



2023 Annual Groundwater Monitoring and Corrective Action Report - Former Emery Pond

Southern Illinois Power Cooperative Marion Power Plant

Prepared Pursuant to 40 CFR §257.90(e)

Submitted to:

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GL21467997.002

January 31, 2024

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EXECUTIVE SUMMARY

This 2023 CCR Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Report) was prepared on behalf of Southern Illinois Power Cooperative (SIPC) for the Marion Power Plant former Emery Pond located in Marion, Illinois (Site). The former Emery Pond is subject to Title 40 Code of Federal Regulations (CFR) Part 257.50 et seq. [Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule; Federal Register Vol. 80, No. 74, 21302-21501 on April 17, 2015, as amended)]. Pursuant to the CCR Rule, SIPC is required to complete an annual groundwater monitoring and corrective action report by January 31st of the following year.

This 2023 Annual Report documents the status of the CCR groundwater monitoring program for the former Emery Pond, summarizes key actions completed, identifies issues encountered, describes actions taken to resolve identified concerns, and proposes key activities for calendar year 2024. More specifically, this 2023 Annual Report describes the results of the CCR Rule Assessment Monitoring Program and Corrective Action Monitoring Program activities and discusses the progression of future sampling activities pursuant to the CCR Rule and the former Emery Pond Groundwater Monitoring Plan Addendum #1 (GMP, Golder, 2021).

In 2017, following the installation of a groundwater monitoring system, groundwater monitoring at the Site was completed to evaluate background water quality consistent with 40 CFR §257.90. In March 2018, the first round of Detection Monitoring was completed pursuant to the requirements of 40 CFR §257.94. The results of Detection Monitoring required the transition to Assessment Monitoring. The first Assessment Monitoring sampling event was completed in August 2018. The results of Assessment Monitoring initiated an Assessment of Corrective Measures which was completed in March 2019 and revised in March 2021. The Selection of Remedy Report was completed in June 2019 and revised in March 2021. The selected remedy, closure by removal, was completed in April 2021. The former Emery Pond is currently in quarterly post-closure monitoring of groundwater or Corrective Action Monitoring (CAM).

In accordance with 40 CFR §257.90(e)(6), the following information provides an overview of groundwater monitoring and corrective action status for the former Emery Pond:

- The Assessment Monitoring Program was initiated on August 8, 2018.
- The Assessment of Corrective Measures (ACM) was initiated in January 2019 and completed in March 2019 (Hanson, Revised March 30, 2021).
- Prior to the Selection of Remedy for Emery Pond, a public meeting was held on May 23, 2019 at the Marion Public Library in Marion, Illinois to discuss the results of the ACM in accordance with 40 CFR §257.96(e).
- The remedy was selected for Emery Pond on June 19, 2019 (SIPC, 2019) as required by 40 CFR §257.97.
- The selected remedy included closure by removal of all CCR from Emery Pond, installation of a perimeter drain, and ongoing groundwater monitoring. Closure by removal of CCR was completed on April 5, 2021 and final inspection by a licensed professional engineer was complete as of May 28, 2021 (SIPC, 2021). Upon completion of these closure by removal actions, all references to and reports for the former CCR unit transitioned to the current nomenclature, former Emery Pond.
- Throughout calendar year 2023, the perimeter drain was maintained as part of the groundwater remedy and CAM was performed at former Emery Pond in accordance with 40 CFR §257.98.

- The following constituents were detected at statistically significant levels (SSLs) above groundwater protection standards (GPS) in 2023: cobalt at EP-2, EP-3, EP-4, and EP-7.

In 2024, SIPC will continue CAM as described in the Site's GMP Addendum #1 (Golder, 2021a).

1.0 INTRODUCTION

On behalf of Southern Illinois Power Cooperative (SIPC), WSP USA Inc. (WSP), formerly known as Golder Associates USA Inc. (Golder), prepared this *2023 CCR Annual Groundwater Monitoring and Corrective Action Report* (2023 Annual Report) for the Marion Power Plant's (i.e., Facility's) former Emery Pond, 11543 Lake of Egypt Road, Marion, Williamson County, Illinois (Site, see Figure 1). The former Emery Pond was an on-site settling pond, approximately one (1) acre in size, closed via removal by April 5, 2021. The former Emery Pond is subject to the groundwater monitoring requirements of Title 40 Code of Federal Regulations (CFR) Part 257.50 et seq. [Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule: Federal Register Vol. 80, No. 74, 21302-21501 on April 17, 2015, as amended)]. Pursuant to the CCR Rule, the Facility is required to complete an annual groundwater monitoring and corrective action report by January 31st of the following year.

This 2023 Annual Report provides the monitoring data and presents the relevant data evaluations from the Corrective Action Monitoring (CAM) events that were performed in December 2022, March 2023, June 2023, and September 2023. An additional CAM event was performed in December 2023; the results from this sampling event will be provided in the 2024 Annual Groundwater Monitoring and Corrective Action Report (2024 Annual Report).

In conformance with the applicable requirements of 40 CFR §257.90(e)(1) through (5), the 2023 Annual Report:

- Documents the status of the groundwater monitoring and corrective action activities.
- Provides figures showing the former Emery Pond, monitoring well locations, and groundwater flow direction(s).
- Summarizes key CCR Rule groundwater activities completed during calendar year 2023.
- Includes CCR Rule groundwater monitoring data obtained in calendar year 2023.
- Describes any problems encountered during the monitoring activities.
- Discusses actions taken to resolve the problems, if applicable.
- Projects key groundwater monitoring and corrective action activities anticipated for 2024.

1.1 Key Actions Completed - 2023

SIPC completed the following key actions relative to 40 CFR Part 257 CCR Rule groundwater monitoring and corrective action regulations at the Site in 2023:

- Preparation of the 2022 Groundwater Monitoring and Corrective Action Annual Report in January 2023 (2022 Annual Report) in accordance with 40 CFR §257.90(e).
- Evaluation and notification of detections above Groundwater Protection Standards (GPS) from the seventh CAM event in March 2023 (40 CFR §257.98).
- Performance of the eighth CAM event in March and May 2023 (40 CFR §257.98).
- Performance of the ninth CAM event in June 2023 (40 CFR §257.98).
- Evaluation and notification of detections above GPS from the eighth CAM event in June 2023 (40 CFR §257.98).

- Evaluation and notification of detections above GPS from the ninth CAM event in July 2023 (40 CFR §257.98).
- Performance of the tenth CAM event in September 2023 (40 CFR § 257.98).
- Evaluation and notification of detections above GPS from the tenth CAM event in November 2023 (40 CFR §257.98).
- Performance of the eleventh CAM event in December 2023 (40 CFR §257.98).

2.0 SITE INFORMATION

The following section summarizes Site information including the current monitoring well network and a description of the Site's geology and hydrogeology.

2.1 Monitoring Well Network

The groundwater monitoring system was installed in 2017 (AECOM, 2017). One background monitoring well (EBG) is located approximately 800 feet (ft) upgradient of the former Emery Pond and four downgradient monitoring wells (EP-1, EP-2, EP-3, and EP-4) are located along the southern, eastern, and northeastern boundaries of the former Emery Pond. Three additional wells (EP-5, EP-6, and EP-7) were installed in October 2021 between the former Emery Pond and the Lake of Egypt to evaluate groundwater at the limits of the groundwater management zone (GMZ, Figure 2). The monitoring wells are screened at the unlithified/bedrock unit interface which occurs at the Site at 10 – 20 feet below ground surface (ft bgs) dependent on location. Table 1 provides a summary of the well rationale/purpose and date of installation and monitoring well construction details.

2.2 Geology and Hydrogeology

The following section describes the geology and hydrogeology of the Site as it pertains to potential contaminant transport and fate at the Site.

2.2.1 Geology

The Site is underlain by glacially derived deposits of the Illinoian Stage overlying the Pennsylvanian Age Bedrock. (Hanson, revised March 24, 2021). WSP's interpretation of the Site's geology is based on soil borings (Appendix A) and bedrock geology maps and includes:

- Fill Materials: Where present, the fill materials generally consist of light gray to yellowish brown gravel with some silt and clay, and trace amounts of sand and asphalt from the ground surface to as deep as 14 ft bgs.
- Silt (upper discontinuous silt layer): Yellowish brown silt with little clay and trace very fine-grained sand from the ground surface to as deep as 8 ft bgs.
- Clay: Yellowish brown to black clay with some silt, little sand, and trace gravel from ground surface to approximately 20 ft bgs.
- Silt (lower discontinuous silt layer): Black to yellowish brown silt with little clay and trace very fine-grained sand from approximately 14 ft bgs to 20 ft bgs.
- Bedrock: Yellowish brown, weathered, sandstone and shale. The upper bedrock layer is at least 190 feet thick. The depth to bedrock is approximately 20 ft bgs.

The uppermost water bearing zone monitored by the groundwater monitoring system extends from the clay layer to the shallowest 11 feet of bedrock.

2.2.2 Site Hydrogeology

The uppermost water bearing zone is a shallow, hydraulically “perched” zone comprised of fill and residuum (silts and clays) from the weathering of underlying bedrock and is not considered a usable water source. No confining layer was identified. The fill and residuum unit has only 3 to 5 feet of saturated thickness. Because the former Emery Pond was constructed directly on top of the bedrock, groundwater monitoring wells are screened at the unlithified/bedrock unit interface. This zone has a low hydraulic conductivity (<1E-04 centimeters per second [cm/s]) and only a few feet of saturated thickness (5-10 ft; Hanson, 2019b).

2.2.3 Groundwater Flow

The 2023 static water levels are summarized in Table 2. Consistent with the requirements of the CCR Rule, the rate and direction of groundwater flow within the uppermost aquifer was determined after each sampling event. The potentiometric surface maps, Figures 3 through 14, were prepared using static water level data obtained monthly in 2023. Groundwater in the vicinity of the former Emery Pond generally flows east/northeast toward the Lake of Egypt. The average groundwater elevation varies between approximately 500 to 520 feet above mean sea level (ft amsl) with an average depth to groundwater of less than 17 feet.

WSP calculated the horizontal hydraulic gradient (i) for the unconfined aquifer in the vicinity of the former Emery Pond at 0.0278 as shown below using average groundwater elevation data for EP-5 and EP-7 from 2023.

$$i = h_L / L$$

Where: i = hydraulic gradient (unitless)

h_L = head loss (elevation difference in feet)

L = length (horizontal distance in feet)

As presented in the following table, the groundwater flow rate between EP-5 and EP-7 was calculated at approximately 6.8-8.3 feet per year using the following formula:

$$V = ki / \theta$$

Where: V = Groundwater Velocity (ft/min)

k = Hydraulic conductivity (ft/min)

i = Hydraulic gradient (unitless)

θ = Assumed effective porosity (unitless)

The hydraulic conductivity used to calculate the groundwater flow rate was the geometric mean of the hydraulic conductivities estimated through analysis of slug test data from wells EP-5 and EP-7 (Hanson, 2019b).

Date	Head Loss (h_L , feet)	Flow Length (feet)	Hydraulic Gradient (i)	Effective Porosity (\emptyset)	Hydraulic Conductivity (k , feet/min)	Estimated Groundwater Velocity	
						(feet/min)	(feet/year)
January 2023	14.1	470	2.99E-02	0.2	1.04E-04	1.55E-05	8.2
February 2023	13.5	470	2.87E-02	0.2	1.04E-04	1.49E-05	7.9
March 2023	12.8	470	2.71E-02	0.2	1.04E-04	1.41E-05	7.4
April 2023	13.4	470	2.85E-02	0.2	1.04E-04	1.48E-05	7.8
May 2023	14.0	470	2.97E-02	0.2	1.04E-04	1.54E-05	8.1
June 2023	14.2	470	3.02E-02	0.2	1.04E-04	1.57E-05	8.3
July 2023	14.1	470	3.00E-02	0.2	1.04E-04	1.56E-05	8.2
August 2023	12.7	470	2.69E-02	0.2	1.04E-04	1.40E-05	7.4
September 2023	12.1	470	2.57E-02	0.2	1.04E-04	1.34E-05	7.0
October 2023	12.4	470	2.64E-02	0.2	1.04E-04	1.37E-05	7.2
November 2023	12.2	470	2.60E-02	0.2	1.04E-04	1.35E-05	7.1
December 2023	11.7	470	2.50E-02	0.2	1.04E-04	1.30E-05	6.8

Notes: feet/min = feet per minute

h_L = Head loss in feet

i = hydraulic gradient

k = hydraulic conductivity

\emptyset = estimated value based on soil and bedrock properties

3.0 FIELD ACTIVITIES

Pursuant to the requirements in 40 CFR §257.95(d)(1), four quarterly monitoring events were completed for the former Emery Pond in 2023. A summary of the sampling events is presented below.

Monitoring Event	Sample Parameters	Sample Dates
8 th Corrective Action Monitoring Event	Appendix III and Appendix IV	March 15 - 16, 2023
8 th Corrective Action Monitoring Resample Event ¹	Appendix III and Appendix IV	May 24, 2023
9 th Corrective Action Monitoring Event	Appendix III and Appendix IV	June 6 - 7, 2023
10 th Corrective Action Monitoring Event	Appendix III and Appendix IV	September 18 - 21, 2023
11 th Corrective Action Monitoring Event	Appendix III and Appendix IV	December 11 - 12, 2023

1) Monitoring wells EBG and EP-6 were not included in the eighth CAM resample event.

During each of the sampling events, the monitoring wells were sampled in accordance with the procedures presented in the Groundwater Monitoring Plan (GMP; Hanson, revised March 24, 2021) and the GMP Addendum #1 (Golder, 2021a). Samples were collected by Teklab, Inc. (Teklab) and delivered to the Teklab laboratory in Collinsville, Illinois in secured coolers under chain-of-custody control. Radium samples were then shipped to Pace Analytical National in Mount Juliet, Tennessee for analysis for the eighth and ninth CAM event and to Summit Environmental Technologies, Inc. in Cuyahoga Falls, Ohio for the tenth CAM event for analysis.

3.1 Problems Encountered and Follow-Up Actions for Resolution

Although field parameters were collected according to the GMP Addendum #1 (Golder, 2021a), the field parameters for the seventh CAM event (December 2022) were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

According to the GMP Addendum #1 (Golder, 2021a), groundwater samples are to be collected once a well has achieved a turbidity level below 5 NTUs or when wells were purged for a minimum of two hours and sampled when turbidity appeared to stabilize (e.g., no downward or upward trend over three consecutive readings five minutes apart). During the eighth CAM event (March 2023), due to field oversight, the GMP Addendum #1 (Golder, 2021a), was not followed, including, incomplete purging and stabilization of monitoring wells resulting in samples collected from EP-3, EP-4 and EP-7 with elevated turbidity and corresponding anomalous analytical results. Due to the observed inconsistencies with the Groundwater Monitoring Plan Addendum #1, SIPC resampled all monitoring wells (with the exception of EBG and EP-6) in May 2023. Review of laboratory data from the resampling effort confirmed that the March 2023 data were anomalous.

Furthermore, during the ninth CAM event (June 2023), groundwater was sampled from monitoring wells EP-2 and EP-4 at turbidity levels of 8.2 (NTUs), respectively. During the tenth CAM event (September 2023) groundwater was sampled from monitoring wells EBG, EP-1, EP-3, EP-4, EP-6, and EP-7 at turbidity levels of 11, 6.1, 8.9, 7.5, 9.3, and 8.2, respectively. Moving forward, wells will be purged in accordance with the specifications of GMP Addendum #1.

During the tenth CAM event (September 2023), monitoring wells EP-2 and EP-5 were dry and no samples were collected. Samples were collected from these wells during the eleventh CAM event.

4.0 GROUNDWATER MONITORING PROGRAM RESULTS

This section includes a description of the CCR Rule monitoring program history and status, a discussion of the groundwater data collection and evaluation, and a summary of the Corrective Actions completed.

4.1 Background Monitoring

Per the requirements of 40 CFR §257.94, eight independent background groundwater samples were collected from each background and downgradient well between March 2017 and August 2017 on behalf of SIPC. SIPC submitted the samples to a contract laboratory, in accordance with chain of custody and quality assurance/quality control procedures, for analysis of 40 CFR Part 257 Appendix III and Appendix IV constituents. In addition, field water quality parameters were measured including specific conductance, temperature, dissolved oxygen, turbidity, oxidation-reduction potential, and pH. On behalf of SIPC, Hanson Professional Services Inc. (Hanson) used the results of the background monitoring phase to develop appropriate, statistically valid background values for each constituent/monitoring well. The sampling dates, number of groundwater samples collected from each background and downgradient well, purpose of sampling, and analytical results are presented in Table 3.

4.2 Detection Monitoring

The first Detection Monitoring event was completed in March 2018. Pursuant to the requirements of 40 CFR §257.94, a groundwater sample was collected from each background and downgradient well for analysis of Appendix III constituents. Hanson evaluated the results of the first Detection Monitoring sampling event to compare to facility background concentrations. The results of Detection Monitoring indicated statistically significant increases (SSIs) and triggered Assessment Monitoring in 2018 (Hanson, 2019a). The sampling dates, number of groundwater samples collected from each background and downgradient well, purpose of sampling, and analytical results are presented in Table 3. The identified SSIs are summarized in the table below.

Parameter	EP-1	EP-2	EP-3	EP-4
Boron	X	X		X
Calcium	X	X		X
Chloride				X
Fluoride				
pH			X	X
Sulfate	X	X	X	X
Total Dissolved Solids	X	X	X	X

"X" Indicates an SSI

4.3 Assessment Monitoring

The first Assessment Monitoring sampling event was completed in August 2018, followed by a statistical evaluation and data analysis in January 2019. In August 2018, groundwater samples were collected from each background and downgradient well for analysis of Appendix III and Appendix IV constituents per 40 CFR §257.95. Following receipt of laboratory results, Hanson evaluated the Appendix IV constituents results relative to the Unit-

specific GPS. In January 2019, Hanson determined that statistically significant levels (SSLs) existed for cobalt and thallium and, as a result, initiated the Assessment of Corrective Measures (ACM). Subsequent Assessment Monitoring sampling events confirmed these SSLs. A summary of the SSLs identified by Hanson between 2018-2020 and WSP in 2021 are provided in the Table below.

Assessment Monitoring Event	Identified Statistically Significant Levels
Assessment Monitoring Event #1 (August 2018)	Cobalt: EP-3 and EP-4 Thallium: EP-4
Assessment Monitoring Event #2 (January 2019)	Cobalt: EP-3 and EP-4 Thallium: EP-4
Assessment Monitoring Event #3 (June 2019)	Arsenic: EP-4 Cobalt: EP-3 and EP-4
Assessment Monitoring Event #4 (January 2020)	Arsenic: EP-4 Cobalt: EP-3 and EP-4
Assessment Monitoring Event #5 (June 2020)	Arsenic: EP-4 Cobalt: EP-3 and EP-4 Lead: EP-4
Assessment Monitoring Event #6 (January 2021)	Cobalt: EP-3 and EP-4

4.4 Corrective Action

The ACM was completed in March 2019 and a public meeting was held on May 23, 2019 at the Marion Public Library in Marion, Illinois to discuss the results of the ACM. The “Corrective Action and Selected Remedy Plan” (Hanson, revised March 30, 2021), outlines the selected remedy including:

- Closure of the then-operating Emery Pond and adjacent flue-gas desulfurization (FGD) storage area by removal of all CCR.
- Construction of a composite liner system compliant with 40 CFR Part 257 in the footprint of the former Emery Pond to continue storm water management functions.
- Construction of a perimeter drain at the toe of the liner system to protect the liner from external hydrostatic pressure and recover contaminated groundwater.
- Installation of three new monitoring wells, continuing to monitor groundwater for changes resulting from the natural attenuation of contaminants, source removal and the perimeter drain collection of impacted groundwater, and the establishment of a GMZ.

Emery Pond ceased receipt of CCR materials in the fall of 2020. Closure construction activities began in late 2020. Emery Pond, and the FGD storage area, were dewatered and excavated. The removal and decontamination of Emery Pond was completed April 5, 2021, and the final inspection was completed May 28, 2021, in accordance with the Site's Closure Plan (Hanson, revised April 15, 2021).

4.5 Corrective Action Monitoring

The former Emery Pond is currently in CAM. In accordance with the Site's Closure Plan (Hanson, revised April 15, 2021) and the GMP Addendum #1 (Golder, 2021a), CAM is completed on a quarterly basis. The first two quarterly CAM events were completed in May and August 2021 and the results were provided in the 2021 Annual Report

(Golder, 2022). The third through sixth CAM sampling events were completed in December 2021, March, May, and September 2022 and the results were provided in the 2022 Annual Report (WSP, 2023). The seventh through eleventh CAM sampling events were completed in December 2022 and March/May, June, September, and December 2023. The results from the December 2022 and the March/May, June and September 2023 sampling events are discussed in Sections 5.1 through 5.5, respectively, and presented in Table 3. The corresponding analytical laboratory reports are provided in Appendix B. The 2023 Data Usability Summary Report is provided in Appendix C. The results from the December 2023 sampling event will be included in the 2024 Annual Report.

5.0 STATISTICAL EVALUATION

The former Emery Pond is currently in CAM. After four quarterly CAM groundwater sampling events have been completed, the groundwater sampling results were statistically evaluated to determine whether statistically significant decreases (SSDs) have occurred after closure through removal of the former Emery Pond as described in the Site's GMP Addendum #1 (Golder, 2021a).

In accordance with the procedures identified in GMP Addendum #1 (Golder, 2021a), WSP updated the GPS by recalculating the facility background concentration, including all data collected from the background monitoring well (EBG) prior to the former Emery Pond closure, for each analyte using a tolerance/prediction limit procedure in accordance with 40 CFR §257.95. The updated GPS are the higher value of the Maximum Contaminant Levels (MCL) provided in 40 CFR §257.95(h)(2), 40 CFR §141.62 or 40 CFR §141.66, and the facility background concentration. The GPS for the Site are summarized in Table 4. The results from the statistical analysis from the seventh through tenth CAM events are provided in Appendix D.

5.1 Seventh Corrective Action Monitoring Event Statistical Analysis

The seventh CAM event (December 2022) data were compared to GPS established by WSP in 2021. Statistical analysis was completed according to the GMP Addendum #1 (Golder, 2021a). The results confirmed the SSLs identified in Assessment Monitoring for cobalt in monitoring wells EP-3, EP-4, and EP-7.

The seventh CAM event data was also evaluated for SSDs by identifying constituents where SSLs were identified in the pre-closure (March 2017- January 2021) data but not identified in post-closure (May 2021-present) data. No SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

5.2 Eighth Corrective Action Monitoring Event Statistical Analysis

The eighth CAM event (March 2023) and eighth CAM resample event (May 2023) data were compared to GPS established by WSP in 2021. As described in Section 4.1 above, due to field oversight, incomplete purging and stabilization of monitoring wells resulting in samples collected from EP-3, EP-4, and EP-7 with elevated turbidity. Review of laboratory data from the resampling effort confirmed that the March 2023 data were anomalous. The results from eighth CAM event (March 2023) are included in Table 3, however, the results from monitoring wells EP-1, EP-2, EP-3, EP-4, EP-5, and EP-7 were removed from the statistical database as outliers. This data is flagged with an "O" qualifier in Table 3. The results confirmed the SSLs identified in Assessment Monitoring for cobalt in monitoring wells EP-3, EP-4, and EP-7. No SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

5.3 Ninth Corrective Action Monitoring Event Statistical Analysis

The ninth CAM event (June 2023) data were compared to GPS established by WSP in 2021. The results confirmed the SSLs for cobalt in monitoring wells EP-3, EP-4 and EP-7 and identified an SSL for cobalt in monitoring well EP-2. No SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

5.4 Tenth Corrective Action Monitoring Event Statistical Analysis

The tenth CAM event (September 2023) data were compared to GPS established by WSP in 2021. The results confirmed the cobalt SSLs in monitoring wells EP-2, EP-3, EP-4 and EP-7. No SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

5.5 Eleventh Corrective Action Monitoring Event Statistical Evaluation

The eleventh CAM event was completed in December 2023. The laboratory results were not received during calendar year 2023. The data for the eleventh CAM event will be evaluated in accordance with the CCR Rule timeframes and reported in the 2024 Annual Report.

6.0 KEY ACTIVITIES PROJECTED FOR 2023

During calendar year 2024, SIPC anticipates conducting the following key CCR Rule groundwater monitoring activities for the former Emery Pond:

- Prepare and submit the appropriate notifications according to the CCR Rule.
- Continue quarterly CAM per CCR Rule requirements.
- Inspect and maintain the monitoring system including wells, pumps, and equipment.

7.0 REFERENCES

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TABLES

Table 1: Monitoring Well Construction Details**Former Emery Pond****Southern Illinois Power Cooperative Marion Power Plant****Marion, Illinois**

CCR Unit	Monitoring Well Type	Monitoring Well ID	Installation Date	Ground Surface Elevation (ft-msl)	Total Borehole Depth (ft)	Top of Casing Elevation (ft-msl)	Sounded Well Depth (ft-btoc)	Well Material	Screen Length (ft)	Screen Depth		Screen Elevation		
										Top (ft-btoc)	Bottom (ft-btoc)	Top (ft-msl)	Middle (ft-msl)	Bottom (ft-msl)
Former Emery Pond	Background	EBG	2/8/2017	521.74	25.00	524.87	28.13	2" Sch 40 PVC	10	18.13	28.13	506.74	501.74	496.74
	Downgradient	EP-1	2/7/2017	517.07	31.00	519.72	33.65	2" Sch 40 PVC	10	23.65	33.65	496.07	491.07	486.07
	Downgradient	EP-2	2/7/2017	511.15	15.00	513.79	17.64	2" Sch 40 PVC	10	7.64	17.64	506.15	501.15	496.15
	Downgradient	EP-3	2/8/2017	516.24	26.50	518.95	29.21	2" Sch 40 PVC	10	19.21	29.21	499.74	494.74	489.74
	Downgradient	EP-4	2/8/2017	517.07	18.50	519.74	21.17	2" Sch 40 PVC	10	11.17	21.17	508.57	503.57	498.57
	GMZ Boundary	EP-5	10/5/2021	524.64	16.32	527.59	16.32	2" Sch 40 PVC	4.5	11.30	15.79	516.29	514.05	511.80
	GMZ Boundary	EP-6	10/4/2021	502.08	13.62	505.11	13.62	2" Sch 40 PVC	4.5	8.59	13.12	496.52	494.26	491.99
	GMZ Boundary	EP-7	10/4/2021	512.49	18.50	515.44	18.50	2" Sch 40 PVC	9.6	9.36	18.00	506.08	501.26	497.44

Notes:

ft-msl = Feet above mean sea level

ft-btoc = Feet below top of casing

2" Sch 40 PVC = Two-inch diameter well, constructed of schedule 40 polyvinyl chloride materials

AECOM, 2018, 2017 Annual Groundwater Monitoring and Corrective Action Report, January 31, 2018.

GMZ = Groundwater Management Zone

Prepared by: DPJ _____

Checked by: SLG _____

Reviewed by: MAH _____

Table 2: 2023 Groundwater Water Levels**Former Emery Pond****Southern Illinois Power Cooperative Marion Power Plant**
Marion, Illinois

Monitoring Well ID	Total Depth (feet)	Sounded Well Depth (feet)	Elevation of Top of Casing (feet msl)	1/6/2023		2/17/2023		3/16/2023		4/17/2023		5/16/2023		6/13/2023	
				DTW (feet)	Elevation (feet msl)										
EBG	25.00	28.13	524.87	8.1	516.77	8.4	516.47	8.7	516.17	7.9	516.97	8.2	516.67	8.4	516.47
EP-1	31.00	33.65	519.72	7.2	512.52	6.5	513.22	5.7	514.02	6.1	513.62	6.4	513.32	6.8	512.92
EP-2	15.00	17.64	513.79	5.2	508.59	5.9	507.89	6.6	507.19	6.3	507.49	5.9	507.89	6.5	507.29
EP-3	26.50	29.21	518.95	14.9	504.05	15.4	503.55	16.2	502.75	15.9	503.05	16.3	502.65	16.5	502.45
EP-4	18.50	21.17	519.74	11.4	508.34	9.4	510.34	8.0	511.74	7.6	512.14	7.2	512.54	7.2	512.54
EP-5	16.32	16.32	527.59	12.8	514.79	12.9	514.69	13.1	514.49	12.7	514.89	11.6	515.99	11.8	515.79
EP-6	13.62	13.62	505.11	5.1	500.01	3.8	501.31	3.1	502.01	3.8	501.31	4.2	500.91	3.6	501.51
EP-7	18.50	18.50	515.44	14.7	500.74	14.2	501.24	13.7	501.74	13.9	501.54	13.4	502.04	13.8	501.64

Notes:

1.) MSL = mean sea level.

2.) DTW = Depth to Water

Table 2: 2023 Groundwater Water Levels**Former Emery Pond****Southern Illinois Power Cooperative Marion Power
Marion, Illinois**

Monitoring Well ID	Total Depth (feet)	Sounded Well Depth (feet)	Elevation of Top of Casing (feet msl)	7/17/2023		8/15/2023		9/5/2023		10/16/2023		11/13/2023		12/11/2023	
				DTW (feet)	Elevation (feet msl)										
EBG	25.00	28.13	524.87	8.8	516.07	9.1	515.77	9	515.87	9.3	515.57	9.4	515.47	9.2	515.67
EP-1	31.00	33.65	519.72	7.2	512.52	7.6	512.12	8.1	511.62	8	511.72	8.2	511.52	8.3	511.42
EP-2	15.00	17.64	513.79	6.7	507.09	7.1	506.69	7.2	506.59	7.4	506.39	7.4	506.39	7.5	506.29
EP-3	26.50	29.21	518.95	16.9	502.05	16.8	502.15	16.7	502.25	16.9	502.05	17	501.95	16.8	502.15
EP-4	18.50	21.17	519.74	7.5	512.24	7.4	512.34	7.6	512.14	8.1	511.64	8.5	511.24	8.7	511.04
EP-5	16.32	16.32	527.59	12.4	515.19	13.8	513.79	14.5	513.09	14.7	512.89	14.6	512.99	14.8	512.79
EP-6	13.62	13.62	505.11	4.5	500.61	4.1	501.01	4.6	500.51	5.2	499.91	5.1	500.01	5.3	499.81
EP-7	18.50	18.50	515.44	14.3	501.14	14.3	501.14	14.4	501.04	14.9	500.54	14.6	500.84	14.4	501.04

Notes:

1.) MSL = mean sea level.

2.) DTW = Depth to Water

Created by: CLS

Checked by: CCC

Reviewed by: MAH

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	
Sample Date	3/23/2017	4/3/2017	5/25/2017	6/22/2017	6/29/2017	7/24/2017	8/1/2017	8/31/2017	3/22/2018	8/27/2018	1/11/2019	6/27/2019	1/30/2020	6/22/2020	1/21/2021	5/31/2021	8/30/2021	12/21/2021	
Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE	Unit																		
Boron	mg/L	0.12	0.079	0.1	0.071	0.073	0.079	0.074	0.056	0.033	0.035	0.041	<0.08	<0.5	0.022	<0.5	<0.009	0.010 J	0.013 J
Calcium	mg/L	23	10	30	23	32	37	35	35	14	15	13	15.2	12	13	15	13.3	12.1	11.6
Chloride	mg/L	55	11	84	68	79	27	86	82	12	16	12	18	7.2	12	13	22	17	12
Fluoride	mg/L	<0.029	<0.029	<0.029	<0.029	<0.029	0.64	<0.029	<0.029	0.53	0.55	0.5	<0.06	0.56	<0.5	0.46	0.6	0.58	0.67
pH	SU	6.5	6.8	6.41	6.45	6.53	6.59	6.66	6.26	6.35	6.57	6.85	6.21	6.54	6.5	6.57	6.61	6.58	6.95
Sulfate	mg/L	64	54	42	57	50	61	45	44	63	72	75	77	87	81	78	85	83	84
Total Dissolved Solids	mg/L	480	400	440	470	280	420	380	470	300	360	370	470	280	500	320	344	340	308
Antimony	mg/L	0.00057	0.00085 J	<0.0026	0.00069 J	0.0014 J	<0.0026	0.00022 J	<0.0026	<0.0016	<0.0016	<0.0016	<0.00052	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200
Arsenic	mg/L	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.002	<0.002	0.0011	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200
Barium	mg/L	0.13	0.029	0.17	0.049	0.086	0.19	0.18	0.16	0.091	<0.00011	0.068	0.0505	0.0469	0.0475				
Beryllium	mg/L	0.00033 J	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055	<0.00015	0.00038 J	<0.00015	<0.00011	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200
Cadmium	mg/L	<0.0001	<0.00075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.000018	<0.00002	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200	<0.0010
Chromium	mg/L	0.0062	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0026	<0.00014	0.0042	<0.0015	0.0011 J	<0.0300	<0.0015	<0.0015	<0.0300
Cobalt	mg/L	0.008	0.00016 J	0.014	0.00015 J	0.0014 J	0.0093	0.0038 J	0.0073	<0.00063	0.0038	<0.00063	0.0017	<0.0001	0.0003 J	<0.0200	<0.0001	0.0003 J	<0.0200
Lead	mg/L	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0042	<0.00016	<0.0033	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200
Lithium	mg/L	0.046 J	0.0074 J	<0.0042	0.028 J	0.059 J	<0.0042	0.082 J	<0.0042	<0.0042	<0.04	<0.042	<0.0207	0.0164	<0.0600				
Mercury	mg/L	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.000093	<0.00001	<0.00019	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Molybdenum	mg/L	0.0034 J	0.0043 J	<0.000095	0.00017 J	0.0016 J	<0.00095	0.0024 J	<0.00095	<0.00014	<0.00028	<0.000019	0.0145	0.0014 J	<0.0300	<0.00019	0.0145	0.0014 J	<0.0300
Radium 226	pCi/L	0.878	<0.223	0.805	<0.262	<0.245	0.43	0.28	0.77	0.933	0.703	0.468	<0.21	0.104 J					
Radium 228	pCi/L	1.06	<0.496	0.555	<0.0695	<0.371	0.98	1.24	2.22	0.447	0.911	0.514	1.02	<0.194					
Radium, 226/228 Combined	pCi/L	1.938	<0.496	1.36	<0.262	<0.371	1.41	1.52	2.99	1.38	1.61	0.983	<1.23	<0.297					
Selenium	mg/L	0.0019 J	<0.0005	<0.0028	0.0036 J	0.0019 J	<0.0028	0.0028 J	0.007	<0.00033	0.00079 J	<0.00033	<0.00056	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0200
Thallium	mg/L	<0.0007	<0.004	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.01	<0.00015	<0.004	<0.0020	0.0054	<0.0400		
Turbidity	NTU														9.95	28.65	13		

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EBG	EBG	EBG	EBG	EBG	EBG	EP-1												
Sample Date	3/7/2022	5/24/2022	9/6/2022	12/19/2022	3/21/2023	6/7/2023	9/18/2023	3/23/2017	4/3/2017	5/25/2017	6/22/2017	6/29/2017	7/24/2017	8/1/2017	8/31/2017	3/22/2018	8/27/2018	1/11/2019	
Sample Purpose	Corrective Action Monitoring	Background																	
ANALYTE	Unit																		
Boron	mg/L	0.0225	0.019 J	0.012 J	0.014 J	0.011 J	<0.0200	0.016 J	0.13	0.21	0.28	0.26	0.32	0.21	0.23	0.17	0.38	0.92	0.75
Calcium	mg/L	11.9	13.1	10.9	10.4	12	12.1	12.4	220	280	310	310	310	270	250	240	330	410	410
Chloride	mg/L	15	18	10	9	12	12	11	54	54	48	50	50	51	48	48	60	63	70
Fluoride	mg/L	0.58	0.52	0.61	0.68	0.58	0.57	0.63	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06
pH	SU	6.78	6.55	6.6	Lab Error	6.83	6.4	6.69	6.94	6.89	6.55	6.52	6.64	6.57	6.82	6.79	6.25	6.36	6.33
Sulfate	mg/L	83	90	101	96	85	82	81	820	910	850	850	440	540	520	440	510	1000	1600
Total Dissolved Solids	mg/L	428	344	322	340 H	314	336	326	2000	2300	2300	2300	2200	2200	2100	2100	2400	2700	2800
Antimony	mg/L	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010	<0.0010	<0.001	0.00043 J	<0.0002	<0.0026	0.00057 J	0.00095 J	<0.0026	<0.0002	<0.0026	<0.0016		
Arsenic	mg/L	<0.0010	0.0005 J	<0.0010	<0.0010	0.0004 J	0.0004 J	<0.0010	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.002		
Barium	mg/L	0.054	0.0506	0.0491	0.0434	0.0508	0.0441	0.0426	0.045	0.04	0.041	0.032	0.033	0.029	0.028	0.026	0.023		
Beryllium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0006 J	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055	<0.00015	<0.00055	
Cadmium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0001	0.006	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	
Chromium	mg/L	0.0009 J	0.0007 J	<0.0015	<0.0015	0.0016	<0.0015	0.0008 J	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0026	
Cobalt	mg/L	0.0005 J	0.0003 J	0.0002 J	0.0002 J	0.003 J	0.0008 J	<0.0010	0.0017 J	0.00079 J	<0.0018	0.00081 J	0.00057 J	<0.00018	0.00074 J	<0.00018	<0.00063	0.00056 J	
Lead	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0042	
Lithium	mg/L	0.0162	0.0166	0.0141	0.0166	0.0191	0.0241	0.0185	0.024 J	0.028 J	<0.0042	0.032 J	0.029 J	<0.1	0.024 J	<0.0042	<0.0042		
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 J	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002	<0.0002	<0.00093	
Molybdenum	mg/L	0.0014 J	0.0021	0.0012 J	0.002	0.0019	0.0016	0.0052	0.0028 J	0.0016 J	<0.000095	0.00077 J	0.0018 J	0.00095	0.0019 J	<0.00095	<0.00014		
Radium 226	pCi/L	0.215	<0.0495	<0.0129	<0.0672	0.180 J	0.444	<0.04	0.603	0.341	0.37	0.313	<0.139	0.16	0.38	0.24	0.453		
Radium 228	pCi/L	1.18	2.63	0.315 J	<0.0292	0.968	1.09 J	0.12	<0.0552	0.55	<0.609	0.496	<0.0387	<0.27	1.04	1.15	0.992		
Radium, 226/228 Combined	pCi/L	1.4	2.68	<0.328	<0.0672	1.15	1.53	0.12	0.603	0.891	0.37	0.809	<0.139	0.16	1.42	1.39	1.445		
Selenium	mg/L	0.0007 J	0.0007 J	0.0006 J	<0.0010	0.0009 J	0.0011	0.0012	0.0012 J	0.0014 J	<0.0028	0.005 J	0.0025 J	<0.0028	0.0011 J	<0.0028	0.00033	<0.0028	
Thallium	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0012 J	<0.0020	<0.0007	<0.004	<0.0081	<0.01	<0.010	<0.010	<0.010	<0.010	<0.0081	<0.01	
Turbidity	NTU	16	15	3.5	Lab Error	<1.0	1.8	11											

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-2	EP-2	EP-2	EP-2	
Sample Date	6/27/2019	1/30/2020	6/22/2020	1/21/2021	5/31/2021	8/30/2021	12/21/2021	3/7/2022	5/24/2022	9/6/2022	12/20/2022	3/15/2023	5/24/2023	6/6/2023	9/18/2023	3/23/2017	4/3/2017	5/25/2017	6/22/2017	
Sample Purpose	Background	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background								
ANALYTE	Unit																			
Boron	mg/L	1.12	1.1	0.92	1	0.816	0.931	1.07	0.914	0.991	1.16	1.06	0.968 O	0.986	0.945	1.29	0.22	0.19	0.2	0.23
Calcium	mg/L	444	540	470	460	478	483	506	474	508	476	523	523 O	505	499	548	190	170	200	200
Chloride	mg/L	55	52	34	39	44	48	46	44	38	35	38	32 O	30	30	28	42	39	36	37
Fluoride	mg/L	<0.06	<0.06	<0.5	<0.2	0.22	0.19	0.24	0.19	0.18	0.21	0.24	0.2 O	0.22	0.21	0.29	<0.029	<0.029	<0.029	<0.029
pH	SU	6.2	7.39	6.15	6.29	6.18	6.12	6.37	6.19	6.2	6.21	Lab Error	6.31 O	6.19	6.31	6.47	6.18	6.39	6.31	6.1
Sulfate	mg/L	1500	1700	1400	1400	1450	1640	1480	1600	1470	1570	1580	1490 O	1520	1430	1430	860	660	780	780
Total Dissolved Solids	mg/L	550	2700	2700	2500	2500	2520	2510	2650	2530	2600	2460 H	2350 O	2010	2370	2460	1800	1800	1900	1800
Antimony	mg/L	<0.0016		<0.0026		<0.0010	0.0005 J	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010 O	<0.010	<0.010	<0.0010	0.0029 J	<0.0002	<0.0026	0.0004 J
Arsenic	mg/L	<0.002		<0.0014		<0.0010	0.0005 J	<0.0200	0.0004 J	<0.0010	0.0004 J	<0.0010	0.0008 JO	0.0007 J	0.0009 J	0.006 J	<0.0014	<0.0014	<0.0014	<0.0014
Barium	mg/L	<0.00011		0.019		0.0216	0.02	0.0193	0.0171	0.017	0.017	0.0158	0.0197 O	0.0163	0.0154	0.0196	0.039	0.035	0.038	0.03
Beryllium	mg/L	<0.00015		<0.00055		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.0006 J	<0.0010 O	<0.010	<0.010	<0.010	<0.0010	<0.0002	<0.0005	<0.0002
Cadmium	mg/L	<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	0.0002 J	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.010	<0.010	<0.010	<0.0015	<0.0001	<0.00075	<0.0015
Chromium	mg/L	<0.00014		<0.0011		<0.0020	0.0019	<0.0300	<0.0015	<0.0015	<0.0015	0.0026	<0.0015 O	<0.0015	<0.0015	<0.0015	<0.0015	<0.0001	<0.0016	<0.0031
Cobalt	mg/L	<0.00063		<0.00018		0.0012	0.0010 J	<0.0200	<0.0010	0.0002 J	<0.0010	0.0004 J	0.0002 JO	0.0003 J	<0.0010	0.003 J	0.052	0.029	0.023	0.016
Lead	mg/L	<0.00016		<0.0033		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.010	<0.010	<0.010	<0.0008	<0.0013	<0.0026	<0.0026
Lithium	mg/L	<0.04		<0.0042		0.0141	0.0127	<0.0600	0.012	0.0103	0.012	0.0139	0.0133 O	0.0111	0.0136	0.0099	0.018 J	0.015 J	<0.0042	0.020 J
Mercury	mg/L	<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020 O	<0.00020	<0.00020	0.00007 J	<0.00019	<0.00019	<0.00019	
Molybdenum	mg/L	<0.00028		<0.000095		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015 O	<0.0015	<0.0015	0.0015 J	0.0017 J	<0.000095	0.0003 J	
Radium 226	pCi/L	0.619		0.42		<0.04	0.501	0.260 J	<0.0628	0.265 J	0.144 J	0.227 J		<0.0926	0.13	<0.187	0.338	<0.177	0.197	
Radium 228	pCi/L	0.0905		0.405			1.78	<0.255	0.439 J	0.888	<0.449	0.326 J	0.726		<-0.248	1.28	0.853	<0.0622	<0.126	<0.127
Radium, 226/228 Combined	pCi/L	0.71		0.825			<1.82	0.756 J	0.699	0.95	<0.265	0.470	0.953		<0.0926	1.41	0.853	0.338	<0.177	0.197
Selenium	mg/L	<0.00033		<0.0028		0.0015	0.0014	<0.0200	0.0017	0.0026	0.0015	0.0021	0.0051 O	0.0073	0.0082	0.0025	0.0038 J	0.0027 J	<0.0028	0.0074
Thallium	mg/L	<0.00015		<0.004		<0.0020	0.0042	<0.0400	<0.0200	<0.0200	<0.0020	<0.0020	<0.0020 O	<0.0020	<0.0020	<0.0007	<0.0007	<0.004	<0.0081	
Turbidity	NTU					49.8	22.65	13	5	<1.0	<1.0	<1.0	Lab Error	<1.0 O	1.6	<1.0	6.1			

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	
Sample Date	6/29/2017	7/24/2017	8/1/2017	8/31/2017	3/22/2018	8/27/2018	1/11/2019	6/27/2019	1/30/2020	6/22/2020	1/21/2021	5/31/2021	8/30/2021	12/22/2021	3/7/2022	5/24/2022	9/7/2022	12/20/2022		
Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Corrective Action Monitoring								
ANALYTE	Unit																			
Boron	mg/L	0.29	0.26	0.31	0.23	0.24	0.2	0.37	0.274	0.56	0.47	0.49 J	0.544	0.499	0.33	0.508	0.48	0.408	0.276	
Calcium	mg/L	470	200	190	180	230	190	280	236	430	360	340	372	363	299	406	347	349	306	
Chloride	mg/L	36	36	36	36	30	35	25	29	13	19	28	29	34	43	30	33	44	52	
Fluoride	mg/L	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06	<0.06	<0.5	0.28	0.62	0.4	0.36	0.69	0.92	0.47	0.39		
pH	SU	5.75	5.86	5.88	6.33	6.27	6.28	6.62	6.18	6.46	5.81	6.37	5.74	5.91	6.32	5.86	5.97	6.19	Lab Error	
Sulfate	mg/L	470	430	770	340	420	740	1100	1100	1100	1200	1300	1370	1590	1250	1630	1700	1760	1350	
Total Dissolved Solids	mg/L	1900	1800	1800	1800	1700	1800	1900	400	1900	2200	2300	2120	2370	2090	2480	2460	2580	2220 H	
Antimony	mg/L	0.00073 J	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	
Arsenic	mg/L	<0.0014	<0.0014	<0.0014	<0.0014		<0.0014		<0.002		<0.002		<0.00027		<0.0010	0.0005 J	<0.0200	<0.0010	0.0013	0.0006 J
Barium	mg/L	0.029	0.025	0.025	0.025		0.018		<0.00011		0.019		0.0146	0.0198	0.0168	0.0151	0.0208	0.0205	0.017	
Beryllium	mg/L	<0.0002	<0.00055	<0.0002	<0.00055		<0.00015	<0.00055	<0.0016		<0.00011		0.0011	0.0003 J	<0.0200	0.0019	0.0056	<0.0010	<0.0010	
Cadmium	mg/L	<0.0015	<0.0015	<0.0015	<0.0015		<0.0015		<0.000018		<0.00002		0.0015	0.0016	<0.0200	0.0014	0.0003 J	0.0003 J	0.0002 J	
Chromium	mg/L	<0.0031	<0.0031	<0.0031	<0.0031		<0.0031		<0.0026	<0.0014	<0.0011		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	<0.0015	
Cobalt	mg/L	0.0087	<0.00018	0.00086 J	<0.00018		<0.00063	0.0007 J	<0.00063	<0.000037		0.0017	0.0052	<0.0200	0.0159	0.211	0.0325	0.0218		
Lead	mg/L	<0.0026	<0.0026	<0.0026	<0.0026		<0.0026	<0.0042	<0.00016		<0.0033		<0.0010	0.0007 J	<0.0200	<0.0010	<0.0020	<0.0010	<0.0010	
Lithium	mg/L	0.025 J	<0.1	0.021 J	<0.0042		<0.0042		<0.04		<0.0042		0.0206	0.0148	<0.0600	0.0196	0.0381	0.0123	0.0129	
Mercury	mg/L	<0.00019	<0.00019	<0.00019	<0.00019		<0.0002		<0.000093		<0.0001		<0.00020	<0.00020	0.00006 J	<0.00020	<0.00020	<0.00020	<0.00020	
Molybdenum	mg/L	0.00055 J	<0.00095	0.00082 J	<0.00095		<0.00014		<0.00028		<0.000019		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	0.0009 J	0.0011 J	
Radium 226	pCi/L	1.9	0.08	0.14	0.08		0		<0.149		0.0467		<0.02	0.228 J	<0.0315	<0.0325	0.365	<0.0328		
Radium 228	pCi/L	<0.458	0.4	1.35	0.64		0.443		0.553		0.176			2.51	<0.145	<0.426 J	0.933	0.899	<0.0435	
Radium, 226/228 Combined	pCi/L	1.9	0.48	1.49	0.72		0.443		0.553		0.222			2.53	0.374 J	<0.458 J	0.965	1.26	<0.0763	
Selenium	mg/L	0.0061	0.0054	0.0046 J	<0.0028		<0.00033	0.0055	<0.00033	0.0031		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0008 J	
Thallium	mg/L	<0.0081	<0.0081	<0.0081	<0.0081		<0.0081	<0.01	<0.00015		<0.004		<0.0020	0.009	<0.0400	<0.0020	<0.0040	<0.0020	<0.0020	
Turbidity	NTU													7.34	9.98	1.5	4.9	4.3	<1.0	Lab Error

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-2	EP-2	EP-2	EP-2	EP-3																			
Sample Date	3/21/2023	5/24/2023	6/6/2023	9/20/2023	3/23/2017	4/3/2017	5/25/2017	6/22/2017	6/29/2017	7/24/2017	8/1/2017	8/31/2017	3/22/2018	8/27/2018	1/11/2019	6/27/2019	1/30/2020	6/22/2020	1/21/2021					
Sample Purpose		Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Background																			
ANALYTE	Unit																							
Boron	mg/L	0.359 O	0.418	0.372																				
Calcium	mg/L	328 O	318	340																				
Chloride	mg/L	29 O	31	35																				
Fluoride	mg/L	1.47 O	1.7	1.57																				
pH	SU	5.96 O	5.48	6.3																				
Sulfate	mg/L	1750 O	1690	1700																				
Total Dissolved Solids	mg/L	2480 O	2380	2570																				
Antimony	mg/L	<0.0050 O	<0.0040	<0.0040																				
Arsenic	mg/L	<0.0010 O	0.0009 J	0.0023																				
Barium	mg/L	0.022 O	0.0185	0.0189																				
Beryllium	mg/L	0.0056 O	0.0082	0.0092																				
Cadmium	mg/L	0.0009 JO	0.0002 J	<0.0010																				
Chromium	mg/L	0.0018 O	0.0009 J	<0.0015																				
Cobalt	mg/L	0.115 O	0.273	0.301																				
Lead	mg/L	<0.0050 O	<0.0040	<0.0040																				
Lithium	mg/L	0.0446 O	0.0518	0.0725																				
Mercury	mg/L	<0.00020 O	<0.00020	<0.00020																				
Molybdenum	mg/L	<0.0015 O	<0.0015	<0.0015																				
Radium 226	pCi/L	<-0.0164		0.182 J																				
Radium 228	pCi/L	2.0		<0.162																				
Radium, 226/228 Combined	pCi/L	2.0		<0.343																				
Selenium	mg/L	<0.0010 O	<0.0010	<0.0010																				
Thallium	mg/L	<0.0100 O	<0.0080	<0.0080																				
Turbidity	NTU	4.48 O	<1.0	8.2																				

Notes:

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< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-3	EP-3	EP-3	EP-4																
Sample Date	5/31/2021	8/30/2021	12/22/2021	3/8/2022	5/25/2022	9/7/2022	12/20/2022	3/21/2023	5/24/2023	6/6/2023	9/20/2023	3/23/2017	4/3/2017	5/25/2017	6/22/2017	6/29/2017	7/24/2017	8/1/2017	8/31/2017	
Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Corrective Action Monitoring	Background															
ANALYTE	Unit																			
Boron	mg/L	0.0556	0.075	0.0501	0.0702	0.067	0.0708	0.063	0.0615 O	0.069	0.0586	0.0611	14	23	14	11	13	11	14	11
Calcium	mg/L	40.6	35.5	58.9	36.3	40.1	36.2	42.8	35.7 O	39.1	36.1	52.6	190	170	170	150	190	160	150	150
Chloride	mg/L	127	129	183	145	157	147	157	127 O	152	141	144	460	290	380	430	250	180	210	210
Fluoride	mg/L	0.22	0.17	0.51	0.2	0.19	0.21	0.23	0.16 O	0.19	0.19	0.25	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029
pH	SU	6.13	6.07	6.41	6.17	6.04	6.05	Lab Error	6.33 O	6.11	6.05	6.26	5.51	5.88	5.77	5.8	5.81	5.8	5.8	5.85
Sulfate	mg/L	148	114	178	153	160	151	170	83 O	141	129	158	620	530	660	730	410	290	330	340
Total Dissolved Solids	mg/L	692	672	812	762	728	670	650 H	535 O	735	735	770	2300	2300	2400	2000	2100	2300	2200	2300
Antimony	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 B	0.0019 O	<0.0010	<0.0010	<0.0010	0.00028 J	<0.0002	<0.0026	0.00033 J	0.00051 J	<0.0026	<0.0002
Arsenic	mg/L	0.0075	0.0076	<0.0200	0.0068	0.0075	0.007	0.0083	0.0173 O	0.0063	0.009	0.0073	0.035	0.039	0.037	0.053	0.044	0.044	0.035	0.049
Barium	mg/L	0.0819	0.101	0.084	0.0851	0.0846	0.0855	0.0836	0.168 O	0.0949	0.0973	0.0772	0.035	0.026	0.028	0.029	0.037	0.026	0.031	0.023
Beryllium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	
Cadmium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 JO	<0.0010	<0.0010	<0.0010	<0.001	0.0052	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015
Chromium	mg/L	<0.0015	<0.0015	<0.0300	0.0015 J	<0.0015	<0.0015	<0.0015	0.0067 O	<0.0015	0.0011 J	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031
Cobalt	mg/L	0.0912	0.0882	0.0472	0.0947	0.121	0.104	0.0846	0.0795 O	0.0939	0.124	0.0841	0.39	0.41	0.41	0.44	0.34	0.41	0.38	
Lead	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0028 O	<0.0010	<0.0010	<0.0010	<0.0010	0.009	0.013	0.011	0.017	<0.0026	0.011	0.012
Lithium	mg/L	0.0314	0.0169	0.0736	0.0267	0.0321	0.027	0.0425	0.0053 O	0.0317	0.0311	0.0694	0.0044 J	0.0062 J	<0.0042	0.0047 J	0.0063 J	<0.1	0.0053 J	<0.0042
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00018 JO	<0.00020	<0.00020	<0.00020	<0.00020	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002
Molybdenum	mg/L	<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	0.0007 J	0.0014 JO	<0.0015	<0.0015	0.00092 J	0.0011 J	<0.000095	<0.0002	0.00058 J	<0.00095	0.0010 J	<0.00095	
Radium 226	pCi/L	<0.27	0.196 J	0.365	0.132 J	0.141 J	0.551	0.606	0.302	<0.12	1.1	1.17	<0.0457	0.18	<0.219	0.3	0.15	0.33		
Radium 228	pCi/L	<0.5	0.768	0.765	1.47	<0.0	1.04	1.25		0.704 J	0.76 J	<0.442	<0.353	0.864	0.897	<0.490	0.44	0.96	2.14	
Radium, 226/228 Combined	pCi/L	<0.77	0.964	1.13	1.6	<0.141	1.59	1.86		1.01 J	0.76 J	1.1	1.17	0.864	1.077	<0.490	0.74	1.11	2.47	
Selenium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	0.0008 J	0.0007 J	0.13	0.12	0.13	0.2	0.13	0.11	0.16	
Thallium	mg/L	<0.0020	0.0019 J	<0.0400	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.0020	0.0018 J	<0.0020	<0.0007	0.065	0.092	0.094	0.058	<0.0081	0.075	0.075
Turbidity	NTU	9.96	6.84	4.2	4.9	1.7	0.42	Lab Error	114.1 O	<1.0	1.9	8.9								

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

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Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4			
	Sample Date	3/22/2018	8/27/2018	1/11/2019	6/27/2019	1/30/2020	6/22/2020	1/21/2021	5/31/2021	8/30/2021	12/22/2021	3/8/2022	5/25/2022	9/7/2022	12/20/2022	3/21/2023	5/24/2023	6/7/2023	9/21/2023	12/21/2021												
	Sample Purpose	Background	Corrective Action Monitoring																													
ANALYTE	Unit																															
Boron	mg/L	13	11	15	11.5	11	9.9	10	11.9	11.8	11.6	11.1	11.8	10.7	9.68 O	10.6	11.6	10.5	0.0855													
Calcium	mg/L	200	150	140	159	170	150	140	179	162	161	171	188	147	165	171 O	184	182	147	25.4												
Chloride	mg/L	200	310	420	440	370	380	390	484	446	477	456	460	478	489	435 O	467	472	448	4												
Fluoride	mg/L	<0.25	<0.5	<0.06	<0.06	<0.06	<0.5	<0.2	0.1	0.09 J	0.09 J	0.12	0.12	0.10 J	0.12	0.14 O	0.17	0.15	0.11	0.48												
pH	SU	6.04	5.85	6.07	5.86	5.94	5.79	5.91	5.79	5.7	6.05	5.94	5.88	5.7	Lab Error	6.12 O	5.94	5.76	5.93	7.07												
Sulfate	mg/L	320	520	750	710	630	610	580	670	565	567	623	531	673	499	516 O	517	492	525	119												
Total Dissolved Solids	mg/L	2100	1900	2000	130	2000	2500	1900	1860 R	1750	1450	1740	1730	1640	1640 H	1520 O	1840	1690	1700	294												
Antimony	mg/L	<0.0016		<0.0016		<0.00052		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010			
Arsenic	mg/L	<0.002		0.026 J	0.019	0.014	<0.05	0.0075	0.0073	<0.0200	0.0053	0.0071	0.0068	0.103 O	0.0134	0.0126	0.0089	0.0200														
Barium	mg/L	0.023		<0.00011		0.027		0.0248	0.027	0.0255	0.0313	0.0329	0.0236	0.0295	0.046 O	0.0395	0.0348	0.0239	0.0478													
Beryllium	mg/L			<0.00055	<0.00015		<0.00055		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0047	0.0003 JO	<0.0010	0.0006 J	<0.0010	<0.0200											
Cadmium	mg/L		<0.0015		<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0200												
Chromium	mg/L	0.011		<0.0026	<0.00014		<0.0011		<0.0015	<0.0015	<0.0300	0.002	<0.0015	<0.0015	0.0014 J	0.0026 O	<0.0015	<0.0015	<0.0015	<0.0300												
Cobalt	mg/L	0.31	0.41	0.28	0.26	0.33	0.32	0.287	0.326	0.298	0.200	0.205	0.471	0.258	0.134 O	0.137	0.217	0.267	<0.0200													
Lead	mg/L	0.015		<0.0042	<0.00016		0.018	<0.025	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0019 O	<0.0010	<0.0010	<0.0010	<0.0200												
Lithium	mg/L		<0.0042		<0.04		<0.0042		<0.0015	0.0023 J	<0.0600	0.0025 J	0.0025 J	0.0021 J	0.0032	0.0034 O	0.0034	0.0032	0.0026 J	<0.0600												
Mercury	mg/L		<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00017 JO	<0.00020	<0.00020	<0.00020	<0.00020												
Molybdenum	mg/L	<0.00014		<0.00028		<0.000019		<0.00015	<0.00015	<0.030	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.0014 JO	<0.0015	<0.0015	<0.0015	<0.0300												
Radium 226	pCi/L	0.262	0.77		0.163				<0.11	0.170 J	0.234	0.144 J	0.276	0.828	0.264 J	<0.048	<0.19	0.564														
Radium 228	pCi/L		0.79		0.929		0.41			<0.14	1.21	0.658	1.25	1.22	0.328 J	1.14		0.564 J	<0.57	<0.125												
Radium, 226/228 Combined	pCi/L		1.052		1.7		0.573			<0.25	1.38	0.893	1.39	1.49	1.16	1.4		0.612 J	<0.76	0.564 J												
Selenium	mg/L	0.021		<0.0028	<0.00033		0.0012		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.0006 J	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010												
Thallium	mg/L	0.14		0.18	<0.00015		<0.004		<0.																							

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-6	EP-7	EP-7								
Sample Date	3/7/2022	5/24/2022	9/6/2022	12/20/2022	3/15/2023	5/24/2023	6/7/2023	9/20/2023	12/22/2021	3/8/2022	5/24/2022	9/6/2022	12/20/2022	3/15/2023	6/6/2023	9/19/2023	12/22/2021	3/8/2022	
Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring																
ANALYTE	Unit																		
Boron	mg/L	0.038	0.0254	0.0222	0.0258	0.0205 O	0.012 J	0.014 J		0.0252	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.984	0.91	
Calcium	mg/L	22.5	21	16.7	17.5	18.8 O	16.6	16.3		4.24	1.92	1.65	1.86	1.69	1.62	1.49	1.26	178	170
Chloride	mg/L	3	3	3 J	3 J	3 JO	3 J	3 J		25	23	24	23	23	20	22	20	186	239
Fluoride	mg/L	0.4	0.38	0.38	0.51	0.4 O	0.44	0.41		0.06 J	0.06 J	0.06 J	0.07 J	0.06 J	0.07 J	0.06 J	0.33	0.3	
pH	SU	6.73	6.55	6.44	Lab Error	6.95 O	6.46	6.48		5.28	5.1	5.07	5.09	Lab Error	5.15	5.07	5.04	6.16	5.97
Sulfate	mg/L	141	132	114	116	125 O	113	128		48	67	63	64	56	66	65	53	549	556
Total Dissolved Solids	mg/L	326	322	282	282 H	262 O	296	286		192	254	238	216	206 H	222	250	212	1270	1450
Antimony	mg/L	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010 O	<0.0010	<0.0010		<0.0200	<0.0010	<0.0010	<0.0010 B	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010	
Arsenic	mg/L	0.0004 J	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010		<0.0200	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010	<0.0010	<0.0200	0.0173	
Barium	mg/L	0.0513	0.0529	0.0506	0.0422	0.0533 O	0.0514	0.0482		0.043	0.0345	0.034	0.0366	0.0475	0.0422	0.035	0.0307	0.0344	0.0271
Beryllium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010		<0.0200	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010	
Cadmium	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010		<0.0200	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010	
Chromium	mg/L	0.0008 J	<0.0015	<0.0015	0.0014 J	0.0008 JO	0.002	<0.0015		<0.0300	0.0013 J	0.0008 J	<0.0015	0.0009 J	0.0008 J	0.0016	0.0015	<0.0300	<0.0015
Cobalt	mg/L	0.0005 J	<0.0010	<0.0010	0.0002 J	<0.0010 O	0.0002 J	<0.0010		0.0040 J	0.0017	0.0007 J	0.0018	0.0068	0.0036	0.0031	0.008 J	0.110	0.139
Lead	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010		<0.0200	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010	
Lithium	mg/L	0.0027 J	0.0023 J	0.0023 J	0.0026 J	0.0029 JO	0.0027 J	0.0026 J		<0.0600	0.0113	0.011	0.0094	0.0066	0.0107	0.0182	0.0139	<0.0600	<0.00300
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020 O	<0.00020	<0.00020		0.00010 J	<0.00020	<0.00020	<0.00020 O	0.00013 J	0.00009 J	<0.00020	0.00008 J	<0.00020	<0.00020
Molybdenum	mg/L	0.003	0.0027	0.0017	0.0028	0.0017 O	0.0013 J	0.0013 J		<0.0300	<0.0015	<0.0015	<0.0015 O	<0.0015 O	<0.0015	<0.0015	<0.0300	0.0012 J	
Radium 226	pCi/L	0.157 J	0.232 J	0.214 J	0.458	0.153 J	0.443			<0.0641	0.123 J	0.112 J	0.0891 J	<0.137	.124 J	0.174 J	<0.07	0.103 J	0.0766 J
Radium 228	pCi/L	0.474 J	<0.287	<0.235	<0.281	0.58		<0.154		0.297 J	1.01	<0.183	0.702	<0	<0.413	0.419 J	<0.17	0.0686 J	0.954
Radium, 226/228 Combined	pCi/L	0.63	0.519 J	<0.214	0.458 J	0.733		0.597		0.362 J	1.13	<0.295	0.791	<0.137	<0.124	0.593 J	<0.24	0.172 J	1.03
Selenium	mg/L	0.0017	0.0015	0.0012	0.0007 J	0.0007 JO	<0.0010	0.0007 J		<0.0200	<0.0010	<0.0010	<0.0010 O	<0.0010 O	<0.0010	<0.0010	<0.0200	<0.0010	
Thallium	mg/L	0.0031	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.0020 O	<0.0020		<0.0400	<0.0200	<0.0200	<0.0020	<0.0020 O	<0.0020 O	<0.0020	<0.0400	<0.0020	
Turbidity	NTU	0.6	<1.0	<1.0	Lab Error	<1.0 O	<1.0	<1.0		7.5	4.0	3.3	<1.0	Lab Error	<1.0	2.2	9.3	4.3	14

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Marion Power Plant
Marion, Illinois

Well ID		EP-7	EP-7	EP-7	EP-7	EP-7	EP-7
	Sample Date	5/25/2022	9/7/2022	12/20/2022	3/21/2023	5/24/2023	6/6/2023
	Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE							
Boron	mg/L	0.682	0.667	0.311	1.15 O	0.639	0.679
Calcium	mg/L	128	93.5	40.2	245 O	114	126
Chloride	mg/L	254	249	223	176 O	240	252
Fluoride	mg/L	0.22	0.2	0.11	0.36 O	0.23	0.24
pH	SU	5.74	5.66	Lab Error	6.22 O	5.82	5.81
Sulfate	mg/L	400	326	165	820 O	363	396
Total Dissolved Solids	mg/L	1210	800	762 H	1720 O	1100	1160
Antimony	mg/L	<0.0010	<0.0010	<0.0010 B	0.0006 JO	<0.0010	<0.0010
Arsenic	mg/L	0.0139	0.0086	0.0081	0.114 O	0.0088	0.0126
Barium	mg/L	0.0325	0.036	0.037	0.194 O	0.0354	0.0331
Beryllium	mg/L	<0.0010	<0.0010	<0.0010	0.0014 O	<0.0010	<0.0010
Cadmium	mg/L	<0.0010	<0.0010	<0.0010 B	0.0007 JO	<0.0010	<0.0010
Chromium	mg/L	0.0017	<0.0015	0.0008 J	0.0298 O	0.0021	0.0019
Cobalt	mg/L	0.161	0.19	0.179	0.12 O	0.158	0.203
Lead	mg/L	0.0008 J	<0.0010	<0.0010	0.0321 O	<0.0010	0.0008 J
Lithium	mg/L	0.0019 J	<0.0030	<0.0030	0.0136 O	<0.0030	0.0015 J
Mercury	mg/L	<0.00020	<0.00020	<0.00020	0.00019 JO	<0.00020	<0.00020 S
Molybdenum	mg/L	0.0007 J	<0.0015	<0.0015	0.0154 O	0.0007 J	0.0015
Radium 226	pCi/L	0.242 J	0.0538 J	0.168	0.391	<0.0636	<0.25
Radium 228	pCi/L	1.23	0.731	0.507	1.61		1.06
Radium, 226/228 Combined	pCi/L	1.47	0.785	0.675	2		1.12
Selenium	mg/L	<0.0010	0.0007 J	<0.0010	<0.0010 O	0.0007 J	0.0006 J
Thallium	mg/L	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.00020	0.0013 J
Turbidity	NTU	1.8	<1.0	Lab Error	499.79 O	6.0	4.3
							8.2

Notes:

J = Indicates the result is estimated

< = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided.

For radium the result reported by the laboratory is provided.

R = relative percent difference for the laboratory duplicate outside recovery limits

mg/L = milligrams per liter

pCi/L = picoCuries per liter

NTU = Nephelometric Turbidity Unit

H = Indicates holding times exceeded

B = Analyte detected in associated Method Blank

Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.

S = Indicates spike recovery outside recovery limits

O = Indicates the result was removed from the statistical database as an outlier

Created by: CLS
 Checked by: CCC
 Reviewed by: MAH

Table 4: Groundwater Protection Standard Summary

Analyte	Unit	Background Tolerance Limit ¹	40 CFR Standard ²	GPS ³
Antimony	mg/L	ND (0.001)	0.006	0.006
Arsenic	mg/L	ND (0.001)	0.01	0.01
Barium	mg/L	0.28	2	2
Beryllium	mg/L	ND (0.001)	0.004	0.004
Cadmium	mg/L	ND (0.001)	0.005	0.005
Chromium	mg/L	ND (0.0015)	0.1	0.1
Cobalt	mg/L	0.018	0.006	0.018
Fluoride	mg/L	0.64	4	4
Lead	mg/L	ND (0.001)	0.015	0.015
Lithium	mg/L	0.082	0.04	0.082
Mercury	mg/L	ND (0.0002)	0.002	0.002
Molybdenum	mg/L	0.007	0.10	0.1
Selenium	mg/L	0.017	0.05	0.05
Thallium	mg/L	ND (0.002)	0.002	0.002
Radium 226 and 228	pCi/L	3.48	5	5

Notes:

1. The background tolerance limit was using the data collected between March 2017 and January 2021 at background well EBG
2. GPS provided in 40 CFR §257.95(h), 40 CFR §141.62 and 40 CFR §141.66
3. The former Emery Pond GPS is the maximum of the background tolerance limit and the GPS provided in 40 CFR §257.95(h)(2), 40 CFR §141.62 and 40 CFR §141.66

Abbreviations:

EPA = Environmental Protection Agency

GPS = Groundwater Protection Standard

mg/L = milligrams per Liter

Prepared by: CLS

ND = Non-detect concentration

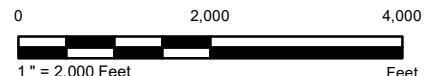
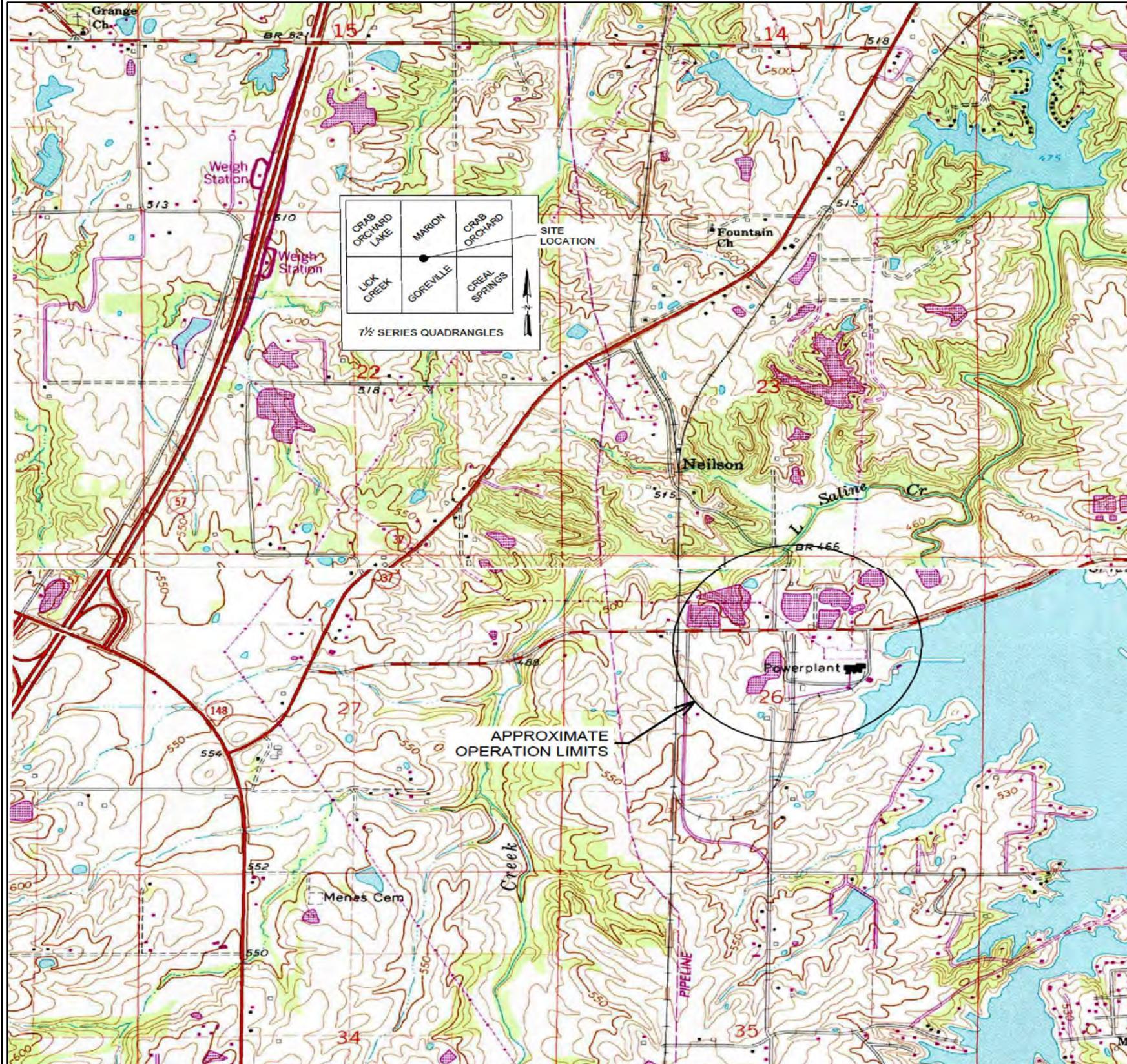
Checked by: DFSC

pCi/L = picoCuries per Liter

Reviewed by: MAH

pH = potential of Hydrogen

FIGURES



NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: GCS WGS 1984
2. BASEMAP CONSISTS OF USGS 7.5 MINUTE QUADRANGLE MAPS.

CLIENT

SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
FORMER EMERY POND

TITLE

SITE LOCATION MAP

CONSULTANT

YYYY-MM-DD	2022-01-12
DESIGNED	DFS
PREPARED	DTD
REVIEWED	DPJ
APPROVED	MAH

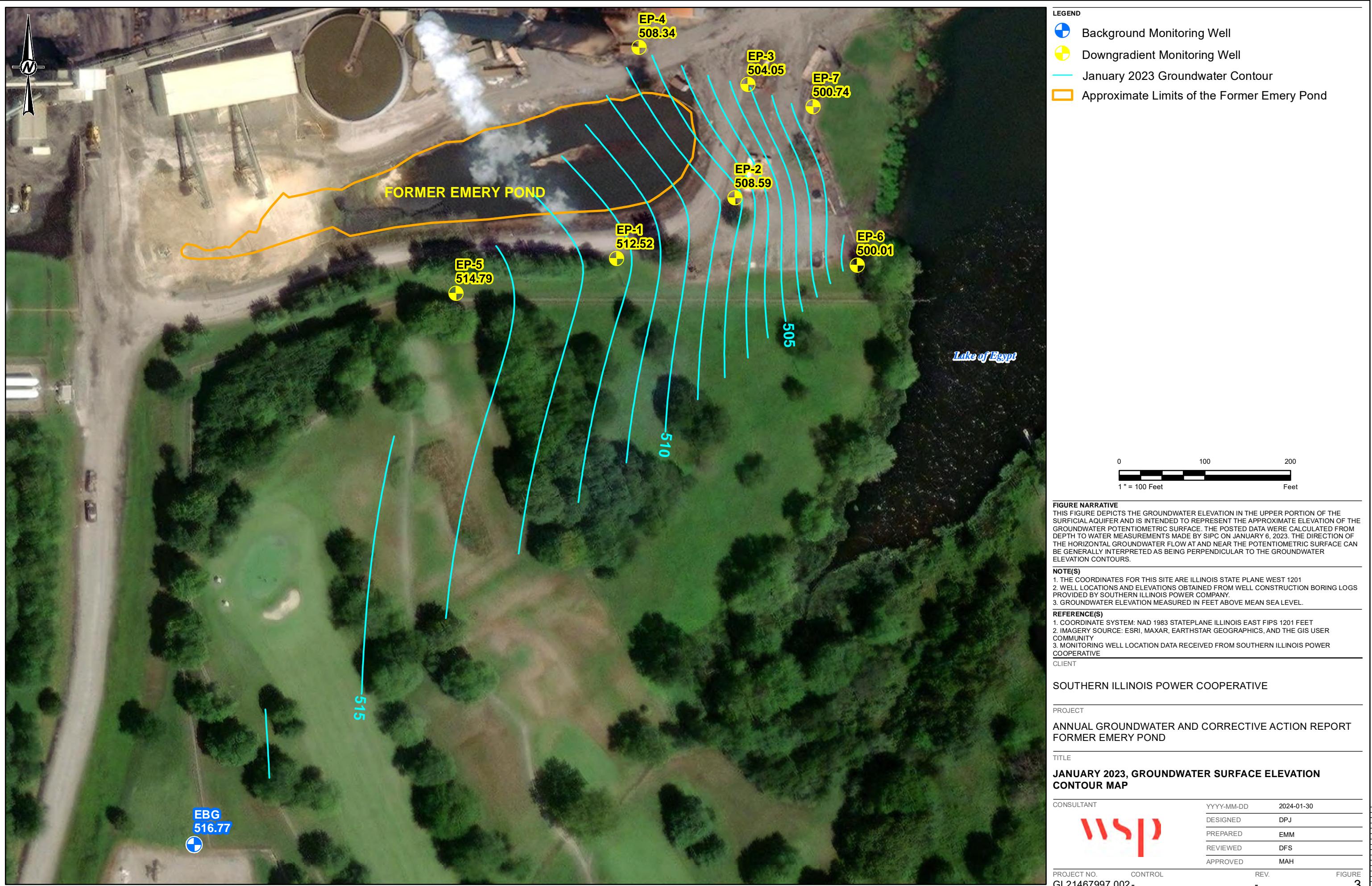
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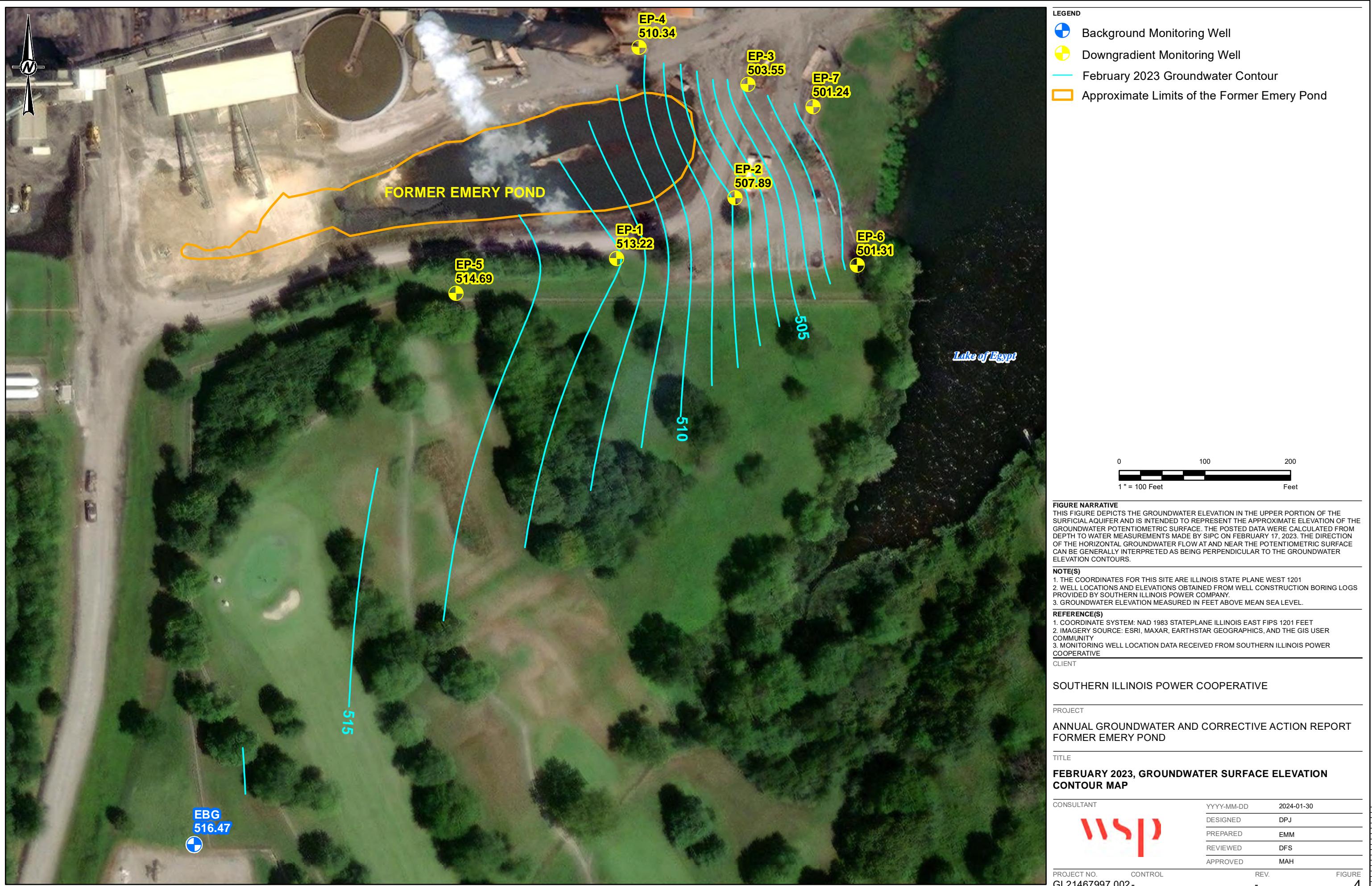
CONTROL REV. -

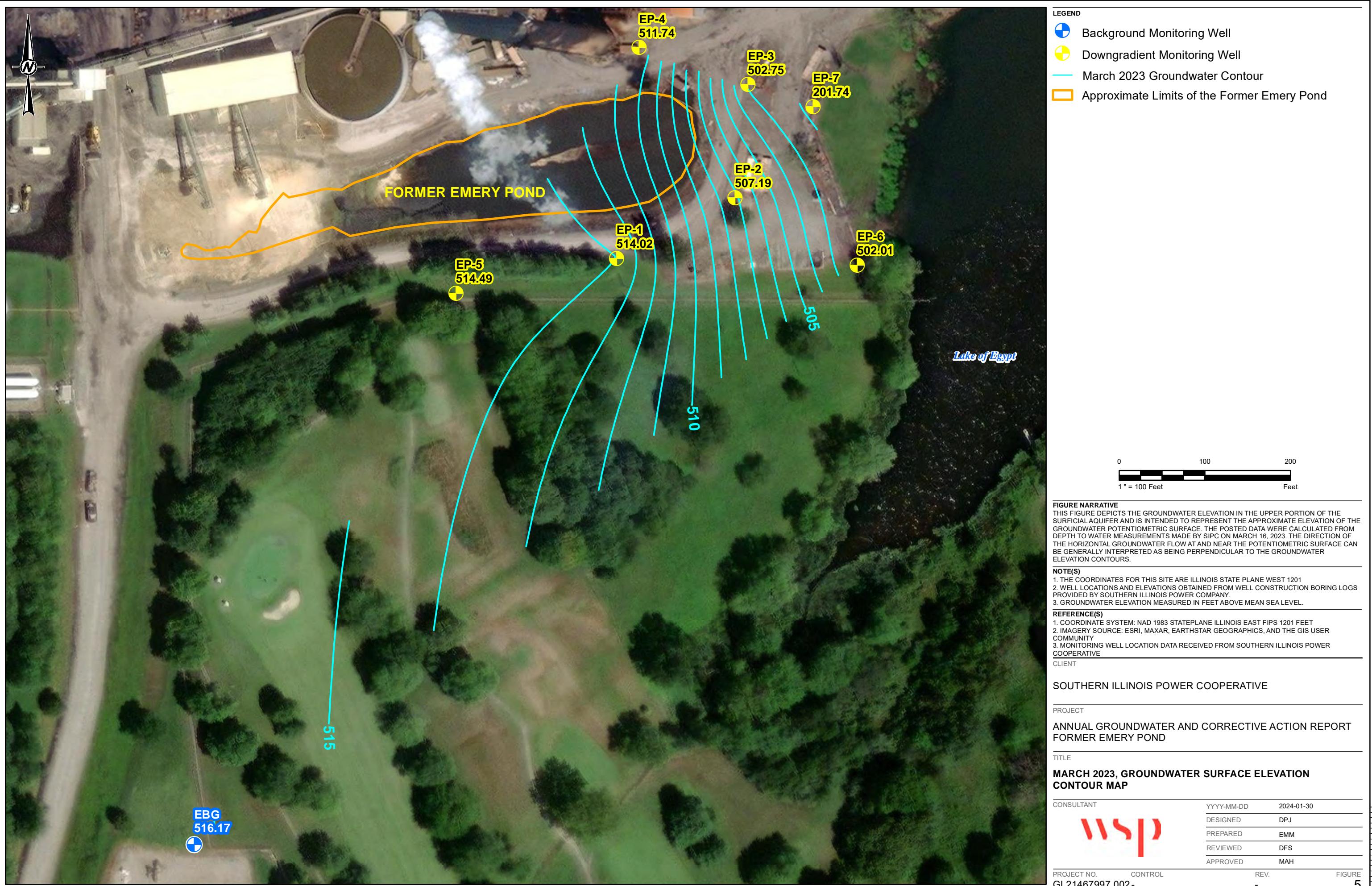
FIGURE 1

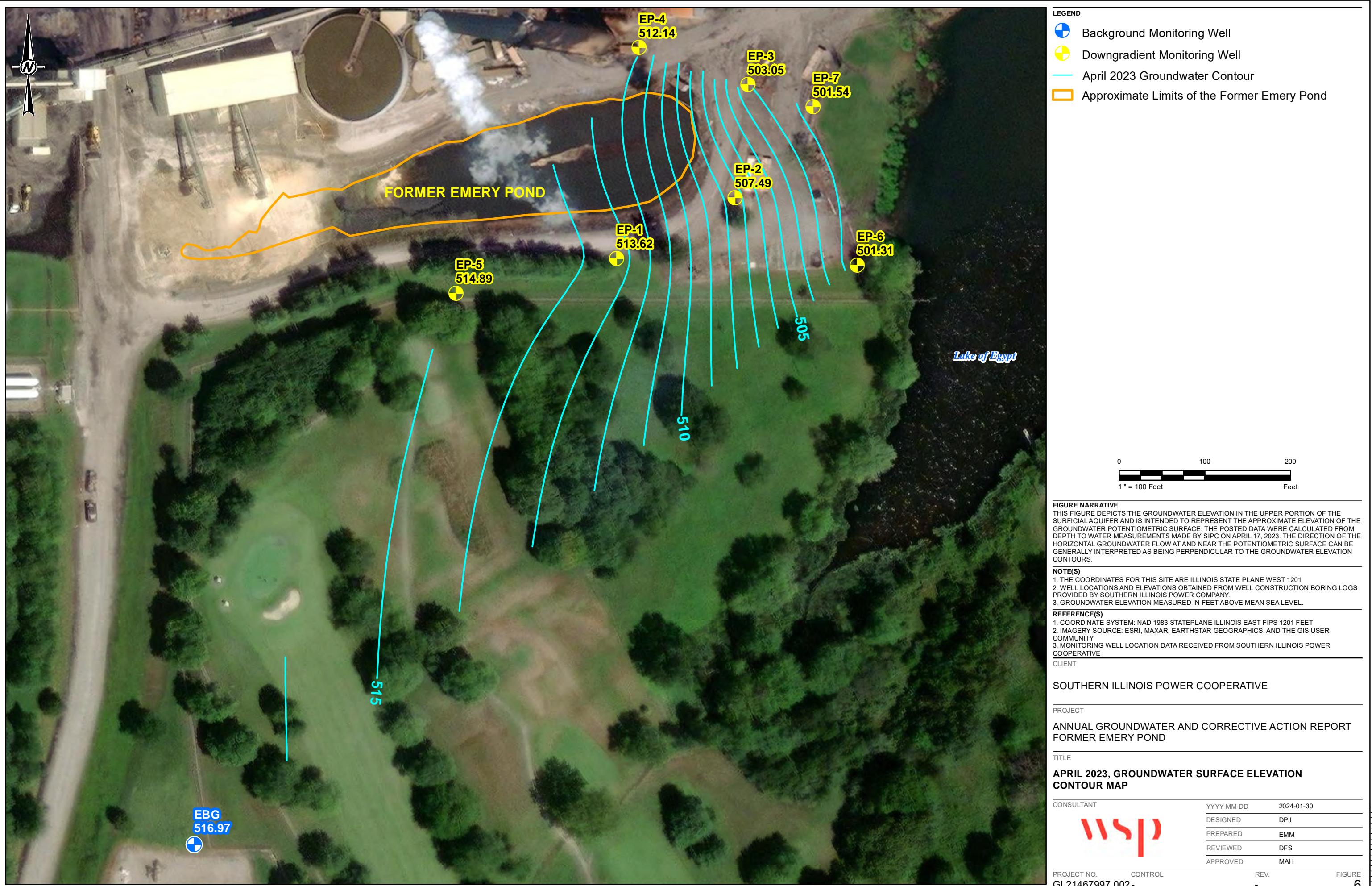


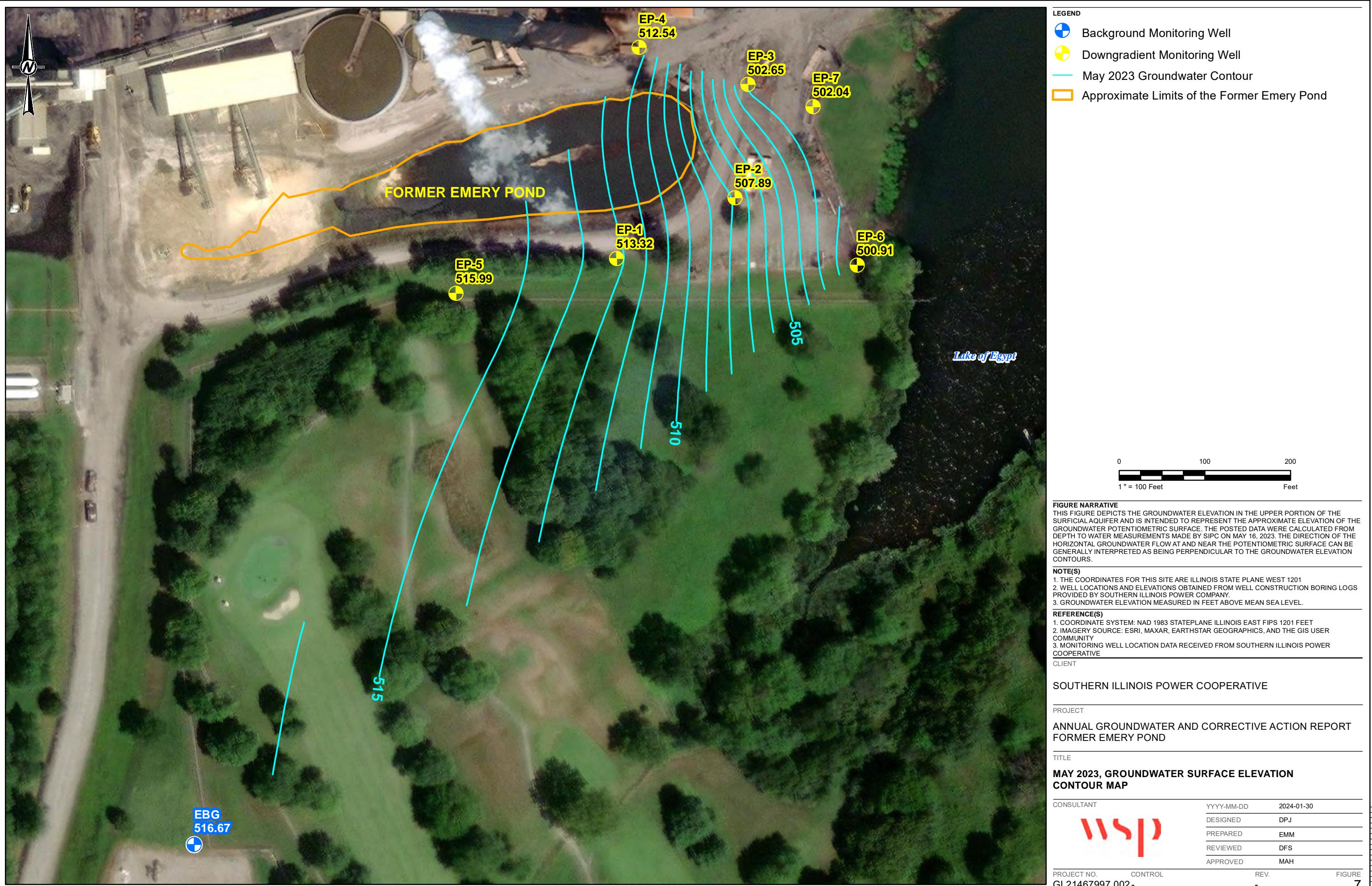


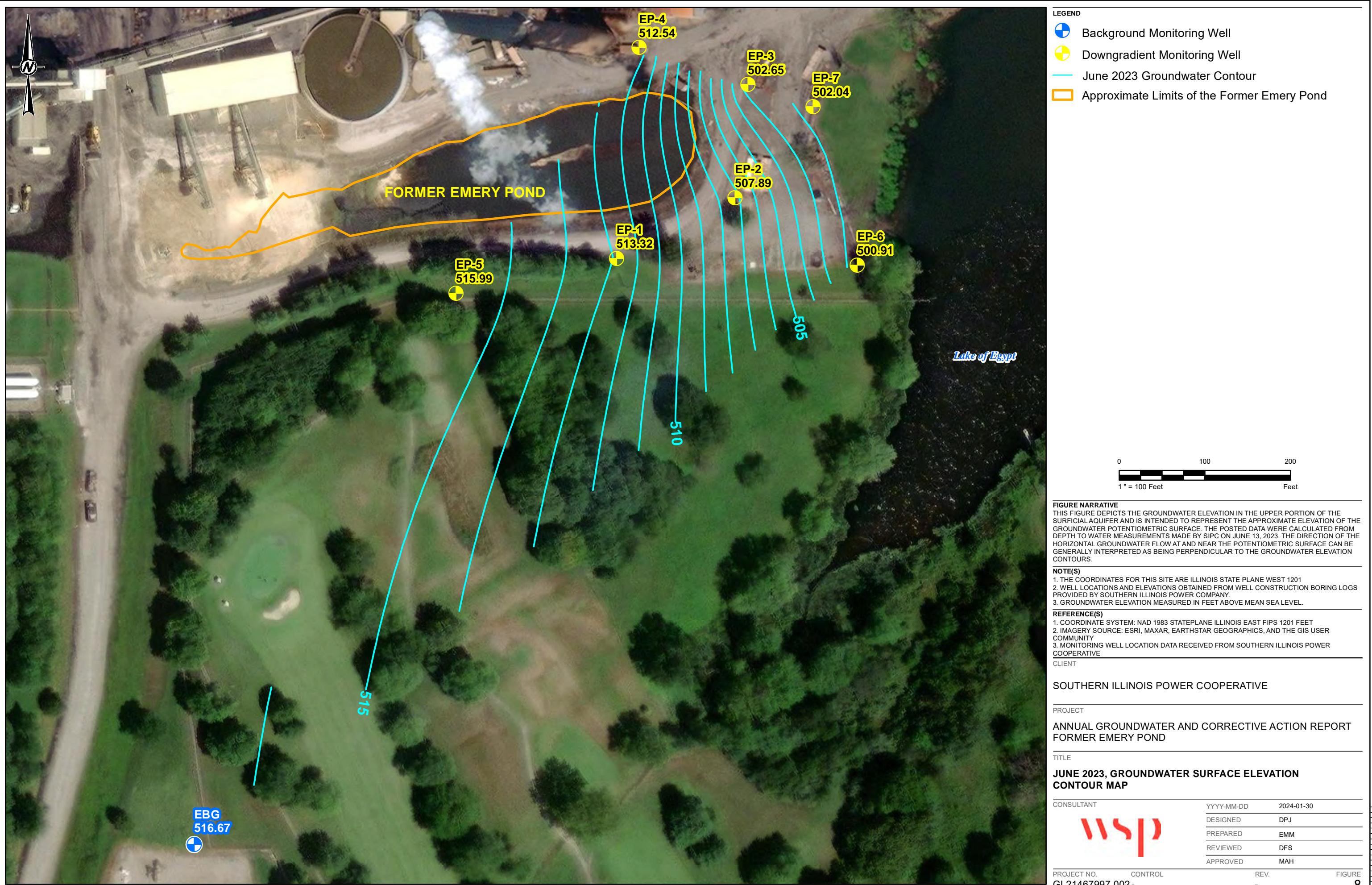


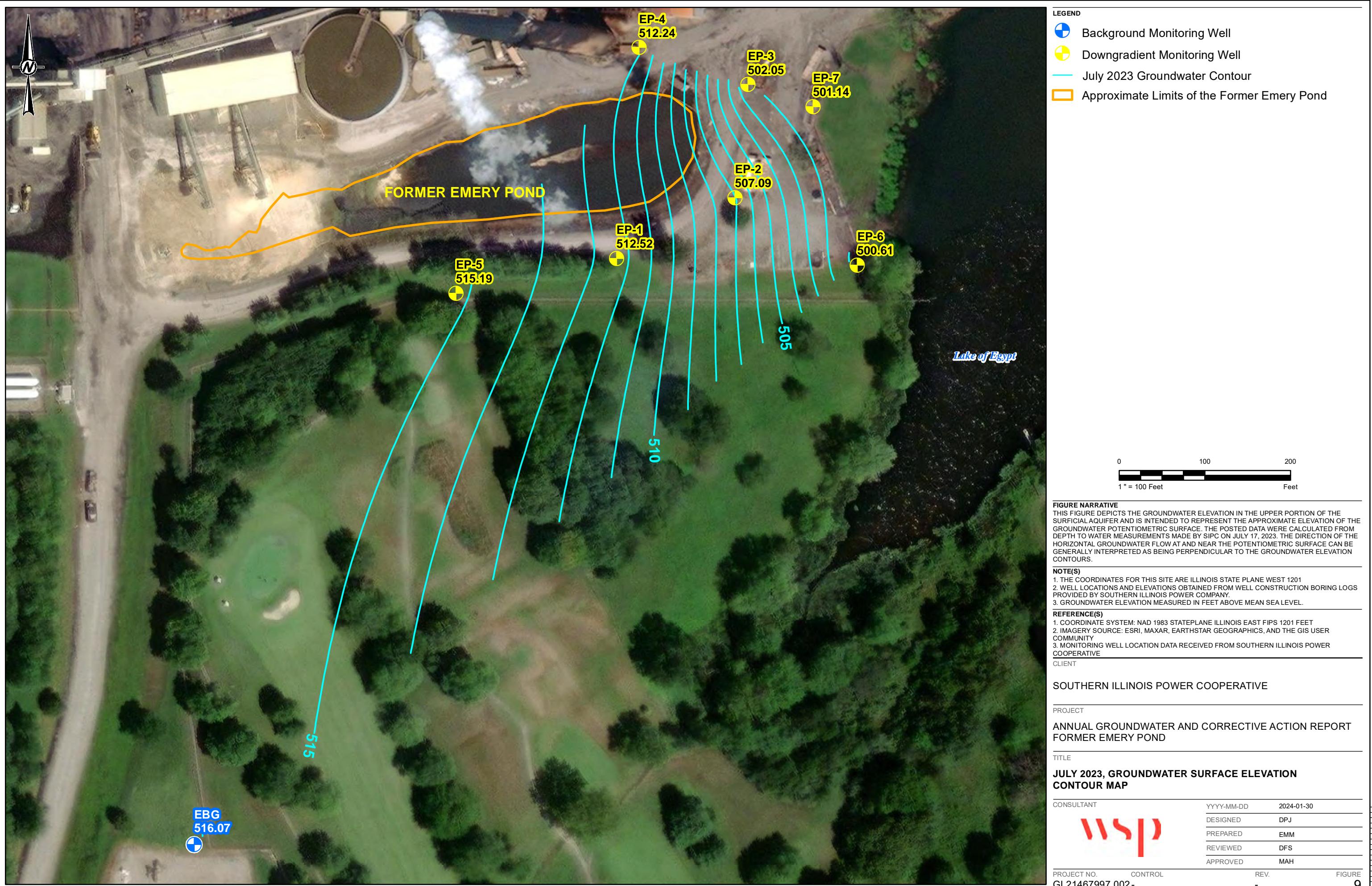


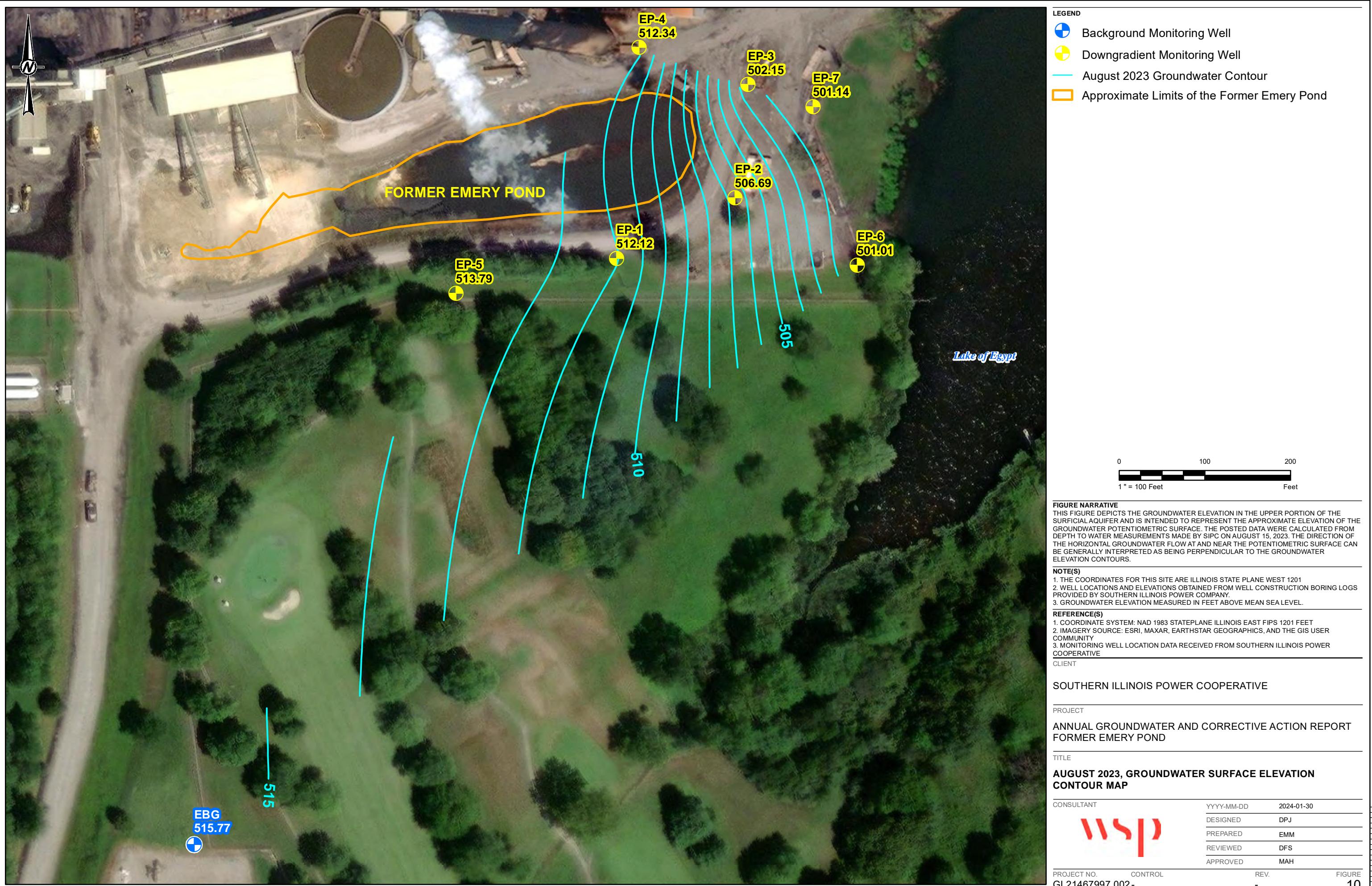


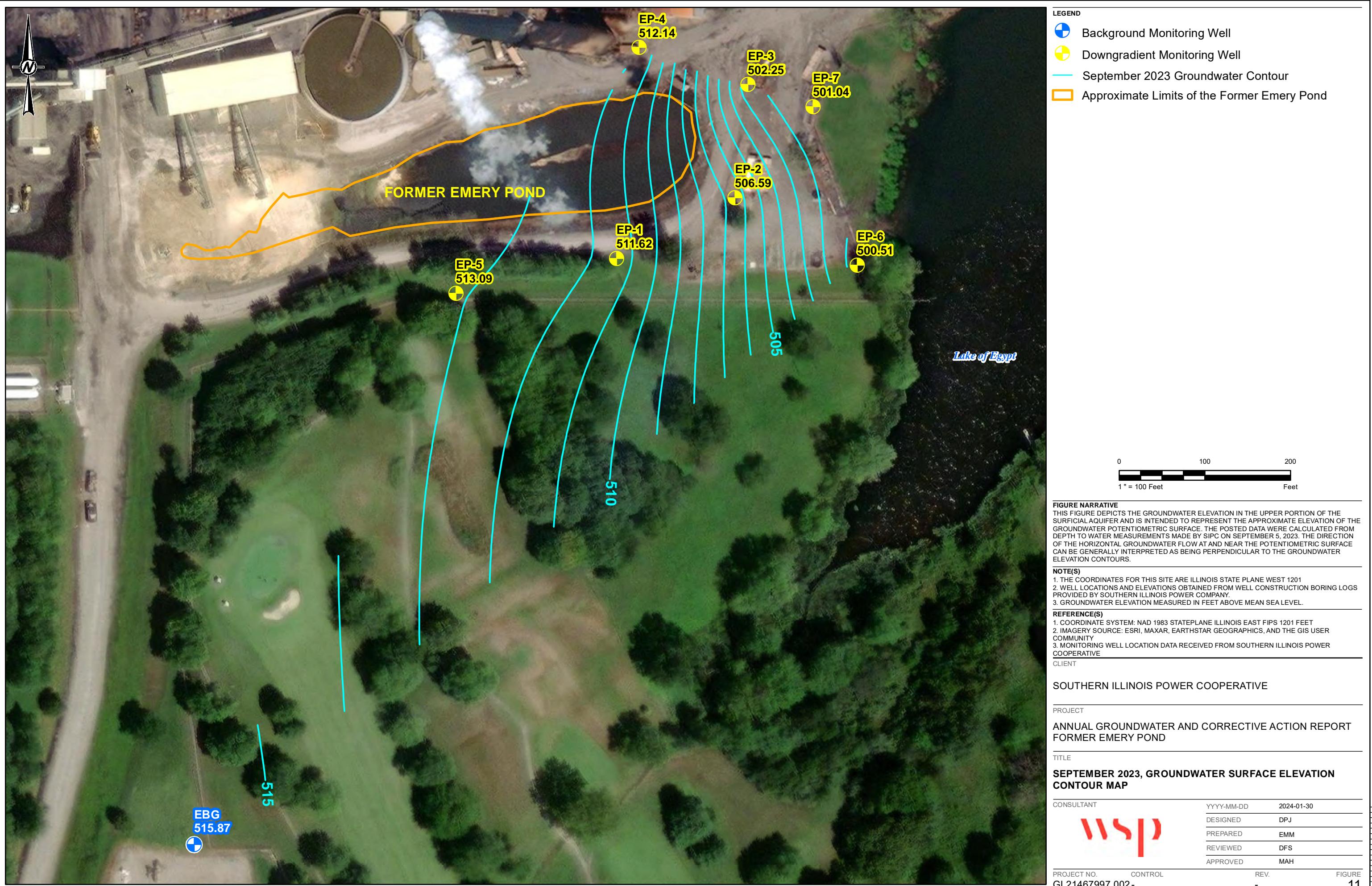


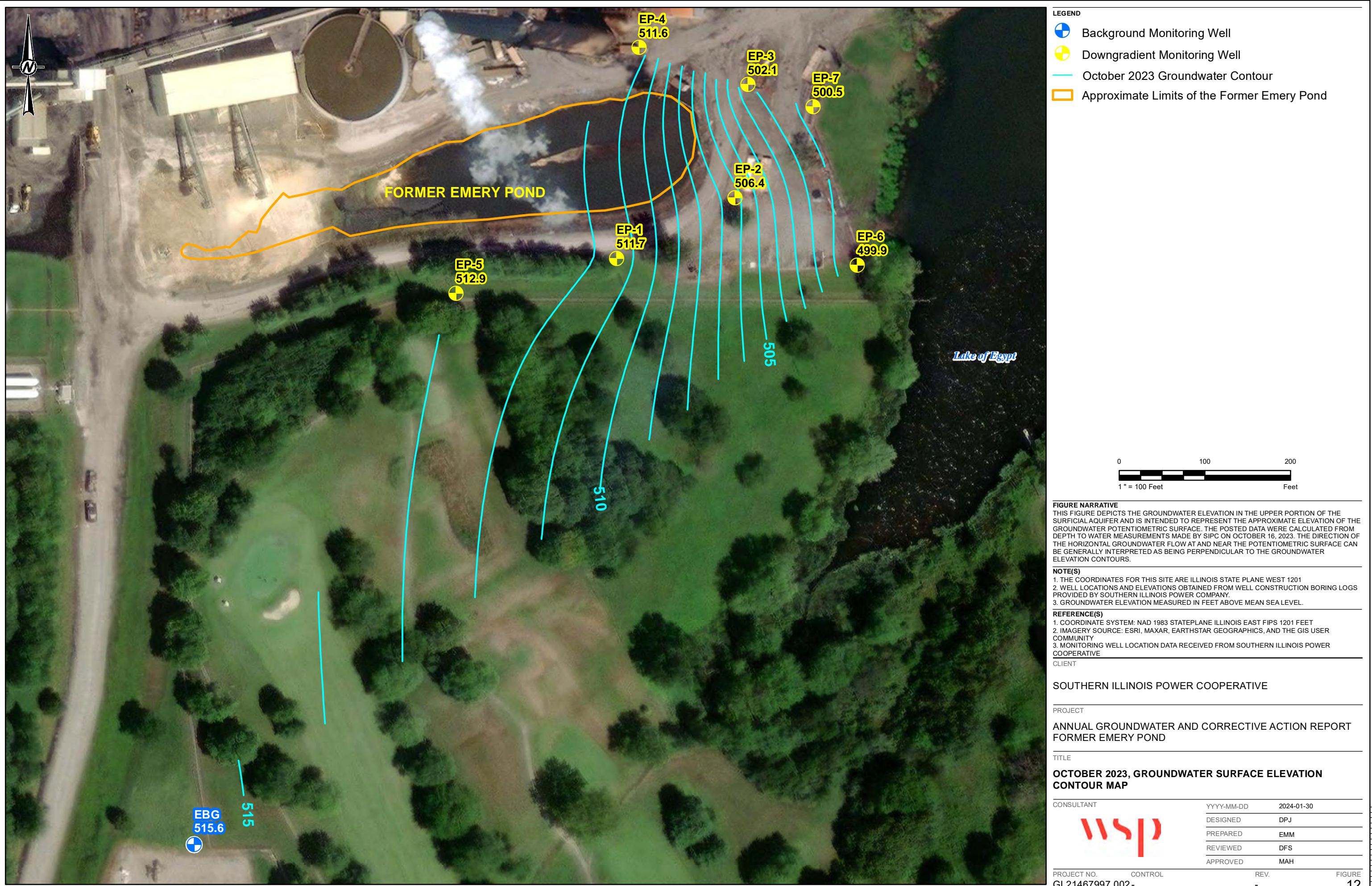


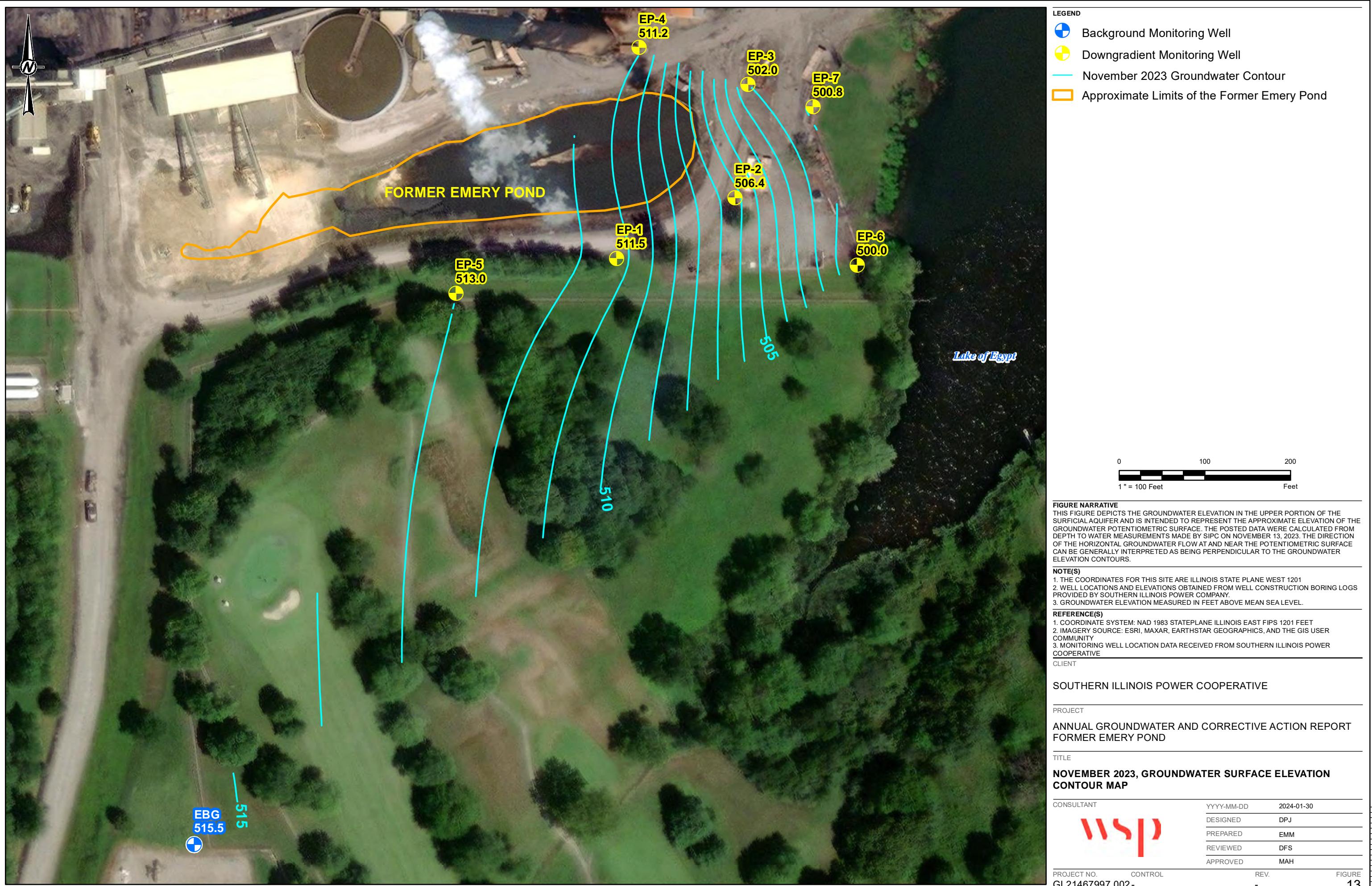


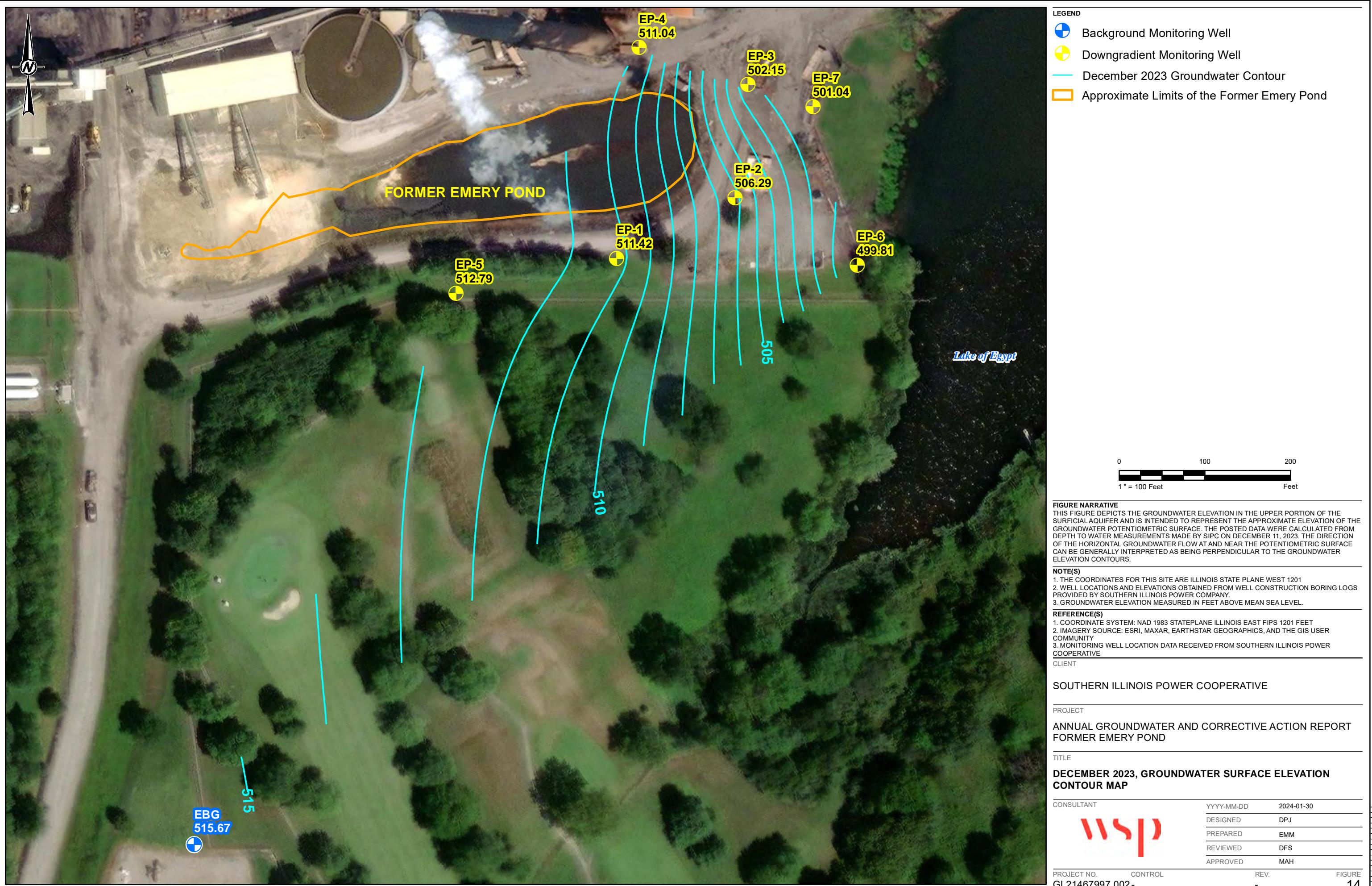












APPENDIX A

Boring Logs



KEY TO SYMBOLS

Hanson Professional Services Inc.
1525 S. Sixth Street
Springfield, Illinois 62703
(217) 788-2450

LITHOLOGIC SYMBOLS (Unified Soil Classification System)

	ASPHALT ASHPALT		MH ELASTIC SILT
	BASALT BASALT		ML SILT
	BLDRCBBL BOULDERS AND COBBLES		OH HIGH PLASTICITY ORGANIC SILT
	BRECCIA BRECCIA		OL LOW PLASTICITY SILT
	CH HIGH PLASTICITY CLAY		PT PEAT
	CL LOW PLASTICITY CLAY		SANDSTONE
	COAL COAL		SC CLAYEY SAND
	CONC. CONCRETE		SHALE
	FILL FILL		SILTSTONE
	GC CLAYEY GRAVEL		SM SILTY SAND
	GM SILTY GRAVEL		SP POORLY GRADED SAND
	GPS SANDY GRAVEL		SW WELL GRADED SAND
	GP POORLY GRADED GRAVEL		TILL GLACIAL TILL
	GW WELL GRADED GRAVEL		TOPSOIL
	LIMESTONE		

SAMPLER SYMBOLS

	GRAB / AUGER CUTTINGS HAND AUGER [AUG or HA]
	SPLIT SPOON / SPT [SS]
	SHELBY TUBE [SH]
	ROCK CORE [RC]
	CONTINUOUS OR MACROSAMPLER [CS or DP]
	BLIND DRILL [BD]
	MODIFIED CALIFORNIA SAMPLER [MC]

WELL SYMBOLS

	CONCRETE SURFACE SEAL
	HIGH-SOLIDS BENTONITE GROUT
	BENTONITE CHIP SEAL
	SAND PACK W/SOLID RISER
	SAND PACK W/SCREEN

ABBREVIATIONS

LL	- Liquid Limit (%)	NP	- Non-Plastic
PL	- Plastic Limit (%)	Qu	- Unconfined Compressive Strength (tsf)
woh	- Weight of Hammer	Qp (P)	- Pocket Penetrometer
wor	- Weight of Rods	TV	- Torvane
MaxGS	- Maximum Grain Size	PID	- Photoionization Detector
<#200	- Percent Passing No. 200 Sieve	ppm	- Parts per Million

GROUNDWATER LEVELS

Level during drilling,
or as indicated

Level after 24 hours,
or as indicated

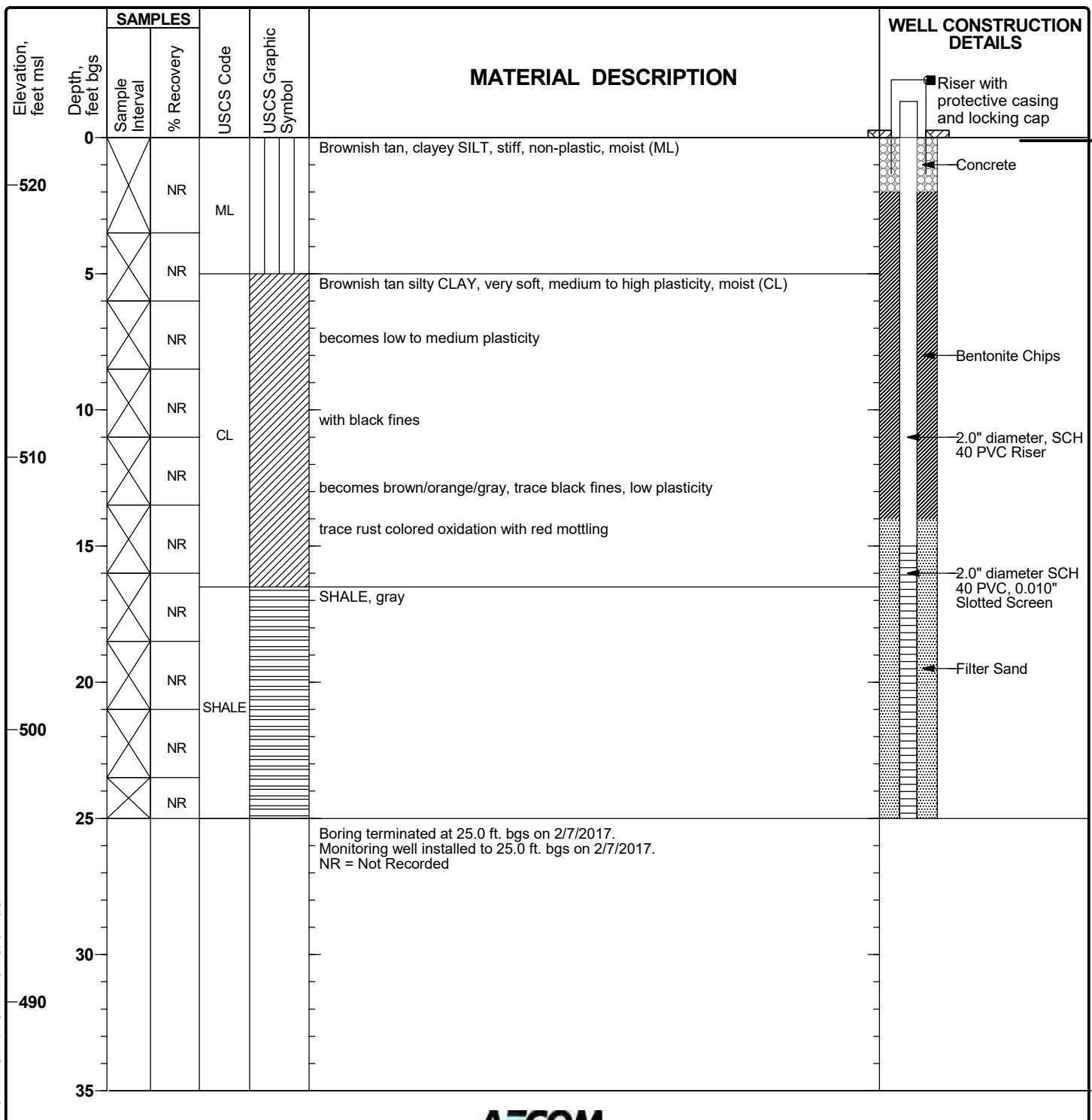
Level as indicated

Client: Southern Illinois Power Cooperative
Project Name: SIPC Marion CCR
Project Location: SIPC Marion
Project Number: 60535846

Log of EBG

Sheet 1 of 1

Date(s) Drilled and Installed	2/8/2017	Logged By	Suzanne Dale	Reviewed By
Drilling Method	Hollow Stem Auger	Drilling Contractor	Holcomb Engineering	Total Depth of Borehole
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) Easting (Plant)
Seal or Backfill	Bentonite Chips			346358.14 ft 804168.155 ft

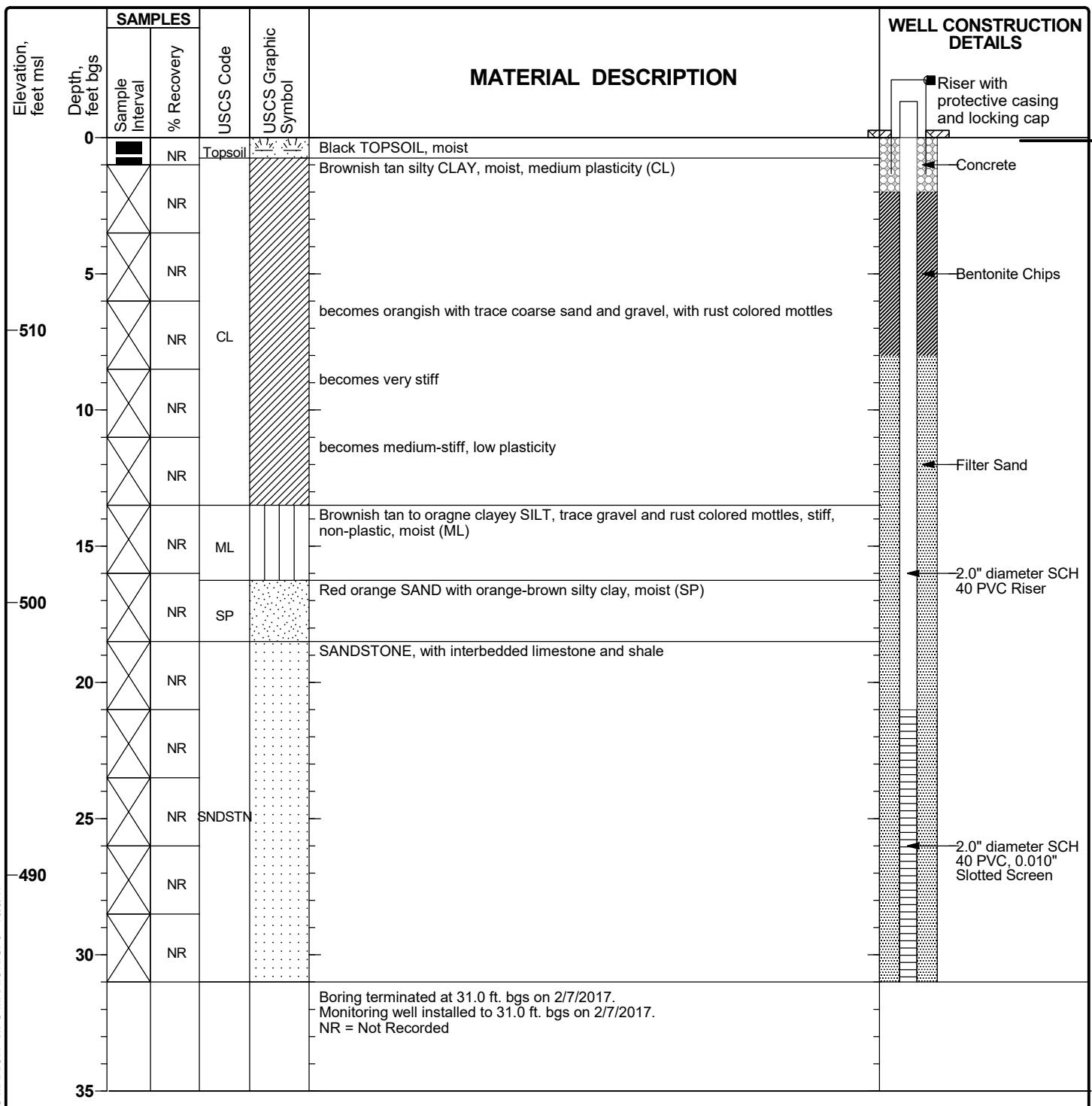


Client: Southern Illinois Power Cooperative
Project Name: SIPC Marion CCR
Project Location: SIPC Marion
Project Number: 60535846

Log of EP-1

Sheet 1 of 1

Date(s) Drilled and Installed	2/7/2017	Logged By	Suzanne Dale	Reviewed By
Drilling Method	Hollow Stem Auger	Drilling Contractor	Holcomb Engineering	Total Depth of Borehole 31.0 feet, bgs
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface 519.72 ft, msl 517.07 ft, msl
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) 347042.306 ft Easting (Plant) 804661.174 ft
Seal or Backfill	Bentonite Chips			

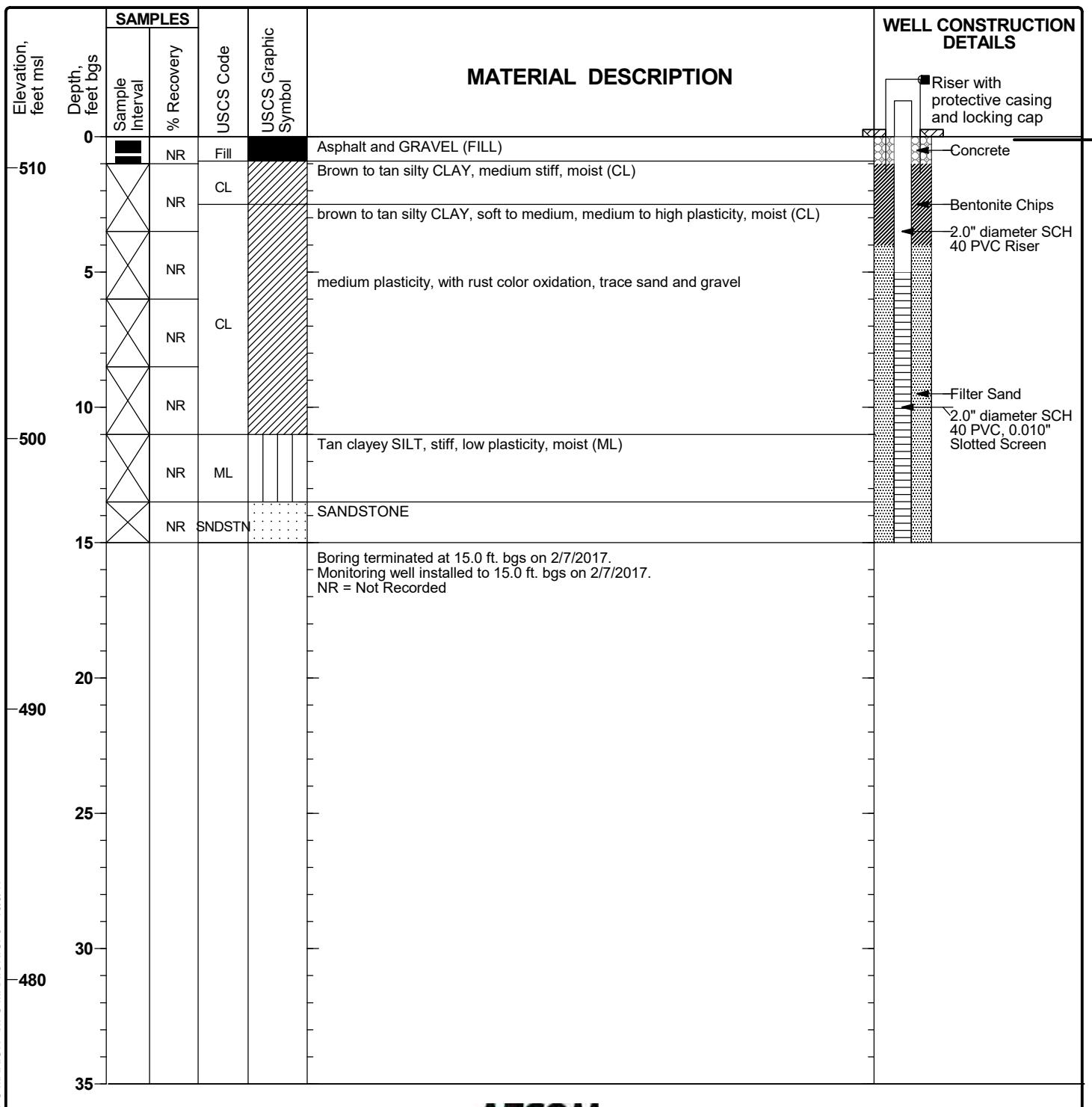


Client: Southern Illinois Power Cooperative
Project Name: SIPC Marion CCR
Project Location: SIPC Marion
Project Number: 60535846

Log of EP-2

Sheet 1 of 1

Date(s) Drilled and Installed	2/7/2017	Logged By	Suzanne Dale	Reviewed By
Drilling Method	Hollow Stem Auger	Drilling Contractor	Holcomb Engineering	Total Depth of Borehole 15.0 feet, bgs
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface 513.79 ft, msl 511.15 ft, msl
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) 347113.029 ft Easting (Plant) 804799.408 ft
Seal or Backfill	Bentonite Chips			

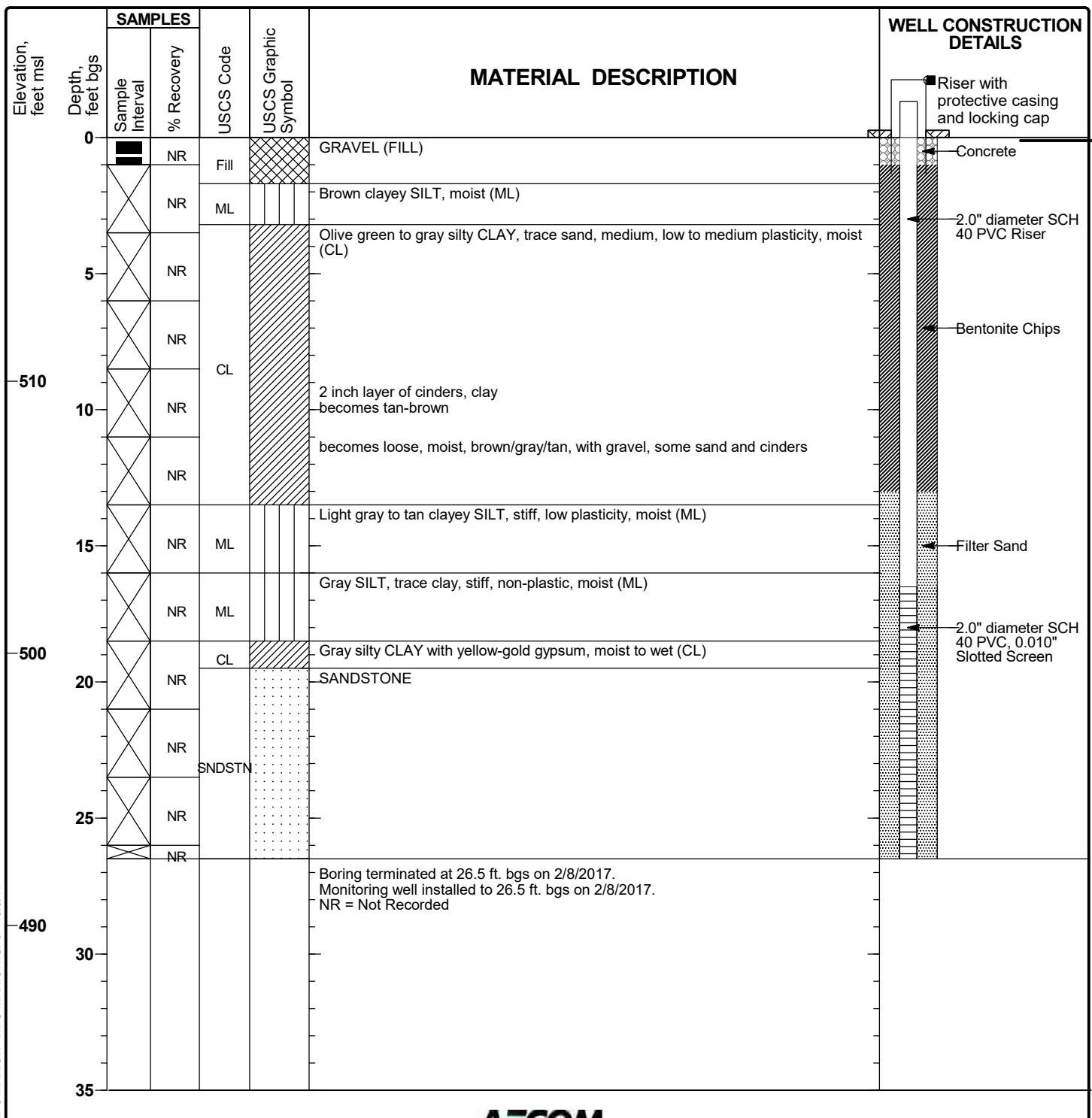


Client: Southern Illinois Power Cooperative
Project Name: SIPC Marion CCR
Project Location: SIPC Marion
Project Number: 60535846

Log of EP-3

Sheet 1 of 1

Date(s) Drilled and Installed	2/8/2017	Logged By	Suzanne Dale	Reviewed By
Drilling Method	Hollow Stem Auger	Drilling Contractor	Holcomb Engineering	Total Depth of Borehole
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) Easting (Plant)
Seal or Backfill	Bentonite Chips			347245.08 ft 804814.534 ft

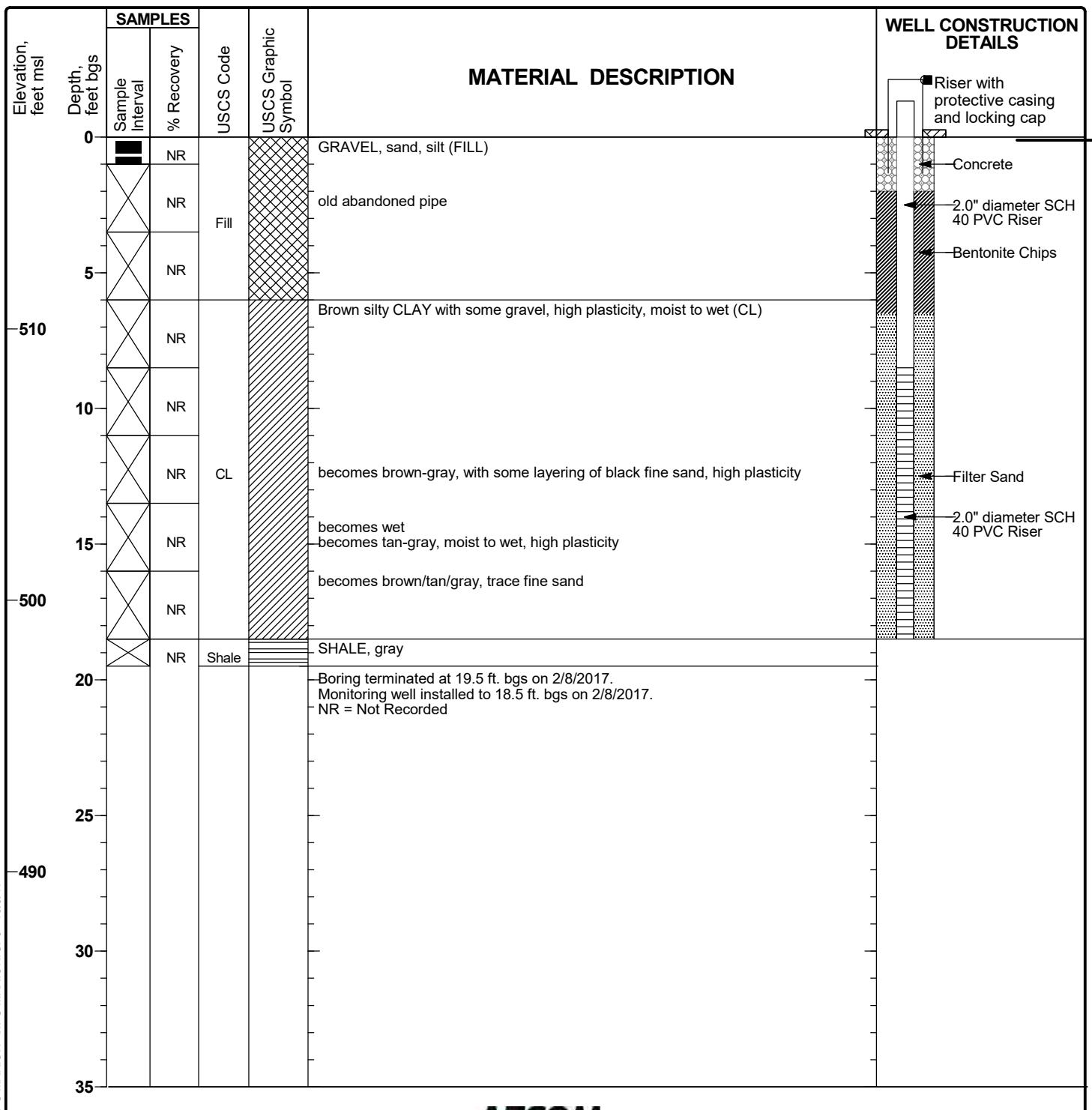


Client: Southern Illinois Power Cooperative
Project Name: SIPC Marion CCR
Project Location: SIPC Marion
Project Number: 60535846

Log of EP-4

Sheet 1 of 1

Date(s) Drilled and Installed	2/8/2017	Logged By	Suzanne Dale	Reviewed By
Drilling Method	Hollow Stem Auger	Drilling Contractor	Holcomb Engineering	Total Depth of Borehole 18.5 feet, bgs
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface 519.74 ft, msl 517.07 ft, msl
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) 347288.297 ft Easting (Plant) 804687.527 ft
Seal or Backfill	Bentonite Chips			



FIELD BORING LOG



CLIENT: Southern Illinois Power Cooperative
Site: Storm Water Basin Monitoring Wells
Location: Marion Power Station, Marion, IL
Project: 21E0079
DATES: Start: 10/5/2021
 Finish: 10/5/2021
WEATHER: Foggy, cool (low 60's)

CONTRACTOR: Holcomb Foundation Engineering Co.
Rig mfg/model: Bobcat T630 with auger attachment
Drilling Method: 3 1/4" Hollow Stem Auger
FIELD STAFF: Driller: J. Carter
 Helper: J. Taylor
 Eng/Geo: R. Hasenyager

BOREHOLE ID: EP-5
Well ID: EP-5
Surface Elev: 524.64 ft. MSL
Completion: 16.32 ft. BGS
Station: 347,001.63N
 804,473.78E

SAMPLE		TESTING				TOPOGRAPHIC MAP INFORMATION:		WATER LEVEL INFORMATION:				
Number	Recov/ Total (in) % Recovery	Type	Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft ³)	Qu (tsf) Qp (tsf) Failure Type	Quadrangle: Goreville Township: Southern Section 26, Tier 10S; Range 2E	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
0/60 0%	AGR							2			524	
0/60 0%	AGR							4			522	
0/60 0%	AGR							6			520	
0/60 0%	AGR							8	Yellowish brown (10YR5/6), moist, medium, CLAY with some silt, little sand, and trace gravel.		518	
0/60 0%	AGR							10			516	
0/60 0%	AGR							12			514	
0/16 0%	AGR							14			512	
								16	Yellowish brown (10YR5/8), weathered SANDSTONE.		510	
EOB = 16.3 ft.												

NOTE(S): Boring drilled adjacent to DP-4d.

FIELD BORING LOG



CLIENT: Southern Illinois Power Cooperative
Site: Storm Water Basin Monitoring Wells
Location: Marion Power Station, Marion, IL
Project: 21E0079
DATES: Start: 10/4/2021
 Finish: 10/4/2021
WEATHER: Sunny, mild (high 70's)

CONTRACTOR: Holcomb Foundation Engineering Co.
Rig mfg/model: CME 550X
Drilling Method: 3 1/4" Hollow Stem Auger with split spoon
FIELD STAFF: Driller: J. Carter
 Helper: J. Taylor
 Eng/Geo: R. Hasenjager

BOREHOLE ID: EP-6
Well ID: EP-6
Surface Elev: 502.08 ft. MSL
Completion: 13.62 ft. BGS
Station: 347,034.68N
 804,941.94E

SAMPLE		TESTING				TOPOGRAPHIC MAP INFORMATION:			WATER LEVEL INFORMATION:				
Number	Recov/ Total (in) % Recovery	Type	Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft ³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS			Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
2A	0/12 0%	BD											
2A	17/24 71%	ss	5-7 7-5 N=14	18.7		3.5	2			Yellowish brown (10YR5/4) mottles, moist, medium, SILT with few clay and trace sand.		500	
3A	24/36 67%	ss	2-2 4-4 N=6	24.6		1.5	4			Gray (10YR5/1) with 10% Yellowish brown (10YR5/6) mottles, moist, medium, CLAY with some silt and trace sand.		498	
4A	23/24 96%	ss	1-1 4-4 N=5	20.7		3.5	6			Yellowish brown (10YR5/6) with 20% Gray (10YR6/1) mottles, moist, medium, SILT with few clay, trace sand, and trace gravel.		496	
5A	27/36 75%	ss	7-8 13-13 N=21	12.1		4.0	8			Strong brown (7.5YR5/8), moist, dense, very fine- to coarse-grained SAND with some silt.		494	
6A	21/21 100%	ss	4-10 27-60/3" N=37	15.0		4.0	10			Strong brown (7.5YR5/8) with 10% gray (7.5YHR5/1) mottles, moist, hard, weathered SHALE.		492	
	0/10 0%	BD					12					490	
								▼					
EOB = 13.6 ft.													

NOTE(S):

FIELD BORING LOG



CLIENT: Southern Illinois Power Cooperative
Site: Storm Water Basin Monitoring Wells
Location: Marion Power Station, Marion, IL
Project: 21E0079
DATES: Start: 10/4/2021
 Finish: 10/4/2021
WEATHER: Sunny, mild (low 70's)

CONTRACTOR: Holcomb Foundation Engineering Co.
Rig mfg/model: CME 550X
Drilling Method: 3½" Hollow Stem Auger with split spoon
FIELD STAFF: Driller: J. Carter
 Helper: J. Taylor
 Eng/Geo: R. Hasenyager

BOREHOLE ID: EP-7
Well ID: EP-7
Surface Elev: 512.49 ft. MSL
Completion: 18.50 ft. BGS
Station: 347,219.28N
 804,890.26E

SAMPLE		TESTING				TOPOGRAPHIC MAP INFORMATION:		WATER LEVEL INFORMATION:				
Number	Reco/ Total (in) % Recovery	Type	Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type						
							Depth ft. BGS			Lithologic Description		
										Borehole Detail	Elevation ft. MSL	Remarks
2A	0/12 0%	BD					Light bluish gray (5PB8/1), moist, dense, GRAVEL with some sand and some silt.				512	
2A	15/24 63%	ss	2-2 3-3 N=5	14.6		1.0	2				510	
3A	32/36 89%	ss	2-5 13-7 N=18	17.3		2.0	4				508	
4A	16/24 67%	ss	2-1 2-1 N=3	21.4		1.0	6				506	
5A	17/36 47%	ss	1-2 2-3 N=4	21.8		1.0	8				504	
6A	15/24 63%	ss	woh-1 3-4 N=4	24.0		1.0	10				502	
7A	27/36 75%	ss	1-2 2-3 N=4	26.2		0.5	12				500	
8A	20/24 83%	ss	woh-1 4-5 N=5	24.3		0.5	14				498	
	0/6 0%	BD					16				496	
							18				494	
EOB = 18.5 ft.												

NOTE(S):

APPENDIX B

**2023 Groundwater Analytical
Reports**

April 28, 2023

Jason McLaurin
Southern Illinois Power Cooperation
11543 Lake of Egypt Road
Marion, IL 62959
TEL: (618) 964-1448
FAX:



Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Groundwater Monitoring

WorkOrder: 23030368

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 3/22/2023 10:39:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com



Report Contents

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	27
Receiving Check List	41
Chain of Custody	Appended

Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Abbr Definition

* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.

DNI Did not ignite

DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count (> 200 CFU)

Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Qualifiers

- | | |
|---|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range |
| H - Holding times exceeded | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Cooler Receipt Temp: 3.4 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analyses were performed by Pace Analytical National. See attached for results and QC report.

Locations

Collinsville	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Collinsville Air	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Springfield	
Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Chicago	
Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Kansas City	
Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Accreditations

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 03/21/2023 12:44

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.82	ft	1	03/21/2023 12:44	R326754
Elevation of groundwater surface	*	0	0		516.05	ft	1	03/21/2023 12:44	R326754
Measuring Point Elevation	*	0	0		524.87	ft	1	03/21/2023 12:44	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.52	gal	1	03/21/2023 12:44	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	03/21/2023 12:44	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		174.6	mV	1	03/21/2023 12:44	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.586	mS/cm	1	03/21/2023 12:44	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		13.0	°C	1	03/21/2023 12:44	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		6.53	mg/L	1	03/21/2023 12:44	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.83		1	03/21/2023 12:44	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		314	mg/L	1	03/23/2023 10:13	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		12	mg/L	1	03/28/2023 15:17	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		85	mg/L	5	03/28/2023 15:23	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.58	mg/L	1	03/27/2023 12:21	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0508	mg/L	1	03/24/2023 15:20	204201
Boron	NELAP	0.0090	0.020	J	0.011	mg/L	1	03/24/2023 15:20	204201
Calcium	NELAP	0.0350	0.100		12.0	mg/L	1	03/24/2023 15:20	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/24/2023 16:01	204201
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	03/24/2023 16:01	204201
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/27/2023 16:17	204201
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/24/2023 16:01	204201
Chromium	NELAP	0.0007	0.0015		0.0016	mg/L	5	03/24/2023 16:01	204201
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	03/24/2023 16:01	204201
Lead	NELAP	0.0006	0.0010		0.0017	mg/L	5	03/24/2023 16:01	204201
Lithium	*	0.0015	0.0030		0.0191	mg/L	5	03/24/2023 16:01	204201
Molybdenum	NELAP	0.0006	0.0015		0.0019	mg/L	5	03/24/2023 16:01	204201
Selenium	NELAP	0.0006	0.0010	J	0.0009	mg/L	5	03/24/2023 16:01	204201
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/24/2023 16:01	204201
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/23/2023 10:46	204193
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/25/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 03/21/2023 12:44

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 03/15/2023 15:11

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		5.72	ft	1	03/15/2023 15:11	R326754
Elevation of groundwater surface	*	0	0		514.00	ft	1	03/15/2023 15:11	R326754
Measuring Point Elevation	*	0	0		519.72	ft	1	03/15/2023 15:11	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.52	gal	1	03/15/2023 15:11	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	03/15/2023 15:11	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		241.5	mV	1	03/15/2023 15:11	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.67	mS/cm	1	03/15/2023 15:11	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.4	°C	1	03/15/2023 15:11	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.91	mg/L	1	03/15/2023 15:11	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.31		1	03/15/2023 15:11	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2350	mg/L	1	03/20/2023 10:24	R326273
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		32	mg/L	1	03/28/2023 15:25	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1490	mg/L	50	03/28/2023 15:31	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.20	mg/L	1	03/21/2023 12:35	R326251
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0197	mg/L	1	03/20/2023 18:44	204057
Boron	NELAP	0.0090	0.0200		0.968	mg/L	1	03/20/2023 18:44	204057
Calcium	NELAP	0.0350	0.100		523	mg/L	1	03/20/2023 18:44	204057
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 10:27	204057
Arsenic	NELAP	0.0004	0.0010	J	0.0008	mg/L	5	03/22/2023 10:27	204057
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:27	204057
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:27	204057
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/22/2023 10:27	204057
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	03/22/2023 10:27	204057
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 10:27	204057
Lithium	*	0.0015	0.0030		0.0133	mg/L	5	03/22/2023 10:27	204057
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/22/2023 10:27	204057
Selenium	NELAP	0.0006	0.0010		0.0051	mg/L	5	03/22/2023 10:27	204057
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/22/2023 10:27	204057
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/20/2023 12:51	204035
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 03/15/2023 15:11

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/13/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring

Work Order: 23030368
 Report Date: 28-Apr-23

Lab ID: 23030368-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		6.49	ft	1	03/21/2023 13:35	R326754
Elevation of groundwater surface	*	0	0		507.30	ft	1	03/21/2023 13:35	R326754
Measuring Point Elevation	*	0	0		513.79	ft	1	03/21/2023 13:35	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.91	gal	1	03/21/2023 13:35	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.48	NTU	1	03/21/2023 13:35	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		102.5	mV	1	03/21/2023 13:35	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.453	mS/cm	1	03/21/2023 13:35	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		13.3	°C	1	03/21/2023 13:35	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.97	mg/L	1	03/21/2023 13:35	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		5.96		1	03/21/2023 13:35	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2480	mg/L	1	03/23/2023 10:15	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		29	mg/L	1	03/28/2023 15:33	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1750	mg/L	50	03/28/2023 15:38	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		1.47	mg/L	1	03/27/2023 12:23	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0220	mg/L	1	03/24/2023 15:22	204201
Boron	NELAP	0.0090	0.0200		0.359	mg/L	1	03/24/2023 15:22	204201
Calcium	NELAP	0.0350	0.100		328	mg/L	1	03/24/2023 15:22	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0022	0.0050		< 0.0050	mg/L	25	03/27/2023 18:57	204201
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/24/2023 16:08	204201
Beryllium	NELAP	0.0002	0.0010		0.0056	mg/L	5	03/27/2023 16:23	204201
Cadmium	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	03/24/2023 16:08	204201
Chromium	NELAP	0.0007	0.0015		0.0018	mg/L	5	03/24/2023 16:08	204201
Cobalt	NELAP	0.0001	0.0010		0.115	mg/L	5	03/24/2023 16:08	204201
Lead	NELAP	0.0030	0.0050		< 0.0050	mg/L	25	03/27/2023 18:57	204201
Lithium	*	0.0015	0.0030		0.0446	mg/L	5	03/24/2023 16:08	204201
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/24/2023 16:08	204201
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/24/2023 16:08	204201
Thallium	NELAP	0.0048	0.0100		< 0.0100	mg/L	25	03/27/2023 18:57	204201
Elevated reporting limits due to limited sample.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/23/2023 10:49	204193

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:18

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.40	ft	1	03/21/2023 14:18	R326754
Elevation of groundwater surface	*	0	0		502.55	ft	1	03/21/2023 14:18	R326754
Measuring Point Elevation	*	0	0		518.95	ft	1	03/21/2023 14:18	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.39	gal	1	03/21/2023 14:18	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		114.1	NTU	1	03/21/2023 14:18	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-52	mV	1	03/21/2023 14:18	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.211	mS/cm	1	03/21/2023 14:18	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.0	°C	1	03/21/2023 14:18	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.72	mg/L	1	03/21/2023 14:18	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.33		1	03/21/2023 14:18	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		535	mg/L	2.5	03/23/2023 10:15	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		127	mg/L	5	03/28/2023 15:41	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		83	mg/L	5	03/28/2023 15:40	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.16	mg/L	1	03/27/2023 12:25	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.168	mg/L	1	03/24/2023 15:23	204201
Boron	NELAP	0.0090	0.0200		0.0615	mg/L	1	03/24/2023 15:23	204201
Calcium	NELAP	0.0350	0.100		35.7	mg/L	1	03/24/2023 15:23	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		0.0019	mg/L	5	03/24/2023 16:39	204201
Arsenic	NELAP	0.0004	0.0010		0.0173	mg/L	5	03/24/2023 16:39	204201
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/27/2023 16:30	204201
Cadmium	NELAP	0.0002	0.0010	J	0.0004	mg/L	5	03/24/2023 16:39	204201
Chromium	NELAP	0.0007	0.0015		0.0067	mg/L	5	03/24/2023 16:39	204201
Cobalt	NELAP	0.0001	0.0010		0.0795	mg/L	5	03/24/2023 16:39	204201
Lead	NELAP	0.0006	0.0010		0.0028	mg/L	5	03/24/2023 16:39	204201
Lithium	*	0.0015	0.0030		0.0053	mg/L	5	03/24/2023 16:39	204201
Molybdenum	NELAP	0.0006	0.0015	J	0.0014	mg/L	5	03/24/2023 16:39	204201
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/24/2023 16:39	204201
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/24/2023 16:39	204201
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00018	mg/L	1	03/23/2023 10:51	204193
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/25/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:18

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.90	ft	1	03/21/2023 14:42	R326754
Elevation of groundwater surface	*	0	0		511.84	ft	1	03/21/2023 14:42	R326754
Measuring Point Elevation	*	0	0		519.74	ft	1	03/21/2023 14:42	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.39	gal	1	03/21/2023 14:42	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		239.84	NTU	1	03/21/2023 14:42	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-22.3	mV	1	03/21/2023 14:42	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.047	mS/cm	1	03/21/2023 14:42	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.1	°C	1	03/21/2023 14:42	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.31	mg/L	1	03/21/2023 14:42	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.12		1	03/21/2023 14:42	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1520	mg/L	2.5	03/23/2023 10:16	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		435	mg/L	10	03/28/2023 16:02	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		516	mg/L	20	03/28/2023 16:07	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.14	mg/L	1	03/27/2023 12:27	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0460	mg/L	1	03/24/2023 15:25	204201
Boron	NELAP	0.0090	0.0200		9.68	mg/L	1	03/24/2023 15:25	204201
Calcium	NELAP	0.0350	0.100		171	mg/L	1	03/24/2023 15:25	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/24/2023 16:45	204201
Arsenic	NELAP	0.0004	0.0010		0.103	mg/L	5	03/24/2023 16:45	204201
Beryllium	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	03/27/2023 16:36	204201
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/24/2023 16:45	204201
Chromium	NELAP	0.0007	0.0015		0.0026	mg/L	5	03/24/2023 16:45	204201
Cobalt	NELAP	0.0001	0.0010		0.134	mg/L	5	03/24/2023 16:45	204201
Lead	NELAP	0.0006	0.0010		0.0019	mg/L	5	03/24/2023 16:45	204201
Lithium	*	0.0015	0.0030		0.0034	mg/L	5	03/24/2023 16:45	204201
Molybdenum	NELAP	0.0006	0.0015	J	0.0014	mg/L	5	03/24/2023 16:45	204201
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/24/2023 16:45	204201
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/24/2023 16:45	204201
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00017	mg/L	1	03/23/2023 10:54	204193
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/25/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 03/15/2023 14:29

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		12.87	ft	1	03/15/2023 14:29	R326754
Elevation of groundwater surface	*	0	0		514.72	ft	1	03/15/2023 14:29	R326754
Measuring Point Elevation	*	0	0		527.59	ft	1	03/15/2023 14:29	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	03/15/2023 14:29	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	03/15/2023 14:29	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		170.6	mV	1	03/15/2023 14:29	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.4408	mS/cm	1	03/15/2023 14:29	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		13.4	°C	1	03/15/2023 14:49	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		9.40	mg/L	1	03/15/2023 14:29	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.95		1	03/15/2023 14:29	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		262	mg/L	1	03/20/2023 10:25	R326273
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4	J	3	mg/L	1	03/28/2023 16:10	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		125	mg/L	5	03/28/2023 16:14	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.40	mg/L	1	03/21/2023 12:38	R326251
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0533	mg/L	1	03/20/2023 18:58	204057
Boron	NELAP	0.0090	0.0200		0.0205	mg/L	1	03/23/2023 12:57	204057
Calcium	NELAP	0.0350	0.100		18.8	mg/L	1	03/20/2023 18:58	204057
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	03/22/2023 10:33	204057
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 10:33	204057
Lithium	*	0.0015	0.0030	J	0.0029	mg/L	5	03/22/2023 10:33	204057
Molybdenum	NELAP	0.0006	0.0015		0.0017	mg/L	5	03/22/2023 10:33	204057
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	03/22/2023 10:33	204057
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/22/2023 10:33	204057
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/20/2023 12:53	204035
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 03/15/2023 14:29

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/13/2023 0:00	R328019

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 03/15/2023 15:53

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		2.99	ft	1	03/15/2023 15:53	R326754
Elevation of groundwater surface	*	0	0		502.12	ft	1	03/15/2023 15:53	R326754
Measuring Point Elevation	*	0	0		505.11	ft	1	03/15/2023 15:53	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	03/15/2023 15:53	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	03/15/2023 15:53	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		267.6	mV	1	03/15/2023 15:53	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.3201	mS/cm	1	03/15/2023 15:53	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		13.8	°C	1	03/15/2023 15:53	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.98	mg/L	1	03/15/2023 15:53	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		5.15		1	03/15/2023 15:53	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		222	mg/L	1	03/20/2023 10:26	R326273
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		20	mg/L	1	03/28/2023 16:21	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		66	mg/L	5	03/30/2023 18:04	R326700
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	03/21/2023 12:40	R326251
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0422	mg/L	1	03/20/2023 18:59	204057
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	03/23/2023 12:58	204057
Calcium	NELAP	0.0350	0.100		1.62	mg/L	1	03/20/2023 18:59	204057
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	03/22/2023 10:39	204057
Cobalt	NELAP	0.0001	0.0010		0.0036	mg/L	5	03/22/2023 10:39	204057
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Lithium	*	0.0015	0.0030		0.0107	mg/L	5	03/22/2023 10:39	204057
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/22/2023 10:39	204057
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 10:39	204057
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/22/2023 10:39	204057
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00009	mg/L	1	03/20/2023 12:55	204035
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 03/15/2023 15:53

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/13/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring

Work Order: 23030368
 Report Date: 28-Apr-23

Lab ID: 23030368-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:56

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.84	ft	1	03/21/2023 13:56	R326754
Elevation of groundwater surface	*	0	0		501.60	ft	1	03/21/2023 13:56	R326754
Measuring Point Elevation	*	0	0		515.44	ft	1	03/21/2023 13:56	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.39	gal	1	03/21/2023 13:56	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		499.79	NTU	1	03/21/2023 13:56	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-27.9	mV	1	03/21/2023 13:56	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.561	mS/cm	1	03/21/2023 13:56	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.3	°C	1	03/21/2023 13:56	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.39	mg/L	1	03/21/2023 13:56	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.22		1	03/21/2023 13:56	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1720	mg/L	2.5	03/23/2023 10:16	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		176	mg/L	10	03/28/2023 16:58	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		820	mg/L	20	03/28/2023 17:02	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.36	mg/L	1	03/27/2023 12:30	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.194	mg/L	1	03/24/2023 15:27	204201
Boron	NELAP	0.0090	0.0200		1.15	mg/L	1	03/24/2023 15:27	204201
Calcium	NELAP	0.0350	0.100		245	mg/L	1	03/24/2023 15:27	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	J	0.0006	mg/L	5	03/24/2023 16:52	204201
Arsenic	NELAP	0.0004	0.0010		0.114	mg/L	5	03/24/2023 16:52	204201
Beryllium	NELAP	0.0002	0.0010		0.0014	mg/L	5	03/27/2023 18:38	204201
Cadmium	NELAP	0.0002	0.0010	J	0.0007	mg/L	5	03/24/2023 16:52	204201
Chromium	NELAP	0.0007	0.0015		0.0298	mg/L	5	03/24/2023 16:52	204201
Cobalt	NELAP	0.0001	0.0010		0.120	mg/L	5	03/24/2023 16:52	204201
Lead	NELAP	0.0006	0.0010		0.0321	mg/L	5	03/24/2023 16:52	204201
Lithium	*	0.0015	0.0030		0.0136	mg/L	5	03/24/2023 16:52	204201
Molybdenum	NELAP	0.0006	0.0015		0.0154	mg/L	5	03/24/2023 16:52	204201
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/24/2023 16:52	204201
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/24/2023 16:52	204201
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00019	mg/L	1	03/23/2023 10:56	204193
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/25/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:56

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 03/16/2023 14:02

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	03/20/2023 10:25	R326273
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	03/28/2023 17:09	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	03/28/2023 17:07	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	03/27/2023 12:31	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	03/20/2023 19:01	204057
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	03/23/2023 12:51	204057
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	03/20/2023 19:01	204057
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Chromium	NELAP	0.0007	0.0015	J	0.0014	mg/L	5	03/22/2023 11:34	204057
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	03/22/2023 11:34	204057
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/22/2023 11:34	204057
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 11:34	204057
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/22/2023 11:34	204057
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/20/2023 13:02	204035
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019
Radium-228	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 03/16/2023 14:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	03/20/2023 10:26	R326273
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	03/28/2023 17:11	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	03/28/2023 17:11	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	03/27/2023 12:34	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	03/20/2023 19:05	204057
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	03/23/2023 12:55	204057
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	03/20/2023 19:05	204057
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	03/22/2023 11:28	204057
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	03/22/2023 11:28	204057
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/22/2023 11:28	204057
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/22/2023 11:28	204057
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/22/2023 11:28	204057
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/20/2023 13:09	204035
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019
Radium-228	*	0	0		See Attached	pci/L	1	04/13/2023 0:00	R328019

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23030368
Report Date: 28-Apr-23

Lab ID: 23030368-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.90	ft	1	03/21/2023 14:42	R326754
Elevation of groundwater surface	*	0	0		511.84	ft	1	03/21/2023 14:42	R326754
Measuring Point Elevation	*	0	0		519.74	ft	1	03/21/2023 14:42	R326754
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.39	gal	1	03/21/2023 14:42	R326754
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		239.84	NTU	1	03/21/2023 14:42	R326754
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-22.3	mV	1	03/21/2023 14:42	R326754
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.047	mS/cm	1	03/21/2023 14:42	R326754
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.1	°C	1	03/21/2023 14:42	R326754
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.31	mg/L	1	03/21/2023 14:42	R326754
SW-846 9040B FIELD									
pH	*	0	1.00		6.12		1	03/21/2023 14:42	R326754
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1530	mg/L	2.5	03/23/2023 10:16	R326435
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	25	200		429	mg/L	50	03/28/2023 17:22	R326602
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		605	mg/L	50	03/28/2023 17:21	R326589
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.13	mg/L	1	03/27/2023 12:37	R326508
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0507	mg/L	1	03/24/2023 15:28	204201
Boron	NELAP	0.0090	0.0200		10.0	mg/L	1	03/24/2023 15:28	204201
Calcium	NELAP	0.0350	0.100		178	mg/L	1	03/24/2023 15:28	204201
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/24/2023 16:58	204201
Arsenic	NELAP	0.0004	0.0010		0.134	mg/L	5	03/24/2023 16:58	204201
Beryllium	NELAP	0.0002	0.0010	J	0.0004	mg/L	5	03/27/2023 18:44	204201
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/24/2023 16:58	204201
Chromium	NELAP	0.0007	0.0015		0.0038	mg/L	5	03/24/2023 16:58	204201
Cobalt	NELAP	0.0001	0.0010		0.141	mg/L	5	03/24/2023 16:58	204201
Lead	NELAP	0.0006	0.0010		0.0025	mg/L	5	03/24/2023 16:58	204201
Lithium	*	0.0015	0.0030		0.0030	mg/L	5	03/24/2023 16:58	204201
Molybdenum	NELAP	0.0006	0.0015	J	0.0015	mg/L	5	03/24/2023 16:58	204201
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/24/2023 16:58	204201
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/24/2023 16:58	204201
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	03/23/2023 11:05	204193
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	04/25/2023 0:00	R328019



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	04/25/2023 0:00	R328019



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

STANDARD METHODS 2510 B FIELD

Batch	R326754	SampType:	LCS	Units	µS/cm					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Spec. Conductance, Field	*	0		1440	1409	0	102.2	90	110	03/15/2023
Spec. Conductance, Field	*	0		1507	1409	0	107.0	90	110	03/15/2023

SW-846 9040B FIELD

Batch	R326754	SampType:	LCS	Units						
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
pH	*	1.00		7.04	7.000	0	100.6	98.57	101.4	03/15/2023
pH	*	1.00		7.10	7.000	0	101.4	98.57	101.4	03/21/2023

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch	R326273	SampType:	MBLK	Units	mg/L					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	03/20/2023
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	03/20/2023

Batch R326273 SampType: LCS

Batch	R326273	SampType:	LCS	Units	mg/L					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids		20		230	250.0	0	92.0	90	110	03/20/2023
Total Dissolved Solids		20		922	1000	0	92.2	90	110	03/20/2023

Batch R326273 SampType: DUP

Batch	R326273	SampType:	DUP	Units	mg/L	RPD Limit: 5				
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids		20		224				222.0	0.90	03/20/2023

Batch R326273 SampType: DUP

Batch	R326273	SampType:	DUP	Units	mg/L	RPD Limit: 5				
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids		20		474				472.0	0.42	03/20/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R326273	SampType: DUP	Units mg/L			RPD Limit: 5					
SampID: 23031170-021ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50		675				675.0	0.00	03/20/2023

Batch R326435	SampType: MBLK	Units mg/L								
SampID: MBLK										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	03/23/2023
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	03/23/2023

Batch R326435	SampType: LCS	Units mg/L								
SampID: LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		948	1000	0	94.8	90	110	03/23/2023
Total Dissolved Solids		20		938	1000	0	93.8	90	110	03/23/2023

Batch R326435	SampType: DUP	Units mg/L			RPD Limit: 5					
SampID: 23030368-001ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		330				314.0	4.97	03/23/2023

Batch R326435	SampType: DUP	Units mg/L			RPD Limit: 5					
SampID: 23031603-001ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		1770				1732	2.17	03/23/2023

Batch R326435	SampType: DUP	Units mg/L			RPD Limit: 5					
SampID: 23031603-009ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		1850				1796	3.18	03/23/2023

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R326602	SampType: MBLK	Units mg/L								
SampID: ICB/MBLK										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		< 4	0.5000	0	0	-100	100	03/28/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R326602	SampType: LCS	Units mg/L								
SampID: ICV/LCS								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		20	20.00	0	98.3	90	110	03/28/2023

Batch R326602	SampType: MS	Units mg/L								
SampID: 23030368-007AMS								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		39	20.00	20.44	91.4	85	115	03/28/2023

Batch R326602	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 23030368-007AMSD								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		39	20.00	20.44	94.1	38.71	1.39	03/28/2023

Batch R326602	SampType: MS	Units mg/L								
SampID: 23031524-001AMS								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		40		474	200.0	291.8	91.2	85	115	03/28/2023

Batch R326602	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 23031524-001AMSD								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		40		471	200.0	291.8	89.8	474.2	0.60	03/28/2023

Batch R326602	SampType: MS	Units mg/L								
SampID: 23031524-002AMS								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		40		346	200.0	150.0	97.9	85	115	03/28/2023

Batch R326602	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 23031524-002AMSD								Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		40		334	200.0	150.0	91.9	345.8	3.50	03/28/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 9036 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	99.2	90	110	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		83	40.00	49.18	85.7	85	115	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		20		86	40.00	49.18	90.9	83.46	2.45	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		500		1720	1000	772.6	94.7	90	110	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		500	S	1670	1000	772.6	89.4	1719	3.15	03/28/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	03/30/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	100.6	90	110	03/30/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 9036 (TOTAL)

Batch	R326700	SampType:	MS	Units	mg/L					
SampID: 23030368-007AMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		50		160	100.0	66.13	94.0	85	115	03/30/2023

Batch R326700 SampType: MSD Units mg/L RPD Limit: 10

SampID: 23030368-007AMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		50		161	100.0	66.13	95.1	160.1	0.70	03/30/2023

SW-846 9214 (TOTAL)

Batch	R326251	SampType:	MBLK	Units	mg/L					
SampID: MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Fluoride		0.10		< 0.10	0.0370	0	0	-100	100	03/21/2023

Batch R326251 SampType: LCS Units mg/L

SampID: LCS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Fluoride		0.10		0.92	1.000	0	91.8	90	110	03/21/2023

Batch R326251 SampType: MS Units mg/L

SampID: 23030964-001AMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Fluoride		0.10		2.43	2.000	0.4870	97.0	75	125	03/21/2023

Batch R326251 SampType: MSD Units mg/L RPD Limit: 15

SampID: 23030964-001AMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Fluoride		0.10		2.42	2.000	0.4870	96.8	2.426	0.12	03/21/2023

Batch R326251 SampType: MS Units mg/L

SampID: 23030973-001AMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Fluoride		1.00		60.0	20.00	41.01	94.9	75	125	03/21/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 9214 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		1.00		59.5	20.00	41.01	92.4	59.99	0.85	03/21/2023

Batch R326251 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.45	2.000	0.4740	98.9	75	125	03/21/2023

Batch R326251 SampType: MSD Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.39	2.000	0.4740	95.6	2.452	2.73	03/21/2023

Batch R326251 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.08	2.000	0.1640	95.6	75	125	03/21/2023

Batch R326251 SampType: MSD Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.11	2.000	0.1640	97.2	2.077	1.53	03/21/2023

Batch R326508 SampType: MBLK Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		< 0.10	0.0370	0	0	-100	100	03/27/2023

Batch R326508 SampType: LCS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		0.99	1.000	0	98.7	90	110	03/27/2023

Batch R326508 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.14	2.000	0.1340	100.2	75	125	03/27/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 9214 (TOTAL)

Batch	R326508	SampType:	MSD	Units	mg/L	RPD Limit: 15				Date	
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed
Fluoride			0.10		2.04	2.000	0.1340	95.4	2.138	4.54	03/27/2023

Batch R326508 SampType: MS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.35	2.000	0.2400	105.4	75	125	03/27/2023

Batch R326508 SampType: MSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.33	2.000	0.2400	104.4	2.348	0.81	03/27/2023

Batch R326508 SampType: MS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		1.00		38.4	20.00	17.83	102.8	75	125	03/27/2023

Batch R326508 SampType: MSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		1.00		39.8	20.00	17.83	110.0	38.38	3.68	03/27/2023

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch	204057	SampType:	MBLK	Units	mg/L	RPD Limit: 15				Date	
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed
Barium			0.0025		< 0.0025	0.0007	0	0	-100	100	03/20/2023
Boron			0.0200		< 0.0200	0.0090	0	0	-100	100	03/20/2023
Calcium			0.100		< 0.100	0.0350	0	0	-100	100	03/20/2023

Batch 204057 SampType: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.18	2.000	0	109.0	85	115	03/20/2023
Boron		0.0200		0.538	0.5000	0	107.5	85	115	03/20/2023
Calcium		0.100		2.79	2.500	0	111.6	85	115	03/20/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch	204057	SampType:	MS	Units	mg/L						
SampID: 23030368-009CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		2.21	2.000	0	110.5	75	125	03/20/2023	
Boron		0.0200		0.502	0.5000	0	100.5	75	125	03/23/2023	
Calcium		0.100		2.82	2.500	0	113.0	75	125	03/20/2023	

Batch 204057 SampType: MSD Units mg/L RPD Limit: 20

Batch	204057	SampType:	MSD	Units	mg/L	RPD Limit: 20					
SampID: 23030368-009CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Barium		0.0025		2.17	2.000	0	108.5	2.210	1.83	03/20/2023	
Boron		0.0200		0.506	0.5000	0	101.2	0.5024	0.75	03/23/2023	
Calcium		0.100		2.78	2.500	0	111.2	2.825	1.60	03/20/2023	

Batch 204201 SampType: MBLK Units mg/L

Batch	204201	SampType:	MBLK	Units	mg/L						
SampID: MBLK-204201											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	03/24/2023	
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	03/24/2023	
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	03/24/2023	

Batch 204201 SampType: LCS Units mg/L

Batch	204201	SampType:	LCS	Units	mg/L						
SampID: LCS-204201											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		1.98	2.000	0	99.0	85	115	03/24/2023	
Boron		0.0200		0.499	0.5000	0	99.7	85	115	03/24/2023	
Calcium		0.100		2.71	2.500	0	108.6	85	115	03/24/2023	

Batch 204201 SampType: MS Units mg/L

Batch	204201	SampType:	MS	Units	mg/L						
SampID: 23030880-001BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Calcium		0.100	S	31.2	2.500	26.97	169.6	75	125	03/28/2023	

Batch 204201 SampType: MSD Units mg/L RPD Limit: 20

Batch	204201	SampType:	MSD	Units	mg/L	RPD Limit: 20					
SampID: 23030880-001BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Calcium		0.100	S	30.7	2.500	26.97	150.8	31.21	1.52	03/28/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 204057 SampType: MBLK Units mg/L

SampID: MBLK-204057

Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		< 0.0010	0.0004	0	0	0	-100	100	03/22/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	0	-100	100	03/22/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	0	-100	100	03/22/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	0	-100	100	03/22/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	0	-100	100	03/22/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	0	-100	100	03/22/2023
Lead		0.0010		< 0.0010	0.0006	0	0	0	-100	100	03/22/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	0	-100	100	03/22/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	0	-100	100	03/22/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	0	-100	100	03/22/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	0	-100	100	03/22/2023

Batch 204057 SampType: LCS Units mg/L

SampID: LCS-204057

Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.502	0.5000	0	100.5	80	120	03/22/2023	
Arsenic		0.0010		0.512	0.5000	0	102.4	80	120	03/22/2023	
Beryllium		0.0010		0.0489	0.0500	0	97.8	80	120	03/22/2023	
Cadmium		0.0010		0.0487	0.0500	0	97.4	80	120	03/22/2023	
Chromium		0.0015		0.196	0.2000	0	98.1	80	120	03/22/2023	
Cobalt		0.0010		0.496	0.5000	0	99.2	80	120	03/22/2023	
Lead		0.0010		0.528	0.5000	0	105.6	80	120	03/22/2023	
Lithium	*	0.0030		0.501	0.5000	0	100.1	80	120	03/22/2023	
Molybdenum		0.0015		0.472	0.5000	0	94.4	80	120	03/22/2023	
Selenium		0.0010		0.488	0.5000	0	97.7	80	120	03/22/2023	
Thallium		0.0020		0.246	0.2500	0	98.4	80	120	03/22/2023	

Quality Control Results

<http://www.teklabinc.com/>
Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	204057	SampType:	MS	Units	mg/L													
Analyses								Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony				0.0010		0.508		0.5000	0		101.6	75		125		03/22/2023		
Arsenic				0.0010		0.525		0.5000	0		105.0	75		125		03/22/2023		
Beryllium				0.0010		0.0499		0.0500	0		99.9	75		125		03/22/2023		
Cadmium				0.0010		0.0491		0.0500	0		98.3	75		125		03/22/2023		
Chromium				0.0015		0.202		0.2000	0.001394		100.1	75		125		03/22/2023		
Cobalt				0.0010		0.519		0.5000	0		103.8	75		125		03/22/2023		
Lead				0.0010		0.513		0.5000	0		102.6	75		125		03/22/2023		
Lithium		*		0.0030		0.509		0.5000	0		101.8	75		125		03/22/2023		
Molybdenum				0.0015		0.481		0.5000	0		96.2	75		125		03/22/2023		
Selenium				0.0010		0.490		0.5000	0		98.0	75		125		03/22/2023		
Thallium				0.0020		0.249		0.2500	0		99.8	75		125		03/22/2023		

Batch	204057	SampType:	MSD	Units	mg/L							RPD Limit: 20				Date Analyzed		
Analyses								Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	RPD Ref Val	%RPD	
Antimony				0.0010		0.505		0.5000	0		101.0	0.5082		0.66		03/22/2023		
Arsenic				0.0010		0.514		0.5000	0		102.9	0.5248		2.02		03/22/2023		
Beryllium				0.0010		0.0490		0.0500	0		97.9	0.04994		2.00		03/22/2023		
Cadmium				0.0010		0.0486		0.0500	0		97.2	0.04914		1.08		03/22/2023		
Chromium				0.0015		0.200		0.2000	0.001394		99.4	0.2016		0.73		03/22/2023		
Cobalt				0.0010		0.505		0.5000	0		101.1	0.5189		2.65		03/22/2023		
Lead				0.0010		0.527		0.5000	0		105.5	0.5128		2.78		03/22/2023		
Lithium		*		0.0030		0.503		0.5000	0		100.5	0.5089		1.24		03/22/2023		
Molybdenum				0.0015		0.470		0.5000	0		94.0	0.4810		2.29		03/22/2023		
Selenium				0.0010		0.488		0.5000	0		97.7	0.4898		0.28		03/22/2023		
Thallium				0.0020		0.255		0.2500	0		101.8	0.2495		2.03		03/22/2023		



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 204201 SampType: MBLK Units mg/L

SampID: MBLK-204201

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		< 0.0010	0.0004	0	0	-100	100	03/24/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	03/24/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	03/27/2023
Boron		0.0250		< 0.0250	0.0093	0	0	-100	100	03/27/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	03/24/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	03/24/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	03/24/2023
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	03/24/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	03/24/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	03/24/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	03/24/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	03/24/2023

Batch 204201 SampType: LCS Units mg/L

SampID: LCS-204201

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.491	0.5000	0	98.1	85	115	03/24/2023
Arsenic		0.0010		0.520	0.5000	0	104.0	85	115	03/24/2023
Beryllium		0.0010		0.0538	0.0500	0	107.5	80	120	03/27/2023
Boron		0.0250		0.563	0.5000	0	112.6	80	120	03/27/2023
Cadmium		0.0010		0.0485	0.0500	0	97.1	85	115	03/24/2023
Chromium		0.0015		0.194	0.2000	0	96.9	85	115	03/24/2023
Cobalt		0.0010		0.494	0.5000	0	98.9	85	115	03/24/2023
Lead		0.0010		0.499	0.5000	0	99.7	85	115	03/24/2023
Lithium	*	0.0030		0.498	0.5000	0	99.6	85	115	03/24/2023
Molybdenum		0.0015		0.481	0.5000	0	96.3	85	115	03/24/2023
Selenium		0.0010		0.468	0.5000	0	93.7	85	115	03/24/2023
Thallium		0.0020		0.244	0.2500	0	97.4	85	115	03/24/2023

Batch 204201 SampType: MS Units mg/L

SampID: 23030880-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		0.0250		0.572	0.5000	0.05248	103.9	75	125	03/27/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	204201	SampType:	MSD	Units	mg/L	RPD Limit: 20				
SampID: 23030880-001BMSD						Date				Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date
Boron		0.0250		0.584	0.5000	0.05248	106.4	0.5719	2.18	03/27/2023

Batch 204201 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Selenium		0.0010		0.892	1.000	0	89.2	70	130	03/24/2023

Batch 204201 SampType: MSD Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Selenium		0.0010		0.889	1.000	0	88.9	0.8921	0.36	03/24/2023

SW-846 7470A (TOTAL)

Batch	204035	SampType:	MBLK	Units	mg/L	RPD Limit: 20				
SampID: MBLK-204035						Date				Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	03/20/2023

Batch 204035 SampType: LCS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00463	0.0050	0	92.6	85	115	03/20/2023

Batch 204035 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00430	0.0050	0	86.0	75	125	03/20/2023

Batch 204035 SampType: MSD Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		0.00429	0.0050	0	85.7	0.004299	0.29	03/20/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 7470A (TOTAL)

Batch	204035	SampType:	MS	Units	mg/L					
SampID: 23031170-003CMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		0.00446	0.0050	0.0001063	87.2	75	125	03/20/2023

Batch	204035	SampType:	MSD	Units	mg/L	RPD Limit: 15				
SampID: 23031170-003CMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Mercury		0.00020		0.00446	0.0050	0.0001063	87.1	0.004465	0.12	03/20/2023

Batch	204193	SampType:	MBLK	Units	mg/L					
SampID: MBLK-204193										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	03/23/2023
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	03/23/2023

Batch	204193	SampType:	LCS	Units	mg/L					
SampID: LCS-204193										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		0.00471	0.0050	0	94.3	85	115	03/23/2023

Batch	204193	SampType:	MS	Units	mg/L					
SampID: 23031489-005CMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		0.00538	0.0050	0.0001401	104.7	75	125	03/23/2023

Batch	204193	SampType:	MSD	Units	mg/L	RPD Limit: 15				
SampID: 23031489-005CMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Mercury		0.00020		0.00548	0.0050	0.0001401	106.8	0.005377	1.85	03/23/2023

Batch	204193	SampType:	MS	Units	mg/L					
SampID: 23031489-007CMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		0.00466	0.0050	0	93.2	75	125	03/23/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

SW-846 7470A (TOTAL)

Batch	SampType:	MSD	Units	mg/L	RPD Limit:	15	Date Analyzed								
SampID:	23031489-007CMSD														
Analyses							Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD
Mercury				0.00020						0.00467	0.0050	0	93.4	0.004658	0.23

Receiving Check List

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Carrier: Joe Riley

Received By: ANC

Completed by:



Reviewed by:



On:

17-Mar-23

Candace Moore

23-Mar-23

Elizabeth A. Hurley

Pages to follow: Chain of custody

2

Extra pages included

29

Not Present

Temp °C **3.4**

Blue Ice

Dry Ice

Shipping container/cooler in good condition?

Yes

No

Type of thermal preservation?

None

Ice

Chain of custody present?

Yes

No

Chain of custody signed when relinquished and received?

Yes

No

Chain of custody agrees with sample labels?

Yes

No

Samples in proper container/bottle?

Yes

No

Sample containers intact?

Yes

No

Sufficient sample volume for indicated test?

Yes

No

All samples received within holding time?

Yes

No

Reported field parameters measured:

Field

Lab

NA

Container/Temp Blank temperature in compliance?

Yes

No

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?

Yes

No

No VOA vials

Water - TOX containers have zero headspace?

Yes

No

No TOX containers

Water - pH acceptable upon receipt?

Yes

No

NA

NPDES/CWA TCN interferences checked/treated in the field?

Yes

No

NA

Any No responses must be detailed below or on the COC.

pH strip #87147. - TWM/cmoore - 3/17/2023 10:11:13 AM

pH strip #88374. - PRY/ehurley - 3/22/23

EP-1, EP-5, EP-6, Equipment Blank, and Field Blank were received on 3/17/23 at 0920. - ehurley - 3/23/2023 5:27:18 PM

CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23030368

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Southern Illinois Power Cooperation Address: 11543 Lake of Egypt Road City / State / Zip: Marion, IL 62959 Contact: Jason McLaurin E-Mail: jmclaurin@sipower.org	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE 3.4 °C LTG# Preserved in: <input checked="" type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes: RTV 88374 Rat + 3/22/23 TM 87147																				
Are these samples known to be involved in litigation? If yes, a surcharge will apply <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																					
Project Name/Number		Sample Collector's Name J-R SLEY																			
Groundwater Monitoring																					
Results Requested		Billing Instructions		# and Type of Containers								MATRIX		INDICATE ANALYSIS REQUESTED							
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)				UNP	HNO3	Groundwater	Aqueous	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	Sulfate	TDS					
Lab Use Only	Sample Identification	Date/Time Sampled																			
23030368-001	EBG	3/21/23 1244	1	3				X		X X X X X X X X X X X											
002	EP-1	3/19/23 1511	1	3				X		X X X X X X X X X X X											
003	EP-2	3/21/23 1335	1	3				X		X X X X X X X X X X X											
004	EP-3	3/21/23 1418	1	3				X		X X X X X X X X X X X											
005	EP-4 *	3/21/23 1442	1	3				X		X X X X X X X X X X X											
006	EP-5	3/15/23 1429	1	3				X		X X X X X X X X X X X											
007	EP-6	1553 3/15/23 + 544	1	3				X		X X X X X X X X X X X											
008	EP-7	3/21/23 1356	1	3				X		X X X X X X X X X X X											
009	Equipment Blank	3/16/23 1402	1	3			X		X X X X X X X X X X X												
010	Field Blank	3/16/23 1405	1	3			X		X X X X X X X X X X X												
Relinquished By				Date/Time				Received By				Date/Time									
				03/17/23 0920				Allison Colvin				3/17/23 0920									
				3/22/23 1039				Elizabeth Anthony				3/22/23 1039									

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 78631



CHAIN OF CUSTODY

pg. 2 of 2 Work order # 13030308

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client:	Southern Illinois Power Cooperation		
Address:	11543 Lake of Egypt Road		
City / State / Zip	Marion, IL 62959		
Contact:	Jason McLaurin	Phone:	(618) 964-1448
E-Mail:	jmclaurin@sipower.org		

Samples on: ICE BLUE ICE NO ICE °C LTG# _____

Preserved In: LAB FIELD FOR LAB USE ONLY

Lab Notes:

Client Comments

ICP: Ba B Ca

ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti

Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No

Are these samples known to be hazardous? Yes No

Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. Yes No

Project Name/Number		Sample Collector's Name						MATRIX		INDICATE ANALYSIS REQUESTED										
Groundwater Monitoring								UNP	HNO ₃	Groundwater	Aqueous	Chloride	Fluoride	Field Parameters	Ra226/228	Mercury	Sulfate	TDS		
Results Requested		Billing Instructions		# and Type of Containers																
<input type="checkbox"/> Standard	<input type="checkbox"/> 1-2 Day (100% Surcharge)																			
<input type="checkbox"/> Other	<input type="checkbox"/> 3 Day (50% Surcharge)																			
Lab Use Only	Sample Identification	Date/Time Sampled																		
13030308-011	Field Duplicate	3/21/23 1442		1	3					X			X	X	X	X	X	X	X	X
Relinquished By		Date/Time		Received By		Date/Time														
		3/22/23 1039				3/22/23 1039														

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 78631





ANALYTICAL REPORT

April 27, 2023

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷GI

⁸AI

⁹SC

TEKLAB, Inc.

Sample Delivery Group: L1598896

Samples Received: 03/28/2023

Project Number: 23030368

Description:

Report To: Elizabeth Hurley
5445 Horseshoe Lake Road
Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

Pace Analytical National

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

ACCOUNT:

TEKLAB, Inc.

PROJECT:

23030368

SDG:

L1598896

DATE/TIME:

04/27/23 18:24

PAGE:

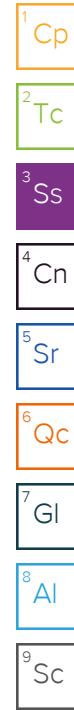
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SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
23030368-001 L1598896-01 Non-Potable Water				03/21/23 12:44	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN
23030368-003 L1598896-02 Non-Potable Water				Collected by	Collected date/time	Received date/time
				03/21/23 13:35	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN
23030368-004 L1598896-03 Non-Potable Water				Collected by	Collected date/time	Received date/time
				03/21/23 14:18	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN
23030368-005 L1598896-04 Non-Potable Water				Collected by	Collected date/time	Received date/time
				03/21/23 14:42	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN
23030368-008 L1598896-05 Non-Potable Water				Collected by	Collected date/time	Received date/time
				03/21/23 13:56	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN
23030368-011 L1598896-06 Non-Potable Water				Collected by	Collected date/time	Received date/time
				03/21/23 14:42	03/28/23 09:20	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ GI
- ⁸ AI
- ⁹ Sc

23030368-001

Collected date/time: 03/21/23 12:44

SAMPLE RESULTS - 01

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.968		0.437	0.799	04/27/2023 11:45	<u>WG2047808</u>
(T) Barium	91.0			30.0-143	04/27/2023 11:45	<u>WG2047808</u>
(T) Yttrium	103			30.0-136	04/27/2023 11:45	<u>WG2047808</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.15		0.487	0.853	04/27/2023 11:45	<u>WG2034934</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.180	J	0.216	0.298	04/25/2023 18:11	<u>WG2034934</u>
(T) Barium-133	83.5			30.0-143	04/25/2023 18:11	<u>WG2034934</u>

23030368-003

Collected date/time: 03/21/23 13:35

SAMPLE RESULTS - 02

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.00		0.248	0.408	04/27/2023 11:45	WG2047808
(<i>T</i>) Barium	102			30.0-143	04/27/2023 11:45	WG2047808
(<i>T</i>) Yttrium	108			30.0-136	04/27/2023 11:45	WG2047808

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.00		0.278	0.505	04/27/2023 11:45	WG2034934

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0164	<u>U</u>	0.125	0.298	04/25/2023 18:11	WG2034934
(<i>T</i>) Barium-133	91.4			30.0-143	04/25/2023 18:11	WG2034934

23030368-004

Collected date/time: 03/21/23 14:18

SAMPLE RESULTS - 03

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.25		0.276	0.484	04/27/2023 11:45	WG2047808
(T) Barium	88.2			30.0-143	04/27/2023 11:45	WG2047808
(T) Yttrium	97.1			30.0-136	04/27/2023 11:45	WG2047808

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.86		0.415	0.556	04/27/2023 11:45	WG2034934

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.606		0.310	0.273	04/25/2023 18:11	WG2034934
(T) Barium-133	101			30.0-143	04/25/2023 18:11	WG2034934

23030368-005

Collected date/time: 03/21/23 14:42

SAMPLE RESULTS - 04

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.14		0.329	0.588	04/27/2023 11:45	<u>WG2047808</u>
(T) Barium	91.9			30.0-143	04/27/2023 11:45	<u>WG2047808</u>
(T) Yttrium	100			30.0-136	04/27/2023 11:45	<u>WG2047808</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.40		0.420	0.676	04/27/2023 11:45	<u>WG2034934</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.264	J	0.261	0.334	04/25/2023 18:11	<u>WG2034934</u>
(T) Barium-133	84.5			30.0-143	04/25/2023 18:11	<u>WG2034934</u>

23030368-008

Collected date/time: 03/21/23 13:56

SAMPLE RESULTS - 05

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.61		0.583	1.06	04/27/2023 11:45	<u>WG2047808</u>
(<i>T</i>) Barium	80.2			30.0-143	04/27/2023 11:45	<u>WG2047808</u>
(<i>T</i>) Yttrium	113			30.0-136	04/27/2023 11:45	<u>WG2047808</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.00		0.652	1.11	04/27/2023 11:45	<u>WG2034934</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.391		0.292	0.344	04/25/2023 18:11	<u>WG2034934</u>
(<i>T</i>) Barium-133	94.6			30.0-143	04/25/2023 18:11	<u>WG2034934</u>

23030368-011

Collected date/time: 03/21/23 14:42

SAMPLE RESULTS - 06

L1598896

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.35	J	0.771	1.42	04/27/2023 11:45	<u>WG2047808</u>
(T) Barium	83.4			30.0-143	04/27/2023 11:45	<u>WG2047808</u>
(T) Yttrium	116			30.0-136	04/27/2023 11:45	<u>WG2047808</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.62		0.797	1.43	04/27/2023 11:45	<u>WG2034934</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.276		0.200	0.190	04/25/2023 18:11	<u>WG2034934</u>
(T) Barium-133	86.6			30.0-143	04/25/2023 18:11	<u>WG2034934</u>

QUALITY CONTROL SUMMARY

[L1598896-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3918340-1 04/27/23 11:45

Analyte	MB Result pCi/l	<u>MB Qualifier</u>	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.255	J	0.138	0.255
(T) Barium	95.4		95.4	
(T) Yttrium	110		110	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1598896-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1598896-01 04/27/23 11:45 • (DUP) R3918340-5 04/27/23 11:45

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-228	0.968	0.437	0.799	1.01	0.334	0.799	1	4.21	0.0756		20	3
(T) Barium	91.0			105	105							
(T) Yttrium	103			101	101							

Laboratory Control Sample (LCS)

(LCS) R3918340-2 04/27/23 11:45

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-228	5.00	5.32	106	80.0-120	
(T) Barium			95.2		
(T) Yttrium			114		

L1598891-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598891-01 04/27/23 11:45 • (MS) R3918340-3 04/27/23 11:45 • (MSD) R3918340-4 04/27/23 11:45

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-228	10.0	-0.114	10.8	11.1	108	111	1	70.0-130		2.83		20
(T) Barium		108		99.9	109							
(T) Yttrium		110		128	107							

QUALITY CONTROL SUMMARY

[L1598896-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3918280-1 04/25/23 18:11

Analyte	MB Result pCi/l	<u>MB Qualifier</u> + / -	MB Uncertainty pCi/l	MB MDA pCi/l
Radium-226	-0.0108	<u>U</u>	0.0316	0.0752
(T) Barium-133	89.2		89.2	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1598402-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1598402-01 04/25/23 18:11 • (DUP) R3918280-5 04/25/23 18:11

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-226	1.80	0.522	0.261	0.586	0.372	0.261	1	102	1.89		20	3
(T) Barium-133	84.1			83.4	83.4							

Laboratory Control Sample (LCS)

(LCS) R3918280-2 04/25/23 18:11

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-226	5.01	4.81	96.0	80.0-120	
(T) Barium-133			89.4		

L1599120-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1599120-01 04/25/23 18:11 • (MS) R3918280-3 04/25/23 18:11 • (MSD) R3918280-4 04/25/23 18:11

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-226	20.0	4.83	10.3	10.3	27.3	27.3	1	75.0-125	<u>J6</u>	<u>J6</u>	0.000		20
(T) Barium-133		104			99.3	95.7							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDA	Minimum Detectable Activity.	¹ Cp
Rec.	Recovery.	² Tc
RER	Replicate Error Ratio.	³ Ss
RPD	Relative Percent Difference.	⁴ Cn
SDG	Sample Delivery Group.	⁵ Sr
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.	⁶ Qc
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.	⁷ GI
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.	⁸ AI
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.	⁹ Sc
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.	
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.	
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.	
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.	
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.	
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.	
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.	
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.	
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.	

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

6319 3616 0043

Sample Receipt Checklist

COC Seal Present/Intact: N If Applicable
 COC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres.Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N

LAB, INC. Chain of Custody

Pg 1 of 1

B057

Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES NO With: Ice Blue Ice Preserved in: Lab Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp:

Sampler: Client

QC Level: 3

Project#

23030368

Comments: Please Issue reports and invoices via email only

Please analyze for Radium 226/228 per methods

Collected at an IL site.

Batch QC is required for all analyses requested. EDD requested.

Contact: Liz Hurley

Email: ehurley@teklabinc.com

Requested Due Date: 10-15 day TAT

Billing/PO: 34153

Phone: 618 344-1004

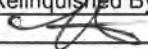
L159 8896

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228	-01	-02	-03	-04	-05	-06
	23030368-001	3/21/23 1244	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	23030368-003	3/21/23 1335	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	23030368-004	3/21/23 1418	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	23030368-005	3/21/23 1442	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	23030368-008	3/21/23 1356	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	23030368-011	3/21/23 1442	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
			HNO3	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			HNO3	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			HNO3	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			HNO3	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Relinquished By	Date/Time	Received By	Date/Time
	3-23-23 1700	g LO	3-28-23 9:20

Teklab maintains a strict policy of client confidentiality and as such
Teklab, Inc. protects clients' confidential information as dir

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

hts,

SubCocRevA
3/2/2016



ANALYTICAL REPORT

April 27, 2023

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

TEKLAB, Inc.

Sample Delivery Group: L1597101
Samples Received: 03/22/2023
Project Number: 23030368
Description:
Site: 002
Report To: Elizabeth Hurley
5445 Horseshoe Lake Road
Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

Pace Analytical National

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

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SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
				03/15/23 15:11	03/22/23 09:00	
23030368-002 L1597101-01 Non-Potable Water	Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst Location
Radiochemistry by Method 904/9320		WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM Mt. Juliet, TN
Radiochemistry by Method Calculation		WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M		WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT Mt. Juliet, TN
23030368-006 L1597101-02 Non-Potable Water				Collected by	Collected date/time	Received date/time
					03/15/23 14:29	03/22/23 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN
23030368-007 L1597101-03 Non-Potable Water				Collected by	Collected date/time	Received date/time
					03/15/23 15:53	03/22/23 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN
23030368-009 L1597101-04 Non-Potable Water				Collected by	Collected date/time	Received date/time
					03/16/23 14:02	03/22/23 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN
23030368-010 L1597101-05 Non-Potable Water				Collected by	Collected date/time	Received date/time
					03/16/23 14:05	03/22/23 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ GI
- ⁸ AI
- ⁹ Sc

23030368-002

Collected date/time: 03/15/23 15:11

SAMPLE RESULTS - 01

L1597101

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.726		0.334	0.613	04/26/2023 22:00	WG2041628
(T) Barium	90.0			30.0-143	04/26/2023 22:00	WG2041628
(T) Yttrium	108			30.0-136	04/26/2023 22:00	WG2041628

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.953		0.436	0.729	04/26/2023 22:00	WG2030892

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.227	J	0.281	0.395	04/13/2023 19:24	WG2030892
(T) Barium-133	80.7			30.0-143	04/13/2023 19:24	WG2030892

23030368-006

Collected date/time: 03/15/23 14:29

SAMPLE RESULTS - 02

L1597101

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.580		0.240	0.439	04/26/2023 22:00	WG2041628
(T) Barium	94.7			30.0-143	04/26/2023 22:00	WG2041628
(T) Yttrium	107			30.0-136	04/26/2023 22:00	WG2041628

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.733		0.360	0.600	04/26/2023 22:00	WG2030892

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.153	J	0.268	0.409	04/13/2023 19:24	WG2030892
(T) Barium-133	77.6			30.0-143	04/13/2023 19:24	WG2030892

23030368-007

Collected date/time: 03/15/23 15:53

SAMPLE RESULTS - 03

L1597101

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.413	<u>U</u>	0.246	0.482	04/26/2023 22:00	<u>WG2041628</u>
(T) Barium	91.6			30.0-143	04/26/2023 22:00	<u>WG2041628</u>
(T) Yttrium	102			30.0-136	04/26/2023 22:00	<u>WG2041628</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.124	<u>U</u>	0.306	0.554	04/26/2023 22:00	<u>WG2030892</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.124	<u>J</u>	0.182	0.274	04/13/2023 19:24	<u>WG2030892</u>
(T) Barium-133	83.3			30.0-143	04/13/2023 19:24	<u>WG2030892</u>

23030368-009

Collected date/time: 03/16/23 14:02

SAMPLE RESULTS - 04

L1597101

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.837		0.193	0.338	04/26/2023 22:00	WG2041628
(<i>T</i>) Barium	103			30.0-143	04/26/2023 22:00	WG2041628
(<i>T</i>) Yttrium	108			30.0-136	04/26/2023 22:00	WG2041628

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.837		0.223	0.429	04/26/2023 22:00	WG2030892

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.00763	<u>U</u>	0.111	0.265	04/13/2023 19:24	WG2030892
(<i>T</i>) Barium-133	82.8			30.0-143	04/13/2023 19:24	WG2030892

23030368-010

Collected date/time: 03/16/23 14:05

SAMPLE RESULTS - 05

L1597101

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.872		0.377	0.691	04/26/2023 22:00	WG2041628
(<i>T</i>) Barium	94.1			30.0-143	04/26/2023 22:00	WG2041628
(<i>T</i>) Yttrium	106			30.0-136	04/26/2023 22:00	WG2041628

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.872		0.399	0.757	04/26/2023 22:00	WG2030892

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0382	<u>U</u>	0.130	0.309	04/13/2023 19:24	WG2030892
(<i>T</i>) Barium-133	92.0			30.0-143	04/13/2023 19:24	WG2030892

QUALITY CONTROL SUMMARY

L1597101-01,02,03,04,05

Method Blank (MB)

(MB) R3918321-1 04/26/23 22:00

Analyte	MB Result pCi/l	<u>MB Qualifier</u>	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.132	<u>U</u>	0.151	0.285
(T) Barium	103		103	
(T) Yttrium	90.5		90.5	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1596613-36 Original Sample (OS) • Duplicate (DUP)

(OS) L1596613-36 04/26/23 22:00 • (DUP) R3918321-5 04/26/23 22:00

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-228	1.32	0.327	0.583	0.660	0.335	0.583	1	66.8	1.41		20	3
(T) Barium	95.1			102	102							
(T) Yttrium	92.7			113	113							

Laboratory Control Sample (LCS)

(LCS) R3918321-2 04/26/23 22:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-228	5.00	4.57	91.4	80.0-120	
(T) Barium			103		
(T) Yttrium			100		

L1597101-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597101-05 04/26/23 22:00 • (MS) R3918321-3 04/26/23 22:00 • (MSD) R3918321-4 04/26/23 22:00

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.872	16.6	15.6	94.2	88.3	1	70.0-130			6.14		20
(T) Barium		94.1		104	99.8								
(T) Yttrium		106		103	96.4								

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

WG2030892

Radiochemistry by Method SM7500Ra B M

QUALITY CONTROL SUMMARY

[L1597101-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3914150-1 04/13/23 19:24

Analyte	MB Result pCi/l	<u>MB Qualifier</u> + / -	MB Uncertainty pCi/l	MB MDA pCi/l
Radium-226	-0.0101	U	0.0295	0.0703
(T) Barium-133	95.4		95.4	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1597101-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1597101-01 04/13/23 19:24 • (DUP) R3914150-5 04/13/23 19:24

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-226	0.227	0.281	0.395	-0.0426	0.187	0.395	1	200	0.799	U	20	3
(T) Barium-133	80.7			78.5	78.5							

Laboratory Control Sample (LCS)

(LCS) R3914150-2 04/13/23 19:24

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-226	5.01	5.09	102	80.0-120	
(T) Barium-133			91.7		

L1597151-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597151-08 04/13/23 19:24 • (MS) R3914150-3 04/13/23 19:24 • (MSD) R3914150-4 04/13/23 19:24

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.256	18.5	17.7	91.4	87.3	1	75.0-125			4.52		20
(T) Barium-133		92.0			87.1	87.1							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

⁸ AI

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES NO With: Ice Blue Ice Preserved in: Lab Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Client QC Level: 3

Preserved in: Lab Field

Project# 23030368

Cooler Temp: Sampler: Client QC Level: 3

Comments: Please Issue reports and invoices via email only
Please analyze for Radium 22/228 per methods specified for Vistra/Ramboll projects.

[Collected at an II site]

Batch QC is required for all analyses requested. EDD requested.

A002

Contact: Liz Hurley

Email: ehurley@teklabinc.com

10-15 day TAT

Billing/PO: 34119

Phone: 618 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Sample Receipt Checklist

COC Seal Present/Intact:	<input checked="" type="checkbox"/>	N	IF Applicable
COC Signed/Accurate:	<input checked="" type="checkbox"/>	N	VCA Zero Headspace:
Bottles arrive intact:	<input checked="" type="checkbox"/>	N	Pres.Correct/Check:
Correct bottles used:	<input checked="" type="checkbox"/>	N	
Sufficient volume sent:	<input checked="" type="checkbox"/>	N	
TAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/>	N	

*Relinquished By	Date/Time	Received By	Date/Time
Candice Moore	3/17/23 17:00	(Fedex)	
		Vanley Roberts	3/22/23 0900

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization, and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5.c)

June 08, 2023

Jason McLaurin
Southern Illinois Power Cooperation
11543 Lake of Egypt Road
Marion, IL 62959
TEL: (618) 964-1448
FAX:



Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Groundwater Monitoring - Q1 2023 resampling

WorkOrder: 23051194

Dear Jason McLaurin:

TEKLAB, INC received 9 samples on 5/24/2023 7:50:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	16
Receiving Check List	26
Chain of Custody	Appended

Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

Abbr Definition

* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.

DNI Did not ignite

DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count (> 200 CFU)



Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

Qualifiers

- | | |
|---|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range |
| H - Holding times exceeded | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

Cooler Receipt Temp: 3.2 °C

An employee of Teklab, Inc. collected the sample(s).

EP-5 will be reported as collected at 10:40 per field file. EAH 6/5/23

Locations

Collinsville	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Collinsville Air	
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Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
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Accreditations

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Southern Illinois Power Cooperation							Work Order: 23051194		
Client Project: Groundwater Monitoring - Q1 2023 resampling							Report Date: 08-Jun-23		
Lab ID: 23051194-001							Client Sample ID: EP-1		
Matrix: GROUNDWATER							Collection Date: 05/24/2023 11:23		
Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		6.62	ft	1	05/24/2023 11:23	R329456
Elevation of groundwater surface	*	0	0		513.10	ft	1	05/24/2023 11:23	R329456
Measuring Point Elevation	*	0	0		519.72	ft	1	05/24/2023 11:23	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	05/24/2023 11:23	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.6	NTU	1	05/24/2023 11:23	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		154	mV	1	05/24/2023 11:23	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2430	µS/cm	1	05/24/2023 11:23	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.4	°C	1	05/24/2023 11:23	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.59	mg/L	1	05/24/2023 11:23	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		6.19		1	05/24/2023 11:23	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2010	mg/L	1	05/30/2023 10:35	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		30	mg/L	1	05/28/2023 1:09	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1520	mg/L	50	05/28/2023 1:15	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.22	mg/L	1	05/30/2023 14:45	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0163	mg/L	1	05/27/2023 1:42	206609
Boron	NELAP	0.0090	0.0200		0.986	mg/L	1	05/27/2023 1:42	206609
Calcium	NELAP	0.0350	0.100		505	mg/L	1	05/27/2023 1:42	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:28	206609
Arsenic	NELAP	0.0004	0.0010	J	0.0007	mg/L	5	05/27/2023 12:28	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:28	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:28	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 12:28	206609
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	05/27/2023 12:28	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:28	206609
Lithium	*	0.0015	0.0030		0.0111	mg/L	5	05/27/2023 12:28	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 12:28	206609
Selenium	NELAP	0.0006	0.0010		0.0073	mg/L	5	05/27/2023 12:28	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 12:28	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:17	206617

Client: Southern Illinois Power Cooperation							Work Order: 23051194		
Client Project: Groundwater Monitoring - Q1 2023 resampling							Report Date: 08-Jun-23		
Lab ID: 23051194-002							Client Sample ID: EP-2		
Matrix: GROUNDWATER							Collection Date: 05/24/2023 17:20		
Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		6.12	ft	1	05/24/2023 17:20	R329456
Elevation of groundwater surface	*	0	0		507.67	ft	1	05/24/2023 17:20	R329456
Measuring Point Elevation	*	0	0		513.79	ft	1	05/24/2023 17:20	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.43	gal	1	05/24/2023 17:20	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	05/24/2023 17:20	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		19	mV	1	05/24/2023 17:20	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2350	µS/cm	1	05/24/2023 17:20	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.6	°C	1	05/24/2023 17:20	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.79	mg/L	1	05/24/2023 17:20	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		5.48		1	05/24/2023 17:20	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2380	mg/L	1	05/30/2023 10:35	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		31	mg/L	1	05/28/2023 1:17	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1690	mg/L	50	05/28/2023 1:22	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		1.70	mg/L	1	05/30/2023 14:47	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0185	mg/L	1	05/27/2023 1:45	206609
Boron	NELAP	0.0090	0.0200		0.418	mg/L	1	05/27/2023 1:45	206609
Calcium	NELAP	0.0350	0.100		318	mg/L	1	05/27/2023 1:45	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0018	0.0040		< 0.0040	mg/L	20	06/01/2023 4:50	206609
Arsenic	NELAP	0.0004	0.0010	J	0.0009	mg/L	5	05/27/2023 12:34	206609
Beryllium	NELAP	0.0002	0.0010		0.0082	mg/L	5	05/27/2023 12:34	206609
Cadmium	NELAP	0.0002	0.0010	J	0.0002	mg/L	5	05/27/2023 12:34	206609
Chromium	NELAP	0.0007	0.0015	J	0.0009	mg/L	5	05/27/2023 12:34	206609
Cobalt	NELAP	0.0001	0.0010		0.273	mg/L	5	05/27/2023 12:34	206609
Lead	NELAP	0.0024	0.0040		< 0.0040	mg/L	20	06/01/2023 4:50	206609
Lithium	*	0.0015	0.0030		0.0518	mg/L	5	05/27/2023 12:34	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 12:34	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:34	206609
Thallium	NELAP	0.0038	0.0080		< 0.0080	mg/L	20	06/01/2023 4:50	206609
Elevated reporting limit due to matrix interference.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:19	206617

Client: Southern Illinois Power Cooperation							Work Order: 23051194		
Client Project: Groundwater Monitoring - Q1 2023 resampling							Report Date: 08-Jun-23		
Lab ID: 23051194-003							Client Sample ID: EP-3		
Matrix: GROUNDWATER							Collection Date: 05/24/2023 14:05		
Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.01	ft	1	05/24/2023 14:05	R329456
Elevation of groundwater surface	*	0	0		502.94	ft	1	05/24/2023 14:05	R329456
Measuring Point Elevation	*	0	0		518.95	ft	1	05/24/2023 14:05	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		2.08	gal	1	05/24/2023 14:05	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	05/24/2023 14:05	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-65	mV	1	05/24/2023 14:05	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1210	µS/cm	1	05/24/2023 14:05	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		19.1	°C	1	05/24/2023 14:05	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.56	mg/L	1	05/24/2023 14:05	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		6.11		1	05/24/2023 14:05	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		735	mg/L	2.5	05/30/2023 10:36	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		152	mg/L	5	05/28/2023 1:25	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		141	mg/L	5	05/28/2023 1:25	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.19	mg/L	1	05/30/2023 14:49	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0949	mg/L	1	05/27/2023 1:49	206609
Boron	NELAP	0.0090	0.0200		0.0690	mg/L	1	05/27/2023 1:49	206609
Calcium	NELAP	0.0350	0.100		39.1	mg/L	1	05/27/2023 1:49	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:41	206609
Arsenic	NELAP	0.0004	0.0010		0.0063	mg/L	5	05/27/2023 12:41	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:41	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:41	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 12:41	206609
Cobalt	NELAP	0.0001	0.0010		0.0939	mg/L	5	05/27/2023 12:41	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:41	206609
Lithium	*	0.0015	0.0030		0.0317	mg/L	5	05/27/2023 12:41	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 12:41	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:41	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 12:41	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:22	206617

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring - Q1 2023 resampling
Lab ID: 23051194-004

Work Order: 23051194
Report Date: 08-Jun-23

Matrix: GROUNDWATER

Client Sample ID: EP-4

Collection Date: 05/24/2023 12:59

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.02	ft	1	05/24/2023 12:59	R329456
Elevation of groundwater surface	*	0	0		512.72	ft	1	05/24/2023 12:59	R329456
Measuring Point Elevation	*	0	0		519.74	ft	1	05/24/2023 12:59	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.90	gal	1	05/24/2023 12:59	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		5.6	NTU	1	05/24/2023 12:59	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-39	mV	1	05/24/2023 12:59	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2530	µS/cm	1	05/24/2023 12:59	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.4	°C	1	05/24/2023 12:59	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.50	mg/L	1	05/24/2023 12:59	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		5.94		1	05/24/2023 12:59	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1840	mg/L	2.5	05/30/2023 10:36	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		467	mg/L	10	05/28/2023 1:33	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		517	mg/L	20	05/28/2023 1:52	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.17	mg/L	1	05/30/2023 14:52	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0395	mg/L	1	05/27/2023 1:53	206609
Boron	NELAP	0.0090	0.0200		10.6	mg/L	1	05/27/2023 1:53	206609
Calcium	NELAP	0.0350	0.100		184	mg/L	1	05/27/2023 1:53	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:47	206609
Arsenic	NELAP	0.0004	0.0010		0.0134	mg/L	5	05/27/2023 12:47	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:47	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:47	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 12:47	206609
Cobalt	NELAP	0.0001	0.0010		0.137	mg/L	5	05/27/2023 12:47	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:47	206609
Lithium	*	0.0015	0.0030		0.0034	mg/L	5	05/27/2023 12:47	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 12:47	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:47	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 12:47	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:24	206617

Client: Southern Illinois Power Cooperation							Work Order: 23051194		
Client Project: Groundwater Monitoring - Q1 2023 resampling							Report Date: 08-Jun-23		
Lab ID: 23051194-005							Client Sample ID: EP-5		
Matrix: GROUNDWATER							Collection Date: 05/24/2023 10:40		
Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		11.54	ft	1	05/24/2023 10:40	R329456
Elevation of groundwater surface	*	0	0		516.05	ft	1	05/24/2023 10:40	R329456
Measuring Point Elevation	*	0	0		527.59	ft	1	05/24/2023 10:40	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.39	gal	1	05/24/2023 10:40	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	05/24/2023 10:40	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		119	mV	1	05/24/2023 10:40	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		425	µS/cm	1	05/24/2023 10:40	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.7	°C	1	05/24/2023 10:40	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		6.75	mg/L	1	05/24/2023 10:40	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		6.46		1	05/24/2023 10:40	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		296	mg/L	1	05/30/2023 10:36	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4	J	3	mg/L	1	05/28/2023 1:54	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		113	mg/L	5	05/28/2023 1:59	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.44	mg/L	1	05/30/2023 14:54	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0514	mg/L	1	05/27/2023 2:15	206609
Boron	NELAP	0.0090	0.020	J	0.012	mg/L	1	05/27/2023 2:15	206609
Calcium	NELAP	0.0350	0.100		16.6	mg/L	1	05/27/2023 2:15	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Chromium	NELAP	0.0007	0.0015		0.0020	mg/L	5	05/27/2023 11:45	206609
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	05/27/2023 11:45	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Lithium	*	0.0015	0.0030	J	0.0027	mg/L	5	05/27/2023 11:45	206609
Molybdenum	NELAP	0.0006	0.0015	J	0.0013	mg/L	5	05/27/2023 11:45	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 11:45	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 11:45	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:31	206617

Client: Southern Illinois Power Cooperation							Work Order: 23051194		
Client Project: Groundwater Monitoring - Q1 2023 resampling							Report Date: 08-Jun-23		
Lab ID: 23051194-006							Client Sample ID: EP-7		
Matrix: GROUNDWATER							Collection Date: 05/24/2023 16:30		
Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.79	ft	1	05/24/2023 16:30	R329456
Elevation of groundwater surface	*	0	0		501.65	ft	1	05/24/2023 16:30	R329456
Measuring Point Elevation	*	0	0		515.44	ft	1	05/24/2023 16:30	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		5.85	gal	1	05/24/2023 16:30	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		6.0	NTU	1	05/24/2023 16:30	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-15	mV	1	05/24/2023 16:30	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1690	µS/cm	1	05/24/2023 16:30	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.2	°C	1	05/24/2023 16:30	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.48	mg/L	1	05/24/2023 16:30	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		5.82		1	05/24/2023 16:30	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1100	mg/L	2.5	05/30/2023 10:36	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		240	mg/L	10	05/28/2023 2:02	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		363	mg/L	10	05/28/2023 2:01	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.23	mg/L	1	05/30/2023 15:06	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0354	mg/L	1	05/27/2023 1:56	206609
Boron	NELAP	0.0090	0.0200		0.639	mg/L	1	05/31/2023 14:16	206609
Calcium	NELAP	0.0350	0.100		114	mg/L	1	05/27/2023 1:56	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:53	206609
Arsenic	NELAP	0.0004	0.0010		0.0088	mg/L	5	05/27/2023 12:53	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:53	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:53	206609
Chromium	NELAP	0.0007	0.0015		0.0021	mg/L	5	05/27/2023 12:53	206609
Cobalt	NELAP	0.0001	0.0010		0.158	mg/L	5	05/27/2023 12:53	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:53	206609
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	05/27/2023 12:53	206609
Molybdenum	NELAP	0.0006	0.0015	J	0.0007	mg/L	5	05/27/2023 12:53	206609
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	05/27/2023 12:53	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 12:53	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:33	206617

Client: Southern Illinois Power Cooperation **Work Order:** 23051194
Client Project: Groundwater Monitoring - Q1 2023 resampling **Report Date:** 08-Jun-23
Lab ID: 23051194-007 **Client Sample ID:** Equipment Blank
Matrix: GROUNDWATER **Collection Date:** 05/24/2023 17:26

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	05/30/2023 10:36	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	05/28/2023 2:13	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	05/28/2023 2:12	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	05/30/2023 15:08	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	05/27/2023 2:26	206609
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	05/27/2023 2:26	206609
Calcium	NELAP	0.035	0.10	J	0.044	mg/L	1	05/27/2023 2:26	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 12:59	206609
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	05/27/2023 12:59	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	05/27/2023 12:59	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 12:59	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 12:59	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 12:59	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:35	206617

Client: Southern Illinois Power Cooperation **Work Order:** 23051194
Client Project: Groundwater Monitoring - Q1 2023 resampling **Report Date:** 08-Jun-23
Lab ID: 23051194-008 **Client Sample ID:** Field Blank
Matrix: GROUNDWATER **Collection Date:** 05/24/2023 16:49

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	05/30/2023 11:25	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	05/28/2023 2:18	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	05/28/2023 2:18	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	05/30/2023 15:11	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	05/27/2023 2:30	206609
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	05/27/2023 2:30	206609
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	05/27/2023 2:30	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/07/2023 11:36	206972
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 13:05	206609
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	05/27/2023 13:05	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 13:05	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 13:05	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 13:05	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:37	206617

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring - Q1 2023 resampling
Lab ID: 23051194-009

Work Order: 23051194
Report Date: 08-Jun-23

Matrix: GROUNDWATER

Client Sample ID: Field Duplicate

Collection Date: 05/24/2023 12:59

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.02	ft	1	05/24/2023 12:59	R329456
Elevation of groundwater surface	*	0	0		512.72	ft	1	05/24/2023 12:59	R329456
Measuring Point Elevation	*	0	0		519.74	ft	1	05/24/2023 12:59	R329456
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.90	gal	1	05/24/2023 12:59	R329456
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		5.6	NTU	1	05/24/2023 12:59	R329456
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-39	mV	1	05/24/2023 12:59	R329456
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2530	µS/cm	1	05/24/2023 12:59	R329456
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.4	°C	1	05/24/2023 12:59	R329456
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.50	mg/L	1	05/24/2023 12:59	R329456
SW-846 9040B FIELD									
pH	*	0	1.00		5.94		1	05/24/2023 12:59	R329456
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1860	mg/L	2.5	05/30/2023 11:25	R329577
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	25	200		460	mg/L	50	05/28/2023 2:26	R329548
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		612	mg/L	50	05/28/2023 2:25	R329494
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.15	mg/L	1	05/30/2023 15:14	R329513
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0400	mg/L	1	05/27/2023 2:33	206609
Boron	NELAP	0.0090	0.0200		10.7	mg/L	1	05/27/2023 2:33	206609
Calcium	NELAP	0.0350	0.100		187	mg/L	1	05/27/2023 2:33	206609
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2023 14:13	206609
Arsenic	NELAP	0.0004	0.0010		0.0137	mg/L	5	05/27/2023 14:13	206609
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 14:13	206609
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2023 14:13	206609
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2023 14:13	206609
Cobalt	NELAP	0.0001	0.0010		0.138	mg/L	5	05/27/2023 14:13	206609
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 14:13	206609
Lithium	*	0.0015	0.0030		0.0031	mg/L	5	05/27/2023 14:13	206609
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2023 14:13	206609
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2023 14:13	206609
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2023 14:13	206609
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/26/2023 10:40	206617



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

STANDARD METHODS 2510 B FIELD

Batch R329456	SampType: LCS	Units $\mu\text{S}/\text{cm}$								
SampID: LCS-R329456										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		1420	1409	0	100.6	90	110	05/24/2023

SW-846 9040B FIELD

Batch R329456	SampType: LCS	Units								
SampID: LCS-R329456										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		7.08	7.000	0	101.1	98.57	101.4	05/24/2023

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R329577	SampType: MBLK	Units mg/L								
SampID: MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	05/30/2023
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	05/30/2023

Batch R329577 SampType: LCS

Batch R329577	SampType: LCS	Units mg/L								
SampID: LCS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		966	1000	0	96.6	90	110	05/30/2023
Total Dissolved Solids		20		988	1000	0	98.8	90	110	05/30/2023

Batch R329577 SampType: DUP

Batch R329577	SampType: DUP	Units mg/L								
SampID: 23051848-003ADUP										RPD Limit: 10
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		526				516.0	1.92	05/30/2023

Batch R329577 SampType: DUP

Batch R329577	SampType: DUP	Units mg/L								
SampID: 23051859-002GDUP										RPD Limit: 10
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		368				354.0	3.88	05/30/2023

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R329548	SampType: MBLK	Units mg/L								
SampID: ICB/MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		< 4	0.5000	0	0	-100	100	05/27/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R329548 SampType: MBLK Units mg/L

SampID: MBLK-204908

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	*	4		< 4	0.5000	0	0	-100	100	05/27/2023

Batch R329548 SampType: LCS Units mg/L

SampID: ICV/LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		20	20.00	0	100.3	90	110	05/27/2023

Batch R329548 SampType: MS Units mg/L

SampID: 23050523-003BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8		91	40.00	54.94	89.9	85	115	05/28/2023

Batch R329548 SampType: MSD Units mg/L

RPD Limit: 15

SampID: 23050523-003BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		8		90	40.00	54.94	87.0	90.89	1.25	05/28/2023

Batch R329548 SampType: MS Units mg/L

SampID: 23050814-007AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		26	20.00	6.700	94.0	85	115	05/28/2023

Batch R329548 SampType: MSD Units mg/L

RPD Limit: 15

SampID: 23050814-007AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		25	20.00	6.700	93.8	25.51	0.24	05/28/2023

SW-846 9036 (TOTAL)

Batch R329494 SampType: MBLK Units mg/L

SampID: ICB/MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	05/27/2023

Quality Control Results

<http://www.teklabinc.com/>
Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 9036 (TOTAL)

Batch R329494 SampType: MBLK		Units mg/L								
SampID: MBLK-204908										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate	*	10		< 10	6.140	0	0	-100	100	05/27/2023

Batch R329494 SampType: LCS		Units mg/L								
SampID: ICV/LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		19	20.00	0	94.3	90	110	05/27/2023

Batch R329494 SampType: MS		Units mg/L								
SampID: 23050796-005AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		183	100.0	95.48	87.5	85	115	05/28/2023

Batch R329494 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23050796-005AMSD											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		184	100.0	95.48	88.1	183.0	0.34	05/28/2023	

Batch R329494 SampType: MS		Units mg/L									
SampID: 23050814-001AMS											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		86	40.00	48.18	95.6	85	115	05/28/2023	

Batch R329494 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23050814-001AMSD											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		88	40.00	48.18	98.8	86.43	1.44	05/28/2023	

Batch R329494 SampType: MS		Units mg/L									
SampID: 23050814-007AMS											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20	SE	105	40.00	74.36	75.6	85	115	05/28/2023	

Batch R329494 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23050814-007AMSD											Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20	SE	104	40.00	74.36	75.2	104.6	0.18	05/28/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 9036 (TOTAL)

Batch R329494	SampType: MS	Units mg/L								
SampID: 23050839-005AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50	S	146	100.0	58.32	87.2	90	110	05/28/2023

Batch R329494 SampType: MSD Units mg/L RPD Limit: 10

SampID: 23050839-005AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50	S	146	100.0	58.32	87.8	145.5	0.39	05/28/2023

SW-846 9214 (TOTAL)

Batch R329513	SampType: MBLK	Units mg/L								
SampID: MBLK										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	05/30/2023

Batch R329513 SampType: LCS Units mg/L

SampID: LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		0.97	1.000	0	97.0	90	110	05/30/2023

Batch R329513 SampType: MS Units mg/L

SampID: 23051194-005AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.40	2.000	0.4380	97.9	75	125	05/30/2023

Batch R329513 SampType: MSD Units mg/L RPD Limit: 15

SampID: 23051194-005AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.52	2.000	0.4380	104.0	2.396	5.01	05/30/2023

Batch R329513 SampType: MS Units mg/L

SampID: 23051194-009AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.10	2.000	0.1530	97.6	75	125	05/30/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 9214 (TOTAL)

Batch R329513 SampType: MSD		Units mg/L		RPD Limit: 15							
SampID: 23051194-009AMSD						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.14	2.000	0.1530	99.5	2.105	1.74	05/30/2023	

Batch R329513 SampType: MS		Units mg/L		RPD Limit: 15							
SampID: 23051824-004AMS						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.07	2.000	0.06600	100.1	75	125	05/30/2023	

Batch R329513 SampType: MSD		Units mg/L		RPD Limit: 15							
SampID: 23051824-004AMSD						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.08	2.000	0.06600	100.8	2.068	0.63	05/30/2023	

Batch R329513 SampType: MS		Units mg/L		RPD Limit: 15						
SampID: 23051848-004AMS							Date Analyzed			
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		12.7	10.00	2.580	101.0	75	125	05/30/2023

Batch R329513 SampType: MSD		Units mg/L		RPD Limit: 15							
SampID: 23051848-004AMSD						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.50		12.5	10.00	2.580	99.5	12.69	1.27	05/30/2023	

Batch R329513 SampType: MS		Units mg/L		RPD Limit: 15							
SampID: 23051985-012AMS						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.16	2.000	0.07500	104.1	75	125	05/30/2023	

Batch R329513 SampType: MSD		Units mg/L		RPD Limit: 15							
SampID: 23051985-012AMSD						Date Analyzed					
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.02	2.000	0.07500	97.2	2.157	6.56	05/30/2023	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 206609 SampType: MBLK Units mg/L

SampID: MBLK-206609

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	05/26/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	05/26/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/26/2023

Batch 206609 SampType: LCS Units mg/L

SampID: LCS-206609

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.16	2.000	0	107.8	85	115	05/26/2023
Boron		0.0200		0.523	0.5000	0	104.6	85	115	05/26/2023
Calcium		0.100		2.71	2.500	0	108.6	85	115	05/26/2023

Batch 206609 SampType: MS Units mg/L

SampID: 23051194-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.16	2.000	0.05140	105.5	75	125	05/27/2023
Boron		0.0200		0.520	0.5000	0.01220	101.6	75	125	05/27/2023
Calcium		0.100		19.0	2.500	16.64	95.2	75	125	05/27/2023

Batch 206609 SampType: MSD Units mg/L RPD Limit: 20

SampID: 23051194-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		0.0025		2.16	2.000	0.05140	105.6	2.162	0.05	05/27/2023
Boron		0.0200		0.524	0.5000	0.01220	102.4	0.5201	0.82	05/27/2023
Calcium		0.100		19.0	2.500	16.64	93.6	19.02	0.21	05/27/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch 206609 SampType: MBLK Units mg/L

SampID: MBLK-206609

Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		< 0.0010	0.0004	0	0	0	-100	100	05/27/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	0	-100	100	05/27/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	0	-100	100	05/30/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	0	-100	100	05/27/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	0	-100	100	05/30/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	0	-100	100	05/30/2023
Lead		0.0010		< 0.0010	0.0006	0	0	0	-100	100	05/27/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	0	-100	100	05/27/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	0	-100	100	05/27/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	0	-100	100	05/27/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	0	-100	100	05/27/2023

Batch 206609 SampType: LCS Units mg/L

SampID: LCS-206609

Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.486	0.5000	0	97.1	85	115	115	05/27/2023
Arsenic		0.0010		0.514	0.5000	0	102.8	85	115	115	05/27/2023
Beryllium		0.0010		0.0504	0.0500	0	100.7	85	115	115	05/27/2023
Cadmium		0.0010		0.0486	0.0500	0	97.2	85	115	115	05/27/2023
Chromium		0.0015		0.196	0.2000	0	97.8	85	115	115	05/27/2023
Cobalt		0.0010		0.492	0.5000	0	98.4	85	115	115	05/27/2023
Lead		0.0010		0.490	0.5000	0	97.9	85	115	115	05/27/2023
Lithium	*	0.0030		0.498	0.5000	0	99.7	85	115	115	05/27/2023
Molybdenum		0.0015		0.466	0.5000	0	93.3	85	115	115	05/27/2023
Selenium		0.0010		0.490	0.5000	0	97.9	85	115	115	05/27/2023
Thallium		0.0020		0.229	0.2500	0	91.8	85	115	115	05/27/2023



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	206609	SampType:	MS	Units	mg/L						
SampID: 23051194-005CMS										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010		0.505	0.5000	0	100.9	75	125	05/27/2023	
Arsenic		0.0010		0.518	0.5000	0	103.5	75	125	05/27/2023	
Beryllium		0.0010		0.0514	0.0500	0	102.7	75	125	05/27/2023	
Cadmium		0.0010		0.0495	0.0500	0	99.0	75	125	05/27/2023	
Chromium		0.0015		0.194	0.2000	0.001991	96.0	75	125	05/27/2023	
Cobalt		0.0010		0.490	0.5000	0.0001822	98.0	75	125	05/27/2023	
Lead		0.0010		0.501	0.5000	0	100.2	75	125	05/27/2023	
Lithium	*	0.0030		0.515	0.5000	0.002692	102.5	75	125	05/27/2023	
Molybdenum		0.0015		0.480	0.5000	0.001313	95.8	75	125	05/27/2023	
Selenium		0.0010		0.492	0.5000	0	98.3	75	125	05/27/2023	
Thallium		0.0020		0.233	0.2500	0	93.1	75	125	05/27/2023	

Batch	206609	SampType:	MSD	Units	mg/L	RPD Limit: 20					
SampID: 23051194-005CMSD										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Antimony		0.0010		0.496	0.5000	0	99.2	0.5047	1.74	05/27/2023	
Arsenic		0.0010		0.515	0.5000	0	103.1	0.5177	0.47	05/27/2023	
Beryllium		0.0010		0.0512	0.0500	0	102.5	0.05136	0.24	05/27/2023	
Cadmium		0.0010		0.0485	0.0500	0	97.0	0.04948	1.97	05/27/2023	
Chromium		0.0015		0.196	0.2000	0.001991	97.2	0.1939	1.29	05/27/2023	
Cobalt		0.0010		0.495	0.5000	0.0001822	98.9	0.4901	0.99	05/27/2023	
Lead		0.0010		0.495	0.5000	0	99.0	0.5011	1.25	05/27/2023	
Lithium	*	0.0030		0.516	0.5000	0.002692	102.8	0.5153	0.23	05/27/2023	
Molybdenum		0.0015		0.476	0.5000	0.001313	94.9	0.4802	0.91	05/27/2023	
Selenium		0.0010		0.490	0.5000	0	98.0	0.4916	0.32	05/27/2023	
Thallium		0.0020		0.235	0.2500	0	94.0	0.2328	0.88	05/27/2023	

Batch	206609	SampType:	MS	Units	mg/L						
SampID: 23051742-004BMS										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Arsenic		0.0010		0.534	0.5000	0.0008777	106.5	70	130	05/27/2023	
Cadmium		0.0010		0.0494	0.0500	0	98.7	70	130	05/27/2023	
Chromium		0.0015		0.196	0.2000	0	98.1	70	130	05/27/2023	
Lead		0.0010		0.489	0.5000	0	97.7	70	130	05/27/2023	
Molybdenum		0.0015		0.487	0.5000	0.002022	97.1	70	130	05/27/2023	
Selenium		0.0010		0.497	0.5000	0	99.3	70	130	05/27/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	206609	SampType:	MSD	Units	mg/L	RPD Limit: 20					Date Analyzed
SampID: 23051742-004BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Arsenic		0.0010		0.537	0.5000	0.0008777	107.2	0.5336	0.59	05/27/2023	
Cadmium		0.0010		0.0507	0.0500	0	101.4	0.04935	2.68	05/27/2023	
Chromium		0.0015		0.200	0.2000	0	100.0	0.1961	1.95	05/27/2023	
Lead		0.0010		0.504	0.5000	0	100.8	0.4887	3.06	05/27/2023	
Molybdenum		0.0015		0.498	0.5000	0.002022	99.2	0.4873	2.16	05/27/2023	
Selenium		0.0010		0.501	0.5000	0	100.2	0.4967	0.89	05/27/2023	

Batch 206972 SampType: MBLK Units mg/L

Batch	206972	SampType:	MBLK	Units	mg/L						Date Analyzed
SampID: MBLK-206972											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010		< 0.0010	0.0004	0	0	-100	100	06/07/2023	

Batch 206972 SampType: LCS Units mg/L

Batch	206972	SampType:	LCS	Units	mg/L						Date Analyzed
SampID: LCS-206972											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010		0.467	0.5000	0	93.5	80	120	06/07/2023	

SW-846 7470A (TOTAL)

Batch	206617	SampType:	MBLK	Units	mg/L						Date Analyzed
SampID: MBLK-206617											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	05/26/2023	

Batch 206617 SampType: LCS Units mg/L

Batch	206617	SampType:	LCS	Units	mg/L						Date Analyzed
SampID: LCS-206617											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Mercury		0.00020		0.00476	0.0050	0	95.3	85	115	05/26/2023	

Batch 206617 SampType: MS Units mg/L

Batch	206617	SampType:	MS	Units	mg/L						Date Analyzed
SampID: 23051764-001HMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Mercury		0.00020		0.00475	0.0050	0	95.0	75	125	05/26/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

SW-846 7470A (TOTAL)

Batch 206617 SampType: MSD		Units mg/L		RPD Limit: 15						
SampID: 23051764-001HMSD						Date Analyzed				
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		0.00470	0.0050	0	93.9	0.004750	1.15	05/26/2023

Batch 206617 SampType: MS

Batch 206617 SampType: MS		Units mg/L		Date Analyzed						
SampID: 23051811-003BMS						Low Limit		High Limit	Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00482	0.0050	0	96.4	75	125	05/26/2023

Batch 206617 SampType: MSD

Batch 206617 SampType: MSD		Units mg/L		RPD Limit: 15						
SampID: 23051811-003BMSD						Date Analyzed				
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		0.00490	0.0050	0	98.0	0.004818	1.68	05/26/2023

Receiving Check List

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

Carrier: Justin Colp

Received By: ANC

Completed by:

On:

25-May-23


Allison Colin

Reviewed by:

On:

25-May-23



Elizabeth A. Hurley

Pages to follow: Chain of custody

1

Extra pages included

1

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C 3.2
Type of thermal preservation?	None <input type="checkbox"/>	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input checked="" type="checkbox"/>	Lab <input type="checkbox"/>	NA <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
<i>When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.</i>				
Water – at least one vial per sample has zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>	
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	

Any No responses must be detailed below or on the COC.

pH strip #88374. - acolin - 5/25/2023 8:49:49 AM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 23051194

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client:	Southern Illinois Power Cooperation		
Address:	11543 Lake of Egypt Road		
City / State / Zip	Marion, IL 62959		
Contact:	Jason McLaurin	Phone:	(618) 964-1448
E-Mail:	jmclaurin@sipower.org	Fax:	

 Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No

 Are these samples known to be hazardous? Yes No

 Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. Yes No

 Samples on: ICE BLUE ICE NO ICE 3.2 °C LTG# 1

 Preserved in: LAB FIELD FOR LAB USE ONLY

Lab Notes: PHV 88374 AC 5/25/23

Client Comments

ICP: Ba B Ca

ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti

* No. 23051194/228 per Danielle S. on 5/23/23

Project Name/Number			Sample Collector's Name			INDICATE ANALYSIS REQUESTED																	
Groundwater Monitoring - Q1 2023 resampling						MATRIX		INDICATE ANALYSIS REQUESTED															
Results Requested		Billing Instructions		# and Type of Containers			UNP	HNO ₃	Chloride	Field Parameters	Fluoride	ICP-MS Metals	Mercury	Sulfate	TDS								
<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> 1-2 Day (100% Surcharge)	<input type="checkbox"/> Other	<input type="checkbox"/> 3 Day (50% Surcharge)																				
Lab Use Only			Sample Identification	Date/Time Sampled	EP-1	5-24-23 / 1123	1	3			X	X	X	X	X	X	X	X	X				
002			EP-2	5-24-23 / 1720	1	3					X	X	X	X	X	X	X	X	X				
003			EP-3	5-24-23 / 1405	1	3					X	X	X	X	X	X	X	X	X				
004			EP-4	5-24-23 / 1259	1	3					X	X	X	X	X	X	X	X	X				
005			EP-5	5-24-23 / 1055	1	3					X	X	X	X	X	X	X	X	X				
006			EP-7	5-24-23 / 1630	1	3					X	X	X	X	X	X	X	X	X				
007			Equipment Blank	5-24-23 / 1726	1	3					X		X	X	X	X	X	X	X				
008			Field Blank	5-24-23 / 1649	1	3					X		X	X	X	X	X	X	X				
009			Field Duplicate	5-24-23 / 1259	1	3					X		X	X	X	X	X	X	X				
Relinquished By			Date/Time			Received By			Date/Time														
J. Gob			5-24-23 / 1950			Allison Colvin			5/24/23 1950														

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 80600



Well ID	Date	Time	Depth (ft)
EBG		0	
EP-1	5-24-23	0958	6.62
EP-2	5-24-23	0957	6.12
EP-3	5-24-23	0948	16.01
EP-4	5-24-23	0945	7.02
EP-5	5-24-23	0959	11.54
EP-6	5-24-23	0952	2.62
EP-7	5-24-23	0950	13.79

2305194

July 11, 2023

Jason McLaurin
Southern Illinois Power Cooperation
11543 Lake of Egypt Road
Marion, IL 62959
TEL: (618) 964-1448
FAX:



Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Groundwater Monitoring

WorkOrder: 23060001

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 6/7/2023 2:16:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

This reporting package includes the following:

Cover Letter	1
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Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Abbr Definition

* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.

DNI Did not ignite

DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count (> 200 CFU)

Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Qualifiers

- | | |
|---|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range |
| H - Holding times exceeded | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Cooler Receipt Temp: 13.2 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analyses were performed by Pace Analytical National. See attached for results and QC report.

Locations

Collinsville	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Collinsville Air	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Springfield	
Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Chicago	
Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Kansas City	
Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Accreditations

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 06/07/2023 12:04

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.51	ft	1	06/07/2023 12:04	R330198
Elevation of groundwater surface	*	0	0		516.36	ft	1	06/07/2023 12:04	R330198
Measuring Point Elevation	*	0	0		524.87	ft	1	06/07/2023 12:04	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.91	gal	1	06/07/2023 12:04	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.8	NTU	1	06/07/2023 12:04	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		98	mV	1	06/07/2023 12:04	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.541	mS/cm	1	06/07/2023 12:04	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.8	°C	1	06/07/2023 12:04	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.20	mg/L	1	06/07/2023 12:04	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.40		1	06/07/2023 12:04	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		336	mg/L	1	06/08/2023 10:32	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		12	mg/L	1	06/16/2023 21:37	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		82	mg/L	5	06/20/2023 12:30	R330562
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.57	mg/L	1	06/08/2023 9:52	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0441	mg/L	1	06/13/2023 17:50	207068
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/13/2023 17:50	207068
Calcium	NELAP	0.0350	0.100		12.1	mg/L	1	06/13/2023 17:50	207068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 11:12	207068
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	06/09/2023 11:12	207068
Beryllium	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	06/09/2023 11:12	207068
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 11:12	207068
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 11:12	207068
Cobalt	NELAP	0.0001	0.0010	J	0.0008	mg/L	5	06/09/2023 11:12	207068
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 11:12	207068
Lithium	*	0.0015	0.0030		0.0241	mg/L	5	06/09/2023 11:12	207068
Molybdenum	NELAP	0.0006	0.0015		0.0016	mg/L	5	06/09/2023 11:12	207068
Selenium	NELAP	0.0006	0.0010		0.0011	mg/L	5	06/09/2023 11:12	207068
Thallium	NELAP	0.0010	0.0020	J	0.0012	mg/L	5	06/09/2023 11:12	207068
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:28	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/29/2023 20:50	R331337

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 06/07/2023 12:04

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/29/2023 20:50	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 06/06/2023 13:41

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.40	ft	1	06/06/2023 13:41	R330198
Elevation of groundwater surface	*	0	0		512.32	ft	1	06/06/2023 13:41	R330198
Measuring Point Elevation	*	0	0		519.72	ft	1	06/06/2023 13:41	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.52	gal	1	06/06/2023 13:41	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	06/06/2023 13:41	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		131	mV	1	06/06/2023 13:41	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.69	mS/cm	1	06/06/2023 13:41	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.9	°C	1	06/06/2023 13:41	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.28	mg/L	1	06/06/2023 13:41	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.31		1	06/06/2023 13:41	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2370	mg/L	1	06/08/2023 10:33	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		30	mg/L	1	06/16/2023 21:58	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1430	mg/L	50	06/20/2023 12:57	R330562
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.21	mg/L	1	06/08/2023 9:55	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0154	mg/L	1	06/08/2023 17:49	207065
Boron	NELAP	0.0090	0.0200		0.945	mg/L	1	06/08/2023 17:49	207065
Calcium	NELAP	0.0350	0.100		499	mg/L	1	06/08/2023 17:49	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:41	207065
Arsenic	NELAP	0.0004	0.0010	J	0.0009	mg/L	5	06/09/2023 12:41	207065
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:41	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:41	207065
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 12:41	207065
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	06/09/2023 12:41	207065
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 12:41	207065
Lithium	*	0.0015	0.0030		0.0136	mg/L	5	06/09/2023 12:41	207065
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 12:41	207065
Selenium	NELAP	0.0006	0.0010		0.0082	mg/L	5	06/09/2023 12:41	207065
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 12:41	207065
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:34	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/29/2023 18:47	R331337

Laboratory Results

<http://www.teklabinc.com/>**Client:** Southern Illinois Power Cooperation**Work Order:** 23060001**Client Project:** Groundwater Monitoring**Report Date:** 11-Jul-23**Lab ID:** 23060001-002**Client Sample ID:** EP-1**Matrix:** GROUNDWATER**Collection Date:** 06/06/2023 13:41

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/29/2023 18:47	R331337

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring

Work Order: 23060001
 Report Date: 11-Jul-23

Lab ID: 23060001-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 06/06/2023 13:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.68	ft	1	06/06/2023 13:14	R330198
Elevation of groundwater surface	*	0	0		506.11	ft	1	06/06/2023 13:14	R330198
Measuring Point Elevation	*	0	0		513.79	ft	1	06/06/2023 13:14	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	06/06/2023 13:14	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		8.2	NTU	1	06/06/2023 13:14	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		74	mV	1	06/06/2023 13:14	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.58	mS/cm	1	06/06/2023 13:14	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.1	°C	1	06/06/2023 13:14	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.90	mg/L	1	06/06/2023 13:14	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.30		1	06/06/2023 13:14	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2570	mg/L	1	06/08/2023 10:33	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		35	mg/L	1	06/16/2023 22:06	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1700	mg/L	50	06/20/2023 13:20	R330562
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		1.57	mg/L	1	06/08/2023 9:56	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0189	mg/L	1	06/08/2023 17:31	207065
Boron	NELAP	0.0090	0.0200		0.372	mg/L	1	06/08/2023 17:31	207065
Calcium	NELAP	0.0350	0.100		340	mg/L	1	06/08/2023 17:31	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0018	0.0040		< 0.0040	mg/L	20	06/15/2023 2:27	207065
Arsenic	NELAP	0.0004	0.0010		0.0023	mg/L	5	06/12/2023 12:45	207065
Beryllium	NELAP	0.0002	0.0010		0.0092	mg/L	5	06/09/2023 14:28	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/12/2023 12:45	207065
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/12/2023 12:45	207065
Cobalt	NELAP	0.0001	0.0010		0.301	mg/L	5	06/12/2023 12:45	207065
Lead	NELAP	0.0024	0.0040		< 0.0040	mg/L	20	06/15/2023 2:27	207065
Lithium	*	0.0015	0.0030		0.0725	mg/L	5	06/09/2023 14:28	207065
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/12/2023 12:45	207065
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/12/2023 12:45	207065
Thallium	NELAP	0.0038	0.0080		< 0.0080	mg/L	20	06/15/2023 2:27	207065
Elevated reporting limit due to matrix interference.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:41	206486

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 06/06/2023 13:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	06/29/2023 18:47	R331337
Radium-228	*	0	0		See Attached	pCi/L	1	06/29/2023 18:47	R331337

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 06/06/2023 12:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.48	ft	1	06/06/2023 12:03	R330198
Elevation of groundwater surface	*	0	0		502.47	ft	1	06/06/2023 12:03	R330198
Measuring Point Elevation	*	0	0		518.95	ft	1	06/06/2023 12:03	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.04	gal	1	06/06/2023 12:03	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.9	NTU	1	06/06/2023 12:03	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-41	mV	1	06/06/2023 12:03	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.33	mS/cm	1	06/06/2023 12:03	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		18.3	°C	1	06/06/2023 12:03	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.71	mg/L	1	06/06/2023 12:03	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.05		1	06/06/2023 12:03	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		735	mg/L	2.5	06/08/2023 11:24	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		141	mg/L	10	06/16/2023 22:35	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		129	mg/L	10	06/16/2023 22:35	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.19	mg/L	1	06/08/2023 9:58	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0973	mg/L	1	06/08/2023 17:32	207065
Boron	NELAP	0.0090	0.0200		0.0586	mg/L	1	06/08/2023 17:32	207065
Calcium	NELAP	0.0350	0.100		36.1	mg/L	1	06/08/2023 17:32	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 15:37	207065
Arsenic	NELAP	0.0004	0.0010		0.0090	mg/L	5	06/09/2023 15:37	207065
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 15:37	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 15:37	207065
Chromium	NELAP	0.0007	0.0015	J	0.0011	mg/L	5	06/09/2023 15:37	207065
Cobalt	NELAP	0.0001	0.0010		0.124	mg/L	5	06/09/2023 15:37	207065
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 15:37	207065
Lithium	*	0.0015	0.0030		0.0311	mg/L	5	06/09/2023 15:37	207065
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 15:37	207065
Selenium	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	06/09/2023 15:37	207065
Thallium	NELAP	0.0010	0.0020	J	0.0018	mg/L	5	06/09/2023 15:37	207065
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:43	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/29/2023 18:47	R331337

Laboratory Results<http://www.teklabinc.com/>**Client:** Southern Illinois Power Cooperation**Work Order:** 23060001**Client Project:** Groundwater Monitoring**Report Date:** 11-Jul-23**Lab ID:** 23060001-004**Client Sample ID:** EP-3**Matrix:** GROUNDWATER**Collection Date:** 06/06/2023 12:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/29/2023 18:47	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 06/07/2023 11:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.10	ft	1	06/07/2023 11:03	R330198
Elevation of groundwater surface	*	0	0		512.64	ft	1	06/07/2023 11:03	R330198
Measuring Point Elevation	*	0	0		519.74	ft	1	06/07/2023 11:03	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.17	gal	1	06/07/2023 11:03	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		3.7	NTU	1	06/07/2023 11:03	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-24	mV	1	06/07/2023 11:03	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.84	mS/cm	1	06/07/2023 11:03	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.2	°C	1	06/07/2023 11:03	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.74	mg/L	1	06/07/2023 11:03	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		5.76		1	06/07/2023 11:03	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1690	mg/L	2.5	06/08/2023 11:24	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		472	mg/L	10	06/16/2023 22:43	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		492	mg/L	20	06/20/2023 13:22	R330562
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.15	mg/L	1	06/08/2023 10:01	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0348	mg/L	1	06/13/2023 17:50	207068
Boron	NELAP	0.0090	0.0200		11.6	mg/L	1	06/13/2023 17:50	207068
Calcium	NELAP	0.0350	0.100		182	mg/L	1	06/13/2023 17:50	207068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:34	207068
Arsenic	NELAP	0.0004	0.0010		0.0126	mg/L	5	06/09/2023 12:34	207068
Beryllium	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	06/09/2023 12:34	207068
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:34	207068
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 12:34	207068
Cobalt	NELAP	0.0001	0.0010		0.217	mg/L	5	06/09/2023 12:34	207068
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 12:34	207068
Lithium	*	0.0015	0.0030		0.0032	mg/L	5	06/09/2023 12:34	207068
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 12:34	207068
Selenium	NELAP	0.0006	0.0010	J	0.0006	mg/L	5	06/09/2023 12:34	207068
Thallium	NELAP	0.0010	0.0020	J	0.0015	mg/L	5	06/09/2023 12:34	207068
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:46	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/29/2023 18:47	R331337

Laboratory Results<http://www.teklabinc.com/>**Client:** Southern Illinois Power Cooperation**Work Order:** 23060001**Client Project:** Groundwater Monitoring**Report Date:** 11-Jul-23**Lab ID:** 23060001-005**Client Sample ID:** EP-4**Matrix:** GROUNDWATER**Collection Date:** 06/07/2023 11:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/29/2023 18:47	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 06/07/2023 11:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		12.05	ft	1	06/07/2023 11:27	R330198
Elevation of groundwater surface	*	0	0		515.54	ft	1	06/07/2023 11:27	R330198
Measuring Point Elevation	*	0	0		527.59	ft	1	06/07/2023 11:27	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.52	gal	1	06/07/2023 11:27	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	06/07/2023 11:27	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		67	mV	1	06/07/2023 11:27	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.455	mS/cm	1	06/07/2023 11:27	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.5	°C	1	06/07/2023 11:27	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		7.32	mg/L	1	06/07/2023 11:27	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.48		1	06/07/2023 11:27	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		286	mg/L	1	06/08/2023 11:25	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4	J	3	mg/L	1	06/16/2023 22:46	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		128	mg/L	10	06/16/2023 22:51	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.41	mg/L	1	06/08/2023 10:03	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0482	mg/L	1	06/13/2023 17:51	207068
Boron	NELAP	0.0090	0.020	J	0.014	mg/L	1	06/13/2023 17:51	207068
Calcium	NELAP	0.0350	0.100		16.3	mg/L	1	06/13/2023 17:51	207068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 12:47	207068
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 12:47	207068
Lithium	*	0.0015	0.0030	J	0.0026	mg/L	5	06/09/2023 12:47	207068
Molybdenum	NELAP	0.0006	0.0015	J	0.0013	mg/L	5	06/09/2023 12:47	207068
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	06/09/2023 12:47	207068
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 12:47	207068
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:48	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 06/07/2023 11:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/26/2023 17:55	R331337

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 06/06/2023 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		3.36	ft	1	06/06/2023 12:45	R330198
Elevation of groundwater surface	*	0	0		501.75	ft	1	06/06/2023 12:45	R330198
Measuring Point Elevation	*	0	0		505.11	ft	1	06/06/2023 12:45	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.52	gal	1	06/06/2023 12:45	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		2.2	NTU	1	06/06/2023 12:45	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		193	mV	1	06/06/2023 12:45	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.305	mS/cm	1	06/06/2023 12:45	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.8	°C	1	06/06/2023 12:45	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.49	mg/L	1	06/06/2023 12:45	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		5.07		1	06/06/2023 12:45	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		250	mg/L	1	06/08/2023 11:25	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		22	mg/L	1	06/16/2023 22:54	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		65	mg/L	2	06/20/2023 13:30	R330562
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.07	mg/L	1	06/08/2023 10:05	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0350	mg/L	1	06/08/2023 17:33	207065
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/08/2023 17:33	207065
Calcium	NELAP	0.0350	0.100		1.49	mg/L	1	06/08/2023 17:33	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 14:34	207065
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 14:34	207065
Beryllium	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	06/09/2023 14:34	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 14:34	207065
Chromium	NELAP	0.0007	0.0015		0.0016	mg/L	5	06/09/2023 14:34	207065
Cobalt	NELAP	0.0001	0.0010		0.0031	mg/L	5	06/09/2023 14:34	207065
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 14:34	207065
Lithium	*	0.0015	0.0030		0.0182	mg/L	5	06/09/2023 14:34	207065
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 14:34	207065
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 14:34	207065
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 14:34	207065
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:50	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337



Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 06/06/2023 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/26/2023 17:55	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 06/06/2023 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		14.01	ft	1	06/06/2023 11:25	R330198
Elevation of groundwater surface	*	0	0		501.43	ft	1	06/06/2023 11:25	R330198
Measuring Point Elevation	*	0	0		515.44	ft	1	06/06/2023 11:25	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		2.34	gal	1	06/06/2023 11:25	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.3	NTU	1	06/06/2023 11:25	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-15	mV	1	06/06/2023 11:25	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.95	mS/cm	1	06/06/2023 11:25	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.1	°C	1	06/06/2023 11:25	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.70	mg/L	1	06/06/2023 11:25	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		5.82		1	06/06/2023 11:25	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1160	mg/L	2.5	06/08/2023 11:25	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		252	mg/L	10	06/16/2023 23:07	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		396	mg/L	10	06/16/2023 23:07	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.24	mg/L	1	06/08/2023 10:08	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0331	mg/L	1	06/08/2023 17:38	207065
Boron	NELAP	0.0090	0.0200		0.679	mg/L	1	06/08/2023 17:38	207065
Calcium	NELAP	0.0350	0.100		126	mg/L	1	06/08/2023 17:38	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 15:44	207065
Arsenic	NELAP	0.0004	0.0010		0.0126	mg/L	5	06/09/2023 15:44	207065
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 15:44	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 15:44	207065
Chromium	NELAP	0.0007	0.0015		0.0019	mg/L	5	06/09/2023 15:44	207065
Cobalt	NELAP	0.0001	0.0010		0.203	mg/L	5	06/09/2023 15:44	207065
Lead	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	06/09/2023 15:44	207065
Lithium	*	0.0015	0.0030	J	0.0015	mg/L	5	06/09/2023 15:44	207065
Molybdenum	NELAP	0.0006	0.0015		0.0015	mg/L	5	06/09/2023 15:44	207065
Selenium	NELAP	0.0006	0.0010	J	0.0006	mg/L	5	06/09/2023 15:44	207065
Thallium	NELAP	0.0010	0.0020	J	0.0013	mg/L	5	06/09/2023 15:44	207065
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:53	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 06/06/2023 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/26/2023 17:55	R331337

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 06/07/2023 12:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	J	16	mg/L	1	06/08/2023 11:26	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	06/16/2023 23:26	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	06/16/2023 23:26	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	06/08/2023 10:19	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	06/13/2023 17:52	207068
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/13/2023 17:52	207068
Calcium	NELAP	0.035	0.10	J	0.090	mg/L	1	06/13/2023 17:52	207068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 12:53	207068
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	06/09/2023 12:53	207068
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 12:53	207068
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 12:53	207068
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 12:53	207068
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:55	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337
Radium-228	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 06/07/2023 11:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	06/08/2023 11:26	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	06/16/2023 23:34	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	06/16/2023 23:34	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	06/08/2023 10:22	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	06/13/2023 17:53	207068
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/13/2023 17:53	207068
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	06/13/2023 17:53	207068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 13:00	207068
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	06/09/2023 13:00	207068
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 13:00	207068
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 13:00	207068
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 13:00	207068
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:57	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337
Radium-228	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 23060001
Report Date: 11-Jul-23

Lab ID: 23060001-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 06/06/2023 12:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.48	ft	1	06/06/2023 12:03	R330198
Elevation of groundwater surface	*	0	0		502.47	ft	1	06/06/2023 12:03	R330198
Measuring Point Elevation	*	0	0		518.95	ft	1	06/06/2023 12:03	R330198
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.04	gal	1	06/06/2023 12:03	R330198
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.9	NTU	1	06/06/2023 12:03	R330198
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-41	mV	1	06/06/2023 12:03	R330198
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.33	mS/cm	1	06/06/2023 12:03	R330198
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		18.3	°C	1	06/06/2023 12:03	R330198
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.71	mg/L	1	06/06/2023 12:03	R330198
SW-846 9040B FIELD									
pH	*	0	1.00		6.05		1	06/06/2023 12:03	R330198
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		690	mg/L	2.5	06/08/2023 11:27	R330033
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		139	mg/L	10	06/16/2023 23:47	R330429
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		131	mg/L	10	06/16/2023 23:47	R330416
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.17	mg/L	1	06/08/2023 10:25	R329994
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0922	mg/L	1	06/08/2023 17:39	207065
Boron	NELAP	0.0090	0.0200		0.0619	mg/L	1	06/08/2023 17:39	207065
Calcium	NELAP	0.0350	0.100		34.2	mg/L	1	06/08/2023 17:39	207065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/09/2023 15:50	207065
Arsenic	NELAP	0.0004	0.0010		0.0096	mg/L	5	06/09/2023 15:50	207065
Beryllium	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	06/09/2023 15:50	207065
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	06/09/2023 15:50	207065
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/09/2023 15:50	207065
Cobalt	NELAP	0.0001	0.0010		0.133	mg/L	5	06/09/2023 15:50	207065
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	06/09/2023 15:50	207065
Lithium	*	0.0015	0.0030		0.0286	mg/L	5	06/09/2023 15:50	207065
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	06/09/2023 15:50	207065
Selenium	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	06/09/2023 15:50	207065
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	06/09/2023 15:50	207065
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/12/2023 12:59	206486
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/26/2023 17:55	R331337

Laboratory Results

<http://www.teklabinc.com/>**Client:** Southern Illinois Power Cooperation**Work Order:** 23060001**Client Project:** Groundwater Monitoring**Report Date:** 11-Jul-23**Lab ID:** 23060001-011**Client Sample ID:** Field Duplicate**Matrix:** GROUNDWATER**Collection Date:** 06/06/2023 12:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-228	*	0	0		See Attached	pCi/L	1	06/26/2023 17:55	R331337



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

STANDARD METHODS 2510 B FIELD

Batch	R330198	SampType:	LCS	Units	mS/cm					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Spec. Conductance, Field	*	0		1.42	1.412	0	100.2	90	110	06/07/2023
Spec. Conductance, Field	*	0		1.42	1.412	0	100.4	90	110	06/06/2023

SW-846 9040B FIELD

Batch	R330198	SampType:	LCS	Units						
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
pH	*	1.00		7.06	7.000	0	100.9	98.57	101.4	06/06/2023
pH	*	1.00		7.08	7.000	0	101.1	98.57	101.4	06/07/2023

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch	R330033	SampType:	MBLK	Units	mg/L					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	06/08/2023

Batch R330033 SampType: LCS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		910	1000	0	91.0	90	110	06/08/2023

Batch R330033 SampType: DUP Units mg/L RPD Limit: 10

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		342				336.0	1.77	06/08/2023

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch	R330429	SampType:	MBLK	Units	mg/L					
Analyses										Date Analyzed
	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Chloride		4		< 4	0.5000	0	0	-100	100	06/16/2023

Batch R330429 SampType: LCS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		20	20.00	0	101.6	90	110	06/16/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		40		361	200.0	182.3	89.4	85	115	06/17/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		40		360	200.0	182.3	88.9	361.0	0.28	06/17/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		31	20.00	11.95	95.8	85	115	06/16/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		31	20.00	11.95	96.0	31.11	0.16	06/16/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		34	20.00	14.79	96.2	85	115	06/17/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		34	20.00	14.79	94.4	34.03	1.03	06/17/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		22	20.00	2.410	100.1	85	115	06/16/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		22	20.00	2.410	99.4	22.43	0.58	06/16/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 9036 (TOTAL)

Batch	R330416	SampType:	MBLK	Units	mg/L					
SampID: ICB/MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		< 10	6.140	0	0	-100	100	06/16/2023

Batch	R330416	SampType:	LCS	Units	mg/L					
SampID: ICV/LCS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		19	20.00	0	95.8	90	110	06/16/2023

Batch	R330416	SampType:	MS	Units	mg/L					
SampID: 23060002-001BMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		20	E	117	40.00	82.70	85.8	85	115	06/17/2023

Batch	R330416	SampType:	MSD	Units	mg/L	RPD Limit: 10				
SampID: 23060002-001BMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		20	E	118	40.00	82.70	87.6	117.0	0.61	06/17/2023

Batch	R330416	SampType:	MS	Units	mg/L					
SampID: 23060002-006AMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		50	E	273	100.0	185.2	87.8	85	115	06/16/2023

Batch	R330416	SampType:	MSD	Units	mg/L	RPD Limit: 10				
SampID: 23060002-006AMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		50	E	274	100.0	185.2	88.7	273.0	0.32	06/16/2023

Batch	R330416	SampType:	MS	Units	mg/L					
SampID: 23060002-011BMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		200		770	400.0	385.3	96.2	85	115	06/16/2023

Batch	R330416	SampType:	MSD	Units	mg/L	RPD Limit: 10				
SampID: 23060002-011BMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		200		759	400.0	385.3	93.5	770.1	1.43	06/16/2023

Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 9036 (TOTAL)

Batch R330562 SampType: MBLK		Units mg/L								
SampID: ICB/MBLK									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	06/20/2023

Batch R330562 SampType: LCS		Units mg/L								
SampID: ICV/LCS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		19	20.00	0	92.8	90	110	06/20/2023

Batch R330562 SampType: MS		Units mg/L								
SampID: 23060001-001AMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		179	100.0	82.30	96.5	85	115	06/20/2023

Batch R330562 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23060001-001AMSD									Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		181	100.0	82.30	98.4	178.8	1.01	06/20/2023	

Batch R330562 SampType: MS		Units mg/L								
SampID: 23060475-001DMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		1000		3470	2000	1660	90.7	90	110	06/20/2023

Batch R330562 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23060475-001DMSD									Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		1000		3510	2000	1660	92.7	3473	1.19	06/20/2023	

Batch R330562 SampType: MS		Units mg/L								
SampID: 23060574-002AMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50	E	271	100.0	177.3	93.6	85	115	06/20/2023

Batch R330562 SampType: MSD		Units mg/L									RPD Limit: 10
SampID: 23060574-002AMSD									Date Analyzed		
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50	E	281	100.0	177.3	103.2	270.9	3.50	06/20/2023	



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 9036 (TOTAL)

Batch R330562 SampType: MS		Units mg/L							Date Analyzed		
SampID:	23060575-001AMS	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		50	E	269		100.0	171.7	97.5	85	115	06/20/2023

Batch R330562 SampType: MSD		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	23060575-001AMSD	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		50	E	270		100.0	171.7	98.5	269.3	0.35	06/20/2023

Batch R330562 SampType: MS		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	23060773-004AMS	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		100		395		200.0	210.9	91.9	85	115	06/20/2023

Batch R330562 SampType: MSD		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	23060773-004AMSD	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		100		405		200.0	210.9	97.0	394.7	2.56	06/20/2023

Batch R330562 SampType: MS		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	23060997-011BMS	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		100		500		200.0	318.2	90.7	85	115	06/20/2023

Batch R330562 SampType: MSD		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	23060997-011BMSD	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		100	E	508		200.0	318.2	94.7	499.7	1.57	06/20/2023

SW-846 9214 (TOTAL)											
Batch R329994 SampType: MBLK		Units mg/L							RPD Limit: 10		Date Analyzed
SampID:	MBLK	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Fluoride		0.10		< 0.10		0.0500	0	0	-100	100	06/08/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 9214 (TOTAL)

Batch	R329994	SampType:	LCS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride				0.10			0.98	1.000	0	98.4	90	110	06/08/2023

Batch	R329994	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride				0.10			2.21	2.000	0.2450	98.4	75	125	06/08/2023

Batch	R329994	SampType:	MSD	Units mg/L		RPD Limit: 15							
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride				0.10			2.24	2.000	0.2450	99.6	2.212	1.08	06/08/2023

Batch	R329994	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride				0.10			2.40	2.000	0.5660	91.9	75	125	06/08/2023

Batch	R329994	SampType:	MSD	Units mg/L		RPD Limit: 15							
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride				0.10			2.55	2.000	0.5660	99.4	2.404	6.01	06/08/2023

Batch	R329994	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride				0.10			2.41	2.000	0.4770	96.7	75	125	06/08/2023

Batch	R329994	SampType:	MSD	Units mg/L		RPD Limit: 15							
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride				0.10			2.40	2.000	0.4770	96.2	2.411	0.37	06/08/2023

Batch	R329994	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride				0.10			2.15	2.000	0.2540	94.8	75	125	06/08/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 9214 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.17	2.000	0.2540	96.0	2.149	1.11	06/08/2023

Batch R329994 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.36	2.000	0.3790	99.2	75	125	06/09/2023

Batch R329994 SampType: MSD Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		2.36	2.000	0.3790	98.8	2.364	0.38	06/09/2023

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	06/08/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	06/08/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	06/08/2023

Batch 207065 SampType: LCS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.05	2.000	0	102.5	85	115	06/08/2023
Boron		0.0200		0.499	0.5000	0	99.8	85	115	06/08/2023
Calcium		0.100		2.67	2.500	0	106.7	85	115	06/08/2023

Batch 207065 SampType: MS Units mg/L

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.13	2.000	0.03500	104.8	75	125	06/08/2023
Boron		0.0200		0.502	0.5000	0	100.4	75	125	06/08/2023
Calcium		0.100		4.14	2.500	1.492	105.8	75	125	06/08/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch	207065	SampType:	MSD	Units	mg/L	RPD Limit: 20					Date Analyzed
SampID: 23060001-007CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Barium		0.0025		2.12	2.000	0.03500	104.2	2.130	0.47		06/08/2023
Boron		0.0200		0.500	0.5000	0	100.1	0.5021	0.36		06/08/2023
Calcium		0.100		4.07	2.500	1.492	102.9	4.137	1.73		06/08/2023

Batch 207068 SampType: MBLK Units mg/L

Batch	207068	SampType:	MBLK	Units	mg/L	Date Analyzed					
SampID: MBLK-207068											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100		06/13/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100		06/13/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100		06/13/2023

Batch 207068 SampType: LCS Units mg/L

Batch	207068	SampType:	LCS	Units	mg/L	Date Analyzed					
SampID: LCS-207068											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		2.07	2.000	0	103.5	85	115		06/13/2023
Boron		0.0200		0.504	0.5000	0	100.8	85	115		06/13/2023
Calcium		0.100		2.62	2.500	0	104.7	85	115		06/13/2023

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	207065	SampType:	MBLK	Units	mg/L	Date Analyzed					
SampID: MBLK-207065											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010		< 0.0010	0.0004	0	0	-100	100		06/09/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100		06/09/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100		06/09/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100		06/09/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100		06/09/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100		06/09/2023
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100		06/09/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100		06/09/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100		06/09/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100		06/09/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100		06/09/2023

Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	207065	SampType:	LCS	Units	mg/L							
Analyses										Date Analyzed		
		Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	
Antimony			0.0010		0.520	0.5000	0		103.9	85	115	06/09/2023
Arsenic			0.0010		0.550	0.5000	0		110.1	85	115	06/09/2023
Beryllium			0.0010		0.0552	0.0500	0		110.3	85	115	06/09/2023
Cadmium			0.0010		0.0503	0.0500	0		100.5	85	115	06/09/2023
Chromium			0.0015		0.205	0.2000	0		102.7	85	115	06/09/2023
Cobalt			0.0010		0.525	0.5000	0		105.0	85	115	06/09/2023
Lead			0.0010		0.518	0.5000	0		103.6	85	115	06/09/2023
Lithium	*		0.0030		0.546	0.5000	0		109.3	85	115	06/09/2023
Molybdenum			0.0015		0.494	0.5000	0		98.8	85	115	06/09/2023
Selenium			0.0010		0.518	0.5000	0		103.6	85	115	06/09/2023
Thallium			0.0020		0.238	0.2500	0		95.0	85	115	06/09/2023

Batch 207065 SampType: MS Units mg/L

Batch	207065	SampType:	MS	Units	mg/L							Date Analyzed
Analyses												
		Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	
Antimony			0.0010		0.534	0.5000	0		106.7	75	125	06/09/2023
Arsenic			0.0010		0.546	0.5000	0		109.1	75	125	06/09/2023
Beryllium			0.0010		0.0572	0.0500	0.0002569		113.9	75	125	06/09/2023
Cadmium			0.0010		0.0521	0.0500	0		104.2	75	125	06/09/2023
Chromium			0.0015		0.206	0.2000	0.001574		102.3	75	125	06/09/2023
Cobalt			0.0010		0.525	0.5000	0.003103		104.3	75	125	06/09/2023
Lead			0.0010		0.527	0.5000	0		105.3	75	125	06/09/2023
Lithium	*		0.0030		0.577	0.5000	0.01815		111.8	75	125	06/09/2023
Molybdenum			0.0015		0.504	0.5000	0		100.8	75	125	06/09/2023
Selenium			0.0010		0.509	0.5000	0		101.7	75	125	06/09/2023
Thallium			0.0020		0.243	0.2500	0		97.4	75	125	06/09/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	207065	SampType:	MSD	Units	mg/L	RPD Limit: 20					Date Analyzed
SampID: 23060001-007CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		0.529	0.5000	0		105.7	0.5336	0.91	06/09/2023
Arsenic		0.0010		0.554	0.5000	0		110.7	0.5455	1.46	06/09/2023
Beryllium		0.0010		0.0557	0.0500	0.0002569		110.8	0.05719	2.70	06/09/2023
Cadmium		0.0010		0.0522	0.0500	0		104.5	0.05211	0.23	06/09/2023
Chromium		0.0015		0.203	0.2000	0.001574		100.6	0.2063	1.76	06/09/2023
Cobalt		0.0010		0.520	0.5000	0.003103		103.4	0.5247	0.84	06/09/2023
Lead		0.0010		0.522	0.5000	0		104.3	0.5265	0.94	06/09/2023
Lithium	*	0.0030		0.578	0.5000	0.01815		112.0	0.5770	0.16	06/09/2023
Molybdenum		0.0015		0.503	0.5000	0		100.6	0.5039	0.19	06/09/2023
Selenium		0.0010		0.514	0.5000	0		102.7	0.5087	0.95	06/09/2023
Thallium		0.0020		0.241	0.2500	0		96.4	0.2434	1.00	06/09/2023

Batch 207068 SampType: MBLK Units mg/L

Batch	207068	SampType:	MBLK	Units	mg/L	Date Analyzed					Date Analyzed
SampID: MBLK-207068											
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		< 0.0010	0.0004	0		0	-100	100	06/09/2023
Arsenic		0.0010		< 0.0010	0.0004	0		0	-100	100	06/09/2023
Beryllium		0.0010		< 0.0010	0.0002	0		0	-100	100	06/09/2023
Cadmium		0.0010		< 0.0010	0.0001	0		0	-100	100	06/09/2023
Chromium		0.0015		< 0.0015	0.0007	0		0	-100	100	06/09/2023
Cobalt		0.0010		< 0.0010	0.0001	0		0	-100	100	06/09/2023
Lead		0.0010		< 0.0010	0.0006	0		0	-100	100	06/09/2023
Lithium	*	0.0030		< 0.0030	0.0015	0		0	-100	100	06/09/2023
Molybdenum		0.0015		< 0.0015	0.0006	0		0	-100	100	06/09/2023
Selenium		0.0010		< 0.0010	0.0006	0		0	-100	100	06/09/2023
Thallium		0.0020		< 0.0020	0.0010	0		0	-100	100	06/09/2023

Quality Control Results

<http://www.teklabinc.com/>
Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	207068	SampType:	LCS	Units mg/L						Date Analyzed			
				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses													
Antimony				0.0010			0.499	0.5000	0	99.7	85	115	06/09/2023
Arsenic				0.0010			0.539	0.5000	0	107.8	85	115	06/09/2023
Beryllium				0.0010			0.0530	0.0500	0	106.0	85	115	06/09/2023
Cadmium				0.0010			0.0498	0.0500	0	99.7	85	115	06/09/2023
Chromium				0.0015			0.205	0.2000	0	102.5	85	115	06/09/2023
Cobalt				0.0010			0.517	0.5000	0	103.4	85	115	06/09/2023
Lead				0.0010			0.496	0.5000	0	99.2	85	115	06/09/2023
Lithium		*		0.0030			0.521	0.5000	0	104.2	85	115	06/09/2023
Molybdenum				0.0015			0.489	0.5000	0	97.9	85	115	06/09/2023
Selenium				0.0010			0.524	0.5000	0	104.9	85	115	06/09/2023
Thallium				0.0020			0.229	0.2500	0	91.7	85	115	06/09/2023

Batch 207068 SampType: MS Units mg/L

Batch	207068	SampType:	MS	Units mg/L						Date Analyzed			
				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses													
Selenium				0.0010			0.509	0.5000	0	101.7	70	130	06/09/2023

Batch 207068 SampType: MSD Units mg/L

Batch	207068	SampType:	MSD	Units mg/L		RPD Limit: 20							
				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Analyses													
Selenium				0.0010			0.500	0.5000	0	100.0	0.5086	1.66	06/09/2023

SW-846 7470A (TOTAL)

Batch	206486	SampType:	MBLK	Units mg/L						Date Analyzed			
				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses													
Mercury				0.00020			< 0.00020	0.0001	0	0	-100	100	06/12/2023
Mercury				0.00020			< 0.00020	0.0001	0	0	-100	100	06/12/2023

Batch 206486 SampType: LCS Units mg/L

Batch	206486	SampType:	LCS	Units mg/L						Date Analyzed			
				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses													
Mercury				0.00020			0.00464	0.0050	0	92.9	85	115	06/12/2023



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

SW-846 7470A (TOTAL)

Batch 206486 SampType: MS		Units mg/L								
SampID: 23060001-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00455	0.0050	0	90.9	75	125	06/12/2023

Batch 206486 SampType: MSD		Units mg/L		RPD Limit: 15						
SampID: 23060001-001CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		0.00466	0.0050	0	93.1	0.004546	2.36	06/12/2023

Batch 206486 SampType: MS		Units mg/L								
SampID: 23060574-001BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00458	0.0050	0	91.6	75	125	06/12/2023

Batch 206486 SampType: MSD		Units mg/L		RPD Limit: 15						
SampID: 23060574-001BMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		0.00460	0.0050	0	92.0	0.004579	0.43	06/12/2023



Receiving Check List

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Carrier: Justin Colp

Received By: MBP

Completed by:

On:

07-Jun-23

Timothy W. Mathis

Reviewed by:

On:

07-Jun-23

Ellie Hopkins

Pages to follow: Chain of custody

2

Extra pages included

23

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C 13.2
Type of thermal preservation?	None <input type="checkbox"/>	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input checked="" type="checkbox"/>	Lab <input type="checkbox"/>	NA <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
<i>When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.</i>				
Water – at least one vial per sample has zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>	
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	

Any No responses must be detailed below or on the COC.

pH strip #88374. - acolin - 6/7/2023 8:38:43 AM

pH strip #88374. - TMathis - 6/7/2023 4:09:27 PM

Samples collected on 6/6/23 were received on 6/6/23 at 1625 (on ice 24.8C - LTG1). - ehurley - 6/7/2023 5:49:41 PM

CHAIN OF CUSTODY

pg. 1 of 2 Work order # 2306001

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Southern Illinois Power Cooperation Address: 11543 Lake of Egypt Road City / State / Zip: Marion, IL 62959 Contact: Jason McLaurin Phone: (618) 964-1448 E-Mail: jmclaurin@sipower.org Fax: _____		Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE 24.8 °C LTG# _____ Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes: PH 8.8374 AC 4017															
Are these samples known to be involved in litigation? If yes, a surcharge will apply <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Client Comments ICP: Ba B Ca ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity															
Project Name/Number		Sample Collector's Name															
Groundwater Monitoring		<i>Justin Colp</i>															
Results Requested		Billing Instructions		# and Type of Containers		MATRIX		INDICATE ANALYSIS REQUESTED									
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)				UNP Groundwater Aqueous	HNO3			Field Parameters Chloride	Fluoride	ICP Metals Mercury	ICP/MS Metals Ra226/228	Sulfate	TDS				
001	EBG			1 3				X	X	X	X	X	X	X	X		
002	EP-1	6-6-23 / 1341		1 3				X	X	X	X	X	X	X	X		
003	EP-2	134		1 3				X	X	X	X	X	X	X	X		
004	EP-3	1203		1 3				X	X	X	X	X	X	X	X		
005	EP-4			1 3				X	X	X	X	X	X	X	X		
006	EP-5			1 3				X	X	X	X	X	X	X	X		
007	EP-6	6-6-23 / 1245		1 3				X	X	X	X	X	X	X	X		
008	EP-7	6 1125		1 3				X	X	X	X	X	X	X	X		
009	Equipment Blank			1 3				X	X	X	X	X	X	X	X		
010	Field Blank			1 3				X	X	X	X	X	X	X	X		
Relinquished By			Date/Time			Received By			Date/Time								
<i>J. Colp</i>			6-6-23 1625			<i>Morgan Weston</i>			10/10/23 1625								

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 80758



CHAIN OF CUSTODY

pg. 2 of 2 Work order # 23060001

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Southern Illinois Power Cooperation		Samples on: <input type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE		°C	LTG#
Address: 11543 Lake of Egypt Road		Preserved in: <input type="checkbox"/> LAB <input type="checkbox"/> FIELD		<u>FOR LAB USE ONLY</u>	
City / State / Zip Marion, IL 62959		Lab Notes:			
Contact: Jason McLaurin	Phone: (618) 964-1448	Client Comments			
E-Mail: jmclaurin@sipower.org	Fax:	ICP: Ba B Ca ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Tl			
Are these samples known to be involved in litigation? If yes, a surcharge will apply <input type="checkbox"/> Yes <input type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. <input type="checkbox"/> Yes <input type="checkbox"/> No					
Project Name/Number		Sample Collector's Name			
Groundwater Monitoring					
Results Requested		Billing Instructions		# and Type of Containers	
<input type="checkbox"/> Standard	<input type="checkbox"/> 1-2 Day (100% Surcharge)			UNP	HNO3
<input type="checkbox"/> Other	<input type="checkbox"/> 3 Day (50% Surcharge)				
Lab Use Only	Sample Identification	Date/Time Sampled			
23060001-011	Field Duplicate	6-6-23 1625			
Relinquished By		Date/Time		Received By	
J. Colp		6-6-23 1625		Marguerite Petrin	
				6-16-23 1625	

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 80758



CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23060001

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004 - Fax: (618) 344-1005

Client: Southern Illinois Power Cooperation Address: 11543 Lake of Egypt Road City / State / Zip Marion, IL 62959 Contact: Jason McLaurin Phone: (618) 964-1448 E-Mail: jmclaurin@sipower.org Fax:	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE LTG# <u>5</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD Lab Notes: <u>88374</u> <u>un 1d7</u>
--	--

Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No

Are these samples known to be hazardous? Yes No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. Yes No

Client Comments

ICP: Ba B Ca

ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti

Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Project Name/Number		Sample Collector's Name		MATRIX		INDICATE ANALYSIS REQUESTED															
Groundwater Monitoring		<i>Justin WP</i>		UNP	HNO3	Groundwater		Chloride		Fluoride		ICP/MS Metals		Mercury		Sulfate		TDS			
						Aqueous															
23060001-001	EBG	6-7-23 / 1204	1 3			X			X X X X X X X X X X X X												
002	EP-1		1 3			X			X X X X X X X X X X X X												
003	EP-2		1 3			X			X X X X X X X X X X X X												
004	EP-3		1 3			X			X X X X X X X X X X X X												
005	EP-4	6-7-23 / 1103	1 3			X			X X X X X X X X X X X X												
006	EP-5	6-7-23 / 1127	1 3			X			X X X X X X X X X X X X												
007	EP-6		1 3			X			X X X X X X X X X X X X												
008	EP-7		1 3			X			X X X X X X X X X X X X												
009	Equipment Blank	6-7-23 / 1210	1 3			X			X X X X X X X X X X X X												
010	Field Blank	6-7-23 / 1145	1 3			X			X X X X X X X X X X X X												
Relinquished By		Date/Time		Received By		Date/Time															
<i>J. Gip</i>		6-7-23 1416		<i>Morgan Peck</i>		6-7-23 1416															

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 80758



Un 617



ANALYTICAL REPORT

July 10, 2023

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷GI

⁸AI

⁹SC

TEKLAB, Inc.

Sample Delivery Group: L1626093

Samples Received: 06/14/2023

Project Number: 23060001

Description:

Report To: Elizabeth Hurley
5445 Horseshoe Lake Road
Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

Pace Analytical National

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

ACCOUNT:

TEKLAB, Inc.

PROJECT:

23060001

SDG:

L1626093

DATE/TIME:

07/10/23 11:34

PAGE:

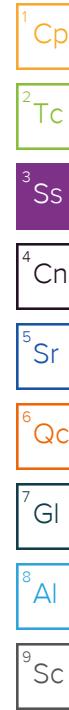
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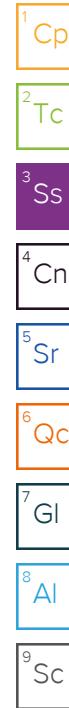
SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
				06/07/23 12:04	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/30/23 13:37	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/30/23 13:37	RGT	Mt. Juliet, TN
			Collected by	Collected date/time	Received date/time	
				06/06/23 13:41	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN
			Collected by	Collected date/time	Received date/time	
				06/06/23 13:14	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN
			Collected by	Collected date/time	Received date/time	
				06/06/23 12:03	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN
			Collected by	Collected date/time	Received date/time	
				06/07/23 11:03	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN
			Collected by	Collected date/time	Received date/time	
				06/07/23 11:27	06/14/23 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN



SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
				06/06/23 12:45	06/14/23 08:45	
23060001-007 L1626093-07 Non-Potable Water	Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst Location
Radiochemistry by Method 904/9320		WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR Mt. Juliet, TN
Radiochemistry by Method Calculation		WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M		WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT Mt. Juliet, TN
23060001-008 L1626093-08 Non-Potable Water				Collected by	Collected date/time	Received date/time
					06/06/23 11:25	06/14/23 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN
23060001-009 L1626093-09 Non-Potable Water				Collected by	Collected date/time	Received date/time
					06/07/23 12:10	06/14/23 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:59	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:59	RGT	Mt. Juliet, TN
23060001-010 L1626093-10 Non-Potable Water				Collected by	Collected date/time	Received date/time
					06/07/23 11:45	06/14/23 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084680	1	06/28/23 16:44	07/01/23 13:56	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084680	1	06/28/23 16:44	07/01/23 13:56	RGT	Mt. Juliet, TN
23060001-011 L1626093-11 Non-Potable Water				Collected by	Collected date/time	Received date/time
					06/06/23 12:03	06/14/23 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084680	1	06/28/23 16:44	07/01/23 13:56	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084680	1	06/28/23 16:44	07/01/23 13:56	RGT	Mt. Juliet, TN



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ GI
- ⁸ AI
- ⁹ SC

23060001-001

Collected date/time: 06/07/23 12:04

SAMPLE RESULTS - 01

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.09	J	0.639	1.15	06/29/2023 20:50	WG2080715
(T) Barium	135			30.0-143	06/29/2023 20:50	WG2080715
(T) Yttrium	106			30.0-136	06/29/2023 20:50	WG2080715

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.53		0.708	1.20	06/30/2023 13:37	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.444		0.304	0.329	06/30/2023 13:37	WG2084678
(T) Barium-133	116			30.0-143	06/30/2023 13:37	WG2084678

23060001-002

Collected date/time: 06/06/23 13:41

SAMPLE RESULTS - 02

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.248	<u>U</u>	0.653	1.23	06/29/2023 20:50	WG2080715
(<i>T</i>) Barium	133			30.0-143	06/29/2023 20:50	WG2080715
(<i>T</i>) Yttrium	88.8			30.0-136	06/29/2023 20:50	WG2080715

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0926	<u>U</u>	0.692	1.29	06/29/2023 20:50	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0926	<u>U</u>	0.230	0.380	06/29/2023 18:47	WG2084678
(<i>T</i>) Barium-133	90.0			30.0-143	06/29/2023 18:47	WG2084678

23060001-003

Collected date/time: 06/06/23 13:14

SAMPLE RESULTS - 03

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.162	<u>U</u>	0.507	0.939	06/29/2023 20:50	WG2080715
(<i>T</i>) Barium	132			30.0-143	06/29/2023 20:50	WG2080715
(<i>T</i>) Yttrium	106			30.0-136	06/29/2023 20:50	WG2080715

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.343	<u>U</u>	0.549	0.982	06/29/2023 20:50	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.182	<u>J</u>	0.211	0.287	06/29/2023 18:47	WG2084678
(<i>T</i>) Barium-133	94.5			30.0-143	06/29/2023 18:47	WG2084678

23060001-004

Collected date/time: 06/06/23 12:03

SAMPLE RESULTS - 04

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.704	J	0.611	1.11	06/29/2023 20:50	WG2080715
(T) Barium	127			30.0-143	06/29/2023 20:50	WG2080715
(T) Yttrium	109			30.0-136	06/29/2023 20:50	WG2080715

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.01	J	0.654	1.14	06/29/2023 20:50	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.302		0.234	0.249	06/29/2023 18:47	WG2084678
(T) Barium-133	105			30.0-143	06/29/2023 18:47	WG2084678

23060001-005

Collected date/time: 06/07/23 11:03

SAMPLE RESULTS - 05

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.564	J	0.532	0.970	06/29/2023 20:50	WG2080715
(T) Barium	119			30.0-143	06/29/2023 20:50	WG2080715
(T) Yttrium	102			30.0-136	06/29/2023 20:50	WG2080715

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.612	J	0.559	1.02	06/29/2023 20:50	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0480	U	0.173	0.302	06/29/2023 18:47	WG2084678
(T) Barium-133	107			30.0-143	06/29/2023 18:47	WG2084678

23060001-006

Collected date/time: 06/07/23 11:27

SAMPLE RESULTS - 06

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.154	<u>U</u>	0.218	0.389	06/26/2023 17:55	WG208142
(<i>T</i>) Barium	108			30.0-143	06/26/2023 17:55	WG208142
(<i>T</i>) Yttrium	114			30.0-136	06/26/2023 17:55	WG208142

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.597		0.348	0.459	06/29/2023 18:47	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.443		0.271	0.244	06/29/2023 18:47	WG2084678
(<i>T</i>) Barium-133	105			30.0-143	06/29/2023 18:47	WG2084678

23060001-007

Collected date/time: 06/06/23 12:45

SAMPLE RESULTS - 07

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.419	J	0.283	0.498	06/26/2023 17:55	WG208142
(T) Barium	113			30.0-143	06/26/2023 17:55	WG208142
(T) Yttrium	115			30.0-136	06/26/2023 17:55	WG208142

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.593	J	0.371	0.608	06/29/2023 18:47	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.174	J	0.240	0.348	06/29/2023 18:47	WG2084678
(T) Barium-133	81.4			30.0-143	06/29/2023 18:47	WG2084678

23060001-008

Collected date/time: 06/06/23 11:25

SAMPLE RESULTS - 08

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.06		0.286	0.483	06/26/2023 17:55	<u>WG208142</u>
(T) Barium	96.7			30.0-143	06/26/2023 17:55	<u>WG208142</u>
(T) Yttrium	104			30.0-136	06/26/2023 17:55	<u>WG208142</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.12		0.307	0.515	06/29/2023 18:47	<u>WG2084678</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0636	<u>U</u>	0.111	0.180	06/29/2023 18:47	<u>WG2084678</u>
(T) Barium-133	103			30.0-143	06/29/2023 18:47	<u>WG2084678</u>

23060001-009

Collected date/time: 06/07/23 12:10

SAMPLE RESULTS - 09

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.130	<u>U</u>	0.234	0.420	06/26/2023 17:55	WG2081142
(<i>T</i>) Barium	117			30.0-143	06/26/2023 17:55	WG2081142
(<i>T</i>) Yttrium	100			30.0-136	06/26/2023 17:55	WG2081142

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.152	<u>U</u>	0.292	0.534	06/29/2023 18:59	WG2084678

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0230	<u>U</u>	0.174	0.329	06/29/2023 18:59	WG2084678
(<i>T</i>) Barium-133	101			30.0-143	06/29/2023 18:59	WG2084678

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

23060001-010

Collected date/time: 06/07/23 11:45

SAMPLE RESULTS - 10

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.31		0.298	0.472	06/26/2023 17:55	<u>WG2081142</u>
(<i>T</i>) Barium	118			30.0-143	06/26/2023 17:55	<u>WG2081142</u>
(<i>T</i>) Yttrium	102			30.0-136	06/26/2023 17:55	<u>WG2081142</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.57		0.356	0.512	07/01/2023 13:56	<u>WG2084680</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.261		0.195	0.198	07/01/2023 13:56	<u>WG2084680</u>
(<i>T</i>) Barium-133	90.9			30.0-143	07/01/2023 13:56	<u>WG2084680</u>

23060001-011

Collected date/time: 06/06/23 12:03

SAMPLE RESULTS - 11

L1626093

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.15		0.250	0.413	06/26/2023 17:55	WG2081142
(<i>T</i>) Barium	104			30.0-143	06/26/2023 17:55	WG2081142
(<i>T</i>) Yttrium	100			30.0-136	06/26/2023 17:55	WG2081142

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.51		0.338	0.460	07/01/2023 13:56	WG2084680

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.364		0.228	0.202	07/01/2023 13:56	WG2084680
(<i>T</i>) Barium-133	98.1			30.0-143	07/01/2023 13:56	WG2084680

⁶Qc⁷Gl⁸Al⁹Sc

QUALITY CONTROL SUMMARY

[L1626093-01,02,03,04,05](#)

Method Blank (MB)

(MB) R3945508-1 06/29/23 20:50

Analyte	MB Result pCi/l	<u>MB Qualifier</u>	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.137	J	0.149	0.273
(T) Barium	122		122	
(T) Yttrium	109		109	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1621260-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1621260-03 06/29/23 20:50 • (DUP) R3945508-5 06/29/23 20:50

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-228	0.341	0.351	0.638	0.307	0.394	0.638	1	10.6	0.0650	U	20	3
(T) Barium	125			136	136							
(T) Yttrium	102			113	113							

Laboratory Control Sample (LCS)

(LCS) R3945508-2 06/29/23 20:50

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-228	5.00	4.51	90.1	80.0-120	
(T) Barium			129		
(T) Yttrium			111		

L1621139-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-06 06/29/23 20:50 • (MS) R3945508-3 06/29/23 20:50 • (MSD) R3945508-4 06/29/23 20:50

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.44	16.4	15.1	89.7	82.0	1	70.0-130			8.18		20
(T) Barium		114		124	122								
(T) Yttrium		96.6		102	114								

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

QUALITY CONTROL SUMMARY

[L1626093-06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R3945879-1 06/26/23 17:55

Analyte	MB Result pCi/l	<u>MB Qualifier</u>	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.601		0.170	0.288
(T) Barium	104		104	
(T) Yttrium	94.0		94.0	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1621698-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1621698-14 06/26/23 17:55 • (DUP) R3945879-5 06/26/23 17:55

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-228	0.810	0.254	0.433	1.72	0.405	0.433	1	71.8	1.90		20	3
(T) Barium	113			116	116							
(T) Yttrium	99.4			107	107							

Laboratory Control Sample (LCS)

(LCS) R3945879-2 06/26/23 17:55

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-228	5.00	4.93	98.6	80.0-120	
(T) Barium			119		
(T) Yttrium			97.2		

L1621698-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621698-06 06/26/23 17:55 • (MS) R3945879-3 06/26/23 17:55 • (MSD) R3945879-4 06/26/23 17:55

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.447	10.8	11.3	104	108	1	70.0-130			4.08		20
(T) Barium		111		110	111								
(T) Yttrium		99.8		103	99.8								

QUALITY CONTROL SUMMARY

[L1626093-01,02,03,04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3943663-1 06/29/23 18:42

Analyte	MB Result pCi/l	<u>MB Qualifier</u> + / -	MB Uncertainty pCi/l	MB MDA pCi/l
Radium-226	-0.0106	<u>U</u>	0.0235	0.0572
(T) Barium-133	93.2		93.2	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1626093-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1626093-09 06/29/23 18:59 • (DUP) R3943663-5 06/29/23 18:47

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0230	0.174	0.329	0.0656	0.146	0.329	1	96.2	0.188	<u>U</u>	20	3
(T) Barium-133	101			104	104							

Laboratory Control Sample (LCS)

(LCS) R3943663-2 06/29/23 18:47

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-226	5.01	4.34	86.7	80.0-120	
(T) Barium-133			87.4		

L1621139-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-09 06/29/23 18:47 • (MS) R3943663-3 06/29/23 18:47 • (MSD) R3943663-4 06/29/23 18:47

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.888	19.5	18.9	93.2	90.3	1	75.0-125			3.02		20
(T) Barium-133		95.1			95.1	101							

QUALITY CONTROL SUMMARY

[L1626093-10,11](#)

Method Blank (MB)

(MB) R3944988-1 07/01/23 13:56

Analyte	MB Result pCi/l	<u>MB Qualifier</u> + / -	MB Uncertainty pCi/l	MB MDA pCi/l
Radium-226	0.0385	J	0.0473	0.0662
(T) Barium-133	98.0		98.0	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1621970-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621970-02 07/01/23 13:56 • (DUP) R3944988-5 07/01/23 13:56

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-226	0.877	0.358	0.262	0.698	0.362	0.262	1	22.7	0.351		20	3
(T) Barium-133	94.7			85.2	85.2							

Laboratory Control Sample (LCS)

(LCS) R3944988-2 07/01/23 13:56

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-226	5.01	4.58	91.4	80.0-120	
(T) Barium-133			97.1		

L1626093-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626093-10 07/01/23 13:56 • (MS) R3944988-3 07/01/23 13:56 • (MSD) R3944988-4 07/01/23 13:56

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.261	17.3	17.9	85.2	88.0	1	75.0-125			3.13		20
(T) Barium-133		90.9			96.9	92.2							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

⁸ AI

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES NO With: Ice Blue Ice Preserved in: Lab Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Client QC Level: 3

Project# 23060001

Comments: Please Issue reports and invoices via email only
Please analyze for Radium 226/228 per methods specified for Vistra/Ramboll projects.
Collected at an IL site.
Batch QC is required for all analyses requested. EDD requested

Contact: Liz Hurley
Requested Due Date: 10-15 day TAT

Email: ehurley@teklabinc.com
Billing/PO: 34541

Phone: 618 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

*Relinquished By	Date/Time	Received By	Date/Time
			6/19/23 0845

G.B A7
22.0±0=22.0
1724 2339 238

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

h does not provide client/sampler information without proper authorization, and proprietary rights are protected by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2, Section 4.1.5.c)

PH-10BDH4321 TRC-2348141
6P6 202011

DocRevA
2016

January 25, 2023

Jason McLaurin
Southern Illinois Power Cooperation
11543 Lake of Egypt Road
Marion, IL 62959
TEL: (618) 964-1448
FAX:



Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Groundwater Monitoring

WorkOrder: 22120076

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 12/21/2022 7:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	27
Receiving Check List	39
Chain of Custody	Appended

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Abbr Definition

* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

CRQL A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.

DNI Did not ignite

DUP Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL "The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count (> 200 CFU)

Definitions

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Qualifiers

- | | |
|---|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| C - RL shown is a Client Requested Quantitation Limit | E - Value above quantitation range |
| H - Holding times exceeded | I - Associated internal standard was outside method criteria |
| J - Analyte detected below quantitation limits | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Cooler Receipt Temp: 2.0 °C

An employee of Teklab, Inc. collected the sample(s).

Lab Error: the digital file containing field parameter data and field QC was lost on the external flash drive employed; internal recovery attempts were unsuccessful. Client was notified via telephone and e-mail on 1/12/23. Recovery attempts by an outside data retrieval company was also unsuccessful; client was notified via e-mail on 1/20/23. EAH 1/20/23

Radium-226 and Radium-228 analysis was performed by Pace Analytical National. See attached report for results.

Locations

Collinsville	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	jhriley@teklabinc.com

Collinsville Air	
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004
Fax	(618) 344-1005
Email	EHurley@teklabinc.com

Springfield	
Address	3920 Pintail Dr Springfield, IL 62711-9415
Phone	(217) 698-1004
Fax	(217) 698-1005
Email	KKlostermann@teklabinc.com

Chicago	
Address	1319 Butterfield Rd. Downers Grove, IL 60515
Phone	(630) 324-6855
Fax	
Email	arenner@teklabinc.com

Kansas City	
Address	8421 Nieman Road Lenexa, KS 66214
Phone	(913) 541-1998
Fax	(913) 541-1998
Email	jhriley@teklabinc.com

Accreditations

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 12/19/2022 15:54

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.45	ft	1	12/19/2022 15:54	R323875
Elevation of groundwater surface	*	0	0		516.42	ft	1	12/19/2022 15:54	R323875
Measuring Point Elevation	*	0	0		524.87	ft	1	12/19/2022 15:54	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/19/2022 15:54	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/19/2022 15:54	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/19/2022 15:54	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/19/2022 15:54	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/19/2022 15:54	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/19/2022 15:54	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/19/2022 15:54	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	340	mg/L	1	12/27/2022 14:33	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		9	mg/L	1	12/29/2022 15:56	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		96	mg/L	5	12/29/2022 16:01	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.68	mg/L	1	12/28/2022 11:46	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0434	mg/L	1	12/22/2022 9:12	201246
Boron	NELAP	0.0090	0.020	J	0.014	mg/L	1	12/22/2022 9:12	201246
Calcium	NELAP	0.0350	0.100		10.4	mg/L	1	12/22/2022 9:12	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:03	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 21:03	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 20:10	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 20:10	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:03	201246
Lithium	*	0.0015	0.0030		0.0166	mg/L	5	01/08/2023 10:54	201246
Molybdenum	NELAP	0.0006	0.0015		0.0020	mg/L	5	12/23/2022 5:37	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:37	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:19	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 12/19/2022 15:54

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 12/20/2022 10:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.29	ft	1	12/20/2022 10:38	R323875
Elevation of groundwater surface	*	0	0		511.43	ft	1	12/20/2022 10:38	R323875
Measuring Point Elevation	*	0	0		519.72	ft	1	12/20/2022 10:38	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 10:38	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 10:38	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 10:38	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 10:38	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 10:38	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 10:38	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 10:38	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	2460	mg/L	1	12/27/2022 14:34	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		38	mg/L	1	12/29/2022 16:20	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1580	mg/L	50	12/29/2022 16:26	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.24	mg/L	1	12/28/2022 11:48	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0158	mg/L	1	12/22/2022 9:29	201246
Boron	NELAP	0.0090	0.0200		1.06	mg/L	1	12/22/2022 9:29	201246
Calcium	NELAP	0.0350	0.100		523	mg/L	1	12/22/2022 9:29	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:10	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 20:16	201246
Beryllium	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	01/05/2023 21:10	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 20:16	201246
Chromium	NELAP	0.0007	0.0015		0.0026	mg/L	5	01/06/2023 20:16	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0004	mg/L	5	01/06/2023 20:16	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:10	201246
Lithium	*	0.0015	0.0030		0.0139	mg/L	5	01/08/2023 11:00	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 5:43	201246
Selenium	NELAP	0.0006	0.0010		0.0021	mg/L	5	01/06/2023 20:16	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:43	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:22	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 12/20/2022 10:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 12/20/2022 12:24

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		11.41	ft	1	12/20/2022 12:24	R323875
Elevation of groundwater surface	*	0	0		502.38	ft	1	12/20/2022 12:24	R323875
Measuring Point Elevation	*	0	0		513.79	ft	1	12/20/2022 12:24	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 12:24	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 12:24	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 12:24	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 12:24	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 12:24	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 12:24	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 12:24	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	2220	mg/L	1	12/27/2022 14:34	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	8		52	mg/L	2	01/03/2023 11:26	R323060
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1350	mg/L	50	12/29/2022 16:33	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.39	mg/L	1	12/28/2022 11:50	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0170	mg/L	1	12/22/2022 9:39	201246
Boron	NELAP	0.0090	0.0200		0.276	mg/L	1	12/22/2022 9:39	201246
Calcium	NELAP	0.0350	0.100		306	mg/L	1	12/22/2022 9:39	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:16	201246
Arsenic	NELAP	0.0004	0.0010	J	0.0006	mg/L	5	01/06/2023 20:22	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 21:16	201246
Cadmium	NELAP	0.0002	0.0010	J	0.0002	mg/L	5	01/06/2023 20:22	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 20:22	201246
Cobalt	NELAP	0.0001	0.0010		0.0218	mg/L	5	01/06/2023 20:22	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:16	201246
Lithium	*	0.0015	0.0030		0.0129	mg/L	5	01/08/2023 11:06	201246
Molybdenum	NELAP	0.0006	0.0015	J	0.0011	mg/L	5	12/23/2022 5:50	201246
Selenium	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	01/06/2023 20:22	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:50	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:24	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 12/20/2022 12:24

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 12/20/2022 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		18.92	ft	1	12/20/2022 0:00	R323875
Elevation of groundwater surface	*	0	0		500.03	ft	1	12/20/2022 0:00	R323875
Measuring Point Elevation	*	0	0		518.95	ft	1	12/20/2022 0:00	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 0:00	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 0:00	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 0:00	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 0:00	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 0:00	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 0:00	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 0:00	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	80	100	H	650	mg/L	5	12/27/2022 14:35	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		157	mg/L	5	12/29/2022 16:36	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		170	mg/L	5	12/29/2022 16:36	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.23	mg/L	1	12/28/2022 11:51	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0836	mg/L	1	12/22/2022 9:50	201246
Boron	NELAP	0.0090	0.0200		0.0630	mg/L	1	12/22/2022 9:50	201246
Calcium	NELAP	0.0350	0.100		42.8	mg/L	1	12/22/2022 9:50	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 22:59	201246
Arsenic	NELAP	0.0004	0.0010		0.0083	mg/L	5	01/06/2023 21:31	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 22:59	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:31	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 21:31	201246
Cobalt	NELAP	0.0001	0.0010		0.0846	mg/L	5	01/06/2023 21:31	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 22:59	201246
Lithium	*	0.0015	0.0030		0.0425	mg/L	5	01/08/2023 11:13	201246
Molybdenum	NELAP	0.0006	0.0015	J	0.0007	mg/L	5	12/23/2022 5:56	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:31	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:56	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:26	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 12/20/2022 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 12/20/2022 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.99	ft	1	12/20/2022 15:10	R323875
Elevation of groundwater surface	*	0	0		511.75	ft	1	12/20/2022 15:10	R323875
Measuring Point Elevation	*	0	0		519.74	ft	1	12/20/2022 15:10	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 15:10	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 15:10	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 15:10	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 15:10	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 15:10	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 15:10	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 15:10	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50	H	1640	mg/L	2.5	12/27/2022 15:16	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		489	mg/L	10	12/29/2022 16:44	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		499	mg/L	10	12/29/2022 16:45	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.12	mg/L	1	12/28/2022 11:53	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0295	mg/L	1	12/22/2022 10:00	201246
Boron	NELAP	0.0090	0.0200		10.7	mg/L	1	12/22/2022 10:00	201246
Calcium	NELAP	0.0350	0.100		165	mg/L	1	12/22/2022 10:00	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:05	201246
Arsenic	NELAP	0.0004	0.0010		0.0068	mg/L	5	01/06/2023 21:37	201246
Beryllium	NELAP	0.0002	0.0010		0.0047	mg/L	5	01/05/2023 23:05	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:37	201246
Chromium	NELAP	0.0007	0.0015	J	0.0014	mg/L	5	01/06/2023 21:37	201246
Cobalt	NELAP	0.0001	0.0010		0.258	mg/L	5	01/06/2023 21:37	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:05	201246
Lithium	*	0.0015	0.0030		0.0032	mg/L	5	01/08/2023 11:19	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 6:03	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:37	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:03	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:28	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 12/20/2022 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 12/20/2022 9:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.17	ft	1	12/20/2022 9:50	R323875
Elevation of groundwater surface	*	0	0		514.42	ft	1	12/20/2022 9:50	R323875
Measuring Point Elevation	*	0	0		527.59	ft	1	12/20/2022 9:50	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 9:50	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 9:50	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 9:50	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 9:50	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 9:50	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 9:50	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 9:50	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	282	mg/L	1	12/27/2022 15:16	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4	J	3	mg/L	1	12/29/2022 16:52	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		116	mg/L	5	12/29/2022 16:58	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.51	mg/L	1	12/28/2022 11:56	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0422	mg/L	1	12/22/2022 11:21	201246
Boron	NELAP	0.0090	0.0200		0.0258	mg/L	1	12/22/2022 11:21	201246
Calcium	NELAP	0.0350	0.100		17.5	mg/L	1	12/22/2022 11:21	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:12	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 21:44	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:12	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:44	201246
Chromium	NELAP	0.0007	0.0015	J	0.0014	mg/L	5	01/06/2023 21:44	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 21:44	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:12	201246
Lithium	*	0.0015	0.0030	J	0.0026	mg/L	5	01/08/2023 12:08	201246
Molybdenum	NELAP	0.0006	0.0015		0.0028	mg/L	5	12/23/2022 6:09	201246
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	01/06/2023 21:44	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:09	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:35	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 12/20/2022 9:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring

Work Order: 22120076
 Report Date: 25-Jan-23

Lab ID: 22120076-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		5.01	ft	1	12/20/2022 11:25	R323875
Elevation of groundwater surface	*	0	0		500.10	ft	1	12/20/2022 11:25	R323875
Measuring Point Elevation	*	0	0		505.11	ft	1	12/20/2022 11:25	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 11:25	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 11:25	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 11:25	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 11:25	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 11:25	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 11:25	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 11:25	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	206	mg/L	1	12/27/2022 15:17	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		23	mg/L	1	12/29/2022 17:16	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		56	mg/L	2	12/29/2022 17:21	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	12/28/2022 11:58	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0475	mg/L	1	12/22/2022 11:24	201246
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/22/2022 11:24	201246
Calcium	NELAP	0.0350	0.100		1.69	mg/L	1	12/22/2022 11:24	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:18	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:18	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Chromium	NELAP	0.0007	0.0015	J	0.0009	mg/L	5	01/06/2023 21:50	201246
Cobalt	NELAP	0.0001	0.0010		0.0068	mg/L	5	01/06/2023 21:50	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:18	201246
Lithium	*	0.0015	0.0030		0.0066	mg/L	5	01/08/2023 12:14	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 6:15	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:15	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020	J	0.00013	mg/L	1	12/28/2022 9:37	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 12/20/2022 13:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.06	ft	1	12/20/2022 13:05	R323875
Elevation of groundwater surface	*	0	0		502.38	ft	1	12/20/2022 13:05	R323875
Measuring Point Elevation	*	0	0		515.44	ft	1	12/20/2022 13:05	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 13:05	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 13:05	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 13:05	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 13:05	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 13:05	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 13:05	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 13:05	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	762	mg/L	1	12/27/2022 15:17	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		223	mg/L	10	12/29/2022 17:24	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		165	mg/L	10	12/29/2022 17:24	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.11	mg/L	1	12/28/2022 12:01	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0370	mg/L	1	12/22/2022 11:28	201246
Boron	NELAP	0.0090	0.0200		0.311	mg/L	1	12/22/2022 11:28	201246
Calcium	NELAP	0.0350	0.100		40.2	mg/L	1	12/22/2022 11:28	201246
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:24	201246
Arsenic	NELAP	0.0004	0.0010		0.0081	mg/L	5	01/06/2023 21:56	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:24	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:56	201246
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	01/06/2023 21:56	201246
Cobalt	NELAP	0.0001	0.0010		0.179	mg/L	5	01/06/2023 21:56	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:24	201246
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 12:20	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 7:19	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:56	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 7:19	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:40	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 12/20/2022 13:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 12/20/2022 15:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	J	16	mg/L	1	12/27/2022 15:17	R322885
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	12/29/2022 17:35	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/29/2022 17:35	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2022 12:12	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2022 12:29	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:29	201307
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2022 12:29	201307
CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:35	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:20	201307
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 17:20	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 10:35	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:45	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:20	201307
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:42	201368
LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.									
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22120076
Report Date: 25-Jan-23

Lab ID: 22120076-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 12/20/2022 15:26

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	J	16	mg/L	1	12/27/2022 15:18	R322885
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	12/29/2022 17:40	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/29/2022 17:40	R322958
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2022 12:14	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2022 12:33	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:33	201307
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2022 12:33	201307
CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:41	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:27	201307
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 10:41	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:51	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:27	201307
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020	S	< 0.00020	mg/L	1	12/28/2022 9:44	201368
Matrix spike recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable.									
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring

Work Order: 22120076
 Report Date: 25-Jan-23

Lab ID: 22120076-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		5.01	ft	1	12/20/2022 11:25	R323875
Elevation of groundwater surface	*	0	0		500.10	ft	1	12/20/2022 11:25	R323875
Measuring Point Elevation	*	0	0		505.11	ft	1	12/20/2022 11:25	R323875
FIELD PURGE VOLUME									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 11:25	R323875
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 11:25	R323875
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 11:25	R323875
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 11:25	R323875
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 11:25	R323875
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 11:25	R323875
SW-846 9040B FIELD									
pH	*	0	1.00		Lab Error		1	12/20/2022 11:25	R323875
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	214	mg/L	1	12/27/2022 15:18	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		23	mg/L	1	12/29/2022 17:43	R322966
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		55	mg/L	2	01/03/2023 11:07	R323058
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.04	mg/L	1	12/28/2022 12:17	R322877
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0511	mg/L	1	12/27/2022 12:37	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:37	201307
Calcium	NELAP	0.0350	0.100		1.80	mg/L	1	12/27/2022 12:37	201307
<i>CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:48	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:33	201307
Cobalt	NELAP	0.0001	0.0010		0.0067	mg/L	5	01/06/2023 17:33	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Lithium	*	0.0015	0.0030		0.0068	mg/L	5	01/08/2023 10:48	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:57	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:33	201307
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:51	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									

Laboratory Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pCi/L	1	01/11/2023 0:00	R323491



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch	R322885	SampType:	MBLK	Units	mg/L						
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids			20		< 20	16.00	0	0	-100	100	12/27/2022
Total Dissolved Solids			20		< 20	16.00	0	0	-100	100	12/27/2022
Total Dissolved Solids			20		< 20	16.00	0	0	-100	100	12/27/2022

Batch	R322885	SampType:	LCS	Units	mg/L						
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Total Dissolved Solids			20		972	1000	0	97.2	90	110	12/27/2022
Total Dissolved Solids			20		976	1000	0	97.6	90	110	12/27/2022
Total Dissolved Solids			20		980	1000	0	98.0	90	110	12/27/2022

Batch	R322885	SampType:	DUP	Units	mg/L	RPD Limit: 5					
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids			20	H	1490				1486	0.00	12/27/2022

Batch	R322885	SampType:	DUP	Units	mg/L	RPD Limit: 5					
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids			20	H	472				464.0	1.71	12/27/2022

Batch	R322885	SampType:	DUP	Units	mg/L	RPD Limit: 5					
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids			50	H	1350				1335	1.12	12/27/2022

Batch	R322885	SampType:	DUP	Units	mg/L	RPD Limit: 5					
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Total Dissolved Solids			20	H	276				276.0	0.00	12/27/2022

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011											
Batch	R322966	SampType:	MBLK	Units	mg/L						
Analyses										Date Analyzed	
		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Chloride			4		< 4	0.5000	0	0	-100	100	12/29/2022



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R322966	SampType: LCS	Units mg/L								
SampID: ICV/LCS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		21	20.00	0	104.3	90	110	12/29/2022

Batch R322966	SampType: MS	Units mg/L								
SampID: 22120101-002BMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		22	20.00	1.890	99.7	85	115	12/29/2022

Batch R322966	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 22120101-002BMSD									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		22	20.00	1.890	98.9	21.83	0.74	12/29/2022

Batch R322966	SampType: MS	Units mg/L								
SampID: 22120101-005BMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		28	20.00	9.070	95.1	85	115	12/29/2022

Batch R322966	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 22120101-005BMSD									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		28	20.00	9.070	96.4	28.09	0.89	12/29/2022

Batch R322966	SampType: MS	Units mg/L								
SampID: 22120101-006BMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		22	20.00	1.830	98.8	85	115	12/29/2022

Batch R322966	SampType: MSD	Units mg/L		RPD Limit: 15						
SampID: 22120101-006BMSD									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4		22	20.00	1.830	101.0	21.59	2.02	12/29/2022

Batch R322966	SampType: MS	Units mg/L								
SampID: 22121389-003AMS									Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		80		684	400.0	312.0	93.0	85	115	12/29/2022



Quality Control Results

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch R322966	SampType: MSD	Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22121389-003AMSD										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD
Chloride		80			687	400.0	312.0	93.6	684.1	0.36

Batch R322966 SampType: MS Units mg/L

Batch R322966	SampType: MS	Units mg/L							Date Analyzed	
SampID: 22121425-001AMS										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit
Chloride		80			622	400.0	248.0	93.6	85	115

Batch R322966 SampType: MSD Units mg/L

Batch R322966	SampType: MSD	Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22121425-001AMSD										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD
Chloride		80			620	400.0	248.0	93.1	622.4	0.34

Batch R323060 SampType: MBLK Units mg/L

Batch R323060	SampType: MBLK	Units mg/L							Date Analyzed	
SampID: ICB/MBLK										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit
Chloride		4		< 4		0.5000	0	0	-100	100

Batch R323060 SampType: LCS Units mg/L

Batch R323060	SampType: LCS	Units mg/L							Date Analyzed	
SampID: ICV/LCS										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit
Chloride		4		20		20.00	0	101.2	90	110

Batch R323060 SampType: MS Units mg/L

Batch R323060	SampType: MS	Units mg/L							Date Analyzed	
SampID: 22120153-001CMS										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit
Chloride		4	E	55		20.00	35.85	94.7	85	115

Batch R323060 SampType: MSD Units mg/L

Batch R323060	SampType: MSD	Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22120153-001CMSD										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD
Chloride		4	E	54		20.00	35.85	93.1	54.79	0.59

Batch R323060 SampType: MS Units mg/L

Batch R323060	SampType: MS	Units mg/L							Date Analyzed	
SampID: 22120153-033BMS										
Analyses		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit
Chloride		20		172		100.0	77.32	94.3	85	115



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011

Batch	R323060	SampType:	MSD	Units	mg/L	RPD Limit: 15				
SampID: 22120153-033BMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Chloride		20		169	100.0	77.32	91.4	171.6	1.69	01/03/2023

Batch	R323060	SampType:	MS	Units	mg/L	RPD Limit: 15				
SampID: 22121600-001AMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Chloride		40		432	200.0	252.2	89.9	85	115	01/03/2023

Batch	R323060	SampType:	MSD	Units	mg/L	RPD Limit: 15				
SampID: 22121600-001AMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Chloride		40		426	200.0	252.2	87.1	432.0	1.30	01/03/2023

Batch	R323060	SampType:	MS	Units	mg/L	RPD Limit: 15				
SampID: 22121712-001CMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Chloride		4	E	63	20.00	42.69	102.0	85	115	01/03/2023

Batch	R323060	SampType:	MSD	Units	mg/L	RPD Limit: 15				
SampID: 22121712-001CMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Chloride		4	E	63	20.00	42.69	101.6	63.10	0.13	01/03/2023

SW-846 9036 (TOTAL)										
Batch	R322958	SampType:	MBLK	Units	mg/L	RPD Limit: 15				
SampID: ICB/MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		< 10	6.140	0	0	-100	100	12/29/2022

Batch R322958 SampType: LCS Units mg/L										
SampID: ICV/LCS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		20	20.00	0	98.4	90	110	12/29/2022



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Work Order: 22120076

Client Project: Groundwater Monitoring

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SW-846 9036 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		30	20.00	10.18	99.6	85	115	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		10		29	20.00	10.18	95.1	30.09	3.00	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		40	20.00	19.57	100.2	85	115	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		10		41	20.00	19.57	104.9	39.62	2.32	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		36	20.00	15.38	101.8	85	115	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		10		36	20.00	15.38	104.3	35.75	1.33	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		200		852	400.0	431.4	105.2	90	110	12/29/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		200	S	790	400.0	431.4	89.7	852.2	7.58	12/29/2022



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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 9036 (TOTAL)

Batch	R323058	SampType:	MBLK	Units	mg/L					
SampID: ICB/MBLK										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		< 10	6.140	0	0	-100	100	01/03/2023

Batch	R323058	SampType:	MBLK	Units	mg/L					
SampID: MB-R323058										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		< 10	7.620	0	0	-100	100	01/03/2023

Batch	R323058	SampType:	LCS	Units	mg/L					
SampID: ICV/LCS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		21	20.00	0	103.4	90	110	01/03/2023

Batch	R323058	SampType:	LCS	Units	mg/L					
SampID: LCS-R323058										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		10		21	20.00	0	103.4	90	110	01/03/2023

Batch	R323058	SampType:	MS	Units	mg/L					
SampID: 22120153-001CMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		50		149	100.0	55.02	93.5	85	115	01/03/2023

Batch	R323058	SampType:	MSD	Units	mg/L					
SampID: 22120153-001CMSD										RPD Limit: 10
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		154	100.0	55.02	98.8	148.5	3.52	01/03/2023

Batch	R323058	SampType:	MS	Units	mg/L					
SampID: 22120153-033BMS										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Sulfate		50		198	100.0	95.53	102.9	85	115	01/03/2023

Batch	R323058	SampType:	MSD	Units	mg/L					
SampID: 22120153-033BMSD										Date Analyzed
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Sulfate		50		193	100.0	95.53	97.9	198.4	2.53	01/03/2023



Quality Control Results

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Work Order: 22120076

Client Project: Groundwater Monitoring

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SW-846 9036 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		500		1720	1000	728.6	99.5	90	110	01/03/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		500		1730	1000	728.6	100.6	1724	0.63	01/03/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	SE	54	20.00	45.01	43.6	90	110	01/03/2023

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		10	SE	53	20.00	45.01	42.2	53.72	0.52	01/03/2023

SW-846 9214 (TOTAL)

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		< 0.10	0.0370	0	0	-100	100	12/28/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		0.99	1.000	0	99.1	90	110	12/28/2022

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.21	2.000	0.1110	105.0	75	125	12/28/2022

Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 9214 (TOTAL)

Batch R322877 SampType: MSD		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: 22120076-008AMSD		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Analyses											
Fluoride		0.10			2.18	2.000	0.1110	103.2	2.210	1.55	12/28/2022

Batch R322877 SampType: MS

Batch R322877 SampType: MS		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: 22121571-001AMS		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses											
Fluoride		0.10			2.25	2.000	0.2450	100.0	75	125	12/28/2022

Batch R322877 SampType: MSD

Batch R322877 SampType: MSD		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: 22121571-001AMSD		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
Analyses											
Fluoride		0.10			2.20	2.000	0.2450	97.7	2.246	2.16	12/28/2022

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 201246 SampType: MBLK		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: MBLK-201246		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses											
Barium		0.0025			< 0.0025	0.0007	0	0	-100	100	12/22/2022
Boron		0.0200			< 0.0200	0.0090	0	0	-100	100	12/22/2022
Calcium		0.100			< 0.100	0.0350	0	0	-100	100	12/22/2022

Batch 201246 SampType: LCS

Batch 201246 SampType: LCS		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: LCS-201246		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses											
Barium		0.0025			2.00	2.000	0	100.2	85	115	12/22/2022
Boron		0.0200			0.506	0.5000	0	101.2	85	115	12/22/2022
Calcium		0.100			2.51	2.500	0	100.3	85	115	12/22/2022

Batch 201246 SampType: MS

Batch 201246 SampType: MS		Units mg/L						RPD Limit: 15		Date Analyzed	
SampID: 22121308-002BMS		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses											
Calcium		0.100			75.6	2.500	73.36	90.0	75	125	12/22/2022

Batch 201246 SampType: MSD

Batch 201246 SampType: MSD		Units mg/L						RPD Limit: 20		Date Analyzed	
SampID: 22121308-002BMSD		Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	
Analyses											
Calcium		0.100			76.0	2.500	73.36	107.2	75.61	0.57	12/22/2022



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 201307 SampType: MBLK Units mg/L

SampID: MBLK-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	12/27/2022
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	01/03/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	12/27/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	01/03/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	12/27/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	01/03/2023

Batch 201307 SampType: LCS Units mg/L

SampID: LCS-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.04	2.000	0	101.8	85	115	01/03/2023
Barium		0.0025		2.03	2.000	0	101.6	85	115	12/27/2022
Boron		0.0200		0.510	0.5000	0	102.1	85	115	01/03/2023
Boron		0.0200		0.520	0.5000	0	104.0	85	115	12/27/2022
Calcium		0.100		2.55	2.500	0	102.1	85	115	01/03/2023
Calcium		0.100		2.55	2.500	0	102.1	85	115	12/27/2022

Batch 201307 SampType: MS Units mg/L

SampID: 22121384-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		0.0200		4.34	0.5000	3.735	120.4	75	125	12/28/2022

Batch 201307 SampType: MSD Units mg/L

RPD Limit: 20

SampID: 22121384-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		0.0200	S	4.38	0.5000	3.735	128.8	4.337	0.96	12/28/2022

Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	201246	SampType:	MBLK	Units	mg/L							
SampID: MBLK-201246								Date Analyzed				
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010	JS	0.0010	0.0004	0		213.1	-100	100		12/23/2022
Arsenic		0.0010		< 0.0010	0.0004	0		0	-100	100		12/23/2022
Beryllium		0.0010		< 0.0010	0.0002	0		0	-100	100		12/23/2022
Cadmium		0.0010		< 0.0010	0.0001	0		0	-100	100		12/23/2022
Chromium		0.0015		< 0.0015	0.0007	0		0	-100	100		12/23/2022
Cobalt		0.0010		< 0.0010	0.0001	0		0	-100	100		12/23/2022
Lead		0.0010		< 0.0010	0.0006	0		0	-100	100		12/23/2022
Lithium	*	0.0030		< 0.0030	0.0015	0		0	-100	100		12/23/2022
Molybdenum		0.0015		< 0.0015	0.0006	0		0	-100	100		12/23/2022
Selenium		0.0010		< 0.0010	0.0006	0		0	-100	100		12/23/2022
Thallium		0.0020		< 0.0020	0.0010	0		0	-100	100		12/23/2022

Batch 201246 SampType: LCS Units mg/L

Batch	201246	SampType:	LCS	Units	mg/L							
SampID: LCS-201246								Date Analyzed				
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit		
Antimony		0.0010	B	0.534	0.5000	0		106.7	80	120		01/05/2023
Arsenic		0.0010		0.527	0.5000	0		105.4	80	120		01/06/2023
Beryllium		0.0010		0.0535	0.0500	0		107.0	80	120		01/05/2023
Cadmium		0.0010		0.0513	0.0500	0		102.6	80	120		01/06/2023
Chromium		0.0015		0.213	0.2000	0		106.5	80	120		01/06/2023
Cobalt		0.0010		0.544	0.5000	0		108.7	80	120		01/06/2023
Lead		0.0010		0.536	0.5000	0		107.1	80	120		01/05/2023
Lithium	*	0.0030		0.591	0.5000	0		118.1	80	120		01/08/2023
Molybdenum		0.0015		0.582	0.5000	0		116.3	80	120		12/23/2022
Selenium		0.0010		0.476	0.5000	0		95.2	80	120		01/06/2023
Thallium		0.0020		0.297	0.2500	0		118.9	80	120		12/23/2022



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)

Batch	201307	SampType:	MBLK	Units	mg/L						
SampID: MBLK-201307										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	
Antimony		0.0010		< 0.0010	0.0004	0	0	0	-100	100	12/28/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	0	-100	100	12/28/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	0	-100	100	12/28/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	0	-100	100	12/28/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	0	-100	100	12/28/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	0	-100	100	12/28/2022
Lead		0.0010		< 0.0010	0.0006	0	0	0	-100	100	12/28/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	0	-100	100	01/06/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	0	-100	100	12/28/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	0	-100	100	12/28/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	0	-100	100	12/28/2022

Batch 201307 SampType: LCS Units mg/L

Batch	201307	SampType:	LCS	Units	mg/L						
SampID: LCS-201307										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	
Antimony		0.0010		0.527	0.5000	0	105.3	80	120	01/06/2023	
Arsenic		0.0010		0.532	0.5000	0	106.3	80	120	01/06/2023	
Beryllium		0.0010		0.0519	0.0500	0	103.9	80	120	01/08/2023	
Cadmium		0.0010		0.0506	0.0500	0	101.2	80	120	01/06/2023	
Chromium		0.0015		0.218	0.2000	0	108.9	80	120	01/06/2023	
Cobalt		0.0010		0.537	0.5000	0	107.3	80	120	01/06/2023	
Lead		0.0010		0.527	0.5000	0	105.4	80	120	01/06/2023	
Lithium	*	0.0030		0.561	0.5000	0	112.2	80	120	01/08/2023	
Molybdenum		0.0015		0.518	0.5000	0	103.6	80	120	01/09/2023	
Selenium		0.0010		0.497	0.5000	0	99.5	85	115	01/06/2023	
Thallium		0.0020		0.255	0.2500	0	102.0	80	120	01/06/2023	

SW-846 7470A (TOTAL)

Batch	201368	SampType:	MBLK	Units	mg/L						
SampID: MBLK-201368										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK	Ref Val	%REC	Low Limit	High Limit	
Mercury		0.00020		< 0.00020	0.0001	0	0	0	-100	100	12/28/2022



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Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

SW-846 7470A (TOTAL)

Batch	201368	SampType:	LCS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury				0.00020	S		0.00643	0.0050	0	128.5	85	115	12/28/2022

Batch 201368 SampType: MS Units mg/L

Batch	201368	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury				0.00020	S		0.00627	0.0050	0	125.5	75	125	12/28/2022

Batch 201368 SampType: MSD Units mg/L

Batch	201368	SampType:	MSD	Units mg/L		RPD Limit: 15							
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury				0.00020			0.00609	0.0050	0	121.8	0.006273	2.93	12/28/2022

Batch 201368 SampType: MS Units mg/L

Batch	201368	SampType:	MS	Units mg/L									
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury				0.00020	S		0.00648	0.0050	0	129.5	75	125	12/28/2022

Batch 201368 SampType: MSD Units mg/L

Batch	201368	SampType:	MSD	Units mg/L		RPD Limit: 15							
Analyses				Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury				0.00020	S		0.00646	0.0050	0	129.2	0.006477	0.22	12/28/2022



Receiving Check List

<http://www.teklabinc.com/>

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Carrier: Joseph Riley

Received By: MLD

Completed by:

On:

21-Dec-22

Lindsey Maddox

Reviewed by:

On:

21-Dec-22

Elizabeth A. Hurley

Pages to follow: Chain of custody

2

Extra pages included

21

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C 2.0
Type of thermal preservation?	None <input type="checkbox"/>	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input checked="" type="checkbox"/>	Lab <input type="checkbox"/>	NA <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
<i>When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.</i>				
Water – at least one vial per sample has zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>	
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	

Any No responses must be detailed below or on the COC.

pH strip #83856. - lmaddox - 12/21/2022 8:59:16 AM

CHAIN OF CUSTODY

pg. 1 of 2 Work order # 22120076

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1000 - Fax: (618) 344-1005

Client:	Southern Illinois Power Cooperation		
Address:	11543 Lake of Egypt Road		
City / State / Zip	Marion, IL 62959		
Contact:	Jason McLaurin	Phone:	(618) 964-1448
E-Mail:	jmclaurin@sipower.org		
Fax:			

Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No

Are these samples known to be hazardous? Yes No

Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. Yes No

Samples on: BCE BLUE ICE NO ICE 2.0 °C LTG# 5

Preserved in: LAB FIELD FOR LAB USE ONLY

Lab Notes:
83690
LM 12/20

Client Comments: **DWT*

iCP: Ba B Ca

ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti

Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Project Name/Number		Sample Collector's Name		
Groundwater Monitoring		<i>J-RILLIC COLLS</i>		
Results Requested		Billing Instructions		
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		# and Type of Containers		
		UNP	HNO ₃	
22120076-001	EBG	12/19/22 1554	1 3	
002	EP-1	12/19/22 1038	1 3	
003	EP-2	12/20/22 1225	1 3	
004	EP-3	12/20/22 1021	1 3	
005	EP-4	12/20/22 1510	1 3	
006	EP-5	12/20/22 0800	1 3	
007	EP-6	12/20/22 1125	1 3	
008	EP-7	12/20/22 1305	1 3	
009	Equipment Blank	12/20/22 1525	1 3	
010	Field Blank	12/20/22 1526	1 3	

	MATRIX		INDICATE ANALYSIS REQUESTED												
	Groundwater	Aqueous	Field Parameters	Chloride	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Sulfate	TDS					
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			
X						X	X	X	X	X	X	X			

Relinquished By	Date/Time	Received By	Date/Time
<i>J-RILLIC COLLS</i>	12/21/22 0700	<i>Marvin L. Doling II</i>	12/21/22 0700

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 76742



CHAIN OF CUSTODY

pg. 2 of 2

Work order # 22120076

TEKLAB, INC. 5445 Horseshoe Lake Road • Collinville, IL 62234 • Phone: (618) 344-1004 • Fax: (618) 344-1005

Client:	Southern Illinois Power Cooperation		
Address:	11543 Lake of Egypt Road		
City / State / Zip	Marion, IL 62959		
Contact:	Jason McLaurin	Phone:	(618) 964-1448
E-Mail:	jmc Laurin@sipower.org	Fax:	

Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No

Are these samples known to be hazardous? Yes No

Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. Yes No

Project Name/Number

Sample Collector's Name

Samples on: ICE BLUE ICE NO ICE LTO#

Preserved in: LAB FIELD **FOR LAB USE ONLY**

Lab Notes:

Client Comments

ICP: Ba B Ca

ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti

Field Parameters = Elevations, Pure Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

		INDICATE ANALYSIS REQUESTED							
		TDS	Sulfate	Ra226/228	Mercury				
MATRIX	Groundwater	X							
	Aquiferous								

Relinquished By

Date/Time

Received By

Date/Time

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BoffleOrder: 76742





ANALYTICAL REPORT

January 13, 2023

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷GI

⁸AI

⁹SC

TEKLAB, Inc.

Sample Delivery Group: L1570795

Samples Received: 12/27/2022

Project Number: 22120076

Description:

Report To: Elizabeth Hurley
5445 Horseshoe Lake Road
Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

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

Pace Analytical National

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

ACCOUNT:

TEKLAB, Inc.

PROJECT:

22120076

SDG:

L1570795

DATE/TIME:

01/13/23 10:46

PAGE:

1 of 21

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22120076-003 L1570795-03	8	⁸ Al
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SAMPLE SUMMARY

			Collected by	Collected date/time	Received date/time	
				12/19/22 15:54	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
22120076-002 L1570795-02 Non-Potable Water			Collected by	Collected date/time	Received date/time	
				12/20/22 10:38	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
22120076-003 L1570795-03 Non-Potable Water			Collected by	Collected date/time	Received date/time	
				12/20/22 12:24	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
22120076-004 L1570795-04 Non-Potable Water			Collected by	Collected date/time	Received date/time	
				12/20/22 00:00	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
22120076-005 L1570795-05 Non-Potable Water			Collected by	Collected date/time	Received date/time	
				12/20/22 15:10	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
22120076-006 L1570795-06 Non-Potable Water			Collected by	Collected date/time	Received date/time	
				12/20/22 09:50	12/27/22 10:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SAMPLE SUMMARY

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

			Collected by	Collected date/time	Received date/time
				12/20/22 11:25	12/27/22 10:30

22120076-007 L1570795-07 Non-Potable Water

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

22120076-008 L1570795-08 Non-Potable Water

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

22120076-009 L1570795-09 Non-Potable Water

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

22120076-010 L1570795-10 Non-Potable Water

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

22120076-011 L1570795-11 Non-Potable Water

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ GI
- ⁸ AI
- ⁹ Sc

22120076-001

Collected date/time: 12/19/22 15:54

SAMPLE RESULTS - 01

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0292	<u>U</u>	0.257	0.482	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Barium	106			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Yttrium	95.6			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0672	<u>U</u>	0.289	0.531	01/11/2023 14:09	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0672	<u>U</u>	0.132	0.222	01/11/2023 14:09	<u>WG1983193</u>
(<i>T</i>) Barium-133	83.0			30.0-143	01/11/2023 14:09	<u>WG1983193</u>

22120076-002

Collected date/time: 12/20/22 10:38

SAMPLE RESULTS - 02

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.326	J	0.222	0.401	01/11/2023 10:18	WG1981307
(T) Barium	90.8			30.0-143	01/11/2023 10:18	WG1981307
(T) Yttrium	95.8			30.0-136	01/11/2023 10:18	WG1981307

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.470		0.269	0.438	01/11/2023 14:09	WG1983193

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.144	J	0.152	0.175	01/11/2023 14:09	WG1983193
(T) Barium-133	81.7			30.0-143	01/11/2023 14:09	WG1983193

22120076-003

Collected date/time: 12/20/22 12:24

SAMPLE RESULTS - 03

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0435	<u>U</u>	0.203	0.378	01/11/2023 10:18	<u>WG1981307</u>
(T) Barium	93.7			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(T) Yttrium	104			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0763	<u>U</u>	0.249	0.473	01/11/2023 14:09	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0328	<u>U</u>	0.144	0.285	01/11/2023 14:09	<u>WG1983193</u>
(T) Barium-133	78.2			30.0-143	01/11/2023 14:09	<u>WG1983193</u>

22120076-004

Collected date/time: 12/20/22 00:00

SAMPLE RESULTS - 04

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.04		0.195	0.322	01/11/2023 10:18	WG1981307
(<i>T</i>) Barium	104			30.0-143	01/11/2023 10:18	WG1981307
(<i>T</i>) Yttrium	116			30.0-136	01/11/2023 10:18	WG1981307

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.59		0.407	0.494	01/11/2023 14:13	WG1983193

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.551		0.357	0.375	01/11/2023 14:13	WG1983193
(<i>T</i>) Barium-133	83.0			30.0-143	01/11/2023 14:13	WG1983193

22120076-005

Collected date/time: 12/20/22 15:10

SAMPLE RESULTS - 05

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.328	J	0.275	0.500	01/11/2023 10:18	WG1981307
(T) Barium	97.4			30.0-143	01/11/2023 10:18	WG1981307
(T) Yttrium	76.8			30.0-136	01/11/2023 10:18	WG1981307

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.16		0.466	0.571	01/11/2023 14:13	WG1983193

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.828		0.376	0.276	01/11/2023 14:13	WG1983193
(T) Barium-133	91.7			30.0-143	01/11/2023 14:13	WG1983193

22120076-006

Collected date/time: 12/20/22 09:50

SAMPLE RESULTS - 06

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.281	<u>U</u>	0.210	0.400	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Barium	96.1			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Yttrium	108			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.458	<u>J</u>	0.361	0.474	01/11/2023 14:13	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.458		0.294	0.255	01/11/2023 14:13	<u>WG1983193</u>
(<i>T</i>) Barium-133	82.5			30.0-143	01/11/2023 14:13	<u>WG1983193</u>

22120076-007

Collected date/time: 12/20/22 11:25

SAMPLE RESULTS - 07

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.000	<u>U</u>	0.182	0.340	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Barium	97.0			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Yttrium	108			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.137	<u>U</u>	0.308	0.515	01/11/2023 14:13	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.137	<u>U</u>	0.249	0.387	01/11/2023 14:13	<u>WG1983193</u>
(<i>T</i>) Barium-133	76.3			30.0-143	01/11/2023 14:13	<u>WG1983193</u>

22120076-008

Collected date/time: 12/20/22 13:05

SAMPLE RESULTS - 08

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.507		0.187	0.329	01/11/2023 10:18	WG1981307
(T) Barium	98.8			30.0-143	01/11/2023 10:18	WG1981307
(T) Yttrium	108			30.0-136	01/11/2023 10:18	WG1981307

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.675		0.293	0.464	01/11/2023 14:13	WG1983193

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.168	J	0.226	0.327	01/11/2023 14:13	WG1983193
(T) Barium-133	67.8			30.0-143	01/11/2023 14:13	WG1983193

22120076-009

Collected date/time: 12/20/22 15:25

SAMPLE RESULTS - 09

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.411	<u>U</u>	0.187	0.364	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Barium	108			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Yttrium	113			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.330	<u>J</u>	0.333	0.491	01/11/2023 14:13	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.330		0.275	0.329	01/11/2023 14:13	<u>WG1983193</u>
(<i>T</i>) Barium-133	80.8			30.0-143	01/11/2023 14:13	<u>WG1983193</u>

22120076-010

Collected date/time: 12/20/22 15:26

SAMPLE RESULTS - 10

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.425		0.176	0.312	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Barium	105			30.0-143	01/11/2023 10:18	<u>WG1981307</u>
(<i>T</i>) Yttrium	100			30.0-136	01/11/2023 10:18	<u>WG1981307</u>

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.438		0.193	0.363	01/11/2023 14:13	<u>WG1983193</u>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0128	<u>U</u>	0.0792	0.185	01/11/2023 14:13	<u>WG1983193</u>
(<i>T</i>) Barium-133	87.7			30.0-143	01/11/2023 14:13	<u>WG1983193</u>

22120076-011

Collected date/time: 12/20/22 11:25

SAMPLE RESULTS - 11

L1570795

Radiochemistry by Method 904/9320

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.307	J	0.236	0.426	01/11/2023 10:18	WG1981307
(T) Barium	97.8			30.0-143	01/11/2023 10:18	WG1981307
(T) Yttrium	110			30.0-136	01/11/2023 10:18	WG1981307

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Radiochemistry by Method Calculation

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.375	J	0.281	0.501	01/11/2023 14:13	WG1983193

Radiochemistry by Method SM7500Ra B M

Analyte	Result	<u>Qualifier</u>	Uncertainty	MDA	Analysis Date	<u>Batch</u>
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0681	U	0.152	0.263	01/11/2023 14:13	WG1983193
(T) Barium-133	83.0			30.0-143	01/11/2023 14:13	WG1983193

QUALITY CONTROL SUMMARY

[L1570795-01,02,03,04,05,06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R3880588-1 01/11/23 10:18

Analyte	MB Result pCi/l	<u>MB Qualifier</u>	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.194	U	0.143	0.272
(T) Barium	98.7		98.7	
(T) Yttrium	103		103	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1570795-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1570795-01 01/11/23 10:18 • (DUP) R3880588-5 01/11/23 10:18

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-228	-0.0292	0.257	0.482	-0.231	0.265	0.482	1	0.000	0.547	U	20	3
(T) Barium	106			94.2	94.2							
(T) Yttrium	95.6			110	110							

Laboratory Control Sample (LCS)

(LCS) R3880588-2 01/11/23 10:18

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-228	5.00	4.59	91.7	80.0-120	
(T) Barium			95.6		
(T) Yttrium			102		

L1571260-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571260-02 01/11/23 10:18 • (MS) R3880588-3 01/11/23 10:18 • (MSD) R3880588-4 01/11/23 10:18

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.880	9.07	9.29	81.9	84.1	1	70.0-130			2.43		20
(T) Barium		96.7		105	108								
(T) Yttrium		89.9		92.6	111								

QUALITY CONTROL SUMMARY

[L1570795-01,02,03,04,05,06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R3880595-1 01/11/23 14:03

Analyte	MB Result pCi/l	<u>MB Qualifier</u> + / -	MB Uncertainty pCi/l	MB MDA pCi/l
Radium-226	0.0599	J	0.0556	0.0693
(T) Barium-133	95.8		95.8	

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

L1570795-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1570795-11 01/11/23 14:13 • (DUP) R3880595-5 01/11/23 14:03

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	<u>DUP Qualifier</u>	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0681	0.152	0.263	0.0205	0.155	0.263	1	108	0.219	U	20	3
(T) Barium-133	83.0			89.8	89.8							

Laboratory Control Sample (LCS)

(LCS) R3880595-2 01/11/23 14:03

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Radium-226	5.02	5.45	109	80.0-120	
(T) Barium-133			95.9		

L1570795-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1570795-01 01/11/23 14:09 • (MS) R3880595-3 01/11/23 14:03 • (MSD) R3880595-4 01/11/23 14:03

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.0672	20.1	20.7	100	103	1	75.0-125			3.04		20
(T) Barium-133		83.0			85.4	85.3							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDA	Minimum Detectable Activity.	¹ Cp
Rec.	Recovery.	² Tc
RER	Replicate Error Ratio.	³ Ss
RPD	Relative Percent Difference.	⁴ Cn
SDG	Sample Delivery Group.	⁵ Sr
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.	⁶ Qc
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.	⁷ GI
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.	⁸ AI
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.	⁹ Sc
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.	
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.	
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.	
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.	
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.	
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.	
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.	
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.	
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.	

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio—VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

TEKLAB, INC. Chain of Custody

K174

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES NO

With: Ice Blue Ice

Preserved in: Lab Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp:

Sampler: Joseph Riley/Caleigh Collins

QC Level: 3

Project#

22120076

Comments: Please Issue reports and invoices via email only

Please analyze for Radium 226/228 on your standard turn around time

Samples collected from an IL site

Batch QC is required for all analyses requested. EDD requested.

Contact: Elizabeth Hurley
Requested Due Date: Standard TAT

Email: EHurley@TekLabInc.com

Phone: (618) 344-1004 x33

PLEASE NOTE-

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

*Relinquished By

Lammes

Date/Time

12/21/23 1800

Received By

Date/Time

12/27/22 108

<u>Sample Receipt Checklist</u>	<u>If Applicable</u>		
DOC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
DOC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Pres.Correct/Check:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	GBA&5.4+0=54	
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	58215898 453/	

which does not provide client/sampler information without proper authorization, and proprietary rights, directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

APPENDIX C

**2023 Data Usability Assessment
Report**

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring
Reviewing Company: WSP USA
Data Evaluator: Candace Cocca
Checked by: Danielle Sylvia Cofelice
Laboratory: Teklab, Inc., Pace Analytical Services, LLC
Matrix: Water Soil Sed. Waste Other:

Project Number: GL21467997.001
Project Manager: Danielle Sylvia Cofelice
Data Evaluation Date: February 7, 2023
Review Date: February 8, 2023
Lab Job #: 22120076

Analytical Methods (type and no.): Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

Sample Information: See Table 1

Applicable Data Validation Guidance: EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

COC and Sample Receipt	YES	NO	NA	COMMENTS
a) COC complete and correct?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 1 _____ (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)
b) COC signed and dated by both field and lab staff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Field QC samples provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD_____
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f) Were the correct preservatives used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g) Was the cooler temperature within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Data Package Information	YES	NO	NA	COMMENTS
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) All samples reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Requested analyte list reported?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 2 _____
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
g) Solid samples met %moisture criteria (> _____ %)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
h) Were any sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i) Results below the RL appropriately qualified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Laboratory Case Narrative	YES	NO	NA	COMMENTS
a) Does the laboratory narrative indicate deficiencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See items below _____

Holding Times	YES	NO	NA	COMMENTS
a) Were holding times met for sample extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were holding times met for sample analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 3 _____

QA LEVEL I - DATA VERIFICATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4 _____
c) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4 _____
d) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4 _____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Table 1 _____
b) Field dup. met precision criteria (RPD 30%)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 5 _____

Overall Evaluation	YES	NO	NA	COMMENTS
a) Were there any other technical problems not previously addressed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes 6-10 _____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

- 1) A sample time was not recorded on the COC for sample EP-3. The laboratory used a sample time of 00:00. No action was taken other than to note.
- 2) Field parameter data was not included in the data package due to lab error. The digital file containing the information was lost on the external flash drive. The client was notified on January 12, 2023. There is no action other than to note.
- 3) All samples were analyzed outside the hold time for total dissolved solids. The hold time for total dissolved solids is 7 days and the samples were analyzed a few hours outside of holding time. Associated detected results are considered potentially biased low.
- 4) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Field and equipment blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
FB 22120076-010	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
EB 22120076-009	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
EB 22120076-009	Metals	Cobalt	0.0002 J	0.0010	mg/L
EB 22120076-009	Radium	Radium-226	0.330	0.329	pCi/L
EB 22120076-009	Radium	Combined Radium	0.330 J	0.491	pCi/L
FB 22120076-010	Radium	Radium-228	0.425	0.312	pCi/L
FB 22120076-010	Radium	Combined Radium	0.438	0.363	pCi/L
MBLK-201246	Metals	Antimony	0.0010 J	0.0010	mg/L
(MB) R3880595-1	Radium	Radium-226	0.0599 J	0.0693	pCi/L

- 5) Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected.

QA LEVEL I - DATA VERIFICATION CHECKLIST

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-6	Anions	Fluoride	0.06 J	0.04 J	0.10	0.10	mg/L	40
EP-6	Metals	Chromium	0.0009 J	< 0.0015 U	0.0015	0.0015	mg/L	50
EP-6	Metals	Mercury	0.00013 J	< 0.00020 U	0.00020	0.00020	mg/L	42
EP-6	Radium	Combined Radium	< 0.515 U	0.375 J	0.515	0.501	pCi/L	31.5

- 6) Sulfate matrix spike and/or matrix spike duplicate recoveries, associated with batches R322958 and R323058, are below QC limits. The spiked samples were not collected from the project site. Data usability is not affected.
- 7) The boron matrix spike duplicate recovery, associated with batch 201307, is above QC limits. The associated matrix spike and relative percent difference is within QC limits. The spiked sample was not collected from the project site. Data usability is not affected.
- 8) Mercury matrix spike and/or matrix spike duplicate recoveries, associated with batch 201368 (all results), are above QC limits. The spiked samples were either not collected from the project site or the associated matrix spike duplicate and relative percent difference is within QC limits. Data usability is not affected.
- 9) The mercury laboratory control sample recovery (128.5%), associated with batch 201368 (all results), is above QC limits (115%). A laboratory control sample duplicate was not analyzed. The associated detected results are considered potentially biased high.
- 10) The radium-226 laboratory duplicate relative percent difference (108), associated with sample Field Duplicate (L1570795-11), is above QC limits (20). Both the primary sample and the duplicate are non-detect. Data usability is not affected.

Definitions:

COC: Chain of Custody

QC: Quality Control

LCS: Laboratory Control Sample

QL: Quantitation Limit

LCS: Laboratory Control Sample

RL: Reporting Limit

MDL: Method Detection Limit

RPD: Relative Percent Difference

MS/MSD: Matrix Spike/Matrix Spike Duplicate

SDG: Sample Delivery Group

TABLE 1

Sample Collection and Analysis Summary
SIPC CCR Groundwater Monitoring

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples	Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Radium-226/228	Sulfate	TDS
22120076-001	EBG	12/19/2022	EBG	GW	-	X		X	X	X	X	X	X
22120076-002	EP-1	12/20/2022	EP-1	GW	-	X		X	X	X	X	X	X
22120076-003	EP-2	12/20/2022	EP-2	GW	-	X		X	X	X	X	X	X
22120076-004	EP-3	12/20/2022	EP-3	GW	-	X		X	X	X	X	X	X
22120076-005	EP-4	12/20/2022	EP-4	GW	-	X		X	X	X	X	X	X
22120076-006	EP-5	12/20/2022	EP-5	GW	-	X		X	X	X	X	X	X
22120076-007	EP-6	12/20/2022	EP-6	GW	-	X		X	X	X	X	X	X
22120076-008	EP-7	12/20/2022	EP-7	GW	-	X		X	X	X	X	X	X
22120076-009	Equipment Blank	12/20/2022	-	WQ	EB	X		X	X	X	X	X	X
22120076-010	Field Blank	12/20/2022	-	WQ	FB	X		X	X	X	X	X	X
22120076-011	Field Duplicate	12/20/2022	EP-6	GW	FD	X		X	X	X	X	X	X

Notes:

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories.

Abbreviations:

FB: Field Blank

FD: Field Duplicate

GW: Ground Water

WQ: Water Quality

QC: Quality Control

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring
Reviewing Company: WSP USA
Data Evaluator: Candace Cocca
Checked by: Danielle Sylvia Cofelice
Laboratory: Teklab, Inc., Pace Analytical Services, LLC

Project Number: GL21467997.001
Project Manager: Danielle Sylvia Cofelice
Data Evaluation Date: April 25, 2023
Review Date: May 16, 2023
Lab Job #: 23030368

Matrix: Aqueous Soil Sediment Waste Air Other:

Analytical Methods: Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

Sample Information: See Table 1.

Data Qualification: No qualifications required

Work Plan or QAPP reference:

Data Validation Guidance: EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

Chain of Custody (COC) and Sample Receipt	YES	NO	NA	COMMENT
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Data Package Information	YES	NO	NA	COMMENT
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

QA LEVEL I - DATA VERIFICATION CHECKLIST

Analytical Assessment	YES	NO	NA	COMMENT
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) All detected sample results within the calibrated range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Did the laboratory satisfy the requested sensitivity requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Laboratory Case Narrative	YES	NO	NA	COMMENT
a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Sample Preservation and Holding Time	YES	NO	NA	COMMENT
a) Were samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were holding times met for sample preparation and/or extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were holding times met for sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Blanks	YES	NO	NA	COMMENTS
a) No analytes detected in the associated preparation/method blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1
b) No analytes detected in the associated trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) No analytes detected in the associated field or equipment/rinsate blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 1

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Was field duplicate RPD or absolute difference criteria acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2

Overall Evaluation	YES	NO	NA	COMMENTS
a) No other technical problems that lead to data rejection identified by laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were data acceptable and usable, except where noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Comments/Notes:

- 1) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Field and equipment blanks are compared to primary samples collected on the same day, however, due to field oversight no primary samples were collected on the same day as the equipment and field blanks. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
EB 23030368-009	Metals	Chromium	0.0014 J	0.0015	mg/L
FB 23030368-010	Metals	Chromium	0.0008 J	0.0015	mg/L
(MB) R3918340-1	Radium	Radium-228	0.255 J	0.255	pCi/L

- 2) Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated.

QA LEVEL I - DATA VERIFICATION CHECKLIST

Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-4	Metals	Chromium	0.0026	0.0038	0.0015	0.0015	mg/L	38

TABLE 1

**Sample Collection and Analysis Summary
SIPC CCR Groundwater Monitoring**

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples	Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Radium-226/228	Sulfate	TDS
23030368-001	EBG	3/21/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23030368-002	EP-1	3/15/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23030368-003	EP-2	3/21/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23030368-004	EP-3	3/21/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23030368-005	EP-4	3/21/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23030368-006	EP-5	3/15/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23030368-007	EP-6	3/15/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23030368-008	EP-7	3/21/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23030368-009	Equipment Blank	3/16/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23030368-010	Field Blank	3/16/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23030368-011	Field Duplicate	3/21/2023	EP-4	GW	FD	X	X	X	X	X	X	X	X

Notes:

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories

Abbreviations:

FB: Field Blank
 EB: Equipment Blank
 FD: Field Duplicate
 GW: Ground Water
 WQ: Water Quality
 QC: Quality Control

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring
Reviewing Company: WSP USA
Data Evaluator: Candace Cocca
Checked by: Danielle Sylvia Cofelice
Laboratory: Teklab, Inc.

Project Number: GL21467997.001
Project Manager: Danielle Sylvia Cofelice
Data Evaluation Date: June 7, 2023
Review Date: June 16, 2023
Lab Job #: 23051194

Matrix: Aqueous Soil Sediment Waste Air Other:

Analytical Methods: Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A

Sample Information: See Table 1.

Data Qualification: No qualifications required.

Work Plan or QAPP reference:

Data Validation Guidance: EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

Chain of Custody (COC) and Sample Receipt	YES	NO	NA	COMMENT
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Data Package Information	YES	NO	NA	COMMENT
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

QA LEVEL I - DATA VERIFICATION CHECKLIST

Analytical Assessment	YES	NO	NA	COMMENT
e) All detected sample results within the calibrated range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Did the laboratory satisfy the requested sensitivity requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Laboratory Case Narrative	YES	NO	NA	COMMENT
a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Sample Preservation and Holding Time	YES	NO	NA	COMMENT
a) Were samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were holding times met for sample preparation and/or extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were holding times met for sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Blanks	YES	NO	NA	COMMENTS
a) No analytes detected in the associated preparation/method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) No analytes detected in the associated trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) No analytes detected in the associated field or equipment/rinsate blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 1

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Was field duplicate RPD or absolute difference criteria acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Overall Evaluation	YES	NO	NA	COMMENTS
a) No other technical problems that lead to data rejection identified by laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were data acceptable and usable, except where noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Comments/Notes:

- 1) Analytes were detected in the equipment blank, as shown in the table below. Equipment blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
Equipment Blank	Metals	Calcium	0.044 J	0.10	mg/L
Equipment Blank	Metals	Cobalt	0.0003 J	0.0010	mg/L

TABLE 1

**Sample Collection and Analysis Summary
SIPC CCR Groundwater Monitoring**

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples	Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Sulfate	TDS
23051194-001	EP-1	5/24/2023	EP-1	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-002	EP-2	5/24/2023	EP-2	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-003	EP-3	5/24/2023	EP-3	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-004	EP-4	5/24/2023	EP-4	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-005	EP-5	5/24/2023	EP-5	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-006	EP-7	5/24/2023	EP-7	GW	-	X X X	X X X	X X X	X X X	X X X	X X X	X X X
23051194-007	Equipment Blank	5/24/2023	-	WQ	EB	X -	X X X	X X X	X X X	X X X	X X X	X X X
23051194-008	Field Blank	5/24/2023	-	WQ	FB	X -	X X X	X X X	X X X	X X X	X X X	X X X
23051194-009	Field Duplicate	5/24/2023	EP-4	GW	FD	X X X	X X X	X X X	X X X	X X X	X X X	X X X

Notes:

All analyses performed by Teklab in Collinsville, IL

Abbreviations:

FB: Field Blank
 EB: Equipment Blank
 FD: Field Duplicate
 GW: Ground Water
 WQ: Water Quality
 QC: Quality Control
 TDS: Total Dissolved Solids

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring
Reviewing Company: WSP USA
Data Evaluator: Candace Cocca
Checked by: Danielle Sylvia Cofelice
Laboratory: Teklab, Inc., Pace Analytical Services, LLC

Project Number: GL21467997.001
Project Manager: Danielle Sylvia Cofelice
Data Evaluation Date: July 14, 2023
Review Date: July 27, 2023
Lab Job #: 23060001

Matrix: Aqueous Soil Sediment Waste Air Other:

Analytical Methods: Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

Sample Information: See Table 1.

Data Qualification: No qualifications required.

Work Plan or QAPP reference: None

Data Validation Guidance: EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

Chain of Custody (COC) and Sample Receipt	YES	NO	NA	COMMENT
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1

Data Package Information	YES	NO	NA	COMMENT
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

QA LEVEL I - DATA VERIFICATION CHECKLIST

Analytical Assessment	YES	NO	NA	COMMENT
e) All detected sample results within the calibrated range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Did the laboratory satisfy the requested sensitivity requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Laboratory Case Narrative	YES	NO	NA	COMMENT
a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Sample Preservation and Holding Time	YES	NO	NA	COMMENT
a) Were samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were holding times met for sample preparation and/or extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were holding times met for sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Blanks	YES	NO	NA	COMMENTS
a) No analytes detected in the associated preparation/method blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 2
b) No analytes detected in the associated trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) No analytes detected in the associated field or equipment/rinsate blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 2

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Was field duplicate RPD or absolute difference criteria acceptable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 3

Overall Evaluation	YES	NO	NA	COMMENTS
a) No other technical problems that lead to data rejection identified by laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were data acceptable and usable, except where noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Comments/Notes:

- 1) The cooler temperatures were outside QC limits ($4 \pm 2^\circ\text{C}$) upon receipt to the laboratory (13.2°C and 24.8°C). Following Guidelines and using professional judgment, no qualifications were required as samples were submitted on ice to the laboratory on the same day as sample collection.
- 2) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Equipment and field blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
Equipment Blank	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
Equipment Blank	Metals	Calcium	0.090 J	0.10	mg/L
Field Blank	Radium	Radium-228	2.31	0.472	pCi/L
Field Blank	Radium	Radium-226	0.261	0.198	pCi/L
Field Blank	Radium	Combined Radium	2.57	0.512	pCi/L
(MB) R3945503-1	Radium	Radium-228	0.137 J	0.273	pCi/L
(MB) R3945879-1	Radium	Radium-228	0.601	0.288	pCi/L
(MB) R3944988-1	Radium	Radium-226	0.0385 J	0.0662	pCi/L

QA LEVEL I - DATA VERIFICATION CHECKLIST

3. Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected. When the results are less than 5x the reporting limit and the absolute value between the results is greater than the reporting limit, associated detected results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-3	Metals	Beryllium	< 0.0010	0.0006 J	0.0010	0.0010	mg/L	50
EP-3	Metals	Chromium	0.0011 J	<0.0015	0.0015	0.0015	mg/L	31
EP-3	Radium	Radium-228	0.704 J	1.15	1.11	0.413	pCi/L	48.1
EP-3	Radium	Combined Radium	1.01 J	1.51	1.14	0.460	pCi/L	39.7

TABLE 1
Sample Collection and Analysis Summary
SIPC CCR Groundwater Monitoring

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples	Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Radium-226/228	Sulfate	TDS
						X	X	X	X	X	X	X	X
23060001-001	EBG	6/7/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23060001-002	EP-1	6/6/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23060001-003	EP-2	6/6/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23060001-004	EP-3	6/6/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23060001-005	EP-4	6/7/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23060001-006	EP-5	6/7/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23060001-007	EP-6	6/6/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23060001-008	EP-7	6/6/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23060001-009	Equipment Blank	6/7/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23060001-010	Field Blank	6/7/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23060001-011	Field Duplicate	6/6/2023	EP-3	GW	FD	X	X	X	X	X	X	X	X

Notes:

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories

Abbreviations:

EB: Equipment Blank
 FB: Field Blank
 FD: Field Duplicate
 GW: Ground Water
 QC: Quality Control
 TDS: Total Dissolved Solids
 WQ: Water Quality

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring

Reviewing Company: WSP USA

Data Evaluator: Candace Cocca

Checked by: Danielle Sylvia Cofelice

Laboratory: : Teklab, Inc., Summit Environmental Technologies, Inc.

Project Number: GL21467997.001

Project Manager: Danielle Sylvia Cofelice

Data Evaluation Date: November 16, 2023

Review Date: November 17, 2023

Lab Job #: 23090001

Matrix: Aqueous Soil Sediment Waste Air Other:

Analytical Methods: Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

Sample Information: See Table 1.

Data Qualification: No qualifications required.

Work Plan or QAPP reference: None

Data Validation Guidance: EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

Chain of Custody (COC) and Sample Receipt	YES	NO	NA	COMMENT
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Data Package Information	YES	NO	NA	COMMENT
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

QA LEVEL I - DATA VERIFICATION CHECKLIST

3. Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected. When the results are less than 5x the reporting limit and the absolute value between the results is greater than the reporting limit, associated detected results are considered potentially biased. When the results are greater than 5x the reporting limit, associated results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-3	General Chemistry	Sulfate	158	109	50	100	mg/L	37
EP-3	Metals	Calcium	52.6	37.1	0.100	0.100	mg/L	34.6
EP-3	Metals	Lithium	0.0694	0.0268	0.0030	0.0030	mg/L	88.6
EP-3	Metals	Selenium	0.0007 J	0.0010 U	0.0010	0.0010	mg/L	36

TABLE 1

**Sample Collection and Analysis Summary
SIPC CCR Groundwater Monitoring**

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples	Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Radium-226/228	Sulfate	TDS
						X	X	X	X	X	X	X	X
23090001-001	EBG	9/18/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23090001-002	EP-1	9/18/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23090001-003	EP-2	9/20/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23090001-004	EP-3	9/20/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23090001-005	EP-4	9/21/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23090001-006	EP-5	9/18/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23090001-007	EP-6	9/19/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23090001-008	EP-7	9/19/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23090001-009	Equipment Blank	9/21/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23090001-010	Field Blank	9/21/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23090001-011	Field Duplicate	9/20/2023	EP-3	GW	FD	X	X	X	X	X	X	X	X

Notes:

All analyses performed by Teklab in Collinsville, IL and Summit Environmental Technologies in Cuyahoga Falls, OH

Abbreviations:

EB: Equipment Blank
 FB: Field Blank
 FD: Field Duplicate
 GW: Ground Water
 QC: Quality Control
 TDS: Total Dissolved Solids
 WQ: Water Quality

January 31, 2024

APPENDIX D

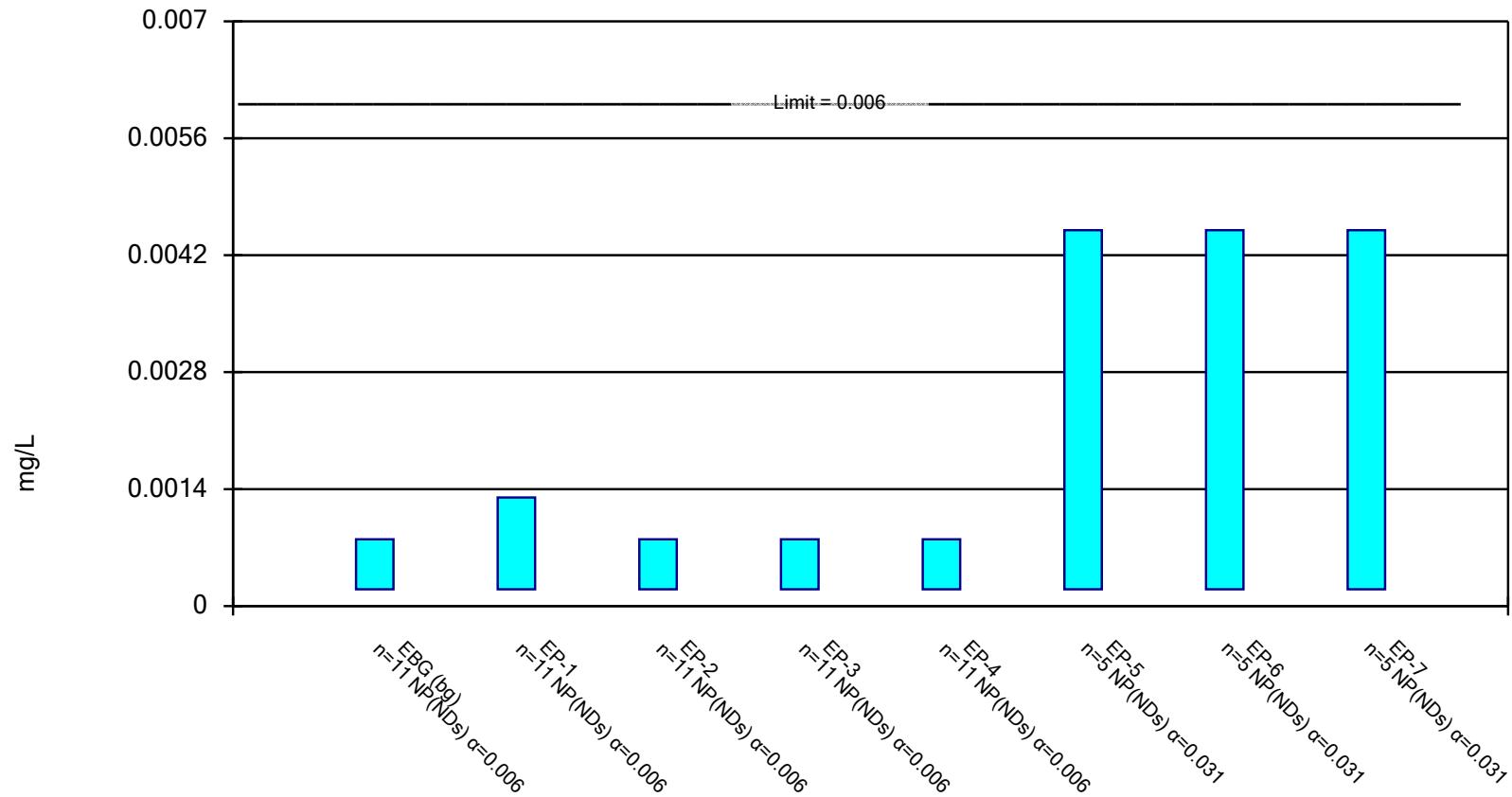
2023 Statistical Evaluation

APPENDIX D-1

**Q4 2022 Groundwater Protection
Standard Exceedances**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

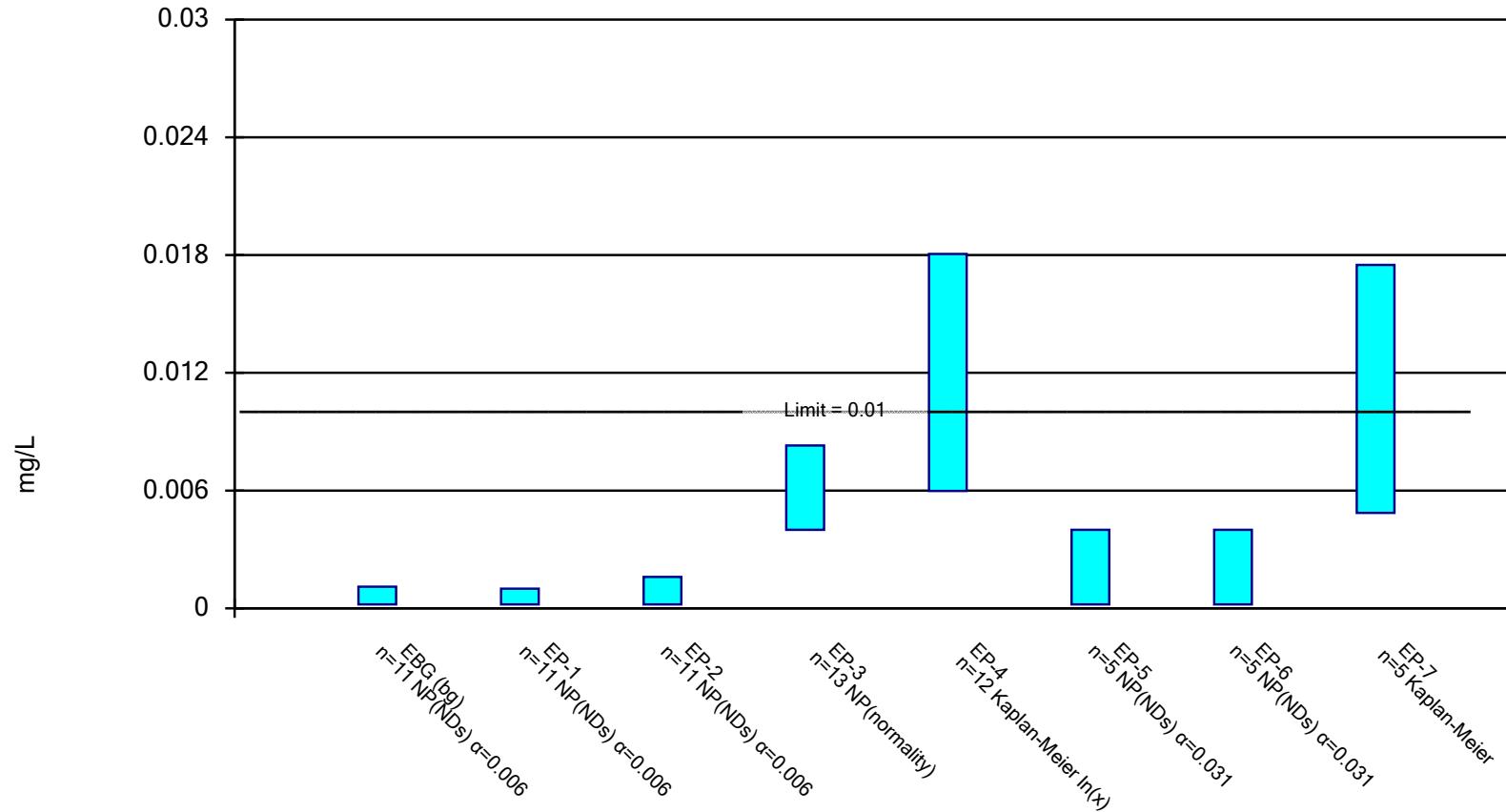


Constituent: Antimony Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

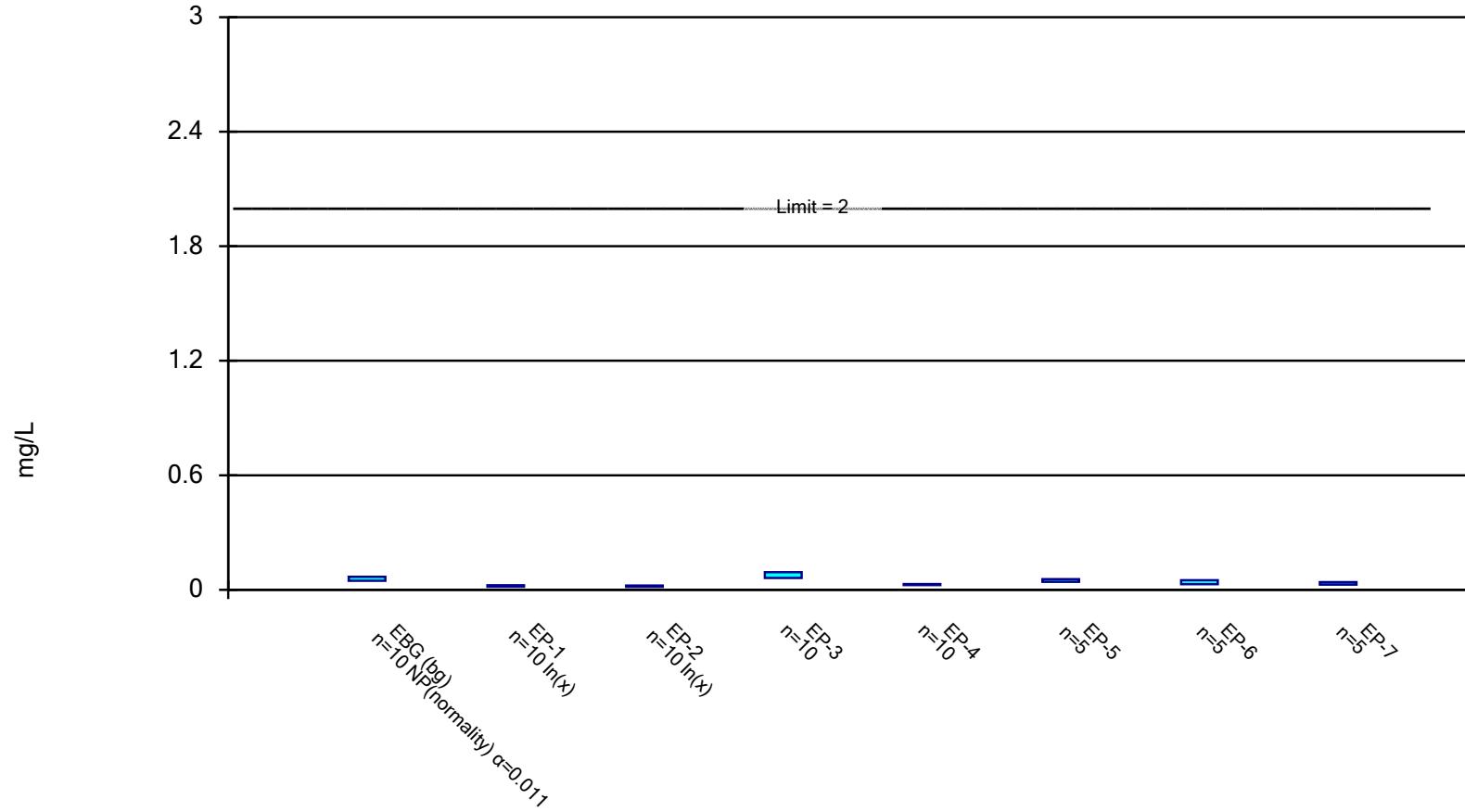


Constituent: Arsenic Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

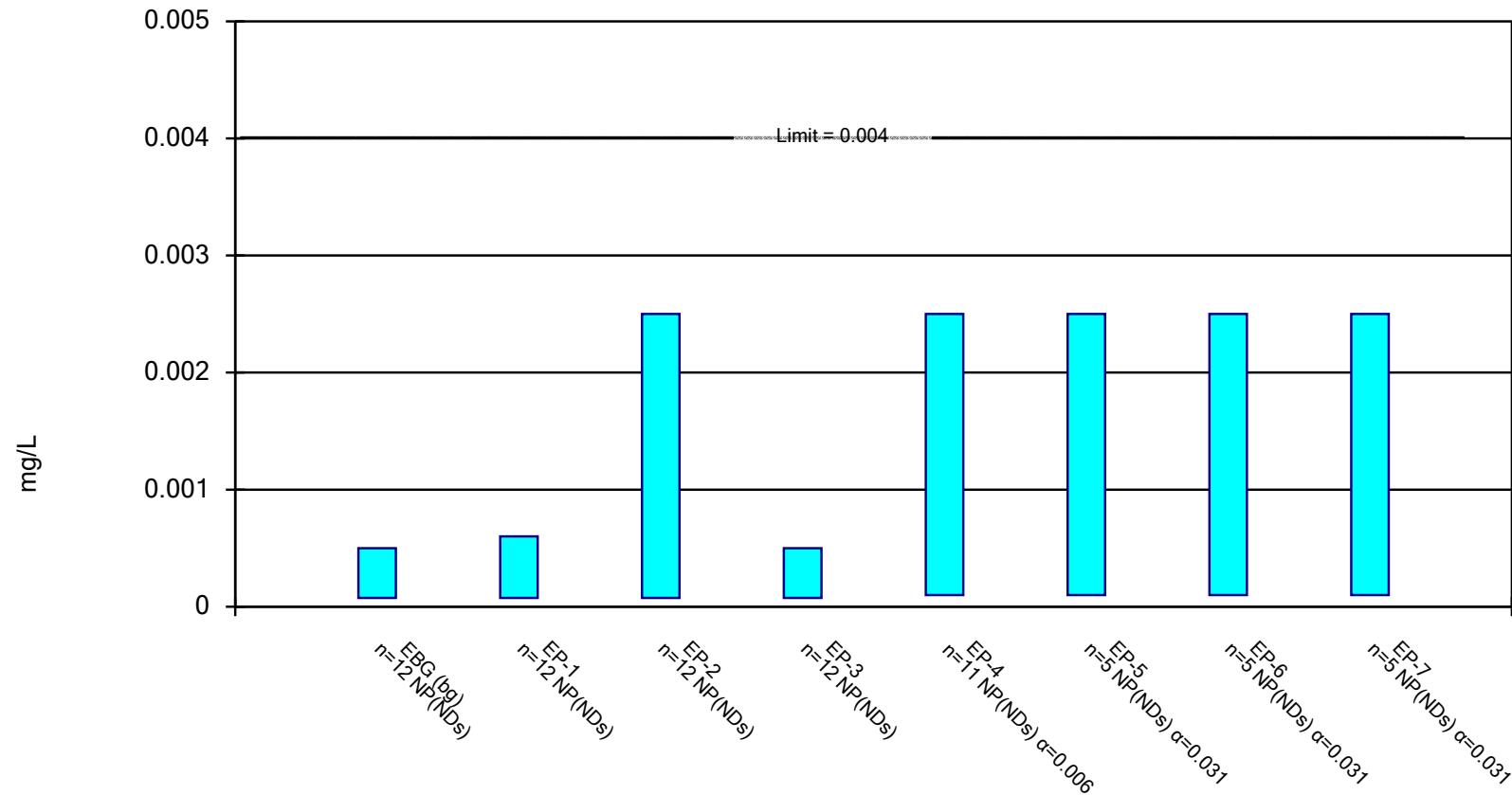


Constituent: Barium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

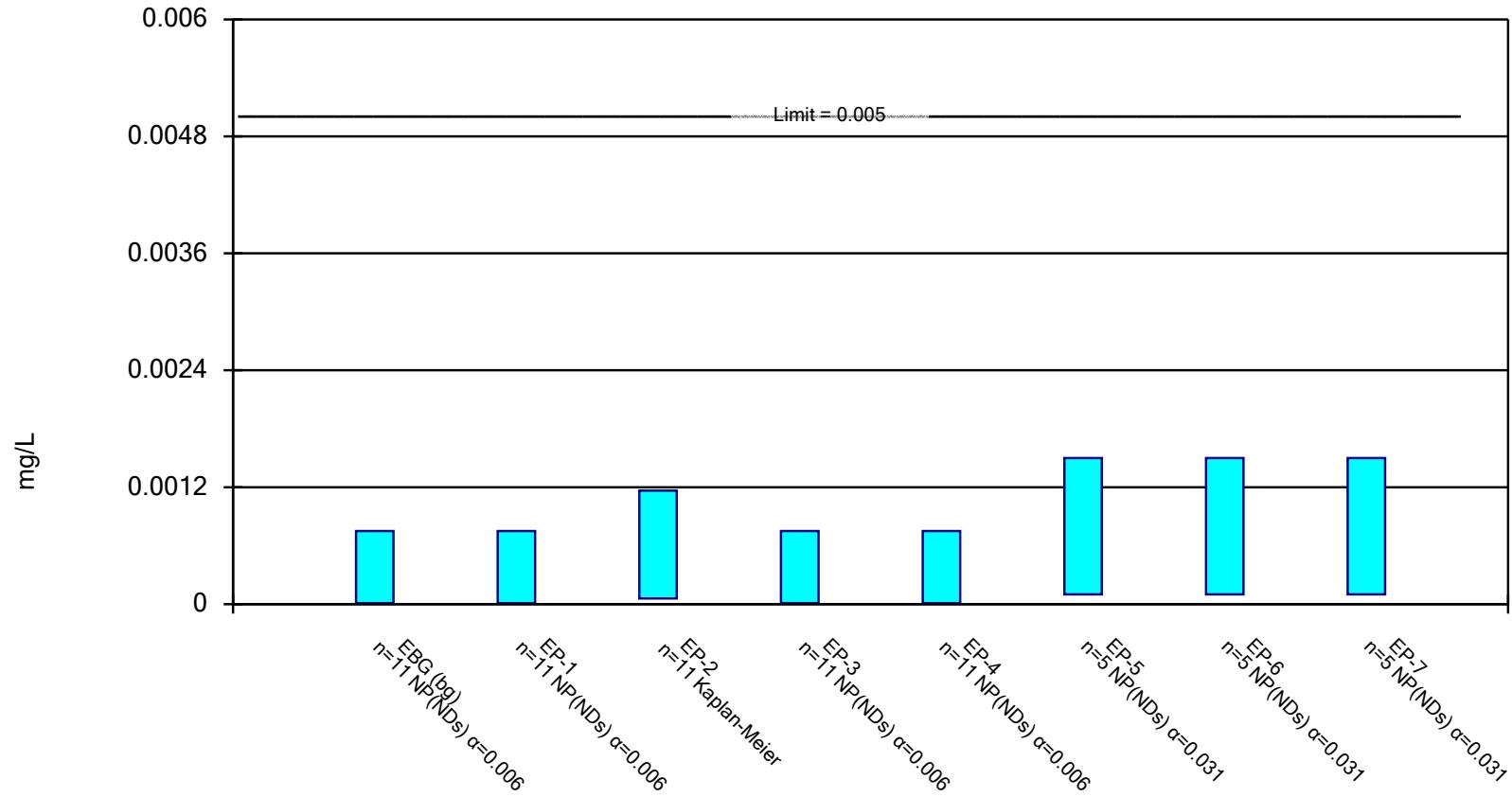


Constituent: Beryllium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

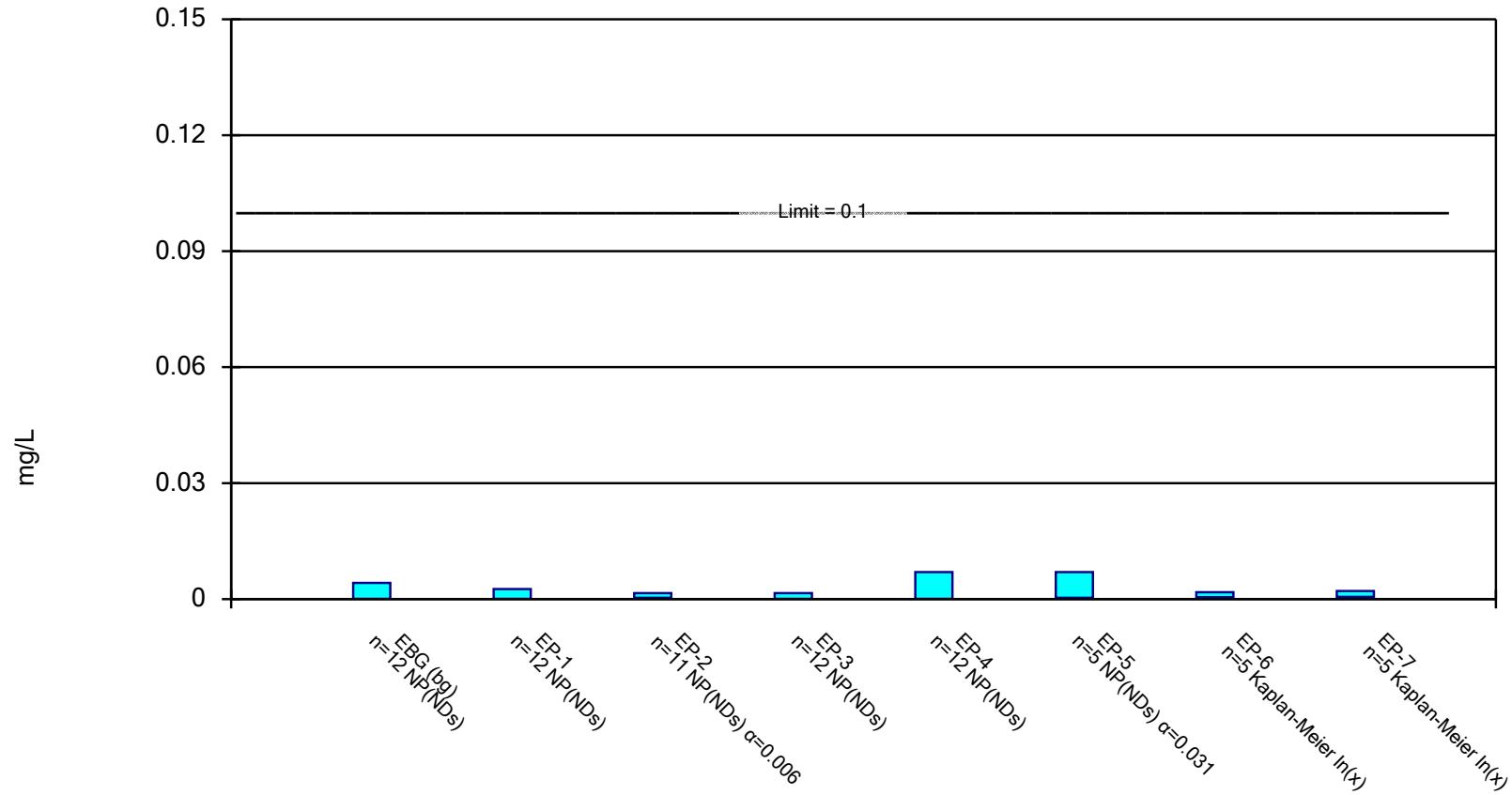


Constituent: Cadmium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

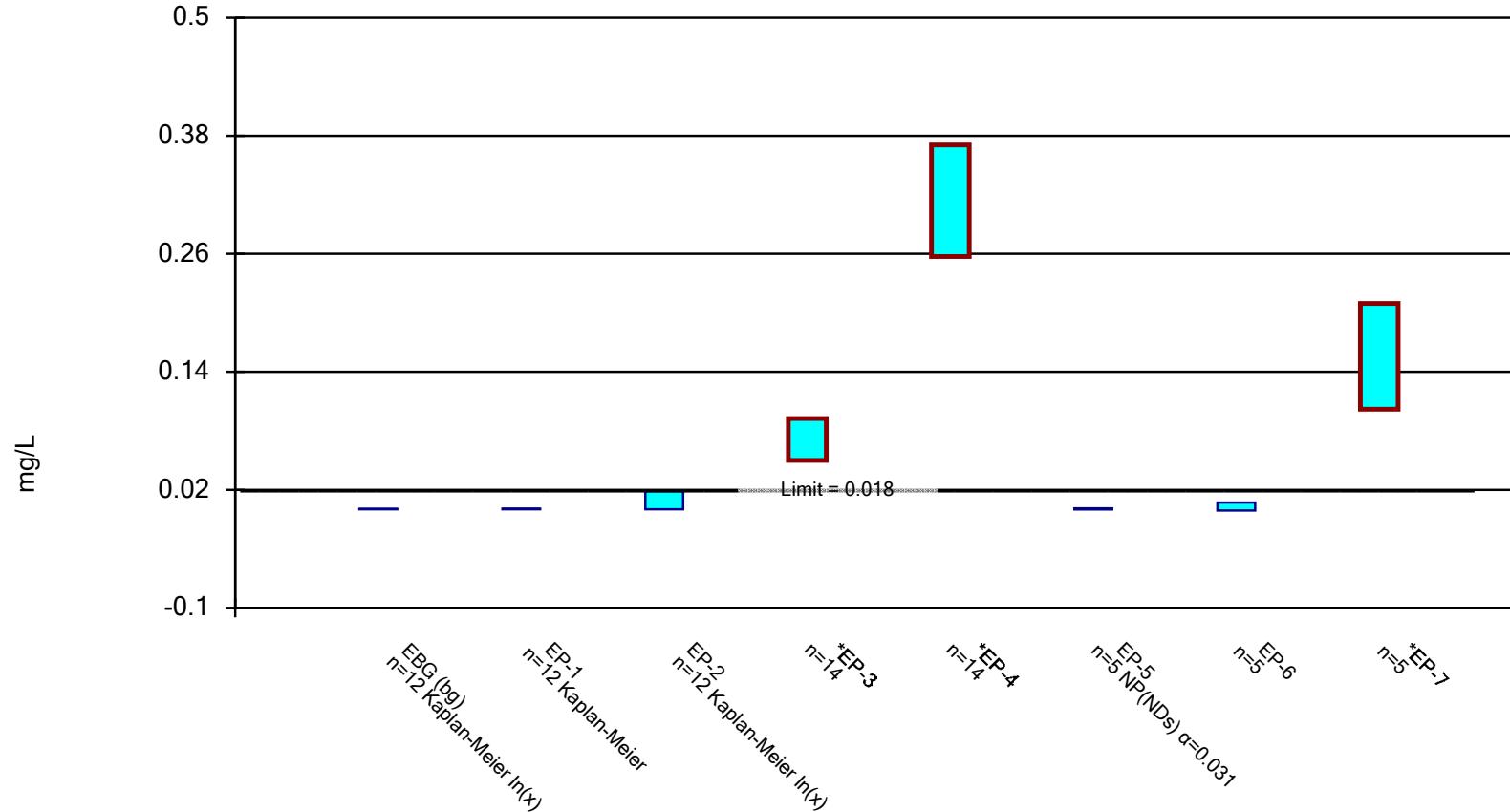


Constituent: Chromium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

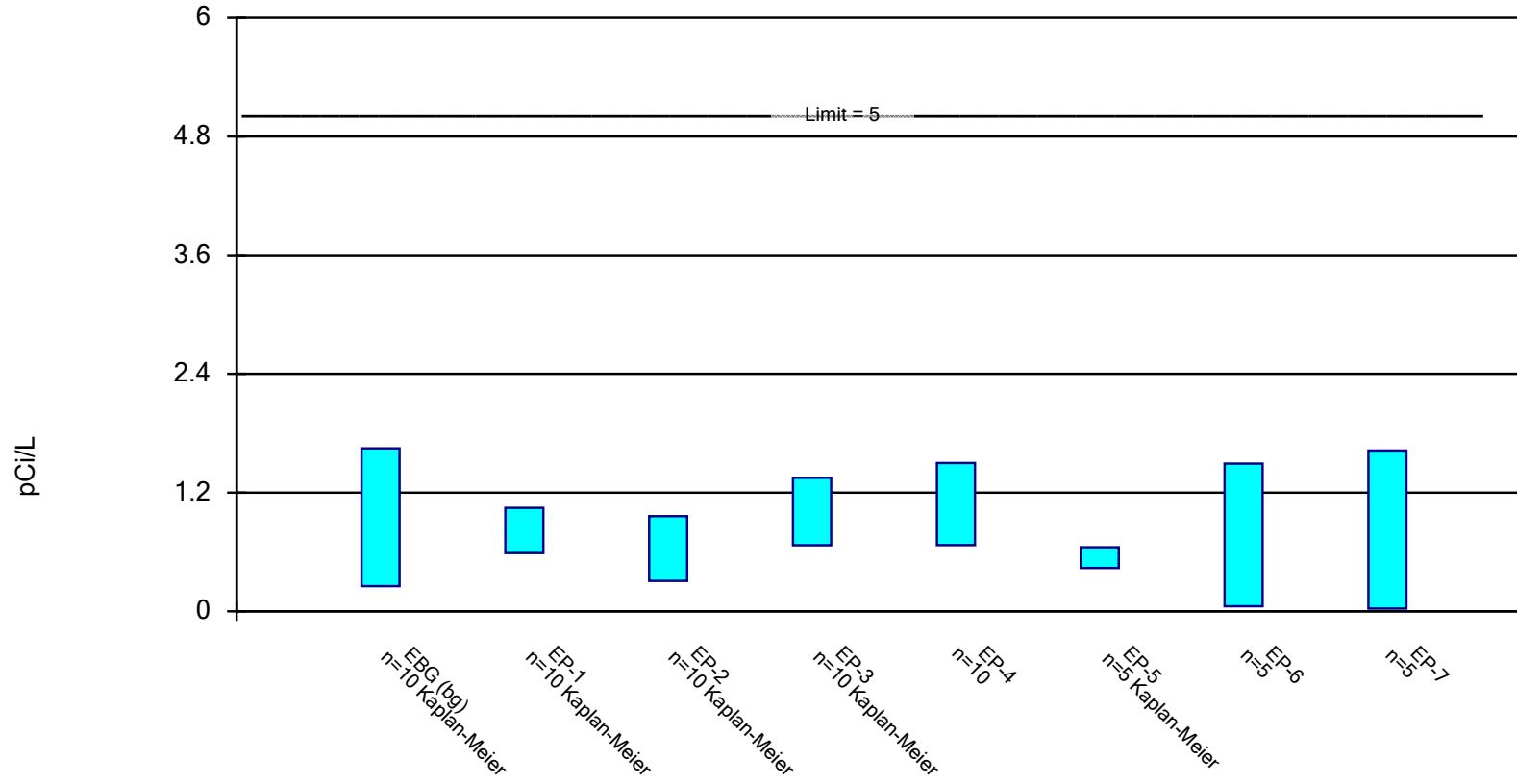


Constituent: Cobalt Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

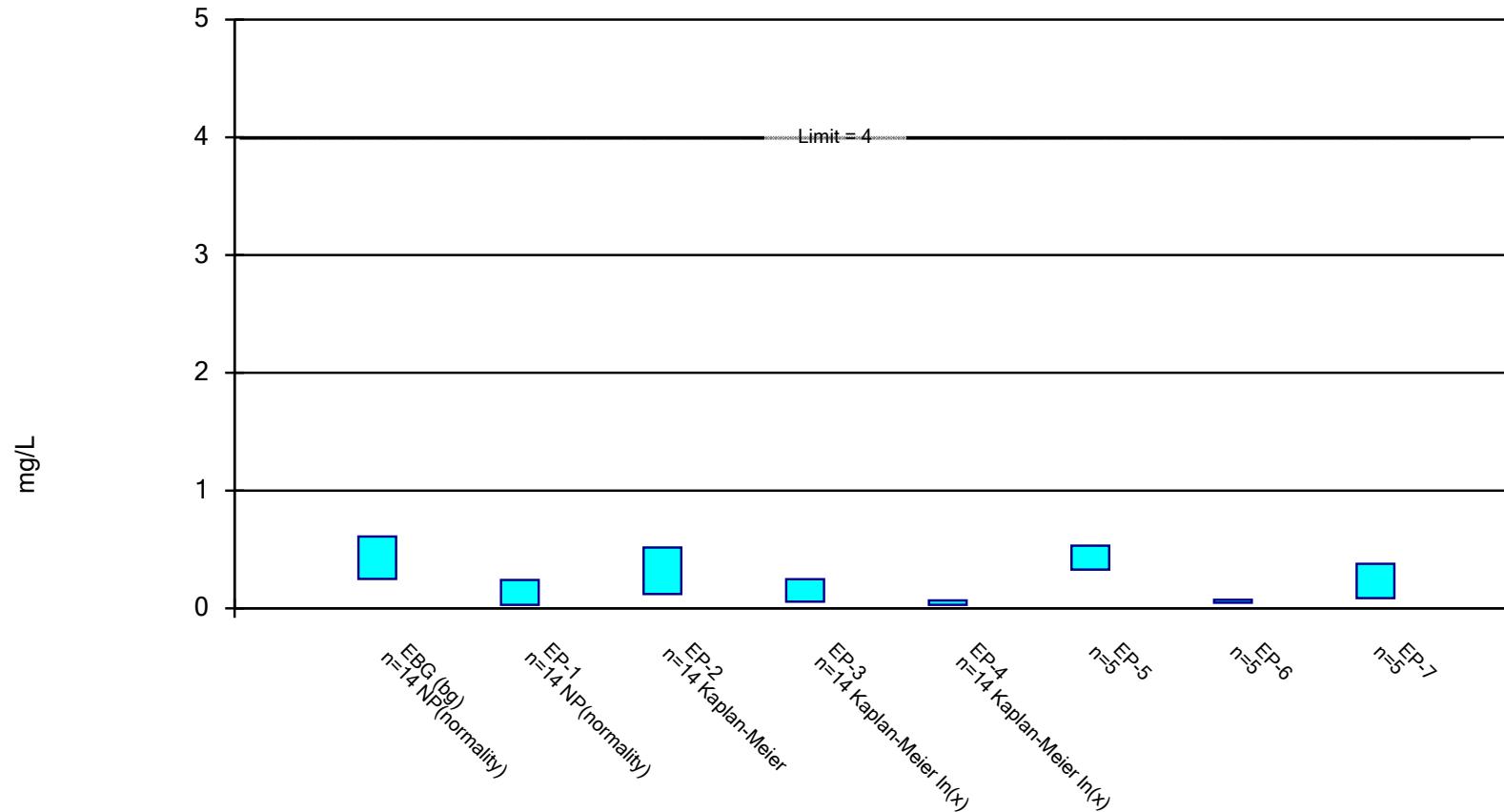


Constituent: Combined Radium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

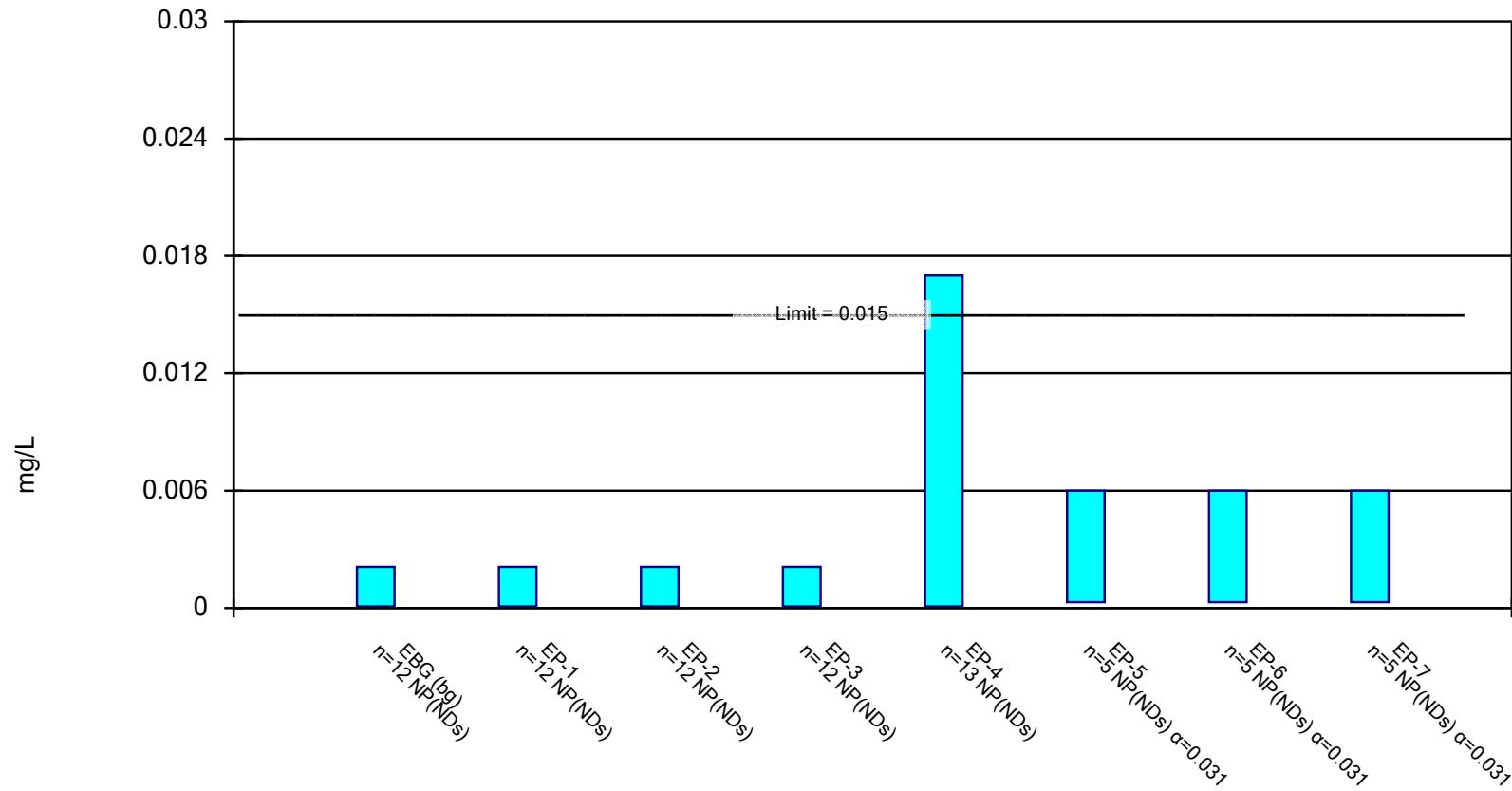


Constituent: Fluoride Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

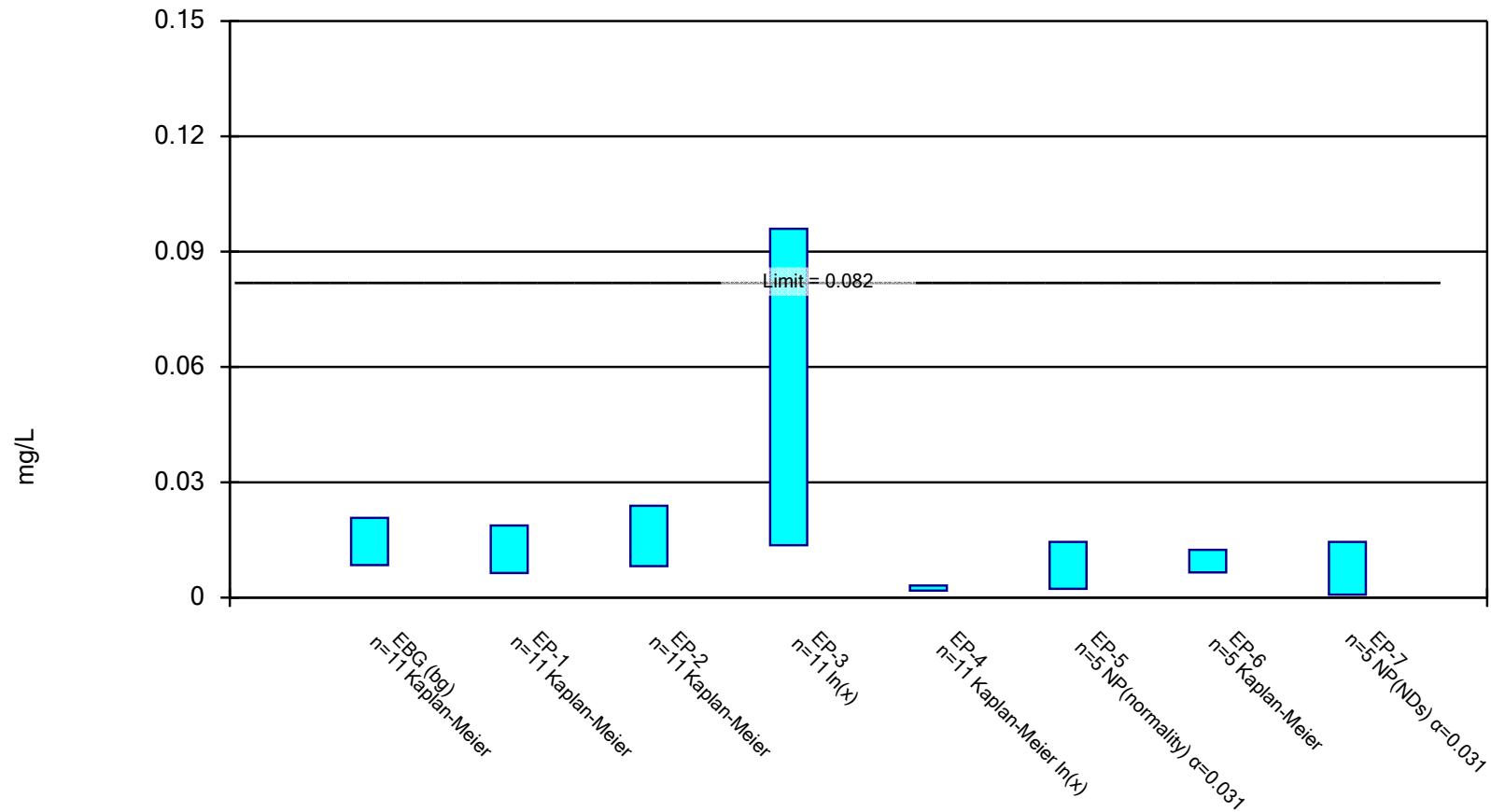


Constituent: Lead Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

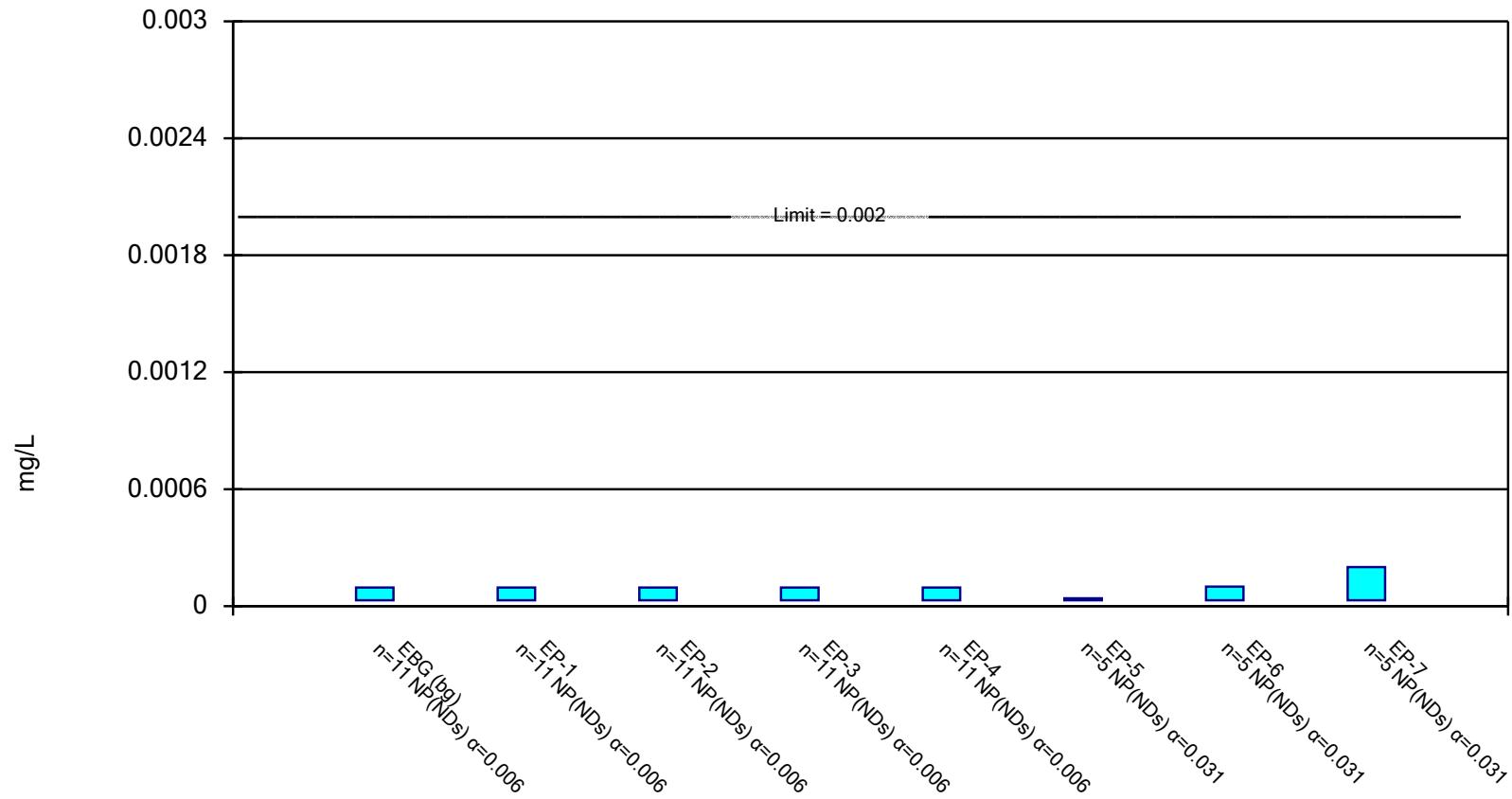


Constituent: Lithium Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

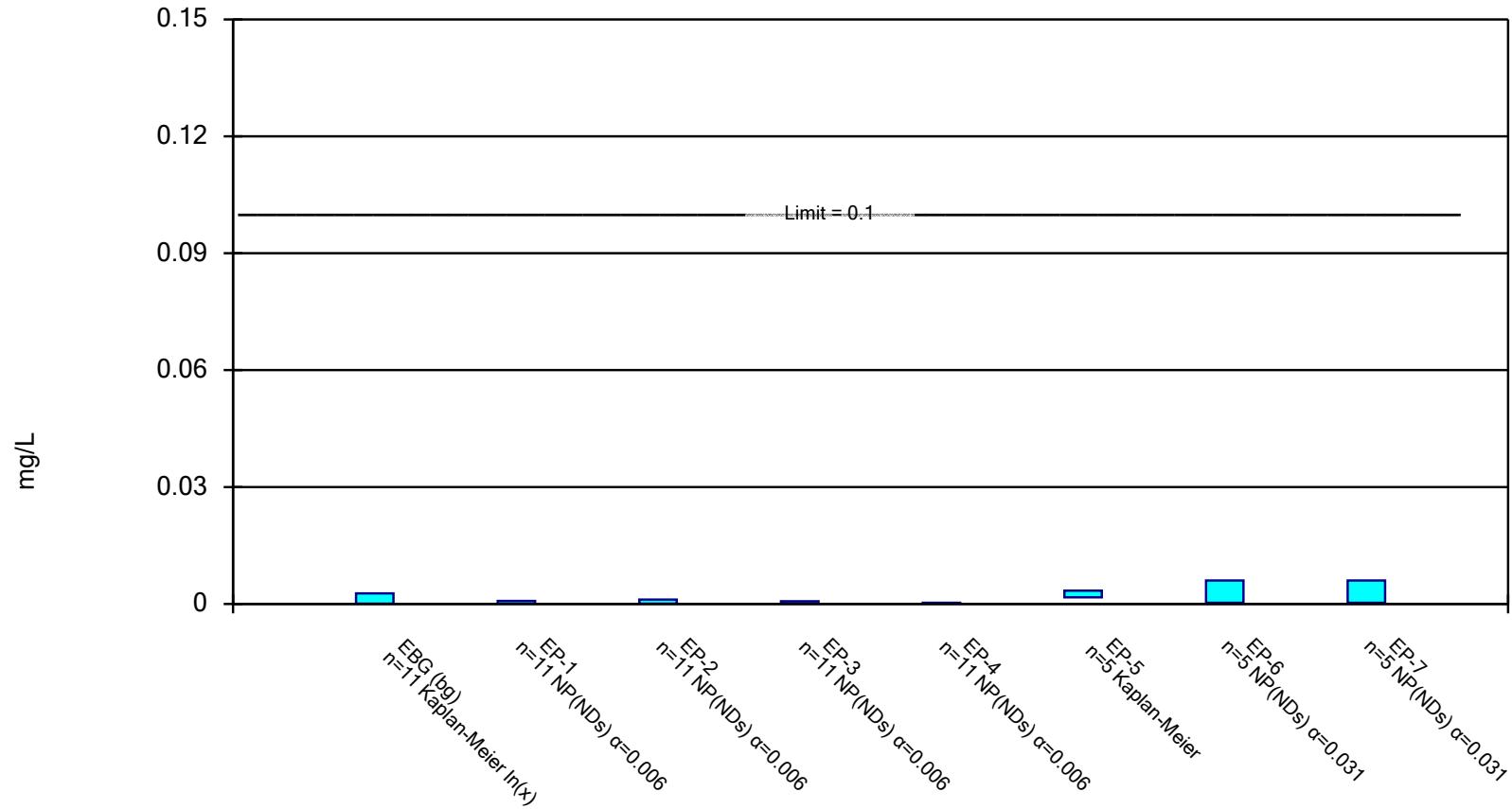


Constituent: Mercury Analysis Run 2/3/2023 3:06 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

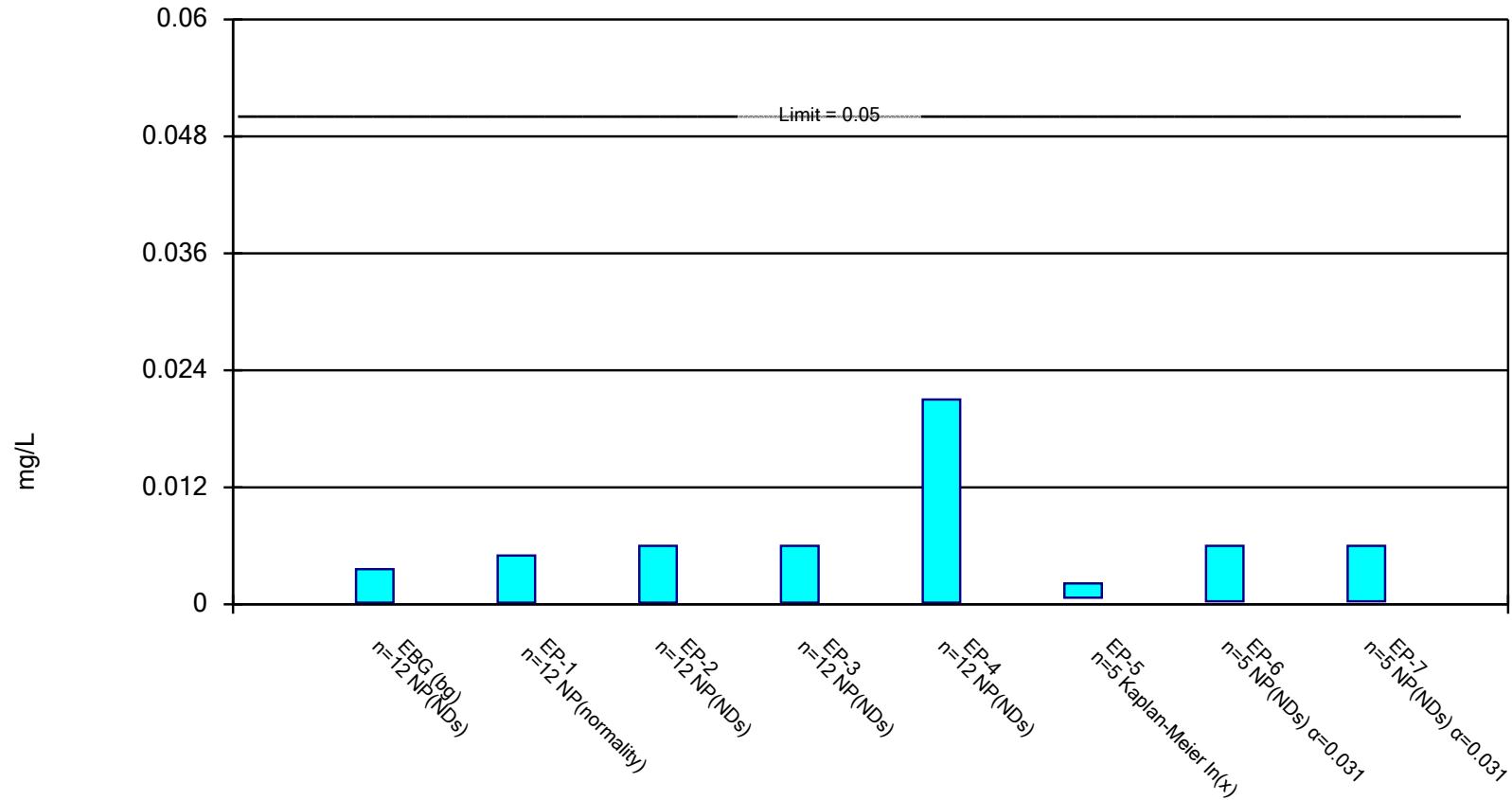


Constituent: Molybdenum Analysis Run 2/3/2023 3:07 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

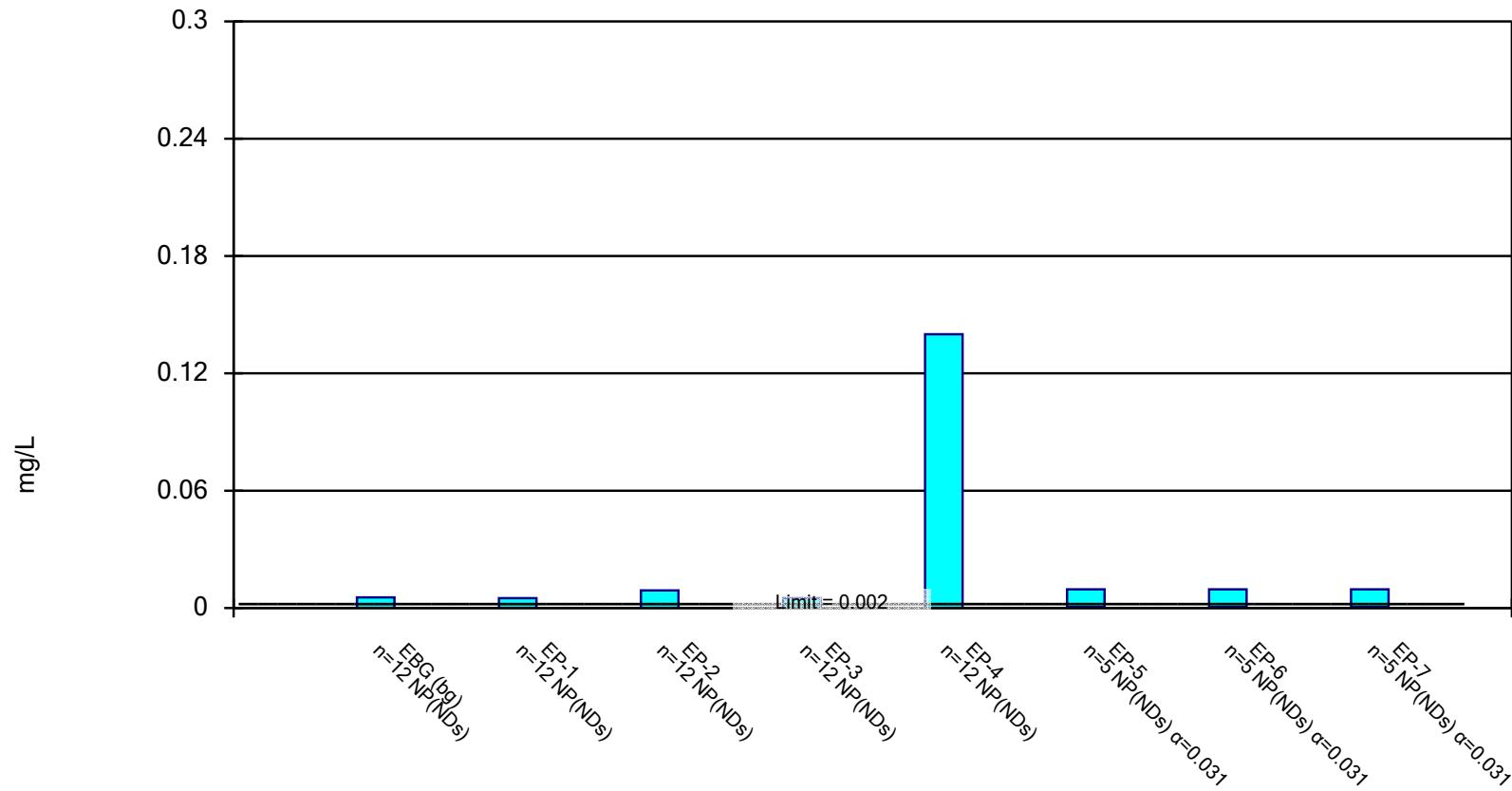


Constituent: Selenium Analysis Run 2/3/2023 3:07 PM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Thallium Analysis Run 2/3/2023 3:07 PM View: EPA GPS

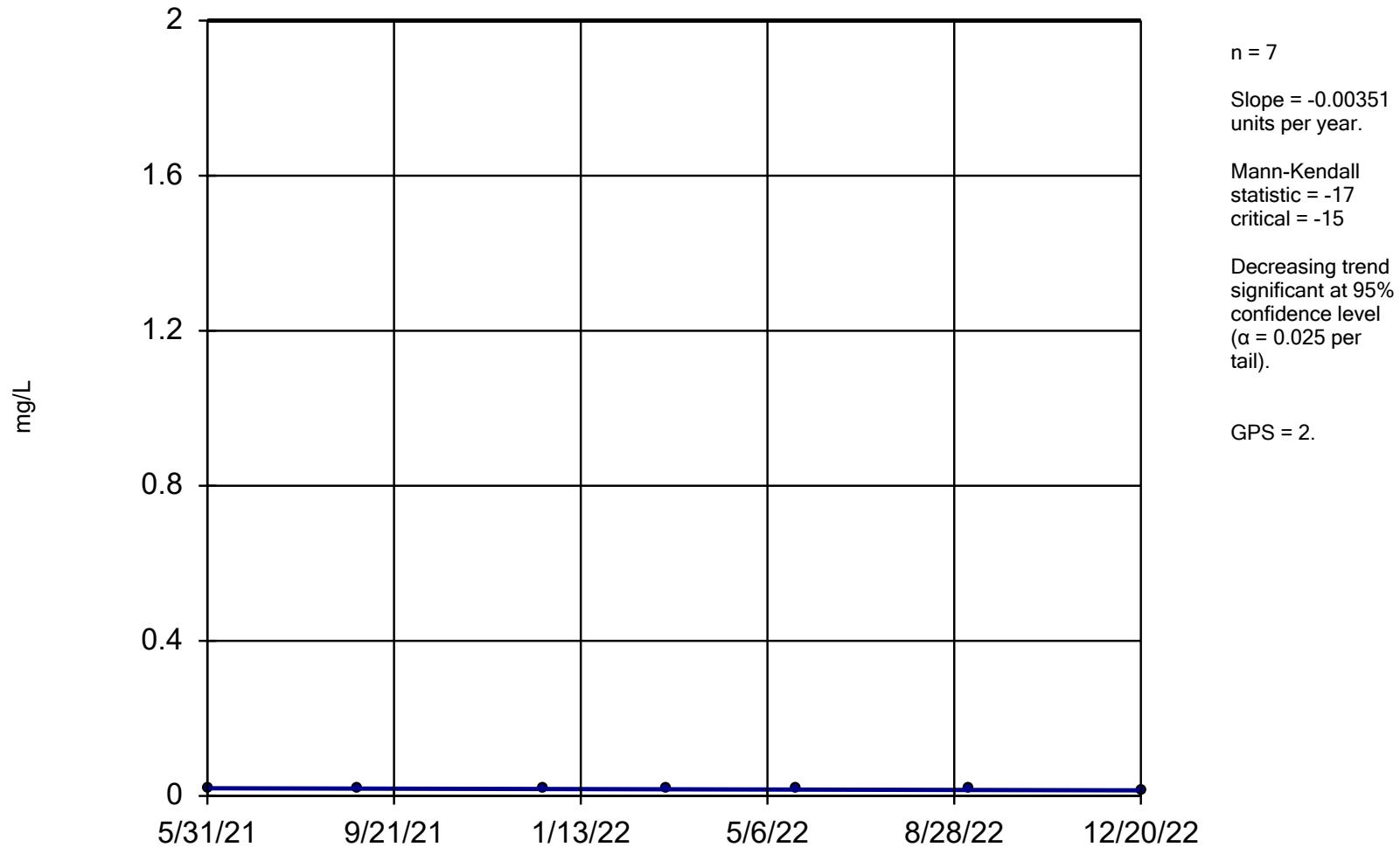
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-2

**Q4 2022 Statistically Significant
Trends**

Sen's Slope Estimator

EP-1



n = 7

Slope = -0.00351
units per year.

Mann-Kendall
statistic = -17
critical = -15

Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

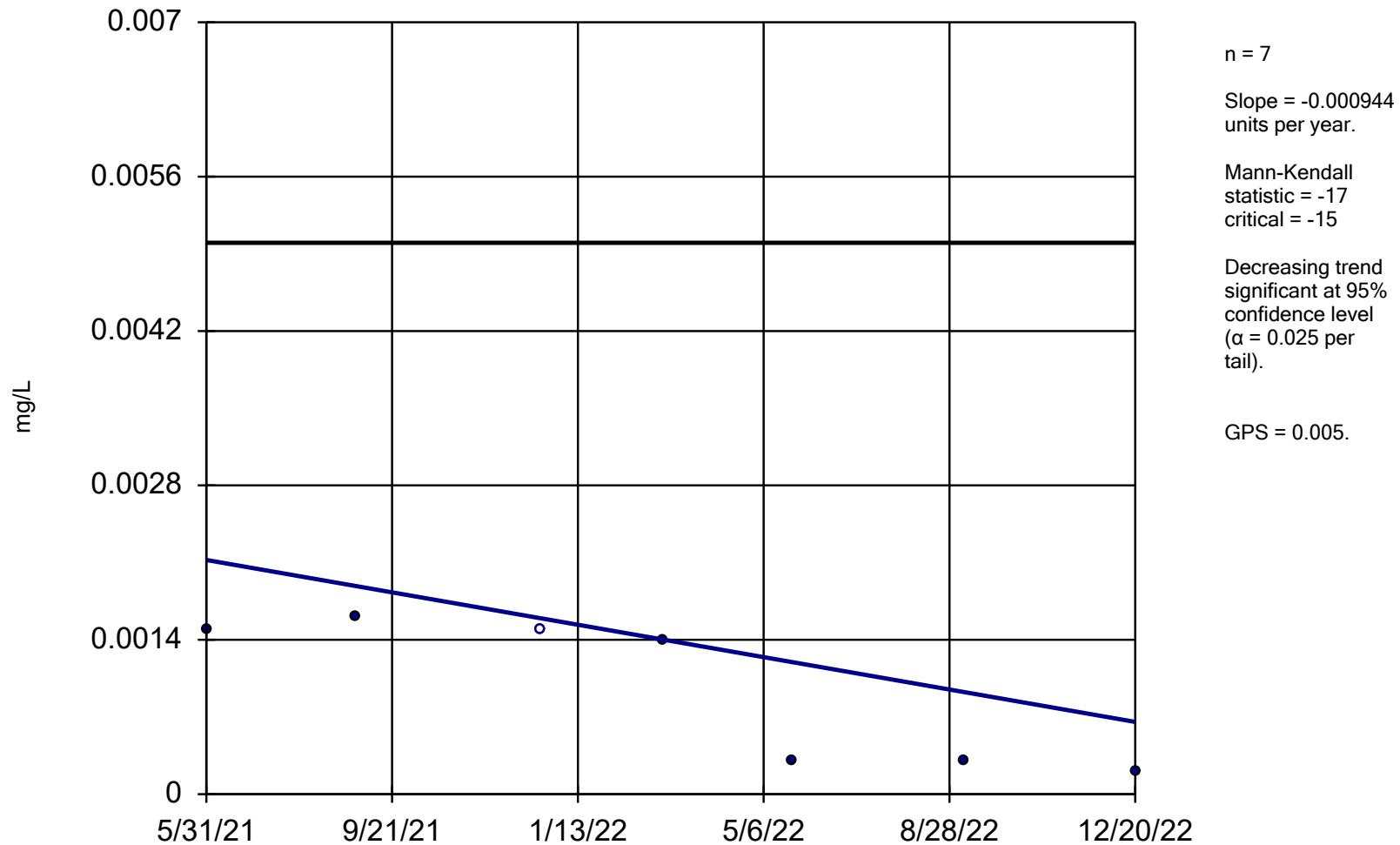
GPS = 2.

Constituent: Barium Analysis Run 2/3/2023 1:02 PM View: EPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope Estimator

EP-2



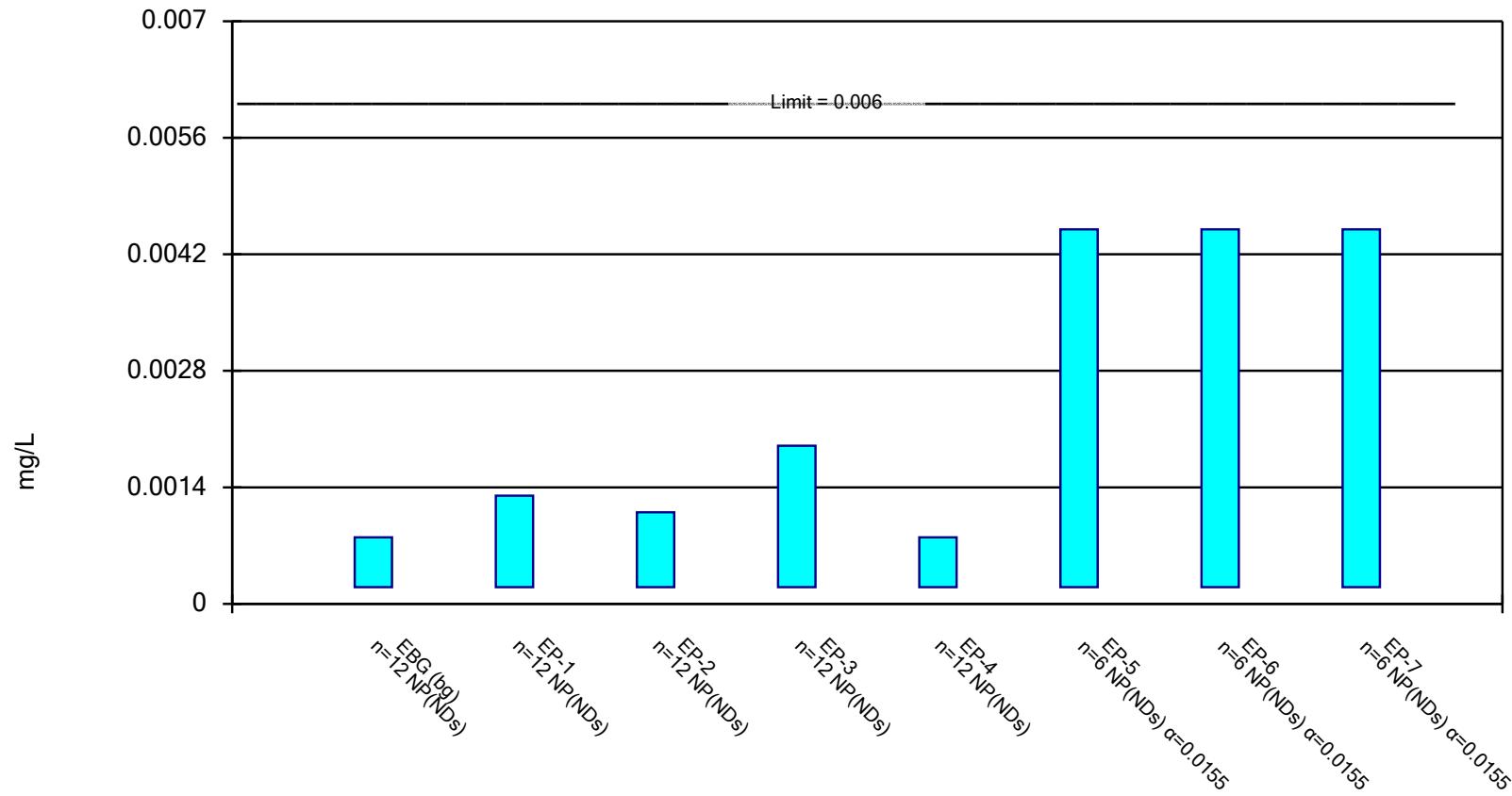
Constituent: Cadmium Analysis Run 2/3/2023 1:03 PM View: EPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-3

**Q1 2023 Groundwater Protection
Standard Exceedances**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

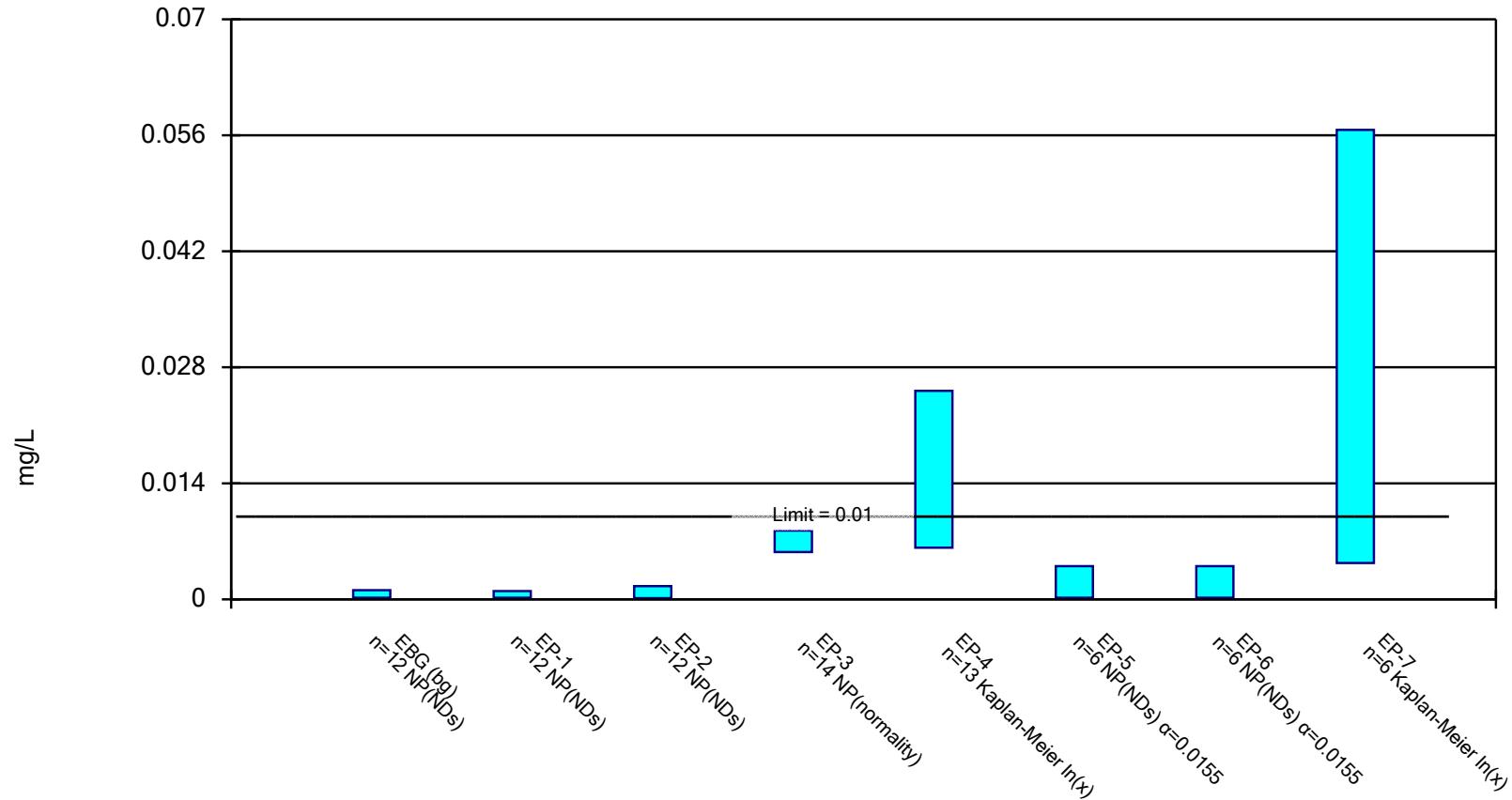


Constituent: Antimony Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

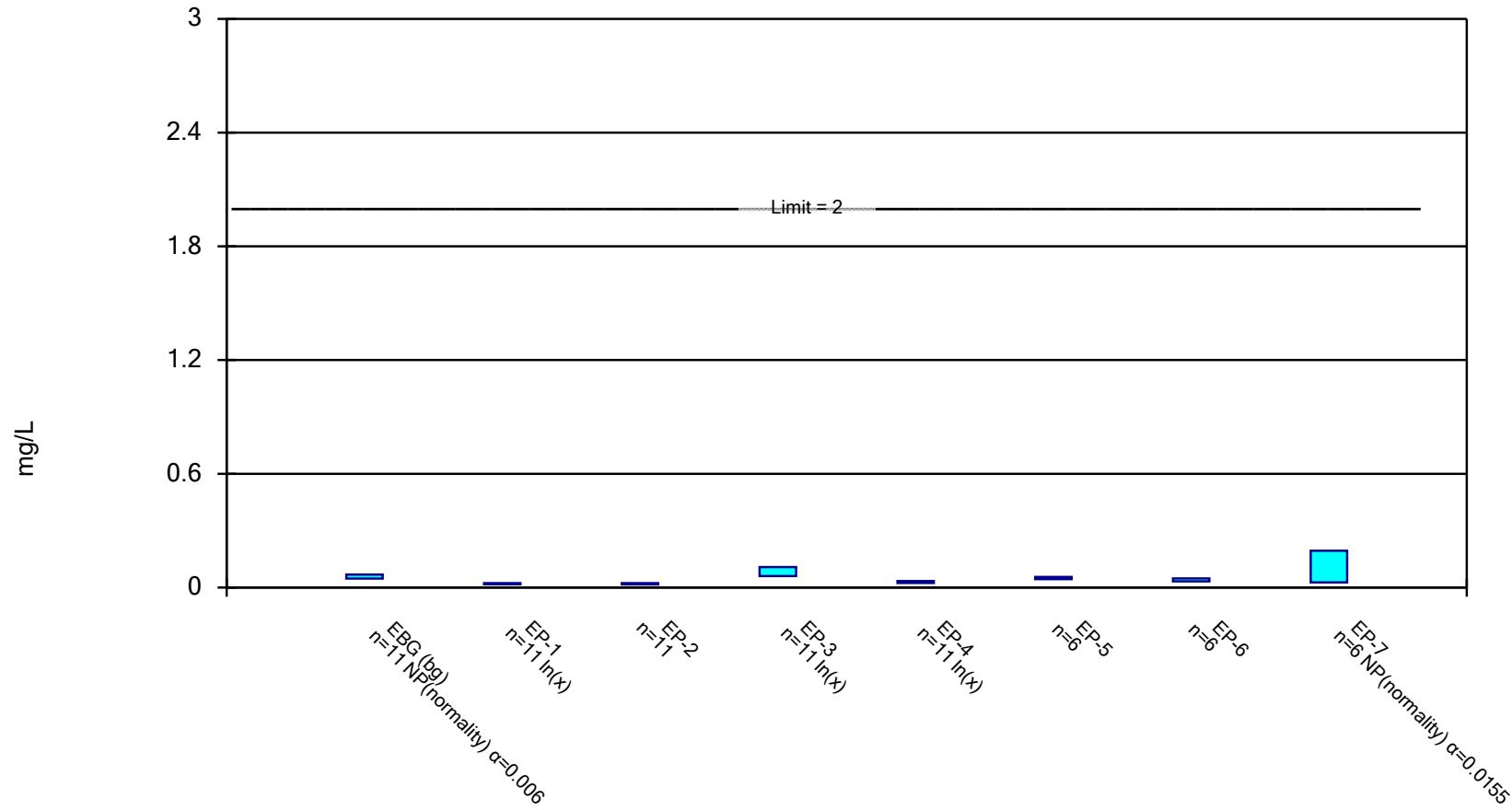


Constituent: Arsenic Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

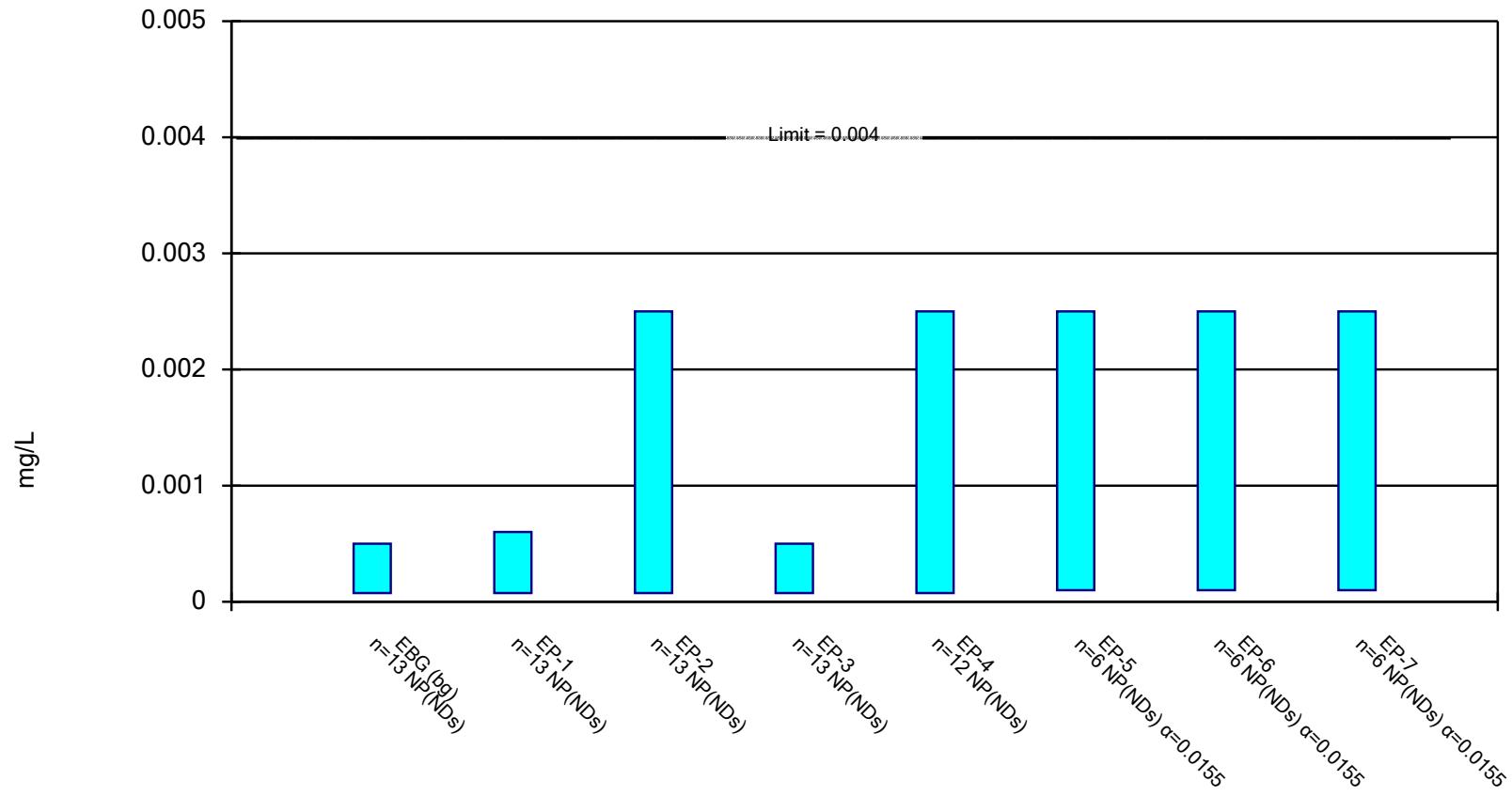


Constituent: Barium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

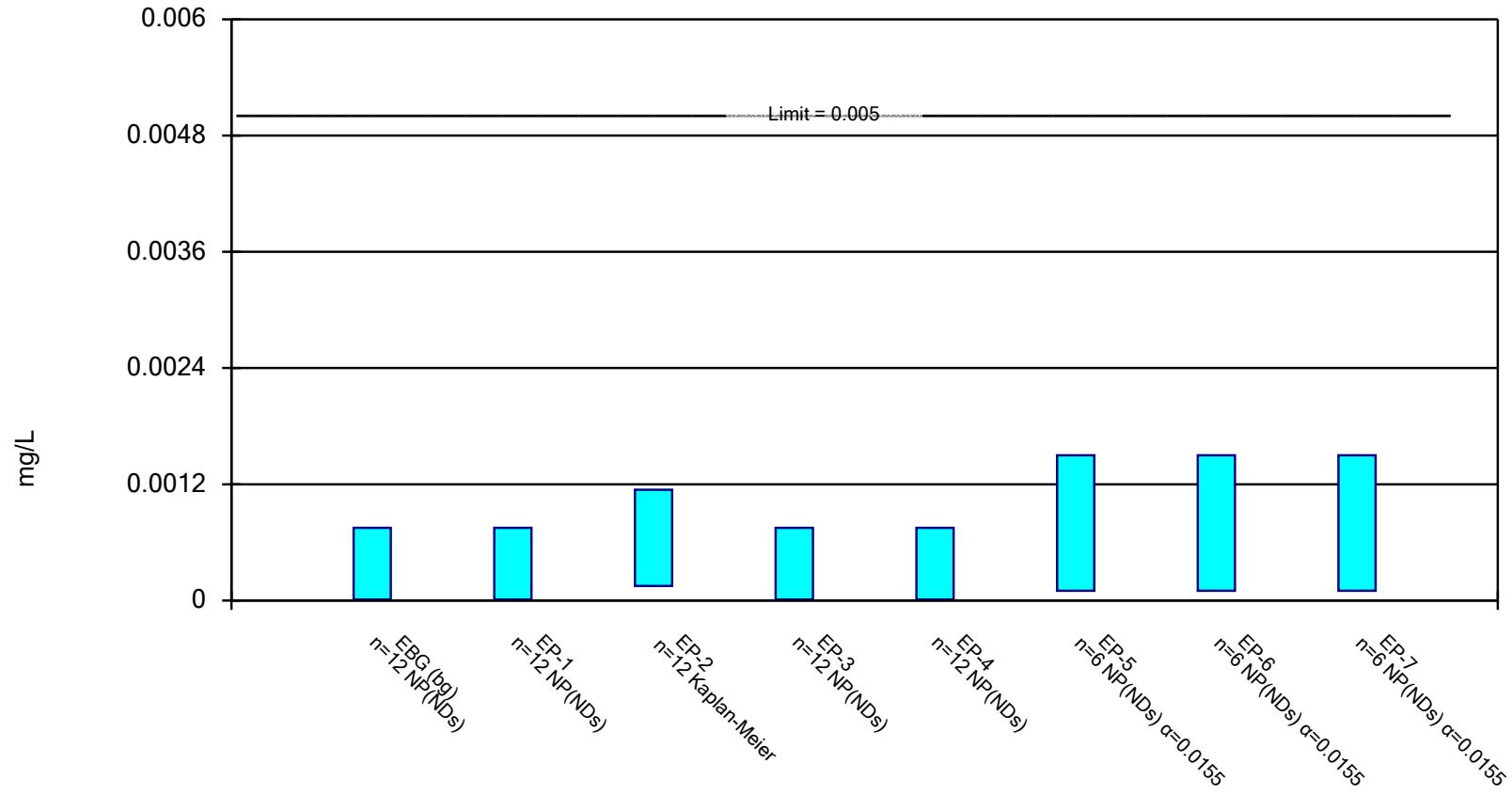


Constituent: Beryllium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

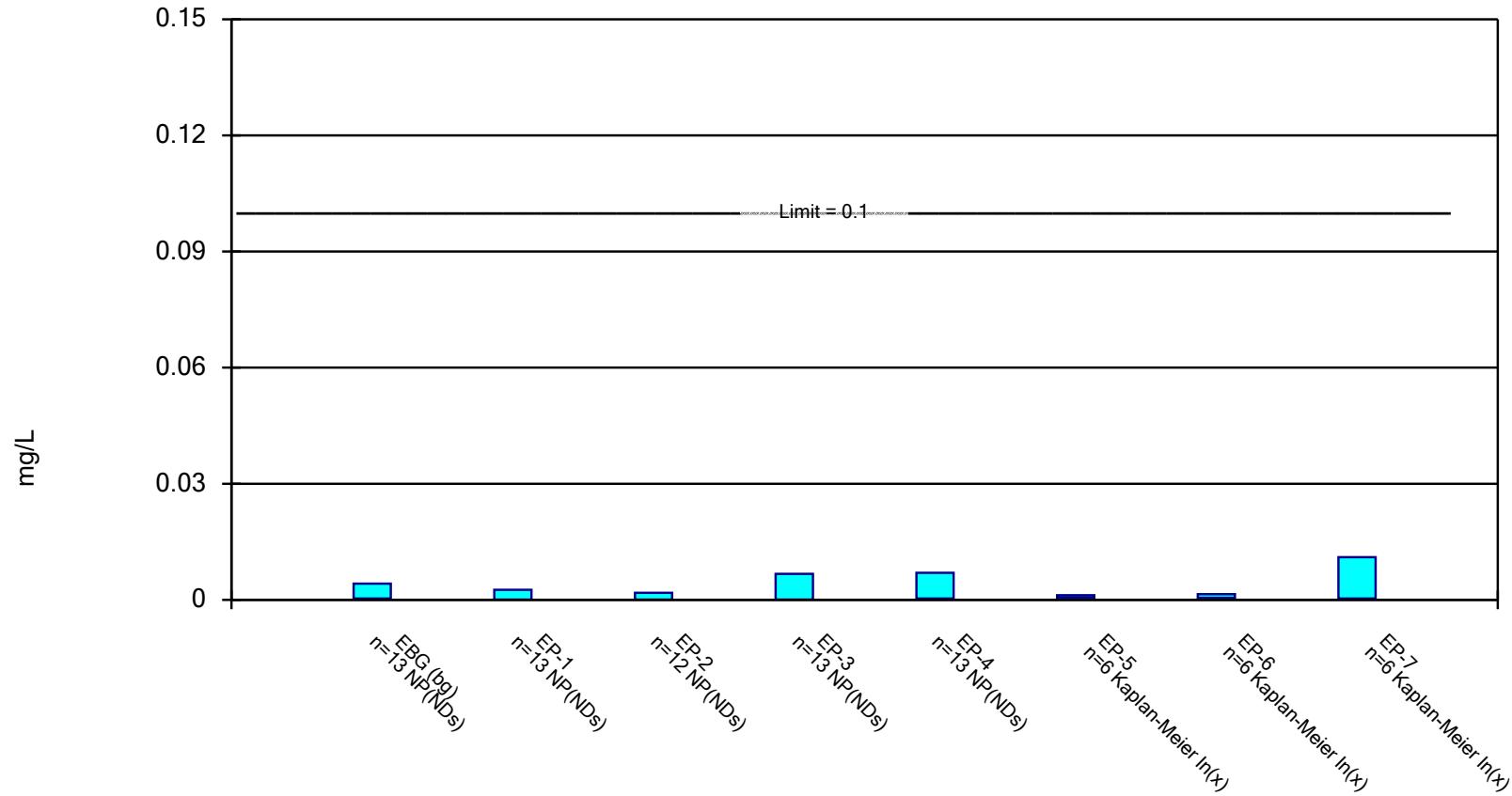


Constituent: Cadmium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

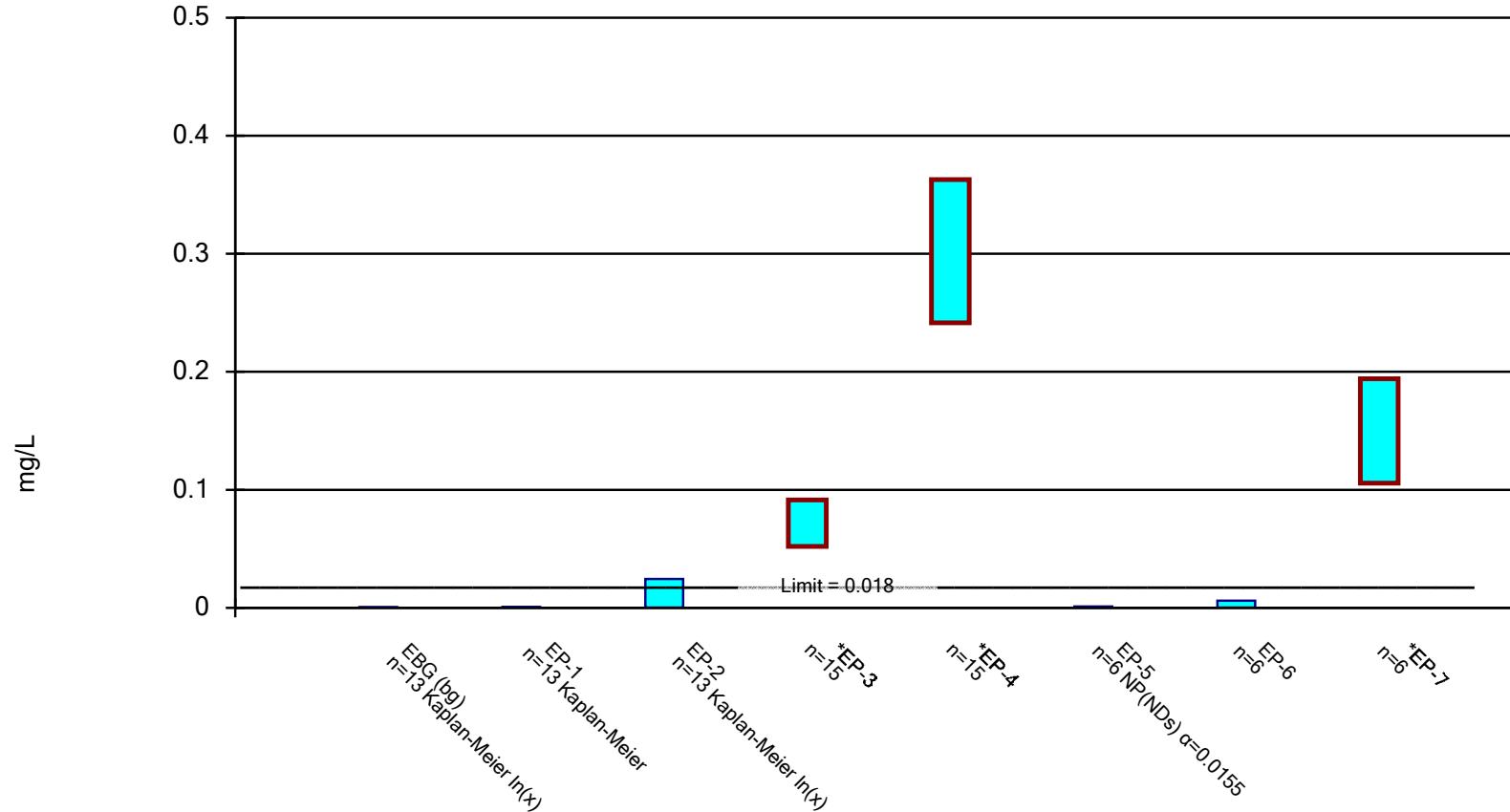


Constituent: Chromium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

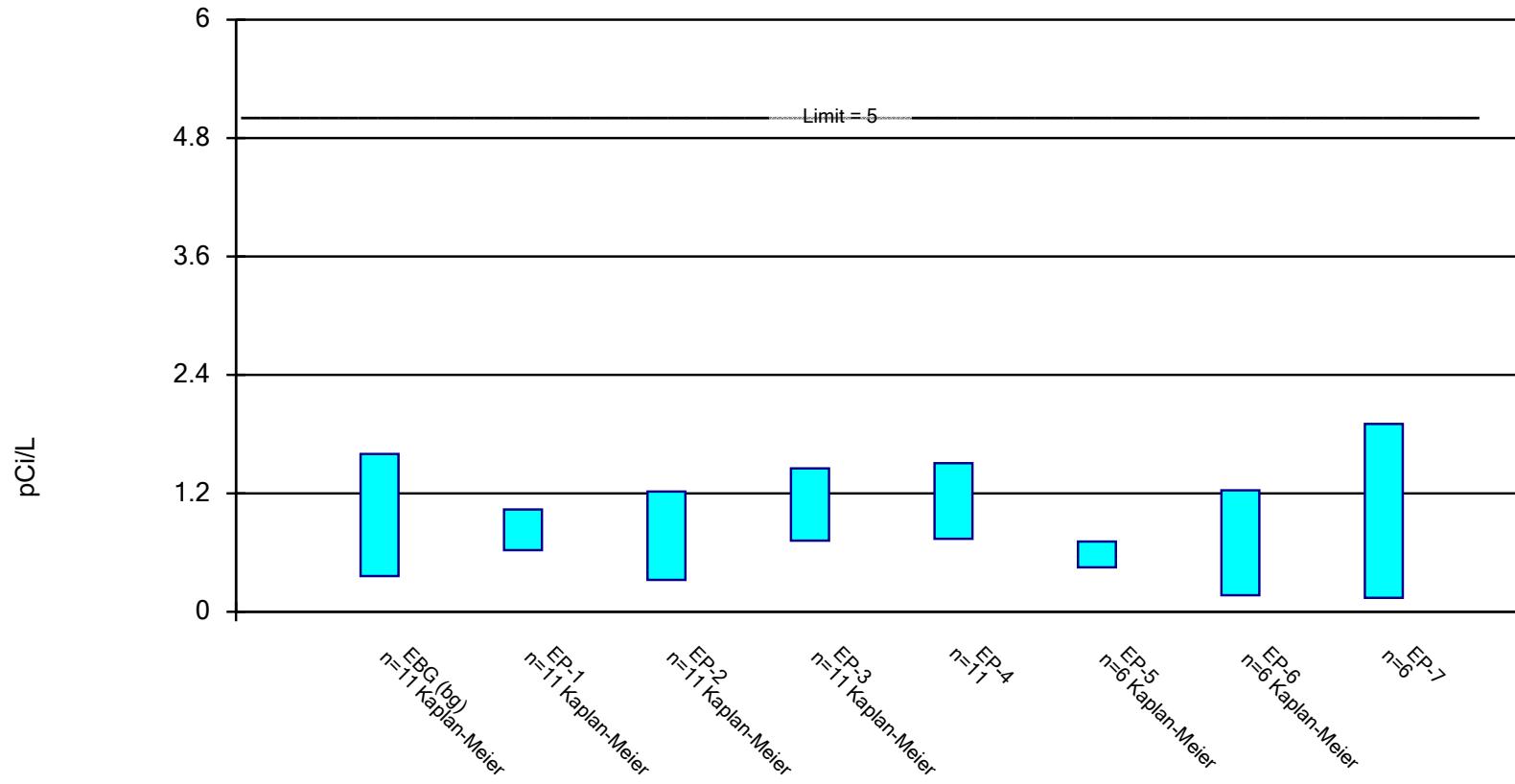


Constituent: Cobalt Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

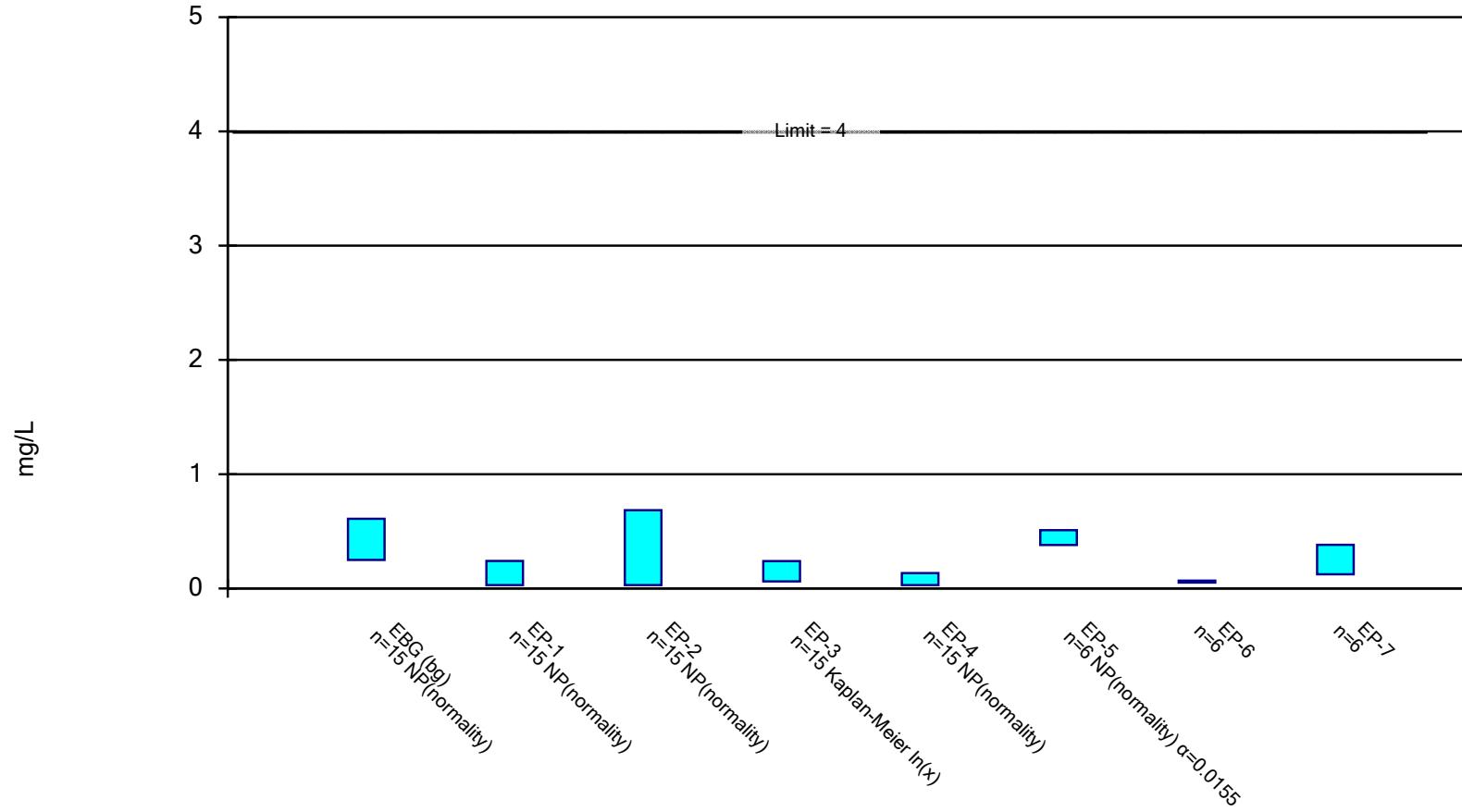


Constituent: Combined Radium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

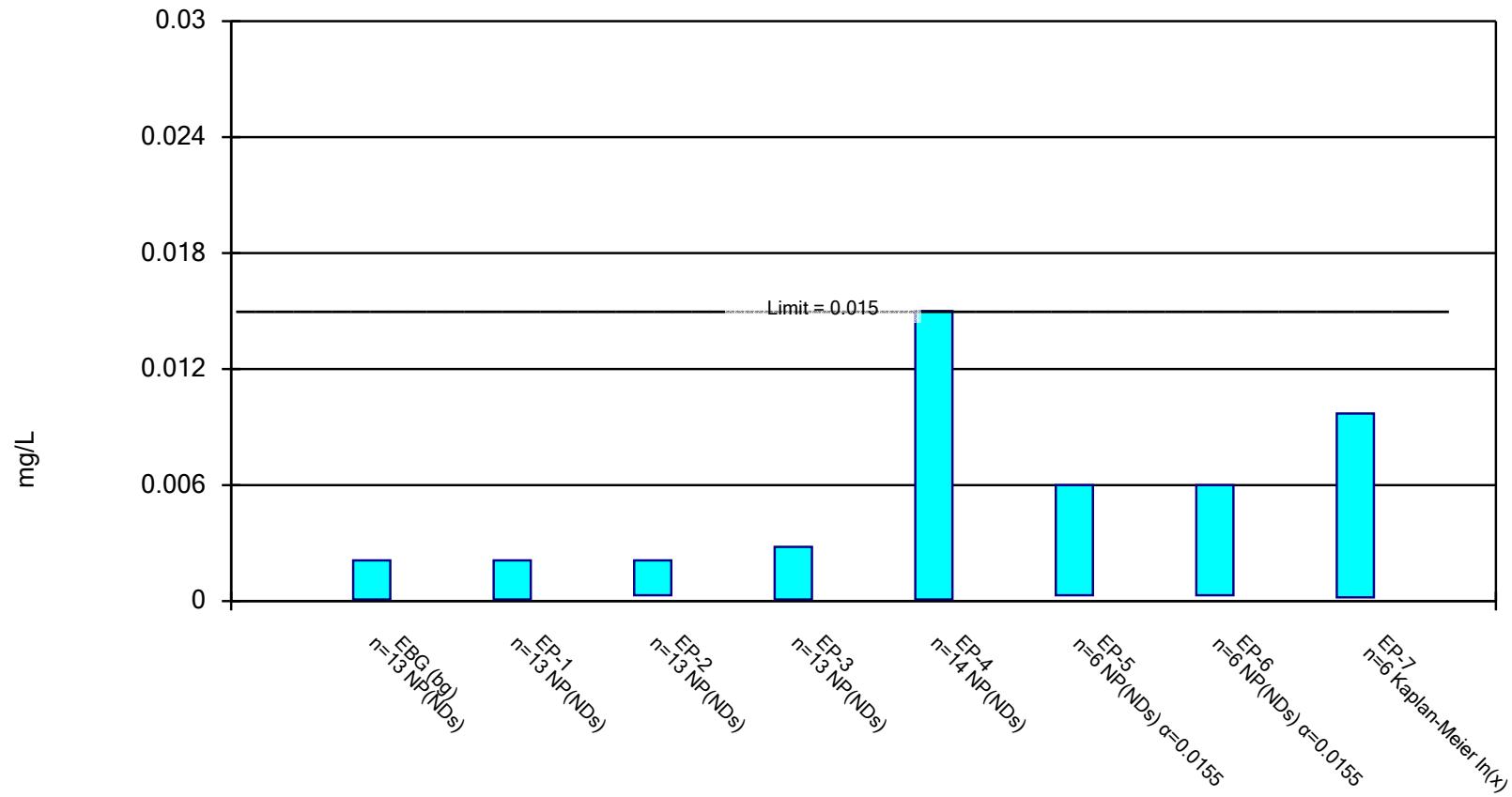


Constituent: Fluoride Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

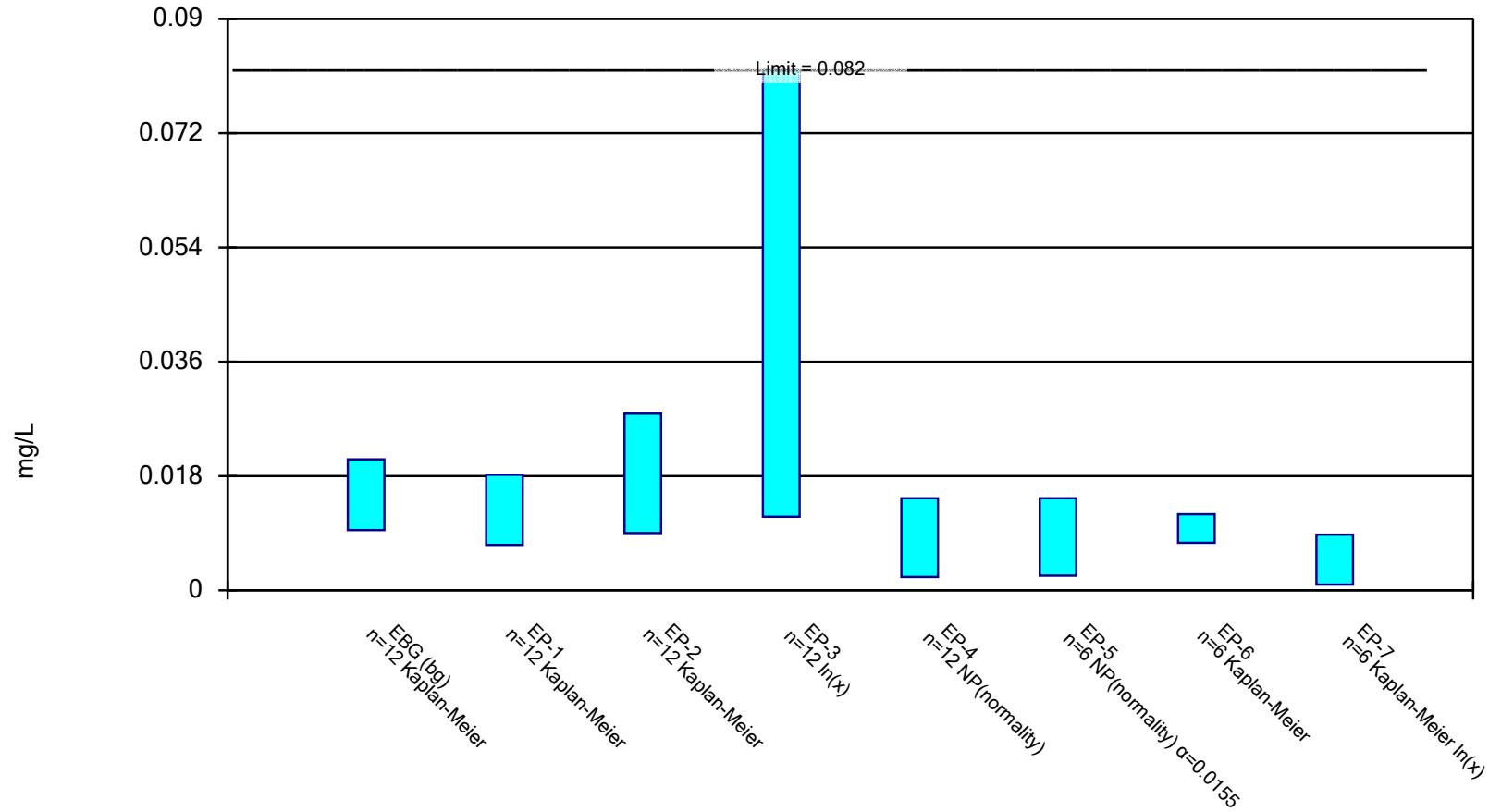


Constituent: Lead Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

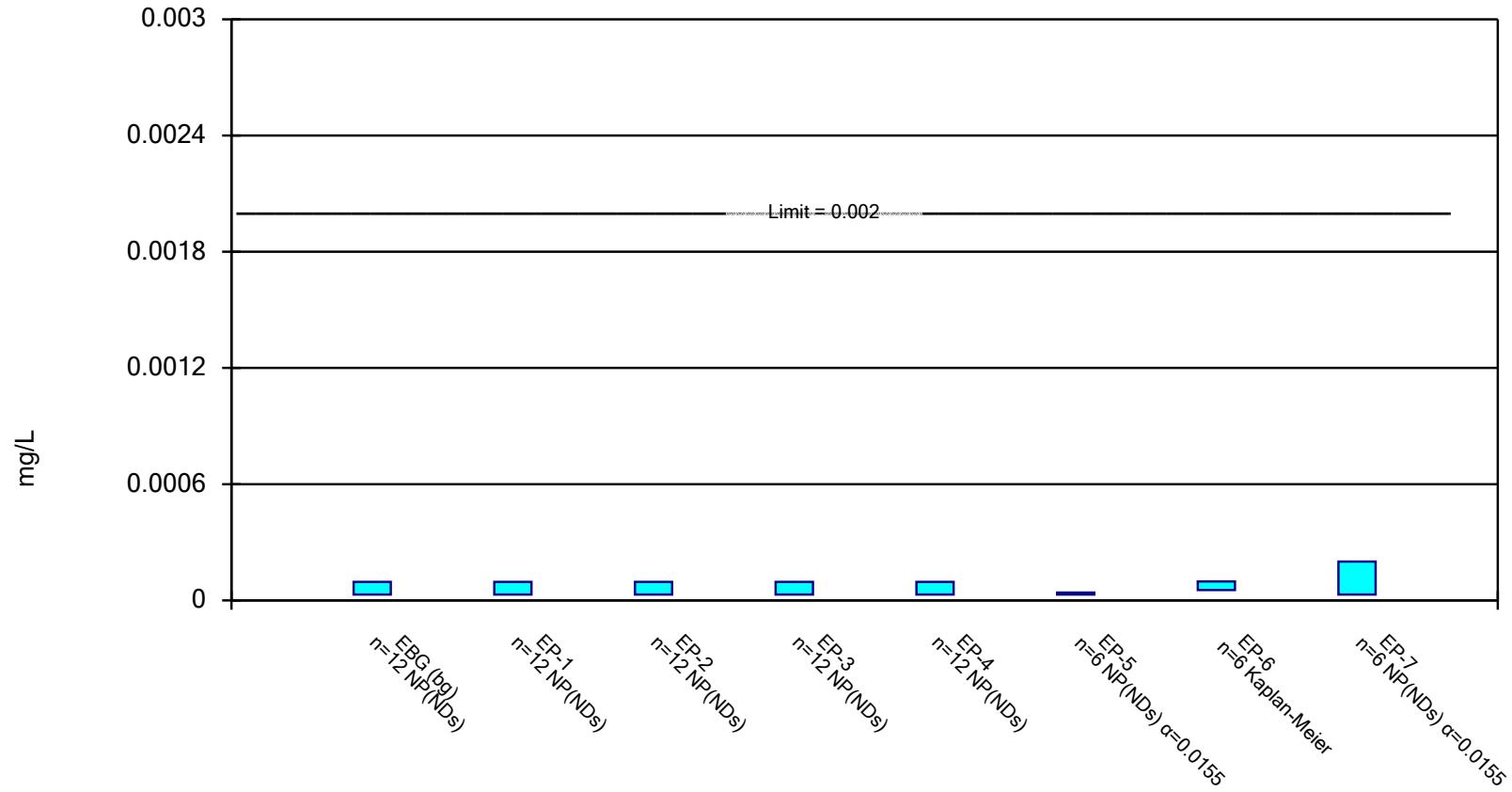


Constituent: Lithium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

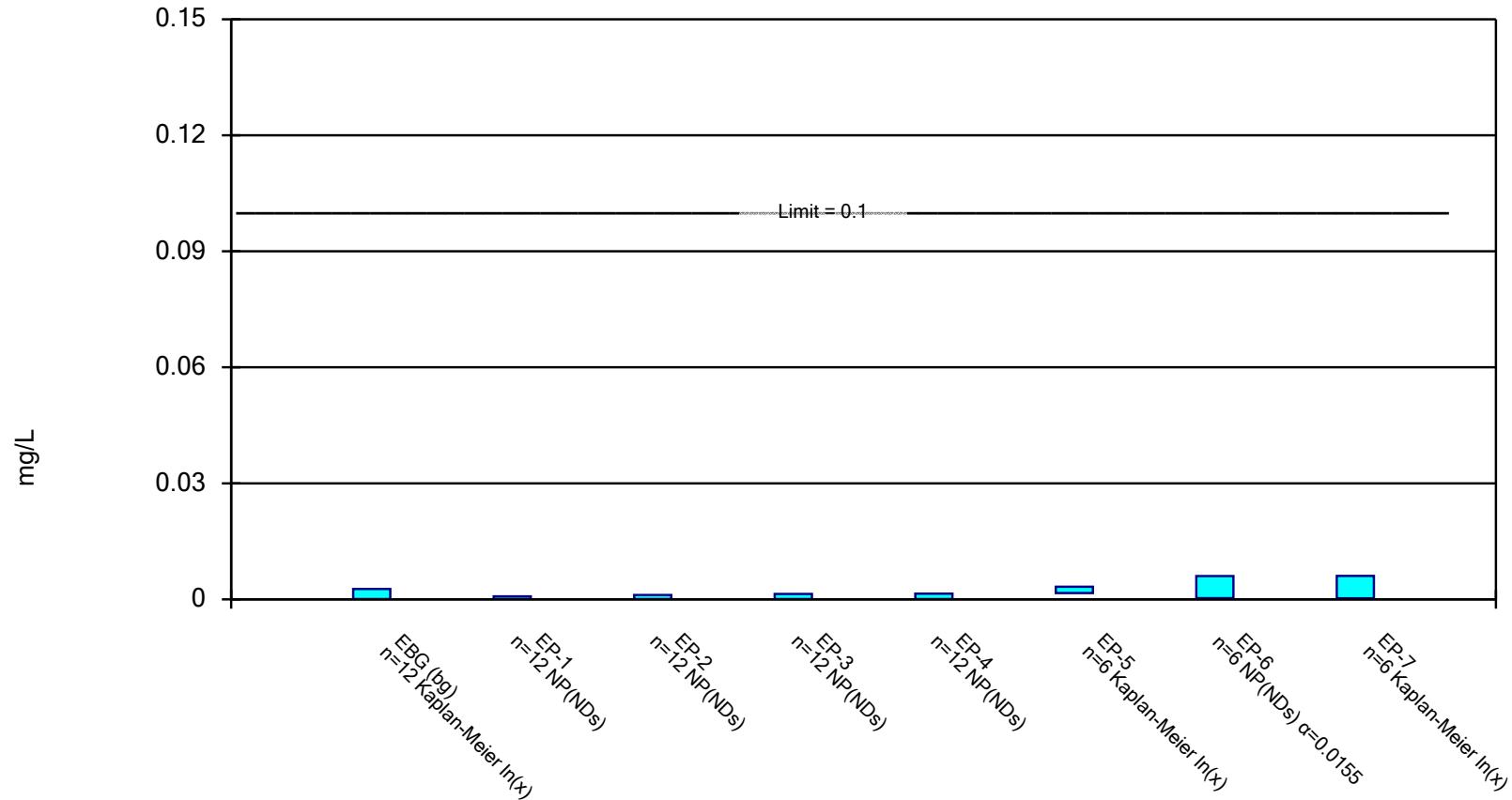


Constituent: Mercury Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

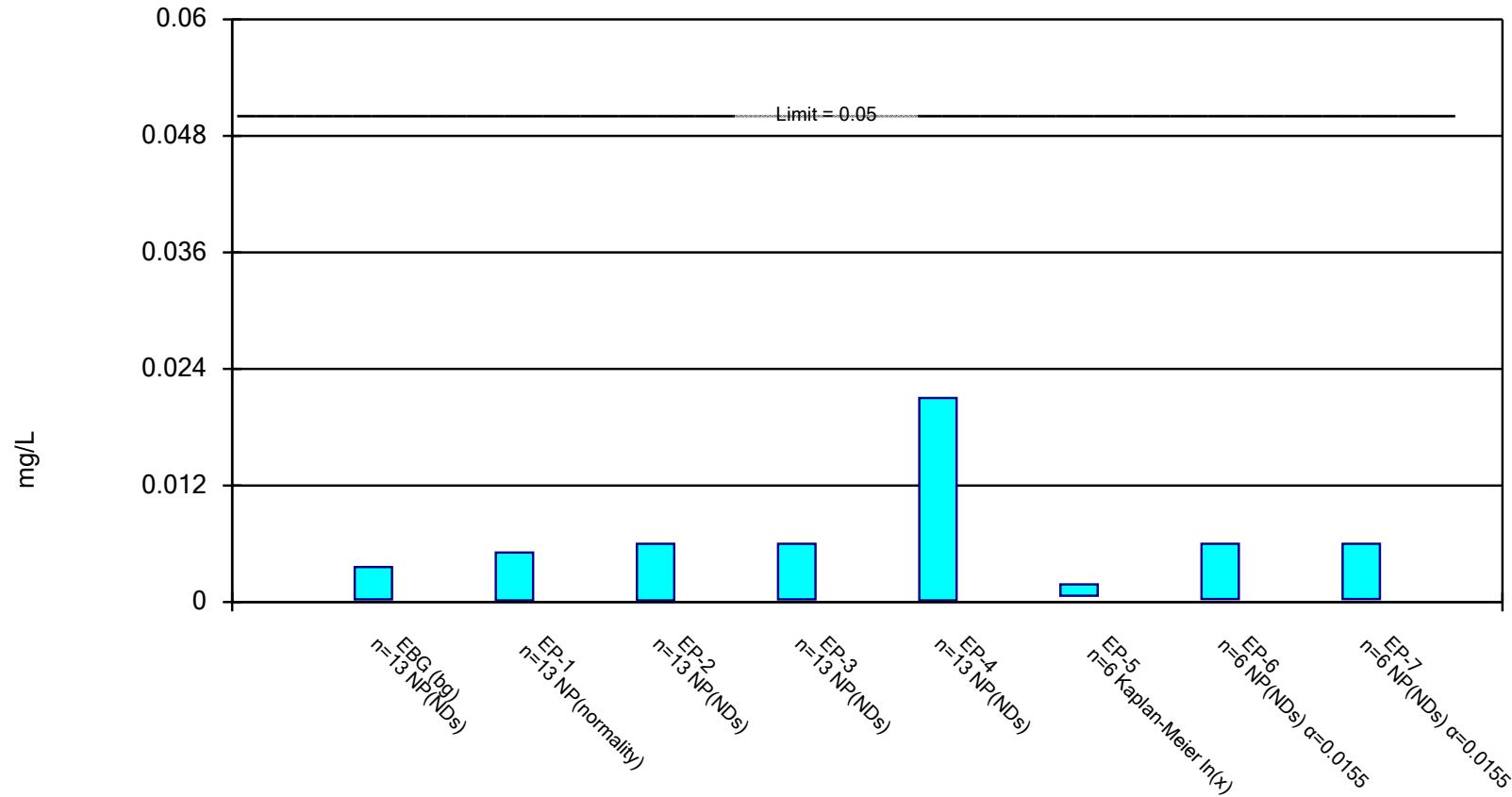


Constituent: Molybdenum Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

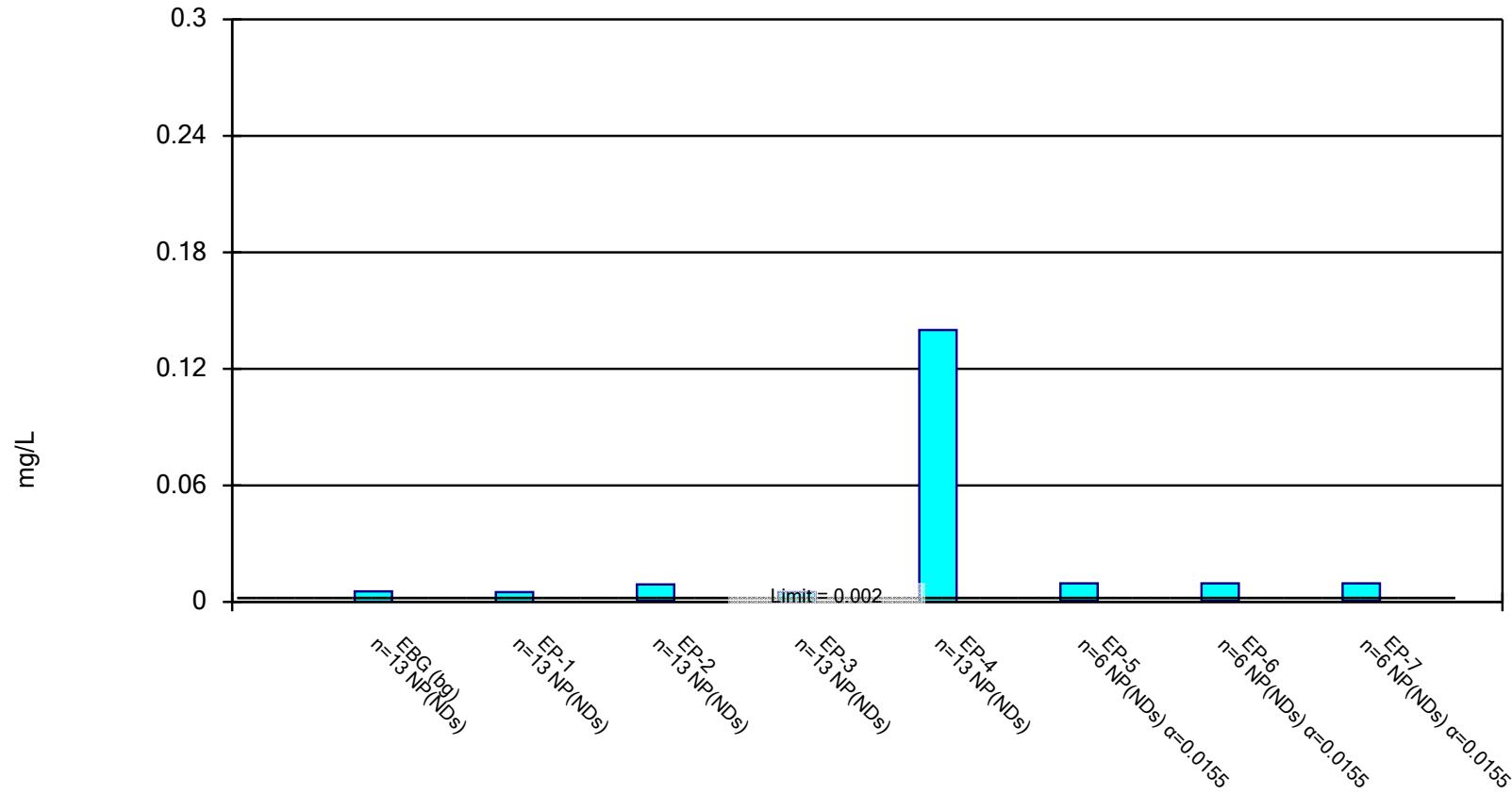


Constituent: Selenium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Thallium Analysis Run 5/12/2023 10:30 AM View: EPA GPS

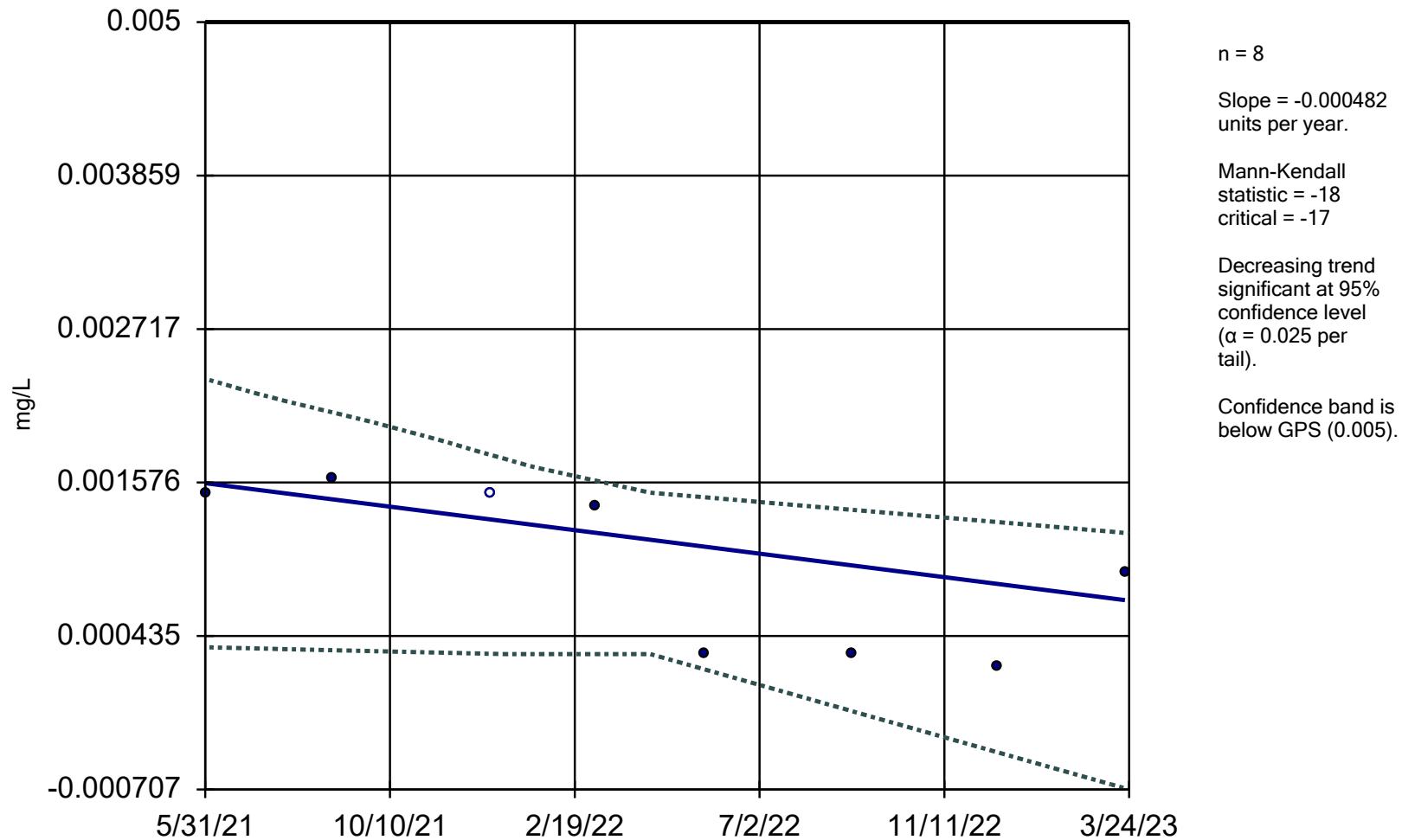
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-4

**Q1 2023 Statistically Significant
Trends**

Sen's Slope and 95% Confidence Band

EP-2

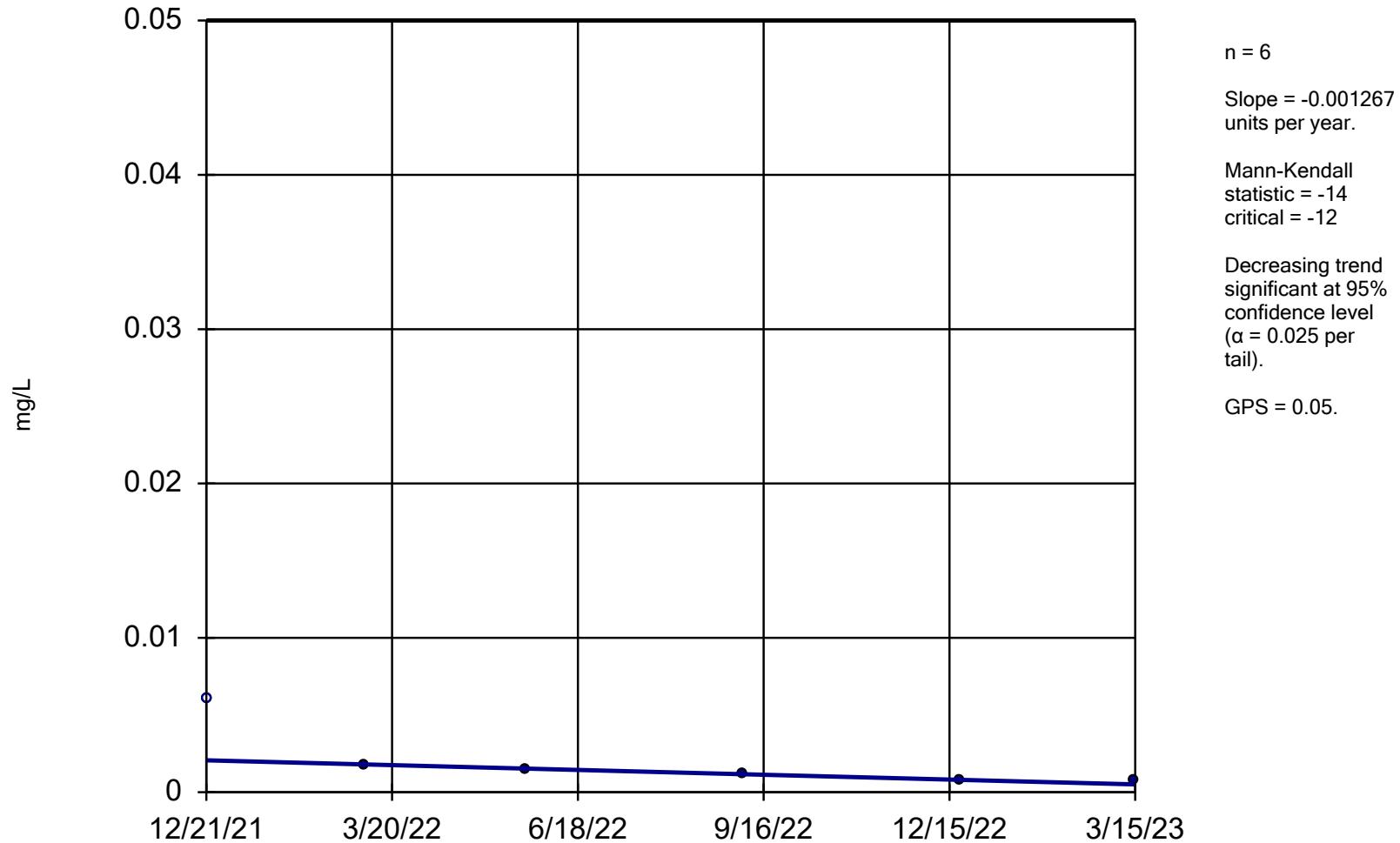


Constituent: Cadmium Analysis Run 5/11/2023 1:36 PM View: EPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5



Constituent: Selenium Analysis Run 5/11/2023 1:38 PM View: EPA

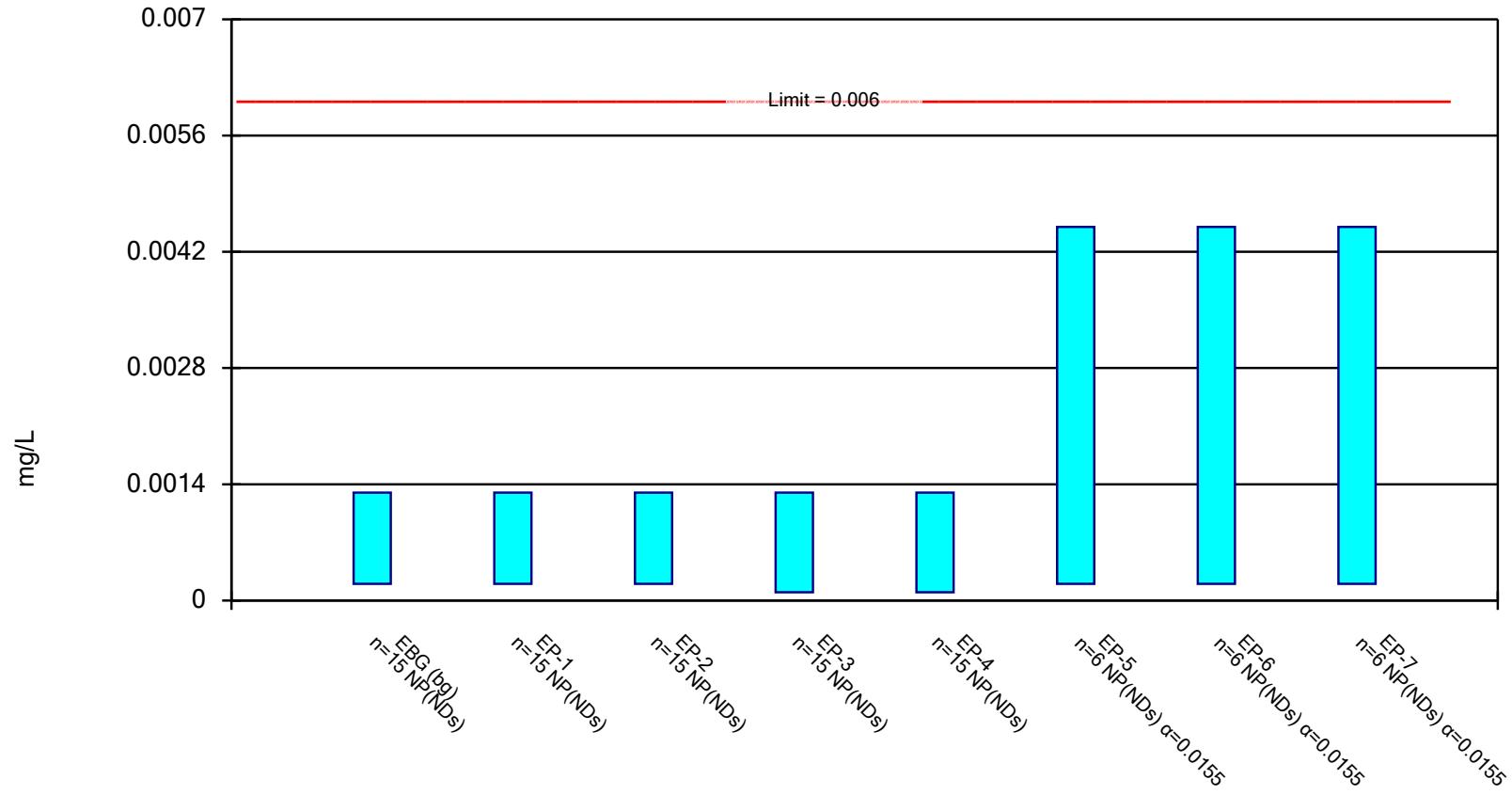
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-5

**Q1 2023 Resample Groundwater
Protection Standard Exceedances**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

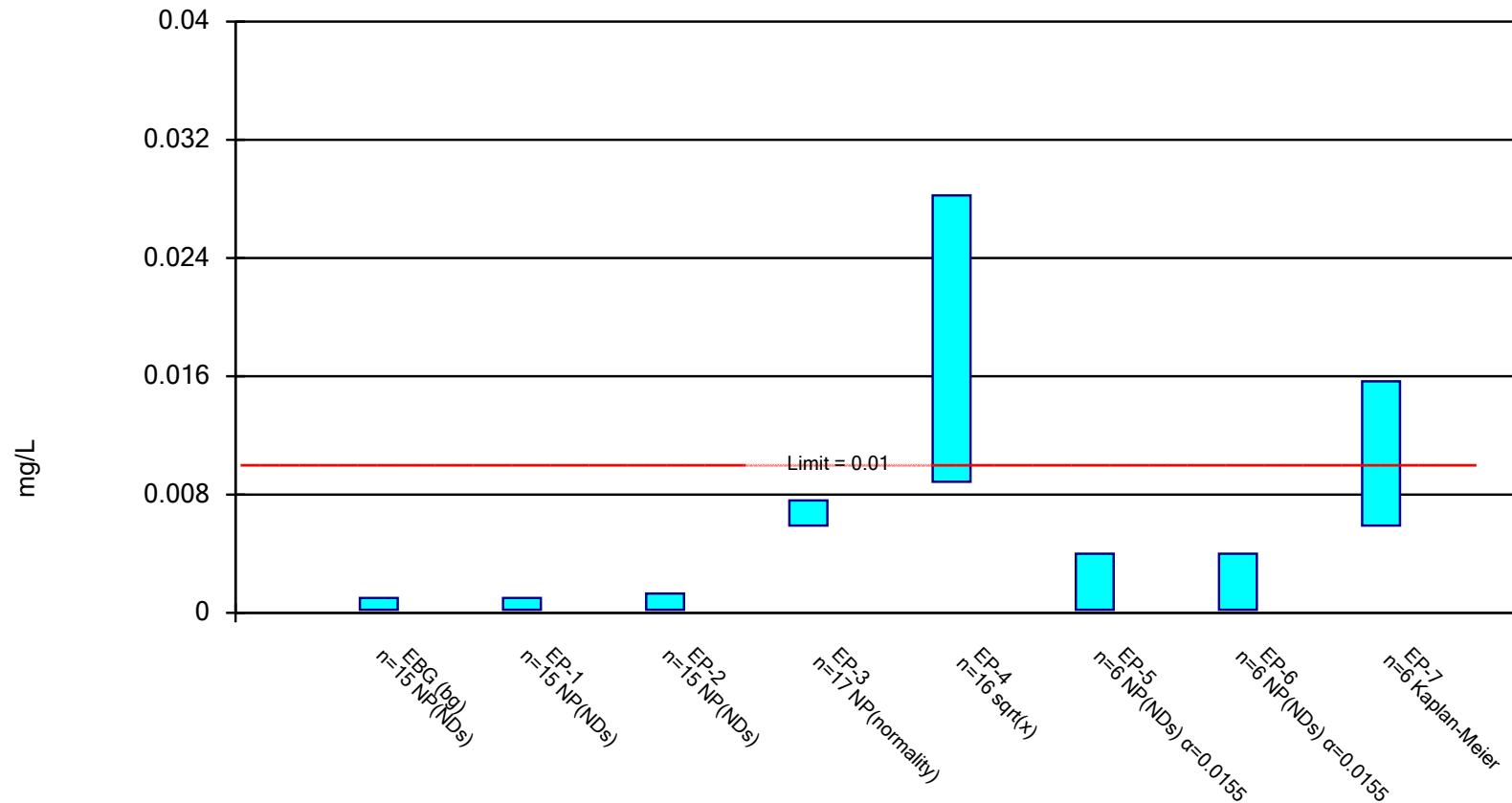


Constituent: Antimony Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

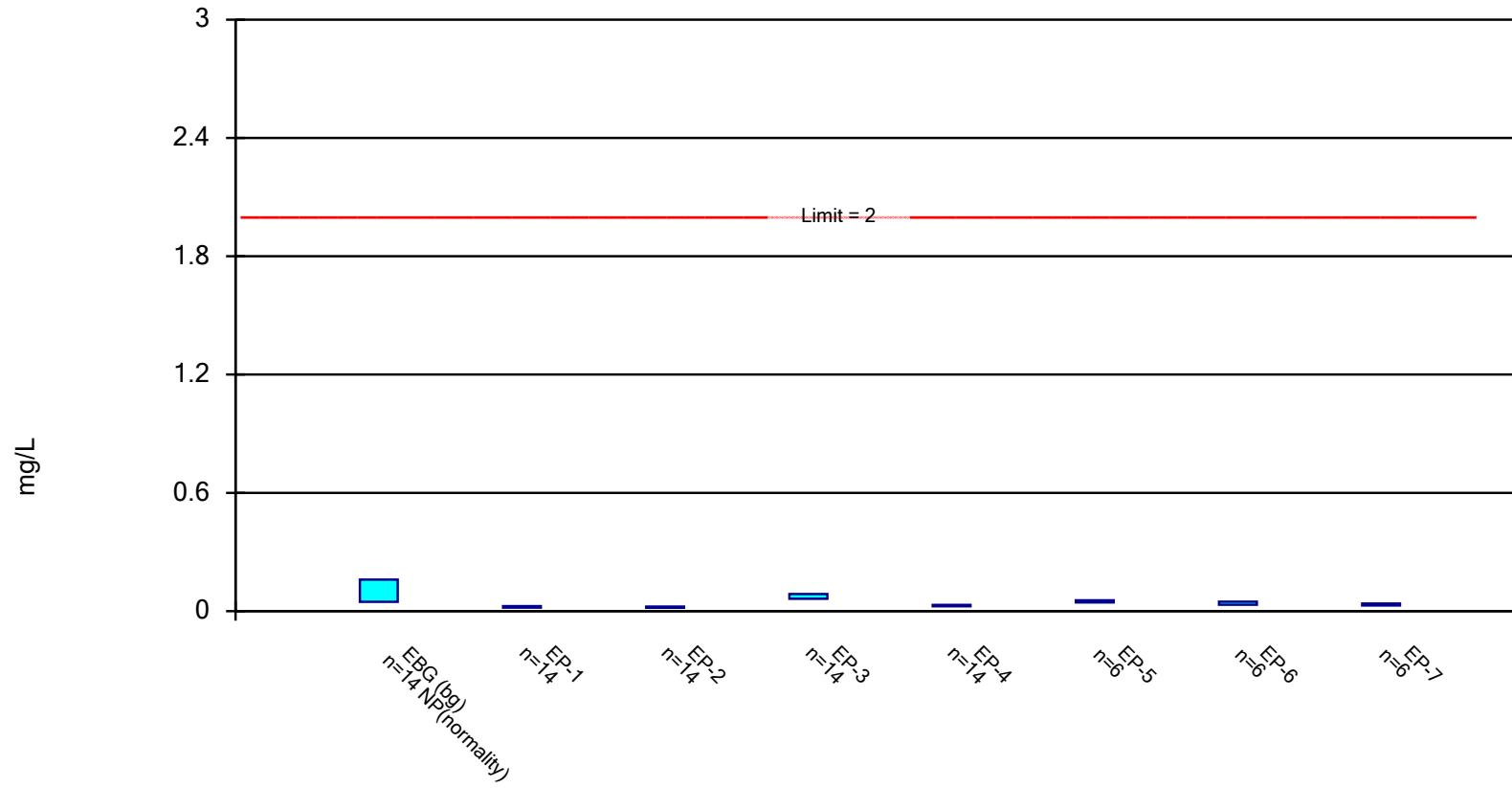


Constituent: Arsenic Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

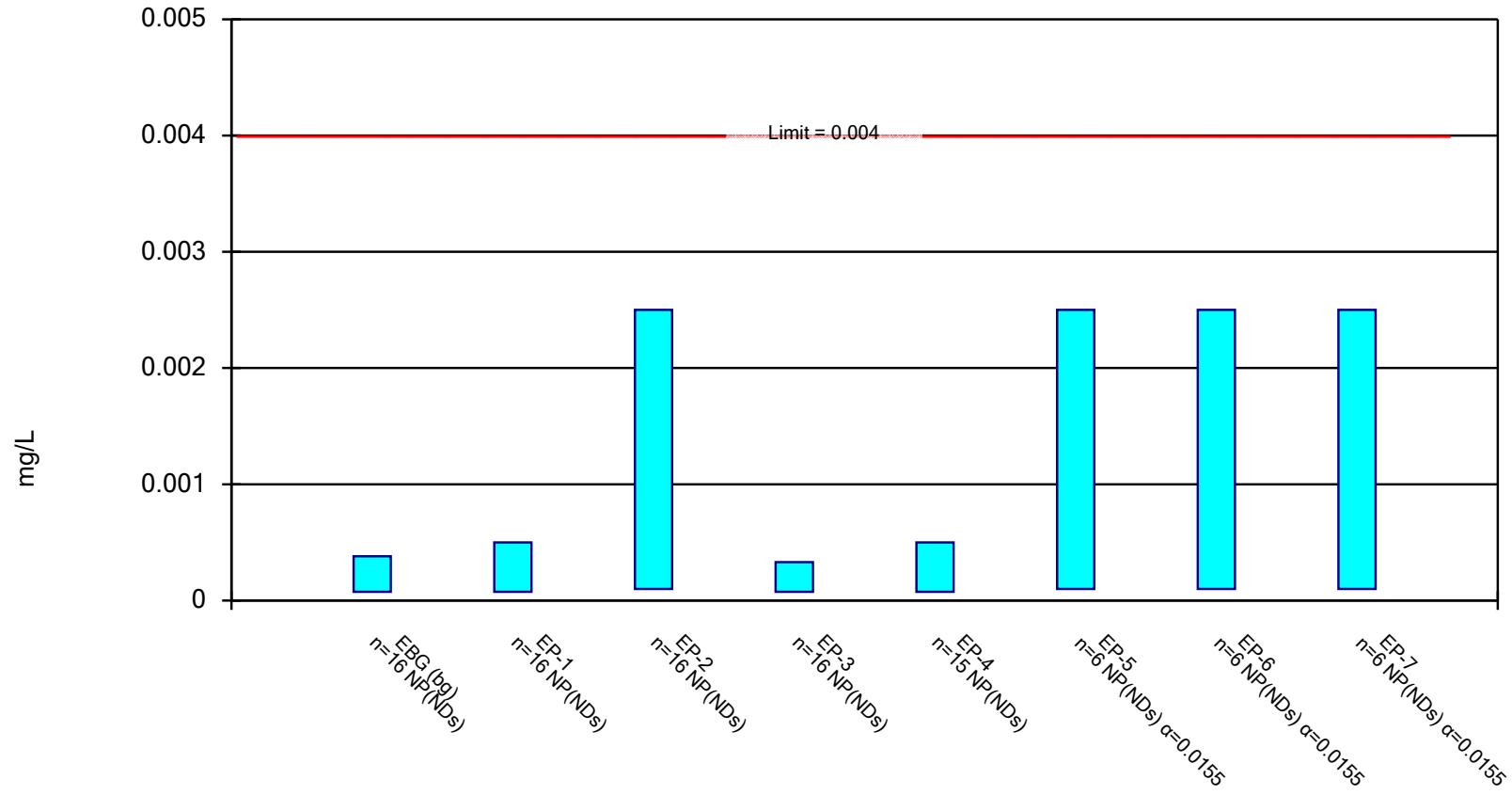
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 6/20/2023 12:07 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

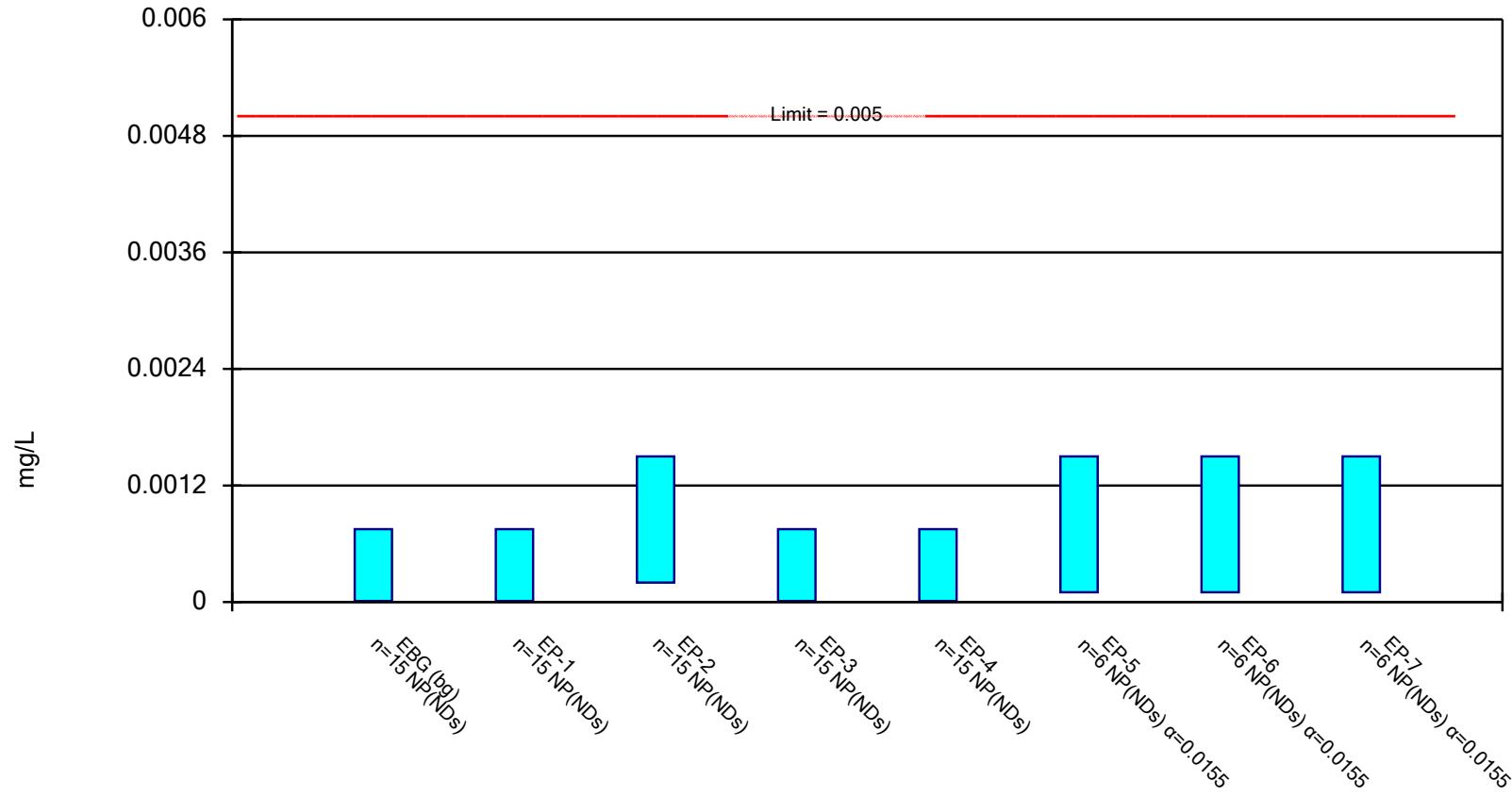


Constituent: Beryllium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

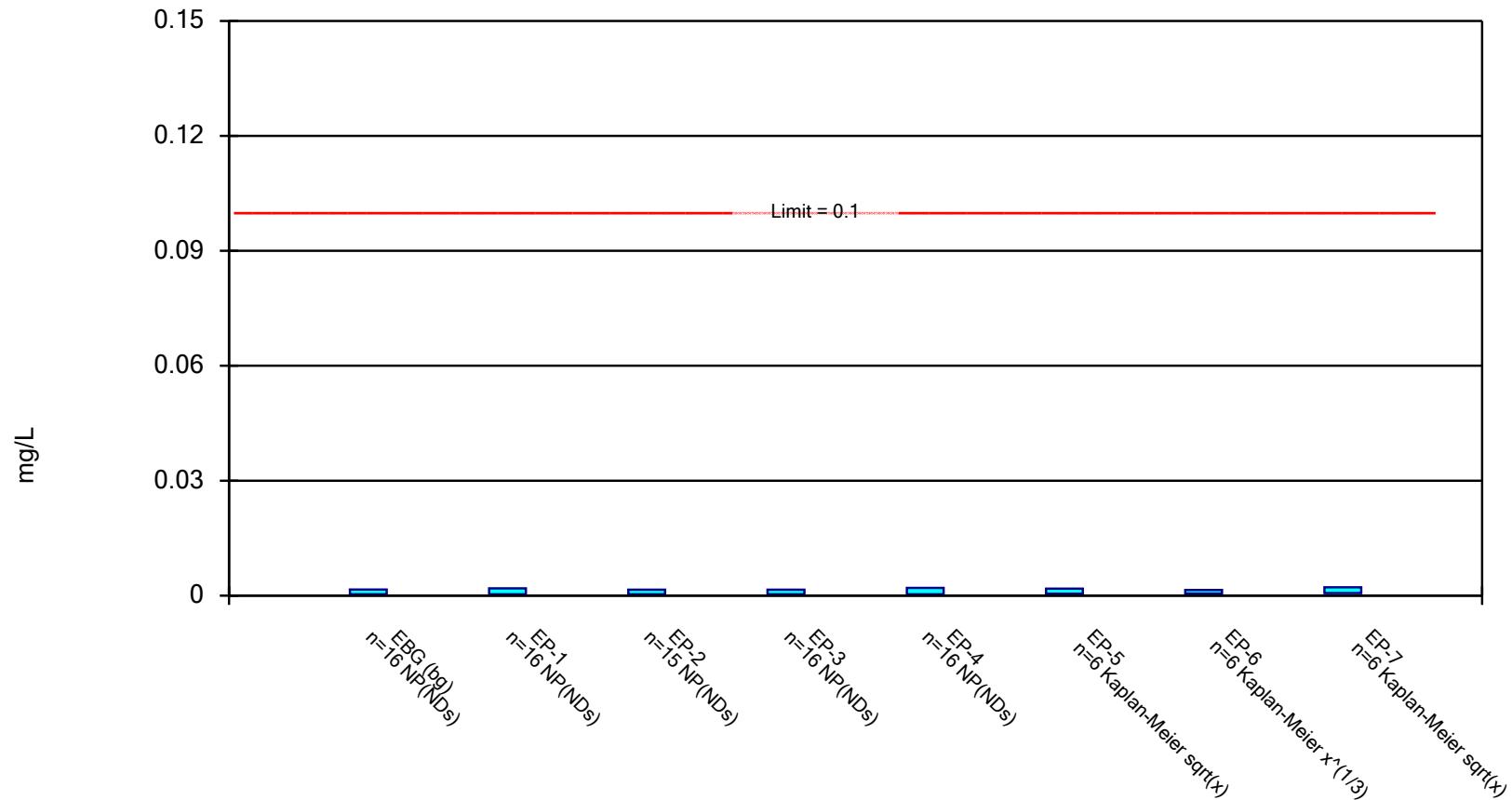


Constituent: Cadmium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

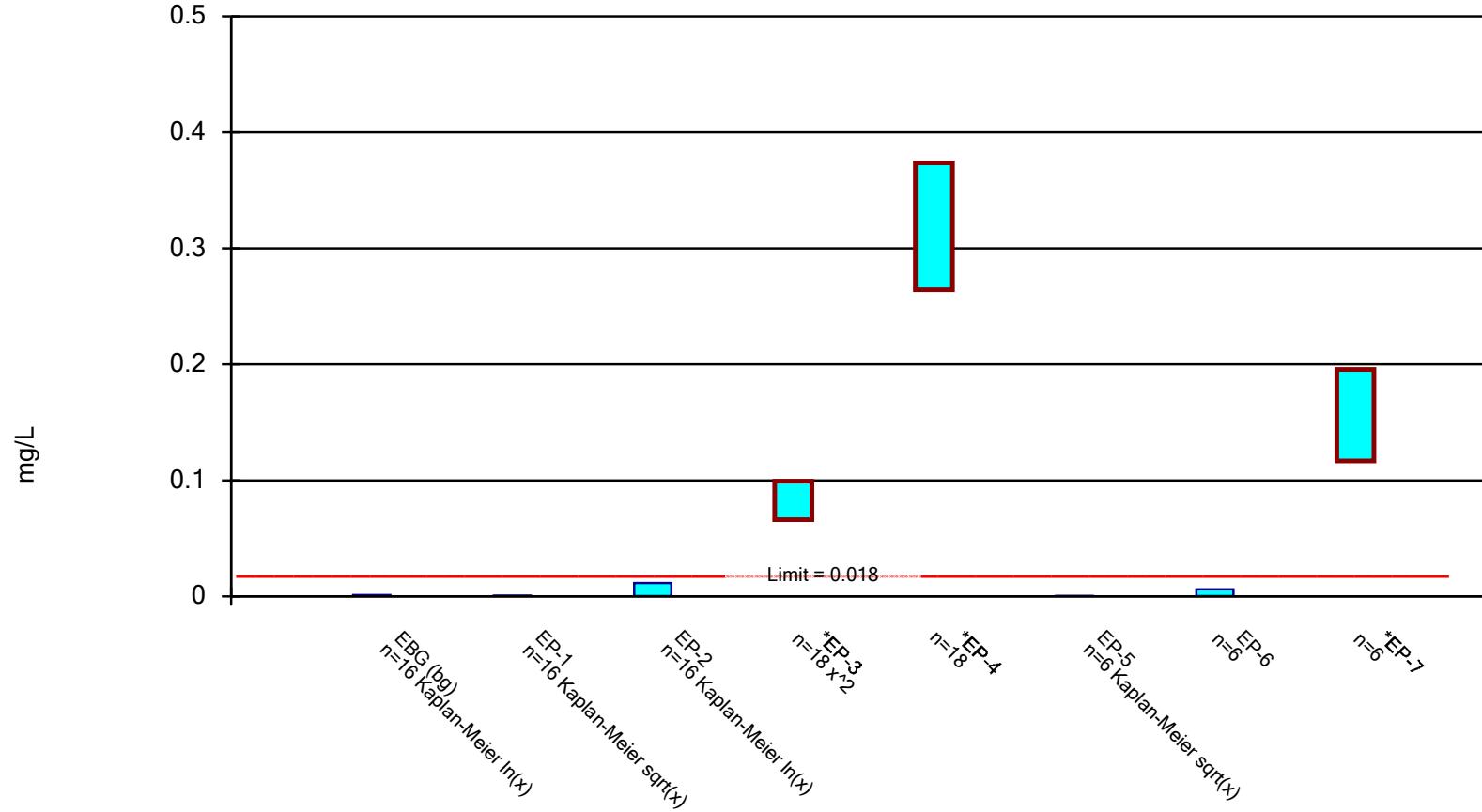


Constituent: Chromium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

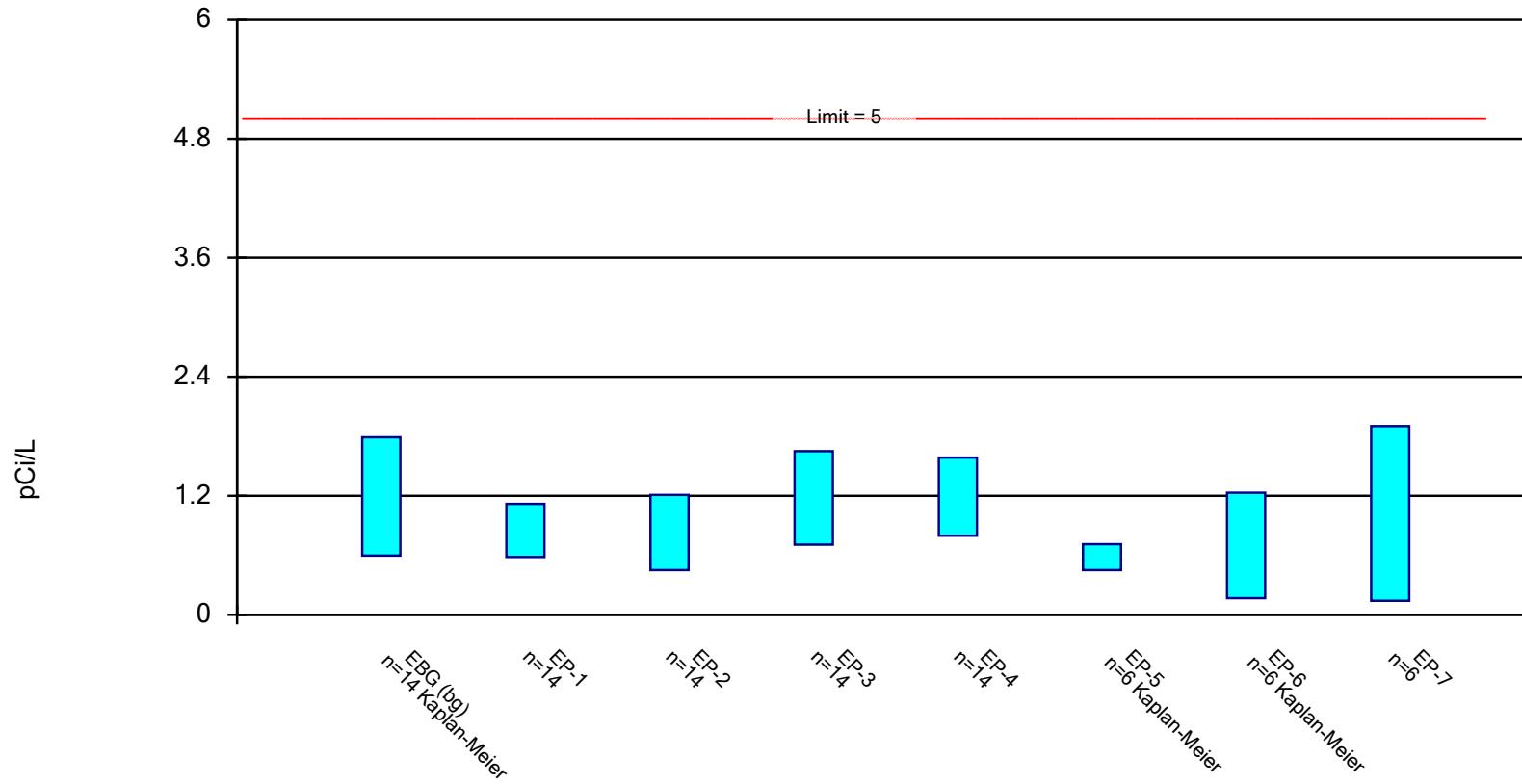
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 6/20/2023 12:07 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

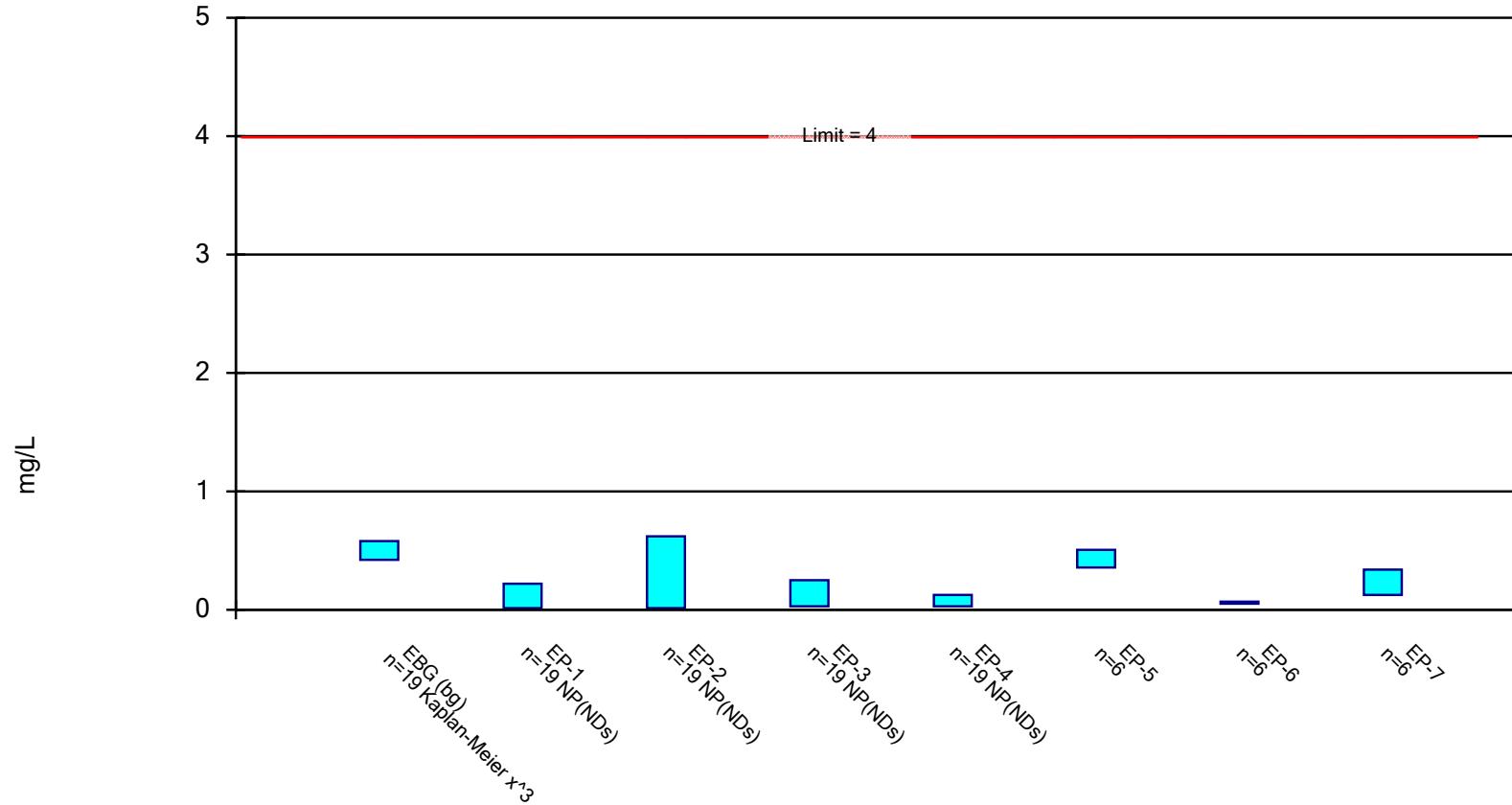


Constituent: Combined Radium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

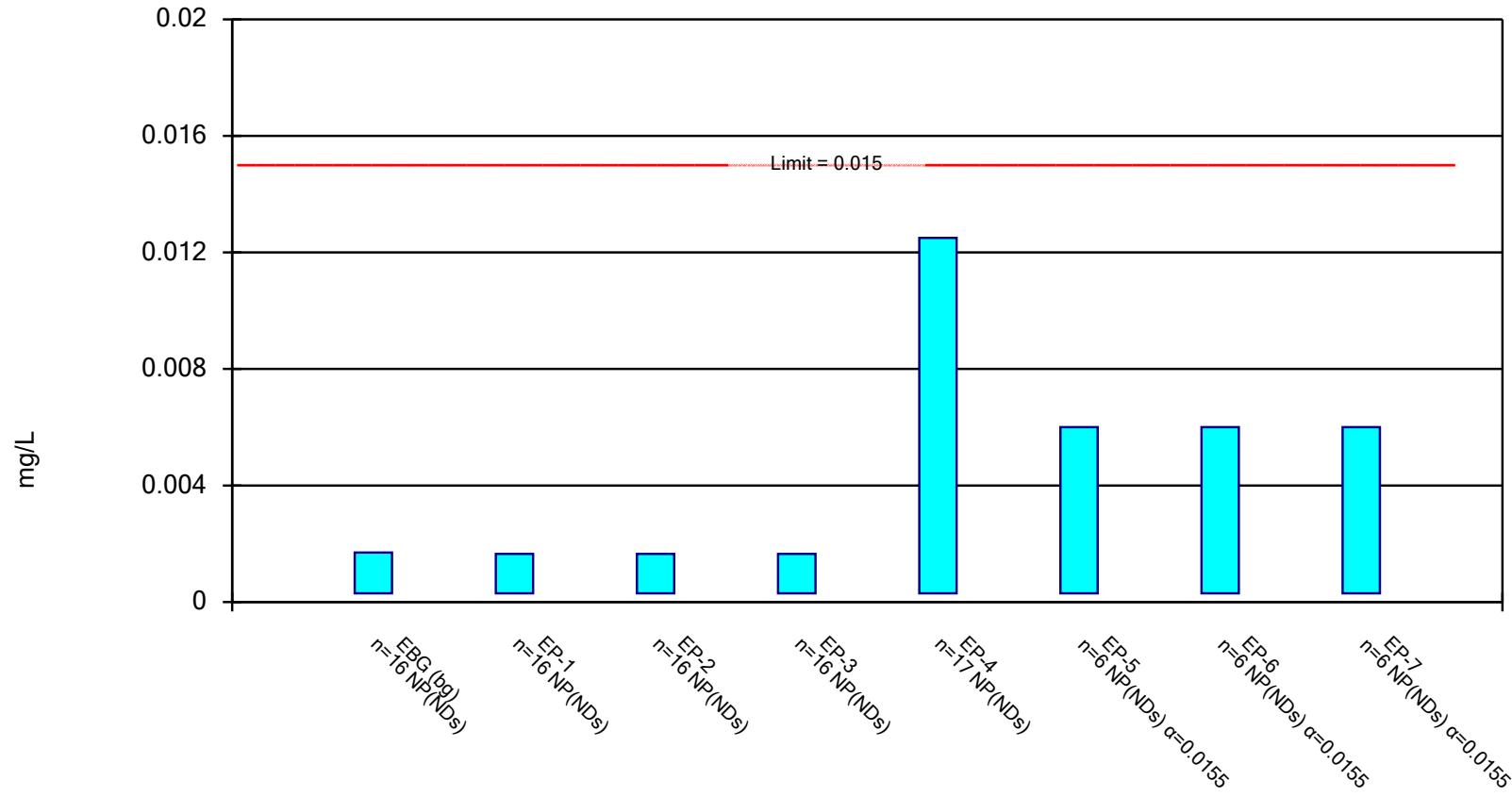


Constituent: Fluoride Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

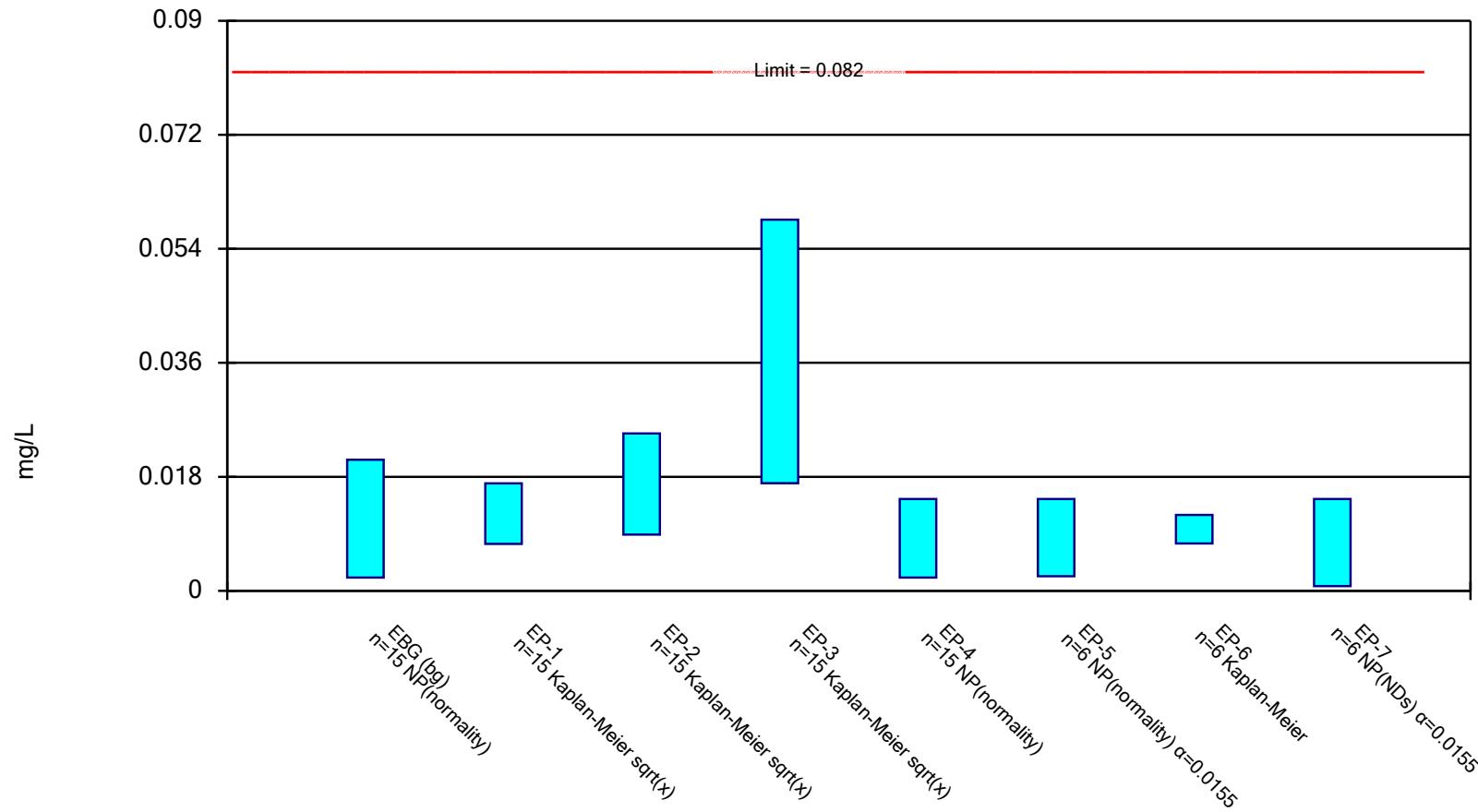
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 6/20/2023 12:07 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

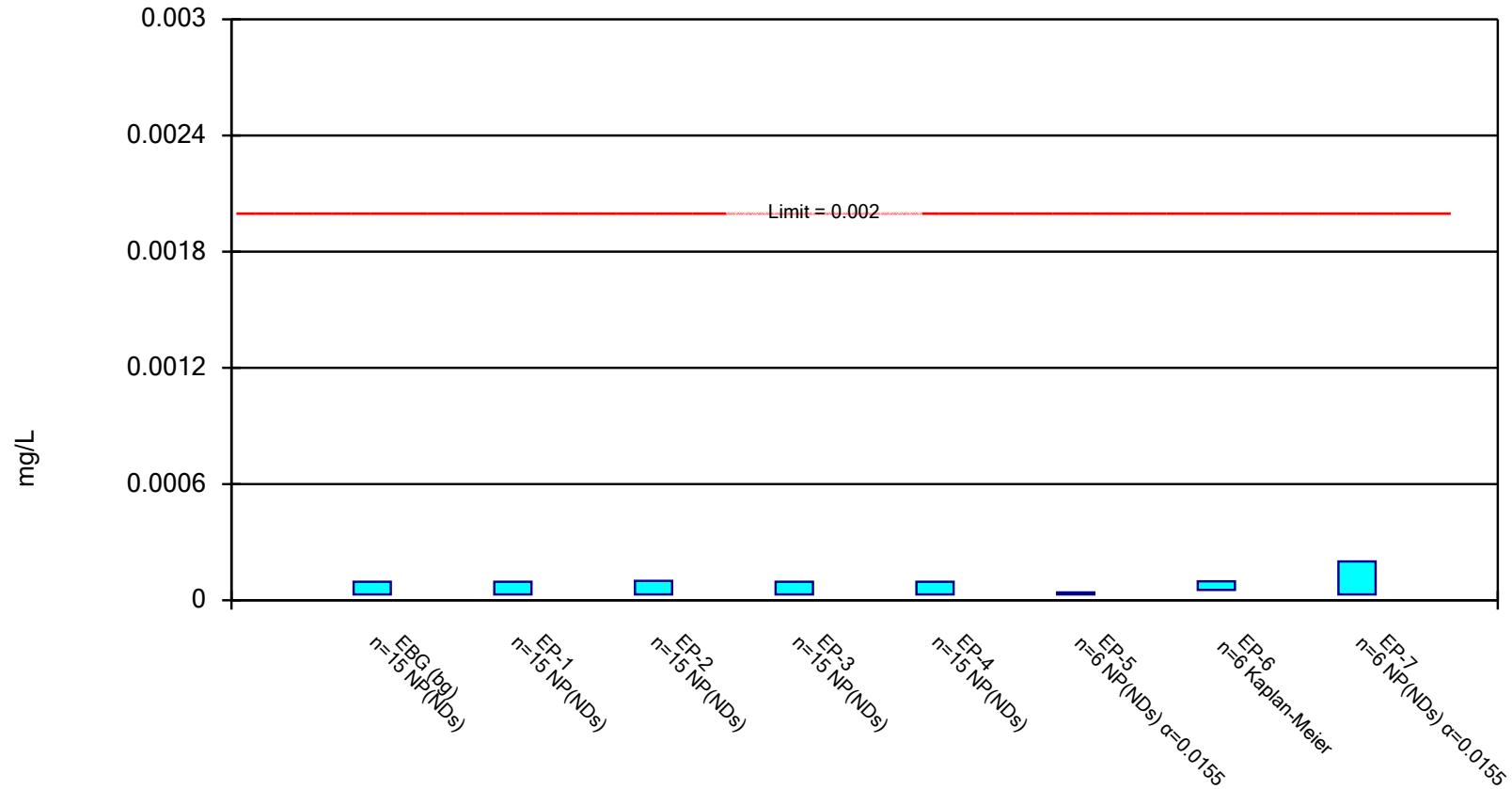


Constituent: Lithium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

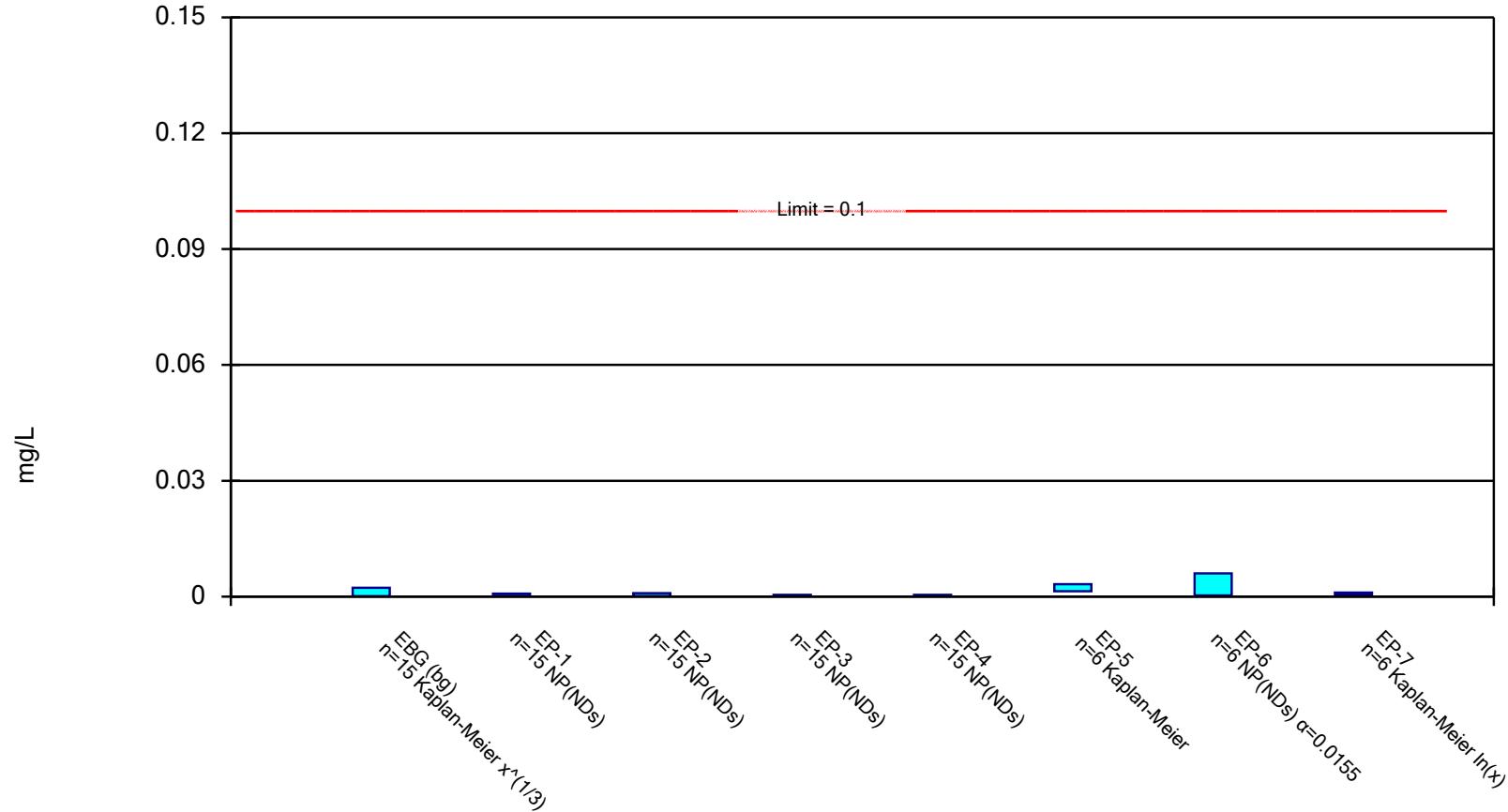


Constituent: Mercury Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

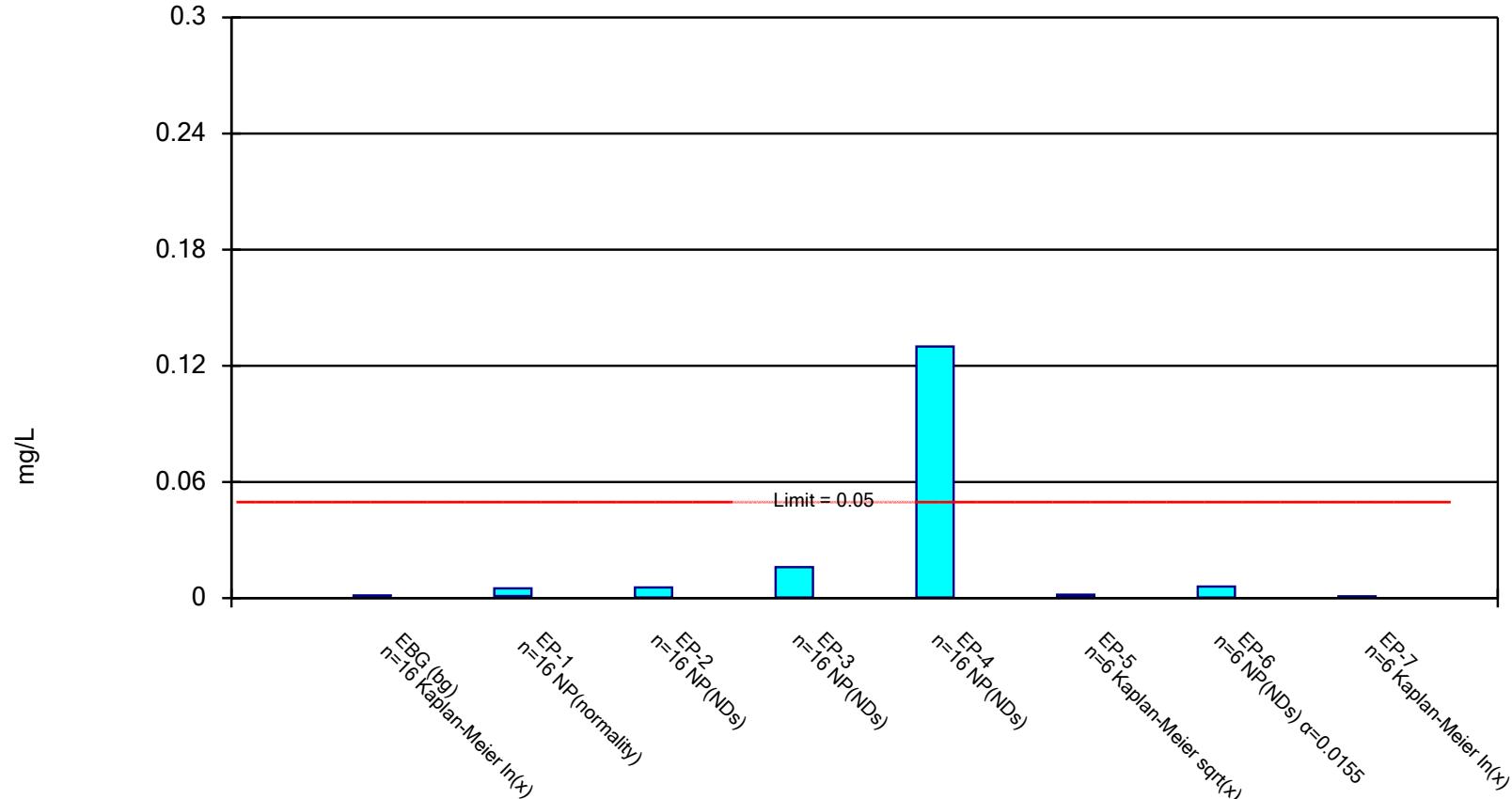


Constituent: Molybdenum Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

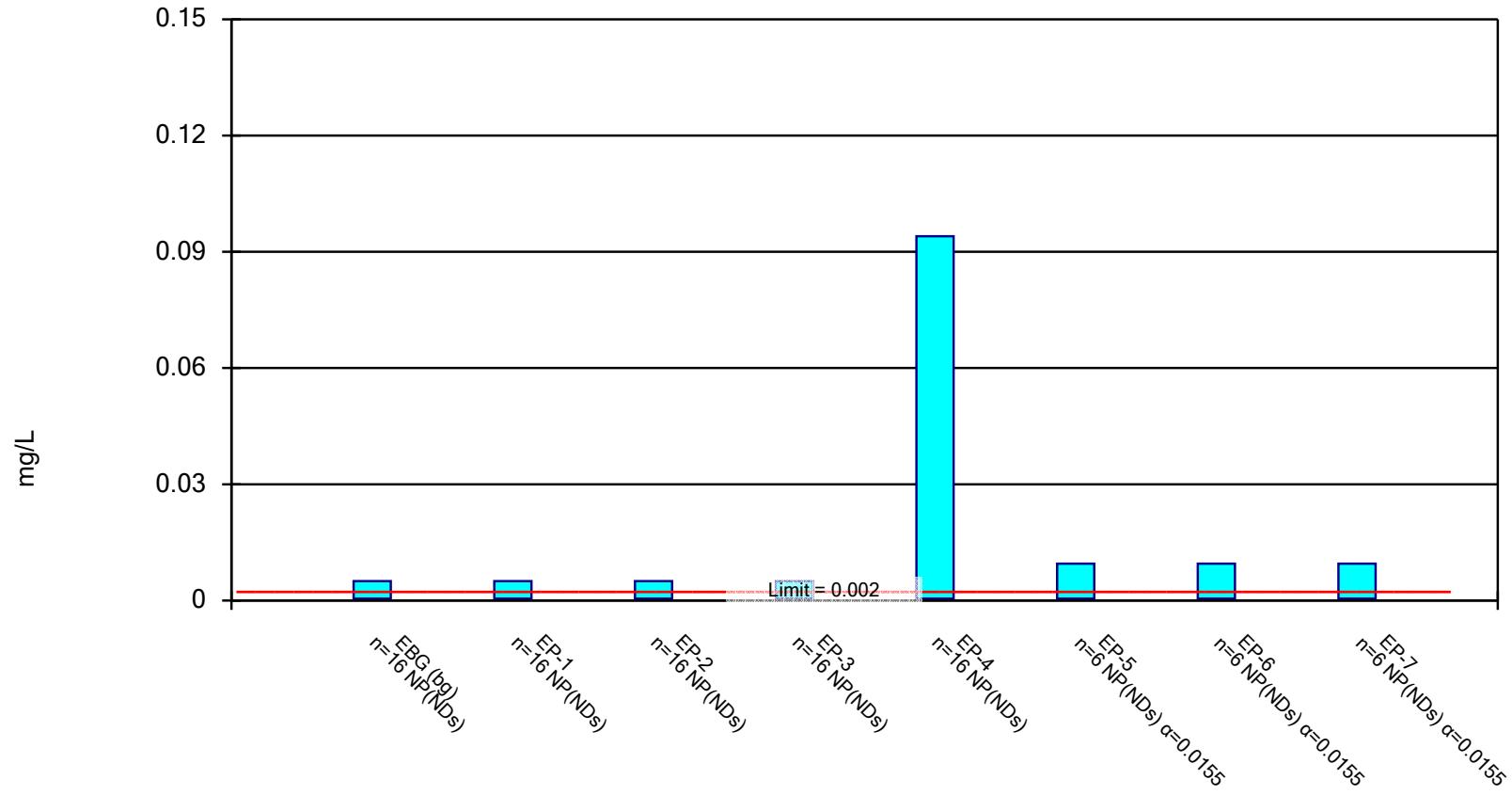


Constituent: Selenium Analysis Run 6/20/2023 12:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Thallium Analysis Run 6/20/2023 12:07 PM

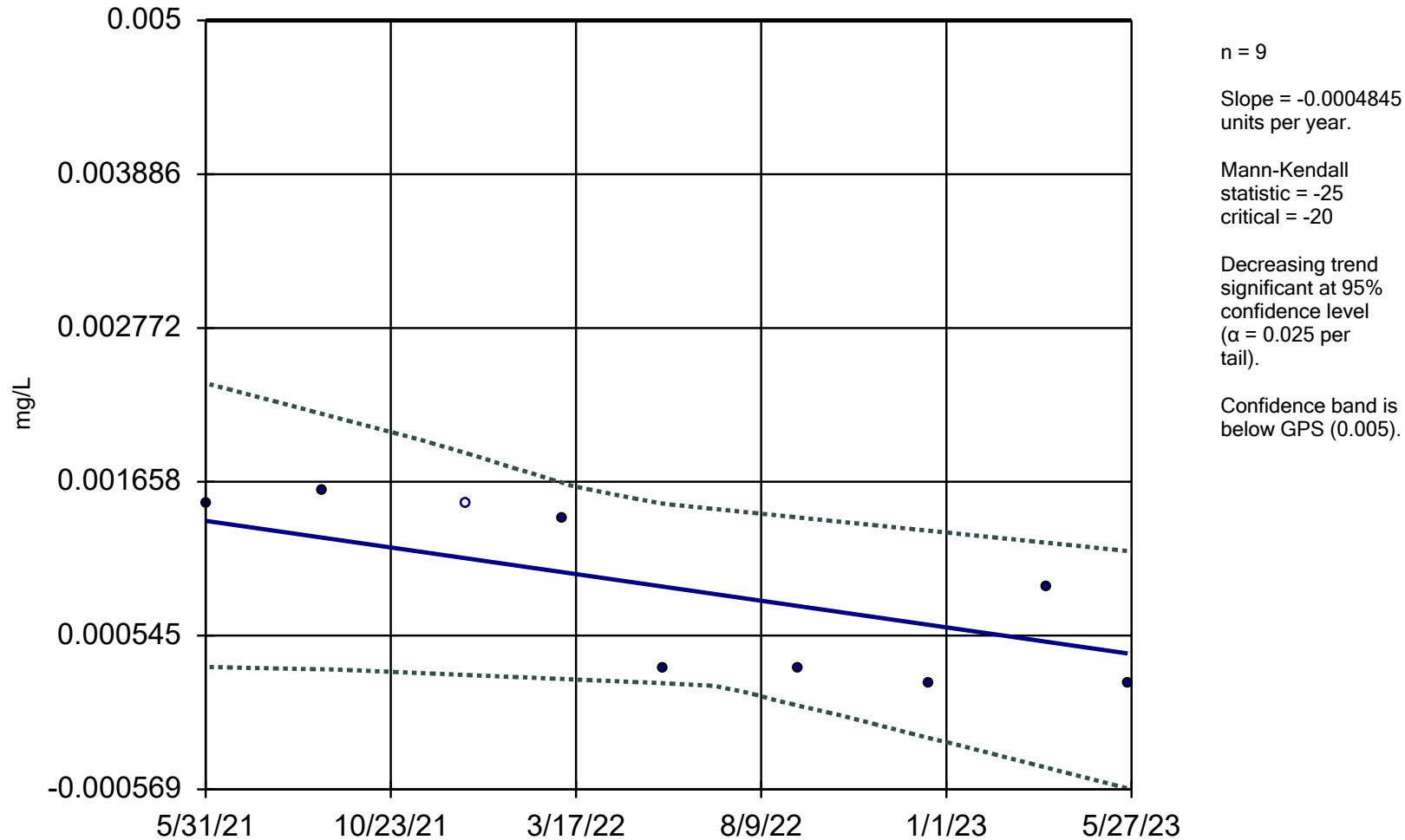
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-6

**Q1 2023 Resample Statistically
Significant Trends**

Sen's Slope and 95% Confidence Band

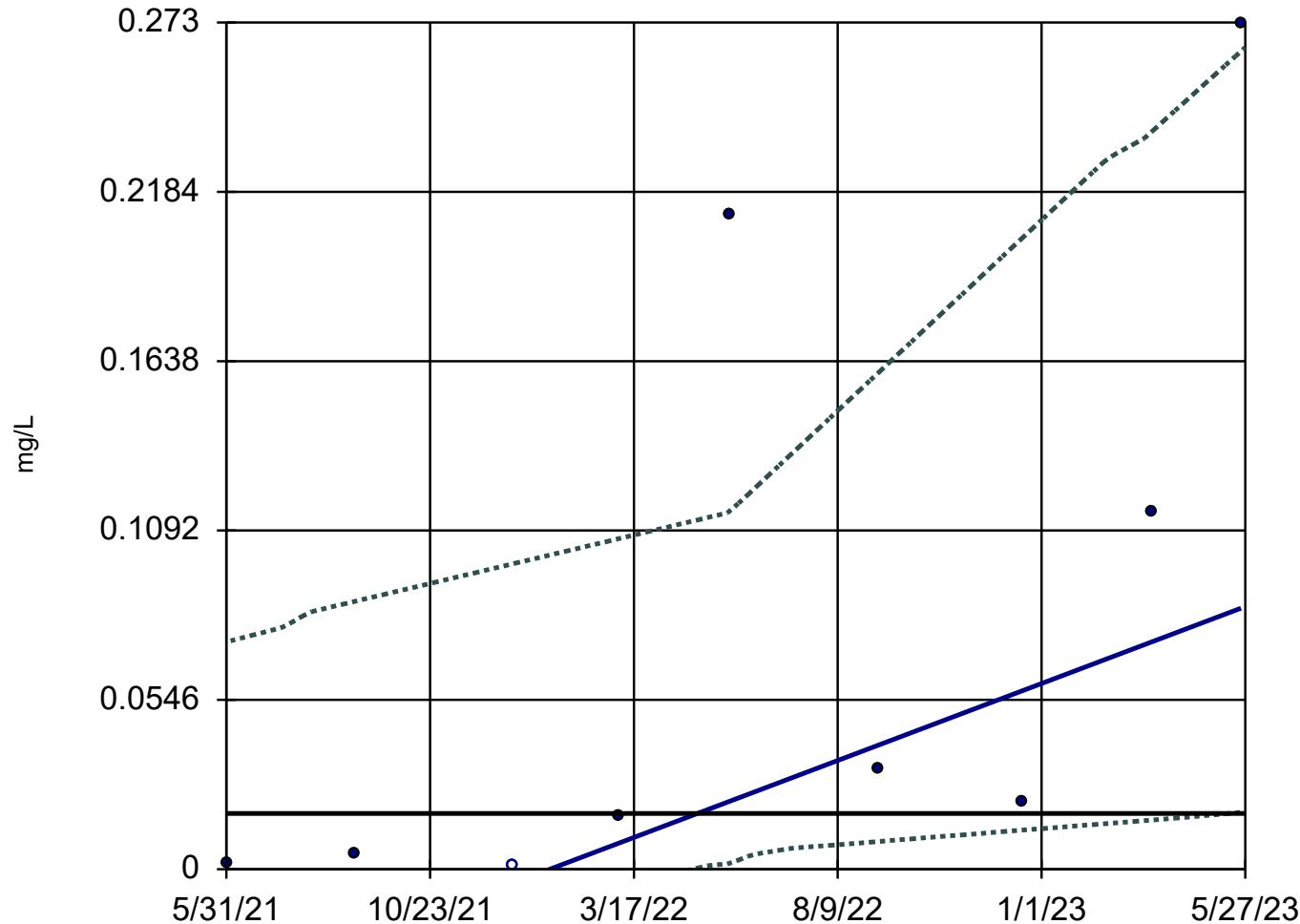
EP-2



Constituent: Cadmium Analysis Run 6/12/2023 12:29 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope and 95% Confidence Band

EP-2



n = 9

Slope = 0.06238
units per year.

Mann-Kendall
statistic = 24
critical = 20

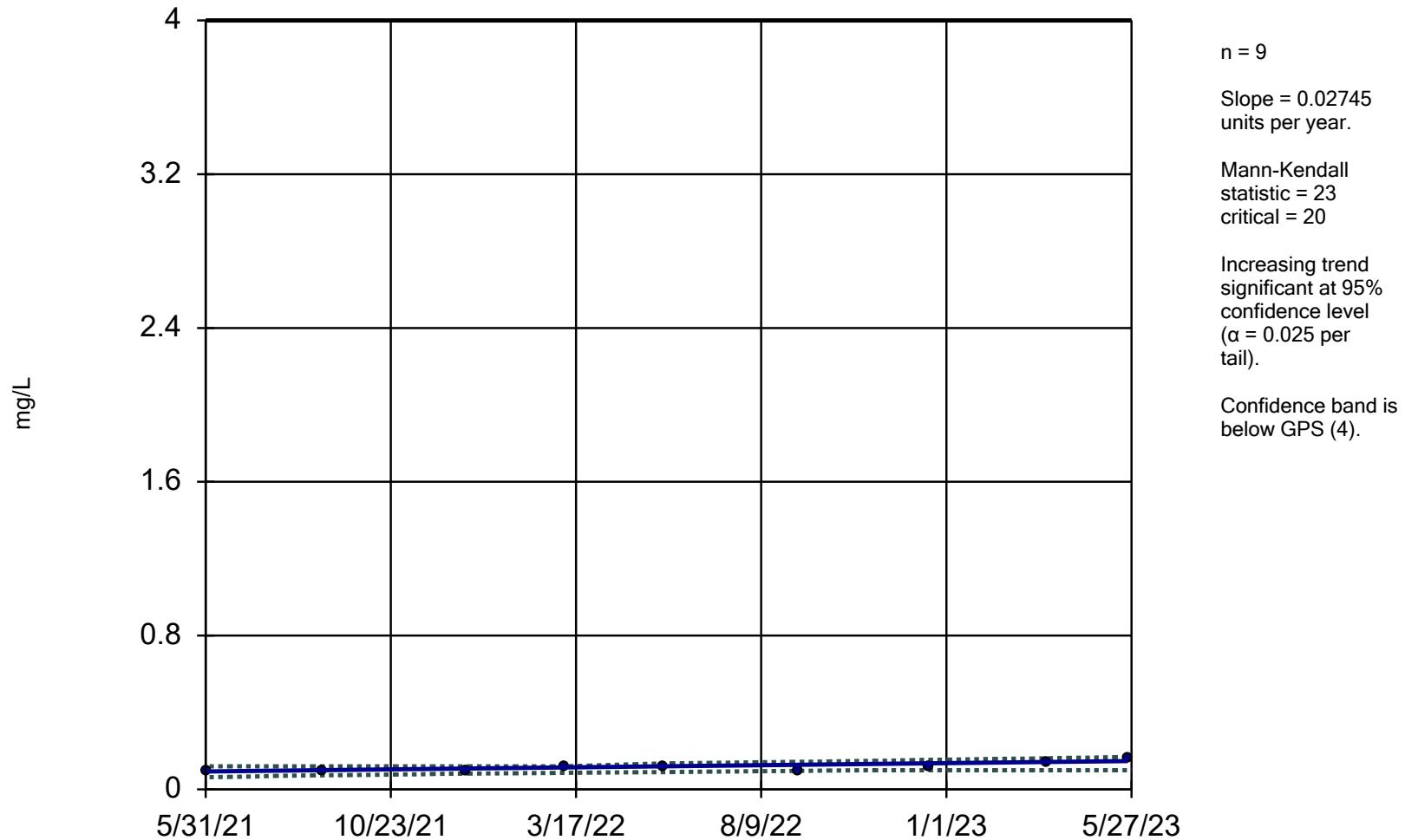
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

Confidence band intersects
GPS (0.018) on 05/20/23.

Constituent: Cobalt Analysis Run 6/12/2023 12:30 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope and 95% Confidence Band

EP-4

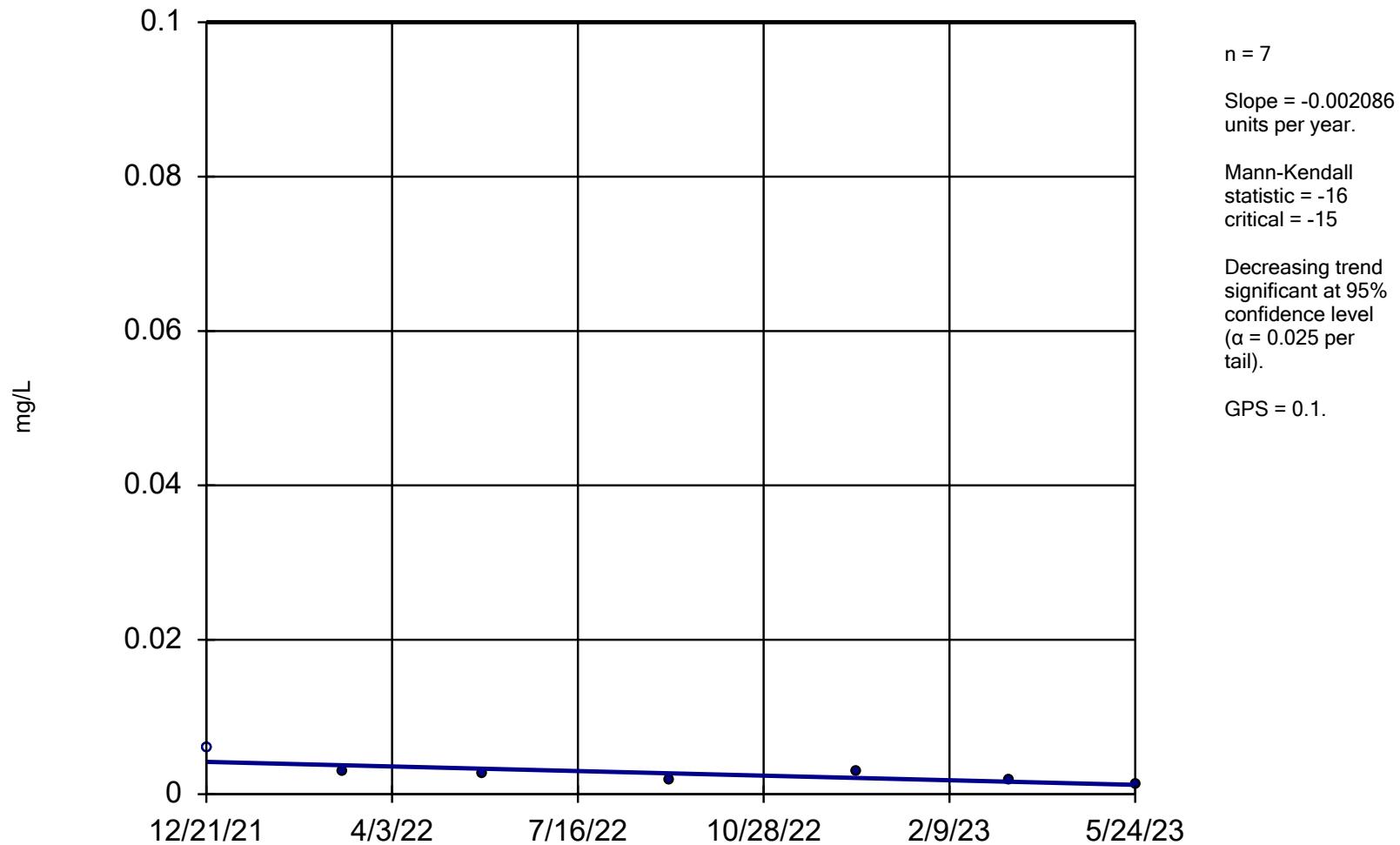


Constituent: Fluoride Analysis Run 6/12/2023 12:30 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5

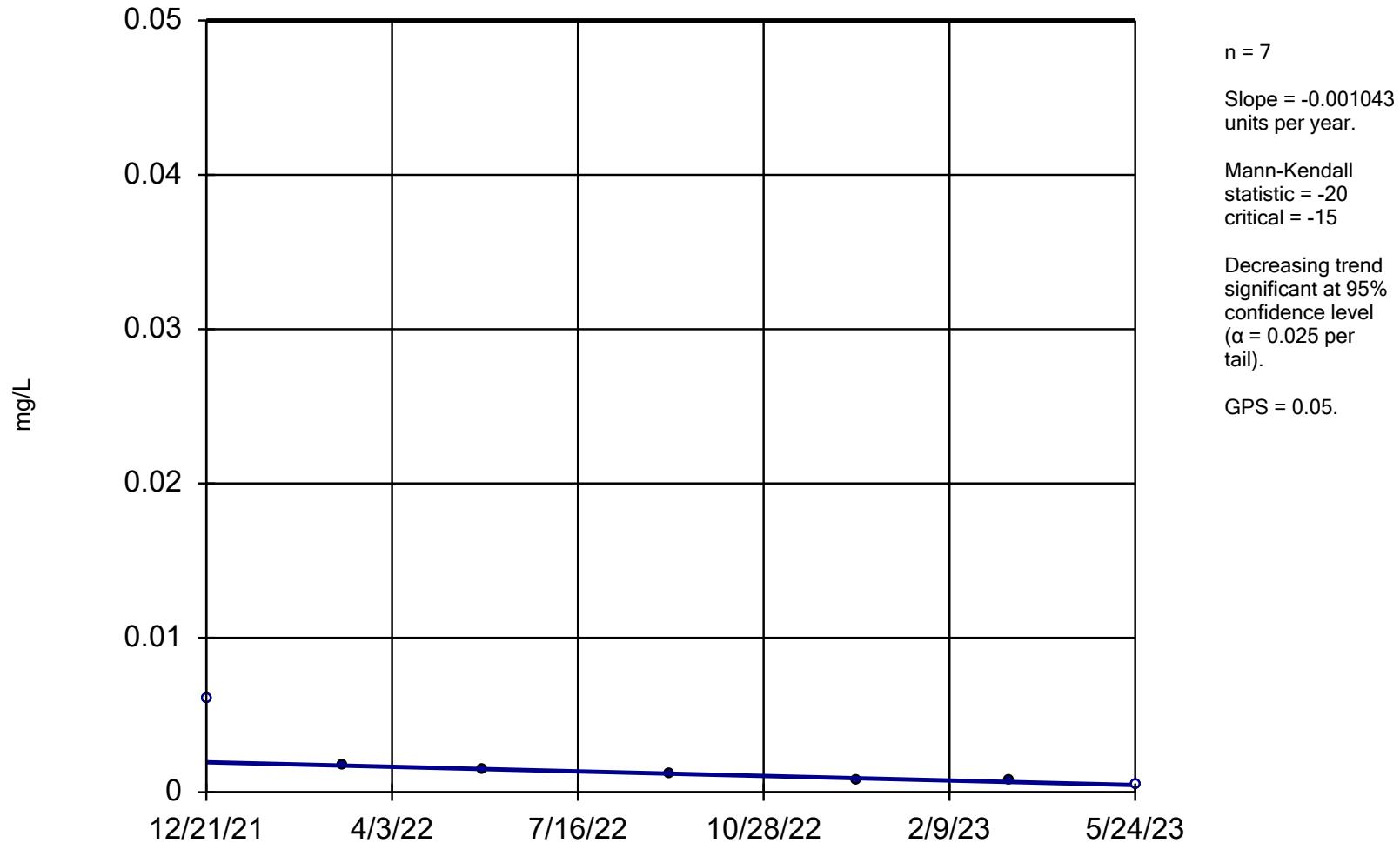


Constituent: Molybdenum Analysis Run 6/12/2023 12:30 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sanitas™ v.9.6.37 Software licensed to WSP USA Inc. EPA
Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5



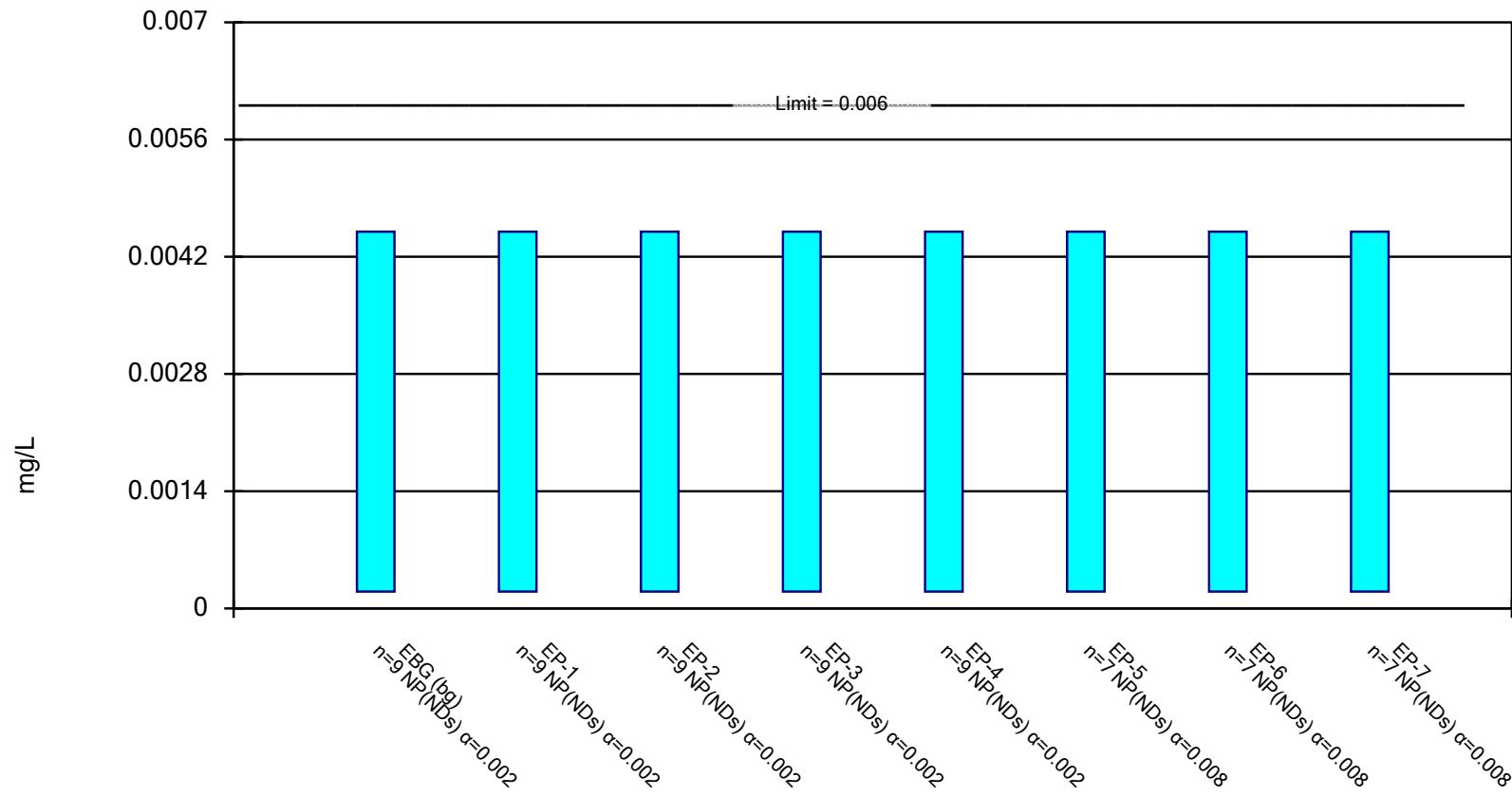
Constituent: Selenium Analysis Run 6/12/2023 12:30 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-7

**Q2 2023 Groundwater Protection
Standard Exceedances**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

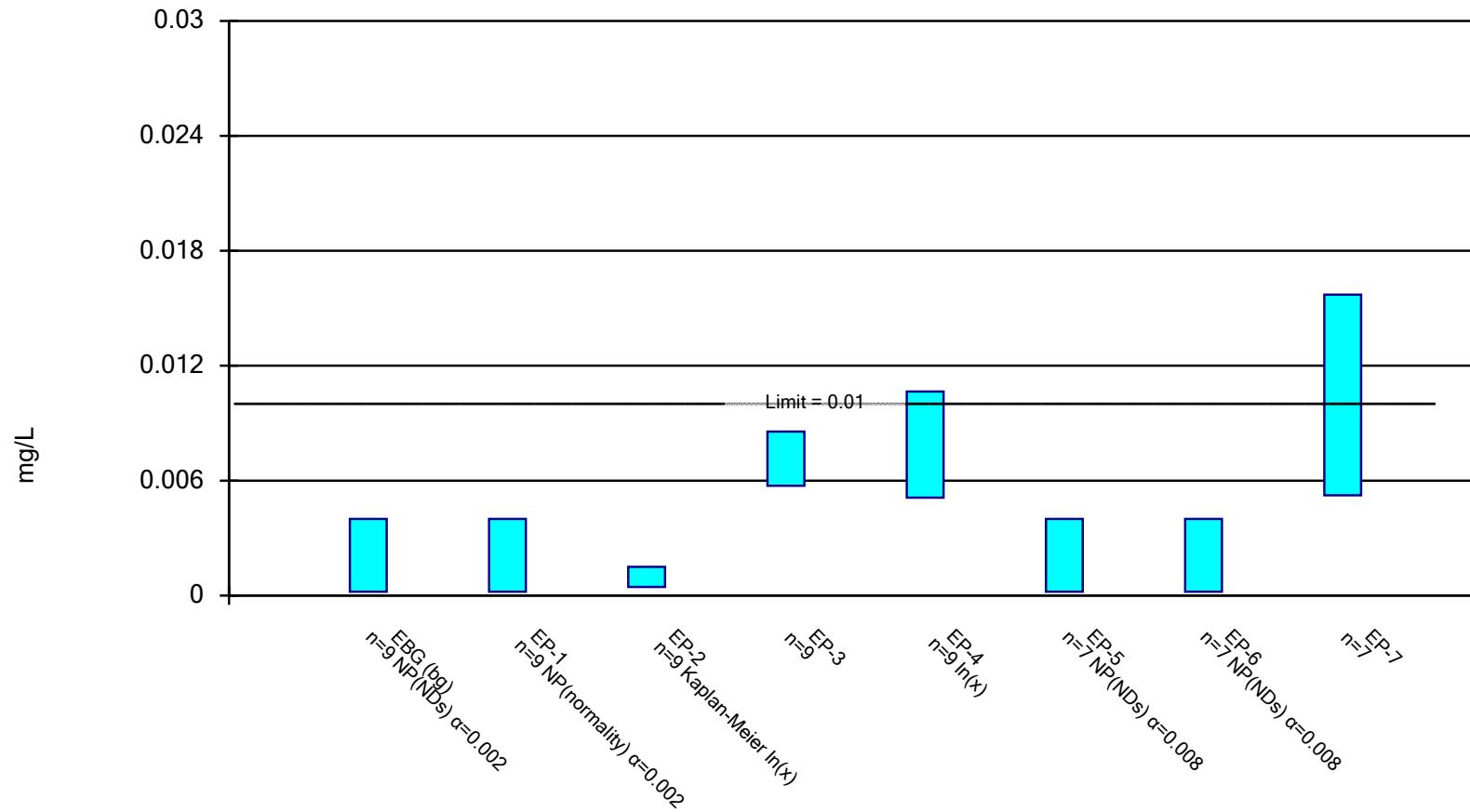


Constituent: Antimony Analysis Run 7/14/2023 10:31 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

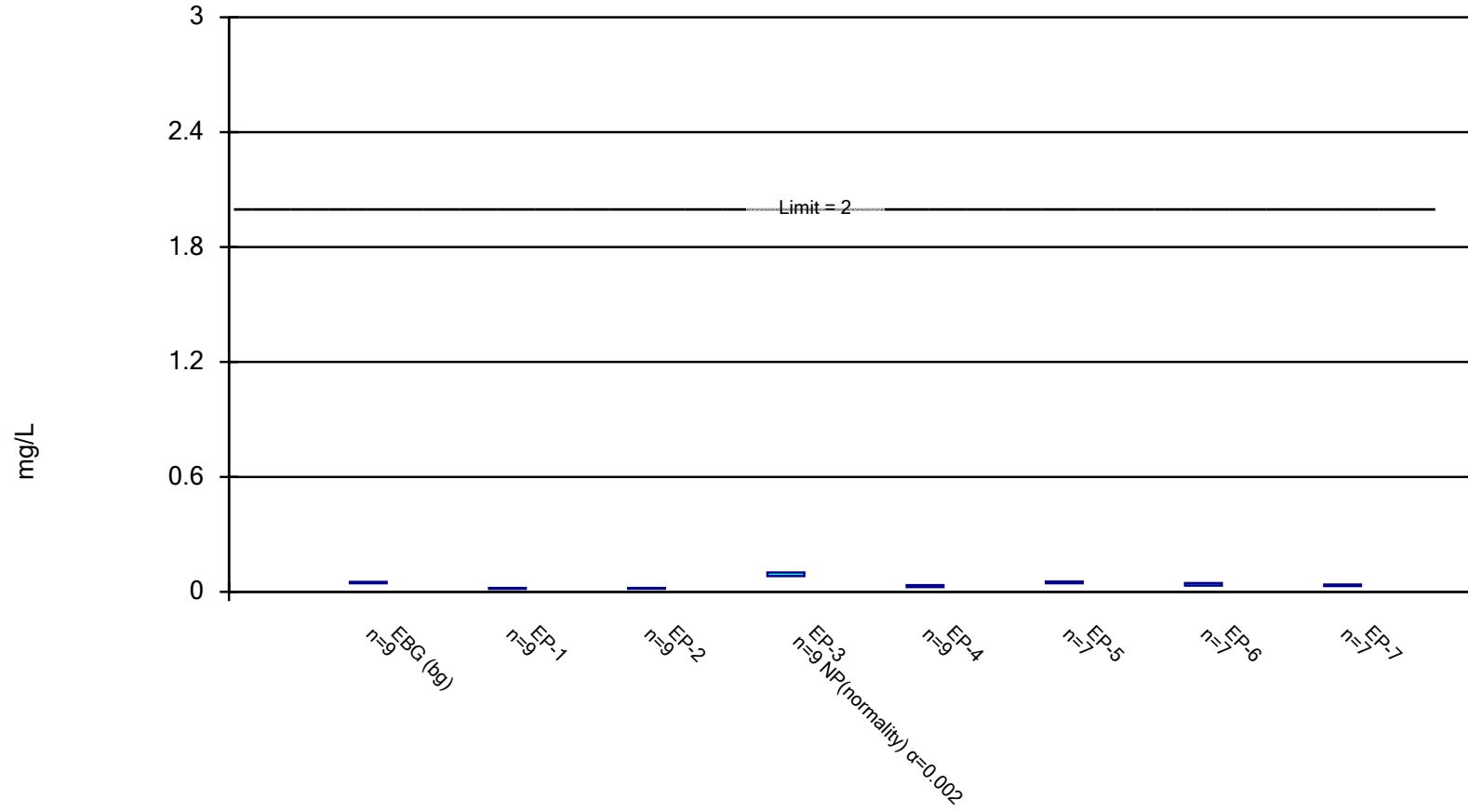
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

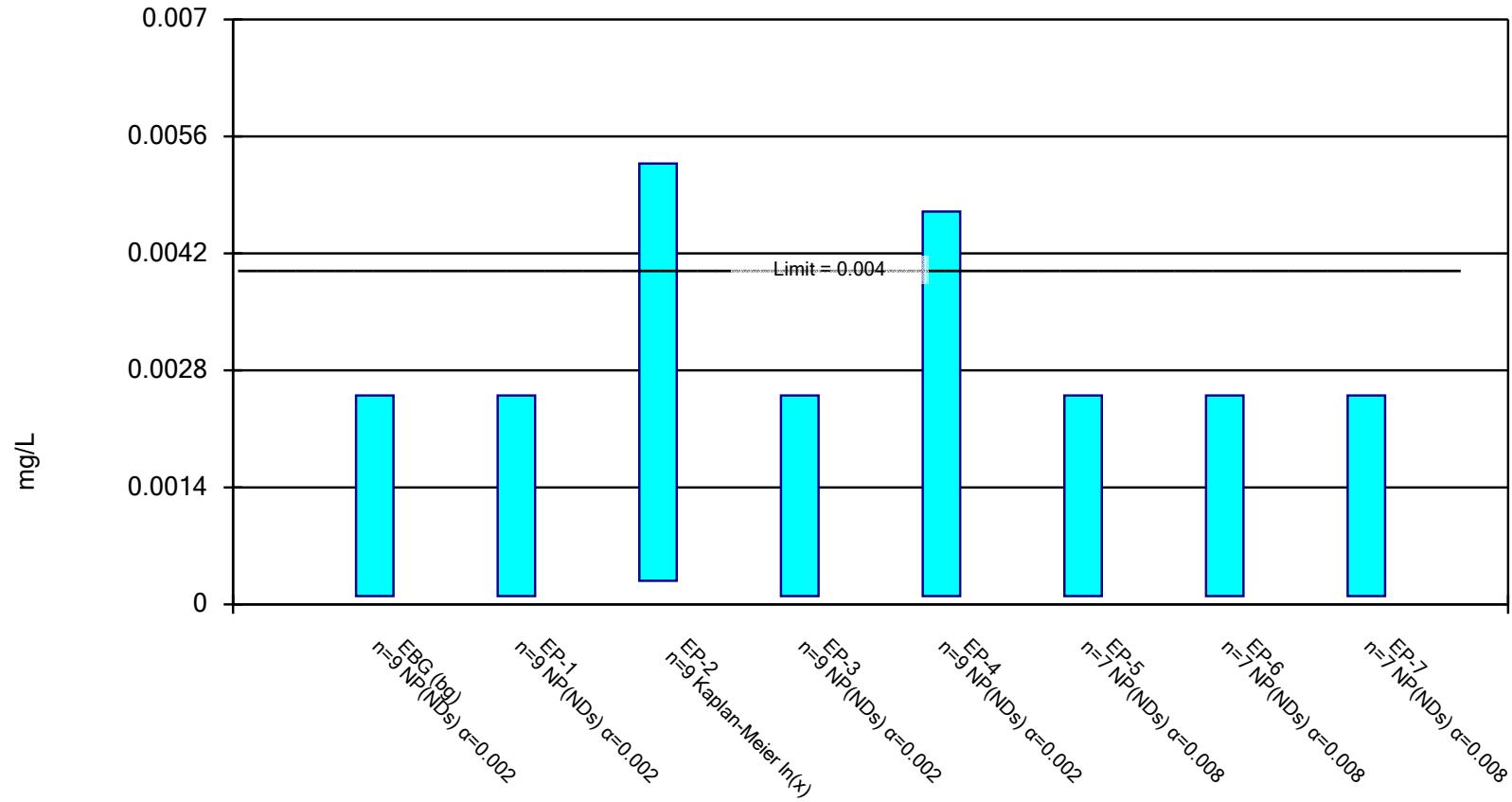
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

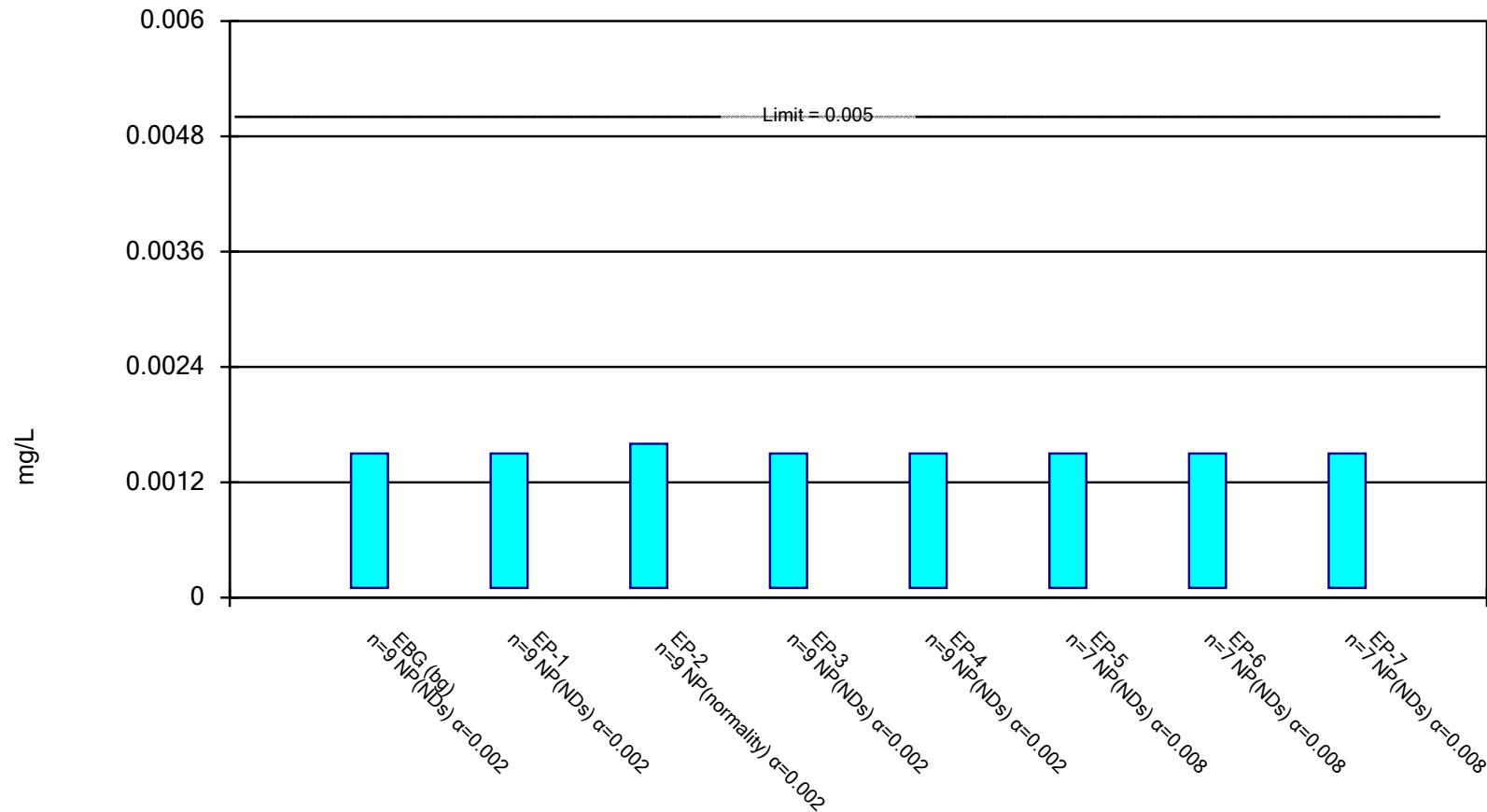


Constituent: Beryllium Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

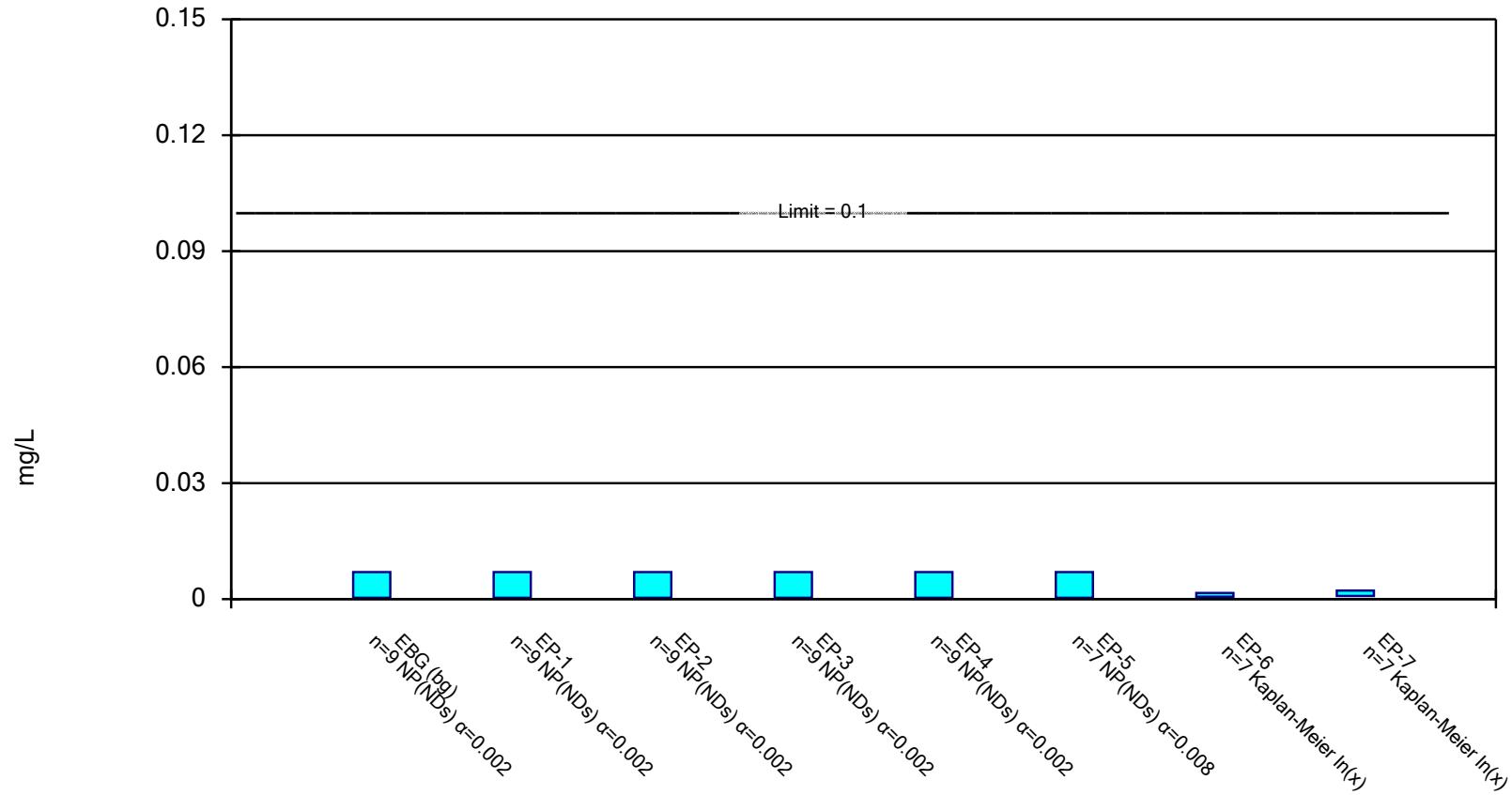


Constituent: Cadmium Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

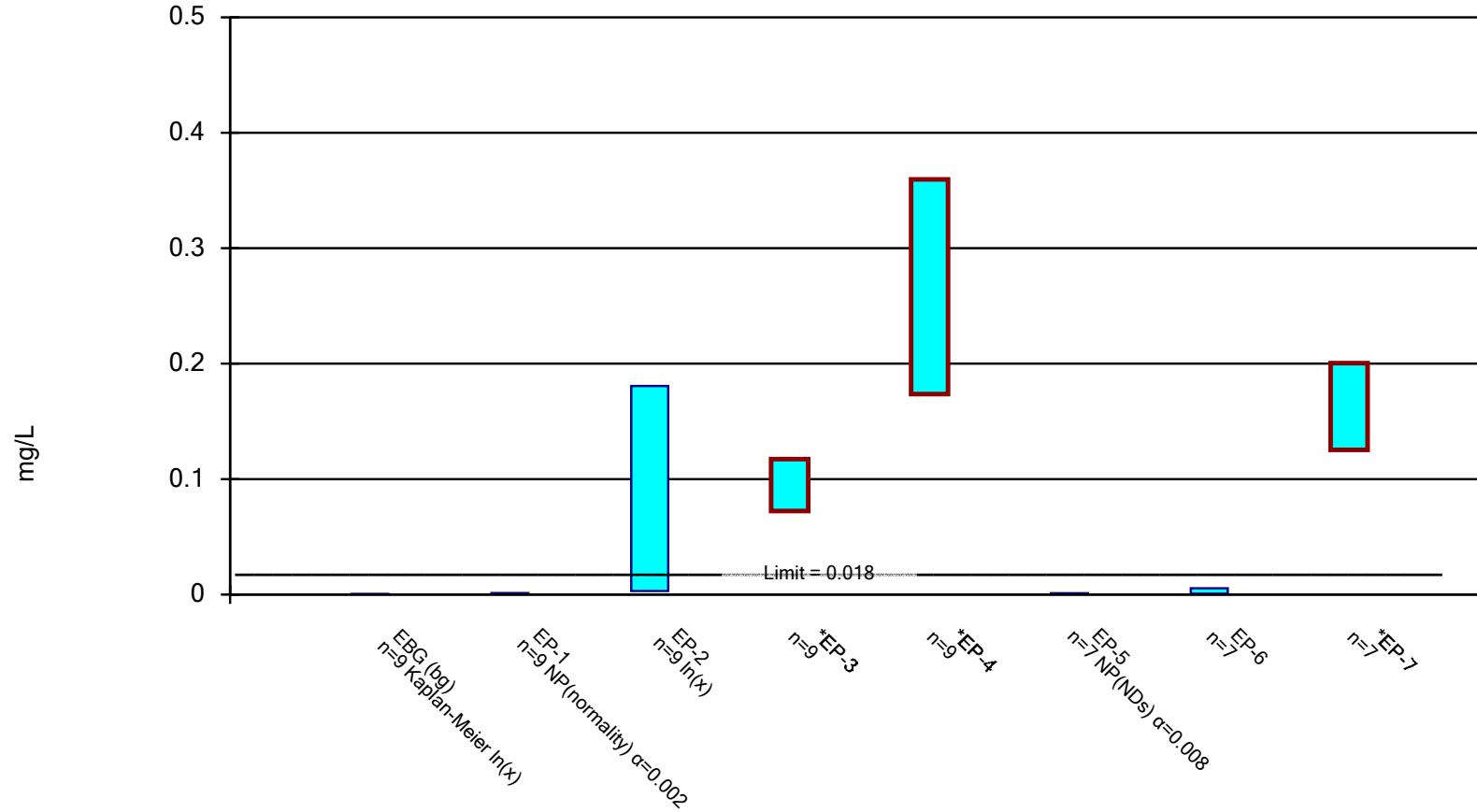


Constituent: Chromium Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

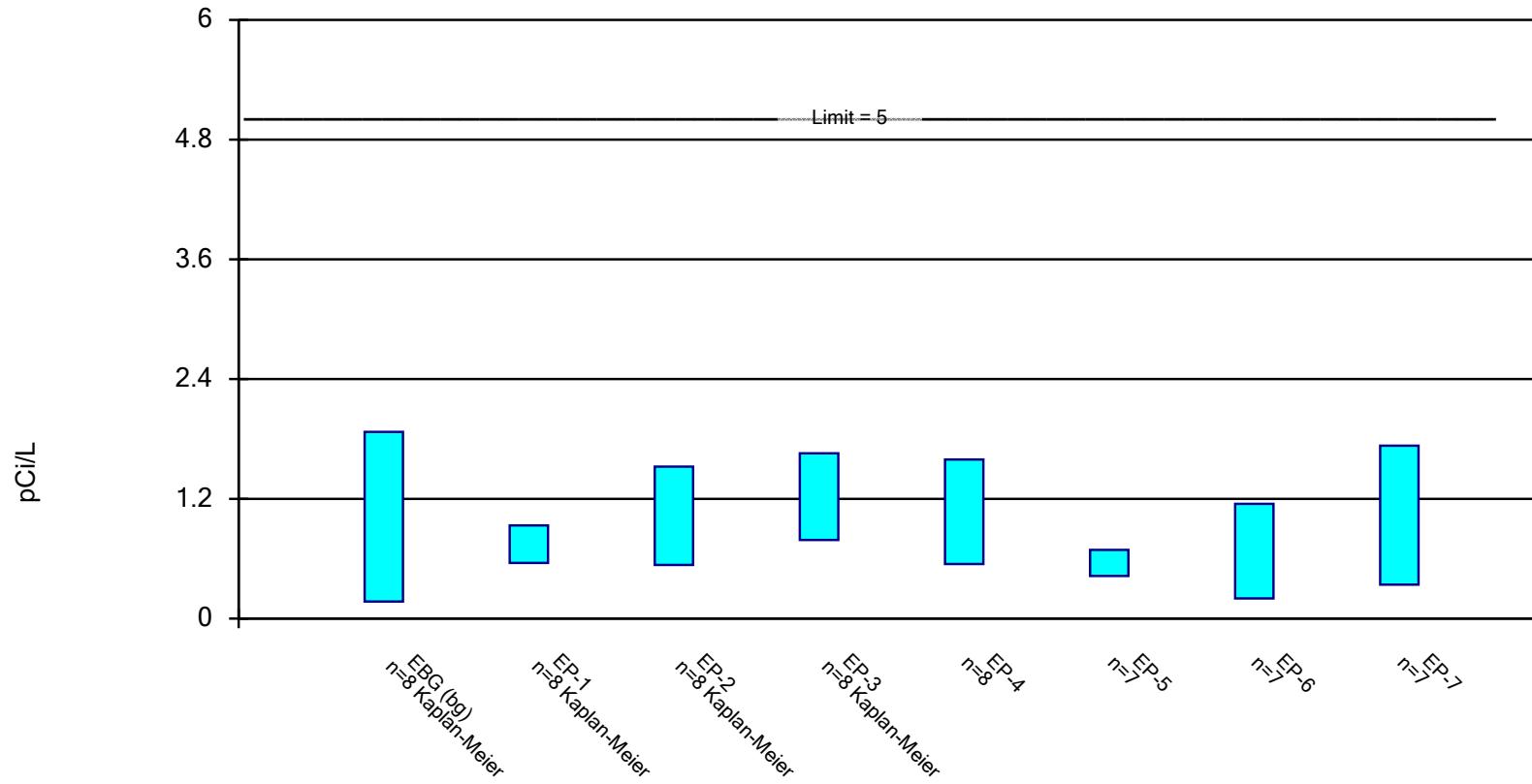
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

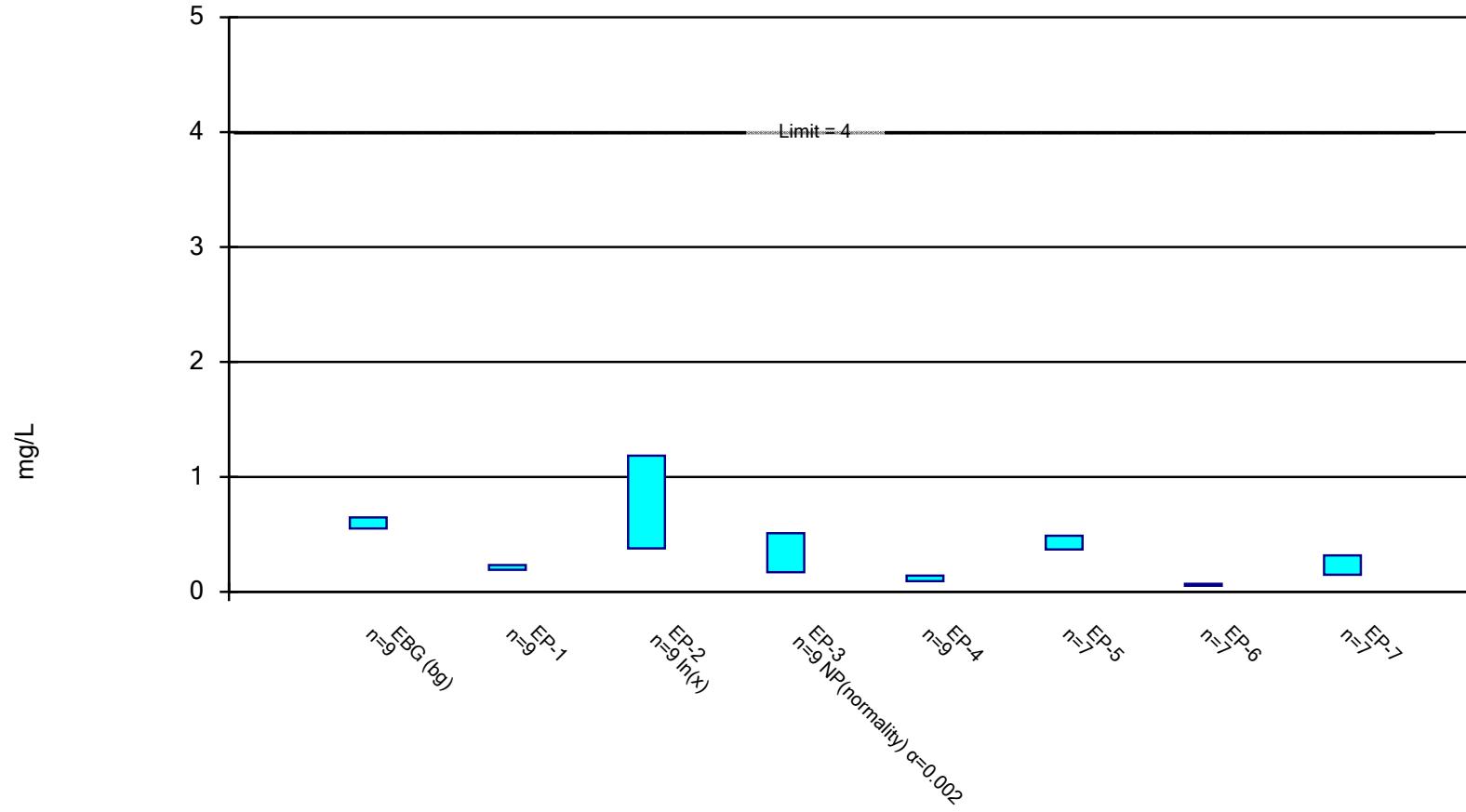
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

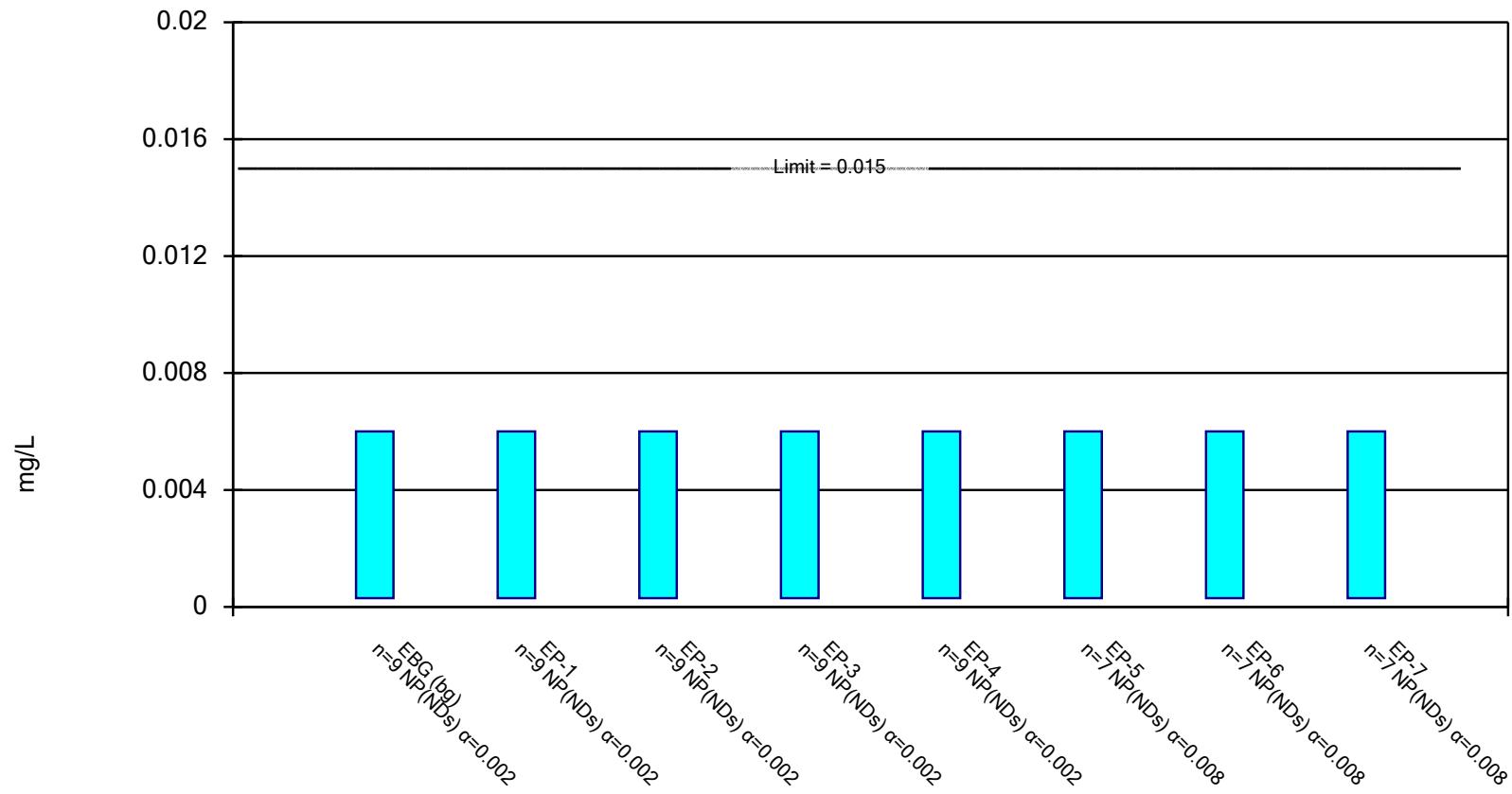


Constituent: Fluoride Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

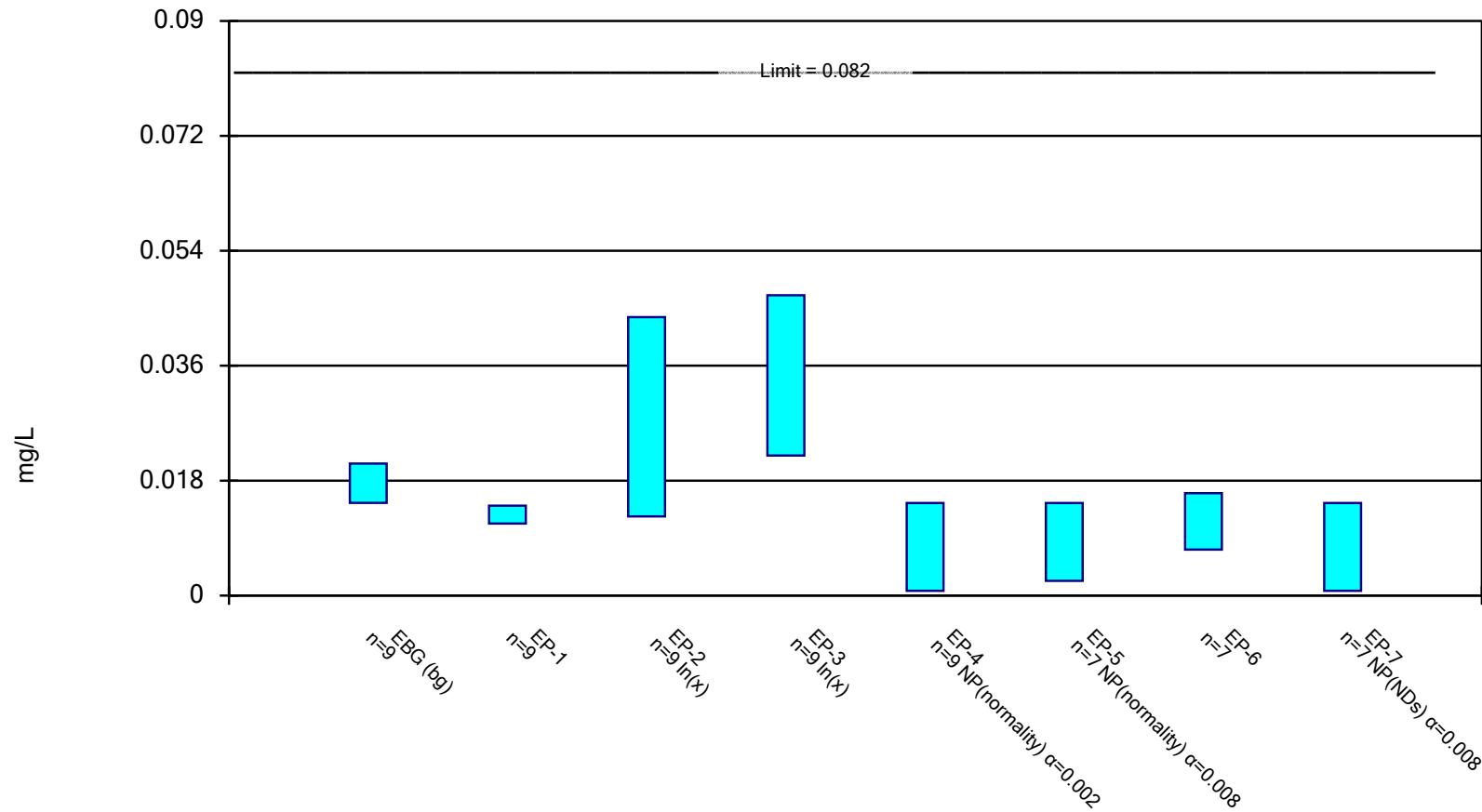
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

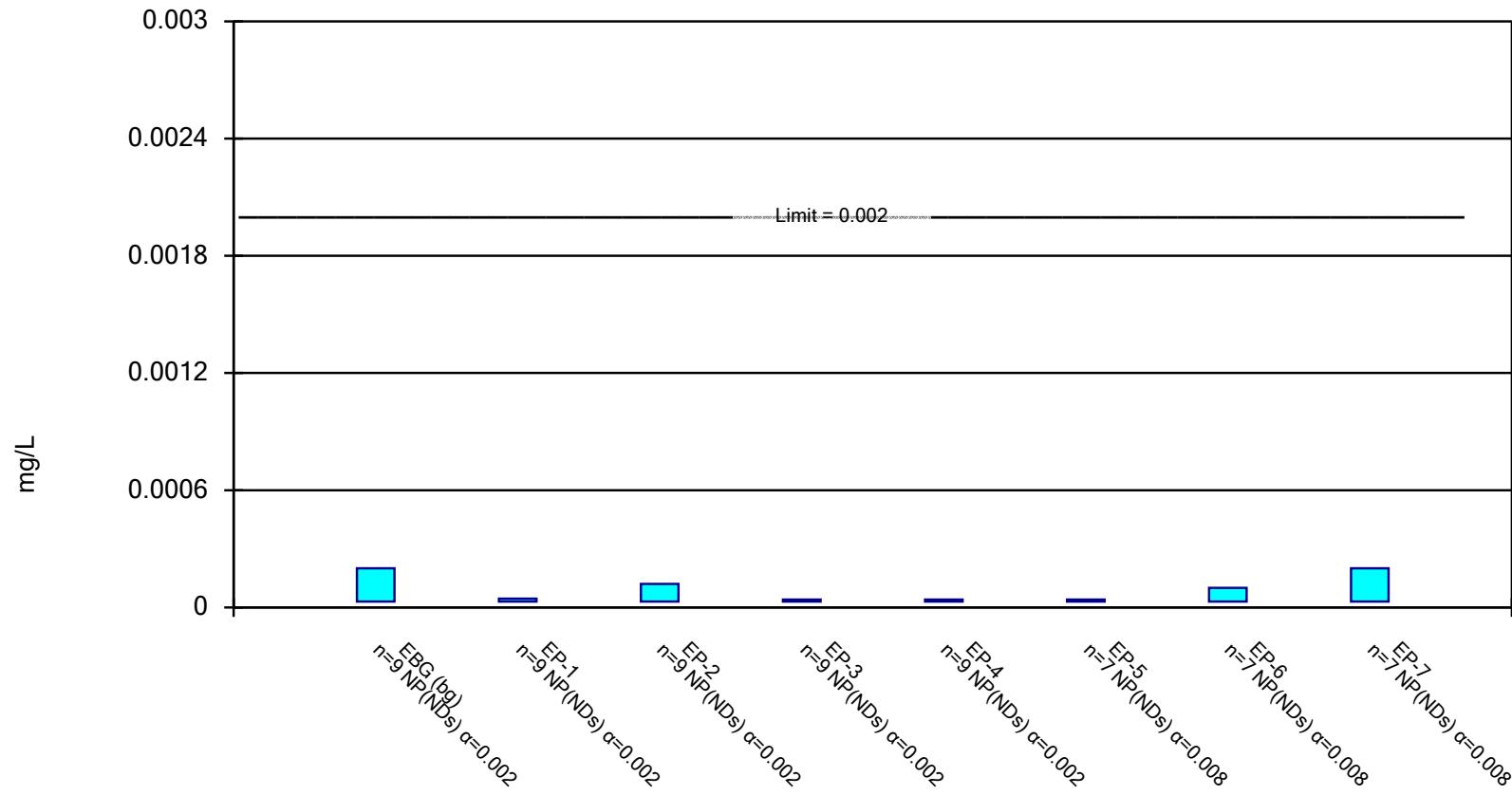
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/14/2023 10:32 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

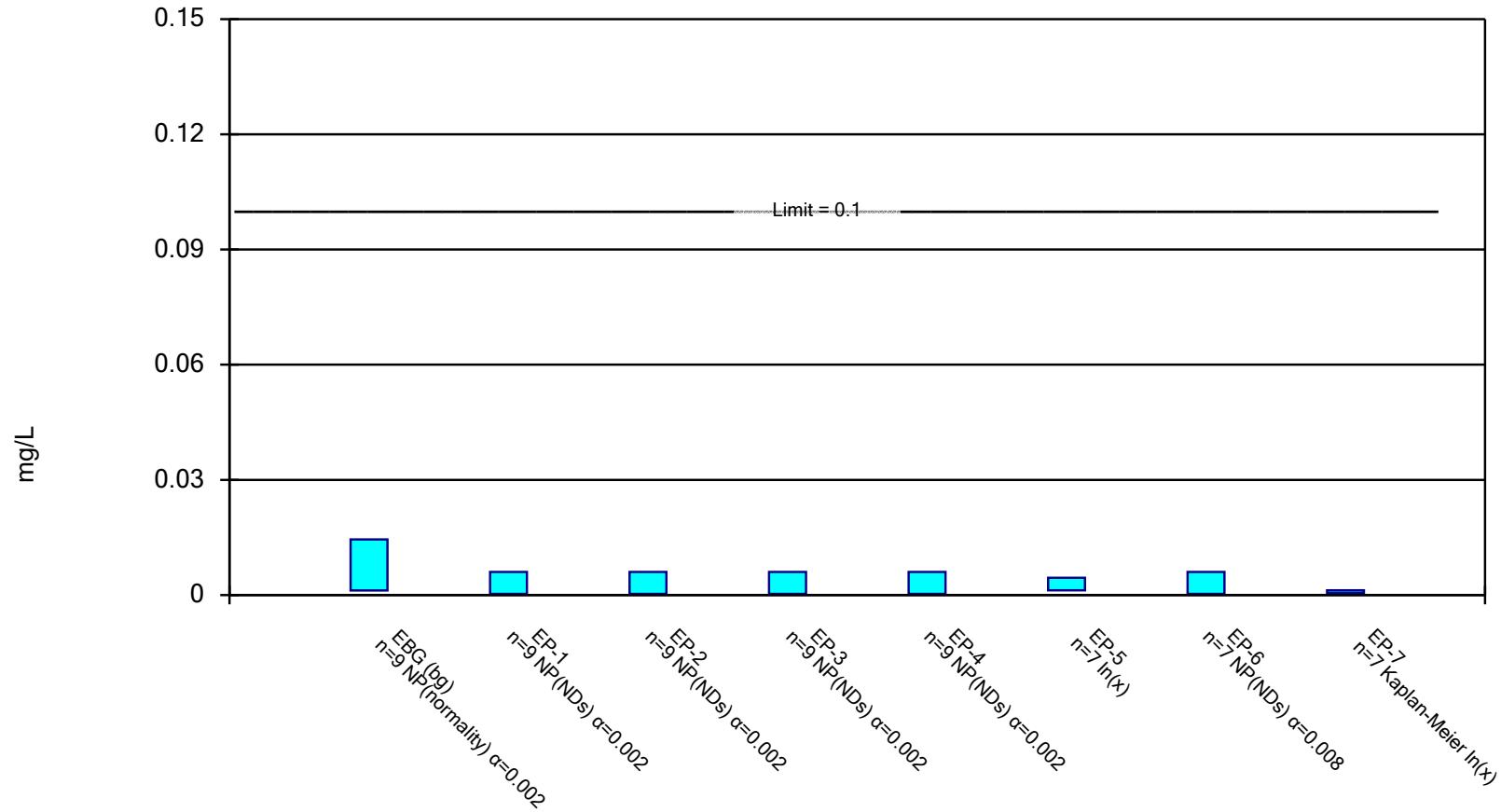


Constituent: Mercury Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

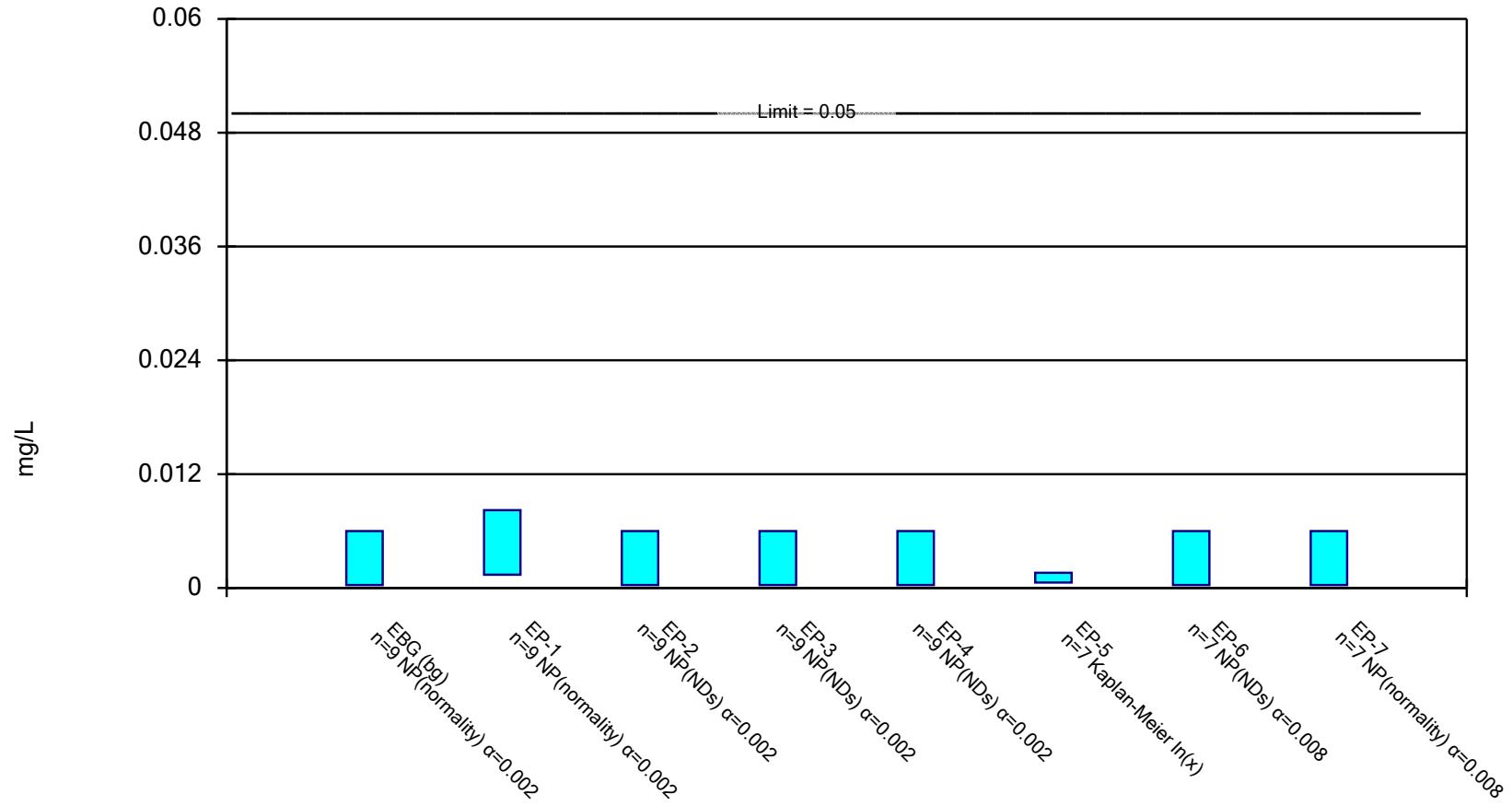


Constituent: Molybdenum Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

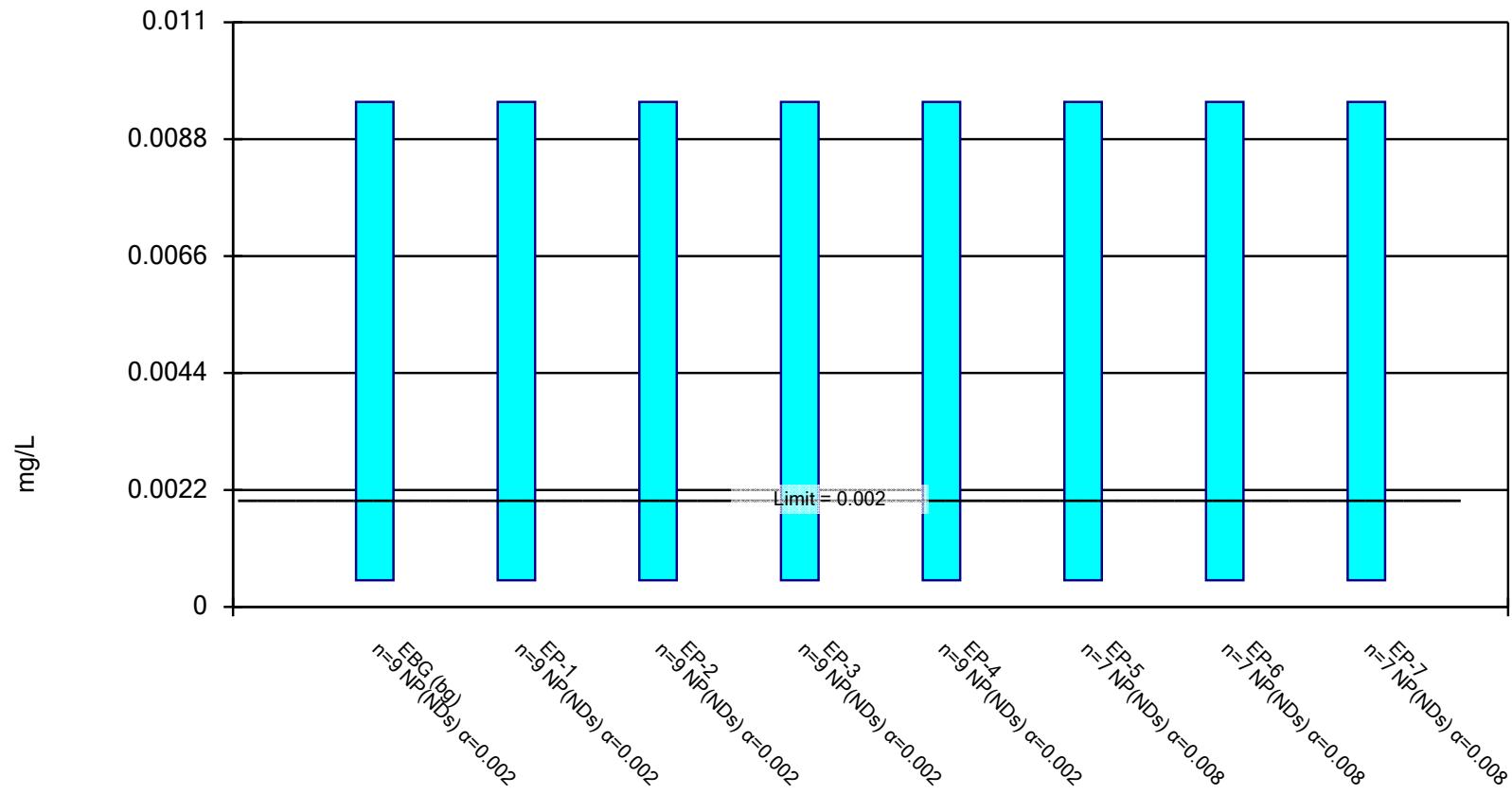


Constituent: Selenium Analysis Run 7/14/2023 10:32 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 7/14/2023 10:33 AM

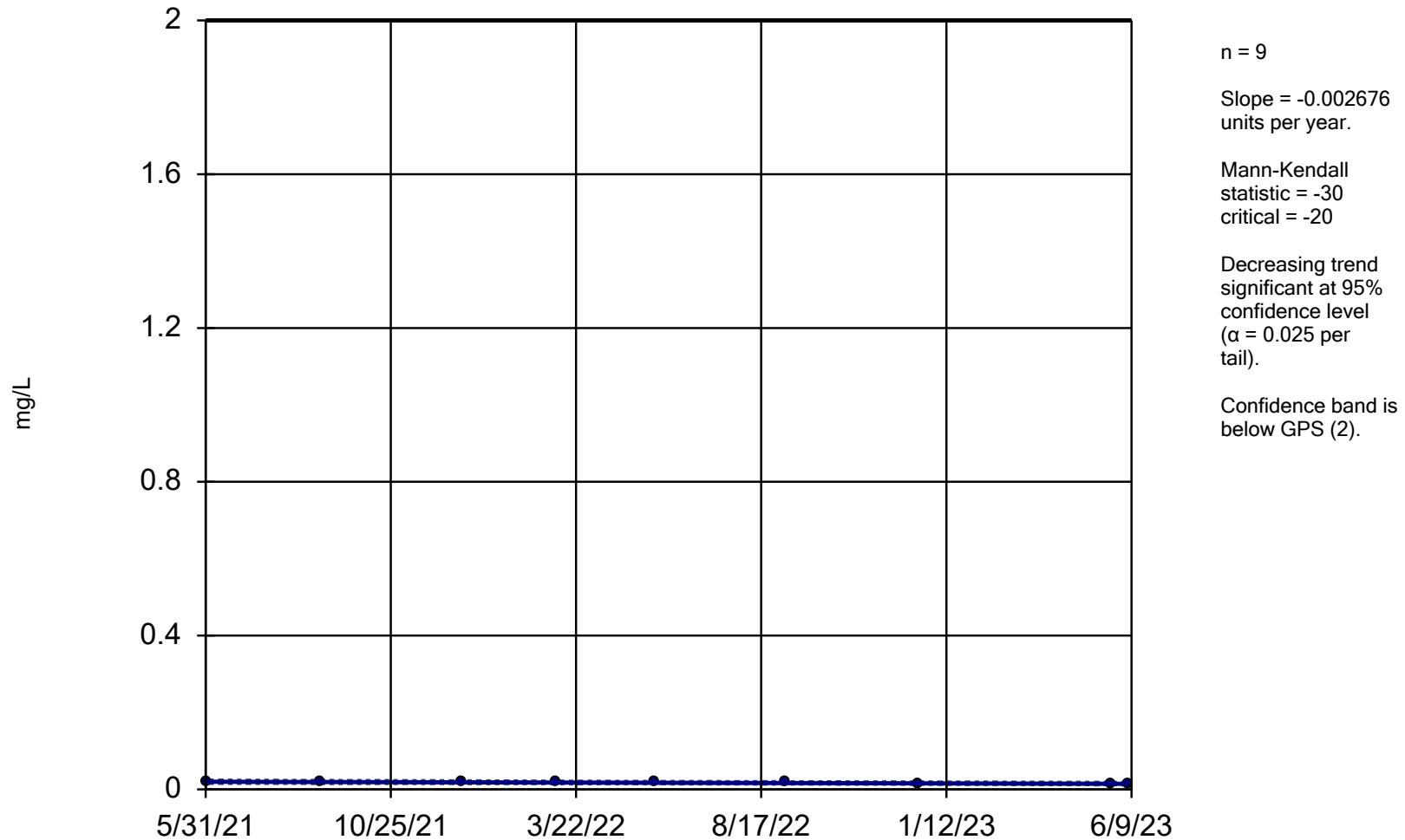
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-8

**Q2 2023 Statistically Significant
Trends**

Sen's Slope and 95% Confidence Band

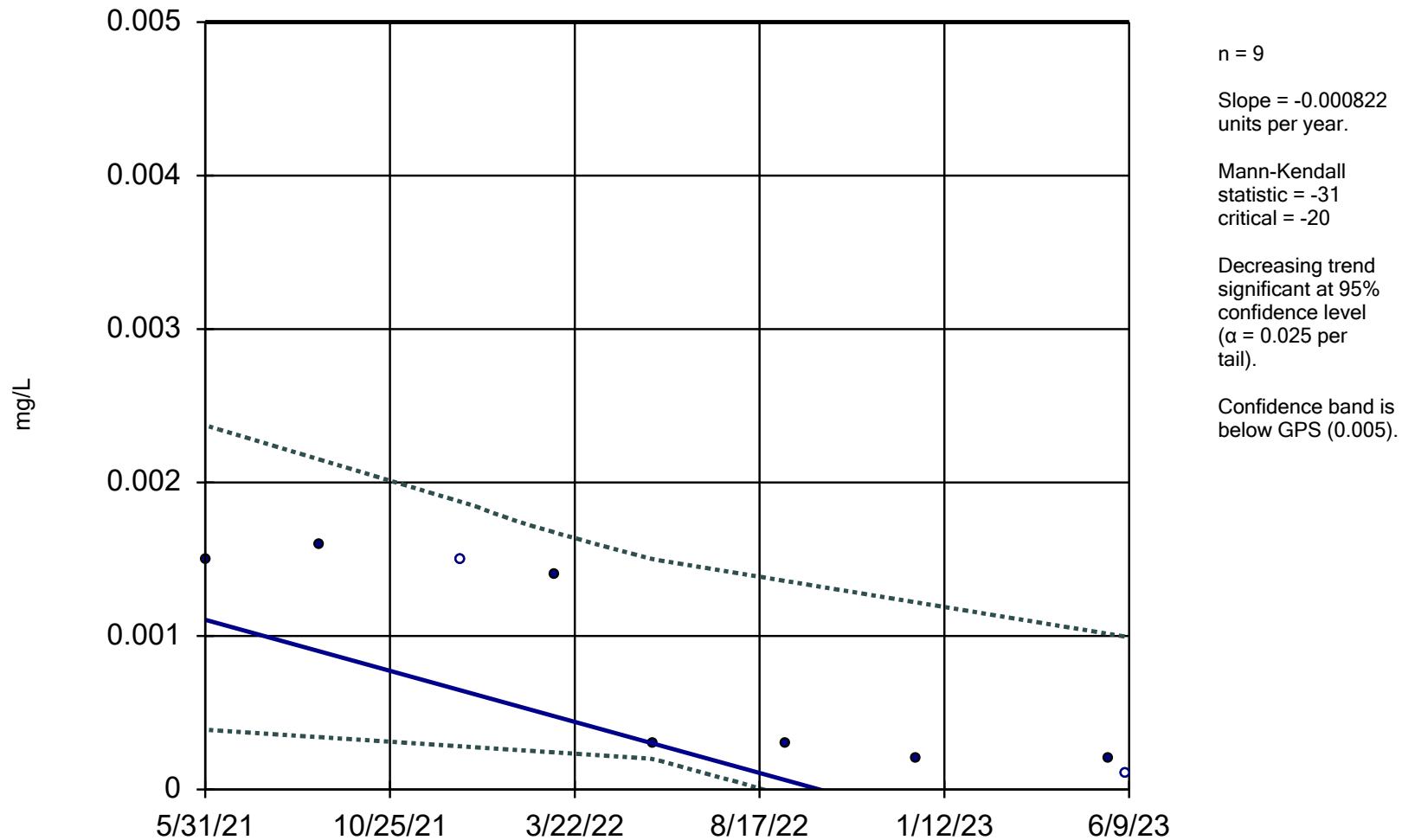
EP-1



Constituent: Barium Analysis Run 7/13/2023 1:07 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope and 95% Confidence Band

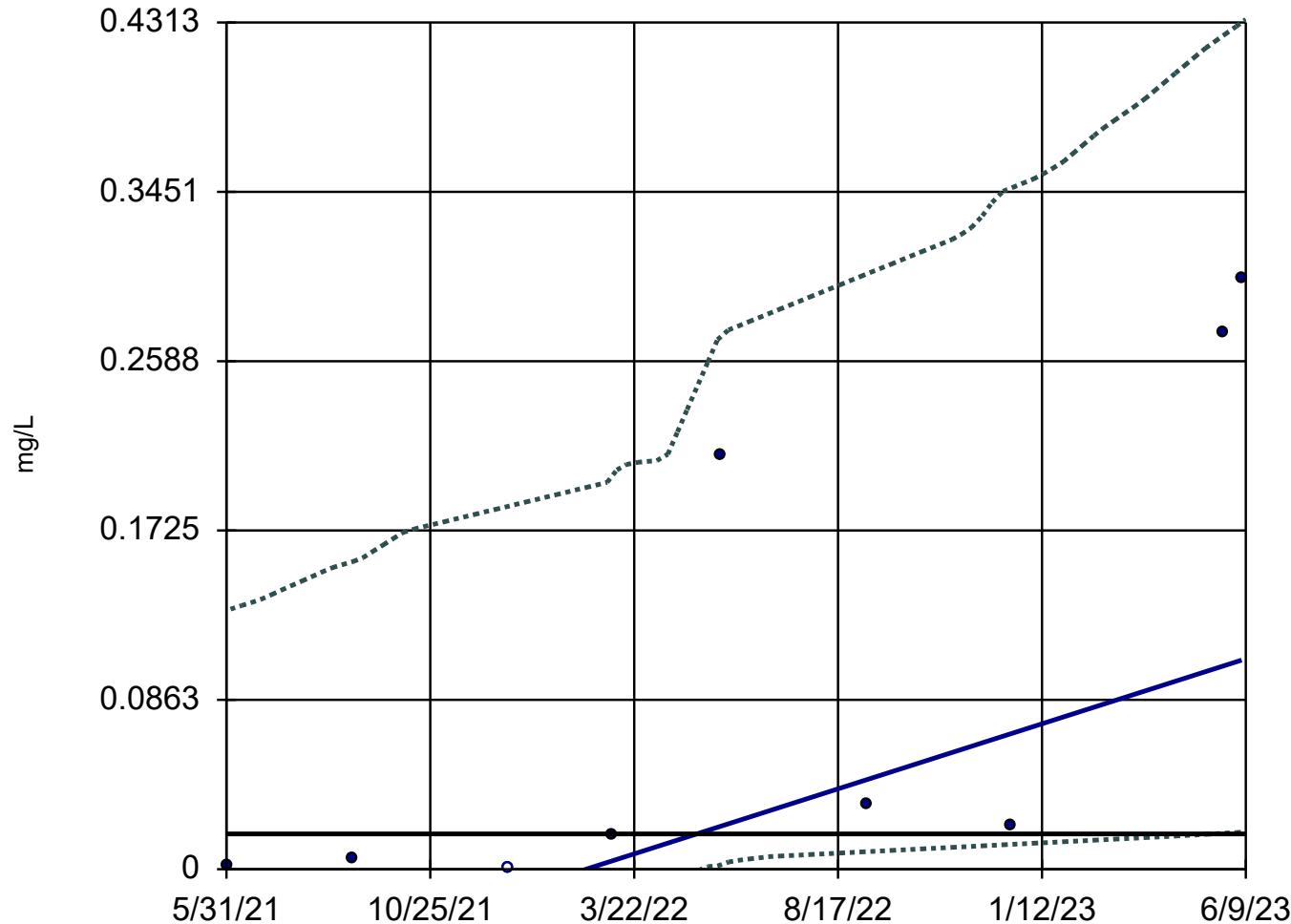
EP-2



Constituent: Cadmium Analysis Run 7/13/2023 1:08 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope and 95% Confidence Band

EP-2



n = 9

Slope = 0.08178
units per year.

Mann-Kendall
statistic = 26
critical = 20

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

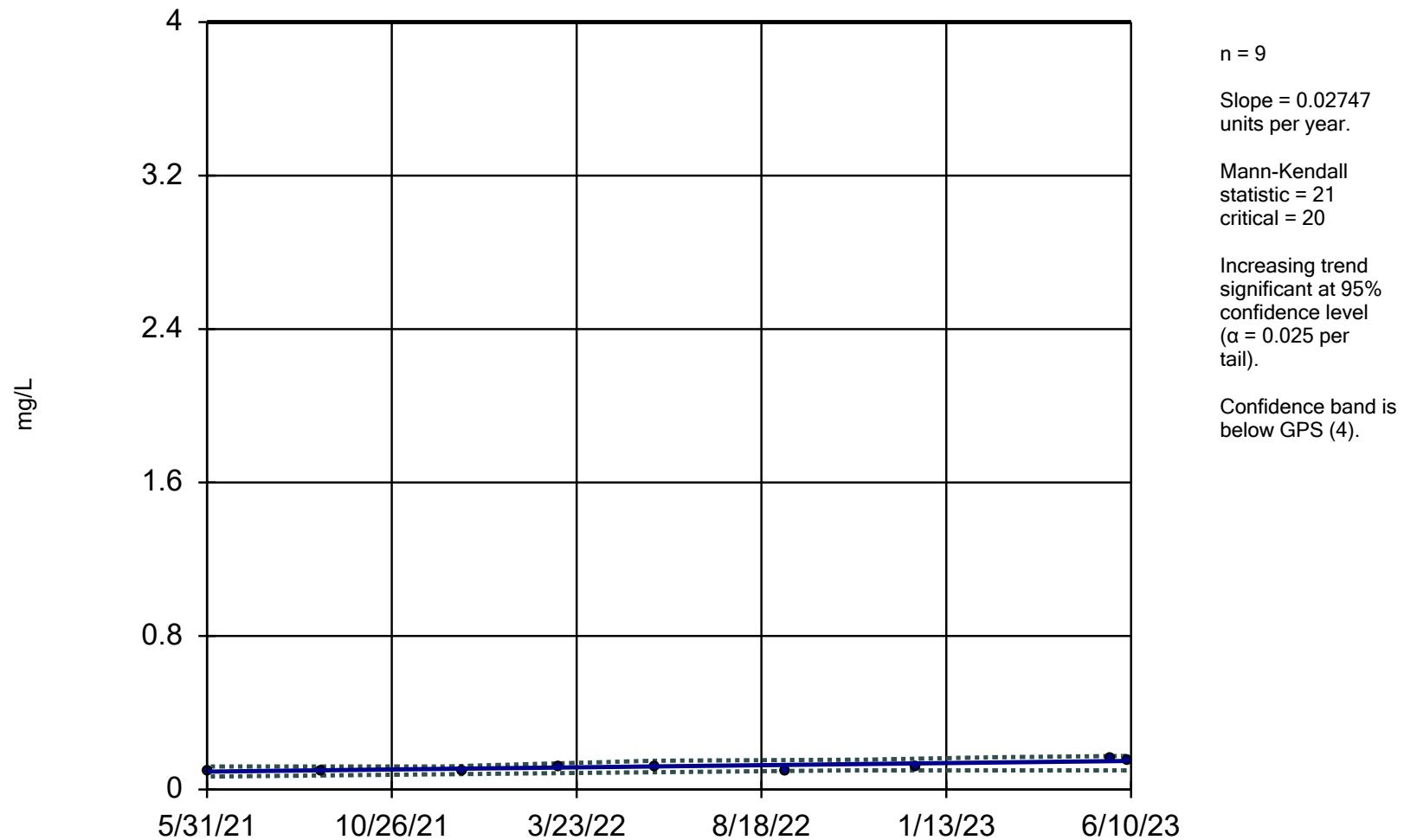
Confidence band intersects
GPS (0.018) on 05/18/23.

Constituent: Cobalt Analysis Run 7/13/2023 1:08 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sen's Slope and 95% Confidence Band

EP-4

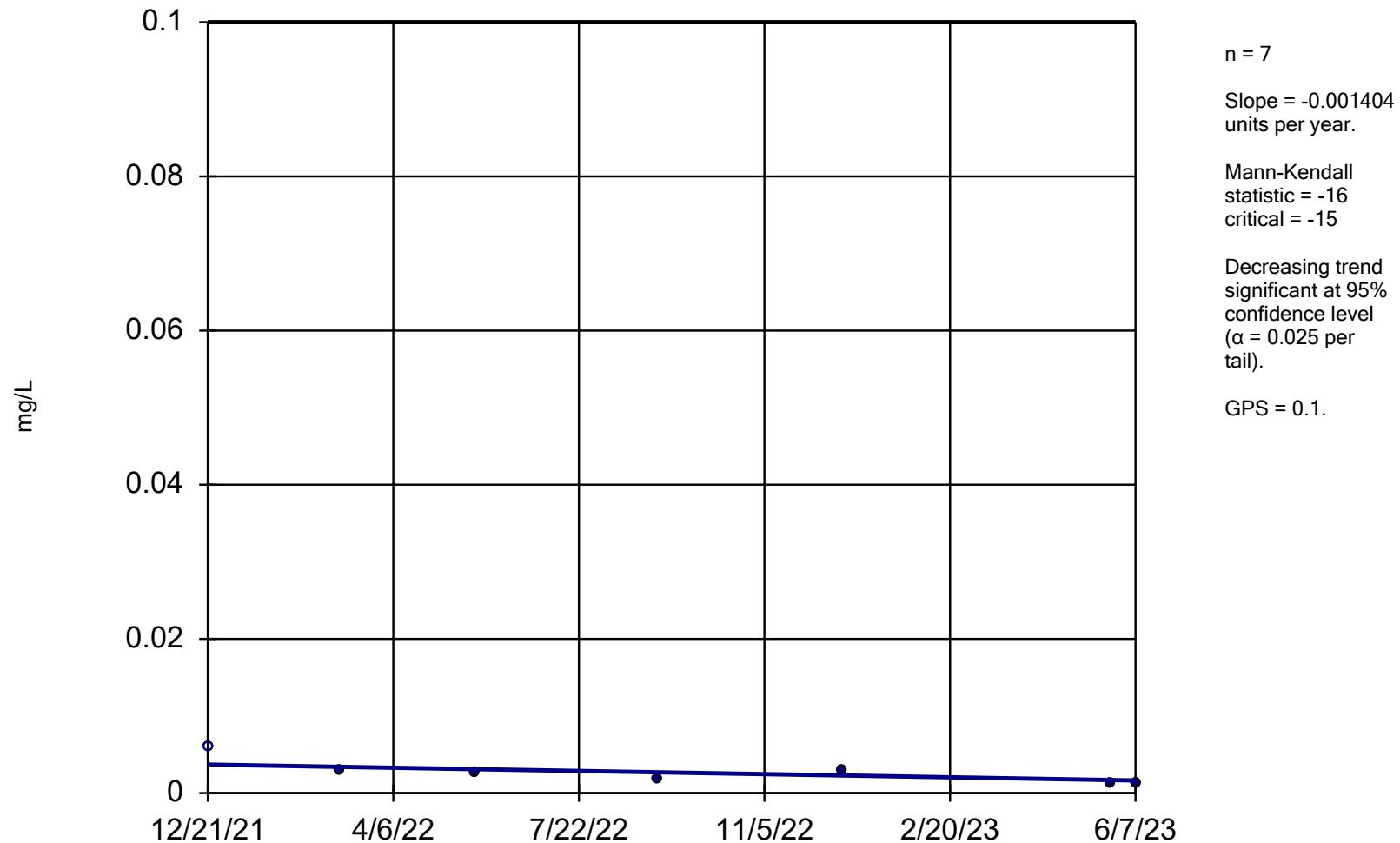


Constituent: Fluoride Analysis Run 7/13/2023 1:08 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5



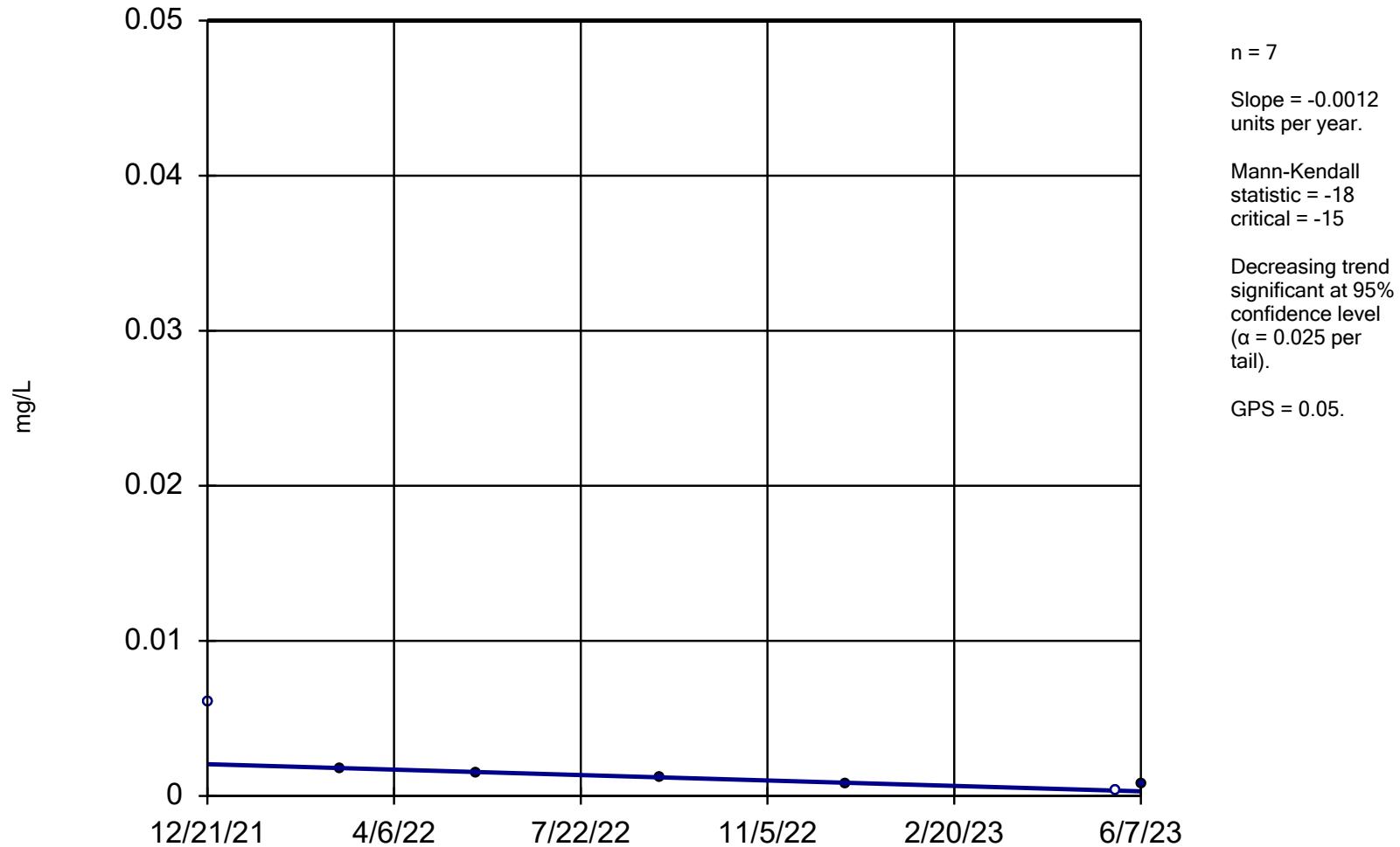
Constituent: Molybdenum Analysis Run 7/13/2023 1:09 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sanitas™ v.9.6.37 Software licensed to WSP USA Inc. EPA
Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5



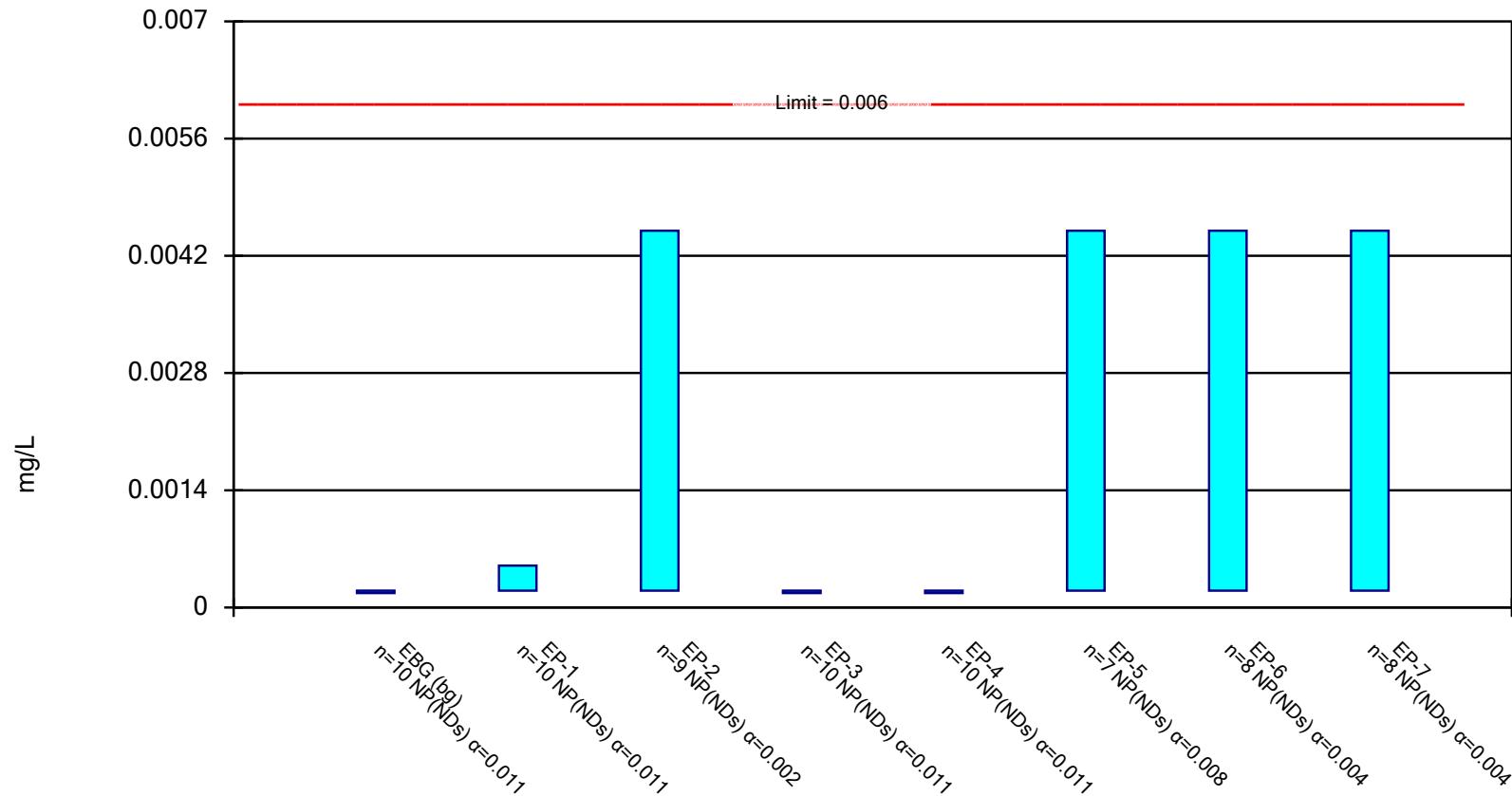
Constituent: Selenium Analysis Run 7/13/2023 1:10 PM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

APPENDIX D-9

**Q3 2023 Groundwater Protection
Standard Exceedances**

Non-Parametric Confidence Interval

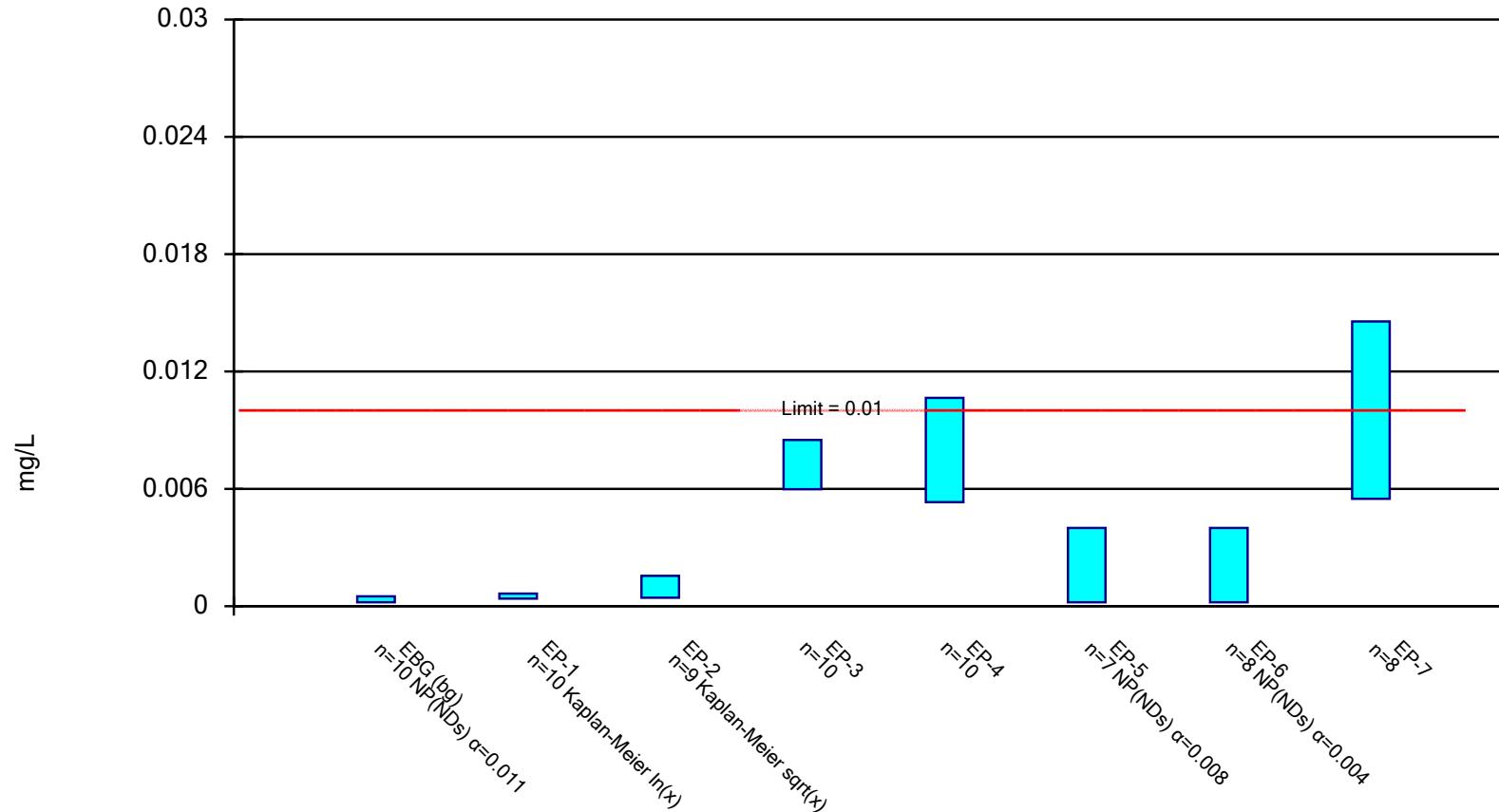
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

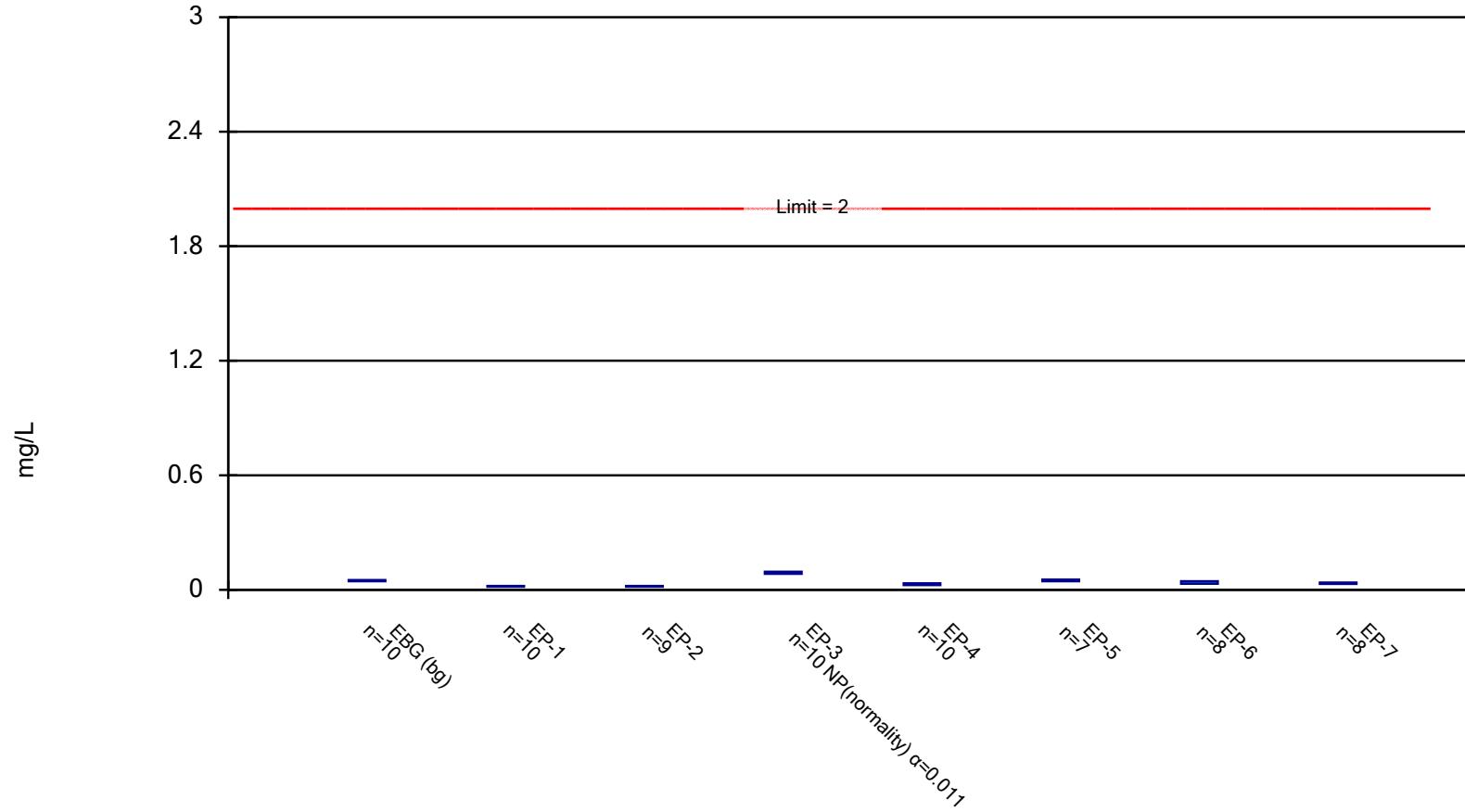
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

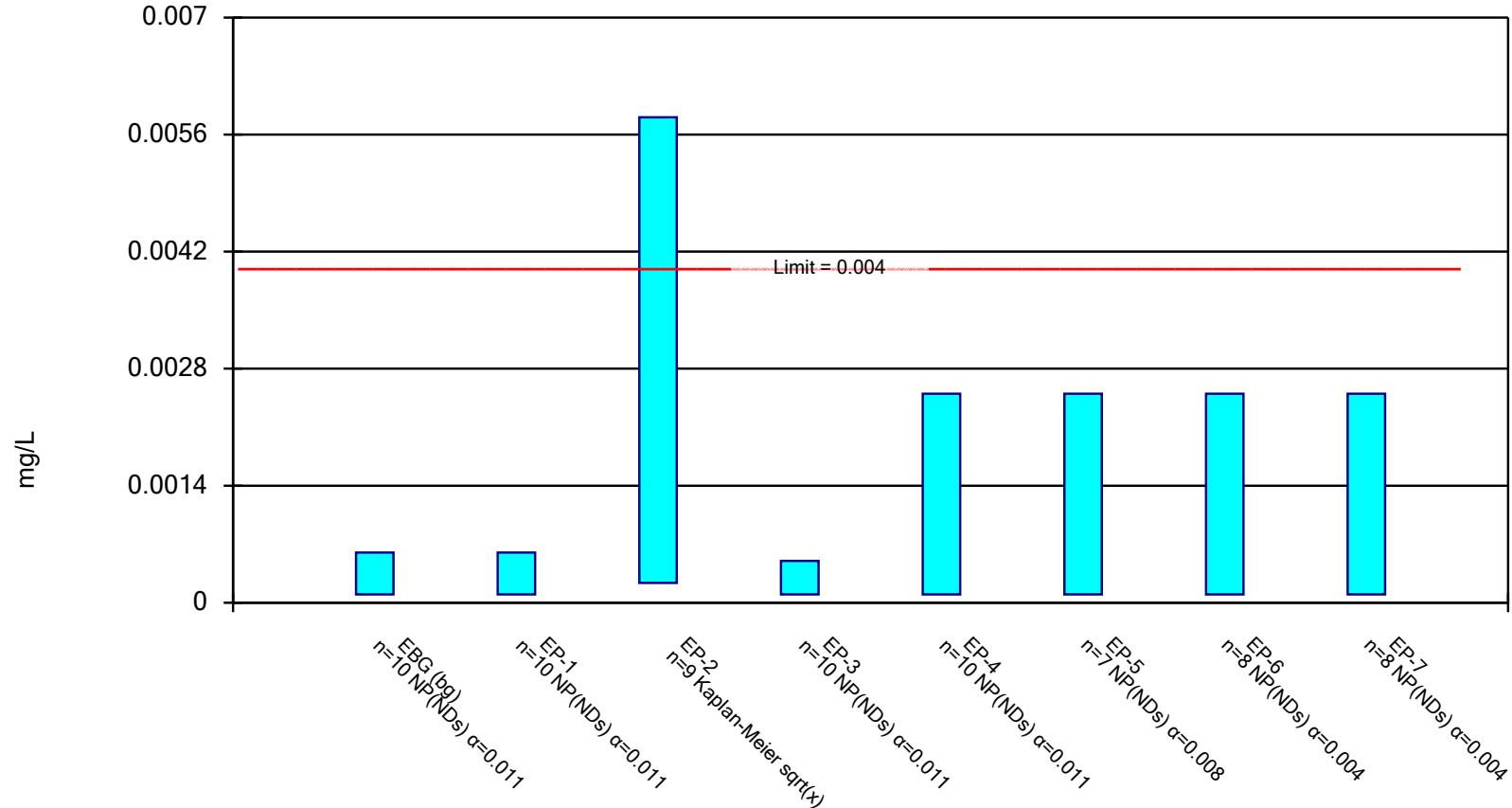
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

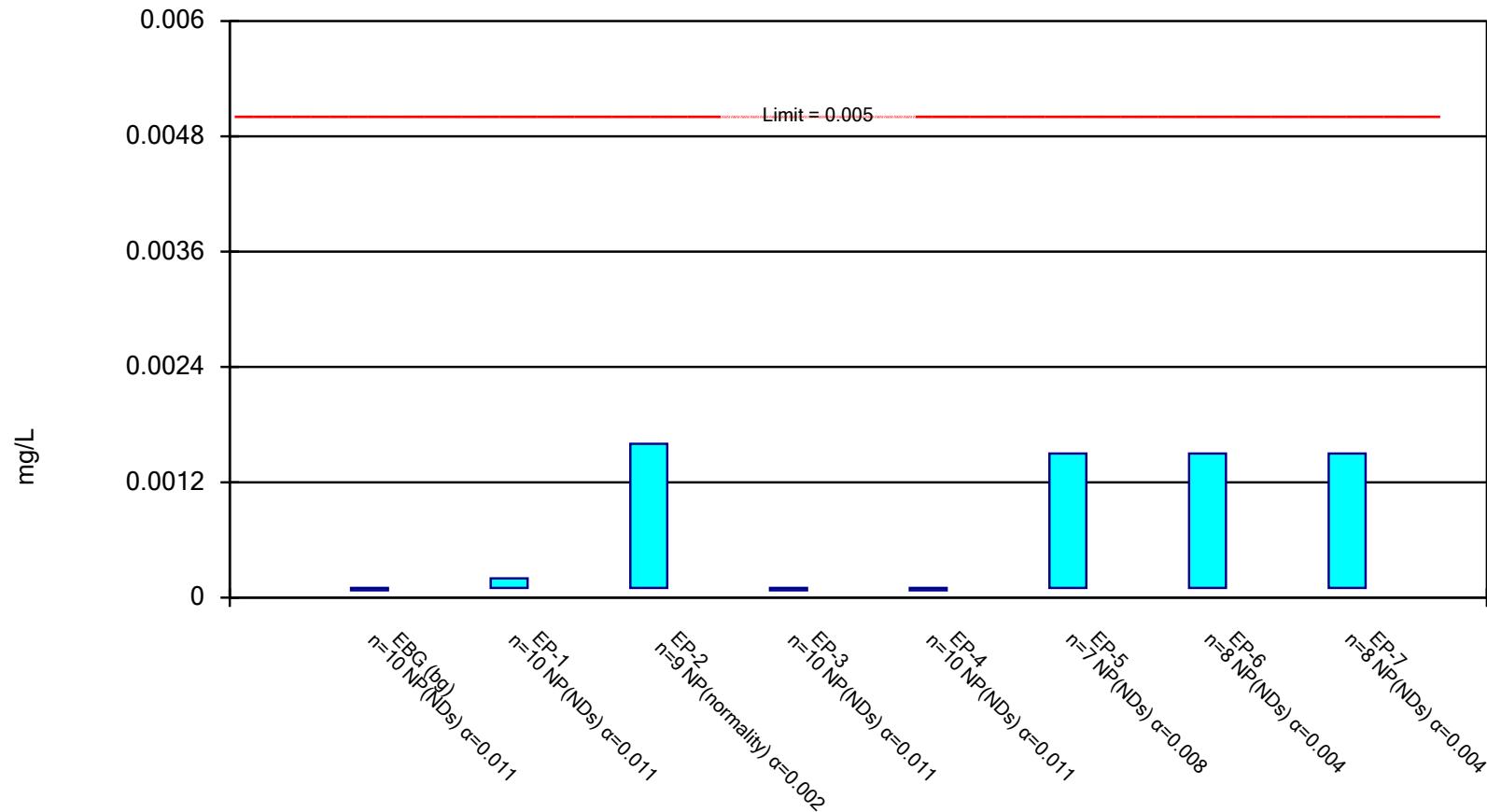
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

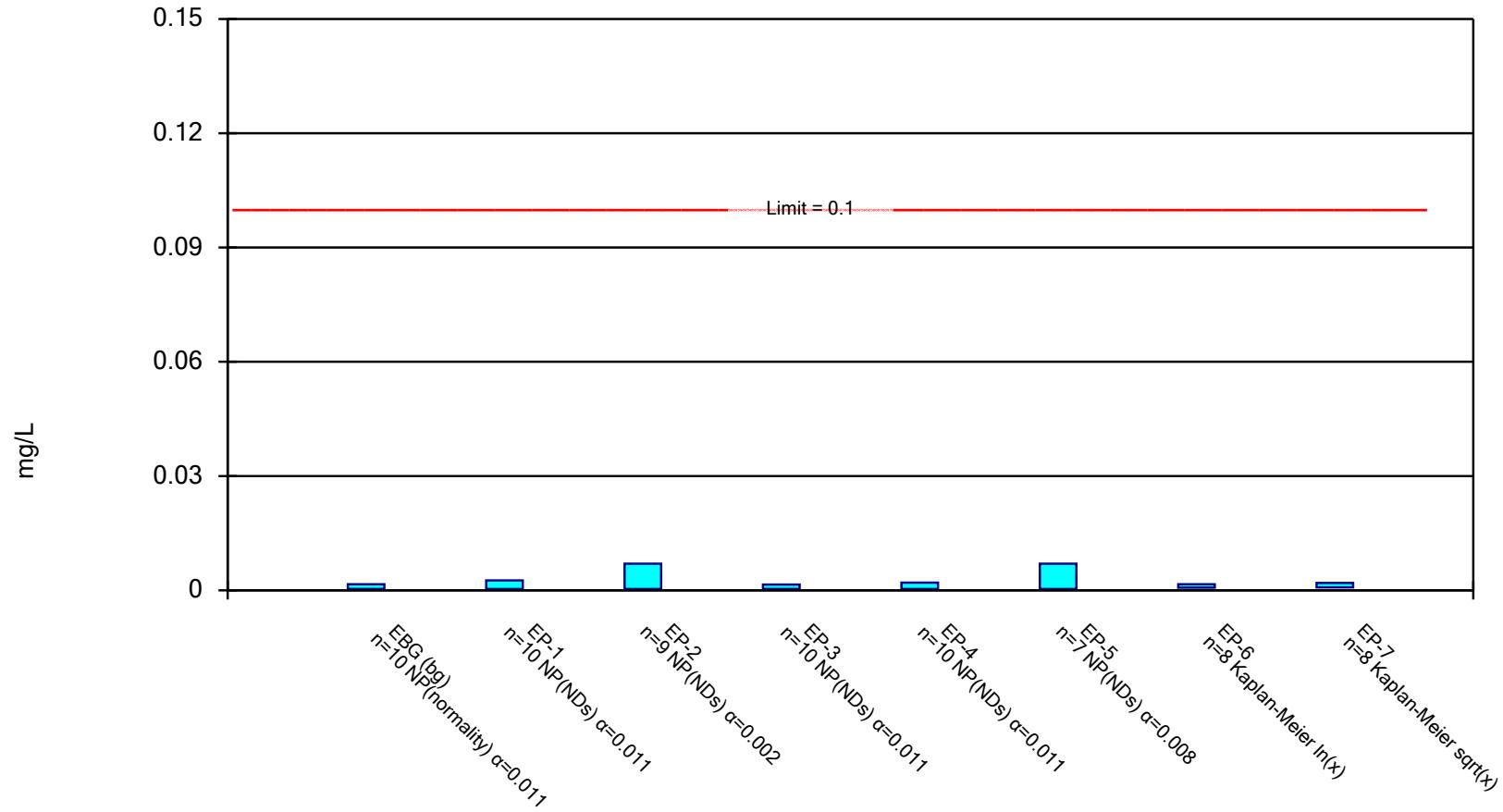
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

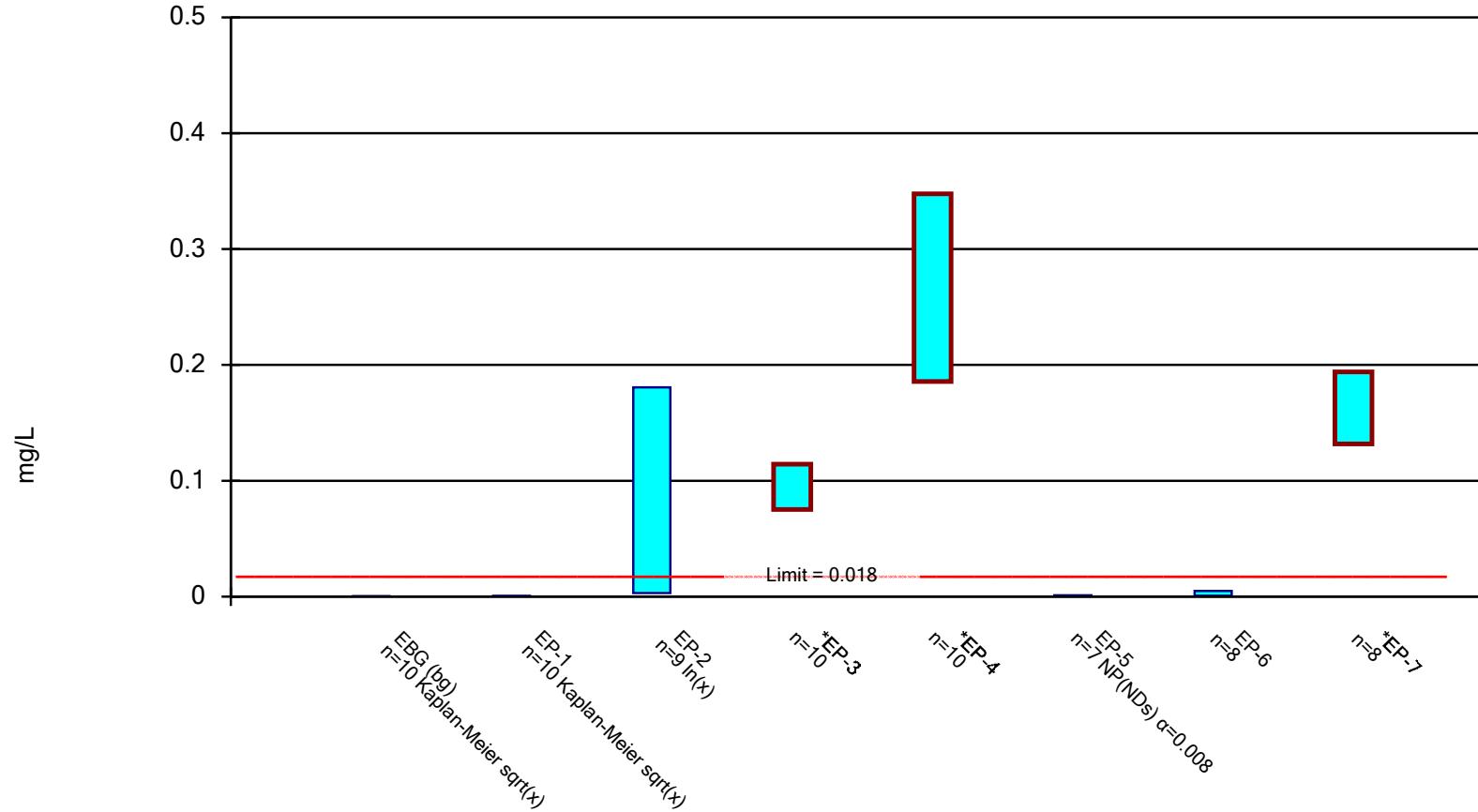
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

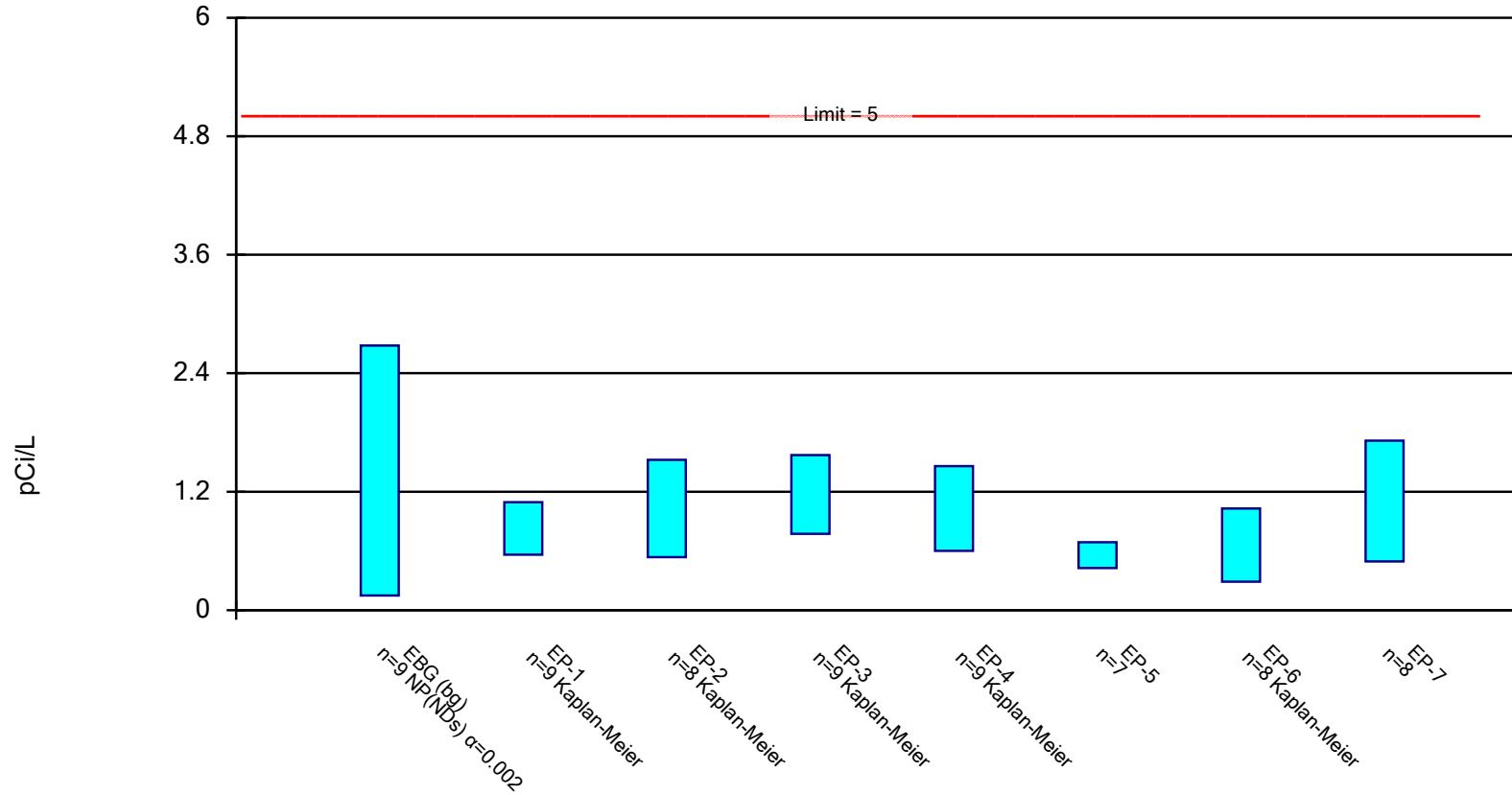
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

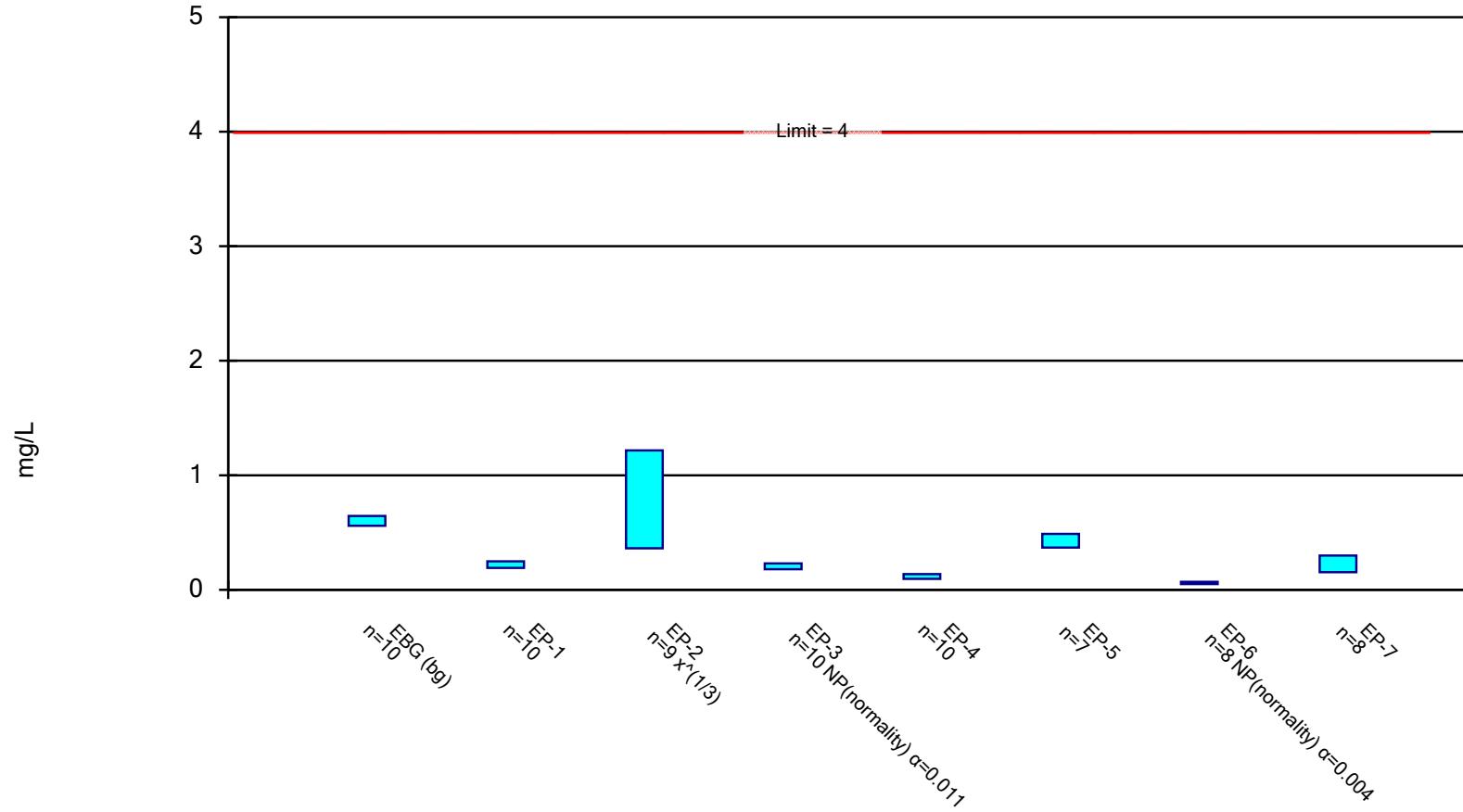


Constituent: Combined Radium Analysis Run 11/10/2023 9:06 AM View: USEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

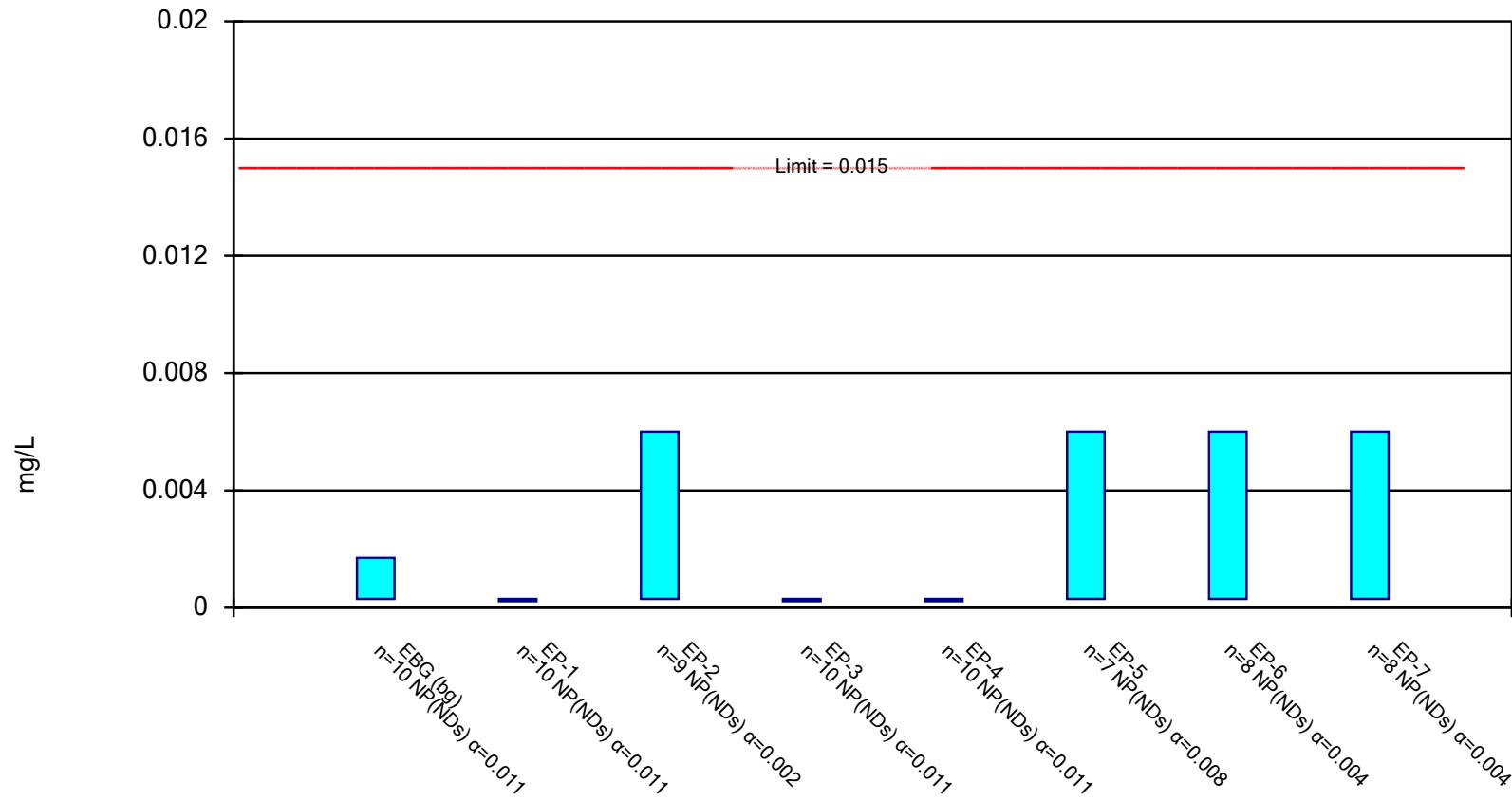
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

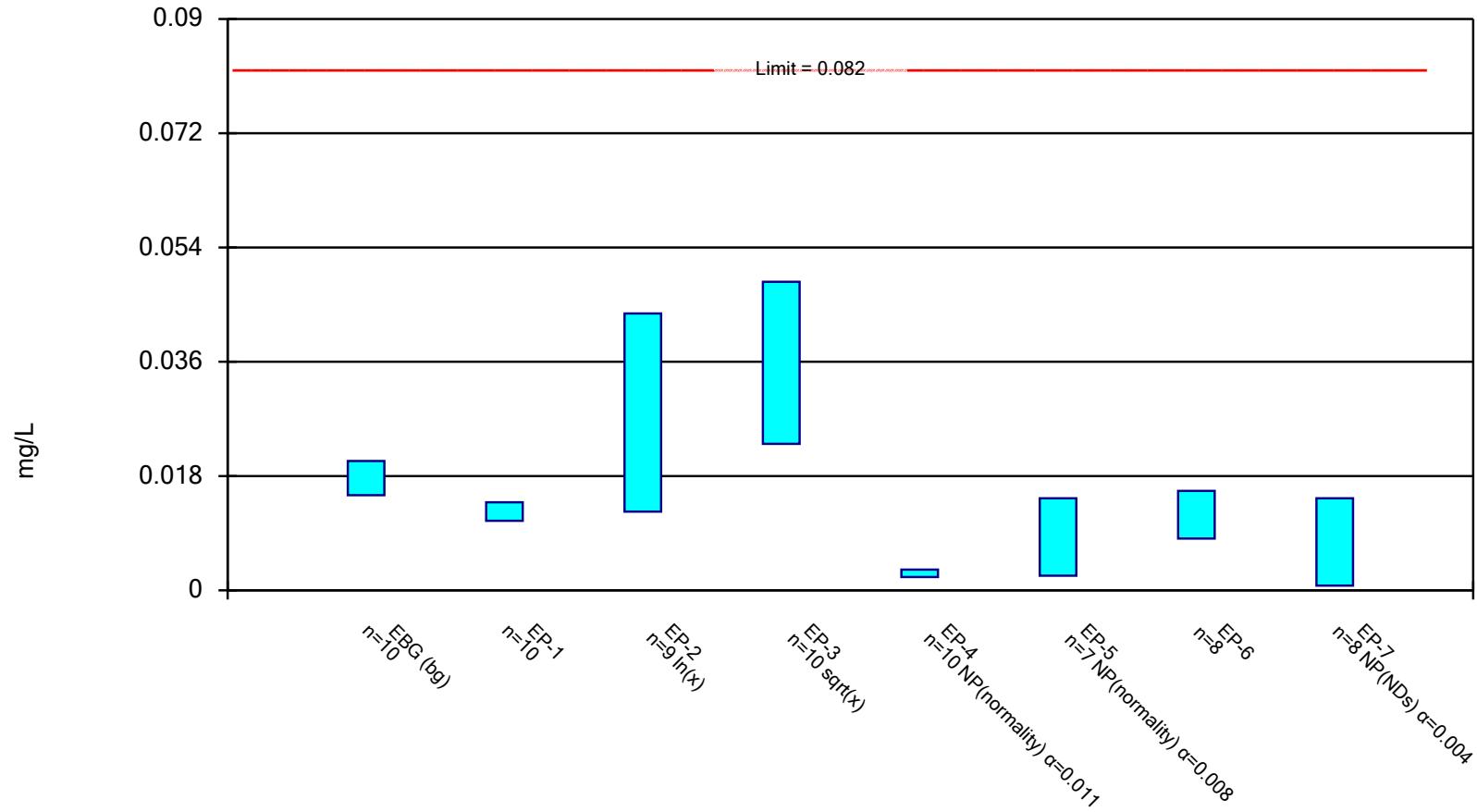


Constituent: Lead Analysis Run 11/10/2023 9:06 AM View: USEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

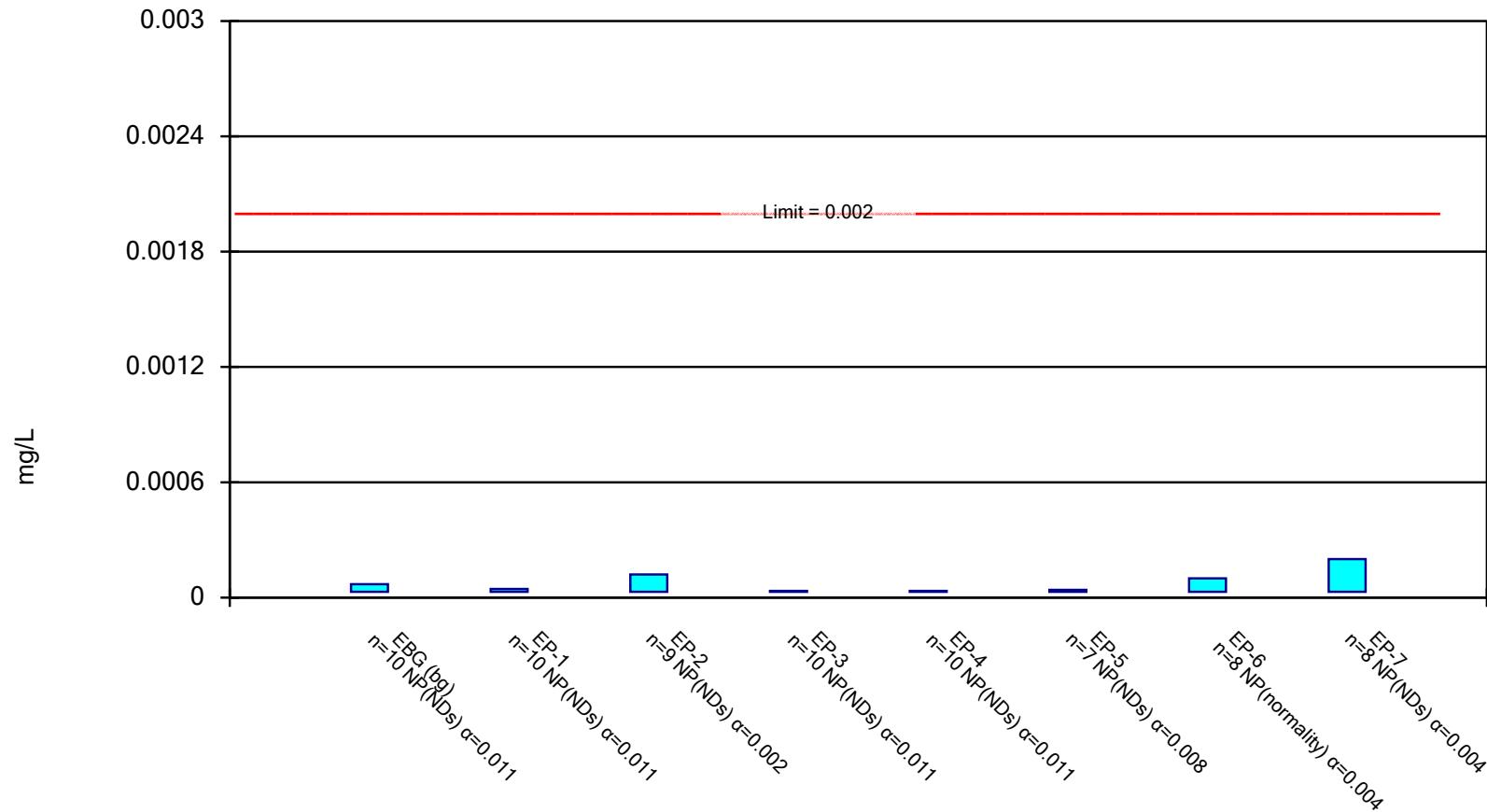


Constituent: Lithium Analysis Run 11/10/2023 9:06 AM View: USEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

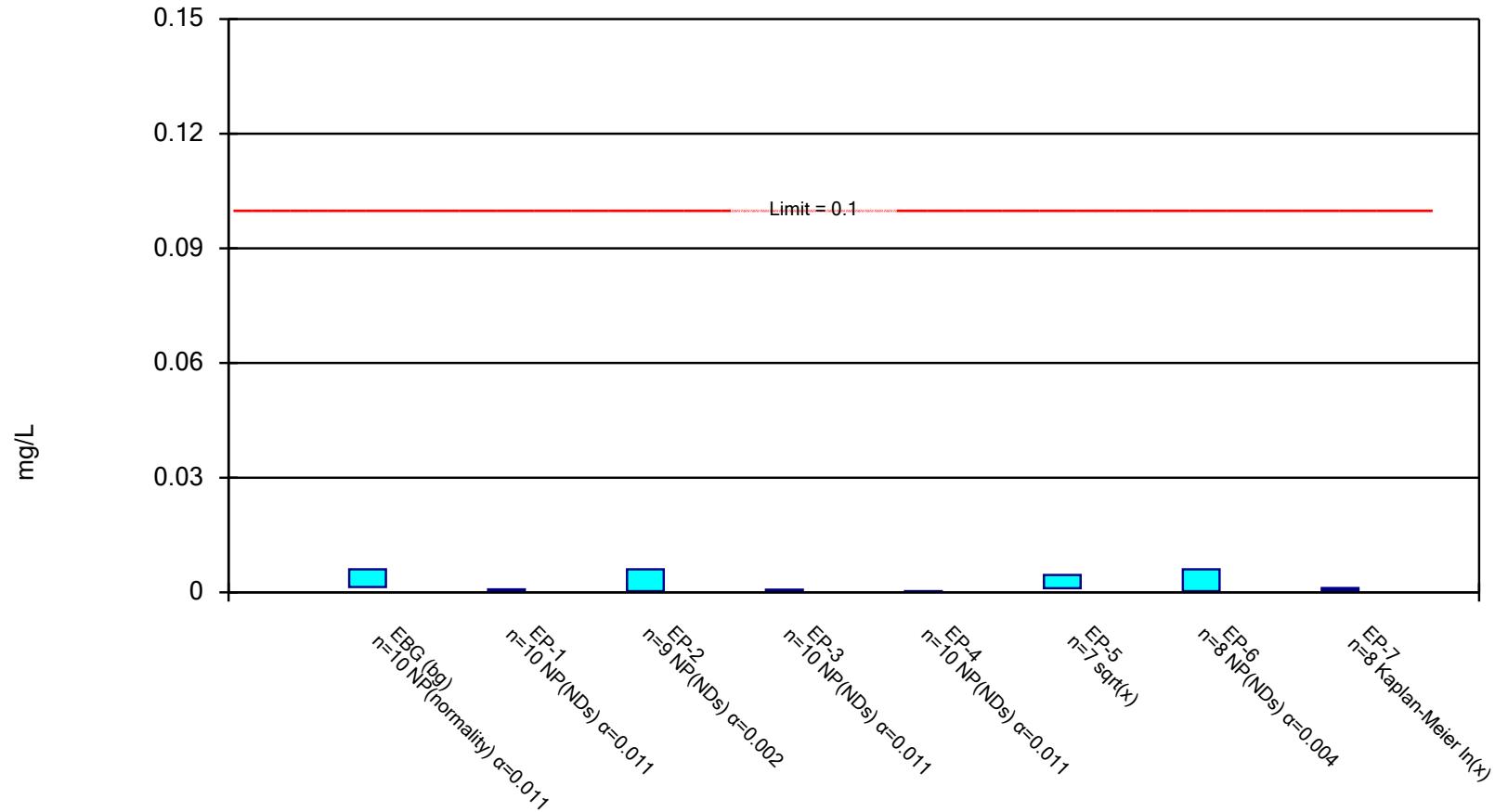


Constituent: Mercury Analysis Run 11/10/2023 9:06 AM View: USEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

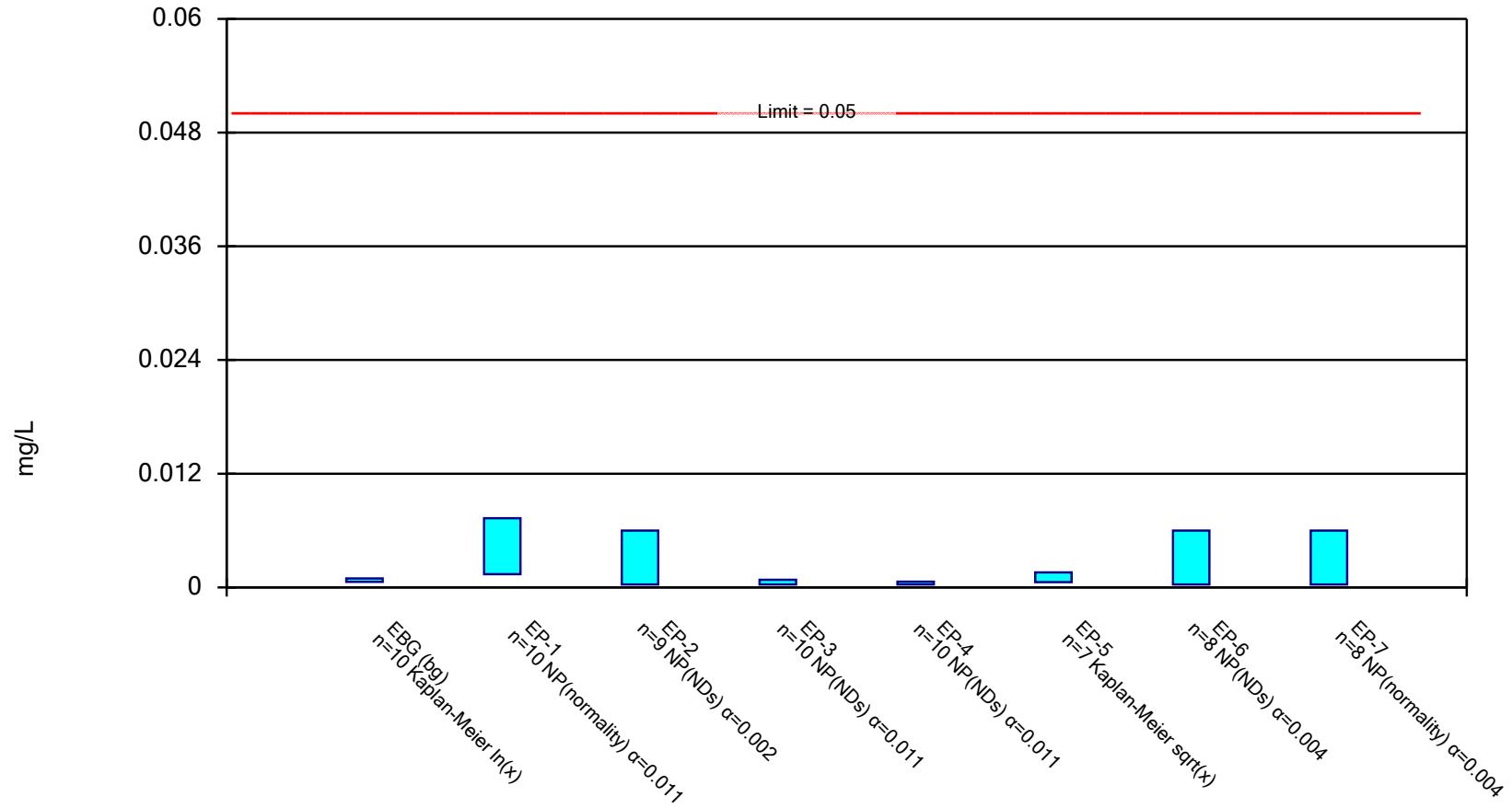


Constituent: Molybdenum Analysis Run 11/10/2023 9:06 AM View: USEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

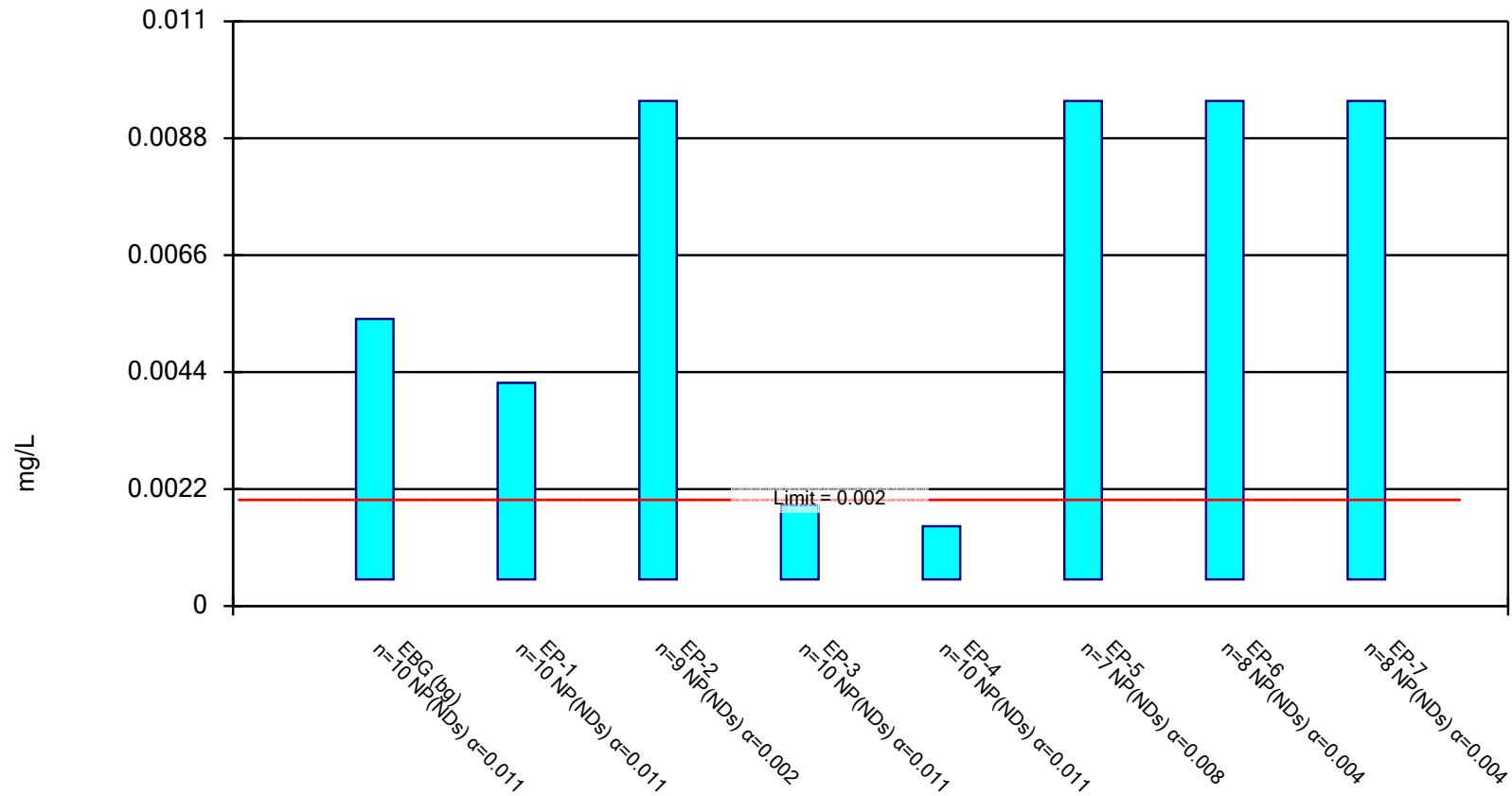
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 11/10/2023 9:06 AM View: USEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

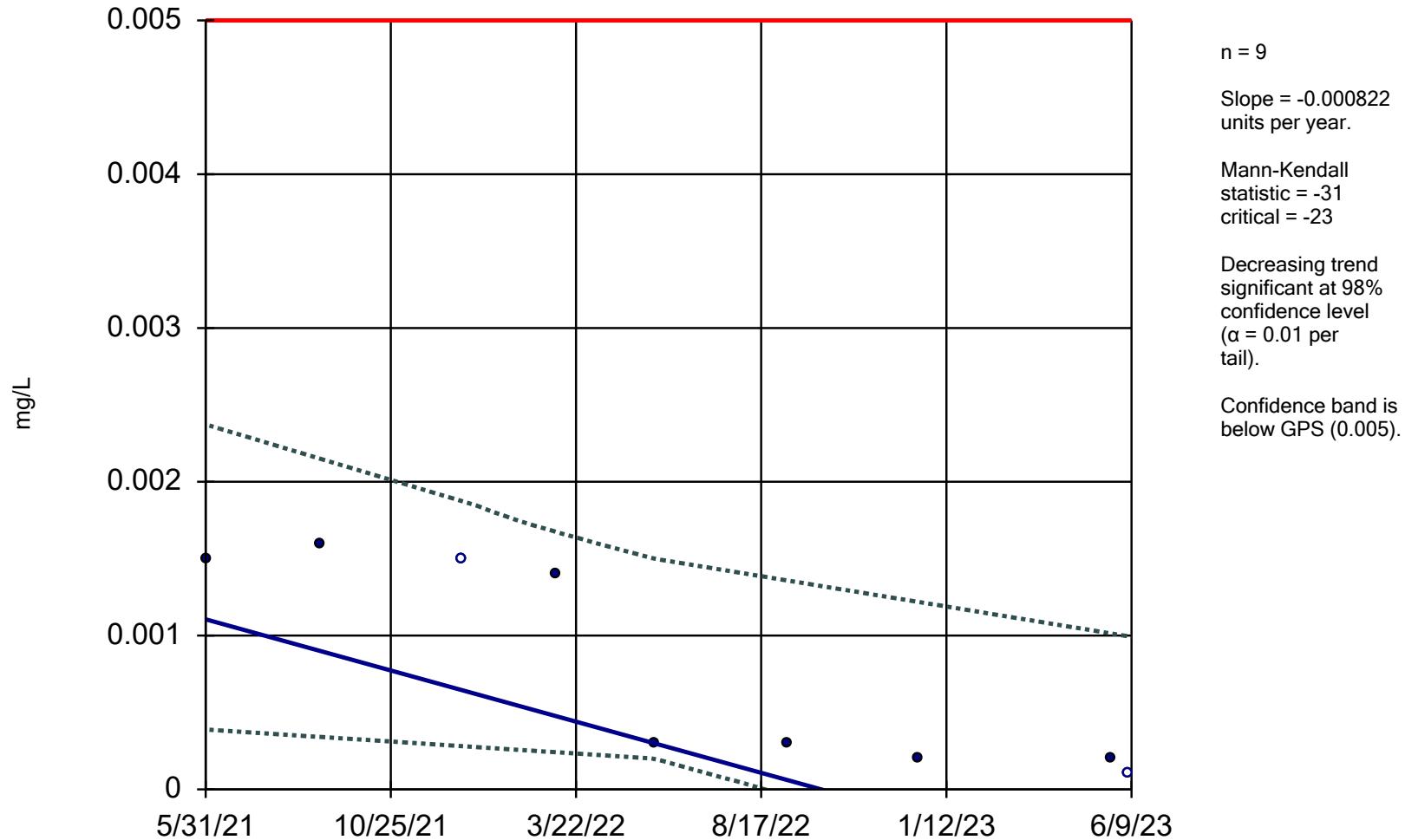
APPENDIX D-10

Q3 2023 Statistically Significant Trends

Sanitas™ v.9.6.35 For the statistical analyses of ground water by Golder Associates only. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

EP-2

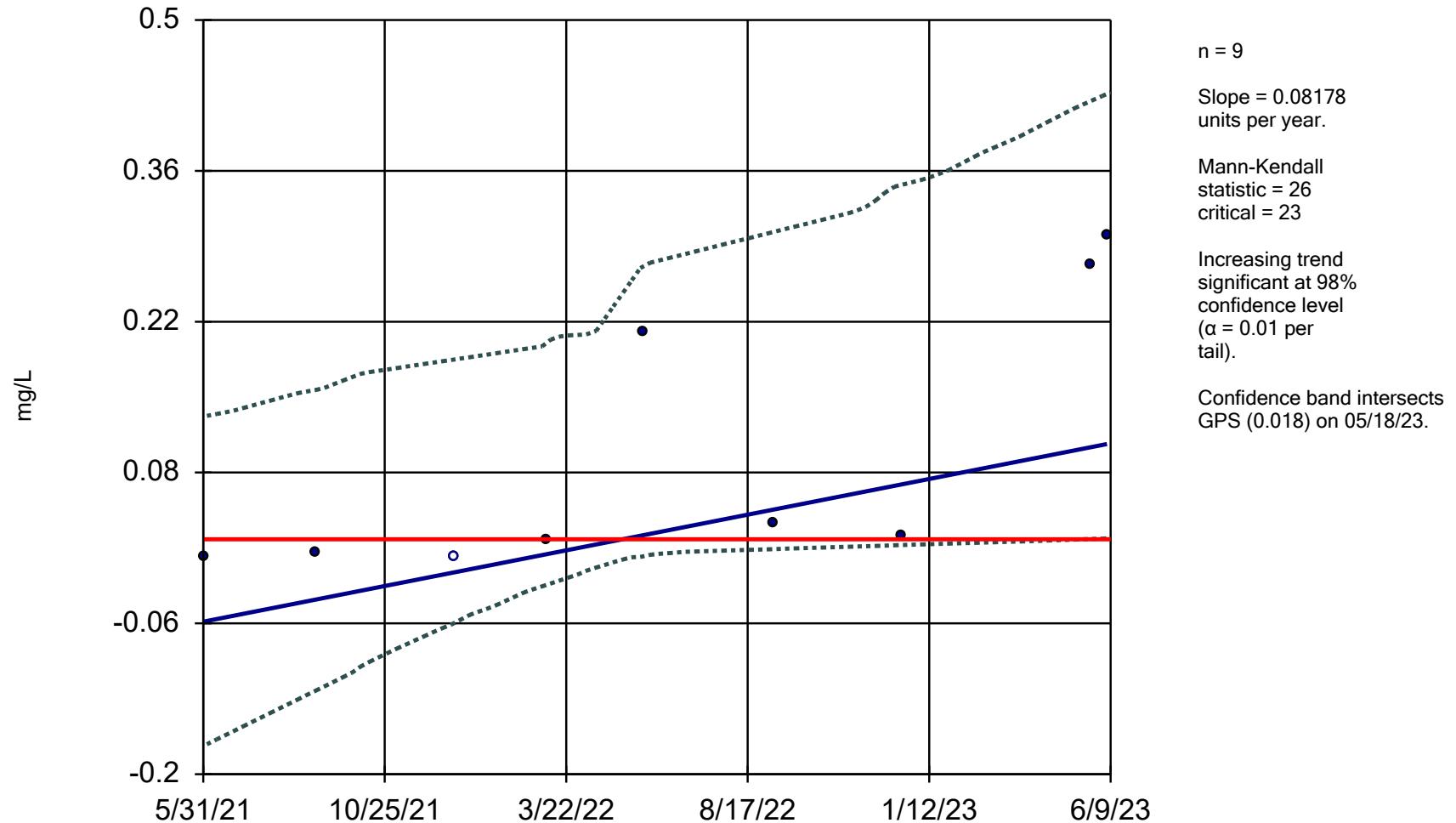


Constituent: Cadmium Analysis Run 11/10/2023 8:40 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sanitas™ v.9.6.35 For the statistical analyses of ground water by Golder Associates only. EPA
Hollow symbols indicate censored values.

Sen's Slope and 95% Confidence Band

EP-2

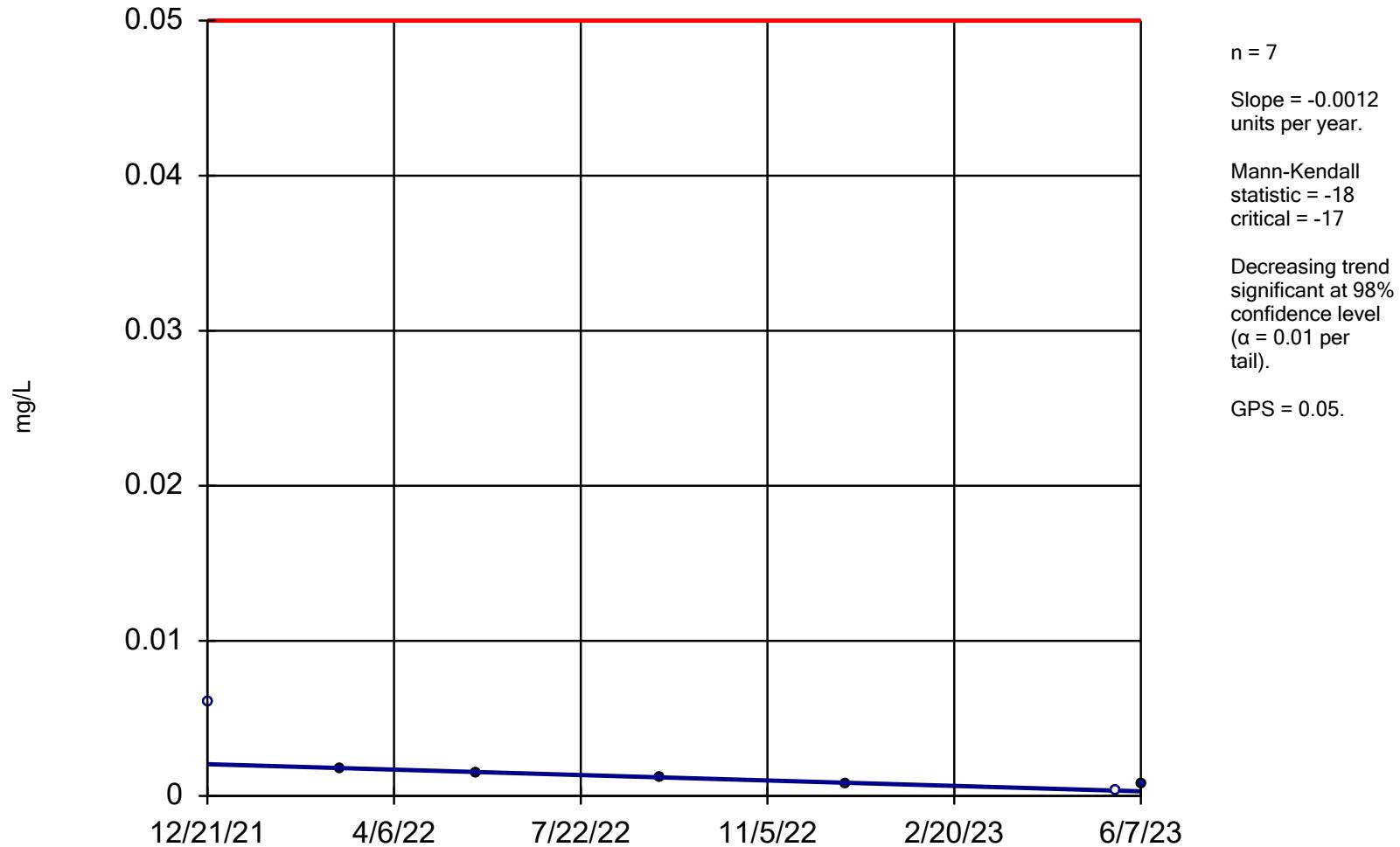


Constituent: Cobalt Analysis Run 11/10/2023 8:40 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Sanitas™ v.9.6.35 For the statistical analyses of ground water by Golder Associates only. EPA
Hollow symbols indicate censored values.

Sen's Slope Estimator

EP-5



Constituent: Selenium Analysis Run 11/10/2023 8:42 AM
Marion Power Plant Client: SIPC Data: SIPC Statistical Database