 18, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	4/28/2021
Well ID No:	PH-MW-05	Sample Collection Time:	6:02 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	528.86	MSL		4/28/2021	6:02 PM	BTB
Turbidity	< 1.00	NTU	SM 2130, B-2001	4/28/2021	6:02 PM	BTB
Conductivity	807	µS/cm	SM 2510, B-2011	4/28/2021	6:02 PM	BTB
Temperature	63.45	°F	SM 2550, B-2010	4/28/2021	6:02 PM	BTB
Oxidation-Reduction Potential	94.80	mV	SM 2580, B-2011	4/28/2021	6:02 PM	BTB
pH	7.14	S.U.	SM 4500-H+, B-2011	4/28/2021	6:02 PM	BTB
Oxygen, dissolved	6.07	mg/L	SM 4500-O	4/28/2021	6:02 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100215

Sample Received Date:	4/29/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:20 PM	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)	5/11/2021	3:47 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:39 PM	JD
Barium	67.8	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Boron	179.	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:39 PM	JD
Calcium	104,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	2:09 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	5/19/2021	1:39 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/16/2021	6:36 PM	JD
Selenium	1.3	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Thallium	0.12	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	5/11/2021	3:47 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	5/11/2021	3:44 PM	JD
Chloride	11.5	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	2:41 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	5/10/2021	3:00 PM	JD
Sulfate	185	mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	5/10/2021	3:00 PM	JD
Solids, Total Dissolved	586	mg/L		50.0	SM 2540, C-2011 (mod)	5/3/2021	11:10 AM	JD

Pace

Lab Identification #: 30419635004

Sample Received Date:	5/6/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	10:10 AM	Sample Received By:	JSM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.570 ± 1.00(1.92) pC/L				Total Radium Calculation	6/3/2021	3:37 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

09:34 AM 06/18/2021

Eric Hamilton - QA/QC Chemist

01:51 PM 06/18/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, July 20, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	5/27/2021
Well ID No:	PH-MW-01	Sample Collection Time:	6:30 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	704.35	MSL		5/27/2021	6:30 PM	BTB
Turbidity	1.30	NTU	SM 2130, B-2001	5/27/2021	6:30 PM	BTB
Conductivity	1,864	µS/cm	SM 2510, B-2011	5/27/2021	6:30 PM	BTB
Temperature	59.14	°F	SM 2550, B-2010	5/27/2021	6:30 PM	BTB
Oxidation-Reduction Potential	175.40	mV	SM 2580, B-2011	5/27/2021	6:30 PM	BTB
pH	5.93	S.U.	SM 4500-H+, B-2011	5/27/2021	6:30 PM	BTB
Oxygen, dissolved	1.23	mg/L	SM 4500-O	5/27/2021	6:30 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100275

Sample Received Date:	5/28/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:45 PM	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)	6/1/2021	7:09 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Barium	50.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Boron	616	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Calcium	313,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	5:26 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Cobalt	1.2	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Lithium	51.6	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Thallium	0.13	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:09 PM	JD
Mercury	< 0.020	µg/L	0.018	0.0200	EPA 245.7 Rev 2.0 (2005)	6/10/2021	2:22 PM	JD
Chloride	15.6	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	3:55 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	6/8/2021	3:55 PM	JD
Sulfate	244	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	6:45 PM	JD
Solids, Total Dissolved	1,350	mg/L		50.0	SM 2540, C-2011 (mod)	6/3/2021	2:24 PM	JD

Pace

Lab Identification #: 30425658001

Sample Received Date:	6/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	MJM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.331 ± 0.945(1.91) pCi/L				Total Radium Calculation	7/2/2021	6:33 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

11:39 AM 07/13/2021

Eric Hamilton - QA/QC Chemist

11:12 AM 07/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, July 20, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	5/27/2021
Well ID No:	PH-MW-02	Sample Collection Time:	8:20 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	547.20	MSL		5/27/2021	8:20 PM	BTB
Turbidity	1.46	NTU	SM 2130, B-2001	5/27/2021	8:20 PM	BTB
Conductivity	1,228	µS/cm	SM 2510, B-2011	5/27/2021	8:20 PM	BTB
Temperature	58.77	°F	SM 2550, B-2010	5/27/2021	8:20 PM	BTB
Oxidation-Reduction Potential	6.30	mV	SM 2580, B-2011	5/27/2021	8:20 PM	BTB
pH	7.31	S.U.	SM 4500-H+, B-2011	5/27/2021	8:20 PM	BTB
Oxygen, dissolved	1.14	mg/L	SM 4500-O	5/27/2021	8:20 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100276

Sample Received Date:	5/28/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:45 PM	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)	6/1/2021	7:13 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Barium	95.2	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Boron	941	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Calcium	55,700	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	5:30 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Lithium	57.2	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Molybdenum	1.3	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:13 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	6/10/2021	2:25 PM	JD
Chloride	144	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	7:04 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:14 PM	JD
Sulfate	33.8	mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:14 PM	JD
Solids, Total Dissolved	718	mg/L		50.0	SM 2540, C-2011 (mod)	6/3/2021	2:24 PM	JD

Pace

Lab Identification #: 30425658002

Sample Received Date:	6/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	MJM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.26 ± 0.900(1.26) pCi/L				Total Radium Calculation	7/2/2021	6:33 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

11:39 AM 07/13/2021

Eric Hamilton - QA/QC Chemist

11:12 AM 07/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, July 20, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	5/28/2021
Well ID No:	PH-MW-04	Sample Collection Time:	11:50 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	526.50	MSL		5/28/2021	11:50 AM	BTB
Turbidity	2.84	NTU	SM 2130, B-2001	5/28/2021	11:50 AM	BTB
Conductivity	1,484	µS/cm	SM 2510, B-2011	5/28/2021	11:50 AM	BTB
Temperature	61.02	°F	SM 2550, B-2010	5/28/2021	11:50 AM	BTB
Oxidation-Reduction Potential	155.70	mV	SM 2580, B-2011	5/28/2021	11:50 AM	BTB
pH	5.97	S.U.	SM 4500-H+, B-2011	5/28/2021	11:50 AM	BTB
Oxygen, dissolved	1.85	mg/L	SM 4500-O	5/28/2021	11:50 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100278

Sample Received Date:	5/28/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:45 PM	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)	6/1/2021	7:18 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Barium	78.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Boron	751	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Calcium	170,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	5:34 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Cobalt	1.4	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Lithium	33.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Thallium	0.12	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:18 PM	JD
Mercury	< 0.020	µg/L	0.018	0.020	EPA 245.7 Rev 2.0 (2005)	6/10/2021	2:28 PM	JD
Chloride	16.0	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:32 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:32 PM	JD
Sulfate	218	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	7:23 PM	JD
Solids, Total Dissolved	1,060	mg/L		50.0	SM 2540, C-2011 (mod)	6/3/2021	2:24 PM	JD

Pace

Lab Identification #: 30425658003

Sample Received Date:	6/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	MJM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.640 ± 1.13(2.19)	pCi/L			Total Radium Calculation	7/2/2021	6:33 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

11:39 AM 07/13/2021

Eric Hamilton - QA/QC Chemist

11:12 AM 07/15/2021

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Report Date: Tuesday, July 20, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	5/28/2021
Well ID No:	PH-MW-05	Sample Collection Time:	9:57 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	528.67	MSL		5/28/2021	9:57 AM	BTB
Turbidity	1.25	NTU	SM 2130, B-2001	5/28/2021	9:57 AM	BTB
Conductivity	877.00	µS/cm	SM 2510, B-2011	5/28/2021	9:57 AM	BTB
Temperature	62.83	°F	SM 2550, B-2010	5/28/2021	9:57 AM	BTB
Oxidation-Reduction Potential	162.60	mV	SM 2580, B-2011	5/28/2021	9:57 AM	BTB
pH	7.12	S.U.	SM 4500-H+, B-2011	5/28/2021	9:57 AM	BTB
Oxygen, dissolved	6.31	mg/L	SM 4500-O	5/28/2021	9:57 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100279

Sample Received Date:	5/28/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	1:45 PM	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)	6/1/2021	7:22 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Barium	80.8	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Boron	218	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Calcium	116,000	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	5:38 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Thallium	0.11	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	6/1/2021	7:22 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	6/10/2021	2:31 PM	JD
Chloride	11.8	mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:51 PM	JD
Fluoride	< 0.50	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:51 PM	JD
Sulfate	192	mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	6/8/2021	4:51 PM	JD
Solids, Total Dissolved	618	mg/L		50.0	SM 2540, C-2011 (mod)	6/3/2021	2:24 PM	JD

Pace

Lab Identification #: 30425658004

Sample Received Date:	6/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	MJM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.260 ± 0.754(1.52) pCi/L				Total Radium Calculation	7/2/2021	6:33 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

11:39 AM 07/13/2021

Eric Hamilton - QA/QC Chemist

11:12 AM 07/15/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Friday, August 27, 2021

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: 6/20/2021
Sample Collection Time: 2:36 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	577.00	MSL		6/20/2021	2:36 PM	BTB
Turbidity	8.32	NTU	SM 2130, B-2001	6/20/2021	2:36 PM	BTB
Conductivity	3,634	µS/cm	SM 2510, B-2011	6/20/2021	2:36 PM	BTB
Temperature	71.24	°F	SM 2550, B-2010	6/20/2021	2:36 PM	BTB
Oxidation-Reduction Potential	201.10	mV	SM 2580, B-2011	6/20/2021	2:36 PM	BTB
pH	7.66	S.U.	SM 4500-H+, B-2011	6/20/2021	2:36 PM	BTB
Oxygen, dissolved	< 1.00	mg/L	SM 4500-O	6/20/2021	2:36 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100420

Sample Received Date: 6/24/2021
Sample Received Time: 10:25 AM
Sample Receipt Temperatures (°C): < 6
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)	7/13/2021	4:57 PM	JD
Arsenic	1.6	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Barium	121	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Boron	2,150	µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:36 PM	JD
Calcium	27,100.	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:12 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:06 PM	JD
Lithium	176.	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Molybdenum	29.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:57 PM	JD
Selenium	3.3	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:36 PM	JD
Thallium	< 0.20	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:06 PM	JD
Mercury	< 0.0050	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:50 PM	JD
Chloride	639	mg/L	9.0	5.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:13 PM	JD
Fluoride	0.72	mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	4:54 PM	JD
Sulfate	494	mg/L	18.0	40.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:13 PM	JD
Solids, Total Dissolved	2,070	mg/L		100	SM 2540, C-2011	6/25/2021	2:20 PM	JD

Pace

Lab Identification #: 30429578001

Sample Received Date: 7/7/2021
Sample Received Time: 2:00 PM
Sample Receipt Temperatures (°C): N/A
Sample Received By: JR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.86 ± 1.07(1.53) pC/L				Total Radium Calculation	7/28/2021	1:33 PM	RMK

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
01:16 PM 08/10/2021

Eric Hamilton - QA/QC Chemist
12:12 PM 08/16/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/28/2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/06/2021
Well ID No:	PH-MW-01	Sample Collection Time:	11:10 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	703.85		MSL		07/06/2021	11:10 AM	BTB
Turbidity	1.28		NTU	SM 2130, B-2001	07/06/2021	11:10 AM	BTB
Conductivity	1916		µS/cm	SM 2510, B-2011	07/06/2021	11:10 AM	BTB
Temperature	62.67		°F	SM 2550, B-2010	07/06/2021	11:10 AM	BTB
Oxidation-Reduction Potential	169.40		mV	SM 2580, B-2011	07/06/2021	11:10 AM	BTB
pH	5.94		S.U.	SM 4500-H+, B-2011	07/06/2021	11:10 AM	BTB
Oxygen, dissolved	1.17		mg/L	SM 4500-O	07/06/2021	11:10 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100350

Sample Received Date:	07/07/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	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)	7/13/2021	4:16 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Barium	53.7		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Boron	641		µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Cadmium	< 0.10		µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:08 PM	JD
Calcium	303000	D	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	3:33 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Cobalt	1.4		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Lithium	54.7		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Selenium	1.4		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:16 PM	JD
Thallium	< 0.10		µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:16 PM	JD
Mercury	< 0.0200	D	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:22 PM	JD
Chloride	14.2		mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:32 PM	JD
Fluoride	< 0.50		mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:32 PM	JD
Sulfate	27	D	mg/L	9.00	20.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	8:41 PM	JD
Solids, Total Dissolved	1210		mg/L		50.0	SM 2540, C-2011	7/9/2021	1:16 PM	JD

Pace

Lab Identification #: 30431731001

Sample Received Date:	7/20/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	2:20 PM	Sample Received By:	MTM

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.614 ± 0.740 (1.38)		pCi/L			Total Radium Calculation	8/9/2021	4:17 PM	RMK

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

04:18 PM 09/27/2021

Eric Hamilton - QA/QC Chemist

09:03 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/28/2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/06/2021
Well ID No:	PH-MW-02	Sample Collection Time:	1:07 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	546.93		MSL		07/06/2021	1:07 PM	BTB
Turbidity	1.49		NTU	SM 2130, B-2001	07/06/2021	1:07 PM	BTB
Conductivity	1307		µS/cm	SM 2510, B-2011	07/06/2021	1:07 PM	BTB
Temperature	64.76		°F	SM 2550, B-2010	07/06/2021	1:07 PM	BTB
Oxidation-Reduction Potential	-4.70		mV	SM 2580, B-2011	07/06/2021	1:07 PM	BTB
pH	7.35		S.U.	SM 4500-H+, B-2011	07/06/2021	1:07 PM	BTB
Oxygen, dissolved	< 1.0		mg/L	SM 4500-O	07/06/2021	1:07 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100351

Sample Received Date:	07/07/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	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)	7/13/2021	4:20 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Barium	90.6		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Boron	894.0		µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Cadmium	< 0.10		µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:10 PM	JD
Calcium	49700	D	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	3:37 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Lithium	57.3		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Molybdenum	1.4		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:19 PM	JD
Thallium	< 0.10		µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:20 PM	JD
Mercury	< 0.0050	D	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:25 PM	JD
Chloride	155	D	mg/L	4.5	10.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	9:00 PM	JD
Fluoride	< 0.50		mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:51 PM	JD
Sulfate	36.8		mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	5:51 PM	JD
Solids, Total Dissolved	654		mg/L		50.0	SM 2540, C-2011	7/9/2021	1:16 PM	JD

Pace

Lab Identification #: 30431731002

Sample Received Date:	7/20/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	2:20 PM	Sample Received By:	MTM

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.701 ± 0.700 (1.23)		pCi/L			Total Radium Calculation	8/9/2021	4:17 PM	RMK

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

04:18 PM 09/27/2021

Eric Hamilton - QA/QC Chemist

09:03 AM 09/28/2021

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Report Date: 9/28/2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/06/2021
Well ID No:	PH-MW-03	Sample Collection Time:	5:14 PM
AKGW No.:	8006-4556	Sample Collected By:	BTB
Well Depth (Ft.):	42.25	Sample Matrix:	Ground Water
Well Elevation (Ft. MSL):	593.3	Laboratory Certification ID:	KY# 08012
Gradient:	Down		

Field Analyses

	Result	Units		Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Groundwater Elevation	577.17		MSL		07/06/2021	5:14 PM	BTB
Turbidity	2.46		NTU	SM 2130, B-2001	07/06/2021	5:14 PM	BTB
Conductivity	3641		µS/cm	SM 2510, B-2011	07/06/2021	5:14 PM	BTB
Temperature	74.25		°F	SM 2550, B-2010	07/06/2021	5:14 PM	BTB
Oxidation-Reduction Potential	79.10		mV	SM 2580, B-2011	07/06/2021	5:14 PM	BTB
pH	6.99		S.U.	SM 4500-H+, B-2011	07/06/2021	5:14 PM	BTB
Oxygen, dissolved	2.42		mg/L	SM 4500-O	07/06/2021	5:14 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100352

Sample Received Date:	07/07/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	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)	7/13/2021	4:24 PM	JD
Arsenic	1.7		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Barium	129		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Boron	2240		µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Cadmium	< 0.10		µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:12 PM	JD
Calcium	28900	D	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	3:41 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Lead	< 1.0	D	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:01 PM	JD
Lithium	188		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Molybdenum	29.2		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:24 PM	JD
Selenium	2.1		µg/L	0.8	2.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:12 PM	JD
Thallium	< 0.20	D	µg/L	0.05	0.20	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:01 PM	JD
Mercury	< 0.0050	D	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:28 PM	JD
Chloride	660	D	mg/L	9.0	20.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	9:19 PM	JD
Fluoride	0.70		mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:10 PM	JD
Sulfate	529	D	mg/L	18.0	40.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	9:19 PM	JD
Solids, Total Dissolved	2120		mg/L		50.0	SM 2540, C-2011	7/9/2021	1:16 PM	JD

Pace

Lab Identification #: 30431731003

Sample Received Date:	7/20/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	2:20 PM	Sample Received By:	MTM

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.60 ± 1.09 (1.66)		pCi/L			Total Radium Calculation	8/9/2021	4:17 PM	RMK

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

04:18 PM 09/27/2021

Eric Hamilton - QA/QC Chemist

09:03 AM 09/28/2021

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Report Date: 9/28/2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/06/2021
Well ID No:	PH-MW-04	Sample Collection Time:	4:26 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	526.4	MSL			07/06/2021	4:26 PM	BTB
Turbidity	2.50	NTU		SM 2130, B-2001	07/06/2021	4:26 PM	BTB
Conductivity	1463	µS/cm		SM 2510, B-2011	07/06/2021	4:26 PM	BTB
Temperature	65.7	°F		SM 2550, B-2010	07/06/2021	4:26 PM	BTB
Oxidation-Reduction Potential	163.60	mV		SM 2580, B-2011	07/06/2021	4:26 PM	BTB
pH	6.07	S.U.		SM 4500-H+, B-2011	07/06/2021	4:26 PM	BTB
Oxygen, dissolved	2.21	mg/L		SM 4500-O	07/06/2021	4:26 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100353

Sample Received Date:	07/07/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	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)	7/13/2021	4:28 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Barium	79.3		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Boron	633		µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Cadmium	< 0.10		µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:14 PM	JD
Calcium	170000	D	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	3:45 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Cobalt	1.5		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Lithium	29.2		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Selenium	1.2		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:24 PM	JD
Thallium	< 0.10		µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:28 PM	JD
Mercury	< 0.0200	D	µg/L	0.0180	0.0200	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:32 PM	JD
Chloride	15.0		mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:29 PM	JD
Fluoride	< 0.50		mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:29 PM	JD
Sulfate	191		mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:29 PM	JD
Solids, Total Dissolved	924		mg/L		50.0	SM 2540, C-2011	7/9/2021	1:16 PM	JD

Pace

Lab Identification #: 30431731004

Sample Received Date:	7/20/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	2:20 PM	Sample Received By:	MTM

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.730 ± 0.924 (1.67)		pCi/L			Total Radium Calculation	8/9/2021	4:17 PM	RMK

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

04:18 PM 09/27/2021

Eric Hamilton - QA/QC Chemist

09:03 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: 9/28/2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	07/06/2021
Well ID No:	PH-MW-05	Sample Collection Time:	2:46 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	528.5		MSL		07/06/2021	2:46 PM	BTB
Turbidity	1.28		NTU	SM 2130, B-2001	07/06/2021	2:46 PM	BTB
Conductivity	909		µS/cm	SM 2510, B-2011	07/06/2021	2:46 PM	BTB
Temperature	71.96		°F	SM 2550, B-2010	07/06/2021	2:46 PM	BTB
Oxidation-Reduction Potential	227.80		mV	SM 2580, B-2011	07/06/2021	2:46 PM	BTB
pH	7.07		S.U.	SM 4500-H+, B-2011	07/06/2021	2:46 PM	BTB
Oxygen, dissolved	5.80		mg/L	SM 4500-O	07/06/2021	2:46 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100354

Sample Received Date:	07/07/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	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)	7/13/2021	4:32 PM	JD
Arsenic	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Barium	79.2		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Beryllium	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Boron	201		µg/L	6.3	50.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Cadmium	< 0.10		µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	7:16 PM	JD
Calcium	116000	D	µg/L	614	1250	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	3:49 PM	JD
Chromium	< 1.0		µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Cobalt	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Lead	< 1.0		µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Lithium	< 25.0		µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Molybdenum	< 1.0		µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Selenium	< 1.0		µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	12:28 PM	JD
Thallium	< 0.10		µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	7/13/2021	4:32 PM	JD
Mercury	< 0.0050	D	µg/L	0.0045	0.0050	EPA 245.7 Rev 2.0 (2005)	7/8/2021	12:35 PM	JD
Chloride	11.5		mg/L	0.9	2.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:47 PM	JD
Fluoride	< 0.50		mg/L	0.05	0.50	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:47 PM	JD
Sulfate	189		mg/L	1.8	4.0	EPA 300.0 Rev 2.1 (1993)	7/9/2021	6:47 PM	JD
Solids, Total Dissolved	594		mg/L		50.0	SM 2540, C-2011	7/9/2021	1:16 PM	JD

Pace

Lab Identification #: 30431731005

Sample Received Date:	7/20/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	2:20 PM	Sample Received By:	MTM

Parameter	Result	Note	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.190 ± 0.897 (1.86)		pCi/L			Total Radium Calculation	8/9/2021	4:17 PM	RMK

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

04:18 PM 09/27/2021

Eric Hamilton - QA/QC Chemist

09:03 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	7/29/2021
Well ID No:	PH-MW-01	Sample Collection Time:	10:02 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	702.88	MSL		7/29/2021	10:02 AM	BTB
Turbidity	< 1.00	NTU	SM 2130, B-2001	7/29/2021	10:02 AM	BTB
Conductivity	2,202	µS/cm	SM 2510, B-2011	7/29/2021	10:02 AM	BTB
Temperature	60.89	°F	SM 2550, B-2010	7/29/2021	10:02 AM	BTB
Oxidation-Reduction Potential	79.50	mV	SM 2580, B-2011	7/29/2021	10:02 AM	BTB
pH	5.89	S.U.	SM 4500-H+, B-2011	7/29/2021	10:02 AM	BTB
Oxygen, dissolved	1.10	mg/L	SM 4500-O	7/29/2021	10:02 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100488

Sample Received Date:	7/30/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:30 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)	8/2/2021	3:28 PM	JD
Arsenic	2.9	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Barium	56.2	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:28 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:28 PM	JD
Boron	947	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:28 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Calcium	366,000	µg/L	4080	5000	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:09 PM	JD
Chromium	1.8	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Cobalt	2.8	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Lead	1.1	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Lithium	60.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:28 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Selenium	4.1	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:44 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	8/3/2021	2:28 PM	JD
Chloride	24.6	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	7/30/2021	3:08 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	7/30/2021	3:08 PM	JD
Sulfate	250	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	6:17 PM	JD
Solids, Total Dissolved	1,520	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30433973001

Sample Received Date:	8/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	BR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.377 ± 1.03 (2.05)	pCi/L			Total Radium Calculation	8/24/2021	4:43 PM	RMK

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
04:27 PM 09/27/2021

Eric Hamilton - QA/QC Chemist
09:41 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	7/29/2021
Well ID No:	PH-MW-02	Sample Collection Time:	11:52 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	546.39	MSL		7/29/2021	11:52 AM	BTB
Turbidity	< 1.00	NTU	SM 2130, B-2001	7/29/2021	11:52 AM	BTB
Conductivity	1,286	µS/cm	SM 2510, B-2011	7/29/2021	11:52 AM	BTB
Temperature	64.51	°F	SM 2550, B-2010	7/29/2021	11:52 AM	BTB
Oxidation-Reduction Potential	17.00	mV	SM 2580, B-2011	7/29/2021	11:52 AM	BTB
pH	7.27	S.U.	SM 4500-H+, B-2011	7/29/2021	11:52 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	7/29/2021	11:52 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100489

Sample Received Date:	7/30/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:30 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)	8/2/2021	3:30 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Barium	84.5	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:30 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:30 PM	JD
Boron	949	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:30 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Calcium	54,800	µg/L	4080	5000	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:11 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Lithium	63.2	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:30 PM	JD
Molybdenum	1.5	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Selenium	1.3	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:48 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/3/2021	2:31 PM	JD
Chloride	168	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	7/30/2021	6:36 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	7/30/2021	3:26 PM	JD
Sulfate	35.0	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	3:26 PM	JD
Solids, Total Dissolved	734	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30433973002

Sample Received Date:	8/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	BR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.455 ± 0.860 (1.66)	pCi/L			Total Radium Calculation	8/24/2021	4:43 PM	RMK

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
04:27 PM 09/27/2021

Eric Hamilton - QA/QC Chemist
09:41 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

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: 7/29/2021
Sample Collection Time: 4:53 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	577.81	MSL		7/29/2021	4:53 PM	BTB
Turbidity	1.16	NTU	SM 2130, B-2001	7/29/2021	4:53 PM	BTB
Conductivity	3,800	µS/cm	SM 2510, B-2011	7/29/2021	4:53 PM	BTB
Temperature	70.12	°F	SM 2550, B-2010	7/29/2021	4:53 PM	BTB
Oxidation-Reduction Potential	3.0	mV	SM 2580, B-2011	7/29/2021	4:53 PM	BTB
pH	7.22	S.U.	SM 4500-H+, B-2011	7/29/2021	4:53 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	7/29/2021	4:53 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100490

Sample Received Date: 7/30/2021
Sample Received Time: 10:30 AM
Sample Receipt Temperatures (°C): < 6
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)	8/2/2021	3:33 PM	JD
Arsenic	1.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Barium	87.6	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:33 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:33 PM	JD
Boron	2,460	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:33 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Calcium	42,400	µg/L	4080	5000	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:13 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Lithium	166	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:33 PM	JD
Molybdenum	28.7	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Selenium	4.5	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:52 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/3/2021	2:34 PM	JD
Chloride	534	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	6:55 PM	JD
Fluoride	0.61	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	7/30/2021	3:45 PM	JD
Sulfate	543	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	6:55 PM	JD
Solids, Total Dissolved	2,080	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30433973003

Sample Received Date: 8/3/2021
Sample Received Time: 9:20 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: BR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.990 ± 0.970 (1.73)	pCi/L			Total Radium Calculation	8/24/2021	4:49 PM	RMK

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
04:27 PM 09/27/2021

Eric Hamilton - QA/QC Chemist
09:41 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, November 1, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	7/29/2021
Well ID No:	PH-MW-04	Sample Collection Time:	3:27 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	525.55	MSL		7/29/2021	3:27 PM	BTB
Turbidity	2.12	NTU	SM 2130, B-2001	7/29/2021	3:27 PM	BTB
Conductivity	1,457	µS/cm	SM 2510, B-2011	7/29/2021	3:27 PM	BTB
Temperature	69.19	°F	SM 2550, B-2010	7/29/2021	3:27 PM	BTB
Oxidation-Reduction Potential	109	mV	SM 2580, B-2011	7/29/2021	3:27 PM	BTB
pH	5.52	S.U.	SM 4500-H+, B-2011	7/29/2021	3:27 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	7/29/2021	3:27 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100491

Sample Received Date:	7/30/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:30 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)	8/2/2021	3:35 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Barium	71.9	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:35 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:35 PM	JD
Boron	615	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:35 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Calcium	176,000	µg/L	4080	5000	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:15 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Cobalt	1.6	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Lithium	26.5	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:35 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	1:56 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	8/3/2021	3:18 PM	JD
Chloride	14.4	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:04 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:04 PM	JD
Sulfate	173	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:04 PM	JD
Solids, Total Dissolved	930	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30433973004

Sample Received Date:	8/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	BR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.54 ± 1.13 (1.93)	pCi/L			Total Radium Calculation	10/18/2021	3:02 PM	VAL

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

10:25 AM 11/01/2021

Eric Hamilton - QA/QC Chemist

11:03 AM 11/01/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	7/29/2021
Well ID No:	PH-MW-05	Sample Collection Time:	1:40 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	527.67	MSL		7/29/2021	1:40 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	7/29/2021	1:40 PM	BTB
Conductivity	906	µS/cm	SM 2510, B-2011	7/29/2021	1:40 PM	BTB
Temperature	71.58	°F	SM 2550, B-2010	7/29/2021	1:40 PM	BTB
Oxidation-Reduction Potential	180.7	mV	SM 2580, B-2011	7/29/2021	1:40 PM	BTB
pH	6.92	S.U.	SM 4500-H+, B-2011	7/29/2021	1:40 PM	BTB
Oxygen, dissolved	4.88	mg/L	SM 4500-O	7/29/2021	1:40 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100492

Sample Received Date:	7/30/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	10:30 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)	8/2/2021	3:37 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Barium	75.7	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:37 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:37 PM	JD
Boron	249	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:37 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Calcium	119,000	µg/L	4080	5000	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:17 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	3:37 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Thallium	< 0.10	µg/L	0.02	0.10	EPA 200.8, Rev. 5.4 (1994)	8/2/2021	2:00 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/3/2021	2:37 PM	JD
Chloride	11.8	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:23 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:23 PM	JD
Sulfate	182	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	7/30/2021	4:23 PM	JD
Solids, Total Dissolved	572	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30433973005

Sample Received Date:	8/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	BR

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.680 ± 0.739 (1.51)	pCi/L			Total Radium Calculation	8/24/2021	4:49 PM	RMK

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
04:27 PM 09/27/2021

Eric Hamilton - QA/QC Chemist
09:41 AM 09/28/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, November 1, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	8/19/2021
Well ID No:	PH-MW-03A	Sample Collection Time:	3:51 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	578.19	MSL		8/19/2021	3:51 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	8/19/2021	3:51 PM	BTB
Conductivity	3,823	µS/cm	SM 2510, B-2011	8/19/2021	3:51 PM	BTB
Temperature	68.31	°F	SM 2550, B-2010	8/19/2021	3:51 PM	BTB
Oxidation-Reduction Potential	39.3	mV	SM 2580, B-2011	8/19/2021	3:51 PM	BTB
pH	7.48	S.U.	SM 4500-H+, B-2011	8/19/2021	3:51 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	8/19/2021	3:51 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100601

Sample Received Date:	8/20/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:20 PM	Sample Received By:	JD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Antimony	1.2	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Barium	69.7	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Boron	2,770	µg/L	59.0	100	EPA 200.8, Rev. 5.4 (1994)	8/25/2021	4:39 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Calcium	35,000	µg/L	204	250	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	8/25/2021	4:39 PM	JD
Lithium	163	µg/L	9.2	50.0	EPA 200.8, Rev. 5.4 (1994)	8/25/2021	4:39 PM	JD
Molybdenum	28.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Selenium	4.1	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	8/24/2021	4:49 PM	JD
Thallium	< 0.20	µg/L	0.06	0.20	EPA 200.8, Rev. 5.4 (1994)	8/25/2021	4:39 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	8/24/2021	11:26 AM	JD
Chloride	509	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	8/23/2021	9:08 PM	JD
Fluoride	0.64	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/23/2021	8:30 PM	JD
Sulfate	536	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	8/23/2021	9:08 PM	JD
Solids, Total Dissolved	2,030	mg/L		50.0	SM 2540, C-2011	7/30/2021	2:25 PM	JD

Pace

Lab Identification #: 30438087001

Sample Received Date:	8/27/2021	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	0.687 ± 0.922 (1.83)	pCi/L			Total Radium Calculation	9/20/2021	3:12 PM	RMK

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

01:23 PM 10/25/2021

Eric Hamilton - QA/QC Chemist

04:15 PM 10/26/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	8/30/2021
Well ID No:	PH-MW-01	Sample Collection Time:	9:35 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	702.33	MSL		8/30/2021	9:35 AM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	8/30/2021	9:35 AM	BTB
Conductivity	2,362	µS/cm	SM 2510, B-2011	8/30/2021	9:35 AM	BTB
Temperature	61.34	°F	SM 2550, B-2010	8/30/2021	9:35 AM	BTB
Oxidation-Reduction Potential	126.3	mV	SM 2580, B-2011	8/30/2021	9:35 AM	BTB
pH	6.09	S.U.	SM 4500-H+, B-2011	8/30/2021	9:35 AM	BTB
Oxygen, dissolved	1.58	mg/L	SM 4500-O	8/30/2021	9:35 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100544

Sample Received Date:	8/31/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:30 AM	Sample Received By:	TY

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)	9/23/2021	1:49 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Barium	54.9	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Boron	1,230	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Calcium	342,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:18 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Cobalt	2.9	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Lithium	76.8	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	11:21 AM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:49 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	9/2/2021	12:20 PM	JD
Chloride	43.3	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/31/2021	4:06 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/31/2021	4:06 PM	JD
Sulfate	278	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	7:15 PM	JD
Solids, Total Dissolved	1,650	mg/L		50.0	SM 2540, C-2011	9/1/2021	9:08 AM	JD

Pace

Lab Identification #: 30439310001

Sample Received Date:	9/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	TD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	2.87 ± 1.29 (1.85)	pCi/L			Total Radium Calculation	9/28/2021	5:25 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
01:36 PM 10/20/2021

Eric Hamilton - QA/QC Chemist
11:16 AM 10/22/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	8/30/2021
Well ID No:	PH-MW-02	Sample Collection Time:	11:10 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	545.96	MSL		8/30/2021	11:10 AM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	8/30/2021	11:10 AM	BTB
Conductivity	1,347	µS/cm	SM 2510, B-2011	8/30/2021	11:10 AM	BTB
Temperature	61.59	°F	SM 2550, B-2010	8/30/2021	11:10 AM	BTB
Oxidation-Reduction Potential	-6.3	mV	SM 2580, B-2011	8/30/2021	11:10 AM	BTB
pH	7.45	S.U.	SM 4500-H+, B-2011	8/30/2021	11:10 AM	BTB
Oxygen, dissolved	< 1	mg/L	SM 4500-O	8/30/2021	11:10 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100545

Sample Received Date:	8/31/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:30 AM	Sample Received By:	TY

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)	9/23/2021	2:00 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Barium	91.1	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Boron	1,060	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Calcium	49,200	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:22 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Lithium	66.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Molybdenum	1.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	11:25 AM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:00 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/2/2021	12:23 PM	JD
Chloride	171	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	8/31/2021	7:34 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/31/2021	4:25 PM	JD
Sulfate	32.9	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	4:25 PM	JD
Solids, Total Dissolved	724	mg/L		50.0	SM 2540, C-2011	9/1/2021	9:08 AM	JD

Pace

Lab Identification #: 30439310002

Sample Received Date:	9/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	TD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.403 ± 0.840 (1.68)	pCi/L			Total Radium Calculation	9/28/2021	5:25 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

01:36 PM 10/20/2021

Eric Hamilton - QA/QC Chemist

11:16 AM 10/22/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, November 1, 2021

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: 8/30/2021
Sample Collection Time: 3:45 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	577.91	MSL		8/30/2021	3:45 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	8/30/2021	3:45 PM	BTB
Conductivity	3,757	µS/cm	SM 2510, B-2011	8/30/2021	3:45 PM	BTB
Temperature	64.38	°F	SM 2550, B-2010	8/30/2021	3:45 PM	BTB
Oxidation-Reduction Potential	107.7	mV	SM 2580, B-2011	8/30/2021	3:45 PM	BTB
pH	7.44	S.U.	SM 4500-H+, B-2011	8/30/2021	3:45 PM	BTB
Oxygen, dissolved	1.29	mg/L	SM 4500-O	8/30/2021	3:45 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100546

Sample Received Date: 8/31/2021
Sample Received Time: 11:30 AM
Sample Receipt Temperatures (°C): < 6
Sample Received By: TY

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)	9/23/2021	2:05 PM	JD
Arsenic	1.1	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Barium	83.4	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Boron	2,600	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Calcium	45,600	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:25 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:30 PM	JD
Lithium	159	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Molybdenum	27.6	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:05 PM	JD
Selenium	2.5	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	11:29 AM	JD
Thallium	< 0.20	µg/L	0.06	0.20	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:30 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/2/2021	12:26 PM	JD
Chloride	474	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	7:53 PM	JD
Fluoride	0.62	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/31/2021	4:44 PM	JD
Sulfate	519	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	7:53 PM	JD
Solids, Total Dissolved	1,990	mg/L		50.0	SM 2540, C-2011	9/1/2021	9:08 AM	JD

Pace

Lab Identification #: 30439310003

Sample Received Date: 9/3/2021
Sample Received Time: 9:20 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: TD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.932 ± 1.31 (2.51)	pCi/L			Total Radium Calculation	9/28/2021	5:25 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
01:23 PM 10/25/2021

Eric Hamilton - QA/QC Chemist
04:15 PM 10/26/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	8/30/2021
Well ID No:	PH-MW-04	Sample Collection Time:	1:21 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	524.05	MSL		8/30/2021	1:21 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	8/30/2021	1:21 PM	BTB
Conductivity	1,535	µS/cm	SM 2510, B-2011	8/30/2021	1:21 PM	BTB
Temperature	63.32	°F	SM 2550, B-2010	8/30/2021	1:21 PM	BTB
Oxidation-Reduction Potential	152.5	mV	SM 2580, B-2011	8/30/2021	1:21 PM	BTB
pH	6.18	S.U.	SM 4500-H+, B-2011	8/30/2021	1:21 PM	BTB
Oxygen, dissolved	2.05	mg/L	SM 4500-O	8/30/2021	1:21 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100547

Sample Received Date:	8/31/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:30 AM	Sample Received By:	TY

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)	9/23/2021	2:08 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Barium	80.7	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Boron	660	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Calcium	194,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:29 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Cobalt	1.6	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Lithium	30.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	11:33 AM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:08 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	9/2/2021	12:29 PM	JD
Chloride	14.4	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:03 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:03 PM	JD
Sulfate	187	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:03 PM	JD
Solids, Total Dissolved	958	mg/L		50.0	SM 2540, C-2011	9/1/2021	9:08 AM	JD

Pace

Lab Identification #: 30439310004

Sample Received Date:	9/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	TD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.53 ± 1.23 (2.14)	pCi/L			Total Radium Calculation	9/28/2021	5:25 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
01:36 PM 10/20/2021

Eric Hamilton - QA/QC Chemist
11:16 AM 10/22/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Monday, October 25, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	8/30/2021
Well ID No:	PH-MW-05	Sample Collection Time:	2:17 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	527.15	MSL		8/30/2021	2:17 PM	BTB
Turbidity	2.61	NTU	SM 2130, B-2001	8/30/2021	2:17 PM	BTB
Conductivity	908	µS/cm	SM 2510, B-2011	8/30/2021	2:17 PM	BTB
Temperature	68.27	°F	SM 2550, B-2010	8/30/2021	2:17 PM	BTB
Oxidation-Reduction Potential	176.0	mV	SM 2580, B-2011	8/30/2021	2:17 PM	BTB
pH	7.16	S.U.	SM 4500-H+, B-2011	8/30/2021	2:17 PM	BTB
Oxygen, dissolved	5.24	mg/L	SM 4500-O	8/30/2021	2:17 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100548

Sample Received Date:	8/31/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	11:30 AM	Sample Received By:	TY

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)	9/23/2021	2:12 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Barium	80.3	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Boron	238	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Calcium	122,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	1:33 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	11:37 AM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	9/23/2021	2:12 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/2/2021	12:32 PM	JD
Chloride	12.0	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:21 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:21 PM	JD
Sulfate	181	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	8/31/2021	5:21 PM	JD
Solids, Total Dissolved	566	mg/L		50.0	SM 2540, C-2011	9/1/2021	9:08 AM	JD

Pace

Lab Identification #: 30439310005

Sample Received Date:	9/3/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:20 AM	Sample Received By:	TD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.640 ± 0.937 (1.83)	pCi/L			Total Radium Calculation	9/28/2021	5:25 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
01:36 PM 10/20/2021

Eric Hamilton - QA/QC Chemist
11:16 AM 10/22/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, November 9, 2021

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: 9/16/2021
Sample Collection Time: 1:26 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	578.02	MSL		9/16/2021	1:26 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	9/16/2021	1:26 PM	BTB
Conductivity	3,720	µS/cm	SM 2510, B-2011	9/16/2021	1:26 PM	BTB
Temperature	65.73	°F	SM 2550, B-2010	9/16/2021	1:26 PM	BTB
Oxidation-Reduction Potential	121.0	mV	SM 2580, B-2011	9/16/2021	1:26 PM	BTB
pH	7.50	S.U.	SM 4500-H+, B-2011	9/16/2021	1:26 PM	BTB
Oxygen, dissolved	1.28	mg/L	SM 4500-O	9/16/2021	1:26 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100644

Sample Received Date: 9/16/2021
Sample Received Time: 4:00 PM
Sample Receipt Temperatures (°C): < 6
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)	10/6/2021	1:56 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Barium	80.8	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Boron	2,890	µg/L	295	500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:40 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Calcium	47,800	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:40 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	6:58 PM	JD
Lithium	133	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Molybdenum	24.2	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Selenium	2.1	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	1:56 PM	JD
Thallium	< 0.20	µg/L	0.06	0.20	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	6:58 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	9/17/2021	9:45 AM	JD
Chloride	398	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	9/17/2021	3:00 PM	JD
Fluoride	0.83	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	9/22/2021	3:36 PM	JD
Sulfate	485	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	9/17/2021	3:00 PM	JD
Solids, Total Dissolved	1,880	mg/L		50.0	SM 2540, C-2011	9/17/2021	12:21 PM	JD

Pace

Lab Identification #: 30442507001

Sample Received Date: 9/27/2021
Sample Received Time: 9:45 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.70 ± 1.17 (1.88)	pCi/L			Total Radium Calculation	10/22/2021	4:04 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
12:23 PM 11/01/2021

Eric Hamilton - QA/QC Chemist
02:51 PM 11/01/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, November 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	9/30/2021
Well ID No:	PH-MW-01	Sample Collection Time:	1:13 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	702.09	MSL		9/30/2021	1:13 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	9/30/2021	1:13 PM	BTB
Conductivity	2,454	µS/cm	SM 2510, B-2011	9/30/2021	1:13 PM	BTB
Temperature	60.64	°F	SM 2550, B-2010	9/30/2021	1:13 PM	BTB
Oxidation-Reduction Potential	160.4	mV	SM 2580, B-2011	9/30/2021	1:13 PM	BTB
pH	6.05	S.U.	SM 4500-H+, B-2011	9/30/2021	1:13 PM	BTB
Oxygen, dissolved	1.67	mg/L	SM 4500-O	9/30/2021	1:13 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100724

Sample Received Date:	10/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	Sample Received By:	TY

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)	10/6/2021	3:46 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Barium	55.9	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Boron	1,300	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Calcium	323,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:06 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Cobalt	3.3	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Lithium	78.3	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:46 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	7:18 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	10/8/2021	2:00 PM	JD
Chloride	59.2	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/6/2021	5:06 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	10/6/2021	5:06 PM	JD
Sulfate	311	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	8:15 PM	JD
Solids, Total Dissolved	1,690	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30445301001

Sample Received Date:	10/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:00 AM	Sample Received By:	JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.93 ± 0.999 (1.36)	pCi/L			Total Radium Calculation	10/30/2021	2:15 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

12:21 PM 11/01/2021

Eric Hamilton - QA/QC Chemist

02:59 PM 11/02/2021

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Report Date: Tuesday, November 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	9/30/2021
Well ID No:	PH-MW-02	Sample Collection Time:	2:43 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	546.42	MSL		9/30/2021	2:43 PM	BTB
Turbidity	1.53	NTU	SM 2130, B-2001	9/30/2021	2:43 PM	BTB
Conductivity	1,567.00	µS/cm	SM 2510, B-2011	9/30/2021	2:43 PM	BTB
Temperature	61.14	°F	SM 2550, B-2010	9/30/2021	2:43 PM	BTB
Oxidation-Reduction Potential	-71.30	mV	SM 2580, B-2011	9/30/2021	2:43 PM	BTB
pH	7.49	S.U.	SM 4500-H+, B-2011	9/30/2021	2:43 PM	BTB
Oxygen, dissolved	< 1	mg/L	SM 4500-O	9/30/2021	2:43 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100725

Sample Received Date:	10/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	Sample Received By:	TY

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)	10/6/2021	3:50 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Barium	95.5	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Boron	1,030	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Calcium	47,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:10 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Lithium	65.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Molybdenum	1.50	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:50 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	7:20 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/8/2021	2:03 PM	JD
Chloride	200	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	10/6/2021	8:34 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	10/6/2021	5:24 PM	JD
Sulfate	34.2	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	5:24 PM	JD
Solids, Total Dissolved	778	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30445301002

Sample Received Date:	10/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:00 AM	Sample Received By:	JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.01 ± 0.960 (1.66)	pCi/L			Total Radium Calculation	10/30/2021	2:15 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

12:21 PM 11/01/2021

Eric Hamilton - QA/QC Chemist

02:59 PM 11/02/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, November 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	9/30/2021
Well ID No:	PH-MW-03A	Sample Collection Time:	6:30 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	577.03	MSL		9/30/2021	6:30 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	9/30/2021	6:30 PM	BTB
Conductivity	3,689	µS/cm	SM 2510, B-2011	9/30/2021	6:30 PM	BTB
Temperature	60.24	°F	SM 2550, B-2010	9/30/2021	6:30 PM	BTB
Oxidation-Reduction Potential	6.7	mV	SM 2580, B-2011	9/30/2021	6:30 PM	BTB
pH	7.30	S.U.	SM 4500-H+, B-2011	9/30/2021	6:30 PM	BTB
Oxygen, dissolved	1.18	mg/L	SM 4500-O	9/30/2021	6:30 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100726

Sample Received Date:	10/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	Sample Received By:	TY

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)	10/6/2021	3:55 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Barium	73.5	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Boron	3,080	µg/L	295	500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:14 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Calcium	49,700	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:14 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Lead	< 1.0	µg/L	0.2	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:28 PM	JD
Lithium	122	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Molybdenum	22.5	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Selenium	1.70	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:55 PM	JD
Thallium	< 0.20	µg/L	0.06	0.20	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	7:21 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/8/2021	2:06 PM	JD
Chloride	402	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	8:53 PM	JD
Fluoride	0.83	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	10/6/2021	5:43 PM	JD
Sulfate	476	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	8:53 PM	JD
Solids, Total Dissolved	1,750	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30445301003

Sample Received Date:	10/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:00 AM	Sample Received By:	JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.54 ± 1.07 (1.75)	pCi/L			Total Radium Calculation	10/30/2021	2:15 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

12:21 PM 11/01/2021

Eric Hamilton - QA/QC Chemist

02:59 PM 11/02/2021

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Report Date: Tuesday, November 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	9/30/2021
Well ID No:	PH-MW-04	Sample Collection Time:	5:18 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	524.31	MSL		9/30/2021	5:18 PM	BTB
Turbidity	1.51	NTU	SM 2130, B-2001	9/30/2021	5:18 PM	BTB
Conductivity	1,583	µS/cm	SM 2510, B-2011	9/30/2021	5:18 PM	BTB
Temperature	62.92	°F	SM 2550, B-2010	9/30/2021	5:18 PM	BTB
Oxidation-Reduction Potential	112.6	mV	SM 2580, B-2011	9/30/2021	5:18 PM	BTB
pH	6.22	S.U.	SM 4500-H+, B-2011	9/30/2021	5:18 PM	BTB
Oxygen, dissolved	2.09	mg/L	SM 4500-O	9/30/2021	5:18 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100727

Sample Received Date:	10/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	Sample Received By:	TY

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)	10/6/2021	3:59 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Barium	83.8	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Boron	714	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Calcium	181,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:18 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Cobalt	1.6	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Lithium	29.6	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:59 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	7:22 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	10/8/2021	2:09 PM	JD
Chloride	14.4	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/6/2021	6:02 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	10/6/2021	6:02 PM	JD
Sulfate	216	mg/L	1.19	5.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	9:11 PM	JD
Solids, Total Dissolved	988	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30445301004

Sample Received Date:	10/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:00 AM	Sample Received By:	JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.000 ± 0.738 (1.66) pCi/L				Total Radium Calculation	10/30/2021	2:15 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

12:21 PM 11/01/2021

Eric Hamilton - QA/QC Chemist

02:59 PM 11/02/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, November 9, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	9/30/2021
Well ID No:	PH-MW-05	Sample Collection Time:	3:47 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	527.79	MSL		9/30/2021	3:47 PM	BTB
Turbidity	< 1	NTU	SM 2130, B-2001	9/30/2021	3:47 PM	BTB
Conductivity	905	µS/cm	SM 2510, B-2011	9/30/2021	3:47 PM	BTB
Temperature	61.65	°F	SM 2550, B-2010	9/30/2021	3:47 PM	BTB
Oxidation-Reduction Potential	245.3	mV	SM 2580, B-2011	9/30/2021	3:47 PM	BTB
pH	7.02	S.U.	SM 4500-H+, B-2011	9/30/2021	3:47 PM	BTB
Oxygen, dissolved	6.14	mg/L	SM 4500-O	9/30/2021	3:47 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100728

Sample Received Date:	10/1/2021	Sample Receipt Temperatures (°C):	< 6
Sample Received Time:	2:00 PM	Sample Received By:	TY

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)	10/6/2021	4:03 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Barium	82.4	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Boron	246	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Calcium	114,000	µg/L	2040	2500	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	3:22 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Lithium	< 25.0	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	4:03 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	10/6/2021	7:24 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	10/8/2021	2:12 PM	JD
Chloride	11.9	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	10/6/2021	6:21 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	10/6/2021	6:21 PM	JD
Sulfate	178	mg/L	0.24	1.0	EPA 300.0 Rev 2.1 (1993)	10/6/2021	6:21 PM	JD
Solids, Total Dissolved	546	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30445301005

Sample Received Date:	10/11/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	9:00 AM	Sample Received By:	JAG

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.250 ± 0.707 (1.48)	pCi/L			Total Radium Calculation	10/30/2021	2:15 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

12:21 PM 11/01/2021

Eric Hamilton - QA/QC Chemist

02:59 PM 11/02/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Wednesday, December 8, 2021

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: 10/14/2021
Sample Collection Time: 2:30 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	577.11	MSL		10/14/2021	2:30 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/14/2021	2:30 PM	BTB
Conductivity	3,514	µS/cm	SM 2510, B-2011	10/14/2021	2:30 PM	BTB
Temperature	65.66	°F	SM 2550, B-2010	10/14/2021	2:30 PM	BTB
Oxidation-Reduction Potential	47.6	mV	SM 2580, B-2011	10/14/2021	2:30 PM	BTB
pH	7.45	S.U.	SM 4500-H+, B-2011	10/14/2021	2:30 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/14/2021	2:30 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100750

Sample Received Date: 10/15/2021
Sample Received Time: 3:30 PM
Sample Receipt Temperatures (°C): < 6
Sample Received By: EH

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)	11/23/202	4:41 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Barium	68.1	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Boron	2,710	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Calcium	53,500	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/202	3:50 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Lithium	118	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Molybdenum	21.8	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Selenium	2.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:40 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/202	4:41 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	11/5/2021	11:57 AM	JD
Chloride	367	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	10/18/2021	2:27 PM	JD
Fluoride	0.85	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	11:50 AM	JD
Sulfate	449	mg/L	2.38	10.0	EPA 300.0 Rev 2.1 (1993)	10/18/2021	2:27 PM	JD
Solids, Total Dissolved	1,800	mg/L		50.0	SM 2540, C-2011	10/5/2021	2:16 PM	JD

Pace

Lab Identification #: 30446897001

Sample Received Date: 10/21/2021
Sample Received Time: 10:00 AM
Sample Receipt Temperatures (°C): NA
Sample Received By: RM

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.98 ± 1.10 (1.79)	pCi/L			Total Radium Calculation	11/18/2021	2:31 PM	RMK

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
12:50 PM 12/07/2021

Eric Hamilton - QA/QC Chemist
01:33 PM 12/07/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, December 21, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/28/2021
Well ID No:	PH-MW-01	Sample Collection Time:	10:25 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	701.78	MSL		10/28/2021	10:25 AM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/28/2021	10:25 AM	BTB
Conductivity	2,490	µS/cm	SM 2510, B-2011	10/28/2021	10:25 AM	BTB
Temperature	53.78	°F	SM 2550, B-2010	10/28/2021	10:25 AM	BTB
Oxidation-Reduction Potential	52.8	mV	SM 2580, B-2011	10/28/2021	10:25 AM	BTB
pH	6.10	S.U.	SM 4500-H+, B-2011	10/28/2021	10:25 AM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/28/2021	10:25 AM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100756

Sample Received Date:	10/29/2021	Sample Receipt Temperatures (°C):	1.6
Sample Received Time:	10:00 AM	Sample Received By:	TY

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)	11/23/2021	4:46 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Barium	51.5	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Boron	1,560	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Calcium	323,000	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	3:54 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Cobalt	3.4	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Lithium	91.1	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Selenium	1.4	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:44 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:46 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	11/5/2021	12:00 PM	JD
Chloride	69.4	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	11/3/2021	12:48 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	12:48 PM	JD
Sulfate	336	mg/L	1.19	20.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	3:58 PM	JD
Solids, Total Dissolved	1,640	mg/L		50.0	SM 2540, C-2011	11/2/2021	9:18 AM	JD

Pace

Lab Identification #: 30450263001

Sample Received Date:	11/4/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	4:00 PM	Sample Received By:	AD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	2.93 ± 1.25 (1.70)	pCi/L			Total Radium Calculation	12/8/2021	3:45 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

12:10 PM 12/16/2021

Eric Hamilton - QA/QC Chemist

09:39 AM 12/20/2021

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Report Date: Tuesday, December 21, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/28/2021
Well ID No:	PH-MW-02	Sample Collection Time:	12:07 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	546.59	MSL		10/28/2021	12:07 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/28/2021	12:07 PM	BTB
Conductivity	1,626	µS/cm	SM 2510, B-2011	10/28/2021	12:07 PM	BTB
Temperature	55.58	°F	SM 2550, B-2010	10/28/2021	12:07 PM	BTB
Oxidation-Reduction Potential	-140.4	mV	SM 2580, B-2011	10/28/2021	12:07 PM	BTB
pH	7.51	S.U.	SM 4500-H+, B-2011	10/28/2021	12:07 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/28/2021	12:07 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100757

Sample Received Date:	10/29/2021	Sample Receipt Temperatures (°C):	1.6
Sample Received Time:	10:00 AM	Sample Received By:	TY

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)	11/23/2021	4:58 PM	JD
Arsenic	1.5	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Barium	85.2	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Boron	1,150	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Calcium	41,200	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	3:58 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Lithium	75.3	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Molybdenum	1.7	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:48 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:58 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	11/5/2021	12:03 PM	JD
Chloride	227	mg/L	1.0	2.5	EPA 300.0 Rev 2.1 (1993)	11/3/2021	4:17 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	1:07 PM	JD
Sulfate	35.3	mg/L	0.24	4.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	1:07 PM	JD
Solids, Total Dissolved	776	mg/L		50.0	SM 2540, C-2011	11/2/2021	9:18 AM	JD

Pace

Lab Identification #: 30450263002

Sample Received Date:	11/4/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	4:00 PM	Sample Received By:	AD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.24 ± 0.830 (1.32)	pCi/L			Total Radium Calculation	12/8/2021	3:45 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
12:10 PM 12/16/2021

Eric Hamilton - QA/QC Chemist
09:39 AM 12/20/2021

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EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, December 21, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/28/2021
Well ID No:	PH-MW-03A	Sample Collection Time:	4:19 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	577.15	MSL		10/28/2021	4:19 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/28/2021	4:19 PM	BTB
Conductivity	3,432	µS/cm	SM 2510, B-2011	10/28/2021	4:19 PM	BTB
Temperature	54.68	°F	SM 2550, B-2010	10/28/2021	4:19 PM	BTB
Oxidation-Reduction Potential	10.7	mV	SM 2580, B-2011	10/28/2021	4:19 PM	BTB
pH	7.50	S.U.	SM 4500-H+, B-2011	10/28/2021	4:19 PM	BTB
Oxygen, dissolved	< 1.0	mg/L	SM 4500-O	10/28/2021	4:19 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100758

Sample Received Date:	10/29/2021	Sample Receipt Temperatures (°C):	1.6
Sample Received Time:	10:00 AM	Sample Received By:	TY

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)	11/23/2021	5:02 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Barium	68.0	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Boron	2,640	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Calcium	49,100	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:09 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Lithium	107	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Molybdenum	22.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Selenium	2.2	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:52 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:02 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	11/5/2021	12:06 PM	JD
Chloride	360	mg/L	1.9	5.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	4:36 PM	JD
Fluoride	0.89	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	1:25 PM	JD
Sulfate	433	mg/L	2.38	40.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	4:36 PM	JD
Solids, Total Dissolved	1,510	mg/L		50.0	SM 2540, C-2011	11/2/2021	9:18 AM	JD

Pace

Lab Identification #: 30450263003

Sample Received Date:	11/4/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	4:00 PM	Sample Received By:	AD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.35 ± 0.950 (1.63)	pCi/L			Total Radium Calculation	12/8/2021	3:45 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

12:10 PM 12/16/2021

Eric Hamilton - QA/QC Chemist

09:39 AM 12/20/2021

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http://www.ekpc.coop

A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, December 21, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/28/2021
Well ID No:	PH-MW-04	Sample Collection Time:	2:53 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	523.19	MSL		10/28/2021	2:53 PM	BTB
Turbidity	1.59	NTU	SM 2130, B-2001	10/28/2021	2:53 PM	BTB
Conductivity	1,553	µS/cm	SM 2510, B-2011	10/28/2021	2:53 PM	BTB
Temperature	57.74	°F	SM 2550, B-2010	10/28/2021	2:53 PM	BTB
Oxidation-Reduction Potential	62.4	mV	SM 2580, B-2011	10/28/2021	2:53 PM	BTB
pH	6.19	S.U.	SM 4500-H+, B-2011	10/28/2021	2:53 PM	BTB
Oxygen, dissolved	2.13	mg/L	SM 4500-O	10/28/2021	2:53 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100759

Sample Received Date:	10/29/2021	Sample Receipt Temperatures (°C):	1.6
Sample Received Time:	10:00 AM	Sample Received By:	TY

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)	11/23/2021	5:06 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Barium	77.9	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Boron	779	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Calcium	177,000	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:13 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Cobalt	1.4	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Lithium	34.8	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:56 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:06 PM	JD
Mercury	< 0.0200	µg/L	0.0056	0.0200	EPA 245.7 Rev 2.0 (2005)	11/5/2021	12:09 PM	JD
Chloride	16.5	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	11/3/2021	1:44 PM	JD
Fluoride	< 0.50	mg/L	0.09	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	4:55 PM	JD
Sulfate	229	mg/L	1.19	20.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	4:55 PM	JD
Solids, Total Dissolved	832	mg/L		50.0	SM 2540, C-2011	11/2/2021	9:18 AM	JD

Pace

Lab Identification #: 30450263004

Sample Received Date:	11/4/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	4:00 PM	Sample Received By:	AD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	0.390 ± 0.747 (1.44)	pCi/L			Total Radium Calculation	12/8/2021	3:45 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

12:10 PM 12/16/2021

Eric Hamilton - QA/QC Chemist

09:39 AM 12/20/2021

4775 Lexington Road 40391
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A Touchstone Energy® Cooperative

EAST KENTUCKY POWER COOPERATIVE

Report Date: Tuesday, December 21, 2021

Certificate of Analysis

Station:	H.L. Spurlock Power Station	Sample Collection Date:	10/28/2021
Well ID No:	PH-MW-05	Sample Collection Time:	1:18 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	527.90	MSL		10/28/2021	1:18 PM	BTB
Turbidity	< 1.0	NTU	SM 2130, B-2001	10/28/2021	1:18 PM	BTB
Conductivity	892	µS/cm	SM 2510, B-2011	10/28/2021	1:18 PM	BTB
Temperature	55.76	°F	SM 2550, B-2010	10/28/2021	1:18 PM	BTB
Oxidation-Reduction Potential	97.9	mV	SM 2580, B-2011	10/28/2021	1:18 PM	BTB
pH	7.06	S.U.	SM 4500-H+, B-2011	10/28/2021	1:18 PM	BTB
Oxygen, dissolved	7.77	mg/L	SM 4500-O	10/28/2021	1:18 PM	BTB

EKPC - Central Laboratory Analyses

Lab Identification #: 2100760

Sample Received Date:	10/29/2021	Sample Receipt Temperatures (°C):	1.6
Sample Received Time:	10:00 AM	Sample Received By:	TY

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)	11/23/2021	5:10 PM	JD
Arsenic	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Barium	79.2	µg/L	0.5	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Beryllium	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Boron	241	µg/L	29.5	50.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Cadmium	< 0.10	µg/L	0.05	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Calcium	112,000	µg/L	2040	5000	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	4:17 PM	JD
Chromium	< 1.0	µg/L	0.4	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Cobalt	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Lead	< 1.0	µg/L	0.1	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Lithium	25.4	µg/L	4.6	25.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Molybdenum	< 1.0	µg/L	0.3	1.0	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Selenium	< 1.0	µg/L	0.8	1.0	EPA 200.8, Rev. 5.4 (1994)	12/2/2021	12:59 PM	JD
Thallium	< 0.10	µg/L	0.03	0.10	EPA 200.8, Rev. 5.4 (1994)	11/23/2021	5:10 PM	JD
Mercury	< 0.0050	µg/L	0.0014	0.0050	EPA 245.7 Rev 2.0 (2005)	11/5/2021	12:12 PM	JD
Chloride	12.1	mg/L	0.2	0.5	EPA 300.0 Rev 2.1 (1993)	11/3/2021	2:03 PM	JD
Fluoride	< 0.50	mg/L	0.02	0.50	EPA 300.0 Rev 2.1 (1993)	11/3/2021	2:03 PM	JD
Sulfate	178	mg/L	0.24	4.0	EPA 300.0 Rev 2.1 (1993)	11/3/2021	2:03 PM	JD
Solids, Total Dissolved	462	mg/L		50.0	SM 2540, C-2011	11/2/2021	9:18 AM	JD

Pace

Lab Identification #: 30450263005

Sample Received Date:	11/4/2021	Sample Receipt Temperatures (°C):	NA
Sample Received Time:	4:00 PM	Sample Received By:	AD

Parameter	Result	Units	MDL	Report Limit	Analysis Method	Date Analyzed:	Time Analyzed:	Analyst:
Total Radium Calculation	1.30 ± 0.831 (1.49)	pCi/L			Total Radium Calculation	12/8/2021	3:45 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
12:10 PM 12/16/2021

Eric Hamilton - QA/QC Chemist
09:39 AM 12/20/2021

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A Touchstone Energy® Cooperative

APPENDIX D – Flow Calculations & Direction Maps

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **January 29th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	559.47	ft
Downgradient Well Water Elev (h_2) =	528.17	ft
Flow Length (L) =	750	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	31.30	ft
Hyd. Grad.(i) =	0.042	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.21E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.90	ft
h_2 =	547.33	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.57	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.09E-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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

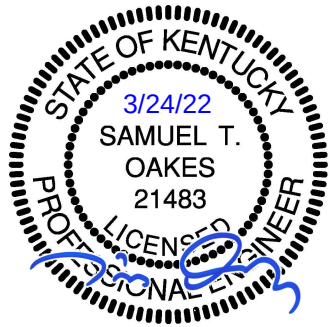
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03 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-03 to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



547.33
PH-MW-02

702.90
PH-MW-01

559.47
PH-MW-03

523.80
PH-MW-04

528.17
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

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

JANUARY 29, 2021 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_2021_.dwg, 3/24/2022 5:01:00 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **February 25th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	559.85	ft
Downgradient Well Water Elev (h_2) =	528.83	ft
Flow Length (L) =	750	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	31.02	ft
Hyd. Grad.(i) =	0.041	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.19E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	703.44	ft
h_2 =	546.66	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.78	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

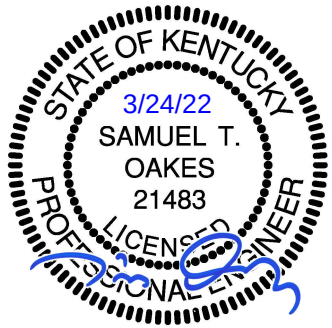
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03 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-03 to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.66
PH-MW-02

703.44
PH-MW-01

559.85
PH-MW-03

523.65
PH-MW-04

528.83
PH-MW-05

S. Ripley Road

Haul Road

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

FEBRUARY 25, 2021 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_2021_.dwg, 3/24/2022 5:02:43 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **March 31st, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	559.15	ft
Downgradient Well Water Elev (h_2) =	529.12	ft
Flow Length (L) =	750	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	30.03	ft
Hyd. Grad.(i) =	0.040	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.12E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	704.91	ft
h_2 =	547.06	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.85	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

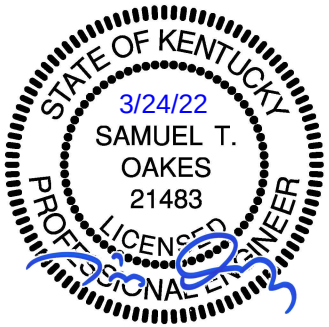
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03 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-03 to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



547.06
PH-MW-02

704.91
PH-MW-01

559.15
PH-MW-03

524.11
PH-MW-04

529.12
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

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

MARCH 31, 2021 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_2021_.dwg, 3/24/2022 5:03:59 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **April 29th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	561.35	ft
Downgradient Well Water Elev (h_2) =	528.86	ft
Flow Length (L) =	750	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	32.49	ft
Hyd. Grad.(i) =	0.043	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.29E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	704.53	ft
h_2 =	547.51	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.02	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

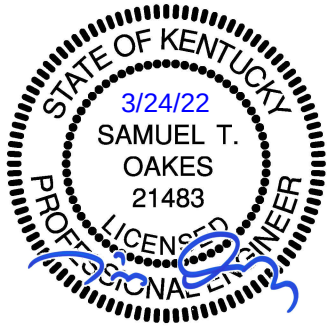
h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

Notes:

1. Groundwater elevation readings from the upgradient well PH-MW-03 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-03 to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.
8. PH-MW-03 abandoned 04/15/21 and replaced with PH-MW-03A. h1 for downgradient well calculations using an estimated groundwater elevation for this event only.



547.51
PH-MW-02

704.53
PH-MW-01

561.35
PH-MW-03
Abandoned
4/15/21

526.31
PH-MW-04

528.86
PH-MW-05

S. Ripley Road

Haul Road

N

STATE OF KENTUCKY
3/24/22
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
- Groundwater Monitoring Well (Abandoned)

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
3.) This map represents a resample event for PH-MW-3A. PH-MW-01, PH-MW-02, PH-MW-04 and PH-MW-05 from the 7/6/21 sampling event were used to represent groundwater elevations at these locations.

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

APRIL 29, 2021 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_2021_.dwg, 3/24/2022 5:06:48 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **May 27th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	575.42	ft
Downgradient Well Water Elev (h_2) =	528.67	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	46.75	ft
Hyd. Grad.(i) =	0.047	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.48E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	704.35	ft
h_2 =	547.20	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	157.15	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

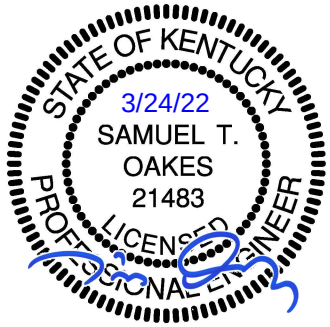
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



547.20
PH-MW-02

704.35
PH-MW-01

575.42
PH-MW-3A

526.50
PH-MW-04

528.67
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

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

MAY 27, 2021 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_2021_.dwg, 3/24/2022 5:08:50 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **June 20th, 2021 Resample Event**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.00	ft
Downgradient Well Water Elev (h_2) =	528.50	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	48.50	ft
Hyd. Grad.(i) =	0.049	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.57E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	703.85	ft
h_2 =	546.93	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.92	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

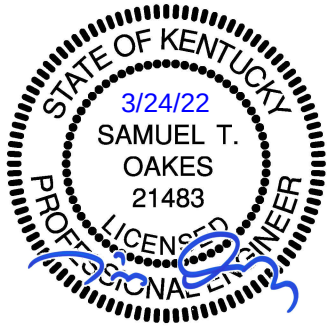
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



546.93
PH-MW-02

703.85
PH-MW-01

S. Ripley Road

Haul Road

526.40
PH-MW-04

528.50
PH-MW-05

557.00
PH-MW-03A

STATE OF KENTUCKY
3/24/22
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
3.) This map represents a resample event for PH-MW-3A. PH-MW-01, PH-MW-02, PH-MW-04 and PH-MW-05 from the 7/6/21 sampling event were used to represent groundwater elevations at these locations.

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

JUNE 20, 2021 RESAMPLE 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **July 6th, 2021**

INPUT VARIABLES: Downgradient wells (1)

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.17	ft
Downgradient Well Water Elev (h_2) =	528.50	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	48.67	ft
Hyd. Grad.(i) =	0.049	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.58E-03	ft/day

INPUT VARIABLES: Background wells (2)

K_h =	3.67E-08	ft/s
h_1 =	703.85	ft
h_2 =	546.93	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.92	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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

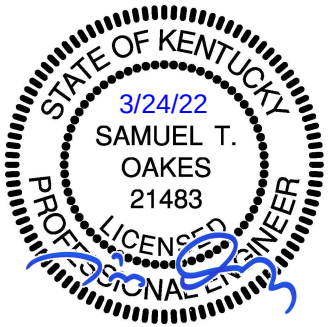
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



546.93
PH-MW-02

703.85
PH-MW-01

577.17
PH-MW-3A

526.40
PH-MW-04

528.50
PH-MW-05

S. Ripley Road

Haul Road

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

JULY 6, 2021 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **July 29th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.81	ft
Downgradient Well Water Elev (h_2) =	527.67	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	50.14	ft
Hyd. Grad.(i) =	0.050	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.66E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.88	ft
h_2 =	546.39	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.49	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.11E-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.
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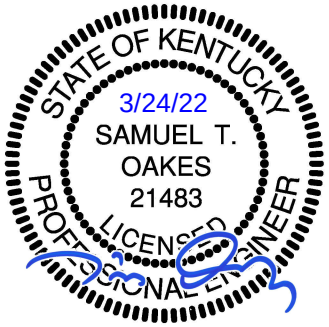
4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
5. Calculations are based on available information and limited data points, therefore, the results reflect estimated values.
6. Flow Length 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.



546.39
PH-MW-02

702.88
PH-MW-01

577.81
PH-MW-3A

525.55
PH-MW-04

527.67
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

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

JULY 29, 2021 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **August 19th, 2021 Resample Event**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	578.19	ft
Downgradient Well Water Elev (h_2) =	527.15	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	51.04	ft
Hyd. Grad.(i) =	0.051	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.71E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.33	ft
h_2 =	545.96	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.37	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.11E-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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

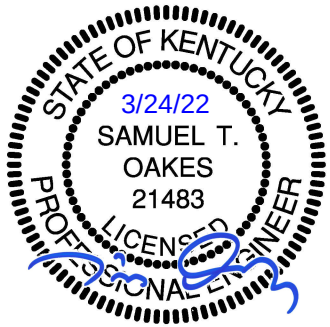
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



545.96
PH-MW-02

702.33
PH-MW-01

S. Ripley Road

Haul Road

524.05
PH-MW-04

527.15
PH-MW-05

578.19
PH-MW-3A

STATE OF KENTUCKY
3/24/22
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
3.) This map represents a resample event for PH-MW-3A. PH-MW-01, PH-MW-02, PH-MW-04 and PH-MW-05 from the 7/6/21 sampling event were used to represent groundwater elevations at these locations.

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

AUGUST 19, 2021 RESAMPLE 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **August 30th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.91	ft
Downgradient Well Water Elev (h_2) =	527.15	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	50.76	ft
Hyd. Grad.(i) =	0.051	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.69E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.33	ft
h_2 =	545.96	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	156.37	ft
i =	0.078	ft/ft
(K_h*i)/n_e =	4.11E-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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

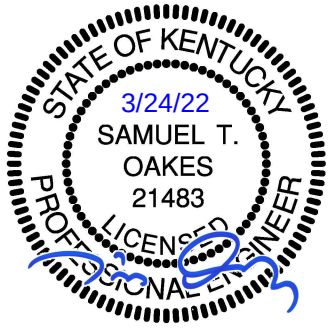
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



545.96
PH-MW-02

702.33
PH-MW-01

577.91
PH-MW-3A

524.05
PH-MW-04

527.15
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

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

AUGUST 30, 2021 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **September 16th, 2021 Resample Event**

INPUT VARIABLES: Downgradient wells (1)

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	578.02	ft
Downgradient Well Water Elev (h_2) =	527.79	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	50.23	ft
Hyd. Grad.(i) =	0.050	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.66E-03	ft/day

INPUT VARIABLES: Background wells (2)

K_h =	3.67E-08	ft/s
h_1 =	702.09	ft
h_2 =	546.42	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.67	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.09E-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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

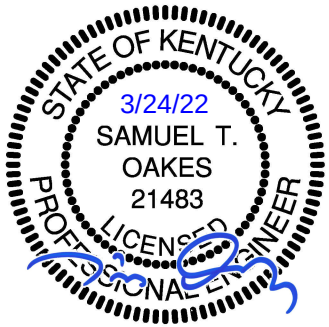
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



546.42
PH-MW-02

702.09
PH-MW-01

S. Ripley Road

Haul Road

524.31
PH-MW-04

527.79
PH-MW-05

578.02
PH-MW-3A

STATE OF KENTUCKY
3/24/22
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

3.) This map represents a resample event for PH-MW-3A. PH-MW-01, PH-MW-02, PH-MW-04 and PH-MW-05 from the 7/6/21 sampling event were used to represent groundwater elevations at these locations.

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

SEPTEMBER 16, 2021 RESAMPLE 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_2021_.dwg, 3/24/2022 5:16:38 PM, MAS

GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **September 30th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.03	ft
Downgradient Well Water Elev (h_2) =	527.79	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	49.24	ft
Hyd. Grad.(i) =	0.049	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.61E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	702.09	ft
h_2 =	546.42	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.67	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.09E-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 $\left(\frac{feet}{foot}\right) = \frac{h_1 - h_2}{L}$

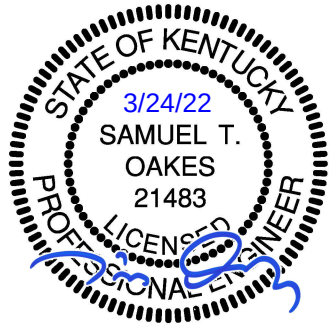
h_1 and h_2 = Groundwater elevation at location 1 and 2

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.



546.42
PH-MW-02

702.09
PH-MW-01

S. Ripley Road

Haul Road

524.31
PH-MW-04

577.03
PH-MW-3A

527.79
PH-MW-05

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

SEPTEMBER 30, 2021 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **October 14th, 2021 Resample Event**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.11	ft
Downgradient Well Water Elev (h_2) =	527.90	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	49.21	ft
Hyd. Grad.(i) =	0.049	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.61E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	701.78	ft
h_2 =	546.59	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.19	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.08E-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.
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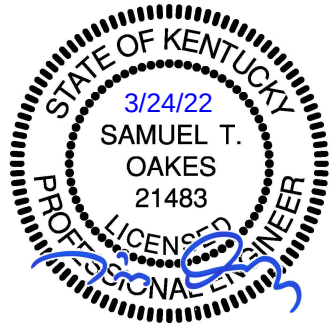
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.59
PH-MW-02

701.78
PH-MW-01

S. Ripley Road

Haul Road

523.19
PH-MW-04

527.90
PH-MW-05

577.11
PH-MW-3A

N

STATE OF KENTUCKY
3/24/22
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

3.) This map represents a resample event for PH-MW-3A. PH-MW-01, PH-MW-02, PH-MW-04 and PH-MW-05 from the 7/6/21 sampling event were used to represent groundwater elevations at these locations.

0 400 800 1600

(SCALE IN FEET)
1 inch = 800 ft.

OCTOBER 14, 2021 RESAMPLE 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **October 28th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	577.15	ft
Downgradient Well Water Elev (h_2) =	527.90	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	49.25	ft
Hyd. Grad.(i) =	0.049	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.61E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	701.78	ft
h_2 =	546.59	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.19	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.08E-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.
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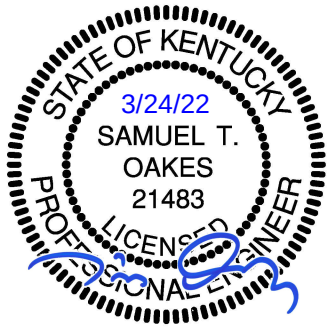
6. Flow Length distance (downgradient wells) calculated from PH-MW-03A to PH-MW-05.
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.39
PH-MW-02

702.28
PH-MW-01

S. Ripley Road

Haul Road

522.51
PH-MW-04

579.81
PH-MW-3A

528.92
PH-MW-05

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

0 400 800 1600

(SCALE IN FEET)

1 inch = 800 ft.

STATE OF KENTUCKY
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

OCTOBER 28, 2021 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

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GROUNDWATER FLOW VELOCITY CALCULATION

Facility Name: **Peg's Hill Landfill**
Sampling Event Date: **November 30th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08	ft/s
Upgradient Well Water Elev (h_1) =	578.57	ft
Downgradient Well Water Elev (h_2) =	528.27	ft
Flow Length (L) =	998	ft
Effective Porosity (n_e) =	0.06	unitless

CALCULATIONS:

dh =	50.30	ft
Hyd. Grad.(i) =	0.050	ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.67E-03	ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08	ft/s
h_1 =	701.92	ft
h_2 =	546.75	ft
L =	2,012	ft
n_e =	0.06	unitless

CALCULATIONS:

dh =	155.17	ft
i =	0.077	ft/ft
(K_h*i)/n_e =	4.08E-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.
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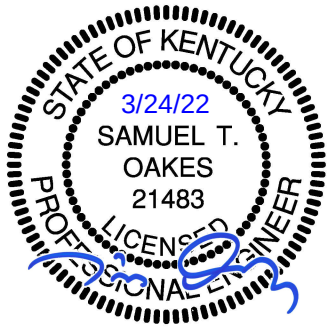
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



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546.75
PH-MW-02

701.92
PH-MW-01

578.57
PH-MW-3A

522.56
PH-MW-04

528.27
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
3/24/22
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

NOVEMBER 30, 2021 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: **December 29th, 2021**

INPUT VARIABLES: Downgradient wells [1]

Hydraulic Conductivity (K_h) =	3.67E-08 ft/s
Upgradient Well Water Elev (h_1) =	579.81 ft
Downgradient Well Water Elev (h_2) =	528.92 ft
Flow Length (L) =	998 ft
Effective Porosity (n_e) =	0.06 unitless

CALCULATIONS:

dh =	50.89 ft
Hyd. Grad.(i) =	0.051 ft/ft
GW Flow Velocity (K_h*i)/n_e =	2.70E-03 ft/day

INPUT VARIABLES: Background wells [2]

K_h =	3.67E-08 ft/s
h_1 =	702.28 ft
h_2 =	546.78 ft
L =	2,012 ft
n_e =	0.06 unitless

CALCULATIONS:

dh =	155.50 ft
i =	0.077 ft/ft
(K_h*i)/n_e =	4.09E-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.
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4. Effective porosity estimates taken from the Groundwater Monitoring System and Hydrogeologic Investigation Report for Peg's Hill dated February 2019 by Geosyntec.
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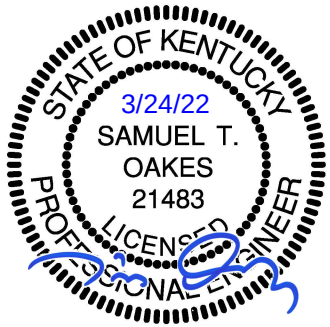
7. Flow Length distance (background wells) calculated from PH-MW-01 to PH-MW-02.



546.78
PH-MW-02

702.28
PH-MW-01

S. Ripley Road

Haul Road

522.51
PH-MW-04

579.81
PH-MW-3A

528.92
PH-MW-05

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.

DECEMBER 29, 2021 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

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