



2022 Annual Groundwater Monitoring and Corrective Action Report - Former Emery Pond

Southern Illinois Power Cooperative Marion Power Plant

Prepared Pursuant to 35 IAC §845.610(e)

Submitted to:

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EXECUTIVE SUMMARY

This 2022 CCR Annual Groundwater Monitoring and Corrective Action Report (2022 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 the Illinois Environmental Protection Agency (IEPA) coal combustion residuals (CCR) groundwater monitoring requirements in 35 Illinois Administrative Code (IAC) Part 845. SIPC completed an IEPA approved closure by removal of CCR prior to July 30, 2021. As the closure was by removal, no post-closure care requirements apply (35 IAC §845.780(a)(2)). Pursuant to the 35 IAC Part 845 CCR Rule, SIPC is required to complete an annual groundwater monitoring and corrective action report by January 31st annually.

This 2022 Annual Report documents the status of the CCR groundwater monitoring program for the former Emery Pond, summarizes key actions completed, describes issues encountered, actions taken to resolve identified concerns, and proposes key activities for calendar year 2023. In accordance with 35 IAC §845.610(e)(4), the following information provides as an overview of groundwater monitoring and corrective action status for the Unit:

- The Assessment of Corrective Measures (ACM) was initiated in January 2019 and completed in March 2019 (Hanson, Revised March 30, 2021).
- The remedy was selected for Emery Pond on June 19, 2019 (SIPC, 2019).
- 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.
- In accordance with the Groundwater Monitoring Plan (GMP) Addendum #1, the first Corrective Action statistical analysis was completed following the first quarter 2022 monitoring event, the fourth Corrective Action Monitoring event following the completion of the closure by removal.
- The following constituents were detected at statistically significant levels (SSLs) above background in 2022: arsenic in monitoring wells EP-3, EP-4, and EP-7; boron at EP-1, EP-2, EP-4, and EP-7; calcium at EP-1, EP-2, and EP-3; chloride at EP-3, EP-4, and EP-7; cobalt at EP-3, EP-4, and EP-7; pH at EP-6; sulfate at EP-1, EP-2, EP-3, EP-4, and EP-7; and total dissolved solids at EP-1, EP-2, EP-3, and EP-4.
- The following constituents were detected at SSLs above groundwater protection standards (GPS) in 2022: boron at EP-4; calcium at EP-1, EP-2, and EP-4; chloride at EP-4; cobalt at EP-3, EP-4, and EP-7; pH at EP-6; sulfate at EP-1, EP-2, and EP-4; and total dissolved solids EP-1, EP-2, and EP-4.
- The following statistically significant decreases (SSDs) were identified in 2022: arsenic, pH, and thallium at EP-4. SSDs were identified for constituents where SSLs were identified in the pre-closure data (March 2017-January 2021) and SSLs were not identified in the post-closure data (May 2021-present).

In 2023 SIPC will continue quarterly post-closure or Corrective Action Monitoring of groundwater as appropriate and 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 *2022 CCR Annual Groundwater Monitoring and Corrective Action Report* (2022 Annual Report) for the Marion Power Plant's (i.e., Facility's) former Emery Pond, 10825 Lake of Egypt Road, Marion, Williamson County, Illinois (Site, see Figure 1). The former Emery Pond was an on-site settling pond, approximately (1) acre in size, closed via removal by April 5, 2021. The former Emery Pond is subject to the Illinois Environmental Protection Agency (IEPA) coal combustion residuals (CCR) groundwater monitoring requirements in 35 Illinois Administrative Code (IAC) Part 845. Pursuant to the 35 IAC Part 845 CCR Rule, the Facility is required to complete an annual groundwater monitoring and corrective action report by January 31st annually.

This 2022 Annual Report provides the monitoring data and presents the relevant data evaluations from the Corrective Action Monitoring (CAM) events that were performed in December 2021, March 2022, May 2022, and September 2022. An additional CAM event was performed in December 2022; the results from this sampling event will be provided in the 2023 Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Report).

In conformance with the applicable requirements of 35 IAC §845.610(e), the 2022 Annual Report:

- Documents the status of the groundwater monitoring and corrective action activities
- Provides figures showing the CCR Unit, monitoring well locations, and groundwater flow direction(s)
- Summarizes key actions completed including the status of permit applications
- Includes CCR Rule groundwater monitoring data obtained
- Describes any problems encountered during the monitoring activities
- Discusses actions taken to resolve the problems, if applicable
- Projects key activities for the upcoming year

1.1 Key Actions Completed - 2022

SIPC completed the following key actions relative to 35 IAC Part 845 CCR Rule groundwater monitoring and corrective action regulations at the Site in 2022:

- Preparation of the 2021 Groundwater Monitoring and Corrective Action Annual Report in January 2022 (2021 Annual Report, 35 IAC §845.610(e))
- Performance of the fourth Corrective Action Sampling event in March 2022 (35 IAC §845.650(b)(1))
- Evaluation and notification of detections above background and Groundwater Protection Standards from the fourth Corrective Action Sampling event in May 2022 (35 IAC §845.610(b)(3)(D))
- Performance of the fifth Corrective Action Sampling event in May 2022 (35 IAC §845.650(b)(1))
- Evaluation and notification of detections above background and Groundwater Protection Standards from the fifth Corrective Action Sampling event in July 2022 (35 IAC §845.610(b)(3)(D))

- Performance of the sixth Corrective Action Sampling event in September 2022 (35 IAC §845.650(b)(1))
- Evaluation and notification of detections above background and Groundwater Protection Standards from the sixth Corrective Action Sampling event in October 2022 (35 IAC §845.610(b)(3)(D))
- Performance of the seventh Corrective Action Sampling event in December 2022 (35 IAC §845.650(b)(1))

2.0 STATUS OF PERMIT APPLICATIONS

In accordance with 35 IAC §845.230(d)(3) SIPC submitted to IEPA the Initial Operating Permit Application on October 31, 2021. The application is currently under review by IEPA. Because SIPC completed an IEPA approved closure by removal for Emery Pond, prior to July 30, 2021, no other permits are required.

3.0 SITE INFORMATION

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

3.1 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.

3.2 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.

3.2.1 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.

3.2.2 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).

3.2.3 Groundwater Flow

The 2022 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 2022. 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 518 feet above mean sea level (ft amsl) with an average depth to groundwater of less than ten feet.

WSP calculated the horizontal hydraulic gradient (i) for the unconfined aquifer in the vicinity of the former Emery Pond at 0.0302 as shown below using average groundwater elevation data for EP-5 and EP-7 from 2022.

$$i = h_L / L$$

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 7.8-8.7 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 (Ø)	Hydraulic Conductivity (k, feet/min)	Estimated Groundwater Velocity	
						(feet/min)	(feet/year)
January 2022	14.2	470	3.02E-02	0.2	1.04E-04	1.57E-05	8.3
February 2022	14.8	470	3.15E-02	0.2	1.04E-04	1.64E-05	8.6
March 2022	14.2	470	3.02E-02	0.2	1.04E-04	1.57E-05	8.3
April 2022	14.8	470	3.15E-02	0.2	1.04E-04	1.64E-05	8.6
May 2022	15.0	470	3.19E-02	0.2	1.04E-04	1.66E-05	8.7
June 2022	14.2	470	3.02E-02	0.2	1.04E-04	1.57E-05	8.3
July 2022	13.6	470	2.89E-02	0.2	1.04E-04	1.51E-05	7.9
August 2022	13.4	470	2.85E-02	0.2	1.04E-04	1.48E-05	7.8
September 2022	13.8	470	2.94E-02	0.2	1.04E-04	1.53E-05	8.0
October 2022	14.0	470	2.98E-02	0.2	1.04E-04	1.55E-05	8.1
November 2022	14.0	470	2.98E-02	0.2	1.04E-04	1.55E-05	8.1
December 2022	14.1	470	3.00E-02	0.2	1.04E-04	1.56E-05	8.2

Notes: feet/min = feet per minute

h_L = Head loss in feet

i = hydraulic gradient

k = hydraulic conductivity

Ø = estimated value based on soil and bedrock properties

4.0 FIELD ACTIVITIES

Pursuant to the requirements in 35 IAC §845.650(b)(1) four quarterly monitoring events were completed for the former Emery Pond in 2022. A summary of the sampling events is presented below.

Monitoring Event	Sample Parameters	Sample Dates
4 th Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	March 7-8, 2022

Monitoring Event	Sample Parameters	Sample Dates
5 th Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	May 24-25, 2022
6 th Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	September 6-7, 2022
7 th Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	December 19-20, 2022

During each of the sampling events, the monitoring wells were sampled in accordance with the procedures presented in the 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 Summit Environmental Technologies, Inc. in Cuyahoga Falls, Ohio for analysis.

4.1 Problems Encountered and Follow-Up Corrective Actions

During the third CAM event (December 2021), groundwater was sampled from monitoring wells EBG, EP-1, EP-4, and EP-6 at turbidity levels of 12.52, 12.68, 10.32, and 7.52 nephelometric turbidity units (NTUs), respectively. During the fourth CAM event (March 2022), groundwater was sampled from monitoring wells EBG and EP-7 at turbidity levels of 15.8 and 14.48, respectively. During the fifth CAM event (May 2022), groundwater was sampled from monitoring well EBG, at turbidity levels of 14.98. 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). This did not occur during the fourth or fifth CAM events due to field oversight. Moving forward, wells will be purged in accordance with the specifications of GMP Addendum #1.

5.0 GROUNDWATER MONITORING PROGRAM RESULTS

This section includes a description of the 35 IAC Part 845 CCR Rule monitoring program status, a discussion of the groundwater data, and a summary of the Corrective Actions completed.

5.1 Background Monitoring

Per the requirements of 35 IAC §845.650(b)(1), between March 2017 and January 2021 fifteen independent background groundwater samples were collected from each background and downgradient well. The samples were submitted to a contract laboratory in accordance with chain of custody and quality assurance/quality control procedures. For ten of the sample events, samples were submitted for analysis of the constituents listed in 35 IAC §845.600(a), except for pH. In addition, field water quality parameters including pH, specific conductance, temperature, dissolved oxygen, turbidity, and oxidation-reduction potential were measured. For the remaining five sampling events, samples were submitted for analysis of a subset of the constituents listed in 35 IAC §845.600(a) and the field water quality parameters listed above. 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.

5.2 Corrective Action

The Assessment of Corrective Measures (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 FGD storage area by removal of all CCR
- Construction of a composite liner system compliant with 35 IAC Part 845 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 adjacent 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).

5.3 Corrective Action Monitoring

The former Emery Pond is currently in Corrective Action Monitoring (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 three quarterly CAM events were completed in May, August, and December 2021. The results from the first two CAM events were provided in the 2021 Annual Report (Golder, 2021).

The fourth through seventh CAM sampling events were completed in March, May, September, and December 2022. The results from the December 2021 and the March, May and September 2022 sampling events are discussed in Sections 6.1 through 6.5, respectively, and presented in Table 3. The corresponding analytical laboratory reports are provided in Appendix B. The 2022 Data Usability Summary Report is provided in Appendix C. The results from the December 2022 sampling event will be included in the 2023 Annual Report.

6.0 STATISTICAL EVALUATION

The former Emery Pond is currently in Corrective Action Monitoring (CAM). After four quarterly CAM groundwater sampling events have been completed, the groundwater sampling results were statistically evaluated to determine statistically significant detections above background, statistically significant levels (SSLs) above applicable Groundwater Protection Standards (GPS), and 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 calculated the GPS and the facility background tolerance limits (i.e., background concentrations), 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 35 IAC §845.640(f)(1)(C). The GPS are the higher of the values provided in 35 IAC §845.600(a) and the background concentration. Calculated facility background

concentrations, 35 IAC §845.600(a) groundwater quality standards, and the GPS for the Site are summarized in Table 4. The results from the statistical analysis from the fourth through sixth CAM events are provided in Appendix D.

6.1 Third Corrective Action Monitoring Event Statistical Analysis

The December 2021 sampling was the third CAM event since closure activities were completed in April 2021. The third CAM event (December 2021) data were compared to facility background concentrations and GPS established by WSP in 2021. Concentrations identified above background for the third CAM event based on a value-to-standard evaluation are summarized in the table below. Due to their construction in December 2021, monitoring wells EP-5, EP-6, and EP-7 were not evaluated because the four requisite quarterly monitoring events for these locations were not completed until the sixth CAM event. The spatial extents of the value-to-standard GPS exceedances are presented on Figure 15.

Constituent	Facility Background Concentration	Illinois CCR Groundwater Protection Standard	Monitoring Well	December 2021 Concentration
Boron (mg/L)	0.14	2	EP-1	1.07
			EP-2	0.33
			EP-4	11.6
Calcium (mg/L)	63		EP-1	506
			EP-2	299
			EP-4	161
Chloride (mg/L)	86	200	EP-3	183
			EP-4	477
Sulfate (mg/L)	101	400	EP-1	1480
			EP-2	1250
			EP-3	178
			EP-4	567
Total Dissolved Solids (mg/L)	591	1200	EP-1	2510
			EP-2	2090
			EP-3	812
			EP-4	1450
Cobalt (mg/L)	0.018	0.018	EP-3	0.0472
			EP-4	0.298
Lithium	0.082	0.04	EP-3	0.0736

mg/L = milligram per liter QL = quantitation limit

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.

6.2 Fourth Corrective Action Monitoring Event Statistical Analysis

The fourth CAM event (March 2022) data were compared to facility background concentrations and GPS established by WSP in 2021, which are summarized in Table 4. Statistical analysis was completed according to the GMP Addendum #1 (Golder, 2021a). SSLs above background and GPS were identified and are summarized in the embedded tables below. The spatial extents of the SSLs above background and GPS are shown on Figure 16.

Constituent	EP-1	EP-2	EP-3	EP-4
Arsenic			X	X
Boron				X
Calcium	X	X		X
Chloride			X	X
Cobalt			X	X
Sulfate	X	X		X
Total Dissolved Solids	X	X		X

"X" indicates a statistically significant detection above background

Constituent	EP-1	EP-2	EP-3	EP-4
Boron				X
Calcium	X	X		X
Chloride				X
Cobalt			X	X
Sulfate	X	X		X
Total Dissolved Solids	X	X		X

"X" indicates a statistically significant detection above the GPS

The fourth CAM event data was the first 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. SSDs were identified in well EP-4 for arsenic, pH (at an increase relative to the lower limit), and thallium. 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.

6.3 Fifth Corrective Action Monitoring Event Statistical Analysis

The fifth CAM event (May 2022) data were compared to facility background concentrations and GPS established by WSP in 2021, which are summarized in Table 4. Statistical analysis was completed according to the GMP Addendum #1 (Golder, 2021a). Statistically significant levels above background and GPSs were identified and are summarized in the embedded tables below. The spatial extent of the SSLs above background and GPS are shown on Figure 17.

Constituent	EP-1	EP-2	EP-3	EP-4
Arsenic			X	X
Boron	X		X	X
Calcium	X	X		X
Chloride			X	X
Cobalt			X	X
Sulfate	X	X	X	X
Total Dissolved Solids	X	X	X	X

"X" indicates a statistically significant detection above background

Constituent	EP-1	EP-2	EP-3	EP-4
Boron				X
Calcium	X	X		X
Chloride				X
Cobalt			X	X
Sulfate	X	X		X
Total Dissolved Solids	X	X		X

"X" indicates a statistically significant detection above the GPS

The fifth CAM event data was evaluated for SSDs by running confidence intervals on all post-closure data. No new SSDs were observed from this evaluation. 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.

6.4 Sixth Corrective Action Monitoring Event Statistical Analysis

The sixth CAM event (September 2022) data were compared to facility background concentrations and GPS established by WSP in 2021, which are summarized in Table 4. Statistical analysis was completed according to the GMP Addendum #1 (Golder, 2021a). Statistically significant levels are summarized in the embedded tables below. The spatial extent of the SSLs above background and GPS are shown on Figure 18.

Constituent	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7
Arsenic			X	X			X
Boron	X	X		X			X
Calcium	X	X		X			
Chloride			X	X			X
Cobalt			X	X			X
pH						X*	
Sulfate	X	X	X	X			X
Total Dissolved Solids	X	X	X	X			

“X” indicates a statistically significant detection above background

*pH was identified at decrease relative to the lower limit

Constituent	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7
Boron				X			
Calcium	X	X		X			
Chloride				X			
Cobalt			X	X			X
pH						X*	
Sulfate	X	X		X			
Total Dissolved Solids	X	X		X			

“X” indicates a statistically significant detection above the GPS

*pH was identified at decrease relative to the lower limit

The sixth CAM event is the fourth sample round for monitoring well EP-5, EP-6, and EP-7 and therefore was the first statistical evaluation of SSLs at these monitoring wells. 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.

6.5 Seventh Corrective Action Monitoring Event Statistical Evaluation

The seventh CAM event was completed in December 2022. The laboratory results were not received during calendar year 2022. The data for the seventh CAM event will be evaluated in accordance with the CCR Rule timeframes and reported in the 2023 Annual Report.

7.0 KEY ACTIVITIES PROJECTED FOR 2023

During calendar year 2023, 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.

8.0 REFERENCES

- AECOM (2017). "Draft Monitoring Well Installation Report Col Combustion Residuals (CCR) Rule, Marion Power Plant", September 28, 2017.
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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-btoc)	Middle (ft-msl)	Bottom (ft-msl)
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: 2022 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)	1/12/2022		2/16/2022		3/16/2022		4/18/2022		5/16/2022		6/13/2022	
				DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)
EBG	25	28.13	524.87	8.10	516.77	6.8	518.1	7.2	517.67	7.7	517.2	7.1	517.77	7.9	517.0
EP-1	31	33.65	519.72	6.20	513.52	5.9	513.8	5.1	514.62	5.8	513.9	6.3	513.42	6.4	513.3
EP-2	15	17.64	513.79	4.20	509.59	4.8	509.0	4.7	509.09	5.2	508.6	4.9	508.89	5.1	508.7
EP-3	26.5	29.21	518.95	15.10	503.85	13.7	505.3	13.50	505.45	13.6	505.4	14.50	504.45	14.3	504.7
EP-4	18.5	21.17	519.74	11.60	508.14	12.4	507.3	11.8	507.94	12.2	507.5	12.4	507.34	12.1	507.6
EP-5	16.32	16.32	527.59	11.2	516.39	10.8	516.8	11.2	516.39	10.9	516.7	10.7	516.89	11.1	516.5
EP-6	13.62	13.62	505.11	2.5	502.61	2.55	502.6	2.65	502.46	2.62	502.5	2.45	502.66	2.62	502.5
EP-7	18.5	18.5	515.44	13.2	502.24	13.4	502.0	13.2	502.24	13.5	501.9	13.5	501.94	13.1	502.3

Notes:

- 1.) MSL = mean sea level.
- 2.) NM = Not measured.
- 3.) DTW = Depth to Water



Table 2: 2022 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)	7/11/2022		8/15/2022		9/12/2022		10/17/2022		11/14/2022		12/13/2022	
				DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)	DTW (feet)	Elevation (feet msl)
EBG	25	28.13	524.87	8	516.9	8.4	516.47	8.1	516.8	8.6	516.3	8.5	516.4	8.1	516.77
EP-1	31	33.65	519.72	6.7	513.0	6.2	513.52	6.5	513.2	7.1	512.6	7.3	512.4	6.9	512.82
EP-2	15	17.64	513.79	5.4	508.4	5.0	508.79	5.4	508.4	5.6	508.2	5.6	508.2	5.5	508.29
EP-3	26.5	29.21	518.95	14.5	504.5	14.2	504.75	14.7	504.3	15.2	503.8	15.2	503.8	14.9	504.05
EP-4	18.5	21.17	519.74	12.5	507.2	11.9	507.84	12.2	507.5	12.5	507.2	12.6	507.1	12.50	507.24
EP-5	16.32	16.32	527.59	11.4	516.2	12.2	515.39	13.0	514.6	13.4	514.2	13.4	514.2	13.1	514.49
EP-6	13.62	13.62	505.11	2.5	502.6	3.7	501.41	4.5	500.6	5.1	500.0	5.2	499.9	5.10	500.01
EP-7	18.5	18.5	515.44	12.8	502.6	13.4	502.04	14.6	500.8	15.2	500.2	15.2	500.2	15	500.44

Notes:

- 1.) MSL = mean sea level.
- 2.) NM = Not measured.
- 3.) DTW = Depth to Water

Created by: CCC
Checked by: GRD
Reviewed by: MAH



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

Well ID	Sample Date	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	
		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	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		<0.00052		<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		<0.002		<0.002		0.0011		<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
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
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
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
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
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		<0.0042		0.0207	0.0164	<0.0600
Mercury	mg/L		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019		<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020
Molybdenum	mg/L	0.0034 J	0.0043 J	<0.000095	0.0017 J	0.0016 J	<0.00095	0.0024 J	<0.00095		<0.00014		<0.00028		<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
Thallium	mg/L	<0.0007	<0.004	<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, the method detection limit 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



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

Well ID	Sample Date	EBG	EBG	EBG	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	
		3/7/2022	5/24/2022	9/6/2022	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	Corrective Action Monitoring	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
ANALYTE	Unit																		
Boron	mg/L	0.0225	0.019 J	0.012 J	0.13	0.21	0.28	0.26	0.32	0.21	0.23	0.17	0.38	0.92	0.75	1.12	1.1	0.92	1
Calcium	mg/L	11.9	13.1	10.9	220	280	310	310	310	270	250	240	330	410	410	444	540	470	460
Chloride	mg/L	15	18	10	54	54	48	50	50	51	48	48	60	63	70	55	52	34	39
Fluoride	mg/L	0.58	0.52	0.61	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06	<0.06	<0.06	<0.5	<0.2
pH	SU	6.78	6.55	6.6	6.94	6.89	6.55	6.52	6.64	6.57	6.82	6.79	6.25	6.36	6.33	6.2	7.39	6.15	6.29
Sulfate	mg/L	83	90	101	820	910	850	850	440	540	520	440	510	1000	1600	1500	1700	1400	1400
Total Dissolved Solids	mg/L	428	344	322	2000	2300	2300	2300	2200	2200	2100	2100	2400	2700	2800	550	2700	2700	2500
Antimony	mg/L	<0.0010	<0.0010	<0.0010	0.00043 J	<0.0002	<0.0026	0.00057 J	0.00095 J	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016		<0.0026	
Arsenic	mg/L	<0.0010	0.0005 J	<0.0010	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014		<0.002		<0.002		<0.0014	
Barium	mg/L	0.054	0.0506	0.0491	0.045	0.04	0.041	0.032	0.033	0.029	0.028	0.026		0.023		<0.00011		0.019	
Beryllium	mg/L	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055		<0.00015	<0.00055	<0.00015		<0.00055	
Cadmium	mg/L	<0.0010	<0.0010	<0.0010	<0.0001	0.006	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015		<0.0015		<0.000018		<0.00002	
Chromium	mg/L	0.0009 J	0.0007 J	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031		<0.0031	<0.0026	<0.00014		<0.0011	
Cobalt	mg/L	0.0005 J	0.0003 J	0.0002 J	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	<0.00063		<0.00018	
Lead	mg/L	<0.0010	<0.0010	<0.0010	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026		<0.0026	<0.0042	<0.00016		<0.0033	
Lithium	mg/L	0.0162	0.0166	0.0141	0.024 J	0.028 J	<0.0042	0.032 J	0.029 J	<0.1	0.024 J	<0.0042		<0.0042		<0.04		<0.0042	
Mercury	mg/L	<0.00020	<0.00020	<0.00020		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002		<0.000093		<0.0001		<0.00019	
Molybdenum	mg/L	0.0014 J	0.0021	0.0012 J	0.0028 J	0.0016 J	<0.000095	0.00077 J	0.0018 J	<0.00095	0.0019 J	<0.00095		<0.00014		<0.00028		<0.000095	
Radium 226	pCi/L	0.215	0.0495	0.0129	0.603	0.341	0.37	0.313	<0.139	0.16	0.38	0.24		0.453		0.619		0.42	
Radium 228	pCi/L	1.18	2.63	0.315 J	<0.0552	0.55	<0.609	0.496	<0.0387	<0.27	1.04	1.15		0.992		0.0905		0.405	
Radium, 226/228 Combined	pCi/L	1.4	2.68	0.328	0.603	0.891	0.37	0.809	<0.139	0.16	1.42	1.39		1.445		0.71		0.825	
Selenium	mg/L	0.0007 J	0.0007 J	0.0006 J	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	<0.00033		<0.0028	
Thallium	mg/L	<0.0020	<0.0020	<0.0020	<0.0007	<0.004	<0.0081	<0.01	<0.010	<0.010	<0.010	<0.010		<0.0081	<0.01	<0.00015		<0.004	
Turbidity	NTU	16	15	3.5															

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit



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

Well ID	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	
Sample Date	5/31/2021	8/30/2021	12/21/2021	3/7/2022	5/24/2022	9/6/2022	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	
Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	
ANALYTE	Unit																		
Boron	mg/L	0.816	0.931	1.07	0.914	0.991	1.16	0.22	0.19	0.2	0.23	0.29	0.26	0.31	0.23	0.24	0.2	0.37	0.274
Calcium	mg/L	478	483	506	474	508	476	190	170	200	200	470	200	190	180	230	190	280	236
Chloride	mg/L	44	48	46	44	38	35	42	39	36	37	36	36	36	36	30	35	25	29
Fluoride	mg/L	0.22	0.19	0.24	0.19	0.18	0.21	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06	<0.06
pH	SU	6.18	6.12	6.37	6.19	6.2	6.21	6.18	6.39	6.31	6.1	5.75	5.86	5.88	6.33	6.27	6.28	6.62	6.18
Sulfate	mg/L	1450	1640	1480	1600	1470	1570	860	660	780	780	470	430	770	340	420	740	1100	1100
Total Dissolved Solids	mg/L	2500	2520	2510	2650	2530	2600	1800	1800	1900	1800	1900	1800	1800	1800	1700	1800	1900	400
Antimony	mg/L	<0.0010	0.0005 J	<0.0200	<0.0010	<0.0010	<0.0010	0.00029 J	<0.0002	<0.0026	0.0004 J	0.00073 J	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016
Arsenic	mg/L	<0.0010	0.0005 J	<0.0200	0.0004 J	<0.0010	0.0004 J	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014		<0.002		<0.002
Barium	mg/L	0.0216	0.02	0.0193	0.0171	0.017	0.017	0.039	0.035	0.038	0.03	0.029	0.025	0.025	0.025		0.018		<0.00011
Beryllium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055		<0.00015	<0.00055	<0.0016
Cadmium	mg/L	<0.0010	<0.0010	<0.0200	0.0002 J	<0.0010	<0.0010	<0.0001	<0.00075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015		<0.0015		<0.000018
Chromium	mg/L	<0.0020	0.0019	<0.0300	<0.0015	<0.0015	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031			<0.0026	<0.00014
Cobalt	mg/L	0.0012	0.0010 J	<0.0200	<0.0010	0.0002 J	<0.0010	0.052	0.029	0.023	0.016	0.0087	<0.00018	0.00086 J	<0.00018		<0.00063	0.0007 J	<0.00063
Lead	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026		<0.0026	<0.0042	<0.00016
Lithium	mg/L	0.0141	0.0127	<0.0600	0.012	0.0103	0.012	0.018 J	0.015 J	<0.0042	0.020 J	0.025 J	<0.1	0.021 J	<0.0042		<0.0042		<0.04
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002		<0.000093		<0.0001
Molybdenum	mg/L	<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	0.0015 J	0.0017 J	<0.000095	0.0003 J	0.00055 J	<0.00095	0.00082 J	<0.00095		<0.00014		<0.00028
Radium 226	pCi/L		<0.04	0.501	0.260 J	0.0628	0.265 J	<0.187	0.338	<0.177	0.197	1.9	0.08	0.14	0.08		0		<0.149
Radium 228	pCi/L		1.78	0.255	0.439 J	0.888	-0.449	0.853	<0.0622	<0.126	<0.127	<0.458	0.4	1.35	0.64		0.443		0.553
Radium, 226/228 Combined	pCi/L		<1.82	0.756 J	0.699	0.95	0.265	0.853	0.338	<0.177	0.197	1.9	0.48	1.49	0.72		0.443		0.553
Selenium	mg/L	0.0015	0.0014	<0.0200	0.0017	0.0026	0.0015	0.0038 J	0.0027 J	<0.0028	0.0074	0.0061	0.0054	0.0046 J	<0.0028		<0.00033	0.0055	<0.00033
Thallium	mg/L	<0.0020	0.0042	<0.0400	<0.0200	<0.0020	<0.0020	<0.0007	<0.004	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081		<0.0081	<0.01	<0.00015
Turbidity	NTU	49.8	22.65	13	5	<1.0	<1.0												

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit



Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Mari
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-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	
Sample Date	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	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	
Sample Purpose	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background	Background	Background	Background	Background	Background	
ANALYTE	Unit																		
Boron	mg/L	0.56	0.47	0.49 J	0.544	0.499	0.33	0.508	0.48	0.408	0.11	0.089	0.081	0.057	0.085	0.083	0.09	0.09	0.078
Calcium	mg/L	430	360	340	372	363	299	406	347	349	34	29	45	93	30	32	34	33	34
Chloride	mg/L	13	19	28	29	34	43	30	33	44	100	120	140	220	66	110	120	110	110
Fluoride	mg/L	<0.06	<0.5	0.28	0.62	0.4	0.36	0.69	0.92	0.47	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25
pH	SU	6.46	5.81	6.37	5.74	5.91	6.32	5.86	5.97	6.19	5.99	5.96	6.03	6.08	6.01	5.96	6.02	6.13	6.1
Sulfate	mg/L	1100	1200	1300	1370	1590	1250	1630	1700	1760	120	180	190	300	73	130	140	110	110
Total Dissolved Solids	mg/L	1900	2200	2300	2120	2370	2090	2480	2460	2580	680	820	1400	560	570	720	630	1000	700
Antimony	mg/L		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.00022 J	<0.0002	<0.0026	0.00026 J	0.00091 J	<0.0026	<0.0002	<0.0026	
Arsenic	mg/L		<0.00027		<0.0010	0.0005 J	<0.0200	<0.0010	0.0013	0.0016	<0.0014	0.0088	0.0076	0.0061	<0.0014	0.0093	0.0062	0.0069	
Barium	mg/L		0.019		0.0146	0.0198	0.0168	0.0151	0.0208	0.0205	0.072	0.059	0.059	0.061	0.065	0.064	0.057	0.058	
Beryllium	mg/L		<0.00011		0.0011	0.0003 J	<0.0200	0.0019	0.0056	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055	
Cadmium	mg/L		<0.00002		0.0015	0.0016	<0.0200	0.0014	0.0003 J	0.0003 J	<0.0001	<0.00075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	
Chromium	mg/L		<0.0011		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	
Cobalt	mg/L		<0.000037		0.0017	0.0052	<0.0200	0.0159	0.211	0.0325	0.11	0.12	0.091	0.037	0.11	0.12	0.1	0.11	
Lead	mg/L		<0.0033		<0.0010	0.0007 J	<0.0200	<0.0010	<0.0020	<0.0010	<0.0008	0.0056	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	
Lithium	mg/L		<0.0042		0.0206	0.0148	<0.0600	0.0196	0.0381	0.0123	<0.003	0.0095 J	<0.0042	0.12	0.012 J	<0.1	0.028 J	<0.0042	
Mercury	mg/L		<0.00019		<0.00020	<0.00020	0.00006 J	<0.00020	<0.00020	<0.00020		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002	
Molybdenum	mg/L		<0.000019		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	0.0009 J	0.00037 J	0.00045 J	<0.000095	<0.0002	<0.0002	<0.00095	0.00047 J	<0.00095	
Radium 226	pCi/L		0.0467			<0.02	0.228 J	0.0315	0.0325	0.365	1.64	0.715	1	0.366	0.317	0.19	0.43	0.41	
Radium 228	pCi/L		0.176			2.51	0.145	0.426 J	0.933	0.899	<0.438	1.92	<0.633	0.42	<0.397	0.77	2.42	0.77	
Radium, 226/228 Combined	pCi/L		0.222			2.53	0.374 J	0.458 J	0.965	1.26	1.64	2.635	1	0.786	0.317	0.96	2.88	1.18	
Selenium	mg/L		0.0031		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.013	0.011	0.016	0.028	0.013	0.016	0.012	0.022	
Thallium	mg/L		<0.004		<0.0020	0.009	<0.0400	<0.0020	<0.0040	<0.0020	<0.0007	<0.004	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	
Turbidity	NTU				7.34	9.98	1.5	4.9	4.3	<1.0									

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit



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

Well ID		EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-3	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4
Sample Date		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	3/23/2017	4/3/2017	5/25/2017	6/22/2017	6/29/2017	7/24/2017
Sample Purpose	Unit	Background	Background	Background	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background	Background	Background
ANALYTE	Unit																		
Boron	mg/L	0.082	0.033	<0.08	<0.5	0.024	<0.25	0.0556	0.075	0.0501	0.0702	0.067	0.0708	14	23	14	11	13	11
Calcium	mg/L	38	94	76.3	40	80	66	40.6	35.5	58.9	36.3	40.1	36.2	190	170	170	150	190	160
Chloride	mg/L	140	240	150	140	330	230	127	129	183	145	157	147	460	290	380	430	250	180
Fluoride	mg/L	<0.06	<0.06	<3	<0.06	<0.5	0.35	0.22	0.17	0.51	0.2	0.19	0.21	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029
pH	SU	6.1	6.11	5.98	6.31	6.01	6.24	6.13	6.07	6.41	6.17	6.04	6.05	5.51	5.88	5.77	5.8	5.81	5.8
Sulfate	mg/L	150	340	160	190	410	300	148	114	178	153	160	151	620	530	660	730	410	290
Total Dissolved Solids	mg/L	690	750	580	750	960	1500	692	672	812	762	728	670	2300	2300	2400	2000	2100	2300
Antimony	mg/L	<0.0016		<0.0016		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.00028 J	<0.0002	<0.0026	0.00033 J	0.00051 J	<0.0026
Arsenic	mg/L	<0.002		0.0057 J	0.0067	0.0059	<0.05	0.0075	0.0076	<0.0200	0.0068	0.0075	0.007	0.035	0.039	0.037	0.053	0.044	0.044
Barium	mg/L	0.064		<0.00011		0.041		0.0819	0.101	0.084	0.0851	0.0846	0.0855	0.035	0.026	0.028	0.029	0.037	0.026
Beryllium	mg/L	<0.00015	0.00033 J	<0.00015		<0.00011		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055
Cadmium	mg/L	<0.0015		<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0001	0.0052	<0.0015	<0.0015	<0.0015	<0.0015
Chromium	mg/L	<0.0031	<0.0026	<0.00014		<0.0011		<0.0015	<0.0015	<0.0300	0.0015 J	<0.0015	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031
Cobalt	mg/L	0.088	0.044	0.032	0.087	0.047	0.031	0.0912	0.0882	0.0472	0.0947	0.121	0.104	0.39	0.41	0.41	0.44	0.34	0.41
Lead	mg/L	<0.0026	<0.0042	<0.00016		<0.0033		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.009	0.013	0.011	0.017	<0.0026	0.011
Lithium	mg/L	<0.0042		0.119		0.12		0.0314	0.0169	0.0736	0.0267	0.0321	0.027	0.0044 J	0.0062 J	<0.0042	0.0047 J	0.0063 J	<0.1
Mercury	mg/L	<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019
Molybdenum	mg/L	<0.00014		<0.00028		<0.000019		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	0.00092 J	0.0011 J	<0.000095	<0.0002	0.00058 J	<0.00095
Radium 226	pCi/L	0.679		0.0839		0.513		<0.27	0.196 J	0.365	0.132 J	0.141 J	1.1	1.17	<0.0457	0.18	<0.219	0.3	
Radium 228	pCi/L	0.717		0.477		0.304		<0.5	0.768	0.765	1.47	0	<0.442	<0.353	0.864	0.897	<0.490	0.44	
Radium, 226/228 Combined	pCi/L	1.396		0.561		0.817		<0.77	0.964	1.13	1.6	0.141	1.1	1.17	0.864	1.077	<0.490	0.74	
Selenium	mg/L	<0.00033	<0.0028	<0.00033		<0.00056		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.13	0.12	0.13	0.2	0.13	0.13
Thallium	mg/L	<0.0081	<0.01	<0.00015		<0.004		<0.0020	0.0019 J	<0.0400	<0.0020	<0.0020	<0.0020	<0.0007	0.065	0.092	0.094	0.058	<0.0081
Turbidity	NTU							9.96	6.84	4.2	4.9	1.7	0.42						

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit



Table 3: Analytical Data
Former Emery Pond
Southern Illinois Power Cooperative Mari
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-5	EP-5	EP-5	
	Sample Date	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	3/8/2022	5/25/2022	9/7/2022	12/21/2021	3/7/2022	5/24/2022			
	Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	
ANALYTE	Unit																					
Boron	mg/L	14	11	13	11	15	11.5	11	9.9	10	11.9	11.8	11.6	11.1	11.8	11.8	0.0855	0.038	0.0254			
Calcium	mg/L	150	150	200	150	140	159	170	150	140	179	162	161	171	188	147	25.4	22.5	21			
Chloride	mg/L	210	210	200	310	420	440	370	380	390	484	446	477	456	460	478	4	3	3			
Fluoride	mg/L	<0.029	<0.029	<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	0.48	0.4	0.38			
pH	SU	5.8	5.85	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	7.07	6.73	6.55			
Sulfate	mg/L	330	340	320	520	750	710	630	610	580	670	565	567	623	531	673	119	141	132			
Total Dissolved Solids	mg/L	2200	2300	2100	1900	2000	130	2000	2500	1900	1860 R	1750	1450	1740	1730	1640	294	326	322			
Antimony	mg/L	<0.0002	<0.0026		<0.0016		<0.0016		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010			
Arsenic	mg/L	0.035	0.049		<0.002		0.026 J	0.019	0.014	<0.05	0.0075	0.0073	<0.0200	0.0053	0.0071	0.0068	<0.0200	0.0004 J	<0.0010			
Barium	mg/L	0.031	0.023		0.023		<0.00011		0.027		0.0248	0.027	0.0255	0.0313	0.0329	0.0236	0.0478	0.0513	0.0529			
Beryllium	mg/L	<0.0002	<0.00055			<0.00055	<0.00015		<0.00055		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010			
Cadmium	mg/L	<0.0015	<0.0015		<0.0015		<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010			
Chromium	mg/L	<0.0031	<0.0031		0.011	<0.0026	<0.00014		<0.0011		<0.0015	<0.0015	<0.0300	0.002	<0.0015	<0.0015	<0.0300	0.0008 J	<0.0015			
Cobalt	mg/L	0.42	0.38		0.31	0.41	0.28	0.26	0.33	0.32	0.287	0.326	0.298	0.200	0.205	0.471	<0.0200	0.0005 J	<0.0010			
Lead	mg/L	0.012	0.012		0.015	<0.0042	<0.00016		0.018	<0.025	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010			
Lithium	mg/L	0.0053 J	<0.0042		<0.0042		<0.04		<0.0042		<0.0015	0.0023 J	<0.0600	0.0025 J	0.0025 J	0.0021 J	<0.0600	0.0027 J	0.0023 J			
Mercury	mg/L	<0.00019	<0.0002		<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Molybdenum	mg/L	0.0010 J	<0.00095		<0.00014		<0.00028		<0.000019		<0.0015	<0.0015	<0.030	<0.0015	<0.0015	<0.0015	<0.0300	0.003	0.0027			
Radium 226	pCi/L	0.15	0.33		0.262		0.77		0.163			<0.11	0.170 J	0.234	0.144 J	0.276	0.564	0.157 J	0.232 J			
Radium 228	pCi/L	0.96	2.14		0.79		0.929		0.41			<0.14	1.21	0.658	1.25	1.22	-0.125	0.474 J	0.287			
Radium, 226/228 Combined	pCi/L	1.11	2.47		1.052		1.7		0.573			<0.25	1.38	0.893	1.39	1.49	0.564 J	0.63	0.519 J			
Selenium	mg/L	0.11	0.16		0.021	<0.0028	<0.00033		0.0012		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	0.0006 J	<0.0200	0.0017	0.0015			
Thallium	mg/L	0.075	0.075		0.14	0.18	<0.00015		<0.004		<0.0020	0.0012 J	<0.0400	<0.0020	<0.0020	<0.0020	<0.0400	0.0031	<0.0020			
Turbidity	NTU										19.22	9.75	10	5	1.5	<1.0	4.9	0.6	<1.0			

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit



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

Well ID		EP-5	EP-6	EP-6	EP-6	EP-6	EP-7	EP-7	EP-7	EP-7
	Sample Date	9/6/2022	12/22/2021	3/8/2022	5/24/2022	9/6/2022	12/22/2021	3/8/2022	5/25/2022	9/7/2022
	Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE	Unit									
Boron	mg/L	0.0222	0.0252	<0.0200	<0.0200	<0.0200	0.984	0.91	0.682	0.667
Calcium	mg/L	16.7	4.24	1.92	1.65	1.86	178	170	128	93.5
Chloride	mg/L	3 J	25	23	24	23	186	239	254	249
Fluoride	mg/L	0.38	0.06 J	0.06 J	0.06 J	0.07 J	0.33	0.3	0.22	0.2
pH	SU	6.44	5.28	5.1	5.07	5.09	6.16	5.97	5.74	5.66
Sulfate	mg/L	114	48	67	63	64	549	556	400	326
Total Dissolved Solids	mg/L	282	192	254	238	216	1270	1450	1210	800
Antimony	mg/L	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010
Arsenic	mg/L	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	0.0173	0.0139	0.0086
Barium	mg/L	0.0506	0.043	0.0345	0.034	0.0366	0.0344	0.0271	0.0325	0.036
Beryllium	mg/L	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010
Cadmium	mg/L	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010
Chromium	mg/L	<0.0015	<0.0300	0.0013 J	0.0008 J	<0.0015	<0.0300	<0.0015	0.0017	<0.0015
Cobalt	mg/L	<0.0010	0.0040 J	0.0017	0.0007 J	0.0018	0.110	0.139	0.161	0.19
Lead	mg/L	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	0.0008 J	<0.0010
Lithium	mg/L	0.0023 J	<0.0600	0.0113	0.011	0.0094	<0.0600	<0.00300	0.0019 J	<0.0030
Mercury	mg/L	<0.00020	0.00010 J	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Molybdenum	mg/L	0.0017	<0.0300	<0.0015	<0.0015	<0.0015	<0.0300	0.0012 J	0.0007 J	<0.0015
Radium 226	pCi/L	0.214 J	0.0641	0.123 J	0.112 J	0.0891 J	0.103 J	0.0766 J	0.242 J	0.0538 J
Radium 228	pCi/L	-0.235	0.297 J	1.01	0.183	0.702	0.0686 J	0.954	1.23	0.731
Radium, 226/228 Combined	pCi/L	0.214	0.362 J	1.13	0.295	0.791	0.172 J	1.03	1.47	0.785
Selenium	mg/L	0.0012	<0.0200	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	0.0007 J
Thallium	mg/L	<0.0020	<0.0400	<0.0200	<0.0020	<0.0020	<0.0400	<0.0020	<0.0020	<0.0020
Turbidity	NTU	<1.0	7.5	4	3.3	<1.0	4.3	14	1.8	<1.0

Notes:
 J = Indicates the result is estimated
 < = Analyte was not detected above the method detection limit
 R = relative percent difference for the laboratory duplicate
 mg/L = milligrams per liter
 pCi/L = picoCuries per liter
 NTU = Nephelometric Turbidity Unit

Created by: CCC
 Checked by: GRD
 Reviewed by: MAH



Table 4: Groundwater Protection Standard Summary

Analyte	Unit	Background Tolerance Limit ¹	35 IAC §845 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
Boron	mg/L	0.14	2	2
Cadmium	mg/L	ND (0.001)	0.005	0.005
Calcium	mg/L	63		63
Chloride	mg/L	86	200	200
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)	0.0075	0.0075
Lithium	mg/L	0.082	0.04	0.082
Mercury	mg/L	ND (0.0002)	0.002	0.002
Molybdenum	mg/L	0.007	0.1	0.1
pH	SU	6.003-7.036	6.5-9.0	6.0-9.0
Selenium	mg/L	0.017	0.05	0.05
Sulfate	mg/L	101	400	400
Thallium	mg/L	ND (0.002)	0.002	0.002
Total Dissolved Solids	mg/L	591	1200	1200
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 35 IAC §845.600(a).
3. The former Emery Pond GPS is the maximum of the background tolerance limit and the GPS provided in 35 IAC §845.600(a)

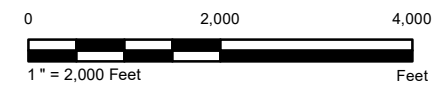
Abbreviations:

IEPA = Illinois Environmental Protection Agency
IAC = Illinois Administrative Code
GPS = Groundwater Protection Standard
mg/L = milligrams per Liter
ND = Non-detect concentration
pCi/L = picoCuries per Liter
pH = potential of Hydrogen
SU= Standard Units

Created by: CCC
Checked by: DPJ
Reviewed by: MAH

FIGURES

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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	2023-01-30
DESIGNED	CCC
PREPARED	EMM
REVIEWED	DSC
APPROVED	MAH

PROJECT NO. CONTROL
 GL21467997.001 -




REV.
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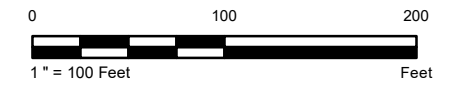
FIGURE
 1

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIB



LEGEND

-  Background Monitoring Well
-  Downgradient Monitoring Well
-  Approximate Limits of the Former Emery Pond



NOTE(S)

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT

SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT

ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
FORMER EMERY POND

TITLE

MONITORING WELL LOCATION MAP

CONSULTANT



YYYY-MM-DD	2023-01-30
DESIGNED	CCC
PREPARED	EMM
REVIEWED	DSC
APPROVED	MAH

PROJECT NO. CONTROL
GL21467997.001 -

REV. -

FIGURE 2

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - January 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

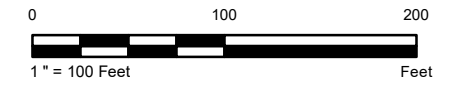


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON JANUARY 12, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
 JANUARY 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANS 8



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - February 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

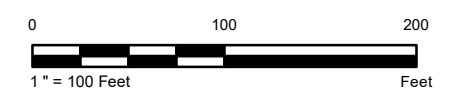


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON FEBRUARY 16, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**FEBRUARY 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - March 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

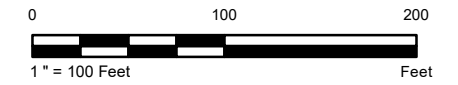


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 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON MARCH 16, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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PROJECT
**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**MARCH 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- April 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

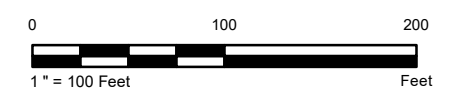


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON APRIL 18, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
 APRIL 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP

CONSULTANT	YYYY-MM-DD	2023-01-06
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- May 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

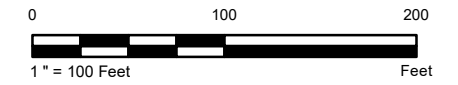


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON MAY 16, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
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 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
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 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
 MAY 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - June 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

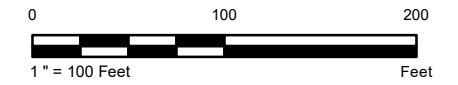


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON JUNE 13, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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 SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
**JUNE 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- July 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

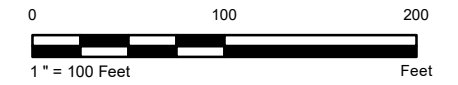


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON JULY 11, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

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 SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
**JULY 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- August 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

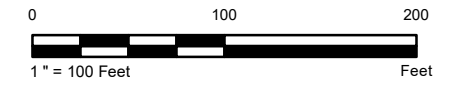


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON AUGUST 15, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**AUGUST 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

B:\Southern_Illinois_Power_Cooperative\Boring_Power_Plant\B99_PROJ\121467997_Operating_Permit_Application\0002_Note_N04_Contour_2022\21467997-0002-NIS-2010.mxd

1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- September 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

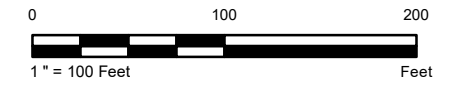


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON SEPTEMBER 12, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**SEPTEMBER 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - October 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

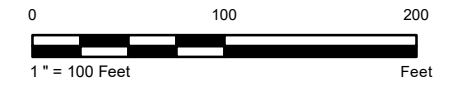


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON OCTOBER 17, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
 SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

TITLE
**OCTOBER 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
DESIGNED	DPJ	
PREPARED	DTD	
REVIEWED	DSC	
APPROVED	MAH	

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- November 2022 Groundwater Contour
- Approximate Limits of the Former Emery Pond

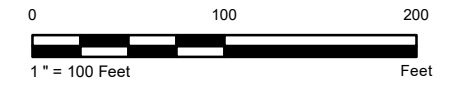


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON NOVEMBER 14, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**NOVEMBER 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2023-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - December 2022 Groundwater Contour
 - Approximate Limits of the Former Emery Pond

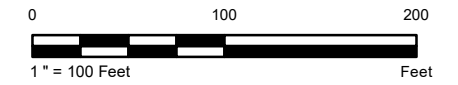


FIGURE NARRATIVE
 THIS FIGURE DEPICTS THE GROUNDWATER ELEVATION IN THE UPPER PORTION OF THE SURFICIAL AQUIFER AND IS INTENDED TO REPRESENT THE APPROXIMATE ELEVATION OF THE GROUNDWATER POTENTIOMETRIC SURFACE. THE POSTED DATA WERE CALCULATED FROM DEPTH TO WATER MEASUREMENTS MADE BY SIPC ON DECEMBER 13, 2022. THE DIRECTION OF THE HORIZONTAL GROUNDWATER FLOW AT AND NEAR THE POTENTIOMETRIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOURS.

- NOTE(S)**
1. THE COORDINATES FOR THIS SITE ARE ILLINOIS STATE PLANE WEST 1201
 2. WELL LOCATIONS AND ELEVATIONS OBTAINED FROM WELL CONSTRUCTION BORING LOGS PROVIDED BY SOUTHERN ILLINOIS POWER COMPANY.
 3. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL.

- REFERENCE(S)**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
 SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
 ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND

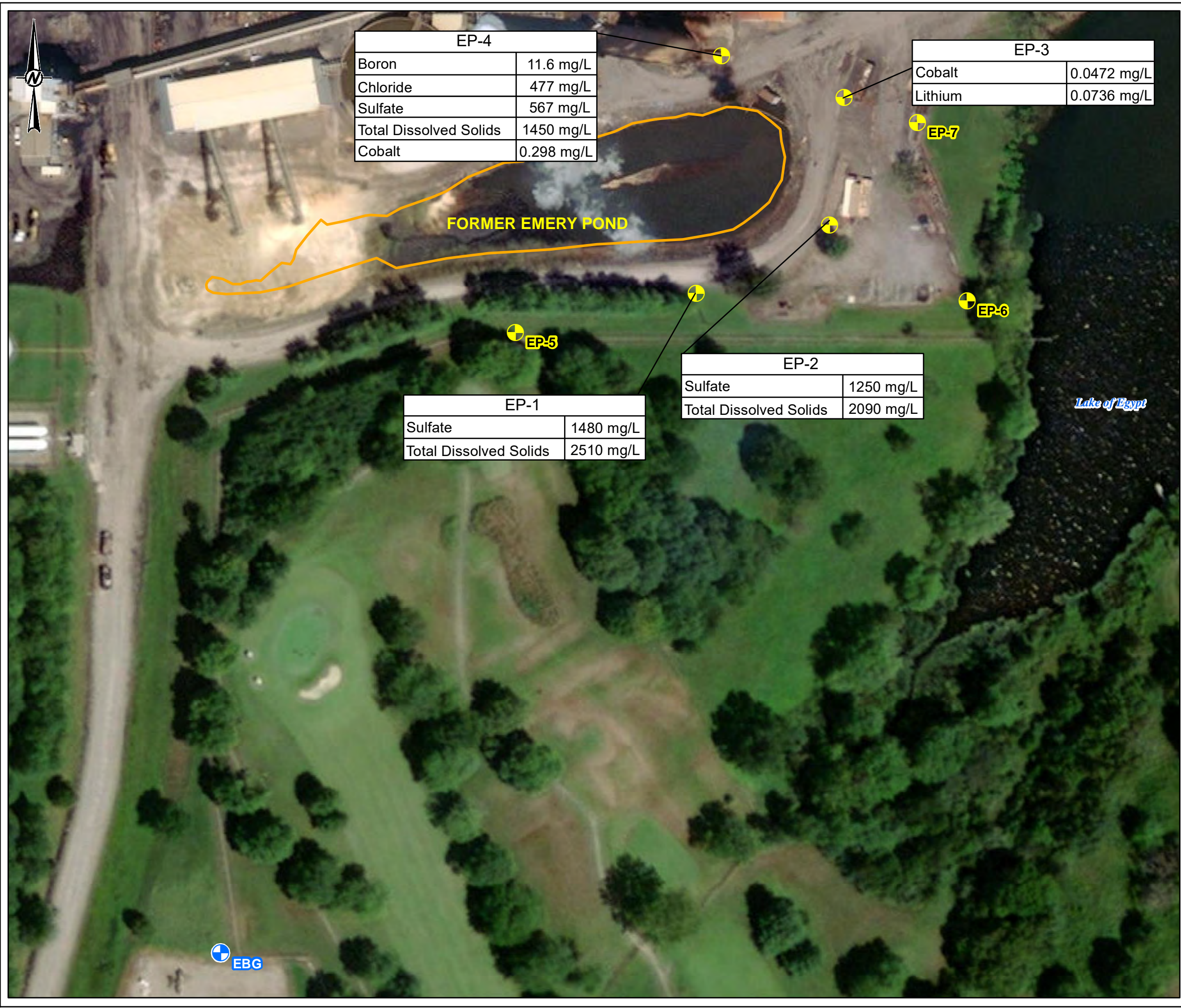
TITLE
 DECEMBER 2022, GROUNDWATER SURFACE ELEVATION
 CONTOUR MAP

CONSULTANT	YYYY-MM-DD	2023-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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EP-4	
Boron	11.6 mg/L
Chloride	477 mg/L
Sulfate	567 mg/L
Total Dissolved Solids	1450 mg/L
Cobalt	0.298 mg/L

EP-3	
Cobalt	0.0472 mg/L
Lithium	0.0736 mg/L

EP-1	
Sulfate	1480 mg/L
Total Dissolved Solids	2510 mg/L

EP-2	
Sulfate	1250 mg/L
Total Dissolved Solids	2090 mg/L

- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - Approximate Limits of the Former Emery Pond

NOTE(S)
 1. ONLY SAMPLE RESULTS COLLECTED IN DECEMBER 2021 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
 2. MG/L- MILLIGRAMS PER LITER

REFERENCE(S)
 1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
 2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

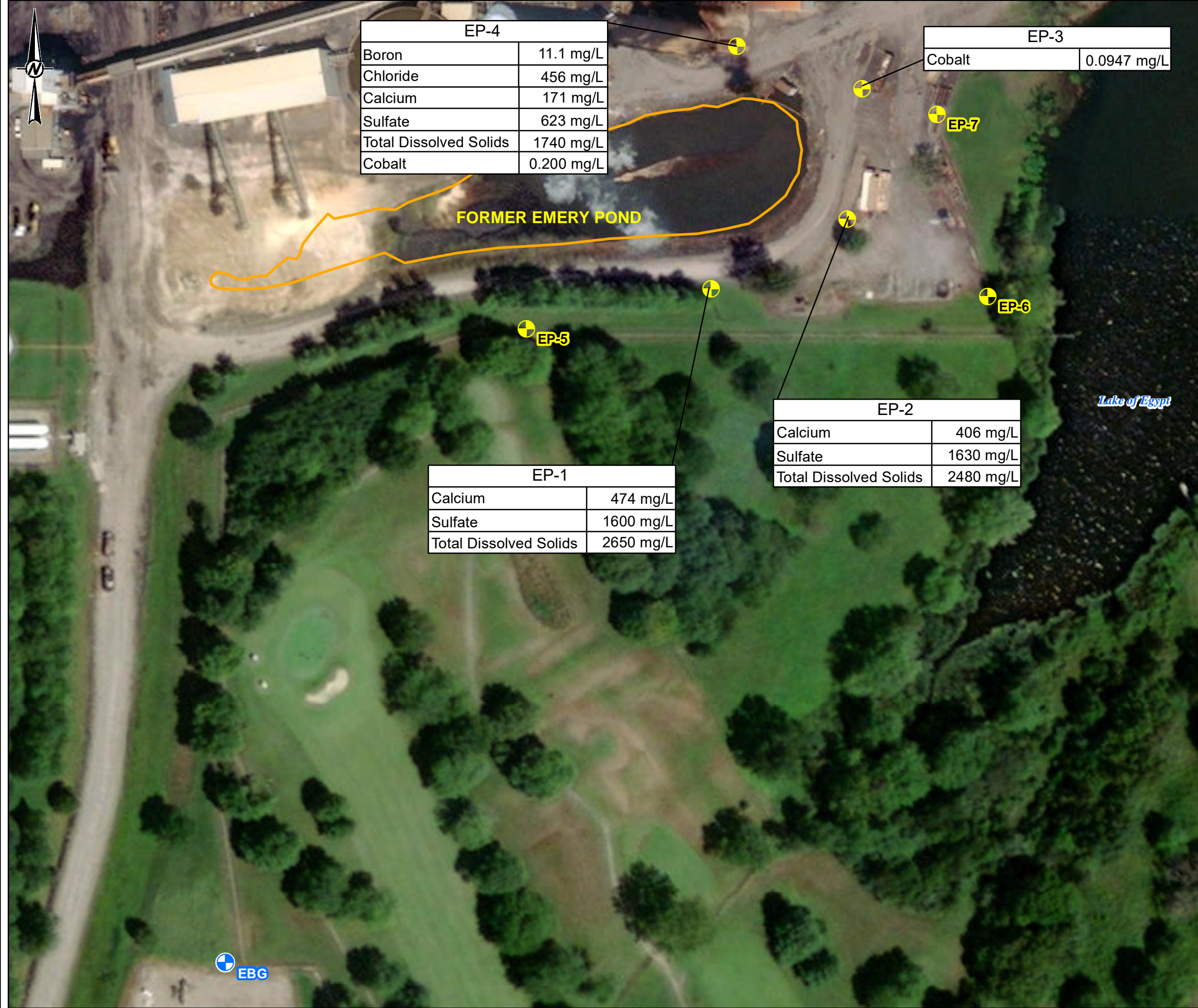
PROJECT
**ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
 FORMER EMERY POND**

TITLE
**DECEMBER 2021, EXTENT OF ILLINOIS CCR GROUNDWATER
 PROTECTION STANDARD EXCEEDANCES**

CONSULTANT	YYYY-MM-DD	2023-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH



1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



EP-4	
Boron	11.1 mg/L
Chloride	456 mg/L
Calcium	171 mg/L
Sulfate	623 mg/L
Total Dissolved Solids	1740 mg/L
Cobalt	0.200 mg/L

EP-3	
Cobalt	0.0947 mg/L

EP-1	
Calcium	474 mg/L
Sulfate	1600 mg/L
Total Dissolved Solids	2650 mg/L

EP-2	
Calcium	406 mg/L
Sulfate	1630 mg/L
Total Dissolved Solids	2480 mg/L

LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- Approximate Limits of the Former Emery Pond

NOTE(S)

- ONLY SAMPLE RESULTS COLLECTED IN MARCH 2022 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
- MG/L- MILLIGRAMS PER LITER

REFERENCE(S)

- COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
- IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
- MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
FORMER EMERY POND

TITLE
MARCH 2022, EXTENT OF CONSTITUENTS DETECTED AT STATISTICALLY SIGNIFICANT LEVELS ABOVE THE GROUNDWATER PROTECTION STANDARDS

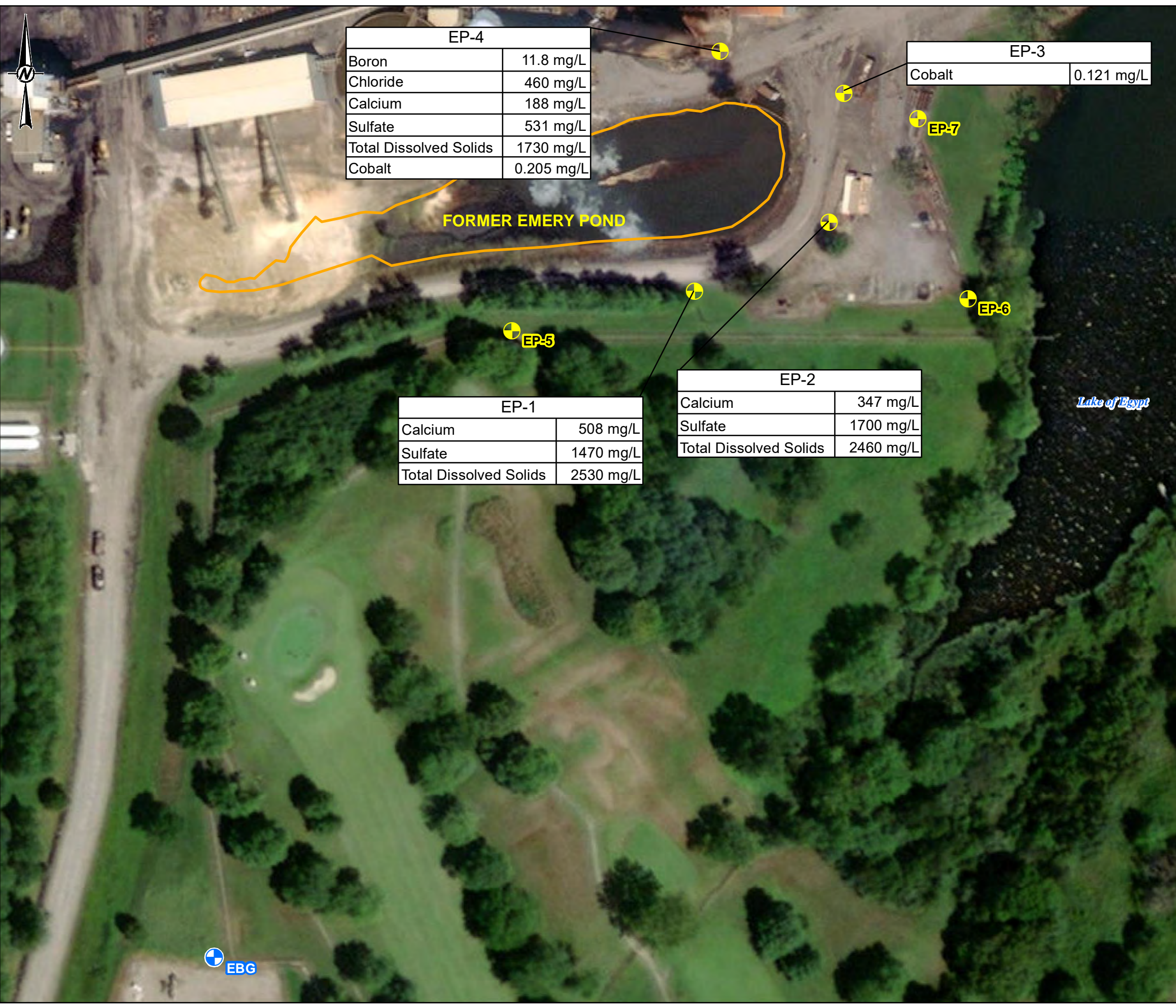
CONSULTANT	YYYY-MM-DD	2023-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH

PROJECT NO. CONTROL REV. FIGURE
GL21467997.001 - - - 16

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B





EP-4	
Boron	11.8 mg/L
Chloride	460 mg/L
Calcium	188 mg/L
Sulfate	531 mg/L
Total Dissolved Solids	1730 mg/L
Cobalt	0.205 mg/L

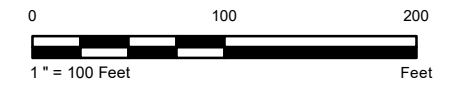
EP-3	
Cobalt	0.121 mg/L

EP-1	
Calcium	508 mg/L
Sulfate	1470 mg/L
Total Dissolved Solids	2530 mg/L

EP-2	
Calcium	347 mg/L
Sulfate	1700 mg/L
Total Dissolved Solids	2460 mg/L

LEGEND

- Background Monitoring Well
- Downgradient Monitoring Well
- Approximate Limits of the Former Emery Pond



NOTE(S)

1. ONLY SAMPLE RESULTS COLLECTED IN MAY 2022 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
2. MG/L- MILLIGRAMS PER LITER

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT

SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT

ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
FORMER EMERY POND

TITLE

**MAY 2022, EXTENT OF CONSTITUENTS DETECTED AT
STATISTICALLY SIGNIFICANT LEVELS ABOVE THE
GROUNDWATER PROTECTION STANDARDS**

CONSULTANT

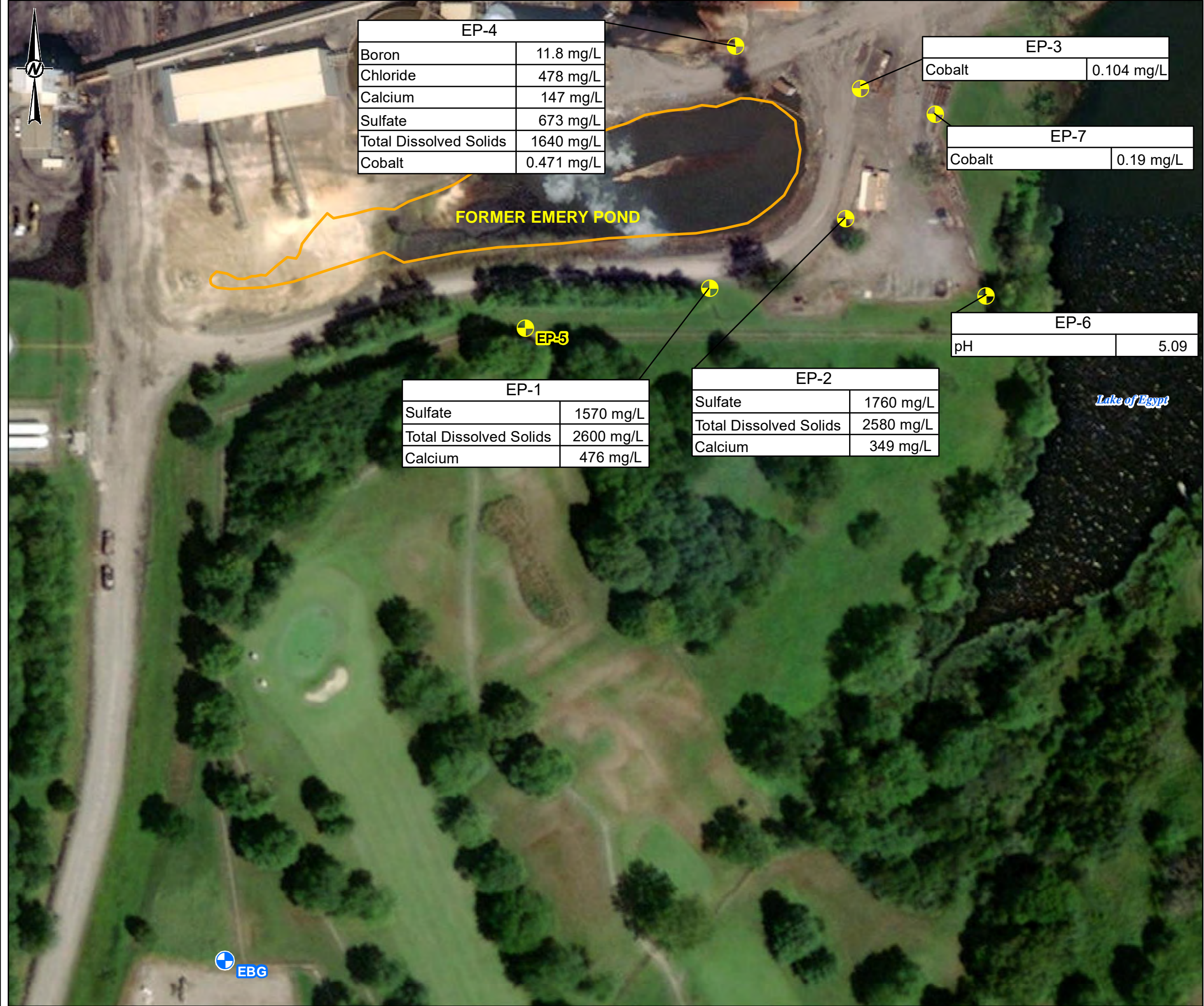
YYYY-MM-DD	2023-01-30
DESIGNED	CCC
PREPARED	EMM
REVIEWED	DSC
APPROVED	MAH

PROJECT NO. CONTROL
GL21467997.001 -

REV.
-

FIGURE
17





EP-4	
Boron	11.8 mg/L
Chloride	478 mg/L
Calcium	147 mg/L
Sulfate	673 mg/L
Total Dissolved Solids	1640 mg/L
Cobalt	0.471 mg/L

EP-3	
Cobalt	0.104 mg/L

EP-7	
Cobalt	0.19 mg/L

EP-6	
pH	5.09

EP-1	
Sulfate	1570 mg/L
Total Dissolved Solids	2600 mg/L
Calcium	476 mg/L

EP-2	
Sulfate	1760 mg/L
Total Dissolved Solids	2580 mg/L
Calcium	349 mg/L

EP-5

- LEGEND**
- Background Monitoring Well
 - Downgradient Monitoring Well
 - Approximate Limits of the Former Emery Pond

NOTE(S)

1. ONLY SAMPLE RESULTS COLLECTED IN SEPTEMBER 2022 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
2. MG/L- MILLIGRAMS PER LITER

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE ILLINOIS EAST FIPS 1201 FEET
2. IMAGERY SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
3. MONITORING WELL LOCATION DATA RECEIVED FROM SOUTHERN ILLINOIS POWER COOPERATIVE

CLIENT
SOUTHERN ILLINOIS POWER COOPERATIVE

PROJECT
ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT
FORMER EMERY POND

TITLE
SEPTEMBER 2022, EXTENT OF CONSTITUENTS DETECTED AT
STATISTICALLY SIGNIFICANT LEVELS ABOVE THE
GROUNDWATER PROTECTION STANDARDS

CONSULTANT	YYYY-MM-DD	2023-01-19
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH

PROJECT NO. CONTROL REV. FIGURE
GL21467997.001 - - - 18

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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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

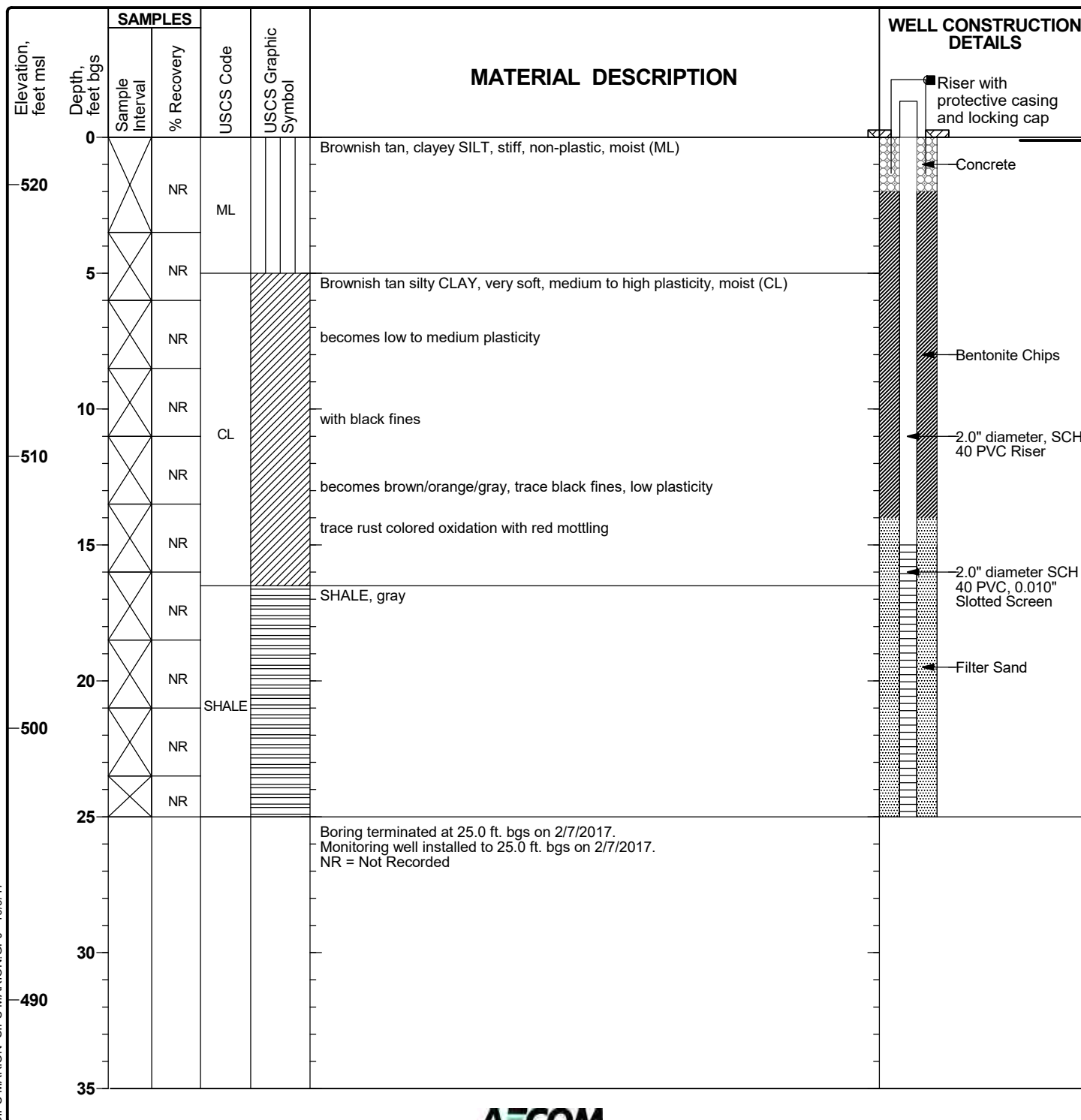
Project Location: SIPC Marion

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	25.0 feet, bgs
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface	524.87 ft, msl 521.74 ft, msl
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant) Easting (Plant)	346358.14 ft 804168.155 ft
Seal or Backfill	Bentonite Chips				



SIPC MARION SIPC MARION.GPJ 10/9/17

Client: Southern Illinois Power Cooperative

Project Name: SIPC Marion CCR

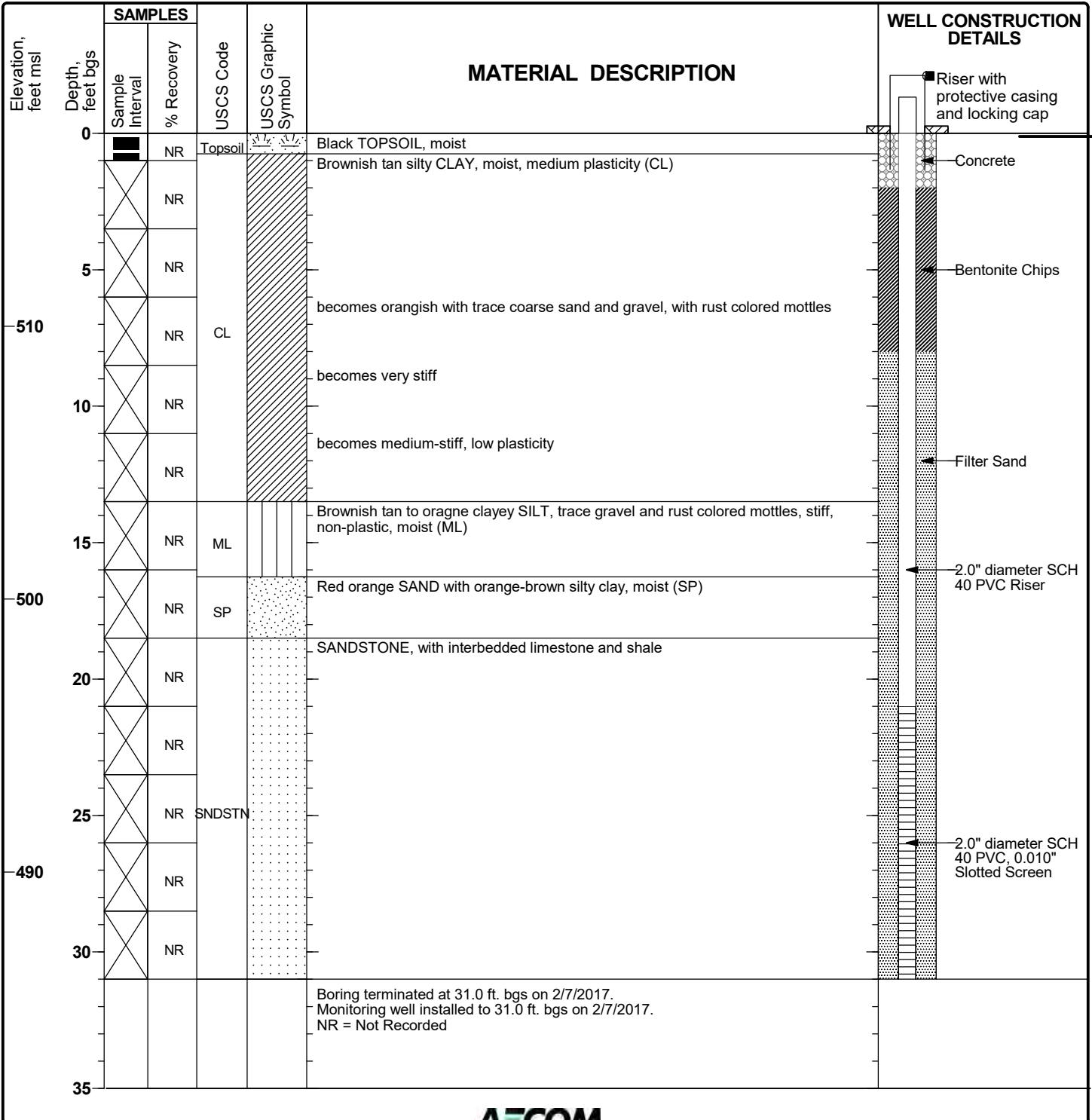
Project Location: SIPC Marion

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
Seal or Backfill	Bentonite Chips			Easting (Plant)	804661.174 ft



SIPC MARION SIPC MARION.GPJ 10/9/17

Client: Southern Illinois Power Cooperative

Project Name: SIPC Marion CCR

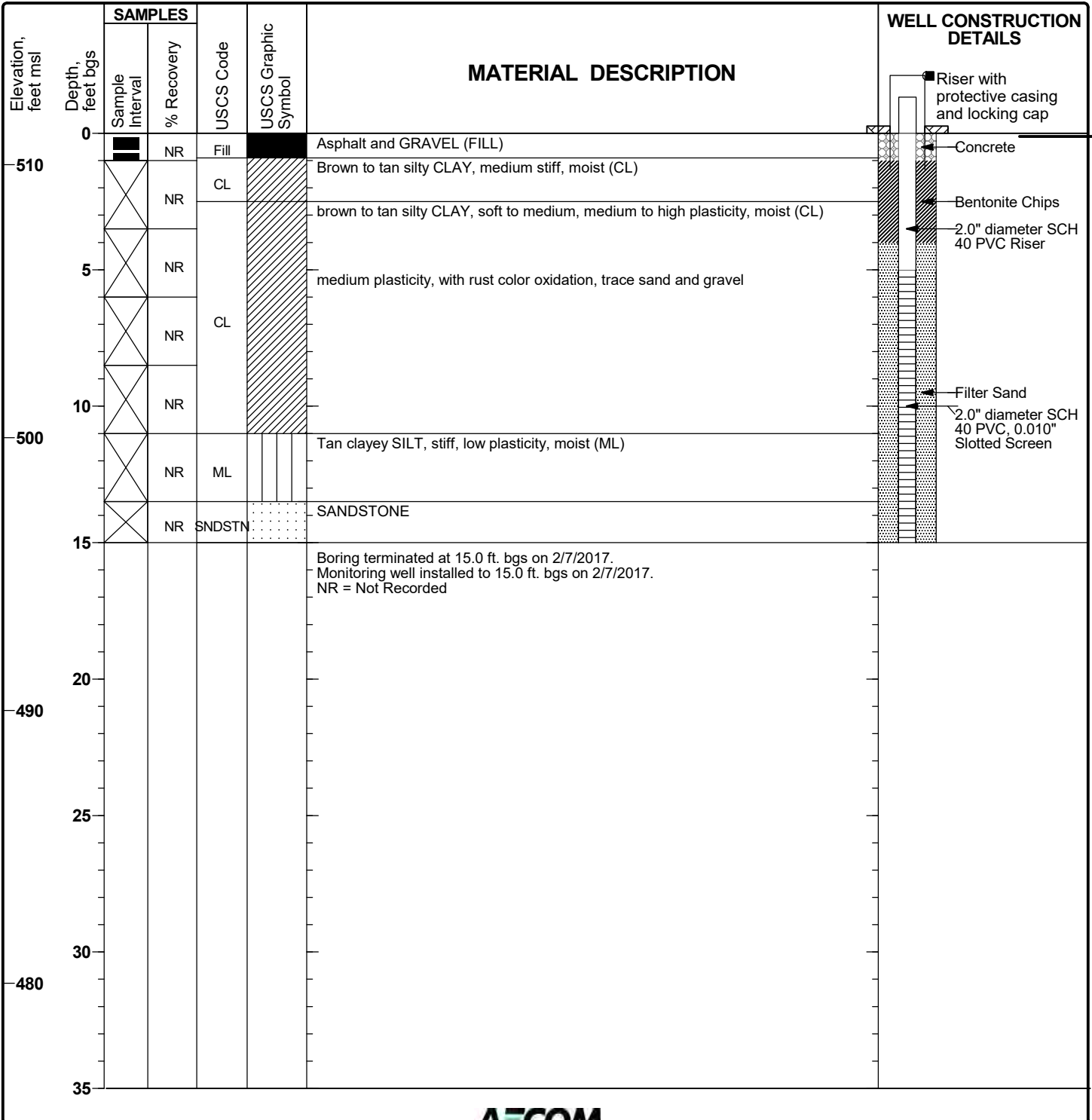
Project Location: SIPC Marion

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) Easting (Plant)	347113.029 ft 804799.408 ft
Seal or Backfill	Bentonite Chips				



SIPC-MARION-SIPC-MARION.GPJ 10/9/17

Client: Southern Illinois Power Cooperative

Project Name: SIPC Marion CCR

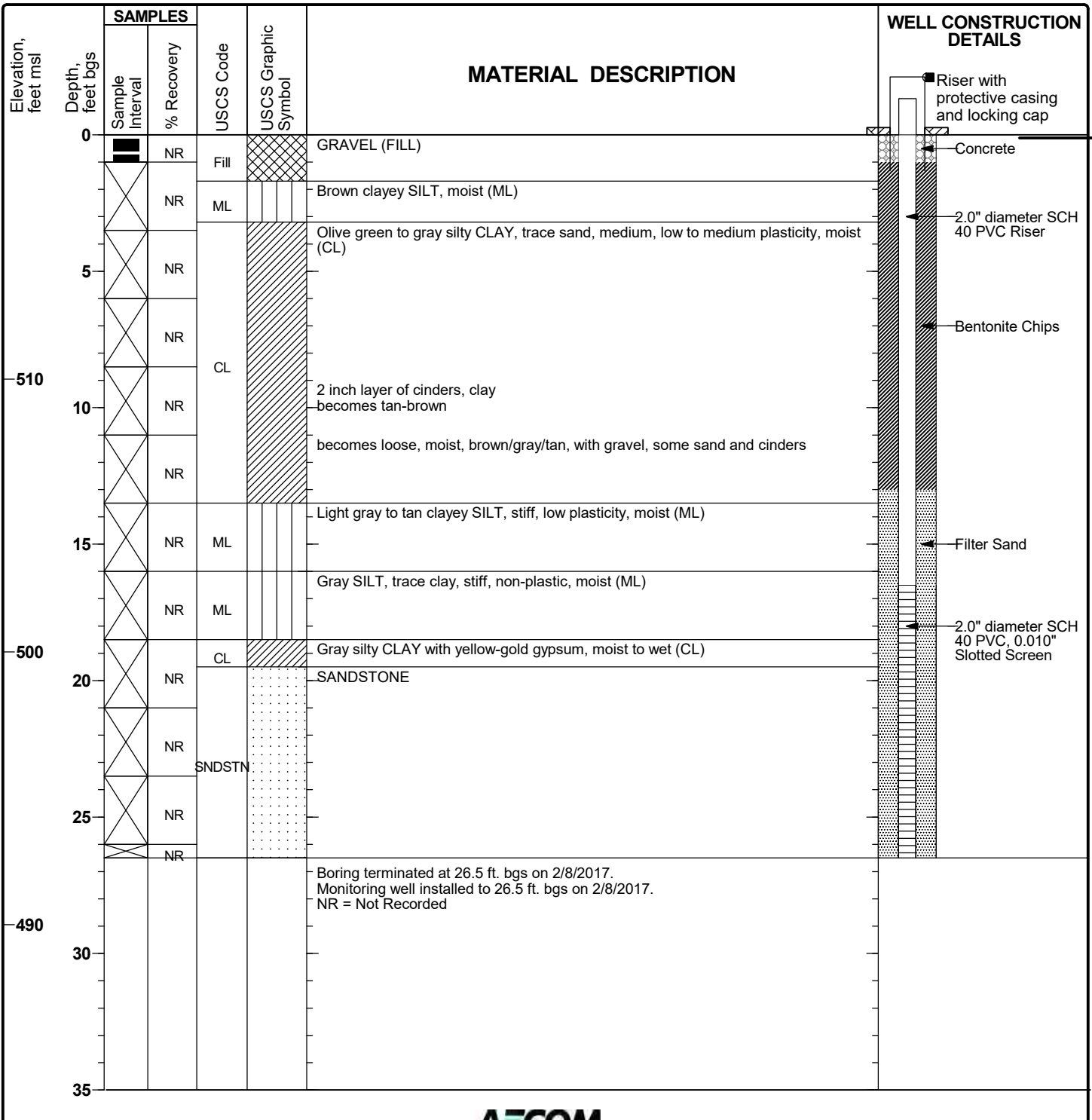
Project Location: SIPC Marion

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	26.5 feet, bgs
Sampling Method	Split Spoon	Water Level TOIC	Not measured	TOC Elevation Ground Surface	518.95 ft, msl 518.95 ft, msl
Size and Type of Well Casing	2-Inch Schedule 40 PVC	Screen Perforation	0.010 - inch	Northing (Plant)	347245.08 ft
Seal or Backfill	Bentonite Chips			Easting (Plant)	804814.534 ft



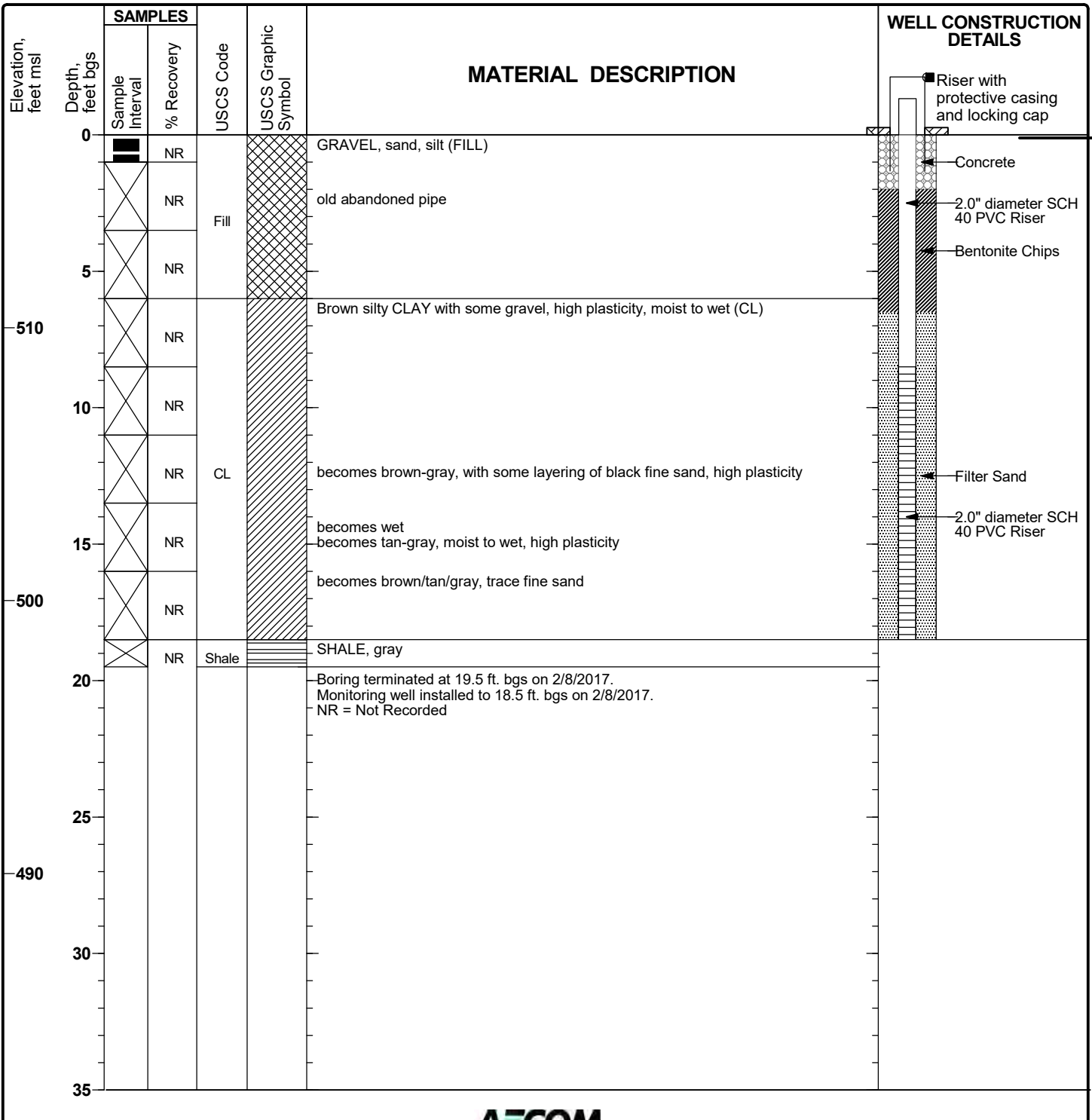
SIPC MARION SIPC MARION.GPJ 10/9/17

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		



SIPC MARION SIPC MARION.GPJ 10/9/17

FIELD BORING LOG



CLIENT: Southern Illinois Power Cooperative
Site: Storm Water Basin Monitoring Wells
Location: Marion Power Station, Marion, IL
Project: 21E0079

CONTRACTOR: Holcomb Foundation Engineering Co.
Rig mfg/model: Bobcat T630 with auger attachment
Drilling Method: 3/4" Hollow Stem Auger

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

DATES: Start: 10/5/2021
 Finish: 10/5/2021

FIELD STAFF: Driller: J. Carter
 Helper: J. Taylor

WEATHER: Foggy, cool (low 60's)

Eng/Geo: R. Hasenyager

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		
	0/60 0%	AGR							2	Yellowish brown (10YR5/6), moist, medium, CLAY with some silt, little sand, and trace gravel.		524			
	0/60 0%	AGR							4			522			
	0/60 0%	AGR							6			520			
	0/60 0%	AGR							8			518			
	0/60 0%	AGR							10			516			
	0/60 0%	AGR							12			514			
	0/60 0%	AGR							14			512			
	0/16 0%	AGR							16			510			
												Yellowish brown (10YR5/8), weathered SANDSTONE.			
												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

CONTRACTOR: Holcomb Foundation Engineering Co.
Rig mfg/model: CME 550X
Drilling Method: 3/4" Hollow Stem Auger with split spoon

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

DATES: Start: 10/4/2021
 Finish: 10/4/2021

FIELD STAFF: Driller: J. Carter
 Helper: J. Taylor

WEATHER: Sunny, mild (high 70's)

Eng/Geo: R. Hasenyager

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	▽ = Dry - during drilling ▽ = 13.00 - at completion ▽ =	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	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				10	Strong brown (7.5YR5/8), moist, dense, very fine- to coarse-grained SAND with some silt.		492	
6A	21/21 100%	SS	4-10 27-60/3" N=37	15.0	4.0				12	Strong brown (7.5YR5/8) with 10% gray (7.5YHR5/1) mottles, moist, hard, weathered SHALE.		490	
	0/10 0%	BD											
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: 3/4" 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	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
	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	Black (10YR2/1), moist, loose, very fine- to coarse-grained SAND with some silt and trace gravel (Bottom Ash).		510	
3A				17.3	2.0		4	Yellowish brown (10YR5/6), moist, soft, CLAY with some silt and trace sand.		508	
4A	32/36 89%	SS	2-5 13-7 N=18	21.4	1.0		6			506	
5A	16/24 67%	SS	2-1 2-1 N=3	21.8	1.0		8	Grayish brown (10YR5/2) with 15% yellowish brown (10YR5/6) mottles, moist, medium CLAY with some silt, trace sand, and trace gravel.		504	
6A	17/36 47%	SS	1-2 2-3 N=4	24.0	1.0		10			502	
7A	15/24 63%	SS	woh-1 3-4 N=4	26.2	1.0		12	Pale brown (10YR6/3), moist, soft, SILT with few clay and trace sand.		500	
8A	27/36 75%	SS	1-2 2-3 N=4	24.3	0.5		14	Yellowish brown (10YR5/4), moist, soft, CLAY with some silt and trace sand.		498	
							16	Gray (10YR5/1), moist, soft, SILT with few clay and trace sand.		496	
	20/24 83%	SS	woh-1 4-5 N=5		0.5		16	Yellowish brown (10YR5/4), moist, soft, CLAY with some silt and trace sand.		496	
	0/6 0%	BD					18	Yellowish brown (10YR5/8), moist, dense, very fine- to medium-grained SANDSTONE.		494	

EOB = 18.5 ft.

NOTE(S):

APPENDIX B

2022 Groundwater Analytical Reports

January 20, 2022

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: 21110629

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 12/23/2021 08:00:00 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,



Aaron Renner
Project Manager
(630)324-6855
arenner@teklabinc.com



Report Contents

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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)

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Qualifiers

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



Case Narrative

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Cooler Receipt Temp: 1.4 °C

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

Radium analysis was performed by Summit Environmental Technologies. See attached 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: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2022	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 12/21/2021 11:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.91	ft	1	12/21/2021 11:35	R304525
Elevation of groundwater surface	*	0	0		516.96	ft	1	12/21/2021 11:35	R304525
Measuring Point Elevation	*	0	0		524.87	ft	1	12/21/2021 11:35	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		2.99	gal	1	12/21/2021 11:35	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		13	NTU	1	12/21/2021 11:35	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		135	mV	1	12/21/2021 11:35	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.715	mS/cm	1	12/21/2021 11:35	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.6	°C	1	12/21/2021 11:35	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		9.40	mg/L	1	12/21/2021 11:35	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.95		1	12/21/2021 11:35	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	H	308	mg/L	1	12/30/2021 14:31	R304482
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	1	2		12	mg/L	2	12/30/2021 02:49	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		84	mg/L	2	12/30/2021 02:49	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.67	mg/L	1	12/28/2021 09:04	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0475	mg/L	1	12/27/2021 20:06	186250
Boron	NELAP	0.0090	0.020	J	0.013	mg/L	1	12/27/2021 20:06	186250
Calcium	NELAP	0.0350	0.100		11.6	mg/L	1	12/27/2021 20:06	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 20:13	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 20:13	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 20:13	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:13	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 20:13	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 16:55	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 12/21/2021 11:35

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 21110629-002
 Matrix: GROUNDWATER

Work Order: 21110629
 Report Date: 20-Jan-22

Client Sample ID: EP-1

Collection Date: 12/21/2021 15:36

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		5.46	ft	1	12/21/2021 15:36	R304525
Elevation of groundwater surface	*	0	0		514.26	ft	1	12/21/2021 15:36	R304525
Measuring Point Elevation	*	0	0		519.72	ft	1	12/21/2021 15:36	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.12	gal	1	12/21/2021 15:36	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		13	NTU	1	12/21/2021 15:36	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		191	mV	1	12/21/2021 15:36	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.86	mS/cm	1	12/21/2021 15:36	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.5	°C	1	12/21/2021 15:36	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		8.59	mg/L	1	12/21/2021 15:36	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.37		1	12/21/2021 15:36	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	B	2510	mg/L	1	12/28/2021 10:58	R304392
<i>Sample result(s) for TDS exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	5	10		46	mg/L	10	12/30/2021 02:54	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1480	mg/L	50	12/30/2021 03:05	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.24	mg/L	1	12/28/2021 09:06	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0193	mg/L	1	12/27/2021 20:08	186250
Boron	NELAP	0.0090	0.0200		1.07	mg/L	1	12/27/2021 20:08	186250
Calcium	NELAP	0.0350	0.100		506	mg/L	1	12/27/2021 20:08	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 20:21	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 20:21	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 20:21	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:21	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 20:21	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 16:57	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 12/21/2021 15:36

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 12/22/2021 10:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		9.99	ft	1	12/22/2021 10:14	R304525
Elevation of groundwater surface	*	0	0		503.80	ft	1	12/22/2021 10:14	R304525
Measuring Point Elevation	*	0	0		513.79	ft	1	12/22/2021 10:14	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.17	gal	1	12/22/2021 10:14	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.5	NTU	1	12/22/2021 10:14	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		152	mV	1	12/22/2021 10:14	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.19	mS/cm	1	12/22/2021 10:14	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.4	°C	1	12/22/2021 10:14	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		2.16	mg/L	1	12/22/2021 10:14	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.32		1	12/22/2021 10:14	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	B	2090	mg/L	1	12/28/2021 14:51	R304392
<i>Sample result(s) for TDS exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	5	10		43	mg/L	10	12/30/2021 03:16	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1250	mg/L	50	12/30/2021 03:34	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.36	mg/L	1	12/28/2021 09:08	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0168	mg/L	1	12/27/2021 20:18	186250
Boron	NELAP	0.0090	0.0200		0.330	mg/L	1	12/29/2021 11:19	186250
Calcium	NELAP	0.0350	0.100		299	mg/L	1	12/27/2021 20:18	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 20:28	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 20:28	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 20:28	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:28	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 20:28	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00006	mg/L	1	12/23/2021 17:00	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 12/22/2021 10:14

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 12/22/2021 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.49	ft	1	12/22/2021 11:40	R304525
Elevation of groundwater surface	*	0	0		502.46	ft	1	12/22/2021 11:40	R304525
Measuring Point Elevation	*	0	0		518.95	ft	1	12/22/2021 11:40	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.56	gal	1	12/22/2021 11:40	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.2	NTU	1	12/22/2021 11:40	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-37	mV	1	12/22/2021 11:40	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.06	mS/cm	1	12/22/2021 11:40	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.9	°C	1	12/22/2021 11:40	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		5.39	mg/L	1	12/22/2021 11:40	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.41		1	12/22/2021 11:40	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	32	40	B	812	mg/L	2	12/28/2021 14:52	R304392
<i>Sample result(s) for TDS exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	5	10		183	mg/L	10	12/30/2021 03:42	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		178	mg/L	10	12/30/2021 03:42	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.51	mg/L	1	12/28/2021 09:10	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0840	mg/L	1	12/27/2021 20:20	186250
Boron	NELAP	0.0090	0.0200		0.0501	mg/L	1	12/29/2021 11:25	186250
Calcium	NELAP	0.0350	0.100		58.9	mg/L	1	12/27/2021 20:20	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 20:36	186250
Cobalt	NELAP	0.0023	0.0200		0.0472	mg/L	100	12/30/2021 20:36	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Lithium	*	0.0290	0.0600		0.0736	mg/L	100	12/30/2021 20:36	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 20:36	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:36	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 20:36	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:11	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 12/22/2021 11:40

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 21110629-005
 Matrix: GROUNDWATER

Work Order: 21110629
 Report Date: 20-Jan-22

Client Sample ID: EP-4

Collection Date: 12/22/2021 15:53

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.50	ft	1	12/22/2021 15:53	R304525
Elevation of groundwater surface	*	0	0		511.24	ft	1	12/22/2021 15:53	R304525
Measuring Point Elevation	*	0	0		519.74	ft	1	12/22/2021 15:53	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.12	gal	1	12/22/2021 15:53	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		10	NTU	1	12/22/2021 15:53	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-14	mV	1	12/22/2021 15:53	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.40	mS/cm	1	12/22/2021 15:53	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.2	°C	1	12/22/2021 15:53	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		5.70	mg/L	1	12/22/2021 15:53	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.05		1	12/22/2021 15:53	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	32	40	B	1450	mg/L	2	12/28/2021 14:52	R304392
<i>Sample result for TDS exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	10	20		477	mg/L	20	12/30/2021 03:45	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		567	mg/L	20	12/30/2021 03:45	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.09	mg/L	1	12/28/2021 09:12	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0255	mg/L	1	12/27/2021 20:21	186250
Boron	NELAP	0.0090	0.0200	S	11.6	mg/L	1	12/29/2021 11:34	186250
Calcium	NELAP	0.0350	0.100	S	161	mg/L	1	12/27/2021 20:21	186250
<i>Matrix spike control limits for B are not applicable due to high sample/spike ratio.</i>									
<i>Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.</i>									
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 20:43	186250
Cobalt	NELAP	0.0023	0.0200		0.298	mg/L	100	12/30/2021 20:43	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 20:43	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 20:43	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 20:43	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 20:43	186250
<i>Elevated reporting limit due to sample composition.</i>									



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 21110629-005
Matrix: GROUNDWATER

Work Order: 21110629
Report Date: 20-Jan-22

Client Sample ID: EP-4

Collection Date: 12/22/2021 15:53

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:14	186251
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 12/21/2021 12:59

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		12.84	ft	1	12/21/2021 12:59	R304525
Elevation of groundwater surface	*	0	0		514.75	ft	1	12/21/2021 12:59	R304525
Measuring Point Elevation	*	0	0		527.59	ft	1	12/21/2021 12:59	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.30	gal	1	12/21/2021 12:59	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.9	NTU	1	12/21/2021 12:59	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		150	mV	1	12/21/2021 12:59	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.724	mS/cm	1	12/21/2021 12:59	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.9	°C	1	12/21/2021 12:59	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		8.30	mg/L	1	12/21/2021 12:59	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		7.07		1	12/21/2021 12:59	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	H	294	mg/L	1	12/30/2021 14:31	R304482
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	1	1		4	mg/L	1	12/30/2021 03:50	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		119	mg/L	10	12/30/2021 03:55	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.48	mg/L	1	12/28/2021 09:15	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0478	mg/L	1	12/27/2021 20:26	186250
Boron	NELAP	0.0090	0.0200		0.0855	mg/L	1	12/29/2021 14:09	186250
Calcium	NELAP	0.0350	0.100		25.4	mg/L	1	12/27/2021 20:26	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 21:06	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 21:06	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 21:06	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:06	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 21:06	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:16	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 12/21/2021 12:59

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 12/22/2021 09:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		2.40	ft	1	12/22/2021 09:10	R304525
Elevation of groundwater surface	*	0	0		502.71	ft	1	12/22/2021 09:10	R304525
Measuring Point Elevation	*	0	0		505.11	ft	1	12/22/2021 09:10	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.12	gal	1	12/22/2021 09:10	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		7.5	NTU	1	12/22/2021 09:10	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		270	mV	1	12/22/2021 09:10	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.357	mS/cm	1	12/22/2021 09:10	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		12.2	°C	1	12/22/2021 09:10	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		5.61	mg/L	1	12/22/2021 09:10	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		5.28		1	12/22/2021 09:10	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	H	192	mg/L	1	12/30/2021 14:32	R304482
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	1	1		25	mg/L	1	12/30/2021 03:58	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		48	mg/L	1	12/30/2021 03:58	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	12/28/2021 09:17	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0430	mg/L	1	12/27/2021 20:28	186250
Boron	NELAP	0.0090	0.0200		0.0252	mg/L	1	12/29/2021 14:18	186250
Calcium	NELAP	0.0350	0.100		4.24	mg/L	1	12/27/2021 20:28	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 21:14	186250
Cobalt	NELAP	0.0023	0.020	J	0.0040	mg/L	100	12/30/2021 21:14	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 21:14	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 21:14	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:14	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 21:14	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00010	mg/L	1	12/23/2021 17:18	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 12/22/2021 09:10

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	01/04/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/04/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 12/22/2021 13:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.52	ft	1	12/22/2021 13:30	R304525
Elevation of groundwater surface	*	0	0		501.92	ft	1	12/22/2021 13:30	R304525
Measuring Point Elevation	*	0	0		515.44	ft	1	12/22/2021 13:30	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.95	gal	1	12/22/2021 13:30	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.3	NTU	1	12/22/2021 13:30	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-20	mV	1	12/22/2021 13:30	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.70	mS/cm	1	12/22/2021 13:30	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.1	°C	1	12/22/2021 13:30	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		2.48	mg/L	1	12/22/2021 13:30	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.16		1	12/22/2021 13:30	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	32	40	B	1270	mg/L	2	12/28/2021 14:54	R304392
<i>Sample result(s) for TDS exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	5	10		186	mg/L	10	12/30/2021 04:12	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		549	mg/L	20	12/30/2021 19:31	R304463
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.33	mg/L	1	12/28/2021 09:19	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0344	mg/L	1	12/27/2021 20:30	186250
Boron	NELAP	0.0090	0.0200		0.984	mg/L	1	12/29/2021 14:26	186250
Calcium	NELAP	0.0350	0.100		178	mg/L	1	12/27/2021 20:30	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 21:22	186250
Cobalt	NELAP	0.0023	0.0200		0.110	mg/L	100	12/30/2021 21:22	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 21:22	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 21:22	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 21:22	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 21:22	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:21	186251



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 12/22/2021 13:30

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	01/05/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 21110629-009
 Matrix: AQUEOUS

Work Order: 21110629
 Report Date: 20-Jan-22

Client Sample ID: Equipment Blank
 Collection Date: 12/22/2021 15:58

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	B	< 20	mg/L	1	12/28/2021 14:55	R304392
<i>Contamination present in the MBLK for TDS. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	1	1		< 1	mg/L	1	12/30/2021 04:30	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/30/2021 04:30	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2021 09:29	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2021 20:32	186250
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2021 20:32	186250
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2021 20:32	186250
<i>CCV recovered outside the upper control limits for B. 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	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 22:00	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 22:00	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 22:00	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:00	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 22:00	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:23	186251
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 12/22/2021 11:44

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	H	< 20	mg/L	1	12/30/2021 14:33	R304482
<i>Sample analysis did not meet hold time requirements.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	1	1		< 1	mg/L	1	12/30/2021 04:36	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/30/2021 04:35	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2021 09:32	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2021 20:42	186250
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2021 20:42	186250
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2021 20:42	186250
<i>CCV recovered outside the upper control limits for B. 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	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 22:07	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 22:07	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 22:07	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:07	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 22:07	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	12/23/2021 17:35	186251
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 21110629-011
 Matrix: GROUNDWATER

Work Order: 21110629
 Report Date: 20-Jan-22

Client Sample ID: Field Duplicate

Collection Date: 12/22/2021 10:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		9.99	ft	1	12/22/2021 10:14	R304525
Elevation of groundwater surface	*	0	0		503.80	ft	1	12/22/2021 10:14	R304525
Measuring Point Elevation	*	0	0		513.79	ft	1	12/22/2021 10:14	R304525
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.17	gal	1	12/22/2021 10:14	R304525
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.5	NTU	1	12/22/2021 10:14	R304525
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		152	mV	1	12/22/2021 10:14	R304525
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.19	mS/cm	1	12/22/2021 10:14	R304525
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.4	°C	1	12/22/2021 10:14	R304525
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		2.16	mg/L	1	12/22/2021 10:14	R304525
SW-846 9040B FIELD									
pH	*	0	1.00		6.32		1	12/22/2021 10:14	R304525
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20	B	1980	mg/L	1	12/28/2021 14:56	R304392
<i>Sample result for TDS exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	*	5	10		44	mg/L	10	12/30/2021 04:38	R304397
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1210	mg/L	50	12/30/2021 04:43	R304396
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.34	mg/L	1	12/28/2021 09:34	R304308
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0172	mg/L	1	12/27/2021 20:43	186250
Boron	NELAP	0.0090	0.0200		0.332	mg/L	1	12/29/2021 14:20	186250
Calcium	NELAP	0.0350	0.100		300	mg/L	1	12/27/2021 20:43	186250
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0090	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Arsenic	NELAP	0.0080	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Beryllium	NELAP	0.0050	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Cadmium	NELAP	0.0030	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Chromium	NELAP	0.0140	0.0300		< 0.0300	mg/L	100	12/30/2021 22:15	186250
Cobalt	NELAP	0.0023	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Lead	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Lithium	*	0.0290	0.0600		< 0.0600	mg/L	100	12/30/2021 22:15	186250
Molybdenum	NELAP	0.0120	0.0300		< 0.0300	mg/L	100	12/30/2021 22:15	186250
Selenium	NELAP	0.0120	0.0200		< 0.0200	mg/L	100	12/30/2021 22:15	186250
Thallium	NELAP	0.0190	0.0400		< 0.0400	mg/L	100	12/30/2021 22:15	186250
<i>Elevated reporting limit due to sample composition.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00006	mg/L	1	12/23/2021 17:37	186251



Laboratory Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Lab ID: 21110629-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 12/22/2021 10:14

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	01/05/2022 00:00	R305067
Radium-228	*	0	0		See Attached	pci/L	1	01/05/2022 00:00	R305067



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

STANDARD METHODS 2510 B FIELD

Batch R304525		SampType: LCS		Units µS/cm							Date Analyzed
SampID: LCS-R304525											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1430	1409	0	101.5	90	110	12/22/2021	
Spec. Conductance, Field	*	0		1450	1409	0	102.9	90	110	12/21/2021	

SW-846 9040B FIELD

Batch R304525		SampType: LCS		Units							Date Analyzed
SampID: LCS-R304525											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		7.07	7.000	0	101.0	98.57	101.4	12/21/2021	
pH	*	1.00		7.00	7.000	0	100.0	98.57	101.4	12/22/2021	

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R304392		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids	*	20	S	38	16.00	0	237.5	-100	100	12/28/2021	

Batch R304392		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids	*	20	B	998	1000	0	99.8	90	110	12/28/2021	

Batch R304392		SampType: DUP		Units mg/L							RPD Limit 5	Date Analyzed
SampID: 21110629-011ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids	*	20	B	2050				1978	3.48	12/28/2021		

Batch R304482		SampType: MBLK		Units mg/L							Date Analyzed
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	12/30/2021	

Batch R304482		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids	*	20		922	1000	0	92.2	90	110	12/30/2021	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R304482		SampType: DUP		Units mg/L			RPD Limit 5			
SampID: 21110629-007ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids	*	20	H	200				192.0	4.08	12/30/2021

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

Batch R304397		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	*	1		< 1	0.5000	0	0	-100	100	12/29/2021

Batch R304397 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	*	1		20	20.00	0	102.2	90	110	12/29/2021

Batch R304397 SampType: MS Units mg/L

SampID: 21110629-002AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	*	10		252	200.0	46.20	103.1	85	115	12/30/2021

Batch R304397 SampType: MSD Units mg/L

Batch R304397		SampType: MSD		Units mg/L			RPD Limit 15			
SampID: 21110629-002AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride	*	10		256	200.0	46.20	104.8	252.4	1.34	12/30/2021

Batch R304397 SampType: MS Units mg/L

SampID: 21120916-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride	*	1	S	38	20.00	22.43	76.1	85	115	12/29/2021

Batch R304397 SampType: MSD Units mg/L

Batch R304397		SampType: MSD		Units mg/L			RPD Limit 15			
SampID: 21120916-001AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride	*	1	S	39	20.00	22.43	81.9	37.65	3.03	12/29/2021



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120916-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	2	S	53	40.00	23.33	75.2	85	115	12/29/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21120916-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	2	S	55	40.00	23.33	78.0	53.42	2.07	12/29/2021		

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120916-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	1	S	35	20.00	20.87	71.7	85	115	12/29/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21120916-006AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	1	S	35	20.00	20.87	71.3	35.21	0.23	12/29/2021		

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121023-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	2		96	40.00	58.87	92.2	85	115	12/29/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121023-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	2		93	40.00	58.87	86.5	95.75	2.40	12/29/2021		

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121037-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		1		23	20.00	1.810	107.6	85	115	12/30/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121037-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		1		21	20.00	1.810	96.6	23.32	9.85	12/30/2021		



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121183-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	1		28	20.00	9.860	92.2	85	115	12/29/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121183-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride	*	1		28	20.00	9.860	91.0	28.31	0.92	12/29/2021		

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121374-001EMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	50		1210	1000	264.1	94.1	85	115	12/30/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121374-001EMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride	*	50		1220	1000	264.1	95.1	1206	0.79	12/30/2021		

Batch R304397		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121384-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	10		478	200.0	282.8	97.8	85	115	12/30/2021	

Batch R304397		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121384-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride	*	10		478	200.0	282.8	97.6	478.5	0.08	12/30/2021		

Batch R304464		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	1		< 1	0.5000	0	0	-100	100	12/30/2021	

Batch R304464		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	1		21	20.00	0	103.0	90	110	12/30/2021	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch R304464		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120863-001BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	5		139	100.0	47.00	92.1	85	115	12/30/2021	

Batch R304464		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21120863-001BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	5		137	100.0	47.00	89.6	139.1	1.78	12/30/2021		

Batch R304464		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121007-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	20		591	400.0	239.8	87.7	85	115	12/30/2021	

Batch R304464		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121007-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	20		600	400.0	239.8	90.0	590.5	1.57	12/30/2021		

Batch R304464		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121556-001BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	1		24	20.00	4.170	99.0	85	115	12/30/2021	

Batch R304464		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121556-001BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	1		24	20.00	4.170	99.6	23.96	0.54	12/30/2021		

Batch R304464		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121641-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride	*	1		22	20.00	0.9700	104.1	85	115	12/31/2021	

Batch R304464		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121641-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride	*	1		22	20.00	0.9700	104.8	21.79	0.64	12/31/2021		



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 9036 (TOTAL)

Batch R304396		SampType: MBLK		Units mg/L							Date Analyzed
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	12/29/2021	

Batch R304396		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		21	20.00	0	103.4	90	110	12/29/2021	

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21110629-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		500		2440	1000	1483	96.1	85	115	12/30/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21110629-002AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		500	E	2500	1000	1483	102.2	2444	2.48	12/30/2021		

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120916-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20	SE	113	40.00	85.94	67.5	90	110	12/29/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21120916-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		20	SE	115	40.00	85.94	71.8	112.9	1.49	12/29/2021		

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120916-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		200		781	400.0	399.9	95.2	90	110	12/29/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21120916-006AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		200		775	400.0	399.9	93.8	780.5	0.73	12/29/2021		



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 9036 (TOTAL)

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121023-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		20	SE	119	40.00	92.83	66.4	90	110	12/29/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121023-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		20	SE	117	40.00	92.83	59.5	119.4	2.32	12/29/2021		

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121037-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		25	20.00	6.270	92.6	85	115	12/30/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121037-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		10		24	20.00	6.270	89.4	24.80	2.66	12/30/2021		

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121122-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		100		474	200.0	258.0	108.0	85	115	12/29/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121122-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		100		443	200.0	258.0	92.5	474.0	6.73	12/29/2021		

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121183-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		100		430	200.0	230.0	100.2	90	110	12/30/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121183-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		100		428	200.0	230.0	98.9	430.4	0.57	12/30/2021		



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 9036 (TOTAL)

Batch R304396		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121374-001EMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		500		1980	1000	902.0	107.8	90	110	12/30/2021	

Batch R304396		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121374-001EMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		500		1950	1000	902.0	105.1	1980	1.36	12/30/2021		

Batch R304463		SampType: MBLK		Units mg/L							Date Analyzed
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	12/30/2021	

Batch R304463		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		21	20.00	0	103.7	90	110	12/30/2021	

Batch R304463		SampType: MS		Units mg/L							Date Analyzed
SampID: 21120916-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		500		1580	1000	536.8	104.4	90	110	12/30/2021	

Batch R304463		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21120916-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		500		1590	1000	536.8	105.0	1580	0.42	12/30/2021		

Batch R304463		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121384-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		1000		3650	2000	1670	99.0	90	110	12/30/2021	

Batch R304463		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 21121384-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		1000		3500	2000	1670	91.6	3650	4.14	12/30/2021		



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 9214 (TOTAL)

Batch R304308		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	0.0370	0	0	-100	100	12/28/2021	

Batch R304308		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		1.01	1.000	0	101.1	90	110	12/28/2021	

Batch R304308		SampType: MS		Units mg/L							
SampID: 21110629-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.58	2.000	0.3270	112.6	75	125	12/28/2021	

Batch R304308		SampType: MSD		Units mg/L							
SampID: 21110629-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.56	2.000	0.3270	111.8	2.578	0.62	12/28/2021	

Batch R304308		SampType: MS		Units mg/L							
SampID: 21121462-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		4.62	2.000	2.336	114.0	75	125	12/28/2021	

Batch R304308		SampType: MSD		Units mg/L							
SampID: 21121462-005AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		4.59	2.000	2.336	112.8	4.615	0.50	12/28/2021	

Batch R304308		SampType: MS		Units mg/L							
SampID: 21121462-009AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		1.00		47.0	20.00	26.42	102.8	75	125	12/28/2021	

Batch R304308		SampType: MSD		Units mg/L							
SampID: 21121462-009AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		1.00		47.0	20.00	26.42	102.7	46.98	0.04	12/28/2021	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 9214 (TOTAL)

Batch R304308		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121521-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.82	2.000	0.5690	112.7	75	125	12/28/2021	

Batch R304308		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 21121521-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.80	2.000	0.5690	111.3	2.823	1.00	12/28/2021		

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

Batch 186250		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-186250											
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	12/27/2021	
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	12/27/2021	
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	12/27/2021	

Batch 186250		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-186250											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		2.03	2.000	0	101.5	85	115	12/27/2021	
Boron		0.0200		0.497	0.5000	0	99.3	85	115	12/27/2021	
Calcium		0.100		2.48	2.500	0	99.4	85	115	12/27/2021	

Batch 186250		SampType: MS		Units mg/L							Date Analyzed
SampID: 21110629-005CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		2.06	2.000	0.02550	101.7	75	125	12/27/2021	
Boron		0.0200	S	11.8	0.5000	11.56	58.0	75	125	12/29/2021	
Calcium		0.100	S	164	2.500	160.8	145.2	75	125	12/27/2021	

Batch 186250		SampType: MSD		Units mg/L							RPD Limit 20	Date Analyzed
SampID: 21110629-005CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Barium		0.0025		2.08	2.000	0.02550	102.7	2.060	0.97	12/27/2021		
Boron		0.0200	S	11.8	0.5000	11.56	57.7	11.85	0.02	12/29/2021		
Calcium		0.100		164	2.500	160.8	119.6	164.4	0.39	12/27/2021		



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch 186250		SampType: MS		Units mg/L							Date Analyzed
SampID: 21121435-009AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Lead		0.0750		1.21	0.5000	0.6995	101.3	75	125	12/29/2021	

Batch 186250		SampType: MSD		Units mg/L							RPD Limit 20	Date Analyzed
SampID: 21121435-009AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Lead		0.0750		1.20	0.5000	0.6995	100.1	1.206	0.50	12/29/2021		

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

Batch 186250		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-186250											
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	12/29/2021	
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	12/29/2021	
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	12/29/2021	
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	12/29/2021	
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	12/29/2021	
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	12/29/2021	
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	12/29/2021	
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	12/29/2021	
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	12/29/2021	
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	12/29/2021	
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	12/29/2021	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch 186250 **SampType: LCS** Units mg/L
 SampID: LCS-186250

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.483	0.5000	0	96.7	85	115	12/29/2021
Arsenic		0.0010		0.520	0.5000	0	104.0	85	115	12/29/2021
Beryllium		0.0010		0.0472	0.0500	0	94.4	85	115	12/29/2021
Cadmium		0.0010		0.0492	0.0500	0	98.3	85	115	12/29/2021
Chromium		0.0015		0.191	0.2000	0	95.4	85	115	12/29/2021
Cobalt		0.0010		0.497	0.5000	0	99.3	85	115	12/29/2021
Lead		0.0010		0.493	0.5000	0	98.6	85	115	12/29/2021
Lithium	*	0.0030		0.500	0.5000	0	100.0	85	115	12/29/2021
Molybdenum		0.0015		0.488	0.5000	0	97.6	85	115	12/29/2021
Selenium		0.0010		0.485	0.5000	0	97.1	85	115	12/29/2021
Thallium		0.0020		0.235	0.2500	0	93.9	85	115	12/29/2021

Batch 186250 **SampType: MS** Units mg/L
 SampID: 21110629-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0200		0.450	0.5000	0	89.9	75	125	12/30/2021
Arsenic		0.0200		0.502	0.5000	0	100.5	75	125	12/30/2021
Beryllium		0.0200		0.0497	0.0500	0	99.4	75	125	12/30/2021
Cadmium		0.0200		0.0458	0.0500	0	91.7	75	125	12/30/2021
Chromium		0.0300		0.199	0.2000	0	99.3	75	125	12/30/2021
Cobalt		0.0200		0.784	0.5000	0.2978	97.1	75	125	12/30/2021
Lead		0.0200		0.485	0.5000	0	97.0	75	125	12/30/2021
Lithium	*	0.0600		0.534	0.5000	0	106.9	75	125	12/30/2021
Molybdenum		0.0300		0.457	0.5000	0	91.4	75	125	12/30/2021
Selenium		0.0200		0.478	0.5000	0	95.7	75	125	12/30/2021
Thallium		0.0400		0.247	0.2500	0	98.9	75	125	12/30/2021



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

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

Batch 186250		SampType: MSD		Units mg/L				RPD Limit 20			Date Analyzed
SampID: 21110629-005CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Antimony		0.0200		0.451	0.5000	0	90.3	0.4496	0.39	12/30/2021	
Arsenic		0.0200		0.491	0.5000	0	98.2	0.5023	2.28	12/30/2021	
Beryllium		0.0200		0.0496	0.0500	0	99.2	0.04971	0.19	12/30/2021	
Cadmium		0.0200		0.0452	0.0500	0	90.4	0.04583	1.34	12/30/2021	
Chromium		0.0300		0.199	0.2000	0	99.5	0.1987	0.16	12/30/2021	
Cobalt		0.0200		0.726	0.5000	0.2978	85.6	0.7835	7.64	12/30/2021	
Lead		0.0200		0.466	0.5000	0	93.1	0.4849	4.05	12/30/2021	
Lithium	*	0.0600		0.527	0.5000	0	105.4	0.5345	1.40	12/30/2021	
Molybdenum		0.0300		0.463	0.5000	0	92.6	0.4568	1.32	12/30/2021	
Selenium		0.0200		0.475	0.5000	0	95.1	0.4784	0.66	12/30/2021	
Thallium		0.0400		0.247	0.2500	0	99.0	0.2474	0.05	12/30/2021	

SW-846 7470A (TOTAL)

Batch 186251		SampType: MBLK		Units mg/L						Date Analyzed
SampID: MBLK-186251										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	12/23/2021

Batch 186251		SampType: LCS		Units mg/L						Date Analyzed
SampID: LCS-186251										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00515	0.0050	0	103.0	85	115	12/27/2021

Batch 186251		SampType: MS		Units mg/L						Date Analyzed
SampID: 21110629-003CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00431	0.0050	0.00005570	85.1	75	125	12/23/2021

Batch 186251		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 21110629-003CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		0.00440	0.0050	0.00005570	87.0	0.004309	2.17	12/23/2021	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

SW-846 7470A (TOTAL)

Batch 186251		SampType: MS		Units mg/L						
SampID: 21110629-009CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00481	0.0050	0	96.1	75	125	12/23/2021

Batch 186251		SampType: MSD		Units mg/L							RPD Limit 15
SampID: 21110629-009CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		0.00475	0.0050	0	95.0	0.004806	1.19	12/23/2021	



Receiving Check List

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

Client: Southern Illinois Power Cooperation

Work Order: 21110629

Client Project: Groundwater Monitoring

Report Date: 20-Jan-22

Carrier: Adam Bridges

Received By: PWR

Completed by:

Reviewed by:

On:

23-Dec-21

Patrick Riley

On:

23-Dec-21

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **1.4**
- Type of thermal preservation? None Ice Blue Ice Dry 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 #77625. - patrickriley - 12/23/2021 8:49:22 AM

CHAIN OF CUSTODY

pg. 1 of 2 Work order # 2110629

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: [X] ICE [] BLUE ICE [] NO ICE 1.4 °C LTG# 1
Preserved in: [] LAB [X] FIELD 77625 8/11/21/21
FOR LAB USE ONLY
Lab Notes:

Are these samples known to be involved in litigation? If yes, a surcharge will apply [] Yes [X] No
Are these samples known to be hazardous? [] Yes [X] No
Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. [] Yes [X] No

Client Comments:
ICP: Ba B Ca
ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti
Field Parameters = Elevations, pH, Conductivity, Temperature, Turbidity, DO, ORP and Purge Volume
Ra226/228: subcontract to Pace-National

Table with columns: Project Name/Number, Sample Collector's Name, MATRIX, INDICATE ANALYSIS REQUESTED, Results Requested, Billing Instructions, # and Type of Containers, Lab Use Only, Sample Identification, Date/Time Sampled, 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.

BottleOrder: 69155



Handwritten signature and date: 12/22/21

CHAIN OF CUSTODY

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: ICE BLUE ICE NO ICE _____ °C LTG# _____
Preserved in: LAB FIELD **FOR LAB USE ONLY**
Lab Notes: _____

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, pH, Conductivity, Temperature, Turbidity, DO, ORP and Purge Volume
 Ra226/228: subcontract to Pace-National

Project Name/Number: Groundwater Monitoring **Sample Collector's Name:** _____

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)		UNP	HNO3

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3
2110629 -011	Field Duplicate	12/22/21 1014	1	3

MATRIX	INDICATE ANALYSIS REQUESTED									
	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	Sulfate	TDS	
Aqueous										
Groundwater	X	X	X	X	X	X	X	X	X	

Relinquished By: *[Signature]* **Date/Time:** 12/23/21 0800

Received By: *[Signature]* **Date/Time:** 12/23/21 0800

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.

TEKLAB, Inc.

Sample Delivery Group: L1445869
Samples Received: 12/27/2021
Project Number: 21110629
Description:

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

Entire Report Reviewed By:

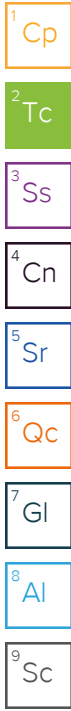


Mark W. Beasley
Project Manager

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.

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SAMPLE SUMMARY

2110629-001 L1445869-01 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 11:35
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/04/22 13:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/04/22 15:02	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

2110629-002 L1445869-02 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 15:36
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/04/22 13:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/04/22 15:02	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

2110629-003 L1445869-03 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 10:14
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/04/22 13:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/04/22 15:02	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

2110629-004 L1445869-04 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 11:40
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/04/22 13:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/04/22 15:02	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

2110629-005 L1445869-05 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 15:53
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

2110629-006 L1445869-06 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/21/21 12:59
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

2110629-007 L1445869-07 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/22/21 09:10
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/04/22 15:02	RGT	Mt. Juliet, TN



2110629-008 L1445869-08 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/22/21 13:30
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/05/22 14:05	RGT	Mt. Juliet, TN

2110629-009 L1445869-09 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/22/21 15:58
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/05/22 14:05	RGT	Mt. Juliet, TN

2110629-010 L1445869-10 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/22/21 11:44
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/05/22 14:05	RGT	Mt. Juliet, TN

2110629-011 L1445869-11 Non-Potable Water

Collected by
Collected date/time
Received date/time

12/22/21 10:14
12/27/21 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1792917	1	12/28/21 10:30	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1797372	1	01/03/22 15:00	01/17/22 14:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1797372	1	01/03/22 15:00	01/05/22 14:05	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 Gl

⁸ Al

⁹ Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.194	<u>U</u>	0.303	0.565	01/04/2022 13:30	WG1792917
(T) Barium	104			62.0-143	01/04/2022 13:30	WG1792917
(T) Yttrium	101			79.0-136	01/04/2022 13:30	WG1792917

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.297	<u>U</u>	0.451	0.783	01/04/2022 15:02	WG1797372

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.104	<u>J</u>	0.148	0.218	01/04/2022 15:02	WG1797372
(T) Barium-133	97.9			30.0-143	01/04/2022 15:02	WG1797372

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.255	<u>U</u>	0.400	0.745	01/04/2022 13:30	WG1792917
(T) Barium	103			62.0-143	01/04/2022 13:30	WG1792917
(T) Yttrium	103			79.0-136	01/04/2022 13:30	WG1792917

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.756	<u>J</u>	0.730	1.06	01/04/2022 15:02	WG1797372

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.501		0.330	0.318	01/04/2022 15:02	WG1797372
(T) Barium-133	91.1			30.0-143	01/04/2022 15:02	WG1797372

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.145	<u>U</u>	0.282	0.529	01/04/2022 13:30	WG1792917
(T) Barium	101			62.0-143	01/04/2022 13:30	WG1792917
(T) Yttrium	96.0			79.0-136	01/04/2022 13:30	WG1792917

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.374	<u>J</u>	0.512	0.813	01/04/2022 15:02	WG1797372

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.228	<u>J</u>	0.230	0.284	01/04/2022 15:02	WG1797372
(T) Barium-133	96.0			30.0-143	01/04/2022 15:02	WG1797372

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.768		0.310	0.558	01/04/2022 13:30	WG1792917
(T) Barium	101			62.0-143	01/04/2022 13:30	WG1792917
(T) Yttrium	94.7			79.0-136	01/04/2022 13:30	WG1792917

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.964		0.549	0.886	01/04/2022 15:02	WG1797372

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.196	J	0.239	0.328	01/04/2022 15:02	WG1797372
(T) Barium-133	98.0			30.0-143	01/04/2022 15:02	WG1797372

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.21		0.419	0.360	01/17/2022 14:30	WG1792917
(T) Barium	112			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	92.0			79.0-136	01/17/2022 14:30	WG1792917

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.38		0.709	0.793	01/17/2022 14:30	WG1797372

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.170	J	0.290	0.433	01/04/2022 15:02	WG1797372
(T) Barium-133	92.4			30.0-143	01/04/2022 15:02	WG1797372

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.125	<u>U</u>	0.367	0.336	01/17/2022 14:30	WG1792917
(T) Barium	101			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	101			79.0-136	01/17/2022 14:30	WG1792917

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.564	<u>J</u>	0.708	0.632	01/17/2022 14:30	WG1797372

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.564		0.341	0.296	01/04/2022 15:02	WG1797372
(T) Barium-133	95.5			30.0-143	01/04/2022 15:02	WG1797372

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.297	J	0.365	0.327	01/17/2022 14:30	WG1792917
(T) Barium	98.4			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	103			79.0-136	01/17/2022 14:30	WG1792917

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.362	J	0.492	0.549	01/17/2022 14:30	WG1797372

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0641	U	0.127	0.222	01/04/2022 15:02	WG1797372
(T) Barium-133	97.5			30.0-143	01/04/2022 15:02	WG1797372

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0686	J	0.373	0.338	01/17/2022 14:30	WG1792917
(T) Barium	103			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	102			79.0-136	01/17/2022 14:30	WG1792917

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.172	J	0.547	0.615	01/17/2022 14:30	WG1797372

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.103	J	0.174	0.277	01/05/2022 14:05	WG1797372
(T) Barium-133	96.0			30.0-143	01/05/2022 14:05	WG1797372

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	3.06		0.440	0.353	01/17/2022 14:30	WG1792917
(T) Barium	101			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	106			79.0-136	01/17/2022 14:30	WG1792917

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.16		0.601	0.595	01/17/2022 14:30	WG1797372

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.108	J	0.161	0.242	01/05/2022 14:05	WG1797372
(T) Barium-133	98.5			30.0-143	01/05/2022 14:05	WG1797372

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.465		0.374	0.332	01/17/2022 14:30	WG1792917
(T) Barium	101			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	101			79.0-136	01/17/2022 14:30	WG1792917

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.482	J	0.484	0.586	01/17/2022 14:30	WG1797372

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0177	U	0.110	0.254	01/05/2022 14:05	WG1797372
(T) Barium-133	101			30.0-143	01/05/2022 14:05	WG1797372

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.13		0.369	0.316	01/17/2022 14:30	WG1792917
(T) Barium	110			62.0-143	01/17/2022 14:30	WG1792917
(T) Yttrium	101			79.0-136	01/17/2022 14:30	WG1792917

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.13		0.497	0.618	01/17/2022 14:30	WG1797372

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0207	<u>U</u>	0.128	0.302	01/05/2022 14:05	WG1797372
(T) Barium-133	98.3			30.0-143	01/05/2022 14:05	WG1797372

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3750966-5 01/17/22 14:30

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.340		0.276	0.245
(T) Barium	106		106	
(T) Yttrium	107		107	

L1445869-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1445869-03 01/04/22 13:30 • (DUP) R3750966-4 01/04/22 13:30

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	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.145	0.282	0.529	-0.170	0.679	0.529	1	200	0.429	<u>U</u>	20	3
(T) Barium	101			100	100							
(T) Yttrium	96.0			97.4	97.4							

Laboratory Control Sample (LCS)

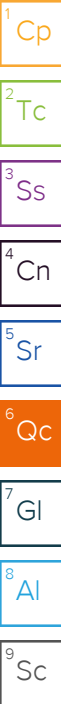
(LCS) R3750966-1 01/04/22 13:30

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.22	104	80.0-120	
(T) Barium			103		
(T) Yttrium			101		

L1445869-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1445869-02 01/04/22 13:30 • (MS) R3750966-2 01/04/22 13:30 • (MSD) R3750966-3 01/04/22 13:30

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.255	20.5	19.6	121	116	1	70.0-130			4.74		20
(T) Barium		103			111	99.6							
(T) Yttrium		103			95.5	99.4							



Method Blank (MB)

(MB) R3748491-1 01/04/22 15:02

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.000567	<u>U</u>	0.0442	0.0899
(T) Barium-133	95.8		95.8	

L1446861-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1446861-01 01/05/22 14:05 • (DUP) R3748491-5 01/04/22 15:02

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	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	-0.0540	0.0967	0.309	0.297	0.237	0.309	1	200	1.37		20	3
(T) Barium-133	95.5			96.4	96.4							

Laboratory Control Sample (LCS)

(LCS) R3748491-2 01/04/22 15:02

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.12	102	80.0-120	
(T) Barium-133			93.5		

L1445869-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1445869-01 01/04/22 15:02 • (MS) R3748491-3 01/04/22 15:02 • (MSD) R3748491-4 01/04/22 15:02

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.1	0.104	17.9	17.9	88.7	88.3	1	75.0-125			0.447		20
(T) Barium-133		97.9			96.5	98.8							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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 Gl

8 Al

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: QC Level:

Project#

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per methods specified for Vistra/Ramboll projects.
IL site
Batch QC is required for all analyses requested.
Any changes to analysis/methods must be approved by Teklab, Inc.
Phone:

Contact: Email:
Requested Due Date: Billing/PO:

L1445869

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.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228													
-01	21110629-001	12/21/21 1135	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-02	21110629-002	12/21/21 1536	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-03	21110629-003	12/22/21 1014	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-04	21110629-004	12/22/21 1140	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-05	21110629-005	12/22/21 1553	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-06	21110629-006	12/21/21 1259	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-07	21110629-007	12/22/21 0910	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-08	21110629-008	12/22/21 1330	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-09	21110629-009	12/22/21 1558	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-10	21110629-010	12/22/21 1144	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-11	21110629-011	12/22/21 1014	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Relinquished By <i>[Signature]</i>	Date/Time 12/23/21 1600	Received By <i>[Signature]</i>	Date/Time 12/27/21 1030
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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

uch 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) 5300 5201 9296 5300 5201 9296 Sub-CocRevA 2/2/2016

March 28, 2022

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: 22021140

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 3/9/2022 8:00:00 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
Project Manager
(618)344-1004 ex 33
ehurley@teklabinc.com



Report Contents

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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	40
Chain of Custody	Appended

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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)

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Qualifiers

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring

Work Order: 22021140
Report Date: 28-Mar-22

Cooler Receipt Temp: 4.0 °C

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

Radium-226 and Radium-228 analysis was performed by Pace Analytical Services, LLC. See attached report for

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: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-001
 Matrix: GROUNDWATER

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: EBG

Collection Date: 03/07/2022 11:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.02	ft	1	03/07/2022 11:42	R308346
Elevation of groundwater surface	*	0	0		516.85	ft	1	03/07/2022 11:42	R308346
Measuring Point Elevation	*	0	0		524.87	ft	1	03/07/2022 11:42	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		5.20	gal	1	03/07/2022 11:42	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		16	NTU	1	03/07/2022 11:42	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		113	mV	1	03/07/2022 11:42	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.663	mS/cm	1	03/07/2022 11:42	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		12.7	°C	1	03/07/2022 11:42	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		5.81	mg/L	1	03/07/2022 11:42	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		6.78		1	03/07/2022 11:42	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		428	mg/L	1	03/11/2022 13:51	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		15	mg/L	1	03/09/2022 19:54	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		83	mg/L	2	03/09/2022 20:12	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.58	mg/L	1	03/09/2022 14:48	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0540	mg/L	1	03/10/2022 21:13	188407
Boron	NELAP	0.0090	0.0200		0.0225	mg/L	1	03/10/2022 21:13	188407
Calcium	NELAP	0.0350	0.100		11.9	mg/L	1	03/10/2022 21:13	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:24	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:24	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:24	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:24	188407
Chromium	NELAP	0.0007	0.0015	J	0.0009	mg/L	5	03/15/2022 1:24	188407
Cobalt	NELAP	0.0001	0.0010	J	0.0005	mg/L	5	03/15/2022 1:24	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:24	188407
Lithium	*	0.0015	0.0030		0.0162	mg/L	5	03/15/2022 1:24	188407
Molybdenum	NELAP	0.0006	0.0015	J	0.0014	mg/L	5	03/15/2022 1:24	188407
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	03/15/2022 1:24	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 1:24	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:43	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-001
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EBG

Collection Date: 03/07/2022 11:42

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 03/07/2022 14:11

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		4.37	ft	1	03/07/2022 14:11	R308346
Elevation of groundwater surface	*	0	0		515.35	ft	1	03/07/2022 14:11	R308346
Measuring Point Elevation	*	0	0		519.72	ft	1	03/07/2022 14:11	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.82	gal	1	03/07/2022 14:11	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		5.0	NTU	1	03/07/2022 14:11	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		146	mV	1	03/07/2022 14:11	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.58	mS/cm	1	03/07/2022 14:11	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		9.6	°C	1	03/07/2022 14:11	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.86	mg/L	1	03/07/2022 14:11	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		6.19		1	03/07/2022 14:11	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		2650	mg/L	1	03/11/2022 13:51	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	8		44	mg/L	2	03/09/2022 20:15	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1600	mg/L	50	03/11/2022 15:16	R308169
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.19	mg/L	1	03/09/2022 14:50	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0171	mg/L	1	03/10/2022 21:17	188407
Boron	NELAP	0.0090	0.0200		0.914	mg/L	1	03/10/2022 21:17	188407
Calcium	NELAP	0.0350	0.100		474	mg/L	1	03/10/2022 21:17	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:29	188407
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	03/15/2022 1:29	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:29	188407
Cadmium	NELAP	0.0002	0.0010	J	0.0002	mg/L	5	03/15/2022 1:29	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 1:29	188407
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/15/2022 1:29	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:29	188407
Lithium	*	0.0015	0.0030		0.0120	mg/L	5	03/15/2022 1:29	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 1:29	188407
Selenium	NELAP	0.0006	0.0010		0.0017	mg/L	5	03/15/2022 1:29	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 1:29	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:45	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-002
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EP-1

Collection Date: 03/07/2022 14:11

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 03/07/2022 15:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		3.91	ft	1	03/07/2022 15:25	R308346
Elevation of groundwater surface	*	0	0		509.88	ft	1	03/07/2022 15:25	R308346
Measuring Point Elevation	*	0	0		512.79	ft	1	03/07/2022 15:25	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.82	gal	1	03/07/2022 15:25	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.9	NTU	1	03/07/2022 15:25	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		124	mV	1	03/07/2022 15:25	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.32	mS/cm	1	03/07/2022 15:25	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		11.5	°C	1	03/07/2022 15:25	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.03	mg/L	1	03/07/2022 15:25	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		5.86		1	03/07/2022 15:25	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		2480	mg/L	1	03/11/2022 13:52	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		30	mg/L	1	03/09/2022 20:23	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1630	mg/L	50	03/09/2022 20:29	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.69	mg/L	1	03/09/2022 15:02	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0151	mg/L	1	03/10/2022 21:20	188407
Boron	NELAP	0.0090	0.0200		0.508	mg/L	1	03/10/2022 21:20	188407
Calcium	NELAP	0.0350	0.100		406	mg/L	1	03/10/2022 21:20	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:35	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:35	188407
Beryllium	NELAP	0.0002	0.0010		0.0019	mg/L	5	03/15/2022 1:35	188407
Cadmium	NELAP	0.0002	0.0010		0.0014	mg/L	5	03/15/2022 1:35	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 1:35	188407
Cobalt	NELAP	0.0001	0.0010		0.0159	mg/L	5	03/15/2022 1:35	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:35	188407
Lithium	*	0.0015	0.0030		0.0196	mg/L	5	03/15/2022 1:35	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 1:35	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:35	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 1:35	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:48	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-003
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EP-2

Collection Date: 03/07/2022 15:25

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 03/08/2022 13:08

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.18	ft	1	03/08/2022 13:08	R308346
Elevation of groundwater surface	*	0	0		502.77	ft	1	03/08/2022 13:08	R308346
Measuring Point Elevation	*	0	0		518.95	ft	1	03/08/2022 13:08	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		4.68	gal	1	03/08/2022 13:08	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.9	NTU	1	03/08/2022 13:08	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-71	mV	1	03/08/2022 13:08	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.52	mS/cm	1	03/08/2022 13:08	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.8	°C	1	03/08/2022 13:08	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.23	mg/L	1	03/08/2022 13:08	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		6.17		1	03/08/2022 13:08	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		762	mg/L	1	03/11/2022 13:53	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		145	mg/L	5	03/09/2022 20:31	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		153	mg/L	5	03/09/2022 20:31	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.20	mg/L	1	03/09/2022 15:04	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0851	mg/L	1	03/10/2022 21:24	188407
Boron	NELAP	0.0090	0.0200		0.0702	mg/L	1	03/10/2022 21:24	188407
Calcium	NELAP	0.0350	0.100		36.3	mg/L	1	03/10/2022 21:24	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 1:41	188407
Arsenic	NELAP	0.0004	0.0010		0.0068	mg/L	5	03/15/2022 1:41	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:41	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:41	188407
Chromium	NELAP	0.0007	0.0015	J	0.0015	mg/L	5	03/15/2022 1:41	188407
Cobalt	NELAP	0.0001	0.0010		0.0947	mg/L	5	03/15/2022 1:41	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:41	188407
Lithium	*	0.0015	0.0030		0.0267	mg/L	5	03/15/2022 1:41	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 1:41	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:41	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 1:41	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:50	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-004
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EP-3

Collection Date: 03/08/2022 13:08

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-005
 Matrix: GROUNDWATER

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: EP-4

Collection Date: 03/08/2022 14:35

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	03/08/2022 14:35	R308346
Elevation of groundwater surface	*	0	0		511.75	ft	1	03/08/2022 14:35	R308346
Measuring Point Elevation	*	0	0		519.74	ft	1	03/08/2022 14:35	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		2.60	gal	1	03/08/2022 14:35	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		5.0	NTU	1	03/08/2022 14:35	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-44	mV	1	03/08/2022 14:35	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.19	mS/cm	1	03/08/2022 14:35	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		14.2	°C	1	03/08/2022 14:35	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.14	mg/L	1	03/08/2022 14:35	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		5.94		1	03/08/2022 14:35	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		1740	mg/L	1	03/11/2022 13:53	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	10	20		456	mg/L	20	03/11/2022 17:43	R308170
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		623	mg/L	20	03/11/2022 17:43	R308169
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.12	mg/L	1	03/09/2022 15:12	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0313	mg/L	1	03/10/2022 21:46	188407
Boron	NELAP	0.0090	0.0200	S	11.1	mg/L	1	03/10/2022 21:46	188407
Calcium	NELAP	0.0350	0.100	S	171	mg/L	1	03/10/2022 21:46	188407
<i>Matrix spike control limits for B and Ca are not applicable due to high sample/spike ratio.</i>									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/16/2022 19:17	188407
Arsenic	NELAP	0.0004	0.0010		0.0053	mg/L	5	03/16/2022 19:17	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 1:47	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 19:29	188407
Chromium	NELAP	0.0007	0.0015		0.0020	mg/L	5	03/15/2022 1:47	188407
Cobalt	NELAP	0.0001	0.0010		0.200	mg/L	5	03/15/2022 1:47	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 1:47	188407
Lithium	*	0.0015	0.0030	J	0.0025	mg/L	5	03/15/2022 1:47	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/16/2022 19:17	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/16/2022 19:17	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 1:47	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:52	188417



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 03/08/2022 14:35

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	03/16/2022 0:00	R308837
Radium-228	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-006
 Matrix: GROUNDWATER

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: EP-5

Collection Date: 03/07/2022 12:49

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		11.14	ft	1	03/07/2022 12:49	R308346
Elevation of groundwater surface	*	0	0		516.45	ft	1	03/07/2022 12:49	R308346
Measuring Point Elevation	*	0	0		527.59	ft	1	03/07/2022 12:49	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.91	gal	1	03/07/2022 12:49	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		0.6	NTU	1	03/07/2022 12:49	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		136	mV	1	03/07/2022 12:49	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.619	mS/cm	1	03/07/2022 12:49	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		11.3	°C	1	03/07/2022 12:49	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		5.50	mg/L	1	03/07/2022 12:49	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		6.73		1	03/07/2022 12:49	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		326	mg/L	1	03/11/2022 13:54	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		3	mg/L	1	03/15/2022 13:44	R308309
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		141	mg/L	5	03/11/2022 17:46	R308169
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.40	mg/L	1	03/09/2022 15:10	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0513	mg/L	1	03/10/2022 21:28	188407
Boron	NELAP	0.0090	0.0200		0.0380	mg/L	1	03/10/2022 21:28	188407
Calcium	NELAP	0.0350	0.100		22.5	mg/L	1	03/10/2022 21:28	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:05	188407
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	03/15/2022 2:05	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:05	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:05	188407
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	03/15/2022 2:05	188407
Cobalt	NELAP	0.0001	0.0010	J	0.0005	mg/L	5	03/15/2022 2:05	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:05	188407
Lithium	*	0.0015	0.0030	J	0.0027	mg/L	5	03/15/2022 2:05	188407
Molybdenum	NELAP	0.0006	0.0015		0.0030	mg/L	5	03/15/2022 2:05	188407
Selenium	NELAP	0.0006	0.0010		0.0017	mg/L	5	03/15/2022 2:05	188407
Thallium	NELAP	0.0010	0.0020		0.0031	mg/L	5	03/15/2022 2:05	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 19:59	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-006
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EP-5
Collection Date: 03/07/2022 12:49

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 03/08/2022 8:36

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		2.61	ft	1	03/08/2022 8:36	R308346
Elevation of groundwater surface	*	0	0		502.50	ft	1	03/08/2022 8:36	R308346
Measuring Point Elevation	*	0	0		505.11	ft	1	03/08/2022 8:36	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.69	gal	1	03/08/2022 8:36	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.0	NTU	1	03/08/2022 8:36	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		227	mV	1	03/08/2022 8:36	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.359	mS/cm	1	03/08/2022 8:36	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		9.6	°C	1	03/08/2022 8:36	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		2.22	mg/L	1	03/08/2022 8:36	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		5.10		1	03/08/2022 8:36	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		254	mg/L	1	03/11/2022 13:54	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		23	mg/L	1	03/09/2022 21:06	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		67	mg/L	2	03/09/2022 21:11	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	03/09/2022 15:23	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0345	mg/L	1	03/10/2022 21:57	188407
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	03/14/2022 11:39	188407
Calcium	NELAP	0.0350	0.100		1.92	mg/L	1	03/10/2022 21:57	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Chromium	NELAP	0.0007	0.0015	J	0.0013	mg/L	5	03/15/2022 2:11	188407
Cobalt	NELAP	0.0001	0.0010		0.0017	mg/L	5	03/15/2022 2:11	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Lithium	*	0.0015	0.0030		0.0113	mg/L	5	03/15/2022 2:11	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 2:11	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:11	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 2:11	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 20:01	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22021140-007
Matrix: GROUNDWATER

Work Order: 22021140
Report Date: 28-Mar-22

Client Sample ID: EP-6
Collection Date: 03/08/2022 8:36

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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-008
 Matrix: GROUNDWATER

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: EP-7

Collection Date: 03/08/2022 11:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.09	ft	1	03/08/2022 11:03	R308346
Elevation of groundwater surface	*	0	0		502.35	ft	1	03/08/2022 11:03	R308346
Measuring Point Elevation	*	0	0		515.44	ft	1	03/08/2022 11:03	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		5.20	gal	1	03/08/2022 11:03	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		14	NTU	1	03/08/2022 11:03	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-35	mV	1	03/08/2022 11:03	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.42	mS/cm	1	03/08/2022 11:03	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.1	°C	1	03/08/2022 11:03	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.16	mg/L	1	03/08/2022 11:03	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		5.97		1	03/08/2022 11:03	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		1450	mg/L	1	03/11/2022 13:55	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		239	mg/L	5	03/09/2022 21:14	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		556	mg/L	20	03/09/2022 21:19	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.30	mg/L	1	03/09/2022 15:06	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0271	mg/L	1	03/10/2022 22:01	188407
Boron	NELAP	0.0090	0.0200		0.910	mg/L	1	03/10/2022 22:01	188407
Calcium	NELAP	0.0350	0.100		170	mg/L	1	03/10/2022 22:01	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:17	188407
Arsenic	NELAP	0.0004	0.0010		0.0173	mg/L	5	03/15/2022 2:17	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:17	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:17	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 2:17	188407
Cobalt	NELAP	0.0001	0.0010		0.139	mg/L	5	03/15/2022 2:17	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:17	188407
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	03/15/2022 2:17	188407
Molybdenum	NELAP	0.0006	0.0015	J	0.0012	mg/L	5	03/15/2022 2:17	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:17	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 2:17	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 20:04	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 03/08/2022 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	03/16/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-009
 Matrix: AQUEOUS

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: Equipment Blank
 Collection Date: 03/08/2022 14:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		< 20	mg/L	1	03/11/2022 13:55	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	03/09/2022 21:25	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	03/09/2022 21:25	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	03/09/2022 15:08	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	03/10/2022 22:05	188407
Boron	NELAP	0.0090	0.0200		0.0302	mg/L	1	03/10/2022 22:05	188407
Calcium	NELAP	0.035	0.10	J	0.064	mg/L	1	03/10/2022 22:05	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 2:59	188407
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	03/15/2022 2:59	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 2:59	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 2:59	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/18/2022 18:42	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 20:06	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/17/2022 0:00	R308837
Radium-228	*	0	0		See Attached	pci/L	1	03/17/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 03/07/2022 15:28

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		< 20	mg/L	1	03/11/2022 13:56	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	03/09/2022 21:27	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	03/09/2022 21:27	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	03/09/2022 15:16	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	03/10/2022 22:08	188407
Boron	NELAP	0.0090	0.020	J	0.019	mg/L	1	03/10/2022 22:08	188407
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	03/10/2022 22:08	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 3:05	188407
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	03/15/2022 3:05	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 3:05	188407
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 3:05	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 3:05	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00008	0.00020		< 0.00020	mg/L	1	03/10/2022 20:08	188417
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/17/2022 0:00	R308837
Radium-228	*	0	0		See Attached	pci/L	1	03/17/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22021140-011
 Matrix: GROUNDWATER

Work Order: 22021140
 Report Date: 28-Mar-22

Client Sample ID: Field Duplicate

Collection Date: 03/07/2022 15:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		3.91	ft	1	03/07/2022 15:25	R308346
Elevation of groundwater surface	*	0	0		509.88	ft	1	03/07/2022 15:25	R308346
Measuring Point Elevation	*	0	0		513.79	ft	1	03/07/2022 15:25	R308346
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.82	gal	1	03/07/2022 15:25	R308346
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.9	NTU	1	03/07/2022 15:25	R308346
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		124	mV	1	03/07/2022 15:25	R308346
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.32	uS/cm	1	03/07/2022 15:25	R308346
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		11.5	°C	1	03/07/2022 15:25	R308346
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.03	mg/L	1	03/07/2022 15:25	R308346
SW-846 9040B FIELD									
pH	*	0	1.00		5.86		1	03/07/2022 15:25	R308346
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	*	16	20		2490	mg/L	1	03/11/2022 13:56	R308313
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		30	mg/L	1	03/09/2022 21:30	R308033
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1720	mg/L	50	03/09/2022 21:35	R308032
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.68	mg/L	1	03/09/2022 15:25	R308014
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0145	mg/L	1	03/10/2022 22:12	188407
Boron	NELAP	0.0090	0.0200		0.519	mg/L	1	03/10/2022 22:12	188407
Calcium	NELAP	0.0350	0.100		408	mg/L	1	03/10/2022 22:12	188407
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 3:11	188407
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	03/15/2022 3:11	188407
Beryllium	NELAP	0.0002	0.0010		0.0025	mg/L	5	03/16/2022 19:35	188407
Cadmium	NELAP	0.0002	0.0010		0.0014	mg/L	5	03/15/2022 3:11	188407
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	03/15/2022 3:11	188407
Cobalt	NELAP	0.0001	0.0010		0.0179	mg/L	5	03/15/2022 3:11	188407
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	03/15/2022 3:11	188407
Lithium	*	0.0015	0.0030		0.0198	mg/L	5	03/15/2022 3:11	188407
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	03/15/2022 3:11	188407
Selenium	NELAP	0.0006	0.0010	J	0.0006	mg/L	5	03/15/2022 3:11	188407
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	03/15/2022 3:11	188407
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	03/12/2022 12:34	188481
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	03/17/2022 0:00	R308837



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Lab ID: 22021140-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 03/07/2022 15:25

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	03/17/2022 0:00	R308837



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

STANDARD METHODS 2510 B FIELD

Batch R308346 **SampType:** LCS Units mS/cm

SampID: LCS-R308346

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		1.42	1.409	0	100.8	90	110	03/08/2022
Spec. Conductance, Field	*	0		1.43	1.409	0	101.5	90	110	03/07/2022

SW-846 9040B FIELD

Batch R308346 **SampType:** LCS Units

SampID: LCS-R308346

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		7.06	7.000	0	100.9	98.57	101.4	03/07/2022
pH	*	1.00		6.99	7.000	0	99.9	98.57	101.4	03/08/2022

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R308313 **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	03/11/2022

Batch R308313 **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		952	1000	0	95.2	90	110	03/11/2022

Batch R308313 **SampType:** DUP Units mg/L

SampID: 22030698-001ADUP

RPD Limit: 5

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids	*	20		704				714.0	1.41	03/11/2022

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

Batch R308033 **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	03/09/2022

Batch R308033 **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	102.5	90	110	03/09/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22021140-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		20		231	100.0	145.4	86.1	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22021140-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		20		234	100.0	145.4	88.8	231.4	1.15	03/09/2022		

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030433-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		32	20.00	12.58	96.8	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030433-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		32	20.00	12.58	98.1	31.95	0.78	03/09/2022		

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030442-004CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		80	E	1020	400.0	615.5	101.3	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030442-004CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		80	E	1010	400.0	615.5	99.7	1021	0.60	03/09/2022		

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030502-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		40		281	200.0	76.38	102.5	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030502-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		40		280	200.0	76.38	101.7	281.3	0.55	03/09/2022		



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030503-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		200	E	2620	1000	1734	88.9	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030503-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride		200	E	2610	1000	1734	87.3	2623	0.61	03/09/2022		

Batch R308033		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030614-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		200		1750	1000	830.7	91.5	85	115	03/09/2022	

Batch R308033		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030614-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride		200		1750	1000	830.7	91.7	1745	0.16	03/09/2022		

Batch R308170		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		1		< 1	0.5000	0	0	-100	100	03/11/2022	

Batch R308170		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK 220310											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	1		< 1	0.5000	0	0	-100	100	03/11/2022	

Batch R308170		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		1		20	20.00	0	100.8	90	110	03/11/2022	

Batch R308170		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030673-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		2		96	40.00	62.45	85.1	85	115	03/11/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch R308170		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22030673-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		2		98	40.00	62.45	87.8	96.49	1.13	03/11/2022	

Batch R308170		SampType: MS		Units mg/L				RPD Limit: 15			
SampID: 22030687-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		20		677	400.0	302.4	93.6	85	115	03/11/2022	

Batch R308170		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22030687-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20		673	400.0	302.4	92.7	676.6	0.49	03/11/2022	

Batch R308170		SampType: MS		Units mg/L				RPD Limit: 15			
SampID: 22030697-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		200		9140	4000	5707	85.7	85	115	03/11/2022	

Batch R308170		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22030697-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		200		9280	4000	5707	89.4	9136	1.58	03/11/2022	

Batch R308170		SampType: MS		Units mg/L				RPD Limit: 15			
SampID: 22030763-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		20	E	1050	400.0	690.0	91.2	85	115	03/11/2022	

Batch R308170		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22030763-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20	E	1060	400.0	690.0	92.2	1055	0.36	03/11/2022	

Batch R308309		SampType: MBLK		Units mg/L				RPD Limit: 15			
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		1		< 1	0.5000	0	0	-100	100	03/15/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch R308309 **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		1		20	20.00	0	100.5	90	110	03/15/2022

Batch R308309 **SampType: MS** Units **mg/L**

SampID: 22021140-006AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		23	20.00	3.220	98.2	85	115	03/15/2022

Batch R308309 **SampType: MSD** Units **mg/L**

SampID: 22021140-006AMSD

RPD Limit: **15**

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		1		23	20.00	3.220	98.8	22.86	0.52	03/15/2022

SW-846 9036 (TOTAL)

Batch R308032 **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	03/09/2022

Batch R308032 **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		20	20.00	0	99.5	90	110	03/09/2022

Batch R308032 **SampType: MS** Units **mg/L**

SampID: 22021140-004AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		238	100.0	152.8	85.4	85	115	03/09/2022

Batch R308032 **SampType: MSD** Units **mg/L**

SampID: 22021140-004AMSD

RPD Limit: **10**

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		238	100.0	152.8	85.6	238.1	0.07	03/09/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

SW-846 9036 (TOTAL)

Batch R308032		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030442-004CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		192	100.0	98.94	93.3	90	110	03/09/2022	

Batch R308032		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030442-004CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		50		195	100.0	98.94	95.7	192.2	1.28	03/09/2022		

Batch R308032		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030465-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		353	200.0	156.0	98.7	90	110	03/09/2022	

Batch R308032		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030465-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		100		356	200.0	156.0	100.2	353.3	0.85	03/09/2022		

Batch R308032		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030502-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		377	200.0	186.5	95.4	90	110	03/09/2022	

Batch R308032		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030502-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		100		388	200.0	186.5	100.6	377.3	2.71	03/09/2022		

Batch R308032		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030593-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		467	200.0	275.0	96.2	85	115	03/09/2022	

Batch R308032		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030593-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		100		459	200.0	275.0	91.8	467.5	1.93	03/09/2022		



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

SW-846 9036 (TOTAL)

Batch R308032		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030614-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		2000		6600	4000	2742	96.5	90	110	03/09/2022	

Batch R308032		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030614-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		2000		6880	4000	2742	103.5	6603	4.15	03/09/2022		

Batch R308169		SampType: MBLK		Units mg/L							Date Analyzed
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	03/11/2022	

Batch R308169		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK 220310											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate	*	10		< 10	7.620	0	0	-100	100	03/11/2022	

Batch R308169		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		20	20.00	0	99.0	90	110	03/11/2022	

Batch R308169		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030503-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		1000		3690	2000	1697	99.5	90	110	03/11/2022	

Batch R308169		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22030503-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		1000		3700	2000	1697	100.0	3687	0.27	03/11/2022		

Batch R308169		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030673-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		96	40.00	56.54	99.5	90	110	03/11/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

SW-846 9036 (TOTAL)

Batch R308169		SampType: MSD		Units mg/L				RPD Limit: 10			
SampID: 22030673-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		97	40.00	56.54	101.8	96.32	0.97	03/11/2022	

Batch R308169		SampType: MS		Units mg/L							
SampID: 22030697-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		2000	S	8920	4000	5561	83.9	90	110	03/11/2022	

Batch R308169		SampType: MSD		Units mg/L				RPD Limit: 10			
SampID: 22030697-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		2000		9390	4000	5561	95.8	8919	5.18	03/11/2022	

Batch R308169		SampType: MS		Units mg/L							
SampID: 22030859-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		459	200.0	276.0	91.4	85	115	03/11/2022	

Batch R308169		SampType: MSD		Units mg/L				RPD Limit: 10			
SampID: 22030859-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		457	200.0	276.0	90.6	458.9	0.39	03/11/2022	

SW-846 9214 (TOTAL)

Batch R308014		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	0.0370	0	0	-100	100	03/09/2022	

Batch R308014		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		1.00	1.000	0	99.5	90	110	03/09/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

SW-846 9214 (TOTAL)

Batch R308014		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030553-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.75	2.000	0.7280	101.1	75	125	03/09/2022	

Batch R308014		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030553-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.76	2.000	0.7280	101.8	2.750	0.47	03/09/2022		

Batch R308014		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030614-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		1.00		35.1	20.00	14.72	102.0	75	125	03/09/2022	

Batch R308014		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030614-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		1.00		35.6	20.00	14.72	104.4	35.11	1.39	03/09/2022		

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

Batch 188407		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-188407											
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	03/10/2022	
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	03/10/2022	
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	03/10/2022	

Batch 188407		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-188407											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		2.05	2.000	0	102.7	85	115	03/10/2022	
Boron		0.0200		0.506	0.5000	0	101.2	85	115	03/10/2022	
Calcium		0.100		2.58	2.500	0	103.2	85	115	03/10/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch 188407		SampType: MS		Units mg/L						
SampID: 22021140-005CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.10	2.000	0.03130	103.7	75	125	03/10/2022
Boron		0.0200	S	11.8	0.5000	11.10	144.0	75	125	03/10/2022
Calcium		0.100	S	175	2.500	170.6	168.0	75	125	03/10/2022

Batch 188407		SampType: MSD		Units mg/L						
SampID: 22021140-005CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		0.0025		2.08	2.000	0.03130	102.4	2.105	1.24	03/10/2022
Boron		0.0200		11.6	0.5000	11.10	110.0	11.82	1.45	03/10/2022
Calcium		0.100		173	2.500	170.6	84.0	174.8	1.21	03/10/2022

Batch 188407		SampType: MS		Units mg/L						
SampID: 22030500-002BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	281	2.500	277.7	148.0	75	125	03/10/2022

Batch 188407		SampType: MSD		Units mg/L						
SampID: 22030500-002BMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	284	2.500	277.7	236.0	281.4	0.78	03/10/2022

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

Batch 188407		SampType: MBLK		Units mg/L						
SampID: MBLK-188407										
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	03/15/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	03/15/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	03/15/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	03/15/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	03/15/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	03/15/2022
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	03/15/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	03/15/2022
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	03/15/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	03/15/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	03/15/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch 188407 **SampType:** LCS **Units** mg/L
SampID: LCS-188407

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.486	0.5000	0	97.2	80	120	03/15/2022
Arsenic		0.0010		0.508	0.5000	0	101.6	80	120	03/15/2022
Beryllium		0.0010		0.0476	0.0500	0	95.2	80	120	03/15/2022
Cadmium		0.0010		0.0521	0.0500	0	104.1	80	120	03/15/2022
Chromium		0.0015		0.196	0.2000	0	98.1	80	120	03/15/2022
Cobalt		0.0010		0.506	0.5000	0	101.1	80	120	03/15/2022
Lead		0.0010		0.493	0.5000	0	98.5	80	120	03/15/2022
Lithium	*	0.0030		0.511	0.5000	0	102.2	80	120	03/15/2022
Molybdenum		0.0015		0.490	0.5000	0	98.0	80	120	03/15/2022
Selenium		0.0010		0.466	0.5000	0	93.1	80	120	03/15/2022
Thallium		0.0020		0.233	0.2500	0	93.2	80	120	03/15/2022

Batch 188407 **SampType:** MS **Units** mg/L
SampID: 22021140-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.523	0.5000	0	104.6	75	125	03/16/2022
Arsenic		0.0010		0.529	0.5000	0.005331	104.7	75	125	03/16/2022
Beryllium		0.0010		0.0472	0.0500	0	94.3	75	125	03/15/2022
Cadmium		0.0010		0.0549	0.0500	0	109.9	75	125	03/15/2022
Chromium		0.0015		0.201	0.2000	0.002030	99.5	75	125	03/15/2022
Cobalt		0.0010		0.705	0.5000	0.1997	101.1	75	125	03/15/2022
Lead		0.0010		0.512	0.5000	0	102.4	75	125	03/15/2022
Lithium	*	0.0030		0.532	0.5000	0.002539	105.9	75	125	03/15/2022
Molybdenum		0.0015		0.521	0.5000	0	104.3	75	125	03/16/2022
Selenium		0.0010		0.486	0.5000	0	97.1	75	125	03/16/2022
Thallium		0.0020		0.246	0.2500	0	98.4	75	125	03/15/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

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

Batch 188407		SampType: MSD		Units mg/L				RPD Limit: 20			
SampID: 22021140-005CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Antimony		0.0010		0.518	0.5000	0	103.7	0.5228	0.85	03/16/2022	
Arsenic		0.0010		0.512	0.5000	0.005331	101.3	0.5289	3.26	03/16/2022	
Beryllium		0.0010		0.0462	0.0500	0	92.4	0.04717	2.11	03/15/2022	
Cadmium		0.0010		0.0534	0.0500	0	106.8	0.05493	2.87	03/15/2022	
Chromium		0.0015		0.191	0.2000	0.002030	94.6	0.2010	4.98	03/15/2022	
Cobalt		0.0010		0.676	0.5000	0.1997	95.3	0.7052	4.21	03/15/2022	
Lead		0.0010		0.488	0.5000	0	97.5	0.5121	4.88	03/15/2022	
Lithium	*	0.0030		0.503	0.5000	0.002539	100.1	0.5321	5.59	03/15/2022	
Molybdenum		0.0015		0.516	0.5000	0	103.2	0.5215	1.04	03/16/2022	
Selenium		0.0010		0.468	0.5000	0	93.5	0.4856	3.74	03/16/2022	
Thallium		0.0020		0.241	0.2500	0	96.6	0.2459	1.85	03/15/2022	

SW-846 7470A (TOTAL)

Batch 188417		SampType: MBLK		Units mg/L							
SampID: MBLK-188417											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	03/10/2022	

Batch 188417		SampType: LCS		Units mg/L							
SampID: LCS-188417											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00465	0.0050	0	93.1	85	115	03/10/2022	

Batch 188417		SampType: MS		Units mg/L							
SampID: 22030593-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00455	0.0050	0	91.0	75	125	03/10/2022	

Batch 188417		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22030593-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		0.00444	0.0050	0	88.9	0.004552	2.38	03/10/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

SW-846 7470A (TOTAL)

Batch 188417		SampType: MS		Units mg/L							Date Analyzed
SampID: 22030678-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00458	0.0050	0	91.5	75	125	03/10/2022	

Batch 188417		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22030678-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Mercury		0.00020		0.00447	0.0050	0	89.4	0.004576	2.34	03/10/2022		

Batch 188481		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-188481											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	03/12/2022	

Batch 188481		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-188481											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00460	0.0050	0	92.0	85	115	03/12/2022	

Batch 188481		SampType: MS		Units mg/L							Date Analyzed
SampID: 22021140-011CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00467	0.0050	0	93.4	75	125	03/12/2022	

Batch 188481		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22021140-011CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Mercury		0.00020		0.00481	0.0050	0	96.1	0.004672	2.83	03/12/2022		



Receiving Check List

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

Client: Southern Illinois Power Cooperation

Work Order: 22021140

Client Project: Groundwater Monitoring

Report Date: 28-Mar-22

Carrier: Adam Bridges

Received By: PRY

Completed by:

Mary E. Kemp

Reviewed by:

Elizabeth A. Hurley

On:

09-Mar-22

Mary E. Kemp

On:

09-Mar-22

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- | | | | | |
|---|---|---|--------------------------------------|----------------------------------|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> | Temp °C 4.0 |
| 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"/> | | |

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 <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 #78011. - PRY/MKemp - 3/9/2022 8:40:51 AM

CHAIN OF CUSTODY

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: ICE BLUE ICE NO ICE 4.0 °C LTG# 1
Preserved in: LAB FIELD **FOR LAB USE ONLY**
Lab Notes: PHV 78011. PNT 3/9/22

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: *DUP
 ICP: Ba B Ca
 ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Tl
 Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Project Name/Number: Groundwater Monitoring
Sample Collector's Name: J. RELEY A. BRIDGES

Results Requested: Standard 1-2 Day (100% Surcharge)
 Other 3 Day (50% Surcharge)
Billing Instructions: _____
and Type of Containers:

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3						
22021140-001	EBG	03/07/22 1142	1	3						
002	EP-1	03/07/22 1411	1	3						
003	EP-2 *	03/07/22 1525	1	3						
004	EP-3	03/08/22 1308	1	3						
005	EP-4	03/08/22 1435	1	3						
006	EP-5	03/07/22 1249	1	3						
007	EP-6	03/08/22 0836	1	3						
008	EP-7	03/08/22 1103	1	3						
009	Equipment Blank	03/09/22 1438	1	3						
010	Field Blank	03/07/22 1528	1	3						

MATRIX	INDICATE ANALYSIS REQUESTED										
	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Raz26/228	Sulfate	TDS		
Groundwater											
Aqueous											
	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
	X	X	X	X	X	X	X	X	X	X	X

Relinquished By: [Signature]	Date/Time: 3-9-22 0800	Received By: [Signature]	Date/Time: 3/9/22 0800

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: 70999



PHV 3/9/22

CHAIN OF CUSTODY

pg. 2 of 2 Work order # 22021140

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 4.0 °C LTG# 1 Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes:
--	--

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

Project Name/Number		Sample Collector's Name		INDICATE ANALYSIS REQUESTED																		
Groundwater Monitoring		S. RELEY A. BRIDGES		MATRIX																		
Results Requested	Billing Instructions	# and Type of Containers			Groundwater	Aqueous	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	Sulfate	TDS							
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		UNP	HNO3																			
Lab Use Only	Sample Identification	Date/Time Sampled			X		X	X	X	X	X	X	X	X								
	Field Duplicate	03/01/2015 25																				

Relinquished By	Date/Time	Received By	Date/Time
	3-9-22 0800		3/9/22 0800

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: 70999



TEKLAB, Inc.

Sample Delivery Group: L1470373
Samples Received: 03/11/2022
Project Number: 22021140
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

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

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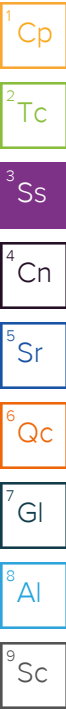
SAMPLE SUMMARY

22021140-001B L1470373-01 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 11:42
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN



22021140-002B L1470373-02 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 14:11
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

22021140-003B L1470373-03 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 15:25
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

22021140-004B L1470373-04 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/08/22 13:08
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

22021140-005B L1470373-05 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/08/22 14:35
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/23/22 15:00	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

22021140-006B L1470373-06 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 12:49
03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

22021140-007B L1470373-07 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/08/22 08:36 03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

22021140-008B L1470373-08 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/08/22 11:03 03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/16/22 13:34	RGT	Mt. Juliet, TN

22021140-009B L1470373-09 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/08/22 14:38 03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/17/22 08:45	RGT	Mt. Juliet, TN

22021140-010B L1470373-10 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 15:28 03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/17/22 08:45	RGT	Mt. Juliet, TN

22021140-011B L1470373-11 Non-Potable Water

Collected by
Collected date/time
Received date/time

03/07/22 15:25 03/11/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1830859	1	03/15/22 12:48	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1831801	1	03/15/22 15:00	03/24/22 12:30	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1831801	1	03/15/22 15:00	03/17/22 08:45	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 Gl

⁸ Al

⁹ Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.18		0.406	0.720	03/23/2022 15:00	WG1830859
(T) Barium	96.4			62.0-143	03/23/2022 15:00	WG1830859
(T) Yttrium	96.8			79.0-136	03/23/2022 15:00	WG1830859

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.40		0.452	0.746	03/23/2022 15:00	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.215		0.198	0.194	03/16/2022 13:34	WG1831801
(T) Barium-133	95.8			30.0-143	03/16/2022 13:34	WG1831801

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.439	J	0.330	0.606	03/23/2022 15:00	WG1830859
(T) Barium	87.9			62.0-143	03/23/2022 15:00	WG1830859
(T) Yttrium	99.1			79.0-136	03/23/2022 15:00	WG1830859

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.699		0.410	0.671	03/23/2022 15:00	WG1831801

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.260	J	0.243	0.289	03/16/2022 13:34	WG1831801
(T) Barium-133	95.5			30.0-143	03/16/2022 13:34	WG1831801

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.426	J	0.334	0.614	03/23/2022 15:00	WG1830859
(T) Barium	91.9			62.0-143	03/23/2022 15:00	WG1830859
(T) Yttrium	98.6			79.0-136	03/23/2022 15:00	WG1830859

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.458	J	0.377	0.704	03/23/2022 15:00	WG1831801

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0315	U	0.174	0.344	03/16/2022 13:34	WG1831801
(T) Barium-133	95.3			30.0-143	03/16/2022 13:34	WG1831801

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.765		0.315	0.565	03/23/2022 15:00	WG1830859
(T) Barium	97.5			62.0-143	03/23/2022 15:00	WG1830859
(T) Yttrium	101			79.0-136	03/23/2022 15:00	WG1830859

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.13		0.407	0.610	03/23/2022 15:00	WG1831801

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.365		0.257	0.229	03/16/2022 13:34	WG1831801
(T) Barium-133	93.2			30.0-143	03/16/2022 13:34	WG1831801

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.658		0.335	0.608	03/23/2022 15:00	WG1830859
(T) Barium	89.6			62.0-143	03/23/2022 15:00	WG1830859
(T) Yttrium	103			79.0-136	03/23/2022 15:00	WG1830859

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.893		0.388	0.633	03/23/2022 15:00	WG1831801

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.234		0.195	0.175	03/16/2022 13:34	WG1831801
(T) Barium-133	99.5			30.0-143	03/16/2022 13:34	WG1831801

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.474	J	0.306	0.542	03/24/2022 12:30	WG1830859
(T) Barium	92.3			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	95.7			79.0-136	03/24/2022 12:30	WG1830859

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.630		0.346	0.570	03/24/2022 12:30	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.157	J	0.162	0.178	03/16/2022 13:34	WG1831801
(T) Barium-133	99.2			30.0-143	03/16/2022 13:34	WG1831801

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.01		0.324	0.555	03/24/2022 12:30	WG1830859
(T) Barium	98.3			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	98.3			79.0-136	03/24/2022 12:30	WG1830859

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.13		0.357	0.586	03/24/2022 12:30	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.123	J	0.150	0.188	03/16/2022 13:34	WG1831801
(T) Barium-133	97.7			30.0-143	03/16/2022 13:34	WG1831801

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.954		0.384	0.666	03/24/2022 12:30	WG1830859
(T) Barium	83.4			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	95.8			79.0-136	03/24/2022 12:30	WG1830859

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.03		0.420	0.727	03/24/2022 12:30	WG1831801

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0766	<u>U</u>	0.171	0.292	03/16/2022 13:34	WG1831801
(T) Barium-133	99.0			30.0-143	03/16/2022 13:34	WG1831801

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0407	<u>U</u>	0.385	0.703	03/24/2022 12:30	WG1830859
(T) Barium	95.5			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	96.7			79.0-136	03/24/2022 12:30	WG1830859

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0841	<u>U</u>	0.421	0.759	03/24/2022 12:30	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0841	<u>U</u>	0.170	0.285	03/17/2022 08:45	WG1831801
(T) Barium-133	99.7			30.0-143	03/17/2022 08:45	WG1831801

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.195	<u>U</u>	0.401	0.722	03/24/2022 12:30	WG1830859
(T) Barium	105			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	97.9			79.0-136	03/24/2022 12:30	WG1830859

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.241	<u>U</u>	0.434	0.791	03/24/2022 12:30	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0463	<u>U</u>	0.167	0.322	03/17/2022 08:45	WG1831801
(T) Barium-133	102			30.0-143	03/17/2022 08:45	WG1831801

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.57		0.349	0.580	03/24/2022 12:30	WG1830859
(T) Barium	89.2			62.0-143	03/24/2022 12:30	WG1830859
(T) Yttrium	94.8			79.0-136	03/24/2022 12:30	WG1830859

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.60		0.381	0.652	03/24/2022 12:30	WG1831801

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0347	<u>U</u>	0.152	0.297	03/17/2022 08:45	WG1831801
(T) Barium-133	98.3			30.0-143	03/17/2022 08:45	WG1831801

Method Blank (MB)

(MB) R3774012-1 03/23/22 15:00

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.252	↓	0.232	0.427
(T) Barium	103		103	
(T) Yttrium	97.2		97.2	

L1467310-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1467310-06 03/23/22 15:00 • (DUP) R3774012-5 03/23/22 15:00

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	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.46	0.303	0.518	1.21	0.562	0.518	1	19.2	0.401		20	3
(T) Barium	101			103	103							
(T) Yttrium	107			99.7	99.7							

Laboratory Control Sample (LCS)

(LCS) R3774012-2 03/23/22 15:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.16	103	80.0-120	
(T) Barium			102		
(T) Yttrium			93.8		

L1467310-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1467310-05 03/23/22 15:00 • (MS) R3774012-3 03/23/22 15:00 • (MSD) R3774012-4 03/23/22 15:00

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	-0.222	10.7	9.93	107	99.3	1	70.0-130			7.64		20
(T) Barium		105			105	108							
(T) Yttrium		112			102	101							

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3771020-1 03/16/22 13:34

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.000572	<u>U</u>	0.0321	0.0757
(T) Barium-133	93.9		93.9	

¹Cp

²Tc

³Ss

⁴Cn

L1470373-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1470373-11 03/17/22 08:45 • (DUP) R3771020-5 03/16/22 13:34

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.0347	0.152	0.297	0.0572	0.129	0.297	1	49.1	0.113	<u>U</u>	20	3
(T) Barium-133	98.3			98.8	98.8							

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3771020-2 03/16/22 13:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	4.84	96.4	80.0-120	
(T) Barium-133			99.8		

⁷Gl

⁸Al

⁹Sc

L1467820-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1467820-01 03/16/22 13:34 • (MS) R3771020-3 03/16/22 13:34 • (MSD) R3771020-4 03/16/22 13:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.1	0.164	19.6	19.0	96.6	93.6	1	75.0-125			3.16		20
(T) Barium-133		93.6			94.9	95.3							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

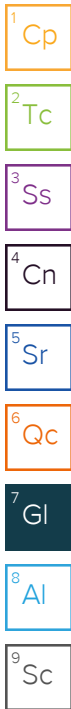
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.



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: QC Level:

Project#

Comments:
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: Email:
Requested Due Date: Billing/PO:

Phone:

L1470373

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	22021140-001B	3/7/22 1142	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-02	22021140-002B	3/7/22 1411	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-03	22021140-003B	3/7/22 1525	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-04	22021140-004B	3/8/22 1308	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-05	22021140-005B	3/8/22 1435	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-06	22021140-006B	3/7/22 1249	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-07	22021140-007B	3/8/22 0836	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-08	22021140-008B	3/8/22 1103	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-09	22021140-009B	3/8/22 1438	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-10	22021140-010B	3/7/22 1528	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	22021140-011B	3/7/22 1525	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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
<i>Mary Kemp</i>	<i>3/9/22 1600</i>	<i>[Signature]</i>	<i>3/11/22 0900</i>

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

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)

3/11-NCF-L1470373 TEKLABIL

R5

Time estimate: 0h Time spent: 0h

Members

HM Hailey Melson (responsible) MB Mark Beasley

Due on 15 March 2022 8:00 AM for target Done

- Login Clarification needed
- Chain of custody is incomplete
- Please specify Metals requested
- Please specify TCLP requested
- Received additional samples not listed on COC
- Sample IDs on containers do not match IDs on COC
- Client did not "X" analysis
- Chain of Custody is missing
- If no COC: Received by: _____
- If no COC: Date/Time: _____
- If no COC: Temp./Cont.Rec./pH: _____
- If no COC: Carrier: _____
- If no COC: Tracking #: _____
- Client informed by call
- Client informed by Email
- Client informed by Voicemail
- Date/Time: 3/13/22 _____
- PM initials: MB _____
- Client Contact: Elizabeth H _____

Comments

Hailey Melson	11 March 2022 1:02 PM
Missing ID: 22021140-011B	
Mark Beasley	13 March 2022 3:11 PM
Client notified	
Hailey Melson	14 March 2022 9:24 AM
Done	

July 08, 2022

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: 22050087

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 5/26/2022 07:35:00 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,



Aaron Renner
Project Manager
(630)324-6855
arenner@teklabinc.com



Report Contents

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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	40
Chain of Custody	Appended

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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)

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Qualifiers

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Cooler Receipt Temp: 4.8 °C

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

Radium-226 and Radium-228 analysis was performed by Pace Analytical Services, LLC. 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

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415

Phone (217) 698-1004

Fax (217) 698-1005

Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214

Phone (913) 541-1998

Fax (913) 541-1998

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

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515

Phone (630) 324-6855

Fax

Email arenner@teklabinc.com



Accreditations

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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	8/31/2022	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



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 05/24/2022 11:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.21	ft	1	05/24/2022 11:15	R312769
Elevation of groundwater surface	*	0	0		516.66	ft	1	05/24/2022 11:15	R312769
Measuring Point Elevation	*	0	0		524.87	ft	1	05/24/2022 11:15	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		3.12	gal	1	05/24/2022 11:15	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		15	NTU	1	05/24/2022 11:15	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		149	mV	1	05/24/2022 11:15	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.544	mS/cm	1	05/24/2022 11:15	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.0	°C	1	05/24/2022 11:15	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		4.59	mg/L	1	05/24/2022 11:15	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		6.55		1	05/24/2022 11:15	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		344	mg/L	1	05/27/2022 09:46	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		18	mg/L	1	05/31/2022 17:48	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		90	mg/L	5	05/31/2022 17:59	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.52	mg/L	1	06/03/2022 13:18	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0506	mg/L	1	06/02/2022 00:36	193106
Boron	NELAP	0.0090	0.020	J	0.019	mg/L	1	06/02/2022 00:36	193106
Calcium	NELAP	0.0350	0.100		13.1	mg/L	1	06/02/2022 00:36	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:14	193106
Arsenic	NELAP	0.0004	0.0010	J	0.0005	mg/L	5	05/27/2022 11:14	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:14	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:14	193106
Chromium	NELAP	0.0007	0.0015	J	0.0007	mg/L	5	05/27/2022 11:14	193106
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	05/27/2022 11:14	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:14	193106
Lithium	*	0.0015	0.0030		0.0166	mg/L	5	06/03/2022 13:52	193229
Molybdenum	NELAP	0.0006	0.0015		0.0021	mg/L	5	05/27/2022 11:14	193106
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	05/27/2022 11:14	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 11:14	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/31/2022 15:31	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 05/24/2022 11:15

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 05/24/2022 13:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		6.51	ft	1	05/24/2022 13:00	R312769
Elevation of groundwater surface	*	0	0		513.21	ft	1	05/24/2022 13:00	R312769
Measuring Point Elevation	*	0	0		519.72	ft	1	05/24/2022 13:00	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	05/24/2022 13:00	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	05/24/2022 13:00	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		166	mV	1	05/24/2022 13:00	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.80	mS/cm	1	05/24/2022 13:00	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.0	°C	1	05/24/2022 13:00	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.56	mg/L	1	05/24/2022 13:00	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		6.20		1	05/24/2022 13:00	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2530	mg/L	1	05/27/2022 09:46	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	5		38	mg/L	5	05/31/2022 18:10	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1470	mg/L	50	05/31/2022 18:14	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.18	mg/L	1	06/03/2022 13:20	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0170	mg/L	1	06/02/2022 00:40	193106
Boron	NELAP	0.0090	0.0200		0.991	mg/L	1	06/02/2022 00:40	193106
Calcium	NELAP	0.0350	0.100		508	mg/L	1	06/02/2022 00:40	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:20	193106
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:20	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:20	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:20	193106
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2022 11:20	193106
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	05/27/2022 11:20	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:20	193106
Lithium	*	0.0015	0.0030		0.0103	mg/L	5	06/03/2022 13:58	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2022 11:20	193106
Selenium	NELAP	0.0006	0.0010		0.0026	mg/L	5	05/27/2022 11:20	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 11:20	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 08:57	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 05/24/2022 13:00

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22050087-003
 Matrix: GROUNDWATER

Work Order: 22050087
 Report Date: 08-Jul-22

Client Sample ID: EP-2

Collection Date: 05/24/2022 15:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		5.99	ft	1	05/24/2022 15:20	R312769
Elevation of groundwater surface	*	0	0		507.80	ft	1	05/24/2022 15:20	R312769
Measuring Point Elevation	*	0	0		513.79	ft	1	05/24/2022 15:20	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	05/24/2022 15:20	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		4.3	NTU	1	05/24/2022 15:20	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		184	mV	1	05/24/2022 15:20	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.84	mS/cm	1	05/24/2022 15:20	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.3	°C	1	05/24/2022 15:20	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.96	mg/L	1	05/24/2022 15:20	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		5.97		1	05/24/2022 15:20	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2460	mg/L	1	05/27/2022 09:47	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		33	mg/L	1	05/31/2022 18:34	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1700	mg/L	50	05/31/2022 18:39	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.92	mg/L	1	06/03/2022 13:22	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0208	mg/L	1	06/02/2022 00:43	193106
Boron	NELAP	0.0090	0.0200		0.480	mg/L	1	06/02/2022 00:43	193106
Calcium	NELAP	0.0350	0.100		347	mg/L	1	06/02/2022 00:43	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	06/06/2022 14:11	193229
Arsenic	NELAP	0.0004	0.0010		0.0013	mg/L	5	05/27/2022 11:26	193106
Beryllium	NELAP	0.0002	0.0010		0.0056	mg/L	5	05/27/2022 11:26	193106
Cadmium	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	05/27/2022 11:26	193106
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2022 11:26	193106
Cobalt	NELAP	0.0001	0.0010		0.211	mg/L	5	05/27/2022 11:26	193106
Lead	NELAP	0.0012	0.0020		< 0.0020	mg/L	10	05/31/2022 13:44	193106
Lithium	*	0.0015	0.0030		0.0381	mg/L	5	06/03/2022 14:04	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2022 11:26	193106
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:26	193106
Thallium	NELAP	0.0019	0.0040		< 0.0040	mg/L	10	05/31/2022 13:44	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:00	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 05/24/2022 15:20

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22050087-004
 Matrix: GROUNDWATER

Work Order: 22050087
 Report Date: 08-Jul-22

Client Sample ID: EP-3

Collection Date: 05/25/2022 10:28

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		16.22	ft	1	05/25/2022 10:28	R312769
Elevation of groundwater surface	*	0	0		502.73	ft	1	05/25/2022 10:28	R312769
Measuring Point Elevation	*	0	0		518.95	ft	1	05/25/2022 10:28	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.56	gal	1	05/25/2022 10:28	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.7	NTU	1	05/25/2022 10:28	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-62	mV	1	05/25/2022 10:28	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.40	mS/cm	1	05/25/2022 10:28	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		18.1	°C	1	05/25/2022 10:28	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.29	mg/L	1	05/25/2022 10:28	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		6.04		1	05/25/2022 10:28	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		728	mg/L	1	05/27/2022 09:47	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	5		157	mg/L	5	05/31/2022 18:42	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		160	mg/L	5	05/31/2022 18:41	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.19	mg/L	1	06/03/2022 13:24	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0846	mg/L	1	06/02/2022 01:31	193106
Boron	NELAP	0.0090	0.0200		0.0670	mg/L	1	06/02/2022 01:31	193106
Calcium	NELAP	0.0350	0.100	S	40.1	mg/L	1	06/02/2022 01:31	193106
<i>Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.</i>									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:44	193106
Arsenic	NELAP	0.0004	0.0010		0.0075	mg/L	5	05/27/2022 11:44	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:44	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:44	193106
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2022 11:44	193106
Cobalt	NELAP	0.0001	0.0010		0.121	mg/L	5	05/27/2022 11:44	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:44	193106
Lithium	*	0.0015	0.0030		0.0321	mg/L	5	06/03/2022 14:20	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2022 11:44	193106
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:44	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 11:44	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:02	193178



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 05/25/2022 10:28

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	06/10/2022 00:00	R314163
Radium-228	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 05/25/2022 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		7.16	ft	1	05/25/2022 11:30	R312769
Elevation of groundwater surface	*	0	0		512.58	ft	1	05/25/2022 11:30	R312769
Measuring Point Elevation	*	0	0		519.74	ft	1	05/25/2022 11:30	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.78	gal	1	05/25/2022 11:30	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.5	NTU	1	05/25/2022 11:30	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-39	mV	1	05/25/2022 11:30	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.84	mS/cm	1	05/25/2022 11:30	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.7	°C	1	05/25/2022 11:30	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.29	mg/L	1	05/25/2022 11:30	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		5.88		1	05/25/2022 11:30	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		1730	mg/L	1	05/27/2022 09:47	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	10		460	mg/L	10	05/31/2022 18:50	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		531	mg/L	20	05/31/2022 18:55	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.12	mg/L	1	06/03/2022 13:26	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0329	mg/L	1	06/02/2022 01:46	193106
Boron	NELAP	0.0090	0.0200		11.8	mg/L	1	06/02/2022 01:46	193106
Calcium	NELAP	0.0350	0.100		188	mg/L	1	06/02/2022 01:46	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:32	193106
Arsenic	NELAP	0.0004	0.0010		0.0071	mg/L	5	05/27/2022 11:32	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:32	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:32	193106
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2022 11:32	193106
Cobalt	NELAP	0.0001	0.0010		0.205	mg/L	5	05/27/2022 11:32	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:32	193106
Lithium	*	0.0015	0.0030	J	0.0025	mg/L	5	06/03/2022 14:09	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2022 11:32	193106
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:32	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 11:32	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:04	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 05/25/2022 11:30

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22050087-006
 Matrix: GROUNDWATER

Work Order: 22050087
 Report Date: 08-Jul-22

Client Sample ID: EP-5

Collection Date: 05/24/2022 12:07

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		10.95	ft	1	05/24/2022 12:07	R312769
Elevation of groundwater surface	*	0	0		516.64	ft	1	05/24/2022 12:07	R312769
Measuring Point Elevation	*	0	0		527.59	ft	1	05/24/2022 12:07	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	05/24/2022 12:07	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	05/24/2022 12:07	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		147	mV	1	05/24/2022 12:07	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.473	mS/cm	1	05/24/2022 12:07	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		13.9	°C	1	05/24/2022 12:07	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		4.46	mg/L	1	05/24/2022 12:07	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		6.55		1	05/24/2022 12:07	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		322	mg/L	1	05/27/2022 09:47	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		3	mg/L	1	05/31/2022 18:58	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		132	mg/L	5	05/31/2022 19:02	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.38	mg/L	1	06/03/2022 13:29	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0529	mg/L	1	06/02/2022 01:24	193106
Boron	NELAP	0.0090	0.0200		0.0254	mg/L	1	06/02/2022 01:24	193106
Calcium	NELAP	0.0350	0.100		21.0	mg/L	1	06/02/2022 01:24	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	05/27/2022 11:38	193106
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 11:38	193106
Lithium	*	0.0015	0.0030	J	0.0023	mg/L	5	06/03/2022 14:15	193229
Molybdenum	NELAP	0.0006	0.0015		0.0027	mg/L	5	05/27/2022 11:38	193106
Selenium	NELAP	0.0006	0.0010		0.0015	mg/L	5	05/27/2022 11:38	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 11:38	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:11	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22050087-006
Matrix: GROUNDWATER

Work Order: 22050087
Report Date: 08-Jul-22

Client Sample ID: EP-5

Collection Date: 05/24/2022 12:07

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22050087-007
 Matrix: GROUNDWATER

Work Order: 22050087
 Report Date: 08-Jul-22

Client Sample ID: EP-6

Collection Date: 05/24/2022 14:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		2.69	ft	1	05/24/2022 14:15	R312769
Elevation of groundwater surface	*	0	0		502.42	ft	1	05/24/2022 14:15	R312769
Measuring Point Elevation	*	0	0		505.11	ft	1	05/24/2022 14:15	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.30	gal	1	05/24/2022 14:15	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		3.3	NTU	1	05/24/2022 14:15	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		182	mV	1	05/24/2022 14:15	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.301	mS/cm	1	05/24/2022 14:15	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.4	°C	1	05/24/2022 14:15	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.05	mg/L	1	05/24/2022 14:15	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		5.07		1	05/24/2022 14:15	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		238	mg/L	1	05/27/2022 09:48	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		24	mg/L	1	05/31/2022 19:08	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	12	20		63	mg/L	2	05/31/2022 19:35	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	06/03/2022 13:31	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0340	mg/L	1	06/02/2022 01:28	193106
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/02/2022 01:28	193106
Calcium	NELAP	0.0350	0.100		1.65	mg/L	1	06/02/2022 01:28	193106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	05/27/2022 13:18	193106
Cobalt	NELAP	0.0001	0.0010	J	0.0007	mg/L	5	05/27/2022 13:18	193106
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Lithium	*	0.0015	0.0030		0.0110	mg/L	5	06/03/2022 15:11	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/27/2022 13:18	193106
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/27/2022 13:18	193106
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/27/2022 13:18	193106
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/31/2022 15:50	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 05/24/2022 14:15

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22050087-008
 Matrix: GROUNDWATER

Work Order: 22050087
 Report Date: 08-Jul-22

Client Sample ID: EP-7

Collection Date: 05/25/2022 08:48

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		13.73	ft	1	05/25/2022 08:48	R312769
Elevation of groundwater surface	*	0	0		501.71	ft	1	05/25/2022 08:48	R312769
Measuring Point Elevation	*	0	0		515.44	ft	1	05/25/2022 08:48	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.95	gal	1	05/25/2022 08:48	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		1.8	NTU	1	05/25/2022 08:48	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		-11	mV	1	05/25/2022 08:48	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.03	mS/cm	1	05/25/2022 08:48	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		16.0	°C	1	05/25/2022 08:48	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.31	mg/L	1	05/25/2022 08:48	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		5.74		1	05/25/2022 08:48	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		1210	mg/L	1	05/27/2022 09:48	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	10	20		254	mg/L	20	05/31/2022 19:51	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		400	mg/L	20	05/31/2022 19:51	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.22	mg/L	1	06/03/2022 13:33	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0325	mg/L	1	06/01/2022 23:59	193127
Boron	NELAP	0.0090	0.0200		0.682	mg/L	1	06/01/2022 23:59	193127
Calcium	NELAP	0.0350	0.100		128	mg/L	1	06/01/2022 23:59	193127
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:05	193127
Arsenic	NELAP	0.0004	0.0010		0.0139	mg/L	5	05/31/2022 20:05	193127
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:05	193127
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:05	193127
Chromium	NELAP	0.0007	0.0015		0.0017	mg/L	5	06/06/2022 14:16	193229
Cobalt	NELAP	0.0001	0.0010		0.161	mg/L	5	05/31/2022 20:05	193127
Lead	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	05/31/2022 20:05	193127
Lithium	*	0.0015	0.0030	J	0.0019	mg/L	5	06/03/2022 15:17	193229
Molybdenum	NELAP	0.0006	0.0015	J	0.0007	mg/L	5	05/31/2022 20:05	193127
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:05	193127
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/31/2022 20:05	193127
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:14	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 05/25/2022 08:48

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	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 05/25/2022 11:34

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	05/27/2022 09:48	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		< 1	mg/L	1	05/31/2022 19:54	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	05/31/2022 19:53	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	06/03/2022 13:49	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	06/02/2022 00:03	193127
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/02/2022 00:03	193127
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	06/02/2022 00:03	193127
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/01/2022 10:54	193127
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	06/03/2022 15:23	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/31/2022 20:11	193127
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:11	193127
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/31/2022 20:11	193127
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	06/01/2022 09:16	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163
Radium-228	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 05/24/2022 15:24

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	05/27/2022 09:49	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		< 1	mg/L	1	05/31/2022 19:59	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	05/31/2022 19:59	R312636
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	06/03/2022 13:52	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	06/02/2022 00:06	193127
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/02/2022 00:06	193127
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	06/02/2022 00:06	193127
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	06/01/2022 11:00	193127
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	06/03/2022 15:28	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/31/2022 20:17	193127
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:17	193127
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/31/2022 20:17	193127
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/31/2022 16:02	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163
Radium-228	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Lab ID: 22050087-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 05/24/2022 14:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		2.69	ft	1	05/24/2022 14:15	R312769
Elevation of groundwater surface	*	0	0		502.42	ft	1	05/24/2022 14:15	R312769
Measuring Point Elevation	*	0	0		505.11	ft	1	05/24/2022 14:15	R312769
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.30	gal	1	05/24/2022 14:15	R312769
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		3.3	NTU	1	05/24/2022 14:15	R312769
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		182	mV	1	05/24/2022 14:15	R312769
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.301	mS/cm	1	05/24/2022 14:15	R312769
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		15.4	°C	1	05/24/2022 14:15	R312769
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.05	mg/L	1	05/24/2022 14:15	R312769
SW-846 9040B FIELD									
pH	*	0	1.00		5.07		1	05/24/2022 14:15	R312769
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		230	mg/L	1	05/27/2022 09:49	R312622
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	1		24	mg/L	1	05/31/2022 20:23	R312644
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		72	mg/L	5	06/02/2022 12:36	R312712
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	06/03/2022 13:54	R312788
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0366	mg/L	1	06/02/2022 00:10	193127
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	06/02/2022 00:10	193127
Calcium	NELAP	0.0350	0.100		1.79	mg/L	1	06/02/2022 00:10	193127
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Chromium	NELAP	0.0007	0.0015		0.0021	mg/L	5	06/01/2022 11:05	193127
Cobalt	NELAP	0.0001	0.0010	J	0.0010	mg/L	5	06/01/2022 11:05	193127
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Lithium	*	0.0015	0.0030		0.0101	mg/L	5	06/03/2022 15:34	193229
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	05/31/2022 20:23	193127
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	05/31/2022 20:23	193127
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	05/31/2022 20:23	193127
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	05/31/2022 16:04	193178
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	06/10/2022 00:00	R314163



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22050087-011
Matrix: GROUNDWATER

Work Order: 22050087
Report Date: 08-Jul-22
Client Sample ID: Field Duplicate
Collection Date: 05/24/2022 14:15

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	06/10/2022 00:00	R314163



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

STANDARD METHODS 2510 B FIELD

Batch R312769		SampType: LCS		Units µS/cm							Date Analyzed
SampID: LCS-R312769											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1510	1409	0	106.9	90	110	05/24/2022	
Spec. Conductance, Field	*	0		1400	1409	0	99.2	90	110	05/25/2022	

SW-846 9040B FIELD

Batch R312769		SampType: LCS		Units							Date Analyzed
SampID: LCS-R312769											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		7.02	7.000	0	100.3	98.57	101.4	05/24/2022	
pH	*	1.00		7.06	7.000	0	100.9	98.57	101.4	05/25/2022	

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R312622		SampType: MBLK		Units mg/L							Date Analyzed
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	05/27/2022	

Batch R312622		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		972	1000	0	97.2	90	110	05/27/2022	

Batch R312622		SampType: DUP		Units mg/L					RPD Limit 5		Date Analyzed
SampID: 22050087-002ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		2520				2530	0.40	05/27/2022	

Batch R312622		SampType: DUP		Units mg/L					RPD Limit 5		Date Analyzed
SampID: 22050087-006ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		316				322.0	1.88	05/27/2022	

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

Batch R312644		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		1		< 1	0.5000	0	0	-100	100	05/31/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch R312644		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		1		21	20.00	0	106.3	90	110	05/31/2022	

Batch R312644		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		1		36	20.00	17.63	92.8	85	115	05/31/2022	

Batch R312644		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22050087-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		1		36	20.00	17.63	92.2	36.19	0.33	05/31/2022		

Batch R312644		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		1		41	20.00	23.81	86.4	85	115	05/31/2022	

Batch R312644		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22050087-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		1		42	20.00	23.81	89.8	41.08	1.69	05/31/2022		

Batch R312644		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-010AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		1		20	20.00	0	100.2	85	115	05/31/2022	

Batch R312644		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22050087-010AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		1		20	20.00	0	99.8	20.03	0.35	05/31/2022		

Batch R312644		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051671-004DMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		5		156	100.0	61.45	94.7	85	115	05/31/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch R312644		SampType: MSD		Units mg/L			RPD Limit 15			
SampID: 22051671-004DMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5		155	100.0	61.45	93.2	156.2	0.95	05/31/2022

Batch R312644		SampType: MS		Units mg/L						
SampID: 22051774-003CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		1		22	20.00	1.950	100.3	85	115	05/31/2022

Batch R312644		SampType: MSD		Units mg/L			RPD Limit 15			
SampID: 22051774-003CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		1		22	20.00	1.950	100.8	22.01	0.50	05/31/2022

SW-846 9036 (TOTAL)

Batch R312636		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	05/31/2022

Batch R312636		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	96.8	90	110	05/31/2022

Batch R312636		SampType: MS		Units mg/L						
SampID: 22050087-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		186	100.0	89.58	96.7	85	115	05/31/2022

Batch R312636		SampType: MSD		Units mg/L			RPD Limit 10			
SampID: 22050087-001AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		191	100.0	89.58	101.4	186.2	2.51	05/31/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

SW-846 9036 (TOTAL)

Batch R312636		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		100	40.00	63.18	91.1	85	115	05/31/2022	

Batch R312636		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 22050087-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		20	E	103	40.00	63.18	99.8	99.63	3.44	05/31/2022		

Batch R312636		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-010AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		18	20.00	0	91.4	85	115	05/31/2022	

Batch R312636		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 22050087-010AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		10		20	20.00	0	98.0	18.27	6.97	05/31/2022		

Batch R312636		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051774-003CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	E	56	20.00	35.98	98.4	85	115	05/31/2022	

Batch R312636		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 22051774-003CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		10	E	56	20.00	35.98	100.6	55.67	0.75	05/31/2022		

Batch R312712		SampType: MBLK		Units mg/L							Date Analyzed
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	06/02/2022	

Batch R312712		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		20	20.00	0	98.6	90	110	06/02/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

SW-846 9036 (TOTAL)

Batch R312712		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051671-004DMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		20	E	101	40.00	64.23	92.0	90	110	06/02/2022	

Batch R312712		SampType: MSD		Units mg/L		RPD Limit 10					Date Analyzed
SampID: 22051671-004DMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Sulfate		20	E	102	40.00	64.23	95.3	101.0	1.29	06/02/2022	

Batch R312712		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051771-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10	S	34	20.00	17.29	84.7	85	115	06/02/2022	

Batch R312712		SampType: MSD		Units mg/L		RPD Limit 10					Date Analyzed
SampID: 22051771-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Sulfate		10	S	34	20.00	17.29	82.9	34.23	1.06	06/02/2022	

Batch R312712		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051771-010AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		49	20.00	30.00	95.6	85	115	06/02/2022	

Batch R312712		SampType: MSD		Units mg/L		RPD Limit 10					Date Analyzed
SampID: 22051771-010AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Sulfate		10		49	20.00	30.00	95.9	49.12	0.12	06/02/2022	

SW-846 9214 (TOTAL)

Batch R312788		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
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	06/03/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

SW-846 9214 (TOTAL)

Batch R312788		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.95	1.000	0	95.4	90	110	06/03/2022	

Batch R312788		SampType: MS		Units mg/L							Date Analyzed
SampID: 22050087-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.15	2.000	0.2230	96.2	75	125	06/03/2022	

Batch R312788		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22050087-008AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.16	2.000	0.2230	96.8	2.148	0.56	06/03/2022		

Batch R312788		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051774-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.12	2.000	0.08000	101.8	75	125	06/03/2022	

Batch R312788		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22051774-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.18	2.000	0.08000	105.2	2.117	3.16	06/03/2022		

Batch R312788		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051774-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.11	2.000	0.1290	99.2	75	125	06/03/2022	

Batch R312788		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22051774-008AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.12	2.000	0.1290	99.7	2.114	0.38	06/03/2022		

Batch R312788		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051774-018AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.02	2.000	0.07300	97.6	75	125	06/03/2022	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

SW-846 9214 (TOTAL)

Batch R312788		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 22051774-018AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.05	2.000	0.07300	98.9	2.024	1.33	06/03/2022	

Batch R312788		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 22060095-004AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.27	2.000	0.2560	100.8	75	125	06/03/2022

Batch R312788		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 22060095-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.32	2.000	0.2560	103.4	2.273	2.26	06/03/2022	

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

Batch 193106		SampType: MBLK		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: MBLK-193106										
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	05/27/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	05/27/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/27/2022

Batch 193106		SampType: LCS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: LCS-193106										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.23	2.000	0	111.4	85	115	05/27/2022
Boron		0.0200		0.558	0.5000	0	111.7	85	115	05/27/2022
Calcium		0.100		2.80	2.500	0	112.0	85	115	05/27/2022

Batch 193106		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 22050087-004CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.25	2.000	0.08460	108.4	75	125	06/02/2022
Boron		0.0200		0.595	0.5000	0.06700	105.5	75	125	06/02/2022
Calcium		0.100	S	42.0	2.500	40.13	74.0	75	125	06/02/2022



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch 193106		SampType: MSD		Units mg/L			RPD Limit 20			
SampID: 22050087-004CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		0.0025		2.25	2.000	0.08460	108.5	2.252	0.09	06/02/2022
Boron		0.0200		0.597	0.5000	0.06700	105.9	0.5946	0.34	06/02/2022
Calcium		0.100		42.3	2.500	40.13	85.6	41.98	0.69	06/02/2022

Batch 193106		SampType: MS		Units mg/L						
SampID: 22051687-019CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	249	2.500	247.5	48.0	75	125	06/01/2022

Batch 193106		SampType: MSD		Units mg/L			RPD Limit 20			
SampID: 22051687-019CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	252	2.500	247.5	188.0	248.7	1.40	06/01/2022

Batch 193127		SampType: MBLK		Units mg/L						
SampID: MBLK-193127										
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	06/01/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	06/01/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	06/01/2022

Batch 193127		SampType: LCS		Units mg/L						
SampID: LCS-193127										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.07	2.000	0	103.4	85	115	06/01/2022
Boron		0.0200		0.517	0.5000	0	103.4	85	115	06/01/2022
Calcium		0.100		2.62	2.500	0	104.7	85	115	06/01/2022

Batch 193229		SampType: MBLK		Units mg/L						
SampID: MBLK-193229										
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	06/02/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	06/02/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	06/02/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch 193229 **SampType:** LCS **Units** mg/L
SampID: LCS-193229

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.14	2.000	0	107.2	85	115	06/02/2022
Boron		0.0200		0.530	0.5000	0	106.0	85	115	06/02/2022
Calcium		0.100		2.69	2.500	0	107.4	85	115	06/02/2022

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

Batch 193106 **SampType:** MBLK **Units** mg/L
SampID: MBLK-193106

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	05/27/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	05/27/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	05/27/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	05/27/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	05/27/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	05/27/2022
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	05/27/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	05/27/2022
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	05/27/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	05/27/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	05/27/2022

Batch 193106 **SampType:** LCS **Units** mg/L
SampID: LCS-193106

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.510	0.5000	0	102.1	80	120	05/27/2022
Arsenic		0.0010		0.545	0.5000	0	109.0	80	120	05/27/2022
Beryllium		0.0010		0.0543	0.0500	0	108.6	80	120	05/27/2022
Cadmium		0.0010		0.0516	0.0500	0	103.1	80	120	05/27/2022
Chromium		0.0015		0.206	0.2000	0	103.2	80	120	05/27/2022
Cobalt		0.0010		0.535	0.5000	0	107.0	80	120	05/27/2022
Lead		0.0010		0.522	0.5000	0	104.4	80	120	05/27/2022
Molybdenum		0.0015		0.505	0.5000	0	101.1	80	120	05/27/2022
Selenium		0.0010		0.522	0.5000	0	104.5	80	120	05/27/2022
Thallium		0.0020		0.244	0.2500	0	97.5	80	120	05/27/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch 193106 **SampType: MS** Units mg/L

SampID: 22050087-004CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.485	0.5000	0	97.0	75	125	05/27/2022
Arsenic		0.0010		0.524	0.5000	0.007459	103.3	75	125	05/27/2022
Beryllium		0.0010		0.0522	0.0500	0	104.3	75	125	05/27/2022
Cadmium		0.0010		0.0487	0.0500	0	97.3	75	125	05/27/2022
Chromium		0.0015		0.190	0.2000	0	94.8	75	125	05/27/2022
Cobalt		0.0010		0.596	0.5000	0.1215	94.9	75	125	05/27/2022
Lead		0.0010		0.501	0.5000	0	100.2	75	125	05/27/2022
Molybdenum		0.0015		0.489	0.5000	0	97.8	75	125	05/27/2022
Selenium		0.0010		0.495	0.5000	0	99.1	75	125	05/27/2022
Thallium		0.0020		0.247	0.2500	0	98.8	75	125	05/27/2022

Batch 193106 **SampType: MSD** Units mg/L

RPD Limit **20**

SampID: 22050087-004CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		0.496	0.5000	0	99.3	0.4848	2.36	05/27/2022
Arsenic		0.0010		0.529	0.5000	0.007459	104.2	0.5240	0.89	05/27/2022
Beryllium		0.0010		0.0530	0.0500	0	106.1	0.05216	1.67	05/27/2022
Cadmium		0.0010		0.0505	0.0500	0	100.9	0.04867	3.64	05/27/2022
Chromium		0.0015		0.190	0.2000	0	95.1	0.1896	0.35	05/27/2022
Cobalt		0.0010		0.609	0.5000	0.1215	97.6	0.5958	2.22	05/27/2022
Lead		0.0010		0.496	0.5000	0	99.2	0.5010	0.98	05/27/2022
Molybdenum		0.0015		0.507	0.5000	0	101.5	0.4892	3.64	05/27/2022
Selenium		0.0010		0.493	0.5000	0	98.6	0.4954	0.46	05/27/2022
Thallium		0.0020		0.235	0.2500	0	94.0	0.2469	4.91	05/27/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch 193127 **SampType: MBLK** Units **mg/L**
 SampID: MBLK-193127

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	05/31/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	05/31/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	05/31/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	05/31/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	06/01/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	05/31/2022
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	05/31/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	05/31/2022
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	05/31/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	05/31/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	05/31/2022

Batch 193127 **SampType: LCS** Units **mg/L**
 SampID: LCS-193127

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.521	0.5000	0	104.1	85	115	05/31/2022
Arsenic		0.0010		0.555	0.5000	0	111.0	85	115	05/31/2022
Beryllium		0.0010		0.0540	0.0500	0	108.0	85	115	05/31/2022
Cadmium		0.0010		0.0538	0.0500	0	107.6	85	115	05/31/2022
Chromium		0.0015		0.210	0.2000	0	105.2	85	115	06/01/2022
Cobalt		0.0010		0.529	0.5000	0	105.8	85	115	05/31/2022
Lead		0.0010		0.537	0.5000	0	107.4	85	115	05/31/2022
Lithium	*	0.0030		0.554	0.5000	0	110.9	85	115	06/03/2022
Molybdenum		0.0015		0.506	0.5000	0	101.2	85	115	05/31/2022
Selenium		0.0010		0.536	0.5000	0	107.1	85	115	05/31/2022
Thallium		0.0020		0.270	0.2500	0	107.8	85	115	05/31/2022

Batch 193229 **SampType: MBLK** Units **mg/L**
 SampID: MBLK-193229

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	06/02/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	06/03/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	06/03/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

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

Batch 193229		SampType: LCS		Units mg/L						
SampID: LCS-193229										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Cadmium		0.0010		0.0524	0.0500	0	104.8	85	115	06/02/2022
Lithium	*	0.0030		0.570	0.5000	0	114.0	85	115	06/03/2022
Selenium		0.0010		0.567	0.5000	0	113.4	85	115	06/03/2022

Batch 193229		SampType: MS		Units mg/L						
SampID: 22050087-004CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Lithium	*	0.0030		0.572	0.5000	0.03210	107.9	75	125	06/03/2022

Batch 193229		SampType: MSD		Units mg/L						RPD Limit 20	
SampID: 22050087-004CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Lithium	*	0.0030		0.596	0.5000	0.03210	112.7	0.5718	4.09	06/03/2022	

SW-846 7470A (TOTAL)

Batch 193178		SampType: MBLK		Units mg/L						
SampID: MBLK-193178										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	05/31/2022

Batch 193178		SampType: LCS		Units mg/L						
SampID: LCS-193178										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00523	0.0050	0	104.5	85	115	05/31/2022

Batch 193178		SampType: MS		Units mg/L						
SampID: 22050087-005CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00436	0.0050	0	87.2	75	125	06/01/2022

Batch 193178		SampType: MSD		Units mg/L						RPD Limit 15	
SampID: 22050087-005CMSD											
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	0.004362	1.76	06/01/2022	



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

SW-846 7470A (TOTAL)

Batch 193178		SampType: MS		Units mg/L							Date Analyzed
SampID: 22051687-003CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		0.00485	0.0050	0	97.1	75	125	05/31/2022	

Batch 193178		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 22051687-003CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Mercury		0.00020		0.00478	0.0050	0	95.6	0.004854	1.52	05/31/2022		



Receiving Check List

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

Client: Southern Illinois Power Cooperation

Work Order: 22050087

Client Project: Groundwater Monitoring

Report Date: 08-Jul-22

Carrier: Joe Riley

Received By: EAH

Completed by:

Reviewed by:

On:

On:

26-May-22

26-May-22

Payton Yoch

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- | | | | | |
|---|---|---|--------------------------------------|----------------------------------|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> | Temp °C 4.8 |
| 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"/> | | |

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 <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 78198 - pyoch - 5/26/2022 9:08:00 AM

CHAIN OF CUSTODY

pg. 1 of 2

Work order # 22050087

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: ICE BLUE ICE NO ICE 4.8 °C LTG# 5
Preserved in: LAB FIELD **FOR LAB USE ONLY**
Lab Notes: PH 7.8/9.8, PM 5/26/22

Client Comments: *DUP
 ICP: Ba B Ca
 ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti
 Field Parameters = elevations, pH, temp., conductivity, DO, purge volume, 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: Groundwater Monitoring
Sample Collector's Name: J. RILEY A. BRIDGES

Results Requested: Standard 1-2 Day (100% Surcharge)
 Other 3 Day (50% Surcharge)
Billing Instructions:
and Type of Containers:

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3						
<u>22050087-001</u>	EBG	<u>05/24/22 1115</u>	1	3						
<u>-002</u>	EP-1	<u>05/24/22 1300</u>	1	3						
<u>-003</u>	EP-2	<u>05/24/22 1520</u>	1	3						
<u>-004</u>	EP-3	<u>05/25/22 1025</u>	1	3						
<u>-005</u>	EP-4	<u>05/25/22 1130</u>	1	3						
<u>-006</u>	EP-5	<u>05/24/22 1207</u>	1	3						
<u>-007</u>	EP-6 *	<u>05/24/22 1415</u>	1	3						
<u>-008</u>	EP-7 <u>3x 0846</u>	<u>05/25/22 0846</u>	1	3						
<u>-009</u>	Equipment Blank	<u>05/25/22 1134</u>	1	3						
<u>-010</u>	Field Blank	<u>05/24/22 1524</u>	1	3						

MATRIX	INDICATE ANALYSIS REQUESTED										
	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	Sulfate	TDS		
Aqueous											
Groundwater	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
<u>[Signature]</u>	<u>05/26/22 0735</u>	<u>[Signature]</u>	<u>5/26/22 0735</u>

TEKLAB, Inc.

Sample Delivery Group: L1499879

Samples Received: 05/31/2022

Project Number:

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

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

22050087-001 L1499879-01 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 11:15 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

22050087-002 L1499879-02 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 13:00 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

22050087-003 L1499879-03 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 15:20 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

22050087-004 L1499879-04 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 10:28 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

22050087-005 L1499879-05 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 11:30 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

22050087-006 L1499879-06 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 12:07 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

22050087-007 L1499879-07 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 14:15 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

22050087-008 L1499879-08 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 08:48 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

22050087-009 L1499879-09 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/25/22 11:34 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

22050087-010 L1499879-10 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 15:24 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	RGT	Mt. Juliet, TN

22050087-011 L1499879-11 Non-Potable Water

Collected by J.R. / A.B. Collected date/time 05/24/22 14:15 Received date/time 05/31/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1879107	1	06/15/22 08:30	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1872769	1	06/09/22 14:00	06/22/22 10:34	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1872769	1	06/09/22 14:00	06/10/22 18:10	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 Gl

⁸ Al

⁹ Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.63		0.226	0.528	06/22/2022 10:34	WG1879107
(T) Barium	112			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	92.2			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.68		0.271	0.592	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0495	<u>U</u>	0.149	0.267	06/10/2022 18:10	WG1872769
(T) Barium-133	94.2			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.888		0.208	0.563	06/22/2022 10:34	WG1879107
(T) Barium	88.6			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	100			79.0-136	06/22/2022 10:34	WG1879107

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.950		0.242	0.600	06/22/2022 10:34	WG1872769

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0628	<u>U</u>	0.123	0.207	06/10/2022 18:10	WG1872769
(T) Barium-133	87.8			30.0-143	06/10/2022 18:10	WG1872769

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.933		0.202	0.546	06/22/2022 10:34	WG1879107
(T) Barium	94.4			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	95.9			79.0-136	06/22/2022 10:34	WG1879107

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.965		0.230	0.586	06/22/2022 10:34	WG1872769

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0325	<u>U</u>	0.110	0.214	06/10/2022 18:10	WG1872769
(T) Barium-133	94.3			30.0-143	06/10/2022 18:10	WG1872769

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.47		0.182	0.455	06/22/2022 10:34	WG1879107
(T) Barium	103			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	101			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.60		0.257	0.527	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.132	J	0.181	0.266	06/10/2022 18:10	WG1872769
(T) Barium-133	87.0			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.25		0.186	0.477	06/22/2022 10:34	WG1879107
(T) Barium	91.5			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	104			79.0-136	06/22/2022 10:34	WG1879107

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.39		0.283	0.574	06/22/2022 10:34	WG1872769

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.144	J	0.213	0.319	06/10/2022 18:10	WG1872769
(T) Barium-133	85.5			30.0-143	06/10/2022 18:10	WG1872769

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.287	<u>U</u>	0.166	0.477	06/22/2022 10:34	WG1879107
(T) Barium	106			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	103			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.519	<u>J</u>	0.272	0.538	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.232	<u>J</u>	0.216	0.249	06/10/2022 18:10	WG1872769
(T) Barium-133	84.0			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.183	<u>U</u>	0.237	0.682	06/22/2022 10:34	WG1879107
(T) Barium	102			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	98.7			79.0-136	06/22/2022 10:34	WG1879107

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.295	<u>U</u>	0.288	0.725	06/22/2022 10:34	WG1872769

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.112	<u>J</u>	0.164	0.246	06/10/2022 18:10	WG1872769
(T) Barium-133	95.7			30.0-143	06/10/2022 18:10	WG1872769

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.23		0.319	0.874	06/22/2022 10:34	WG1879107
(T) Barium	82.6			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	98.5			79.0-136	06/22/2022 10:34	WG1879107

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.47		0.389	0.914	06/22/2022 10:34	WG1872769

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.242	J	0.223	0.266	06/10/2022 18:10	WG1872769
(T) Barium-133	80.8			30.0-143	06/10/2022 18:10	WG1872769

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.657	J	0.236	0.657	06/22/2022 10:34	WG1879107
(T) Barium	109			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	102			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.698	J	0.274	0.710	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0409	U	0.139	0.270	06/10/2022 18:10	WG1872769
(T) Barium-133	85.9			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.365	<u>U</u>	0.285	0.806	06/22/2022 10:34	WG1879107
(T) Barium	109			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	99.9			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.365	<u>U</u>	0.294	0.838	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0400	<u>U</u>	0.0715	0.231	06/10/2022 18:10	WG1872769
(T) Barium-133	91.3			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.19		0.361	0.956	06/22/2022 10:34	WG1879107
(T) Barium	96.7			62.0-143	06/22/2022 10:34	WG1879107
(T) Yttrium	91.5			79.0-136	06/22/2022 10:34	WG1879107

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.37		0.389	0.964	06/22/2022 10:34	WG1872769

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.188		0.145	0.127	06/10/2022 18:10	WG1872769
(T) Barium-133	108			30.0-143	06/10/2022 18:10	WG1872769

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3811243-1 06/20/22 16:20

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	0.239	<u>J</u>	0.178	0.334
(T) Barium	107		107	
(T) Yttrium	94.8		94.8	

L1494363-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1494363-07 06/24/22 15:08 • (DUP) R3811243-5 06/24/22 15:08

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-228	0.770	0.199	0.357	0.197	0.435	0.357	1	118	1.20	<u>U</u>	20	3
(T) Barium	103			104	104							
(T) Yttrium	109			107	107							

Laboratory Control Sample (LCS)

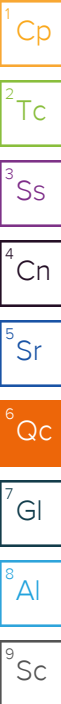
(LCS) R3811243-2 06/20/22 16:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.41	88.1	80.0-120	
(T) Barium			93.1		
(T) Yttrium			99.4		

L1494363-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1494363-05 06/22/22 10:34 • (MS) R3811243-3 06/20/22 16:20 • (MSD) R3811243-4 06/20/22 16:20

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	1.59	18.9	17.8	104	97.1	1	70.0-130			5.99		20
(T) Barium		95.0			99.1	109							
(T) Yttrium		108			94.3	97.1							



Method Blank (MB)

(MB) R3803155-1 06/10/22 18:09

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0176	<u>U</u>	0.0489	0.0800
(T) Barium-133	106		106	

L1491809-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1491809-13 06/10/22 18:09 • (DUP) R3803155-5 06/10/22 18:09

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.203	0.193	0.240	0.341	0.279	0.240	1	50.7	0.407	<u>J</u>	20	3
(T) Barium-133	108			100	100							

Laboratory Control Sample (LCS)

(LCS) R3803155-2 06/10/22 18:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.53	110	80.0-120	
(T) Barium-133			103		

L1499879-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1499879-11 06/10/22 18:10 • (MS) R3803155-3 06/10/22 18:09 • (MSD) R3803155-4 06/10/22 18:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.188	18.0	19.8	88.8	98.0	1	75.0-125			9.75		20
(T) Barium-133		108			95.7	87.1							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

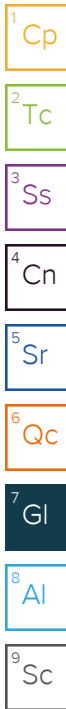
Guide to Reading and Understanding Your Laboratory Report

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.



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.



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: QC Level:

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..

Project#

Contact: Email:
Requested Due Date: Billing/PO:

Phone:

11499879

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	22050087-001	5/24/22 11.15	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-02	22050087-002	5/24/22 13.00	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-03	22050087-003	5/24/22 15.20	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-04	22050087-004	5/24/22 10.28	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-05	22050087-005	5/24/22 11.30	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-06	22050087-006	5/24/22 12.07	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-07	22050087-007	5/24/22 14.15	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-08	22050087-008	5/24/22 08.48	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-09	22050087-009	5/25/22 11.34	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-10	22050087-010	5/24/22 15.24	HNO3	Aqueous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-11	22050087-011	5/24/22 14.15	HNO3	Aqueous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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
<i>[Signature]</i>		<i>[Signature]</i>	5/31/22 10 ⁰⁰

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler Teklab, Inc. protects clients' confidential information as directed by local, state or federal law

IMP Sample Receipt Checklist
 5821 5897 6961
 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
AMB

October 10, 2022

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: 22080134

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 9/8/2022 8:45:00 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: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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)

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Qualifiers

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Cooler Receipt Temp: 0.6 °C

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

Radium-226 and Radium-228 analysis was performed by Pace Analytical Services, LLC. 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: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-001
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EBG

Collection Date: 09/06/2022 12:19

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	09/06/2022 12:19	R318074
Elevation of groundwater surface	*	0	0		516.42	ft	1	09/06/2022 12:19	R318074
Measuring Point Elevation	*	0	0		524.87	ft	1	09/06/2022 12:19	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.56	gal	1	09/06/2022 12:19	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		3.5	NTU	1	09/06/2022 12:19	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		180	mV	1	09/06/2022 12:19	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.530	mS/cm	1	09/06/2022 12:19	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		19.4	°C	1	09/06/2022 12:19	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		4.23	mg/L	1	09/06/2022 12:19	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.60		1	09/06/2022 12:19	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	322	mg/L	1	10/06/2022 11:11	R319177
<i>Sample required re-analysis out of hold time.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		10	mg/L	1	09/14/2022 12:51	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		101	mg/L	5	09/14/2022 12:58	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.61	mg/L	1	09/12/2022 14:57	R317927
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0491	mg/L	1	09/09/2022 10:52	196431
Boron	NELAP	0.0090	0.020	J	0.012	mg/L	1	09/09/2022 10:52	196431
Calcium	NELAP	0.0350	0.100		10.9	mg/L	1	09/09/2022 10:52	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:09	196431
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:09	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/14/2022 6:27	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 12:09	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 2:41	196431
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	09/14/2022 6:27	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:09	196431
Lithium	*	0.0015	0.0030		0.0141	mg/L	5	09/12/2022 12:09	196431
Molybdenum	NELAP	0.0006	0.0015	J	0.0012	mg/L	5	09/12/2022 12:09	196431
Selenium	NELAP	0.0006	0.0010	J	0.0006	mg/L	5	09/12/2022 12:09	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 6:27	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:23	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 09/06/2022 12:19

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-002
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-1

Collection Date: 09/06/2022 14:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.32	ft	1	09/06/2022 14:37	R318074
Elevation of groundwater surface	*	0	0		511.40	ft	1	09/06/2022 14:37	R318074
Measuring Point Elevation	*	0	0		519.72	ft	1	09/06/2022 14:37	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.91	gal	1	09/06/2022 14:37	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/06/2022 14:37	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		201	mV	1	09/06/2022 14:37	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.80	mS/cm	1	09/06/2022 14:37	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.6	°C	1	09/06/2022 14:37	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.22	mg/L	1	09/06/2022 14:37	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.21		1	09/06/2022 14:37	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	2600	mg/L	1	10/06/2022 11:11	R319177
<i>Sample required re-analysis out of hold time.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		35	mg/L	1	09/14/2022 12:59	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1570	mg/L	50	09/14/2022 13:19	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.21	mg/L	1	09/12/2022 15:02	R317927
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0170	mg/L	1	09/09/2022 11:02	196431
Boron	NELAP	0.0090	0.0200		1.16	mg/L	1	09/09/2022 11:02	196431
Calcium	NELAP	0.0350	0.100		476	mg/L	1	09/09/2022 11:02	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:15	196431
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	09/12/2022 12:15	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/14/2022 6:33	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 12:15	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 2:48	196431
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/14/2022 6:33	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:15	196431
Lithium	*	0.0015	0.0030		0.0120	mg/L	5	09/12/2022 12:15	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 12:15	196431
Selenium	NELAP	0.0006	0.0010		0.0015	mg/L	5	09/12/2022 12:15	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 6:33	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:26	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-002

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 09/06/2022 14:37

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-003
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-2

Collection Date: 09/07/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		10.40	ft	1	09/07/2022 11:25	R318074
Elevation of groundwater surface	*	0	0		503.39	ft	1	09/07/2022 11:25	R318074
Measuring Point Elevation	*	0	0		513.79	ft	1	09/07/2022 11:25	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	09/07/2022 11:25	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/07/2022 11:25	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		123	mV	1	09/07/2022 11:25	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		3.02	mS/cm	1	09/07/2022 11:25	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		20.2	°C	1	09/07/2022 11:25	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		1.76	mg/L	1	09/07/2022 11:25	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.19		1	09/07/2022 11:25	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		2580	mg/L	1	09/12/2022 11:56	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		44	mg/L	1	09/14/2022 13:21	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1760	mg/L	50	09/14/2022 13:26	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.47	mg/L	1	09/14/2022 9:09	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0205	mg/L	1	09/09/2022 11:06	196431
Boron	NELAP	0.0090	0.0200		0.408	mg/L	1	09/09/2022 11:06	196431
Calcium	NELAP	0.0350	0.100		349	mg/L	1	09/09/2022 11:06	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:21	196431
Arsenic	NELAP	0.0004	0.0010		0.0016	mg/L	5	09/12/2022 12:21	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 2:54	196431
Cadmium	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	09/12/2022 12:21	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 10:19	196431
Cobalt	NELAP	0.0001	0.0010		0.0325	mg/L	5	09/15/2022 2:54	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:21	196431
Lithium	*	0.0015	0.0030		0.0123	mg/L	5	09/12/2022 12:21	196431
Molybdenum	NELAP	0.0006	0.0015	J	0.0009	mg/L	5	09/12/2022 12:21	196431
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:21	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:24	196431
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:28	196576
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22080134-003
Matrix: GROUNDWATER

Work Order: 22080134
Report Date: 10-Oct-22

Client Sample ID: EP-2
Collection Date: 09/07/2022 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	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-004
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-3

Collection Date: 09/07/2022 12:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		17.00	ft	1	09/07/2022 12:27	R318074
Elevation of groundwater surface	*	0	0		501.95	ft	1	09/07/2022 12:27	R318074
Measuring Point Elevation	*	0	0		518.95	ft	1	09/07/2022 12:27	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.17	gal	1	09/07/2022 12:27	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		0.42	NTU	1	09/07/2022 12:27	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		36	mV	1	09/07/2022 12:27	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.34	mS/cm	1	09/07/2022 12:27	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		20.0	°C	1	09/07/2022 12:27	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.11	mg/L	1	09/07/2022 12:27	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.05		1	09/07/2022 12:27	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		670	mg/L	2.5	09/12/2022 11:56	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	2	20		147	mg/L	5	09/14/2022 13:29	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		151	mg/L	5	09/14/2022 13:29	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.21	mg/L	1	09/14/2022 9:11	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0855	mg/L	1	09/09/2022 11:28	196431
Boron	NELAP	0.0090	0.0200		0.0708	mg/L	1	09/09/2022 11:28	196431
Calcium	NELAP	0.0350	0.100		36.2	mg/L	1	09/09/2022 11:28	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:28	196431
Arsenic	NELAP	0.0004	0.0010		0.0070	mg/L	5	09/12/2022 12:28	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 3:00	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 12:28	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 3:00	196431
Cobalt	NELAP	0.0001	0.0010		0.104	mg/L	5	09/15/2022 3:00	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:28	196431
Lithium	*	0.0015	0.0030		0.0270	mg/L	5	09/12/2022 12:28	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 12:28	196431
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:28	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:30	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:30	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-004

Client Sample ID: EP-3

Matrix: GROUNDWATER

Collection Date: 09/07/2022 12:27

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 09/07/2022 13:02

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	09/07/2022 13:02	R318074
Elevation of groundwater surface	*	0	0		512.72	ft	1	09/07/2022 13:02	R318074
Measuring Point Elevation	*	0	0		519.74	ft	1	09/07/2022 13:02	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	09/07/2022 13:02	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/07/2022 13:02	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		77	mV	1	09/07/2022 13:02	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.74	mS/cm	1	09/07/2022 13:02	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		20.9	°C	1	09/07/2022 13:02	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.21	mg/L	1	09/07/2022 13:02	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		5.70		1	09/07/2022 13:02	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		1640	mg/L	2.5	09/12/2022 11:57	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		478	mg/L	10	09/14/2022 13:37	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	123	200		673	mg/L	20	09/14/2022 13:42	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.10	mg/L	1	09/14/2022 9:13	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0236	mg/L	1	09/09/2022 11:33	196431
Boron	NELAP	0.0090	0.0200		11.8	mg/L	1	09/09/2022 11:33	196431
Calcium	NELAP	0.0350	0.100		147	mg/L	1	09/09/2022 11:33	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 12:34	196431
Arsenic	NELAP	0.0004	0.0010		0.0068	mg/L	5	09/12/2022 12:34	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 3:52	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 12:34	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 3:52	196431
Cobalt	NELAP	0.0001	0.0010		0.471	mg/L	5	09/15/2022 3:52	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 12:34	196431
Lithium	*	0.0015	0.0030	J	0.0021	mg/L	5	09/12/2022 12:34	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 12:34	196431
Selenium	NELAP	0.0006	0.0010	J	0.0006	mg/L	5	09/12/2022 12:34	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:36	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:32	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22080134-005
Matrix: GROUNDWATER

Work Order: 22080134
Report Date: 10-Oct-22

Client Sample ID: EP-4

Collection Date: 09/07/2022 13:02

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-006
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-5

Collection Date: 09/06/2022 13:33

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		12.90	ft	1	09/06/2022 13:33	R318074
Elevation of groundwater surface	*	0	0		514.69	ft	1	09/06/2022 13:33	R318074
Measuring Point Elevation	*	0	0		527.59	ft	1	09/06/2022 13:33	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.95	gal	1	09/06/2022 13:33	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/06/2022 13:33	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		188	mV	1	09/06/2022 13:33	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.441	mS/cm	1	09/06/2022 13:33	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		18.4	°C	1	09/06/2022 13:33	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		3.78	mg/L	1	09/06/2022 13:33	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.44		1	09/06/2022 13:33	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		282	mg/L	1	09/12/2022 11:57	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4	J	3	mg/L	1	09/14/2022 13:44	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		114	mg/L	5	09/14/2022 13:50	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.38	mg/L	1	09/14/2022 9:15	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0506	mg/L	1	09/09/2022 11:37	196431
Boron	NELAP	0.0090	0.0200		0.0222	mg/L	1	09/09/2022 12:28	196431
Calcium	NELAP	0.0350	0.100		16.7	mg/L	1	09/09/2022 11:37	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:25	196431
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:25	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 3:58	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 13:25	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 3:58	196431
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/15/2022 3:58	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:25	196431
Lithium	*	0.0015	0.0030	J	0.0023	mg/L	5	09/12/2022 13:25	196431
Molybdenum	NELAP	0.0006	0.0015		0.0017	mg/L	5	09/12/2022 13:25	196431
Selenium	NELAP	0.0006	0.0010		0.0012	mg/L	5	09/12/2022 13:25	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:42	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:35	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22080134-006
Matrix: GROUNDWATER

Work Order: 22080134
Report Date: 10-Oct-22

Client Sample ID: EP-5
Collection Date: 09/06/2022 13:33

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-007
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-6

Collection Date: 09/06/2022 15:44

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		4.32	ft	1	09/06/2022 15:44	R318074
Elevation of groundwater surface	*	0	0		500.79	ft	1	09/06/2022 15:44	R318074
Measuring Point Elevation	*	0	0		505.11	ft	1	09/06/2022 15:44	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.65	gal	1	09/06/2022 15:44	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/06/2022 15:44	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		234	mV	1	09/06/2022 15:44	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		0.298	mS/cm	1	09/06/2022 15:44	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		21.0	°C	1	09/06/2022 15:44	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.78	mg/L	1	09/06/2022 15:44	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		5.09		1	09/06/2022 15:44	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20		216	mg/L	1	09/12/2022 11:57	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		23	mg/L	1	09/14/2022 13:53	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	31	50		64	mg/L	5	09/14/2022 14:11	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10	J	0.07	mg/L	1	09/14/2022 9:26	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0366	mg/L	1	09/09/2022 12:32	196431
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	09/09/2022 12:32	196431
Calcium	NELAP	0.0350	0.100		1.86	mg/L	1	09/09/2022 12:32	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:32	196431
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:32	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 4:04	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 13:32	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 4:04	196431
Cobalt	NELAP	0.0001	0.0010		0.0018	mg/L	5	09/15/2022 4:04	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:32	196431
Lithium	*	0.0015	0.0030		0.0094	mg/L	5	09/12/2022 13:32	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 13:32	196431
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:32	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:49	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:37	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22080134-007
Matrix: GROUNDWATER

Work Order: 22080134
Report Date: 10-Oct-22

Client Sample ID: EP-6

Collection Date: 09/06/2022 15:44

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-008
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: EP-7

Collection Date: 09/07/2022 10:42

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		14.42	ft	1	09/07/2022 10:42	R318074
Elevation of groundwater surface	*	0	0		501.02	ft	1	09/07/2022 10:42	R318074
Measuring Point Elevation	*	0	0		515.44	ft	1	09/07/2022 10:42	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		1.04	gal	1	09/07/2022 10:42	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/07/2022 10:42	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		87	mV	1	09/07/2022 10:42	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		1.79	mS/cm	1	09/07/2022 10:42	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		19.5	°C	1	09/07/2022 10:42	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.14	mg/L	1	09/07/2022 10:42	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		5.66		1	09/07/2022 10:42	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	40	50		800	mg/L	2.5	09/12/2022 11:58	R317996
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	5	40		249	mg/L	10	09/14/2022 14:14	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	61	100		326	mg/L	10	09/14/2022 14:14	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.20	mg/L	1	09/14/2022 9:28	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0360	mg/L	1	09/09/2022 12:38	196431
Boron	NELAP	0.0090	0.0200		0.667	mg/L	1	09/09/2022 12:38	196431
Calcium	NELAP	0.0350	0.100		93.5	mg/L	1	09/09/2022 12:38	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:38	196431
Arsenic	NELAP	0.0004	0.0010		0.0086	mg/L	5	09/12/2022 13:38	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 4:11	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 13:38	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 4:11	196431
Cobalt	NELAP	0.0001	0.0010		0.190	mg/L	5	09/15/2022 4:11	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:38	196431
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	09/12/2022 13:38	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 13:38	196431
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	09/12/2022 13:38	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 7:55	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:44	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 09/07/2022 10:42

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 09/07/2022 13:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	< 20	mg/L	1	10/06/2022 11:11	R319177
<i>Sample required re-analysis out of hold time.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	09/14/2022 14:24	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	09/14/2022 14:24	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	09/14/2022 9:30	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	09/09/2022 12:49	196431
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	09/09/2022 12:49	196431
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	09/09/2022 12:49	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 14:04	196431
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 14:04	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/14/2022 6:40	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 14:04	196431
Chromium	NELAP	0.0007	0.0015	S	< 0.0015	mg/L	5	09/15/2022 4:30	196431
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/14/2022 6:40	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 14:04	196431
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	09/12/2022 14:04	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 14:04	196431
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 14:04	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 6:40	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<i>Matrix spike recovered outside upper control limits for Cr. Sample results are below the reporting limit. Data is reportable.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:46	196576
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Lab ID: 22080134-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 09/06/2022 15:54

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	< 20	mg/L	1	10/06/2022 11:11	R319177
<i>Sample required re-analysis out of hold time.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		< 4	mg/L	1	09/14/2022 14:27	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	6	10		< 10	mg/L	1	09/14/2022 14:26	R318056
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	09/14/2022 9:33	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	09/09/2022 13:08	196431
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	09/09/2022 13:08	196431
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	09/09/2022 13:08	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:44	196431
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:44	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 4:17	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 13:44	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 4:17	196431
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/15/2022 4:17	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:44	196431
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	09/12/2022 13:44	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 13:44	196431
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:44	196431
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/14/2022 8:01	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/15/2022 11:48	196576
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Laboratory Results

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

Client: Southern Illinois Power Cooperation
 Client Project: Groundwater Monitoring
 Lab ID: 22080134-011
 Matrix: GROUNDWATER

Work Order: 22080134
 Report Date: 10-Oct-22

Client Sample ID: Field Duplicate

Collection Date: 09/06/2022 14:37

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS									
Depth to water from measuring point	*	0	0		8.32	ft	1	09/06/2022 14:37	R318074
Elevation of groundwater surface	*	0	0		511.40	ft	1	09/06/2022 14:37	R318074
Measuring Point Elevation	*	0	0		519.72	ft	1	09/06/2022 14:37	R318074
FIELD PURGE VOLUME									
Purge Volume	*	0	0		0.91	gal	1	09/06/2022 14:37	R318074
STANDARD METHODS 2130 B FIELD									
Turbidity	*	1.0	1.0		< 1.0	NTU	1	09/06/2022 14:37	R318074
STANDARD METHODS 18TH ED. 2580 B FIELD									
Oxidation-Reduction Potential	*	-300	-300		201	mV	1	09/06/2022 14:37	R318074
STANDARD METHODS 2510 B FIELD									
Spec. Conductance, Field	*	0	0		2.80	mS/cm	1	09/06/2022 14:37	R318074
STANDARD METHODS 2550 B FIELD									
Temperature	*	0	0		17.6	°C	1	09/06/2022 14:37	R318074
STANDARD METHODS 4500-O G FIELD									
Oxygen, Dissolved	*	0	0		0.22	mg/L	1	09/06/2022 14:37	R318074
SW-846 9040B FIELD									
pH	*	0	1.00		6.21		1	09/06/2022 14:37	R318074
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	16	20	H	2570	mg/L	1	10/06/2022 11:12	R319177
<i>Sample required re-analysis out of hold time.</i>									
STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011									
Chloride	NELAP	1	4		34	mg/L	1	09/14/2022 14:30	R318019
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		1590	mg/L	50	09/16/2022 9:49	R318144
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		0.22	mg/L	1	09/14/2022 9:36	R318011
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	0.0007	0.0025		0.0173	mg/L	1	09/09/2022 13:50	196431
Boron	NELAP	0.0090	0.0200		1.18	mg/L	1	09/09/2022 13:50	196431
Calcium	NELAP	0.0350	0.100		481	mg/L	1	09/09/2022 13:50	196431
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/12/2022 13:51	196431
Arsenic	NELAP	0.0004	0.0010	J	0.0004	mg/L	5	09/12/2022 13:51	196431
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/15/2022 4:23	196431
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/12/2022 13:51	196431
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/15/2022 4:23	196431
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/15/2022 4:23	196431
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/12/2022 13:51	196431
Lithium	*	0.0015	0.0030		0.0119	mg/L	5	09/12/2022 13:51	196431
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	09/12/2022 13:51	196431
Selenium	NELAP	0.0006	0.0010		0.0013	mg/L	5	09/12/2022 13:51	196431
Thallium	NELAP	0.0010	0.0020	J	0.0010	mg/L	5	09/14/2022 9:34	196431
<i>PQL recovered outside the upper control limits for Cr. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020	J	0.00006	mg/L	1	09/15/2022 11:50	196576



Laboratory Results

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

Client: Southern Illinois Power Cooperation
Client Project: Groundwater Monitoring
Lab ID: 22080134-011
Matrix: GROUNDWATER

Work Order: 22080134
Report Date: 10-Oct-22
Client Sample ID: Field Duplicate
Collection Date: 09/06/2022 14:37

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	09/16/2022 0:00	R318593
Radium-228	*	0	0		See Attached	pci/L	1	09/16/2022 0:00	R318593



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

STANDARD METHODS 2510 B FIELD

Batch R318074 **SampType: LCS** Units **µS/cm**

SampID: LCS-R318074

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		1400	1409	0	99.5	90	110	09/07/2022
Spec. Conductance, Field	*	0		1430	1409	0	101.6	90	110	09/06/2022

SW-846 9040B FIELD

Batch R318074 **SampType: LCS** Units

SampID: LCS-R318074

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		6.96	7.000	0	99.4	98.57	101.4	09/06/2022
pH	*	1.00		7.05	7.000	0	100.7	98.57	101.4	09/07/2022

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R317996 **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	09/12/2022

Batch R317996 **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		954	1000	0	95.4	90	110	09/12/2022

Batch R317996 **SampType: DUP** Units **mg/L** RPD Limit: **5**

SampID: 22090535-001ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		2760				2736	0.95	09/12/2022

Batch R319177 **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	10/06/2022
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	10/06/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R319177		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		968	1000	0	96.8	90	110	10/06/2022
Total Dissolved Solids		20		972	1000	0	97.2	90	110	10/06/2022

Batch R319177		SampType: DUP		Units mg/L						
SampID: 22082027-016ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		706				698.0	1.14	10/06/2022

RPD Limit: 5

Batch R319177		SampType: DUP		Units mg/L						
SampID: 22082027-019ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		3330				3320	0.30	10/06/2022

RPD Limit: 5

Batch R319177		SampType: DUP		Units mg/L						
SampID: 22091019-008ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20	H	784				782.0	0.26	10/06/2022

RPD Limit: 5

Batch R319177		SampType: DUP		Units mg/L						
SampID: 22100200-001ADUP										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50		1870				1835	1.89	10/06/2022

RPD Limit: 5

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

Batch R318019		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	09/14/2022

Batch R318019		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	98.0	90	110	09/14/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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

Batch R318019 SampType: MS Units mg/L

SampID: 22090375-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		161	100.0	72.00	88.9	85	115	09/14/2022

Batch R318019 SampType: MSD Units mg/L

RPD Limit: 15

SampID: 22090375-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		20		162	100.0	72.00	90.3	160.9	0.88	09/14/2022

Batch R318019 SampType: MS Units mg/L

SampID: 22090533-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		200		1980	1000	1087	89.6	85	115	09/14/2022

Batch R318019 SampType: MSD Units mg/L

RPD Limit: 15

SampID: 22090533-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		200		1980	1000	1087	88.9	1982	0.32	09/14/2022

Batch R318019 SampType: MS Units mg/L

SampID: 22090537-003AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		2000		18500	10000	9784	87.3	85	115	09/14/2022

Batch R318019 SampType: MSD Units mg/L

RPD Limit: 15

SampID: 22090537-003AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		2000		18600	10000	9784	87.8	18510	0.31	09/14/2022

SW-846 9036 (TOTAL)

Batch R318056 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	09/14/2022



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

SW-846 9036 (TOTAL)

Batch R318056		SampType: LCS		Units mg/L							Date Analyzed
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	94.0	90	110	09/14/2022	

Batch R318056		SampType: MS		Units mg/L							Date Analyzed
SampID: 22080632-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		29	20.00	11.39	90.4	85	115	09/14/2022	

Batch R318056		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22080632-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		10		32	20.00	11.39	103.6	29.48	8.51	09/14/2022		

Batch R318144		SampType: MBLK		Units mg/L							Date Analyzed
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	09/16/2022	

Batch R318144		SampType: LCS		Units mg/L							Date Analyzed
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	94.4	90	110	09/16/2022	

Batch R318144		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090533-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		1000		3710	2000	1787	95.9	90	110	09/16/2022	

Batch R318144		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22090533-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		1000		3880	2000	1787	104.8	3705	4.68	09/16/2022		

Batch R318144		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090537-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10000		30000	20000	10220	98.9	90	110	09/16/2022	



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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

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SW-846 9036 (TOTAL)

Batch R318144		SampType: MSD		Units mg/L				RPD Limit: 10			Date Analyzed
SampID: 22090537-003AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10000		30400	20000	10220	100.9	30000	1.32	09/16/2022	

Batch R318144		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 22090712-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		100		449	200.0	268.1	90.3	85	115	09/16/2022

Batch R318144		SampType: MSD		Units mg/L				RPD Limit: 10			Date Analyzed
SampID: 22090712-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		482	200.0	268.1	107.1	448.8	7.21	09/16/2022	

SW-846 9214 (TOTAL)

Batch R317927		SampType: MBLK		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: MBLK										
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	09/12/2022

Batch R317927		SampType: LCS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		0.99	1.000	0	98.9	90	110	09/12/2022

Batch R317927		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 22080111-008AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		2.41	2.000	0.2150	109.6	75	125	09/12/2022

Batch R317927		SampType: MSD		Units mg/L				RPD Limit: 15			Date Analyzed
SampID: 22080111-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.39	2.000	0.2150	108.6	2.408	0.92	09/12/2022	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

SW-846 9214 (TOTAL)

Batch R317927		SampType: MS		Units mg/L							
SampID: 22080111-016AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.08	2.000	0	104.2	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							
SampID: 22080111-016AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.13	2.000	0	106.4	2.085	2.04	09/12/2022	

Batch R317927		SampType: MS		Units mg/L							
SampID: 22090111-008BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.13	2.000	0.1060	101.2	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							
SampID: 22090111-008BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.21	2.000	0.1060	105.3	2.130	3.78	09/12/2022	

Batch R317927		SampType: MS		Units mg/L							
SampID: 22090111-015BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.44	2.000	0.3180	106.0	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							
SampID: 22090111-015BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.69	2.000	0.3180	118.6	2.438	9.79	09/12/2022	

Batch R317927		SampType: MS		Units mg/L							
SampID: 22090111-016BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.28	2.000	0.2080	103.5	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							
SampID: 22090111-016BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.36	2.000	0.2080	107.8	2.278	3.66	09/12/2022	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

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SW-846 9214 (TOTAL)

Batch R317927		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090111-024BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.97	2.000	0.05300	95.9	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22090111-024BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		1.93	2.000	0.05300	93.6	1.971	2.31	09/12/2022		

Batch R317927		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090111-030BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.34	2.000	0.2470	104.7	75	125	09/12/2022	

Batch R317927		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22090111-030BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.39	2.000	0.2470	107.0	2.341	1.99	09/12/2022		

Batch R318011		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
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	09/14/2022	

Batch R318011		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.06	1.000	0	106.1	90	110	09/14/2022	

Batch R318011		SampType: MS		Units mg/L							Date Analyzed
SampID: 22080134-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.48	2.000	0.3750	105.4	75	125	09/14/2022	

Batch R318011		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 22080134-006AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.49	2.000	0.3750	106.0	2.482	0.48	09/14/2022		



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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

SW-846 9214 (TOTAL)

Batch R318011		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090392-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.66	2.000	0.4610	109.8	75	125	09/14/2022	

Batch R318011		SampType: MSD		Units mg/L		RPD Limit: 15					Date Analyzed
SampID: 22090392-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Fluoride		0.10		2.60	2.000	0.4610	106.9	2.658	2.24	09/14/2022	

Batch R318011		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090533-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.57	2.000	0.5040	103.2	75	125	09/14/2022	

Batch R318011		SampType: MSD		Units mg/L		RPD Limit: 15					Date Analyzed
SampID: 22090533-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Fluoride		0.10		2.48	2.000	0.5040	99.0	2.567	3.25	09/14/2022	

Batch R318011		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090537-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		1.00		40.6	20.00	21.92	93.2	75	125	09/14/2022	

Batch R318011		SampType: MSD		Units mg/L		RPD Limit: 15					Date Analyzed
SampID: 22090537-003AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Fluoride		1.00		40.8	20.00	21.92	94.2	40.55	0.49	09/14/2022	

Batch R318011		SampType: MS		Units mg/L							Date Analyzed
SampID: 22090769-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.59	2.000	0.4760	105.6	75	125	09/14/2022	

Batch R318011		SampType: MSD		Units mg/L		RPD Limit: 15					Date Analyzed
SampID: 22090769-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Fluoride		0.10		2.60	2.000	0.4760	106.2	2.588	0.42	09/14/2022	



Quality Control Results

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Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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

Batch 196431 **SampType: MBLK** Units mg/L
 SampID: MBLK-196431

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	09/09/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	09/09/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	09/09/2022

Batch 196431 **SampType: LCS** Units mg/L
 SampID: LCS-196431

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.05	2.000	0	102.3	85	115	09/09/2022
Boron		0.0200		0.526	0.5000	0	105.1	85	115	09/09/2022
Calcium		0.100		2.60	2.500	0	103.8	85	115	09/09/2022

Batch 196431 **SampType: MS** Units mg/L
 SampID: 22080134-009CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.09	2.000	0	104.3	75	125	09/09/2022
Boron		0.0200		0.536	0.5000	0	107.3	75	125	09/09/2022
Calcium		0.100		2.62	2.500	0	105.0	75	125	09/09/2022

Batch 196431 **SampType: MSD** Units mg/L
 SampID: 22080134-009CMSD

RPD Limit: 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		0.0025		2.05	2.000	0	102.7	2.086	1.55	09/09/2022
Boron		0.0200		0.530	0.5000	0	105.9	0.5365	1.29	09/09/2022
Calcium		0.100		2.59	2.500	0	103.6	2.625	1.38	09/09/2022

Batch 196431 **SampType: MS** Units mg/L
 SampID: 22090292-005BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		29.7	2.500	27.21	98.0	75	125	09/09/2022

Batch 196431 **SampType: MSD** Units mg/L
 SampID: 22090292-005BMSD

RPD Limit: 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100		29.3	2.500	27.21	85.2	29.66	1.08	09/09/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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

Batch 196431 **SampType:** MBLK Units mg/L
SampID: MBLK-196431

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	09/09/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	09/09/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	09/09/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	09/09/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	09/15/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	09/09/2022
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	09/09/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	09/09/2022
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	09/09/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	09/09/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	09/09/2022

Batch 196431 **SampType:** LCS Units mg/L
SampID: LCS-196431

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.442	0.5000	0	88.4	85	115	09/12/2022
Arsenic		0.0010		0.463	0.5000	0	92.6	85	115	09/12/2022
Beryllium		0.0010		0.0454	0.0500	0	90.8	85	115	09/14/2022
Cadmium		0.0010		0.0482	0.0500	0	96.5	85	115	09/12/2022
Chromium		0.0015		0.187	0.2000	0	93.3	80	120	09/15/2022
Cobalt		0.0010		0.466	0.5000	0	93.2	85	115	09/14/2022
Lead		0.0010		0.434	0.5000	0	86.8	85	115	09/12/2022
Lithium	*	0.0030		0.460	0.5000	0	92.0	85	115	09/12/2022
Molybdenum		0.0015		0.425	0.5000	0	85.1	85	115	09/12/2022
Selenium		0.0010		0.448	0.5000	0	89.6	85	115	09/12/2022
Thallium		0.0020		0.228	0.2500	0	91.1	85	115	09/14/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

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

Batch 196431 **SampType:** MS Units mg/L
 SampID: 22080134-009CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.453	0.5000	0	90.5	75	125	09/12/2022
Arsenic		0.0010		0.464	0.5000	0	92.9	75	125	09/12/2022
Beryllium		0.0010		0.0500	0.0500	0	99.9	75	125	09/14/2022
Cadmium		0.0010		0.0470	0.0500	0	94.0	75	125	09/12/2022
Chromium		0.0015		0.248	0.2000	0	124.1	75	125	09/15/2022
Cobalt		0.0010		0.484	0.5000	0	96.7	75	125	09/14/2022
Lead		0.0010		0.452	0.5000	0	90.3	75	125	09/12/2022
Lithium	*	0.0030		0.458	0.5000	0	91.7	75	125	09/12/2022
Molybdenum		0.0015		0.420	0.5000	0	83.9	75	125	09/12/2022
Selenium		0.0010		0.448	0.5000	0	89.6	75	125	09/12/2022
Thallium		0.0020		0.225	0.2500	0	90.0	75	125	09/14/2022

Batch 196431 **SampType:** MSD Units mg/L
 SampID: 22080134-009CMSD

RPD Limit: 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0010		0.475	0.5000	0	94.9	0.4527	4.76	09/12/2022
Arsenic		0.0010		0.515	0.5000	0	103.0	0.4643	10.35	09/12/2022
Beryllium		0.0010		0.0543	0.0500	0	108.6	0.04997	8.33	09/14/2022
Cadmium		0.0010		0.0512	0.0500	0	102.4	0.04700	8.50	09/12/2022
Chromium		0.0015	S	0.268	0.2000	0	134.0	0.2482	7.64	09/15/2022
Cobalt		0.0010		0.538	0.5000	0	107.6	0.4837	10.64	09/14/2022
Lead		0.0010		0.480	0.5000	0	96.0	0.4515	6.06	09/12/2022
Lithium	*	0.0030		0.484	0.5000	0	96.8	0.4584	5.43	09/12/2022
Molybdenum		0.0015		0.460	0.5000	0	92.1	0.4196	9.25	09/12/2022
Selenium		0.0010		0.494	0.5000	0	98.8	0.4479	9.81	09/12/2022
Thallium		0.0020		0.255	0.2500	0	102.1	0.2251	12.59	09/14/2022

SW-846 7470A (TOTAL)

Batch 196576 **SampType:** MBLK Units mg/L
 SampID: MBLK-196576

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		< 0.00020	0.0001	0	0	-100	100	09/15/2022



Quality Control Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

SW-846 7470A (TOTAL)

Batch 196576		SampType: LCS		Units mg/L						
SampID: LCS-196576										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00553	0.0050	0	110.5	85	115	09/15/2022

Batch 196576		SampType: MS		Units mg/L						
SampID: 22090616-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00546	0.0050	0	109.3	75	125	09/15/2022

Batch 196576		SampType: MSD		Units mg/L							RPD Limit: 15
SampID: 22090616-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		0.00531	0.0050	0	106.3	0.005463	2.79	09/15/2022	

Batch 196576		SampType: MS		Units mg/L						
SampID: 22090712-002BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		0.00577	0.0050	0	115.4	75	125	09/15/2022

Batch 196576		SampType: MSD		Units mg/L							RPD Limit: 15
SampID: 22090712-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		0.00581	0.0050	0	116.1	0.005770	0.62	09/15/2022	



Receiving Check List

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

Client: Southern Illinois Power Cooperation

Work Order: 22080134

Client Project: Groundwater Monitoring

Report Date: 10-Oct-22

Carrier: Joseph Riley

Received By: RMW

Completed by:

Reviewed by: *Elizabeth A. Hurley*

On:

On:

08-Sep-22

08-Sep-22

Ellie Hopkins

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- | | | | | |
|---|---|---|--------------------------------------|----------------------------------|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> | Temp °C 0.6 |
| 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"/> | | |

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 <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 #82999. - PRY/ehurley - 9/8/2022 11:45:07 AM

CHAIN OF CUSTODY

pg. 2 of 2 Work order # 22080134

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 _____ °C LTG# _____ Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes:
--	--

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 Tl
 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		J. RILEY		Aqueous	Groundwater	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	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)		UNP	HNO3																			
Lab Use Only	Sample Identification	Date/Time Sampled																				
22080134-011	Field Duplicate	09/06/22 1437	1	3	X	X	X	X	X	X	X	X	X	X								

Relinquished By	Date/Time	Received By	Date/Time
	09/08/22 0845	R Willis	9/8/22 845

TEKLAB, Inc.

Sample Delivery Group: L1535048

Samples Received: 09/12/2022

Project Number: 22080134

Description:

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

Entire Report Reviewed By:



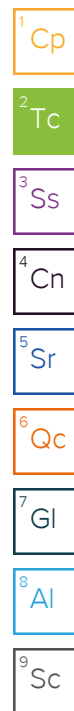
Mark W. Beasley
Project Manager

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

22080134-001 L1535048-01 Non-Potable Water

Collected by JR / AB Collected date/time 09/06/22 12:19 Received date/time 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

22080134-002 L1535048-02 Non-Potable Water

Collected by JR / AB Collected date/time 09/06/22 14:37 Received date/time 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-003 L1535048-03 Non-Potable Water

Collected by JR / AB Collected date/time 09/07/22 11:25 Received date/time 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-004 L1535048-04 Non-Potable Water

Collected by JR / AB Collected date/time 09/07/22 12:27 Received date/time 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-005 L1535048-05 Non-Potable Water

Collected by JR / AB Collected date/time 09/07/22 13:02 Received date/time 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-006 L1535048-06 Non-Potable Water

Collected by JR / AB Collected date/time 09/06/22 13:33 Received date/time 09/12/22 09:45

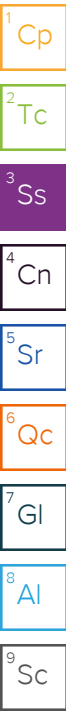
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

22080134-007 L1535048-07 Non-Potable Water

Collected by: JR / AB
 Collected date/time: 09/06/22 15:44
 Received date/time: 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN



22080134-008 L1535048-08 Non-Potable Water

Collected by: JR / AB
 Collected date/time: 09/07/22 10:42
 Received date/time: 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-009 L1535048-09 Non-Potable Water

Collected by: JR / AB
 Collected date/time: 09/07/22 13:05
 Received date/time: 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-010 L1535048-10 Non-Potable Water

Collected by: JR / AB
 Collected date/time: 09/06/22 15:54
 Received date/time: 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	RGT	Mt. Juliet, TN

22080134-011 L1535048-11 Non-Potable Water

Collected by: JR / AB
 Collected date/time: 09/06/22 14:37
 Received date/time: 09/12/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926427	1	09/15/22 09:57	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1925714	1	09/15/22 15:00	09/23/22 10:29	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1925714	1	09/15/22 15:00	09/16/22 12:44	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 Gl

⁸ Al

⁹ Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.315	J	0.166	0.479	09/23/2022 10:29	WG1926427
(T) Barium	92.1			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	103			30.0-136	09/23/2022 10:29	WG1926427

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.328	U	0.224	0.557	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0129	U	0.150	0.284	09/16/2022 12:44	WG1925714
(T) Barium-133	100			30.0-143	09/16/2022 12:44	WG1925714

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.449	<u>U</u>	0.232	0.708	09/23/2022 10:29	WG1926427
(T) Barium	78.7			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	108			30.0-136	09/23/2022 10:29	WG1926427

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.265	<u>U</u>	0.338	0.771	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.265	<u>J</u>	0.246	0.306	09/16/2022 12:44	WG1925714
(T) Barium-133	96.5			30.0-143	09/16/2022 12:44	WG1925714

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.899		0.188	0.505	09/23/2022 10:29	WG1926427
(T) Barium	90.7			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	106			30.0-136	09/23/2022 10:29	WG1926427

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.26		0.325	0.585	09/23/2022 10:29	WG1925714

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.365		0.265	0.296	09/16/2022 12:44	WG1925714
(T) Barium-133	93.1			30.0-143	09/16/2022 12:44	WG1925714

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.000	<u>U</u>	0.214	0.642	09/23/2022 10:29	WG1926427
(T) Barium	69.9			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	102			30.0-136	09/23/2022 10:29	WG1926427

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.141	<u>U</u>	0.273	0.683	09/23/2022 10:29	WG1925714

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.141	<u>J</u>	0.170	0.233	09/16/2022 12:44	WG1925714
(T) Barium-133	94.7			30.0-143	09/16/2022 12:44	WG1925714

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.22		0.255	0.681	09/23/2022 10:29	WG1926427
(T) Barium	88.0			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	110			30.0-136	09/23/2022 10:29	WG1926427

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.49		0.336	0.725	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.276		0.219	0.248	09/16/2022 12:44	WG1925714
(T) Barium-133	92.4			30.0-143	09/16/2022 12:44	WG1925714

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.235	<u>U</u>	0.261	0.779	09/23/2022 10:29	WG1926427
(T) Barium	92.1			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	109			30.0-136	09/23/2022 10:29	WG1926427

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.214	<u>U</u>	0.322	0.808	09/23/2022 10:29	WG1925714

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.214	<u>J</u>	0.189	0.215	09/16/2022 12:44	WG1925714
(T) Barium-133	97.2			30.0-143	09/16/2022 12:44	WG1925714

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.702		0.219	0.605	09/23/2022 10:29	WG1926427
(T) Barium	91.4			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	112			30.0-136	09/23/2022 10:29	WG1926427

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.791		0.250	0.629	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0891	J	0.120	0.173	09/16/2022 12:44	WG1925714
(T) Barium-133	99.5			30.0-143	09/16/2022 12:44	WG1925714

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.731		0.251	0.700	09/23/2022 10:29	WG1926427
(T) Barium	80.2			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	101			30.0-136	09/23/2022 10:29	WG1926427

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.785		0.266	0.713	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0538	J	0.0869	0.138	09/16/2022 12:44	WG1925714
(T) Barium-133	99.7			30.0-143	09/16/2022 12:44	WG1925714

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.407	J	0.207	0.589	09/23/2022 10:29	WG1926427
(T) Barium	95.6			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	105			30.0-136	09/23/2022 10:29	WG1926427

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.490	J	0.243	0.621	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0821	J	0.127	0.198	09/16/2022 12:44	WG1925714
(T) Barium-133	97.3			30.0-143	09/16/2022 12:44	WG1925714

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.149	<u>U</u>	0.187	0.545	09/23/2022 10:29	WG1926427
(T) Barium	105			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	106			30.0-136	09/23/2022 10:29	WG1926427

¹Cp

²Tc

³Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.225	<u>U</u>	0.224	0.577	09/23/2022 10:29	WG1925714

⁴Cn

⁵Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0768	<u>J</u>	0.123	0.190	09/16/2022 12:44	WG1925714
(T) Barium-133	105			30.0-143	09/16/2022 12:44	WG1925714

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.362	<u>U</u>	0.274	0.783	09/23/2022 10:29	WG1926427
(T) Barium	82.4			30.0-143	09/23/2022 10:29	WG1926427
(T) Yttrium	102			30.0-136	09/23/2022 10:29	WG1926427

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.484	<u>U</u>	0.311	0.809	09/23/2022 10:29	WG1925714

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.123	<u>J</u>	0.147	0.202	09/16/2022 12:44	WG1925714
(T) Barium-133	102			30.0-143	09/16/2022 12:44	WG1925714

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

Method Blank (MB)

(MB) R3841523-1 09/23/22 10:29

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.101	<u>U</u>	0.132	0.387
(T) Barium	97.5		97.5	
(T) Yttrium	88.2		88.2	

L1529884-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1529884-05 09/26/22 10:42 • (DUP) R3841523-5 09/26/22 10:42

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	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.57	0.302	0.506	1.91	0.347	0.506	1	19.8	0.748		20	3
(T) Barium	89.7			103	103							
(T) Yttrium	108			103	103							

Laboratory Control Sample (LCS)

(LCS) R3841523-2 09/23/22 10:29

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.06	81.1	80.0-120	
(T) Barium			98.4		
(T) Yttrium			105		

L1529884-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529884-06 09/23/22 10:29 • (MS) R3841523-3 09/23/22 10:29 • (MSD) R3841523-4 09/23/22 10:29

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.929	15.1	17.7	84.9	100	1	70.0-130			15.9		20
(T) Barium		97.0			100	98.5							
(T) Yttrium		96.7			100	106							

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3840156-4 09/17/22 16:37

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.00759	<u>U</u>	0.0258	0.0501
(T) Barium-133	91.5		91.5	

¹Cp

²Tc

³Ss

⁴Cn

L1535051-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1535051-02 09/16/22 12:44 • (DUP) R3840156-3 09/16/22 12:44

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.192	0.215	0.290	0.368	0.225	0.290	1	62.8	0.566		20	3
(T) Barium-133	97.3			96.9	96.9							

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3840156-5 09/17/22 16:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.20	104	80.0-120	
(T) Barium-133			91.3		

⁷Gl

⁸Al

⁹Sc

L1534094-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534094-10 09/16/22 12:44 • (MS) R3840156-1 09/16/22 12:44 • (MSD) R3840156-2 09/16/22 12:44

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.271	16.3	18.9	80.3	93.0	1	75.0-125			14.4		20
(T) Barium-133		94.7			94.2	91.5							

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.



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.



TEKLAB, INC. Chain of Custody

K042

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/Adam Bridges QC Level:

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..

Project#

Contact: Elizabeth Hurley Email: EHurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 33322

Phone:

L1535018

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														
	22080134 - 001	9/6/22 1219	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	01
	22080134 - 002	9/6/22 1437	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	02
	22080134 - 003	9/7/22 1125	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	03
	22080134 - 004	9/7/22 1227	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	04
	22080134 - 005	9/7/22 1302	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	05
	22080134 - 006	9/6/22 1333	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	06
	22080134 - 007	9/6/22 1544	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07
	22080134 - 008	9/7/22 1042	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	08
	22080134 - 009	9/7/22 1305	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	09
	22080134 - 010	9/6/22 1554	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
	22080134 - 011	9/6/22 1437	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11

*Relinquished By	Date/Time	Received By	Date/Time
<i>Michelle Hopkins</i>		<i>Mark Miller</i>	9/12/22 945

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
 pA Screen <0.5 mp/hr: Y N

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

APPENDIX C

2022 Data Usability Assessment Report

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC CCR Groundwater Monitoring

Reviewing Company: Golder Associates USA

Data Evaluator: Victor Garcia

Checked by: Danielle Sylvia Cofelice

Laboratory: Teklab, Inc., Pace Analytical Services, LLC

Matrix: Water Soil Sed. Waste Other:

Project Number: GL21767997

Project Manager: Danielle Sylvia Cofelice

Data Evaluation Date: May 9, 2022

Review Date: May 24, 2022

Lab Job #: 21110629

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? (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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"/>	_____

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 2 _____

QA LEVEL I - DATA VERIFICATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
c) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 3_____
e) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 3_____
f) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 3_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Field dup. met precision criteria (RPD 30%)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 4_____

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 5-8_____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

- 1) The data was evaluated for precision, accuracy, representativeness, completeness, and comparability. Data usability was evaluated following the EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8).
- 2) Samples Field Blank, EP-6, EP-5, and EBG for total dissolved solids were analyzed outside of holding time. The holding time for total dissolved solids is 7 days, the samples were analyzed 8-9 days after sample collection. The laboratory qualified the samples "H" to indicate the problem.
- 3) 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/MDA	Units
Equipment Blank	Radium	Radium-226	0.108 J	0.161	pCi/L
Equipment Blank	Radium	Radium-228	3.06	0.353	pCi/L
Equipment Blank	Radium	Combined Radium	3.16	0.595	pCi/L
Field Blank	Radium	Radium-228	0.465	0.374	pCi/L
Field Blank	Radium	Combined Radium	0.482 J	0.586	pCi/L
MB-R304392	TDS 2540C	Total Dissolved Solids	38	20	mg/L
MB R3774012-1	Radium	Radium-228	0.252 J	0.427	pCi/L

- 4) 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. The affected results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	MDC Primary Sample	MDC Duplicate Sample	Unit	RPD (%)
EP-2	Radiological	Radium-228	0.145 U	1.13	0.529	0.316	pCi/L	72.5
EP-2	Radiological	Combined Radium	0.374 J	1.13	0.813	0.618	pCi/L	101

- 5) Chloride matrix spike and matrix spike duplicate recoveries, associated with batch R304397, are below QC limits. The associated relative percent difference are within QC limits. The spiked sample was not collected from the project site. Data usability is not affected.

QA LEVEL I - DATA VERIFICATION CHECKLIST

- 6) Sulfate matrix spike and matrix spike duplicate recoveries, associated with batch R304397 and R304396, are below QC limits. The associated relative percent difference are within QC limits. The spiked samples were not collected from the project site. Data usability is not affected.
- 7) Boron matrix spike and matrix spike duplicate recoveries, associated with batch 186250, are below QC limits. The associated relative percent difference are within QC limits. The associated results are considered to have potential low bias.
- 8) A calcium matrix spike duplicate recovery, associated with batch 186250, is above QC limits. The associated matrix spike duplicate recovery and relative percent difference are within QC limits. Data usability is not affected.

Definitions:

COC: Chain of Custody

LCS: Laboratory Control Sample

LCS: Laboratory Control Sample

MDL: Method Detection Limit

MS/MSD: Matrix Spike/Matrix Spike Duplicate

QC: Quality Control

QL: Quantitation Limit

RL: Reporting Limit

RPD: Relative Percent Difference

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						
						Anions	Total Dissolved Solids	Total Metals	Mercury	Total Hardness	Radium-226/228
21110629-001	EBG	12/21/2021	EBG	GW	-	X	X	X	X	X	X
21110629-002	EP-1	12/21/2021	EP-1	GW	-	X	X	X	X	X	X
21110629-003	EP-2	12/22/2021	EP-2	GW	-	X	X	X	X	X	X
21110629-004	EP-3	12/22/2021	EP-3	GW	-	X	X	X	X	X	X
21110629-005	EP-4	12/22/2021	EP-4	GW	-	X	X	X	X	X	X
21110629-006	EP-5	12/21/2021	EP-5	GW	-	X	X	X	X	X	X
21110629-007	EP-6	12/22/2021	EP-6	GW	-	X	X	X	X	X	X
21110629-008	EP-7	12/22/2021	EP-7	GW	-	X	X	X	X	X	X
21110629-009	Equipment Blank	12/22/2021	-	WQ	EB	X	X	X	X	X	X
21110629-010	Field Blank	12/22/2021	-	WQ	FB	X	X	X	X	X	X
21110629-011	Field Duplicate	12/22/2021	EP-2	GW	FD	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 CCR Groundwater Monitoring

Project Number: GL21767997

Reviewing Company: Golder Associates USA

Project Manager: Danielle Sylvia Cofelice

Data Evaluator: Danielle Sylvia Cofelice

Data Evaluation Date: May 3, 2022

Checked by: Michael Shadle

Review Date: May 4, 2022

Laboratory: Teklab, Inc., Pace Analytical Services, LLC

Lab Job #: 22021140

Matrix: Water Soil Sed. Waste Other:

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? (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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"/>	_____

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

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 2_____
c) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2_____
d) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Field dup. met precision criteria (RPD 30%)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

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 3-5_____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

- 1) The data was evaluated for precision, accuracy, representativeness, completeness, and comparability. Data usability was evaluated following the EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8).
- 2) 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
Field Blank	Metals	Boron	0.019 J	0.020	mg/L
Equipment Blank	Metals	Boron	0.0302	0.020	mg/L
Equipment Blank	Metals	Calcium	0.064 J	0.10	mg/L
MB R3774012-1	Radium	Radium-228	0.252 J	0.232	pCi/L

- 3) A sulfate matrix spike recovery, associated with batch R308169, is below QC limits. The associated matrix spike duplicate recovery and the relative percent difference are within QC limits. Data usability is not affected.
- 4) Boron and calcium matrix spike recoveries, associated with batch 188407, are above QC limits. The associated matrix spike duplicate recoveries and the relative percent differences are within QC limits. Data usability is not affected.
- 5) Calcium matrix spike and matrix spike duplicate recoveries, associated with batch 188407, are above QC limits. The initial sample result is greater than ten times the spike amount. 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

<i>Lab ID</i>	<i>Field Identification</i>	<i>Collection Date</i>	<i>Location</i>	<i>Matrix</i>	<i>QC Samples</i>						
						<i>Anions</i>	<i>Total Dissolved Solids</i>	<i>Total Metals</i>	<i>Mercury</i>	<i>Total Hardness</i>	<i>Radium-226/228</i>
22021140-001	EBG	3/7/2022	EBG	GW	-	X	X	X	X	X	X
22021140-002	EP-1	3/7/2022	EP-1	GW	-	X	X	X	X	X	X
22021140-003	EP-2	3/7/2022	EP-2	GW	-	X	X	X	X	X	X
22021140-004	EP-3	3/8/2022	EP-3	GW	-	X	X	X	X	X	X
22021140-005	EP-4	3/8/2022	EP-4	GW	-	X	X	X	X	X	X
22021140-006	EP-5	3/7/2022	EP-5	GW	-	X	X	X	X	X	X
22021140-007	EP-6	3/8/2022	EP-6	GW	-	X	X	X	X	X	X
22021140-008	EP-7	3/8/2022	EP-7	GW	-	X	X	X	X	X	X
22021140-009	Equipment Blank	3/8/2022	-	WQ	EB	X	X	X	X	X	X
22021140-010	Field Blank	3/7/2022	-	WQ	FB	X	X	X	X	X	X
22021140-011	Field Duplicate	3/7/2022	EP-2	GW	FD	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 CCR Groundwater Monitoring

Project Number: GL21767997

Reviewing Company: Golder Associates USA

Project Manager: Danielle Sylvia Cofelice

Data Evaluator: Victor Garcia

Data Evaluation Date: July 19, 2022

Checked by: Danielle Sylvia Cofelice

Review Date: July 19, 2022

Laboratory: Teklab, Inc., Pace Analytical Services, LLC

Lab Job #: 22050087

Matrix: Water Soil Sed. Waste Other:

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? (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

QA LEVEL I - DATA VERIFICATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
c) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d) Were analytes detected in the field blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
e) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2_____
f) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Field dup. met precision criteria (RPD 30%)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 3_____

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 4-6_____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

- 1) The data was evaluated for precision, accuracy, representativeness, completeness, and comparability. Data usability was evaluated following the EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8).
- 2) 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/MDA	Units
Equipment Blank	Radium	Radium-228	0.657 J	0.657	pCi/L
Equipment Blank	Radium	Combined Radium	0.698 J	0.710	pCi/L
MB R3811243-1	Radium	Radium-228	0.239 J	0.334	pCi/L

- 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. Otherwise, the affected results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MD A Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-6	Metals	Chromium	0.0008 J	0.0021	0.0015	0.0015	mg/L	90
EP-6	Metals	Cobalt	0.0007 J	0.0010	0.0010	0.0010	mg/L	35
EP-6	Radiological	Radium-228	0.183 U	2.19	0.682	0.956	pCi/L	105
EP-6	Radiological	Combined Radium	0.295 U	2.37	0.288	0.964	pCi/L	106

- 4) Sulfate matrix spike and matrix spike duplicate recoveries, associated with batch R312712, are below QC limits. The associated relative percent difference is within QC limits. The spiked samples were not collected from the project site. Data usability is not affected.
- 5) Calcium matrix spikes recoveries, associated with batch R193106, are below QC limits. One of the calcium matrix spike duplicate recoveries is above QC limits. The associated relative percent differences are within QC limits. The spiked samples were not collected from the project site. Data usability is not affected.

QA LEVEL I - DATA VERIFICATION CHECKLIST

- 6) Laboratory duplicate RPDs did not meet acceptance criteria (20%). The affected parent samples were not collected from the project side. Data usability is not affected.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	MDA Primary Sample	MDA Duplicate Sample	Unit	RPD (%)
L1494363-07	Radiological	Radium-228	0.770	0.197 U	0.357	0.357	pCi/L	118
L1491809-13	Radiological	Radium-226	0.203 U	0.341	0.240	0.240	pCi/L	50.7

Definitions:

COC: Chain of Custody

LCS: Laboratory Control Sample

LCS: Laboratory Control Sample

MDL: Method Detection Limit

MS/MSD: Matrix Spike/Matrix Spike Duplicate

QC: Quality Control

QL: Quantitation Limit

RL: Reporting Limit

RPD: Relative Percent Difference

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						
						Anions	Total Dissolved Solids	Total Metals	Mercury	Total Hardness	Radium-226/228
22050087-001	EBG	5/24/2022	EBG	GW	-	X	X	X	X	X	X
22050087-002	EP-1	5/24/2022	EP-1	GW	-	X	X	X	X	X	X
22050087-003	EP-2	5/24/2022	EP-2	GW	-	X	X	X	X	X	X
22050087-004	EP-3	5/25/2022	EP-3	GW	-	X	X	X	X	X	X
22050087-005	EP-4	5/25/2022	EP-4	GW	-	X	X	X	X	X	X
22050087-006	EP-5	5/24/2022	EP-5	GW	-	X	X	X	X	X	X
22050087-007	EP-6	5/24/2022	EP-6	GW	-	X	X	X	X	X	X
22050087-008	EP-7	5/25/2022	EP-7	GW	-	X	X	X	X	X	X
22050087-009	Equipment Blank	5/25/2022	-	WQ	EB	X	X	X	X	X	X
22050087-010	Field Blank	5/24/2022	-	WQ	FB	X	X	X	X	X	X
22050087-011	Field Duplicate	5/24/2022	EP-6	GW	FD	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

QA LEVEL I - DATA VERIFICATION CHECKLIST

Project Name: SIPC Groundwater Monitoring
Reviewing Company: Golder Associates 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
Project Manager: Danielle Sylvia Cofelice
Data Evaluation Date: October 24, 2022
Review Date: November 2, 2022
Lab Job #: 22080134

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? (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
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 1 _____

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 2_____
c) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2_____
d) Were analytes detected in the method blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

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 3_____

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 Note 4_____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

- The following samples were analyzed outside of the method holding for total dissolved solids: EBG, EP-1, Field Duplicate, Equipment Blank, and Field Blank. The hold time for total dissolved solids is 7 days and these samples were analyzed 30 days outside of holding time. Initial results were deemed non-reportable by the laboratory due to technician error and these samples were reanalyzed outside of the method holding time. The results are considered to be potentially biased.
- Analytes were detected in the 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.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
FB 22080134-010	Radium	Radium-226	0.0768 J	0.190	pCi/L
EB 22080134-009	Radium	Radium-228	0.407 J	0.589	pCi/L
EB 22080134-009	Radium	Radium-226	0.0821 J	0.198	pCi/L
EB 22080134-009	Radium	Combined Radium	0.490 J	0.621	pCi/L

- 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. Otherwise, the affected 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-1	Metals	Thallium	0.002	0.001 J	0.002	0.002	mg/L	66.7%
EP-1	Radium	Radium-226	0.265 J	0.123 J	0.306	0.202	Pci/l	73.2%
EP-1	Mercury	Mercury	0.0002	0.00006 J	0.0002	0.0002	mg/L	107.7%

- A chromium matrix spike duplicate recovery, associated with batch 196431(all samples), is above QC limits. The associated matrix spike recovery and relative percent difference is within QC limits. Data usability is not affected.

Definitions:

QA LEVEL I - DATA VERIFICATION CHECKLIST

COC: Chain of Custody

LCS: Laboratory Control Sample

LCS: Laboratory Control Sample

MDL: Method Detection Limit

MS/MSD: Matrix Spike/Matrix Spike Duplicate

QC: Quality Control

QL: Quantitation Limit

RL: Reporting Limit

RPD: Relative Percent Difference

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	
22080134-001	EBG	9/6/2022	EBG	GW	-	X	X	X	X	X	X	X	X	X
22080134-002	EP-1	9/6/2022	EP-1	GW	-	X	X	X	X	X	X	X	X	X
22080134-003	EP-2	9/7/2022	EP-2	GW	-	X	X	X	X	X	X	X	X	X
22080134-004	EP-3	9/7/2022	EP-3	GW	-	X	X	X	X	X	X	X	X	X
22080134-005	EP-4	9/7/2022	EP-4	GW	-	X	X	X	X	X	X	X	X	X
22080134-006	EP-5	9/6/2022	EP-5	GW	-	X	X	X	X	X	X	X	X	X
22080134-007	EP-6	9/6/2022	EP-6	GW	-	X	X	X	X	X	X	X	X	X
22080134-008	EP-7	9/7/2022	EP-7	GW	-	X	X	X	X	X	X	X	X	X
22080134-009	Equipment Blank	9/7/2022	-	WQ	EB	X		X	X	X	X	X	X	X
22080134-010	Field Blank	9/6/2022	-	WQ	FB	X		X	X	X	X	X	X	X
22080134-011	Field Duplicate	9/6/2022	EP-1	GW	FD	X	X	X	X	X	X	X	X	X

Notes:

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories.

Abbreviations:

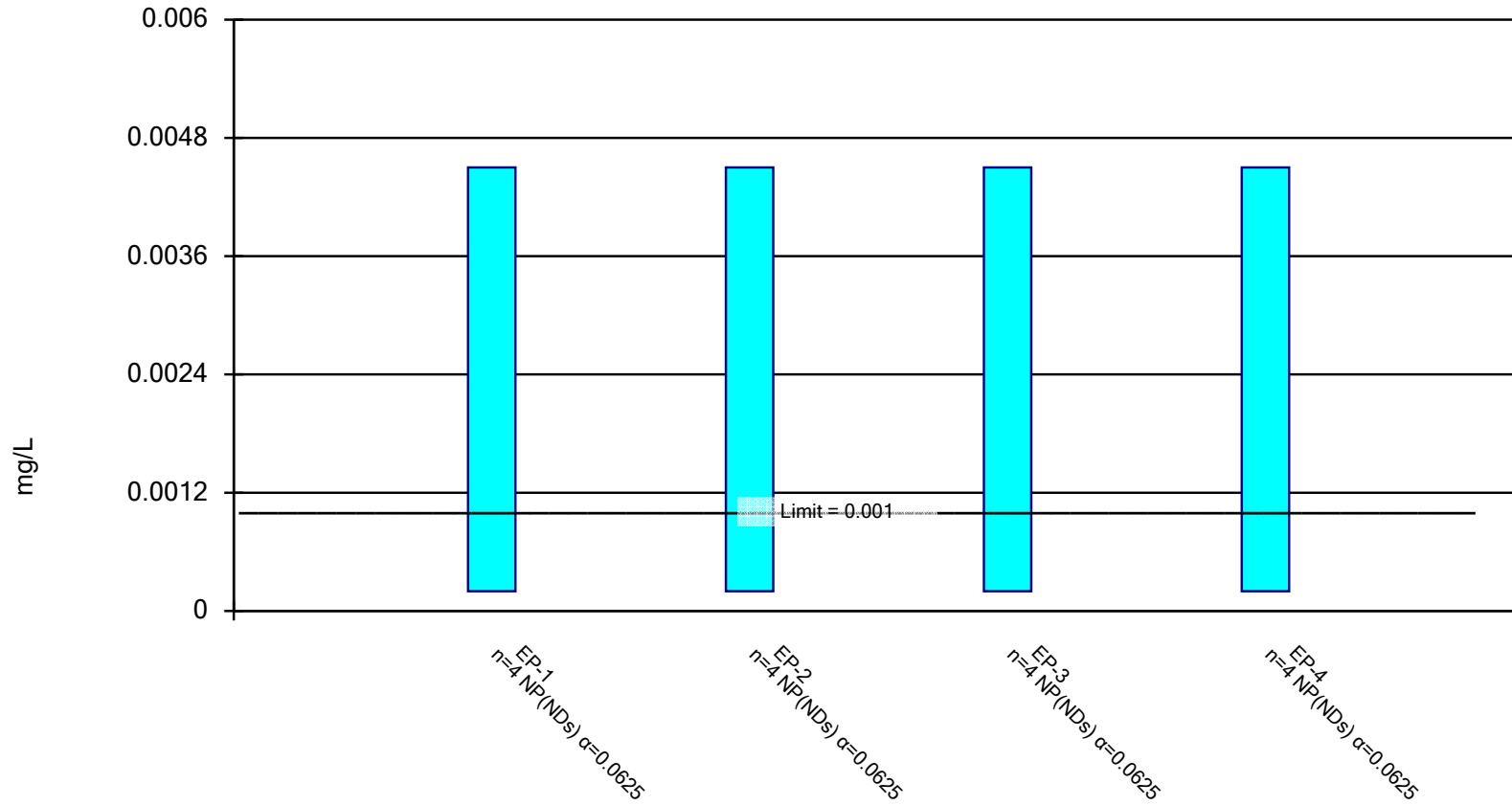
FB: Field Blank
 FD: Field Duplicate
 GW: Ground Water
 WQ: Water Quality
 QC: Quality Control

APPENDIX D

2022 Statistical Evaluation

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

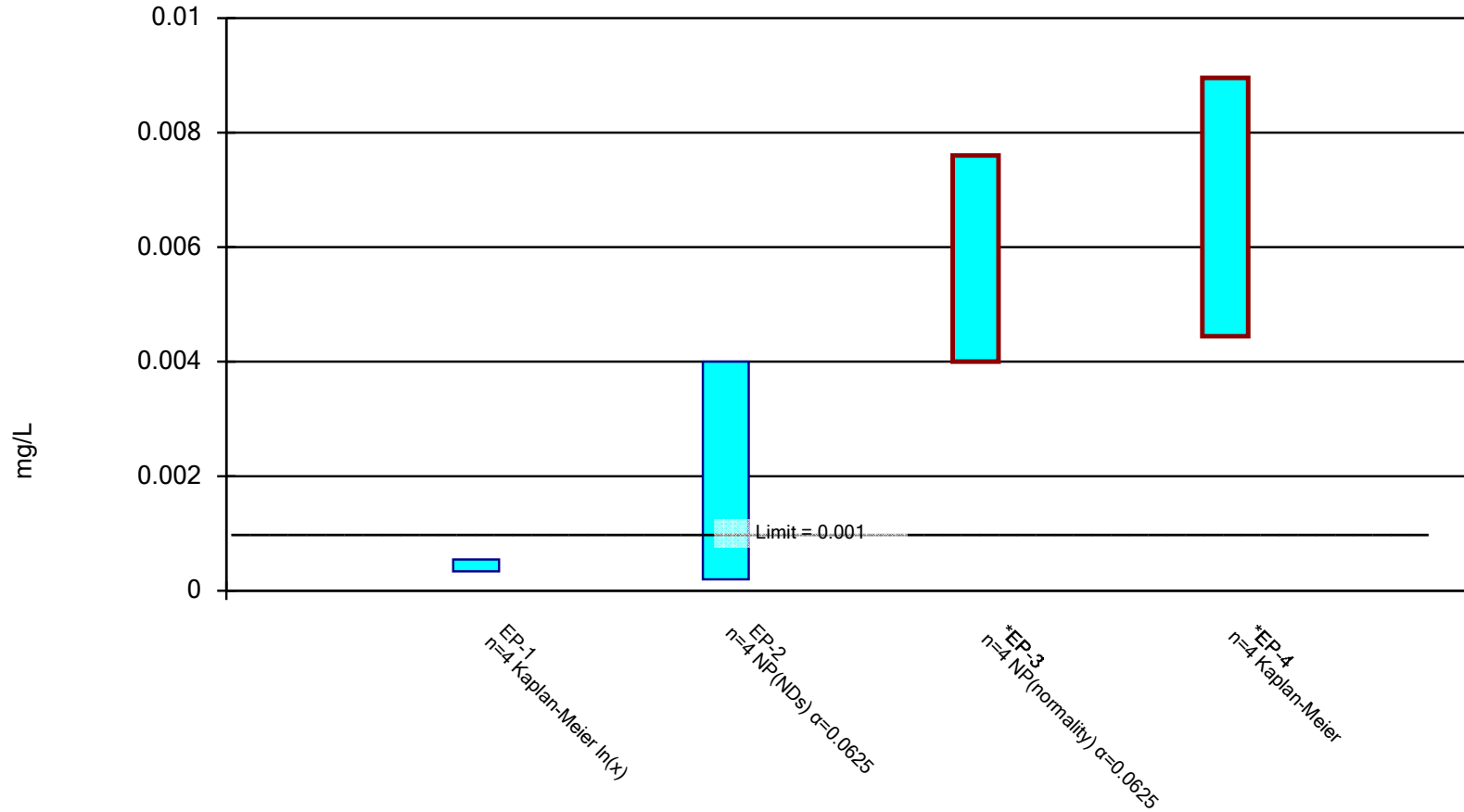


Constituent: Antimony Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

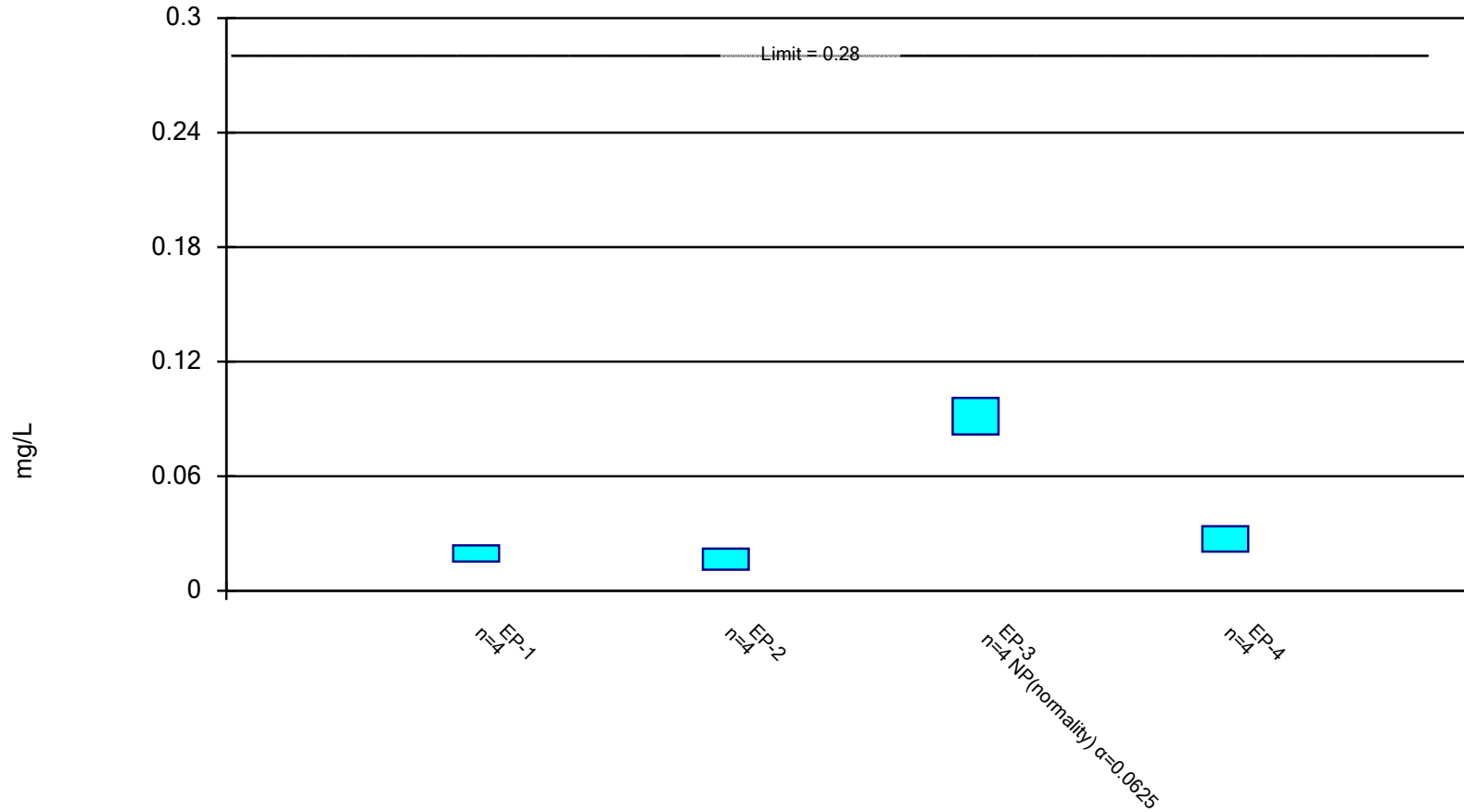
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data
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.

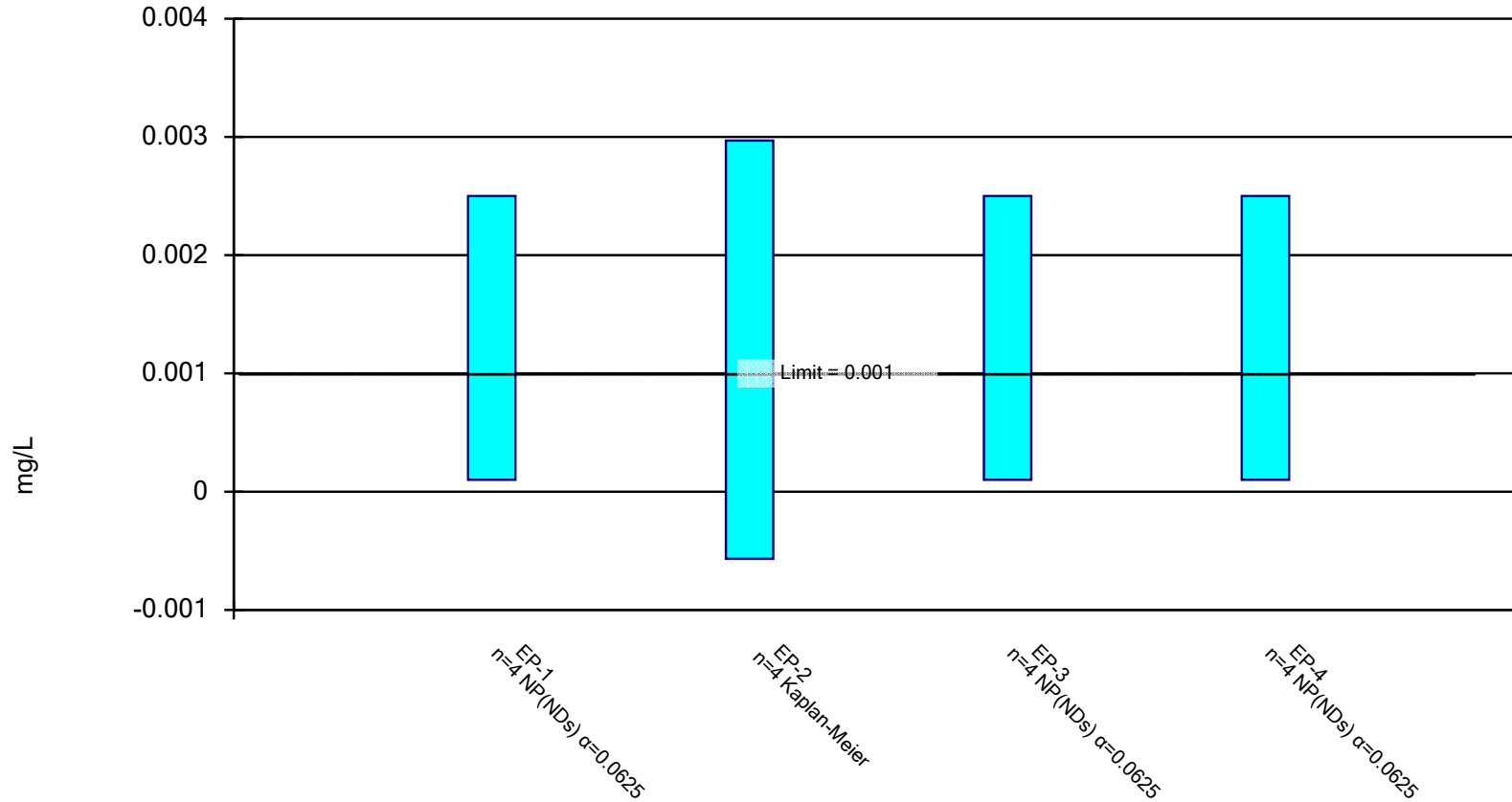


Constituent: Barium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

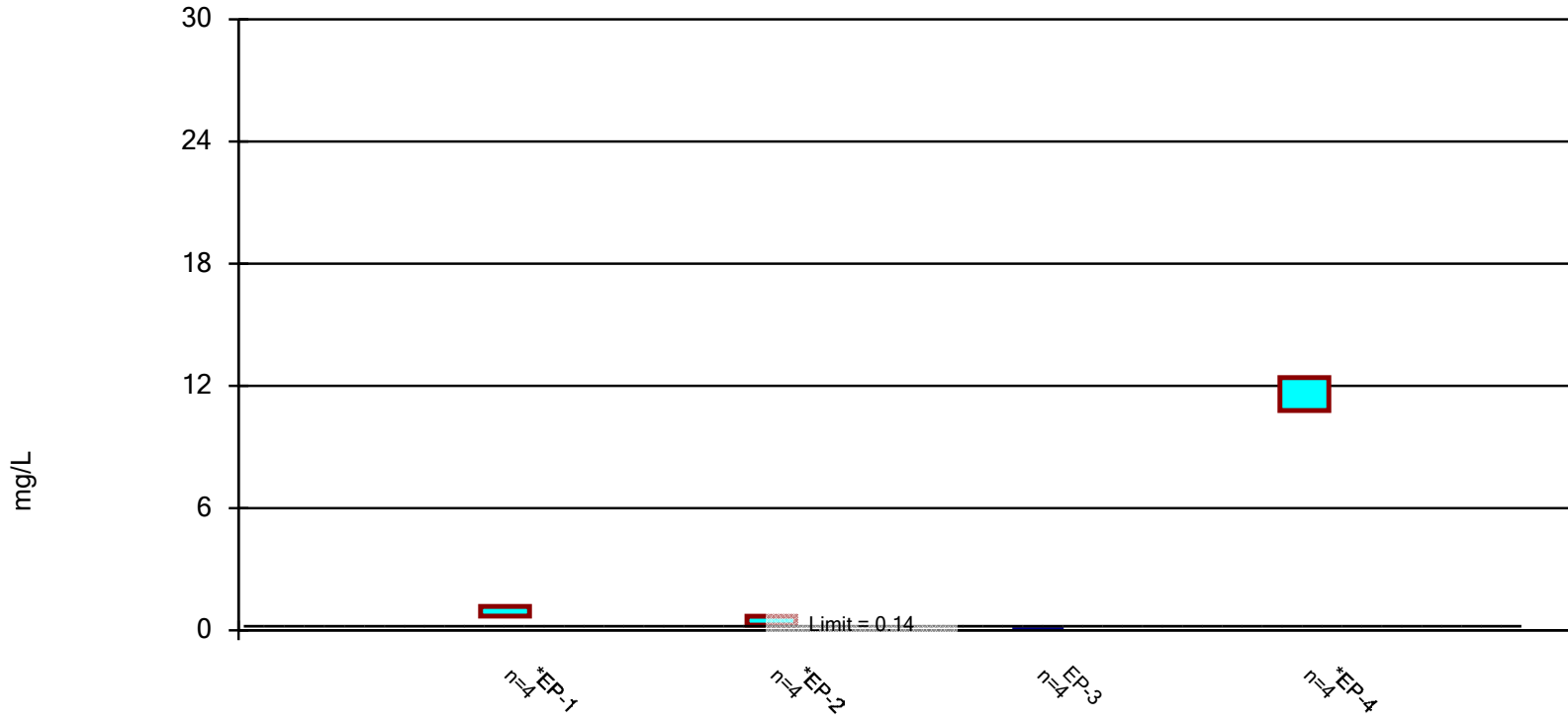


Constituent: Beryllium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

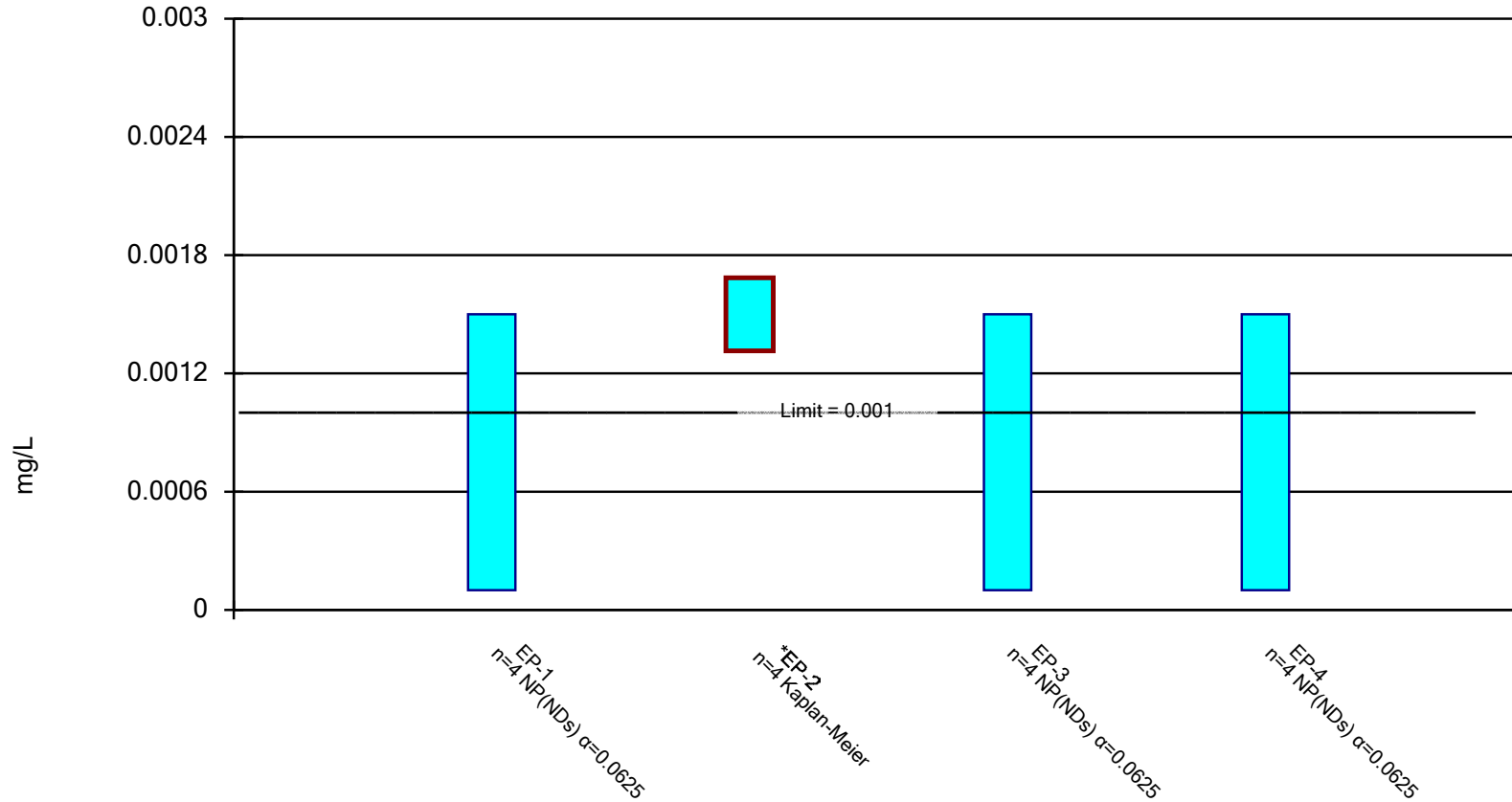


Constituent: Boron Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

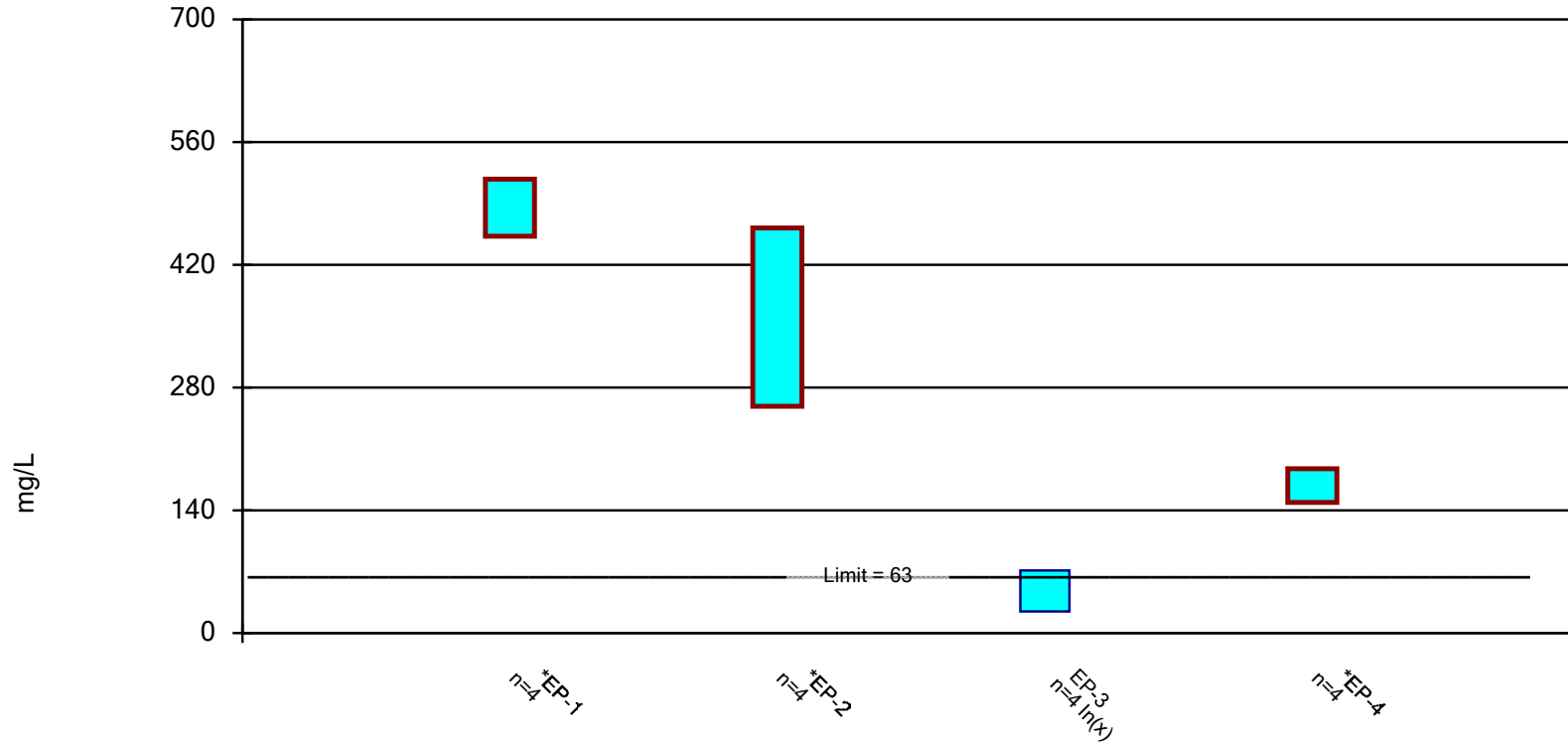


Constituent: Cadmium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

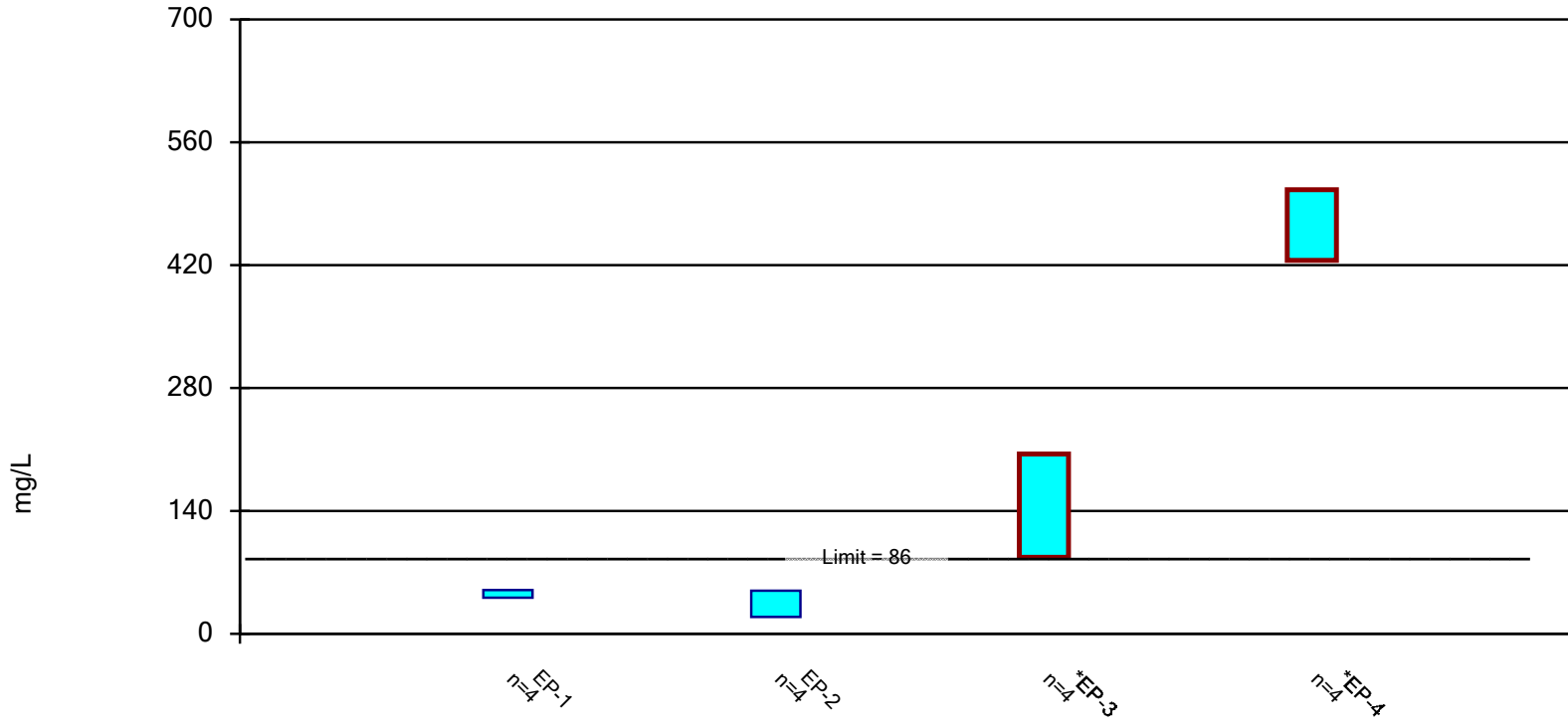


Constituent: Calcium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

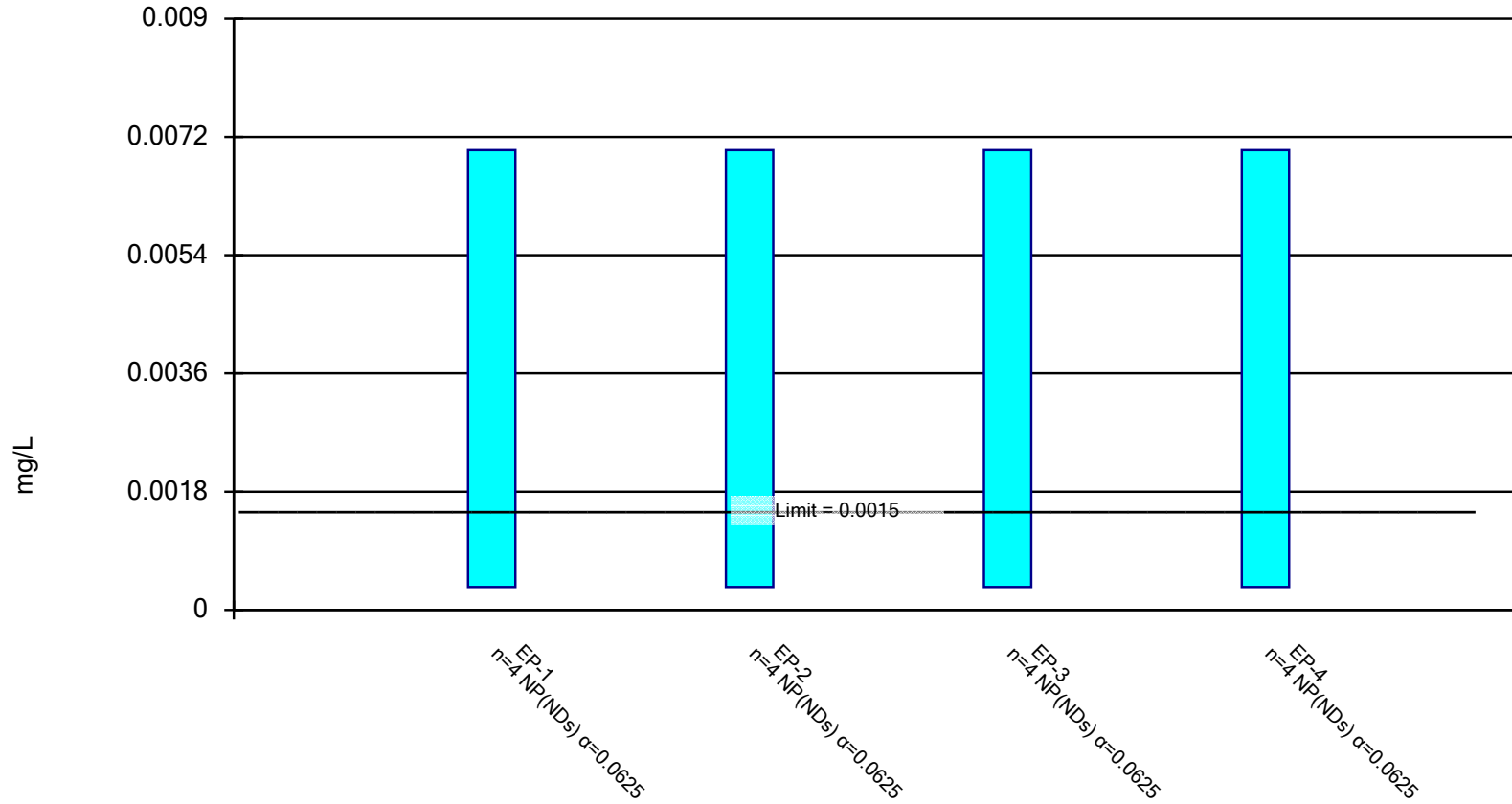


Constituent: Chloride Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

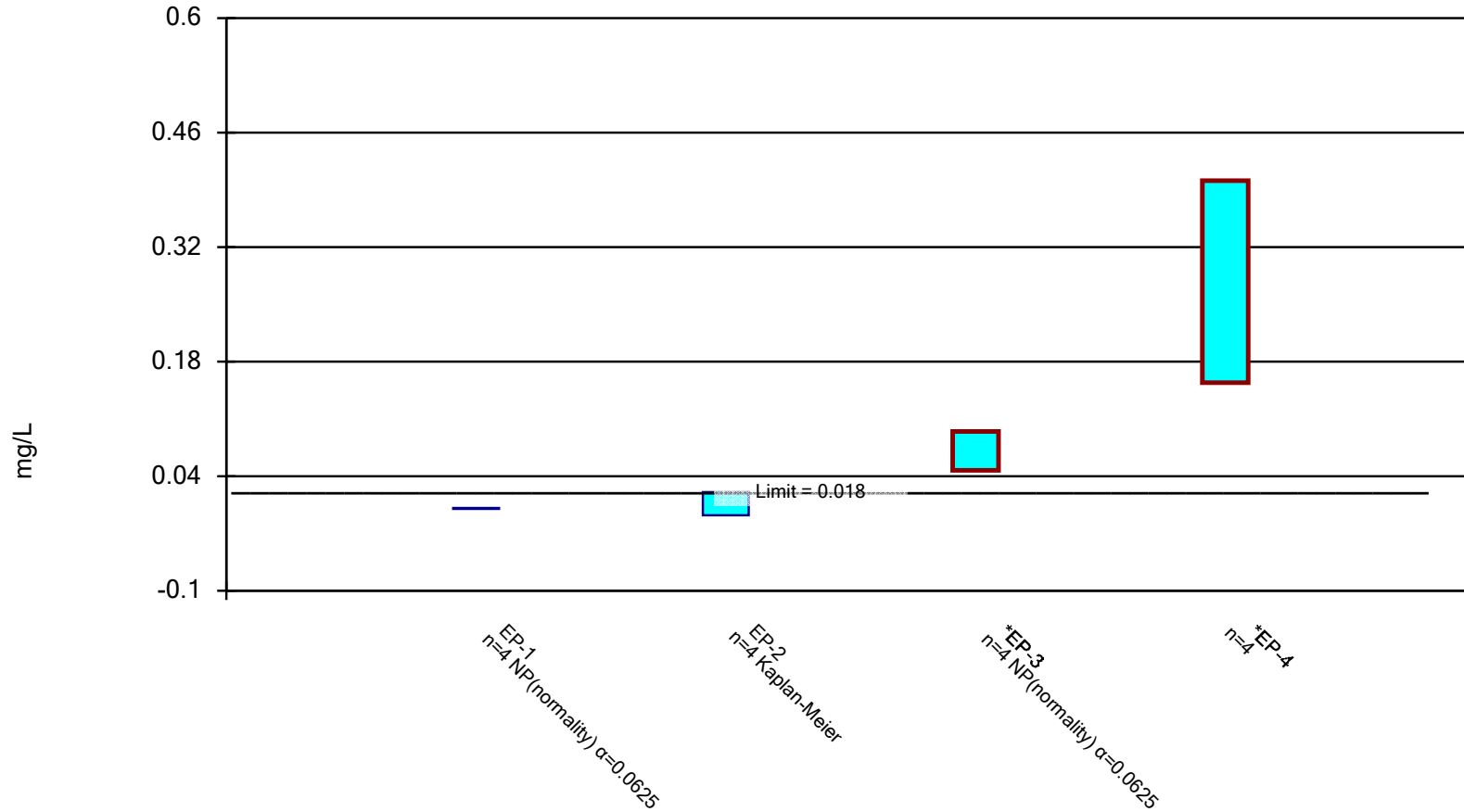


Constituent: Chromium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

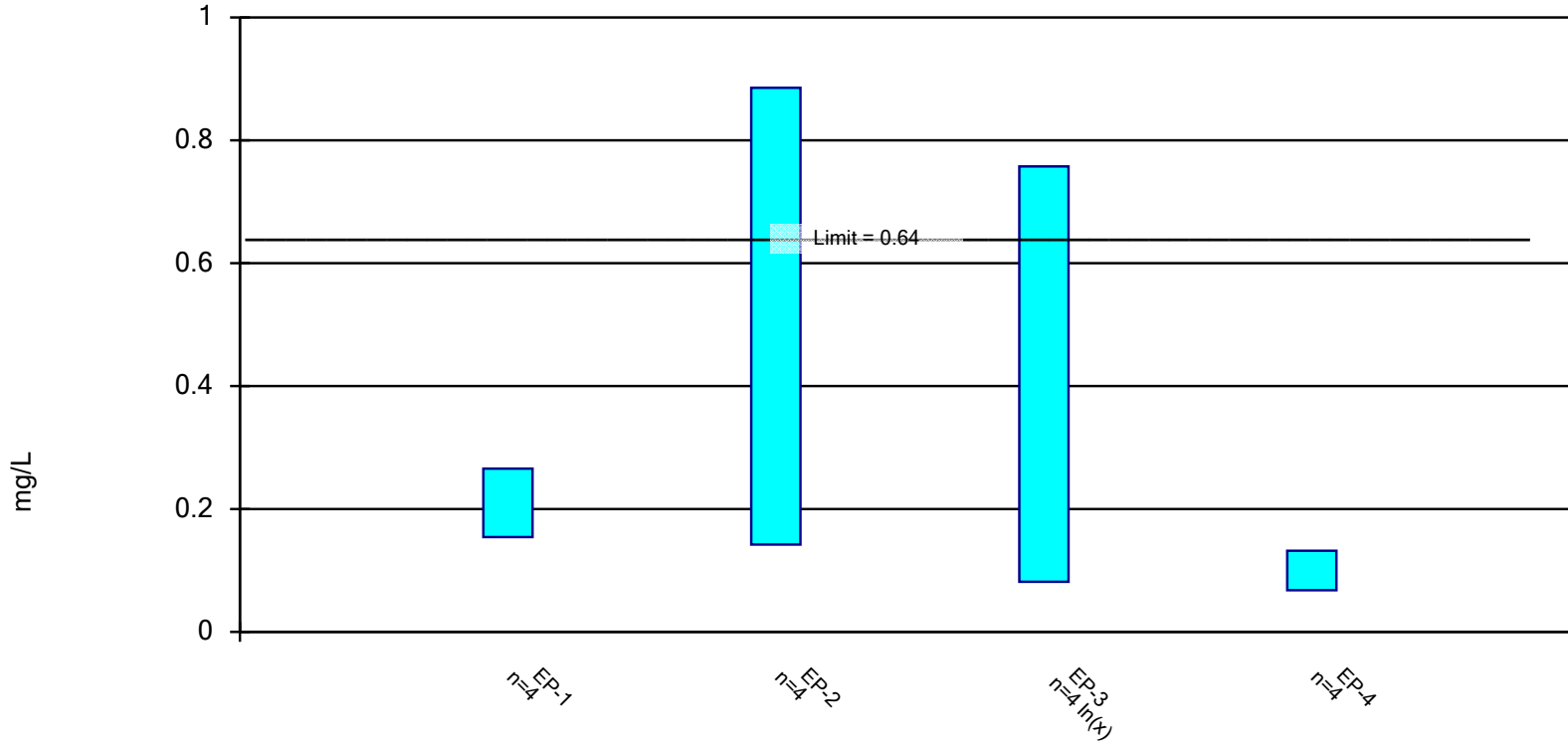


Constituent: Cobalt Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

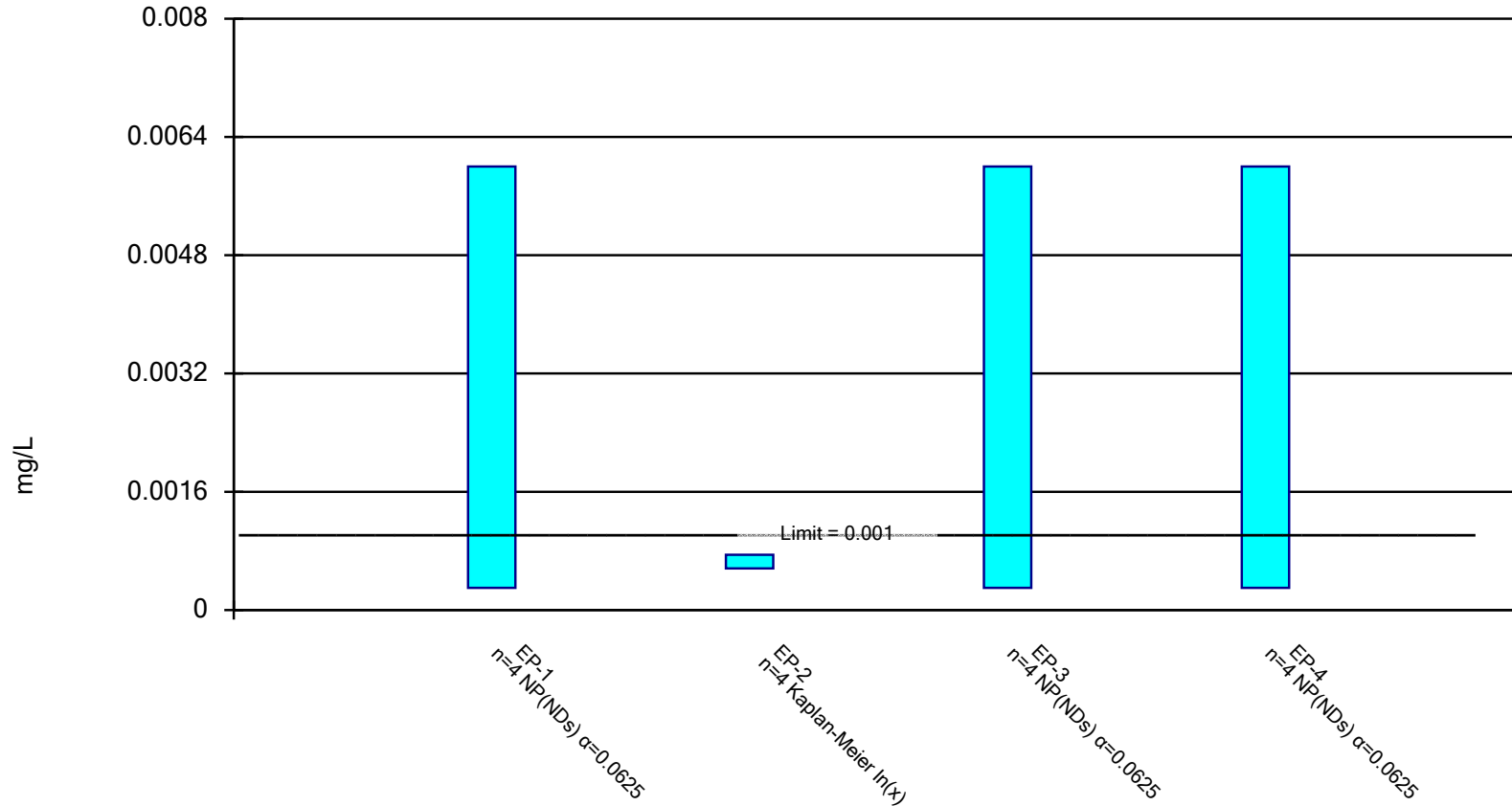


Constituent: Fluoride Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

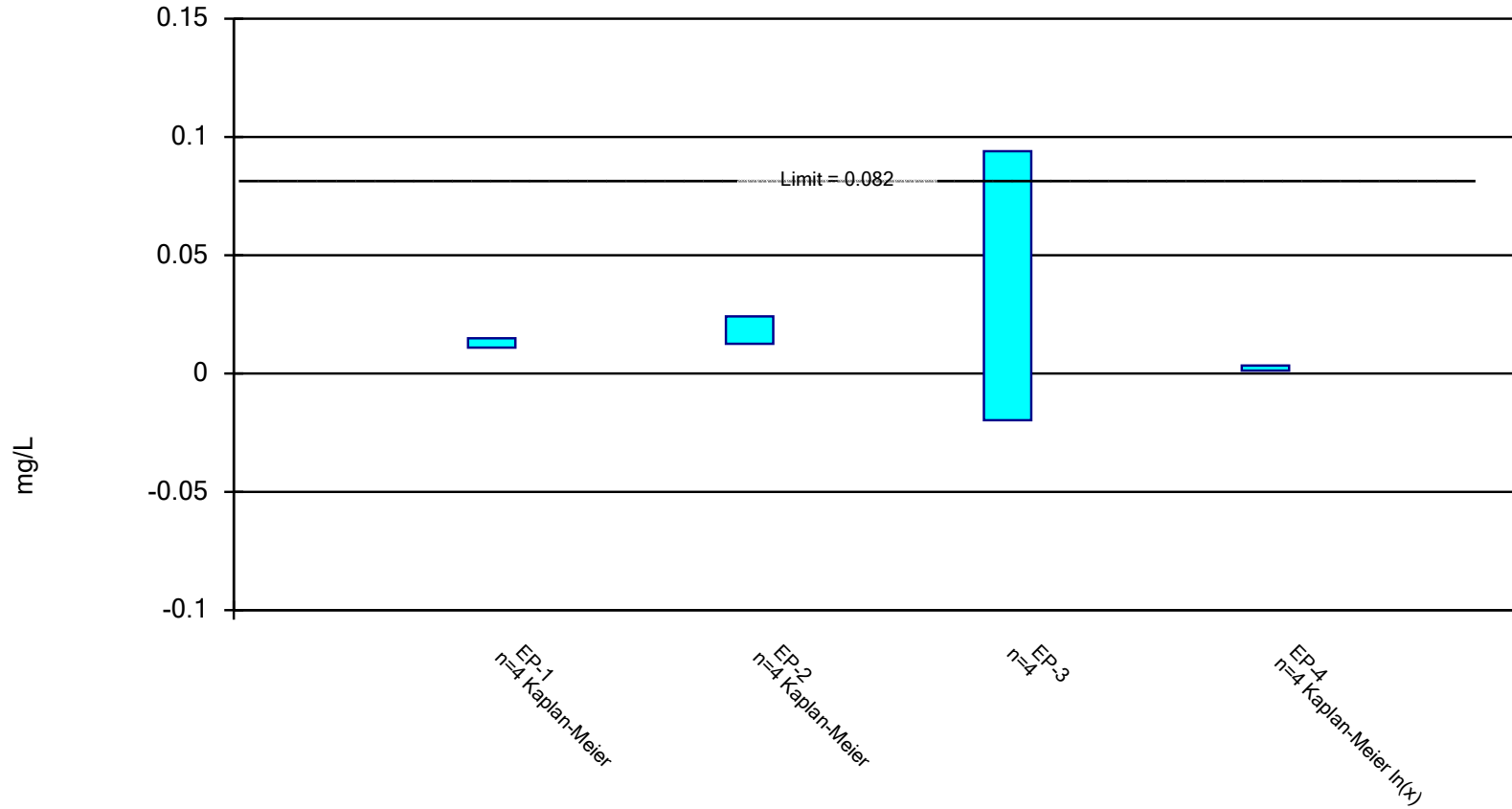


Constituent: Lead Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

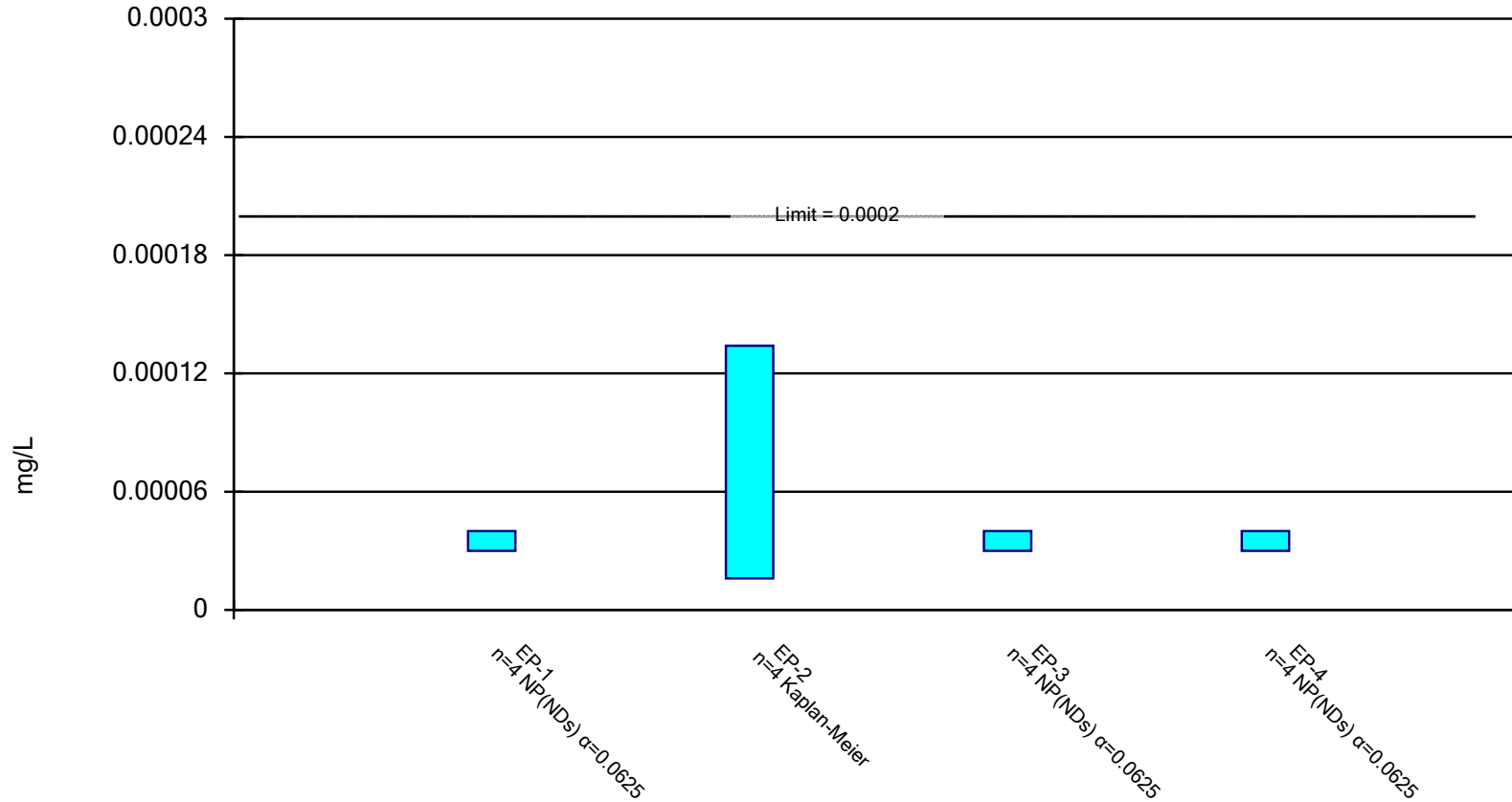


Constituent: Lithium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

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.

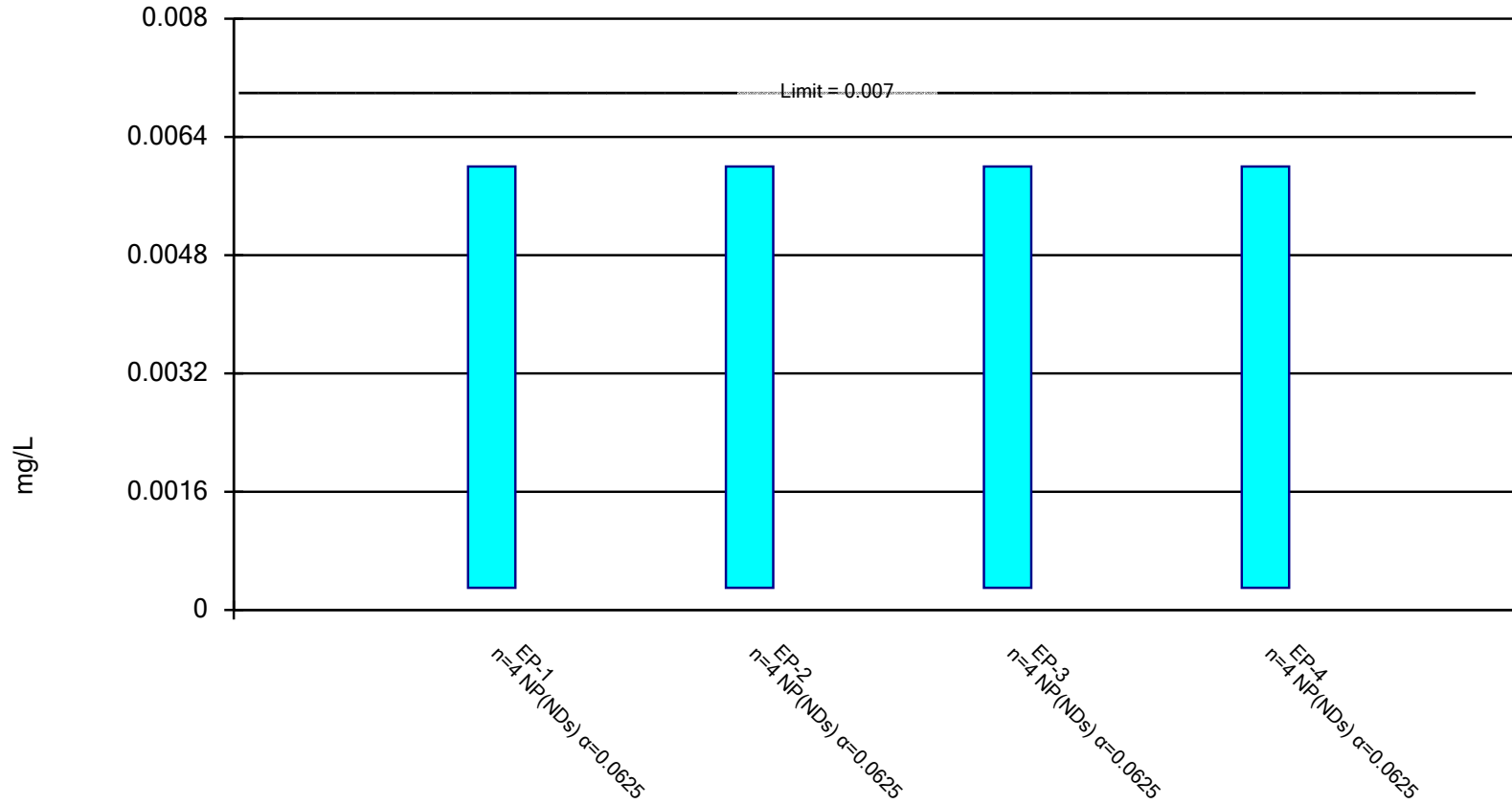


Constituent: Mercury Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

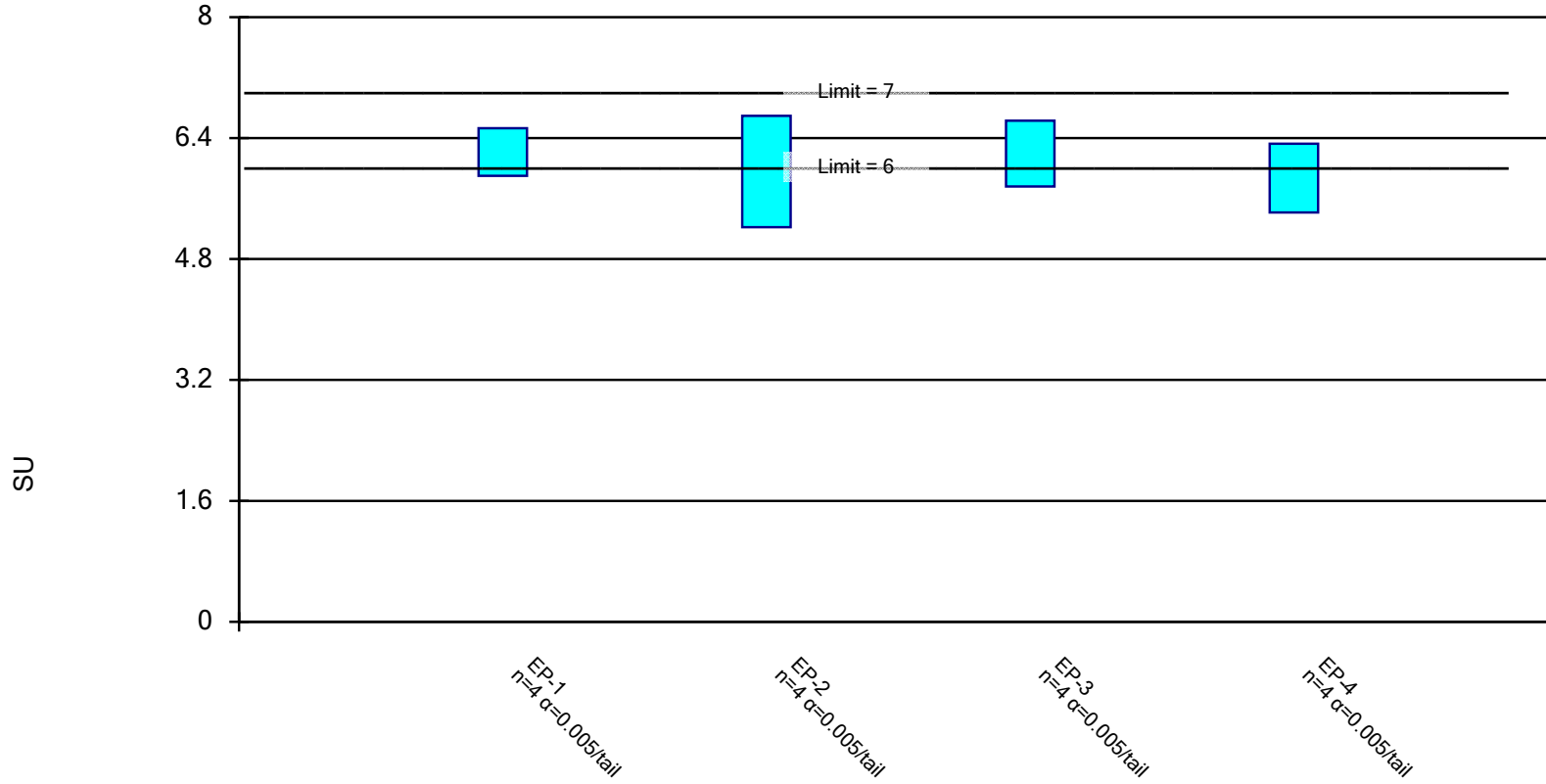


Constituent: Molybdenum Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.

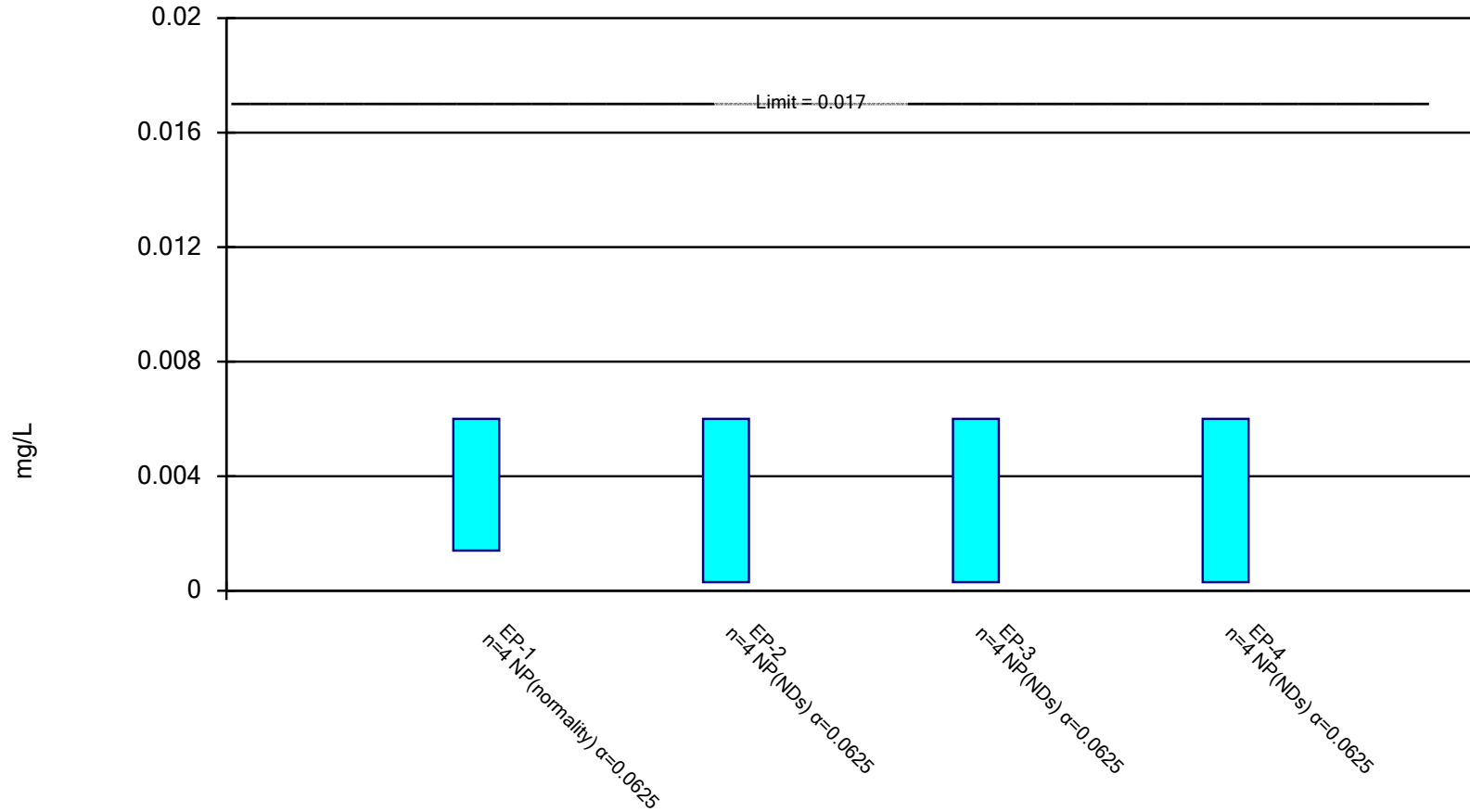


Constituent: pH Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

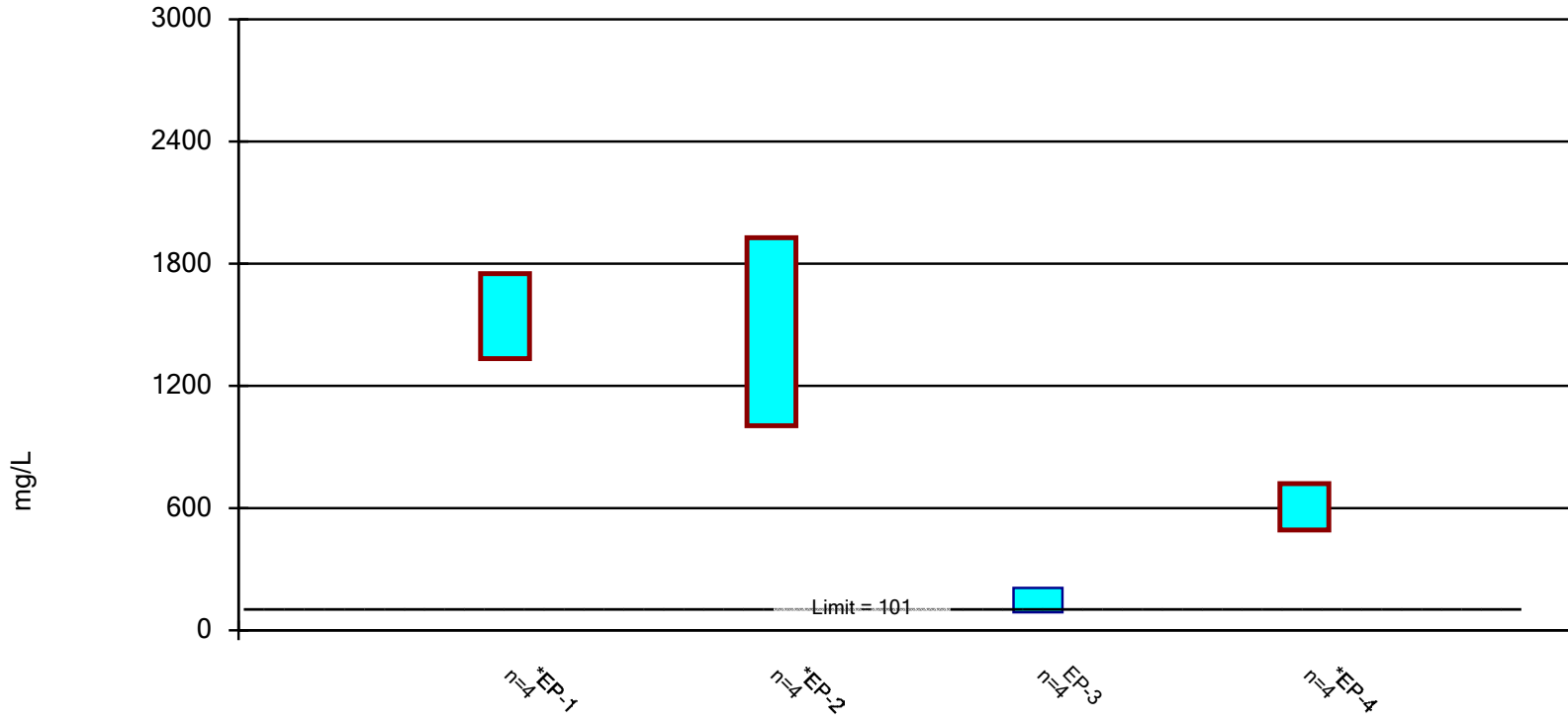


Constituent: Selenium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

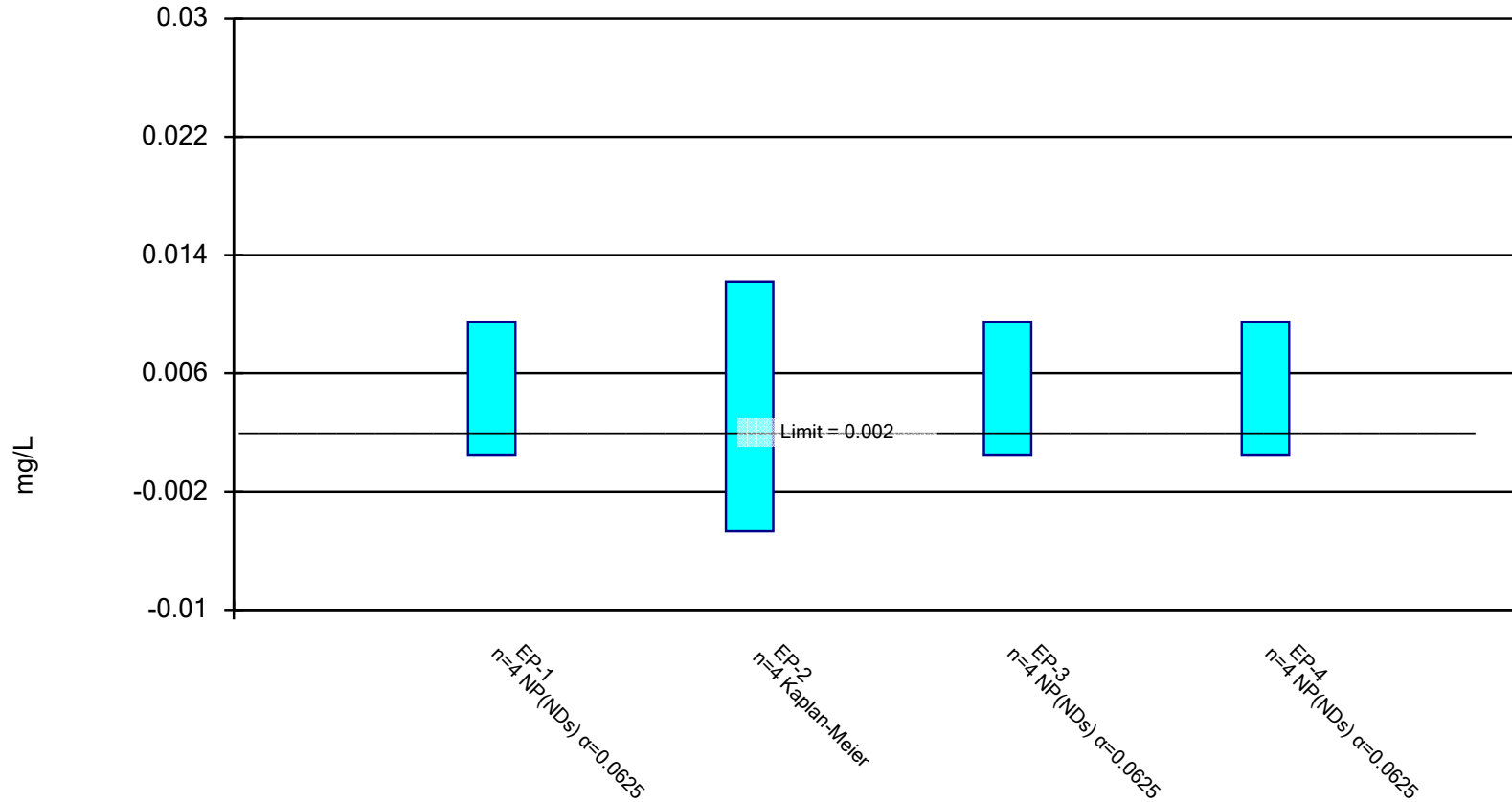
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Sulfate Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data
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.

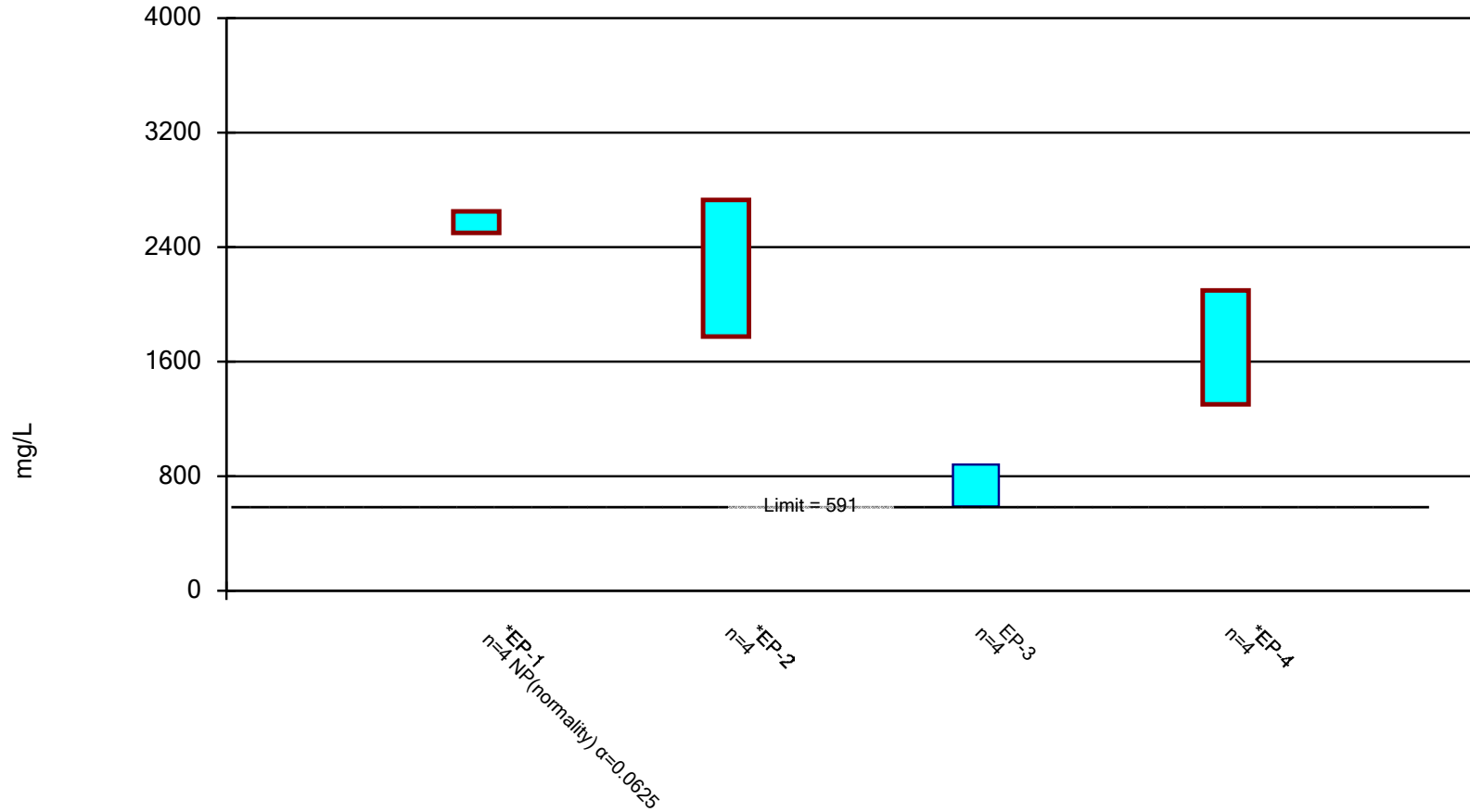


Constituent: Thallium Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

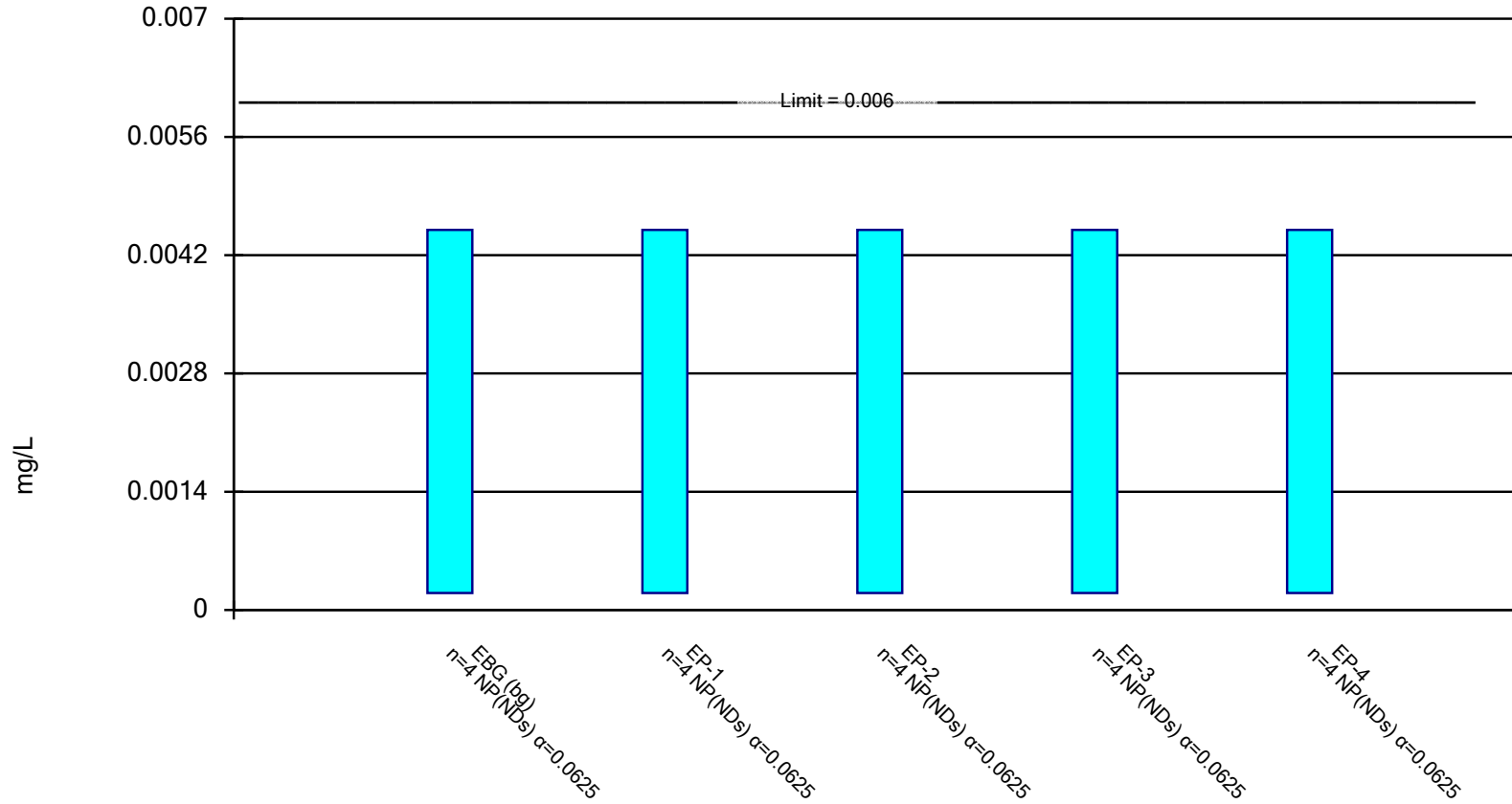
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 5/6/2022 1:56 PM View: Post-Closure Data
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

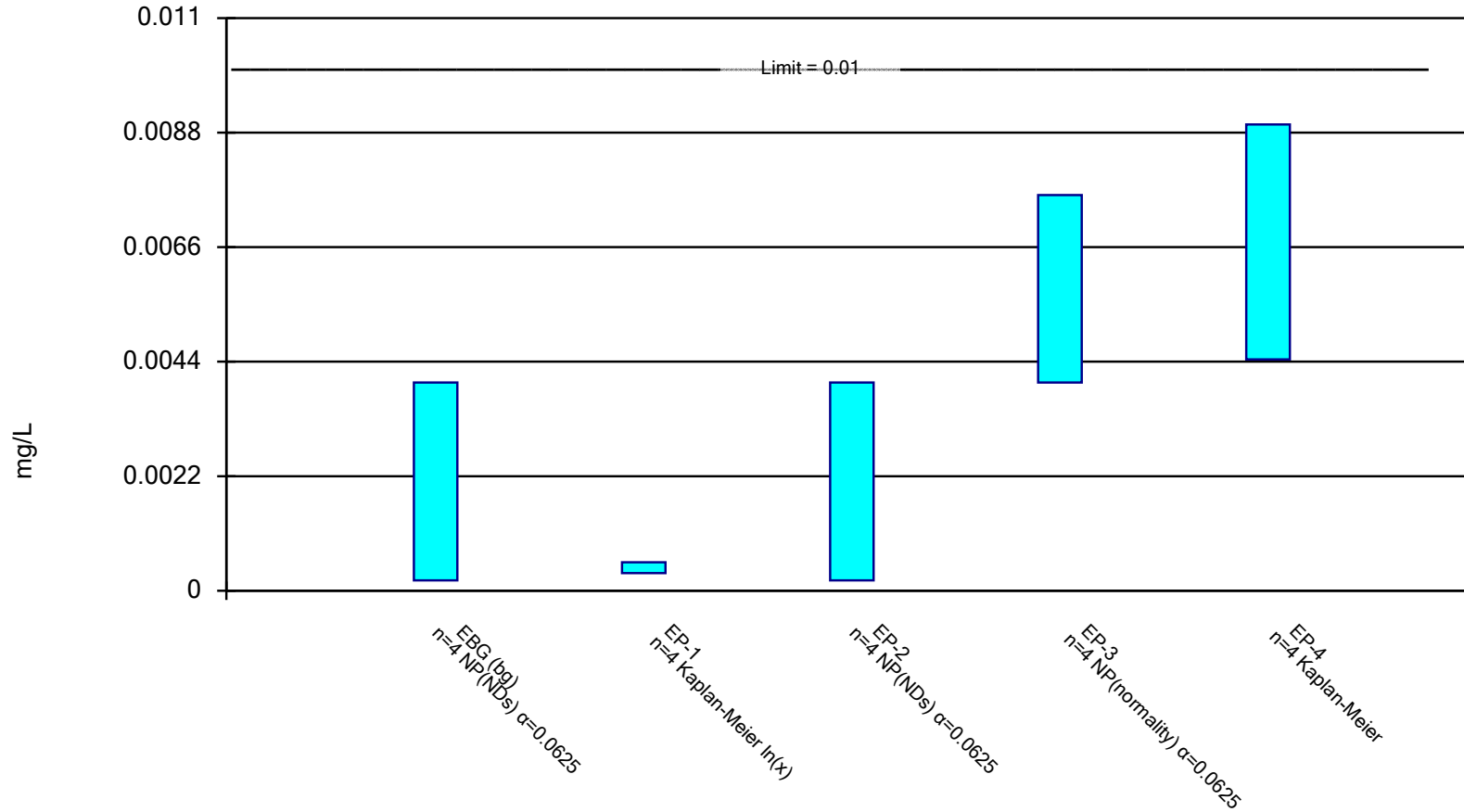


Constituent: Antimony Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

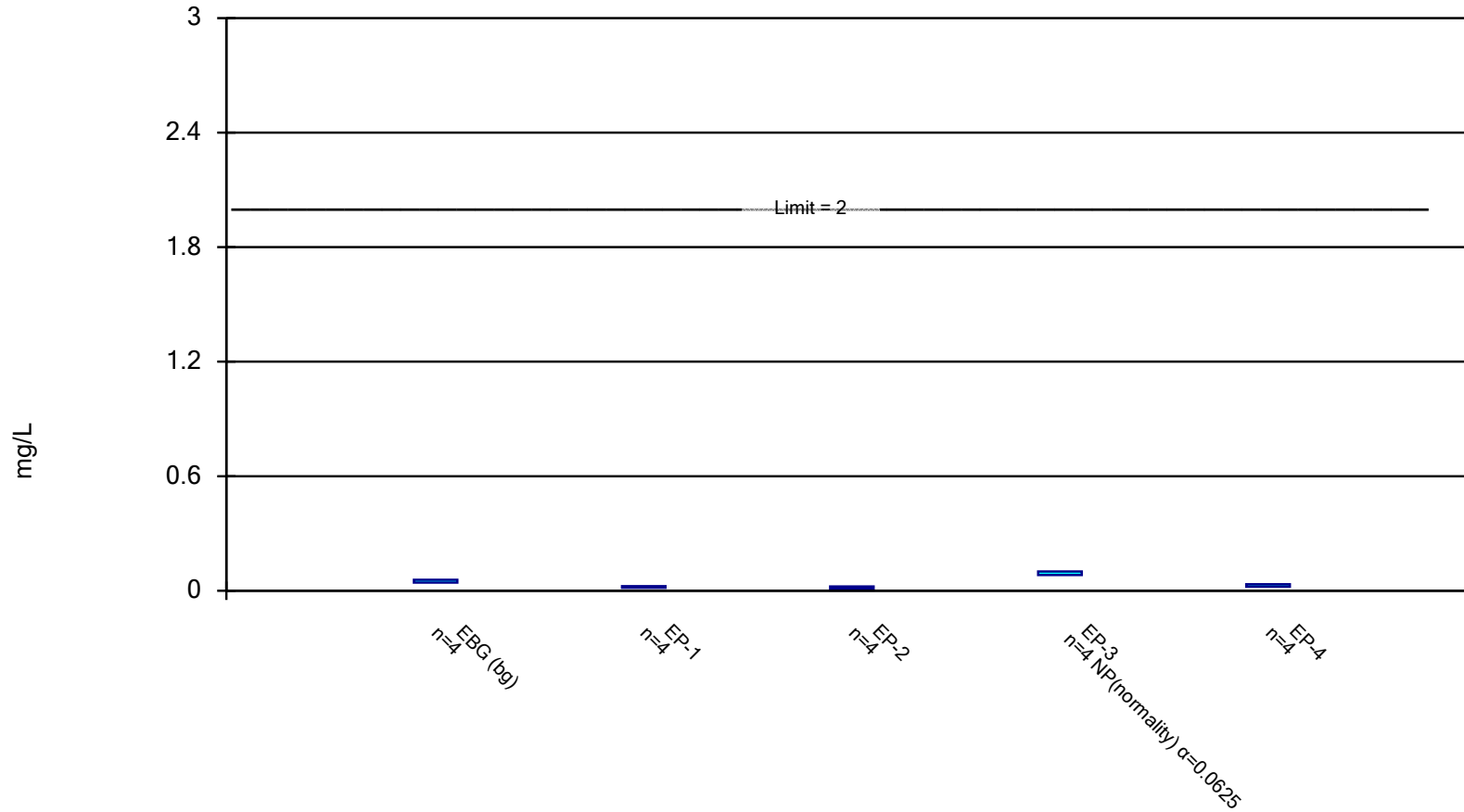


Constituent: Arsenic Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

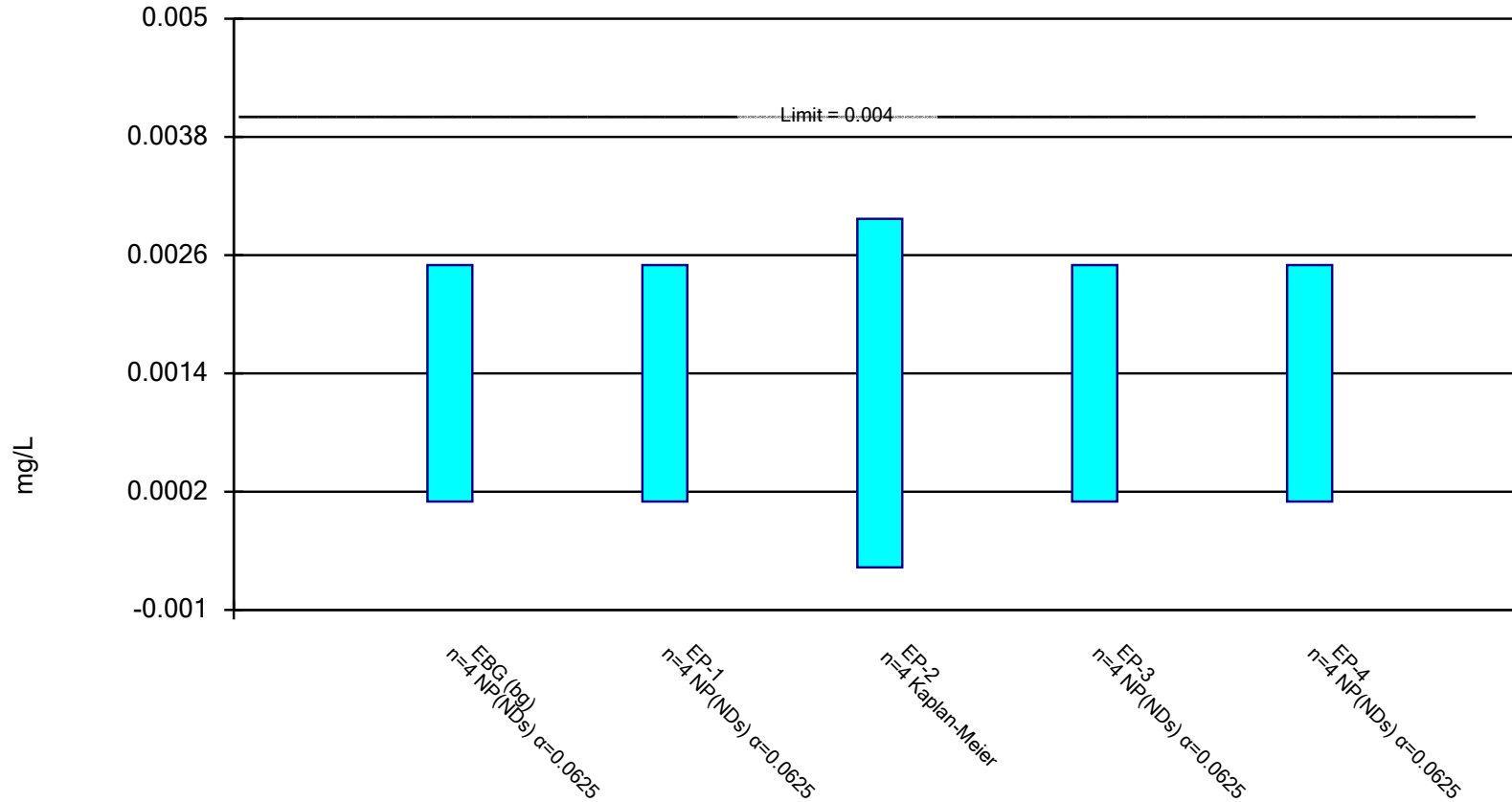


Constituent: Barium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

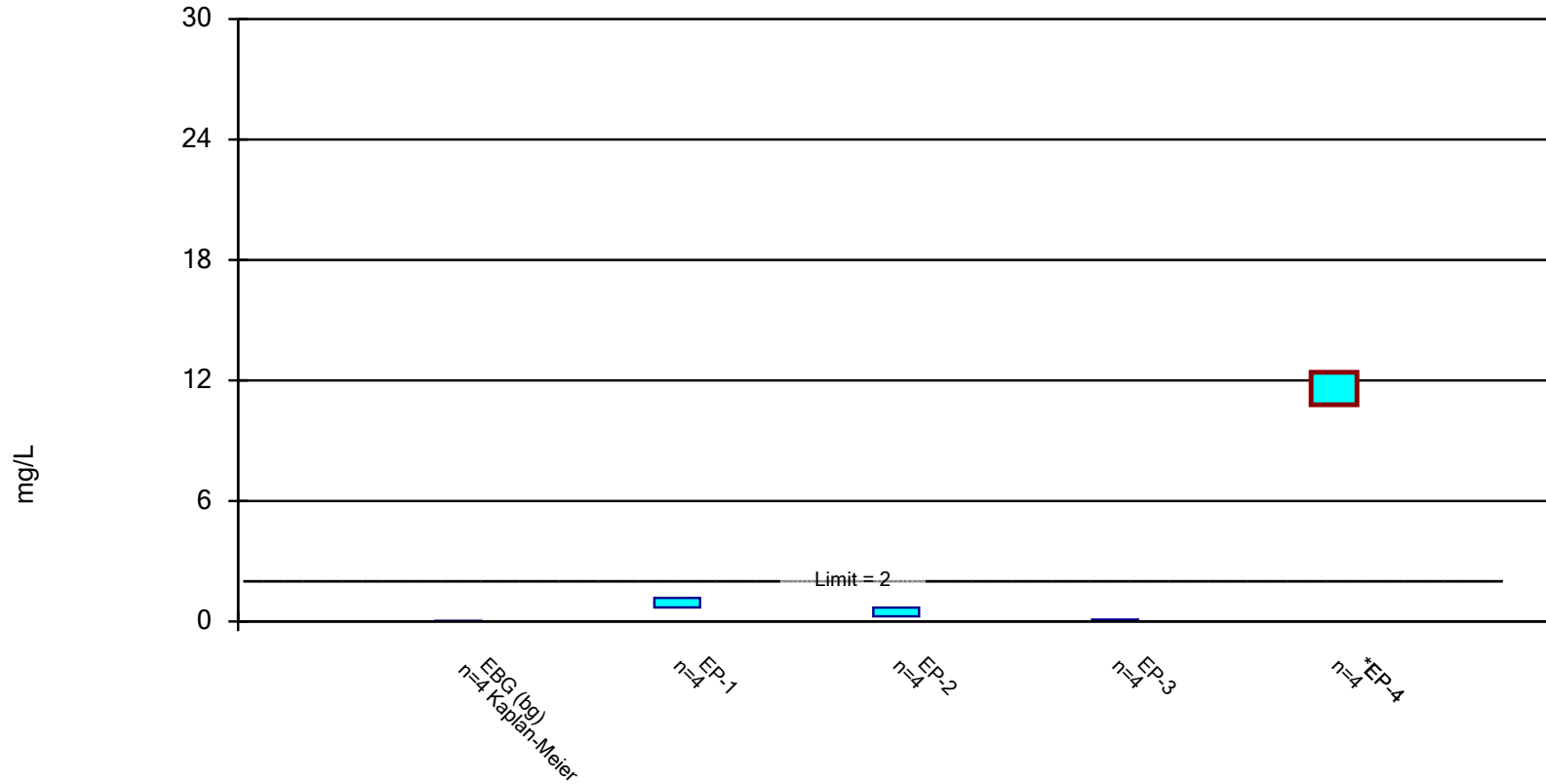


Constituent: Beryllium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

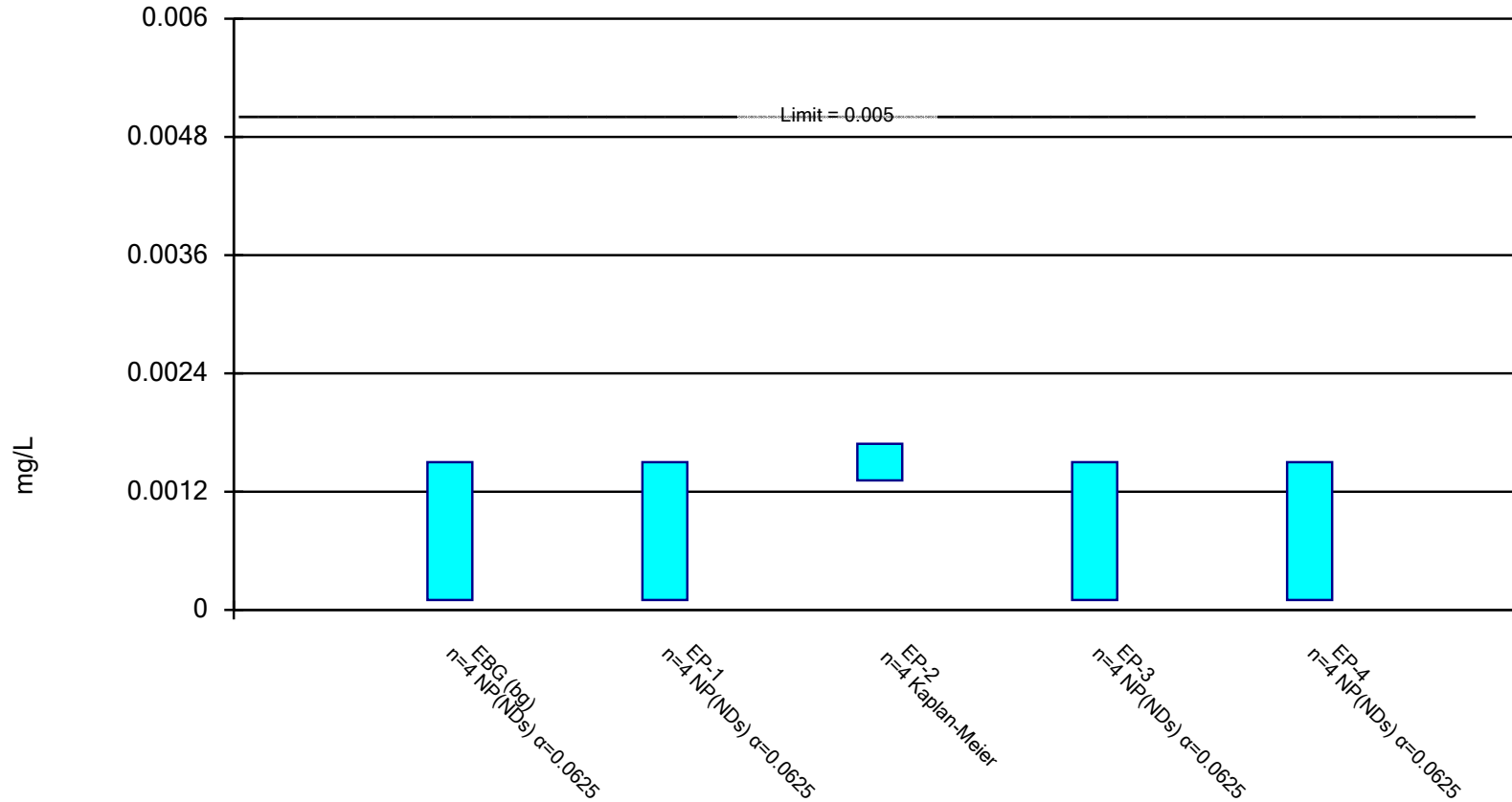


Constituent: Boron Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

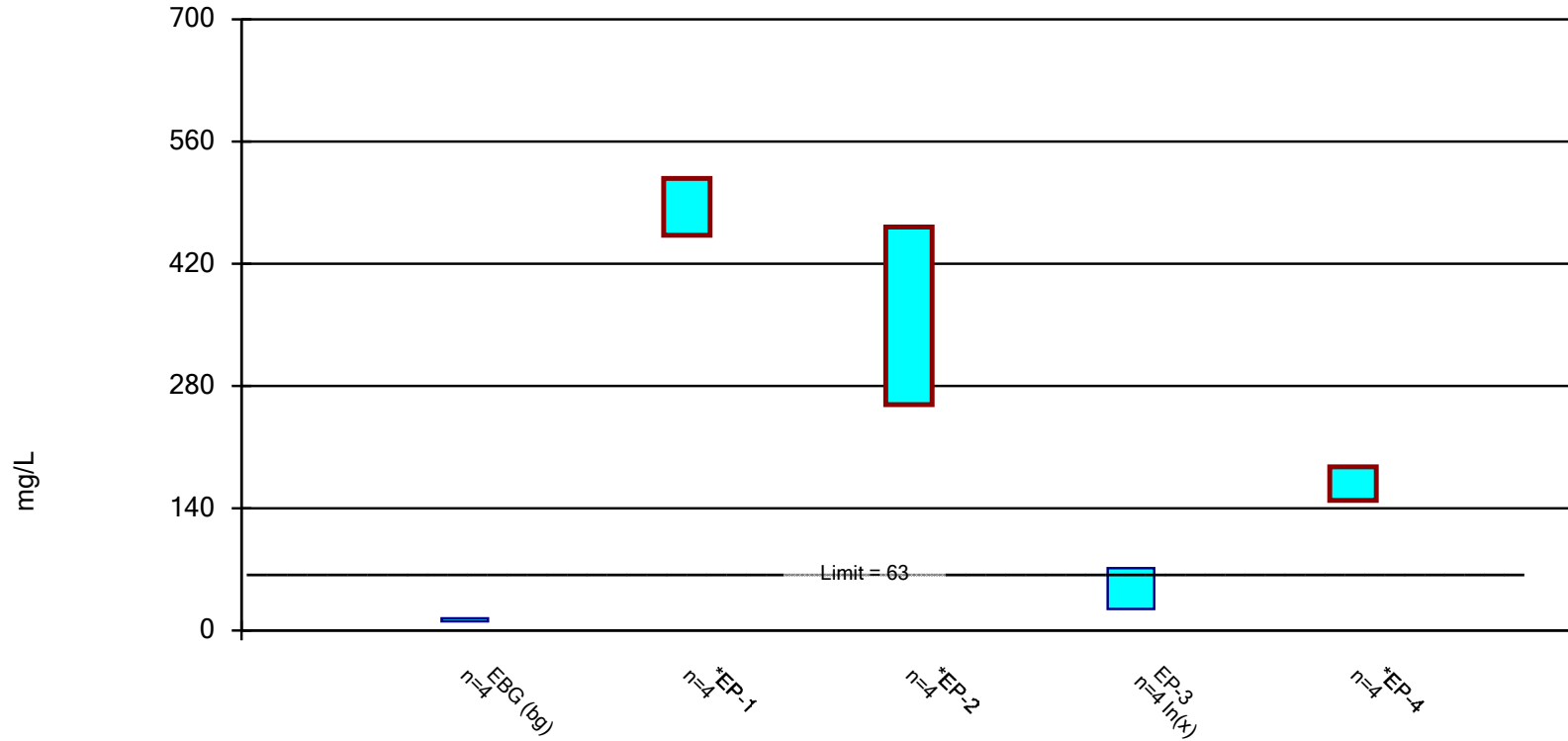


Constituent: Cadmium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

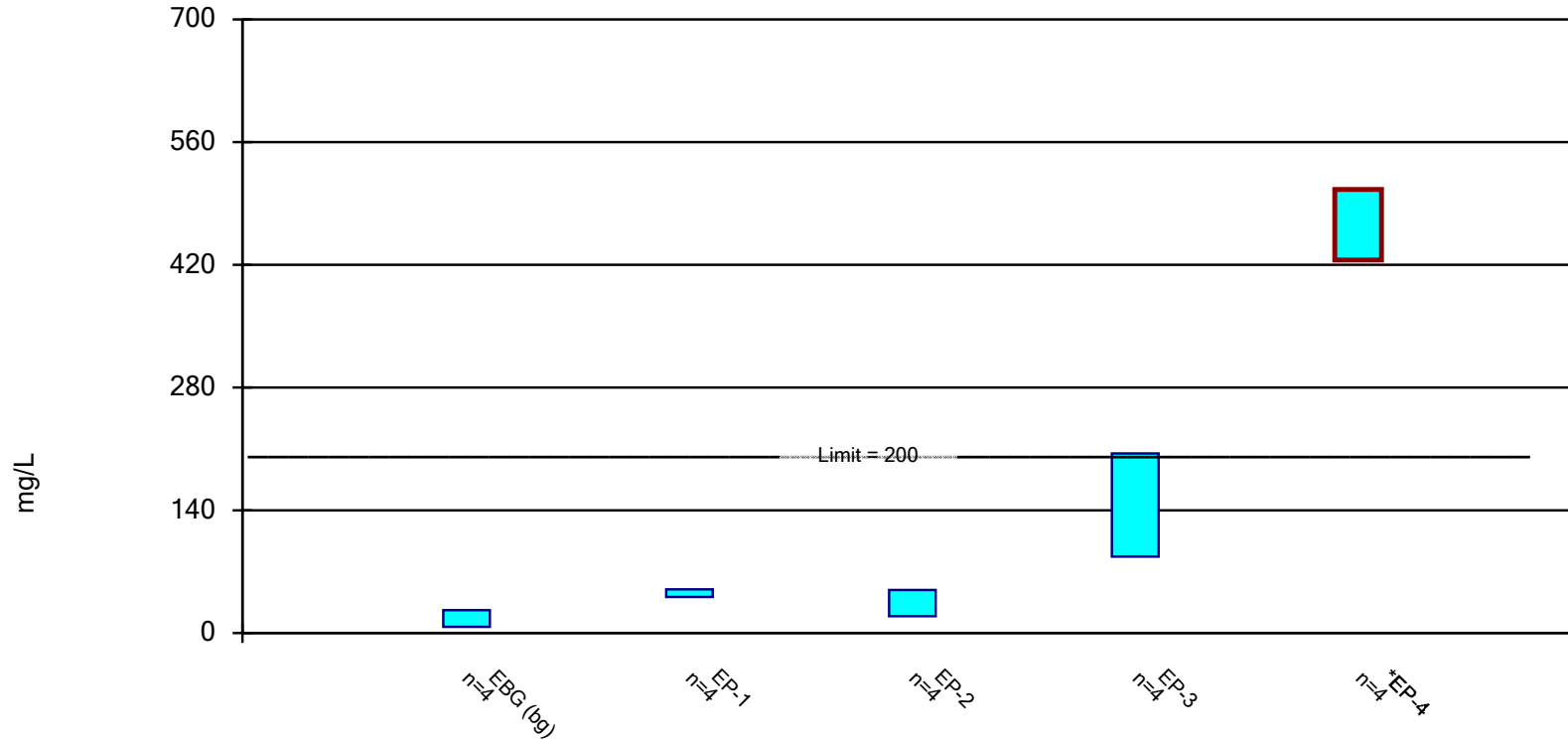


Constituent: Calcium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

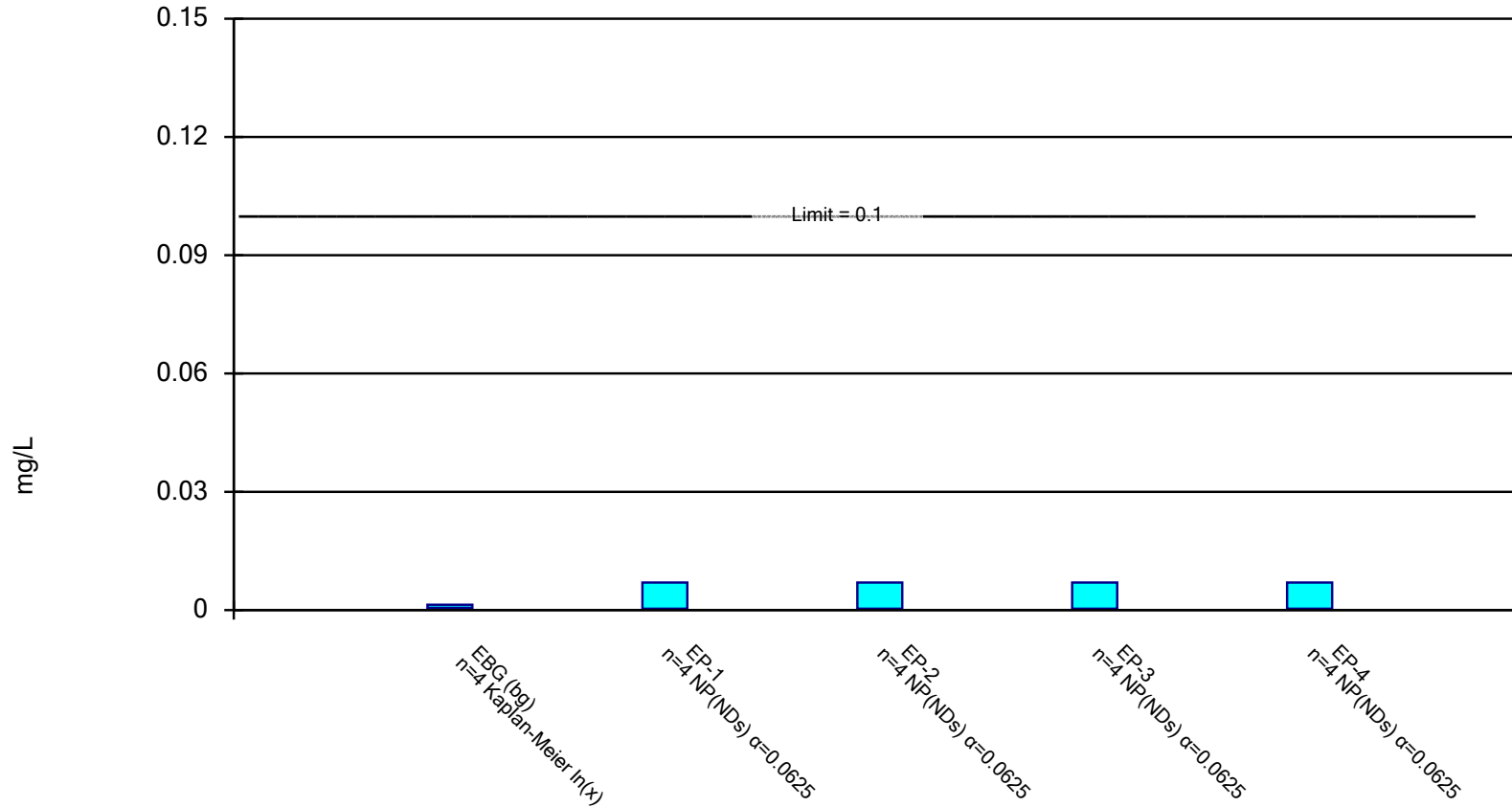


Constituent: Chloride Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

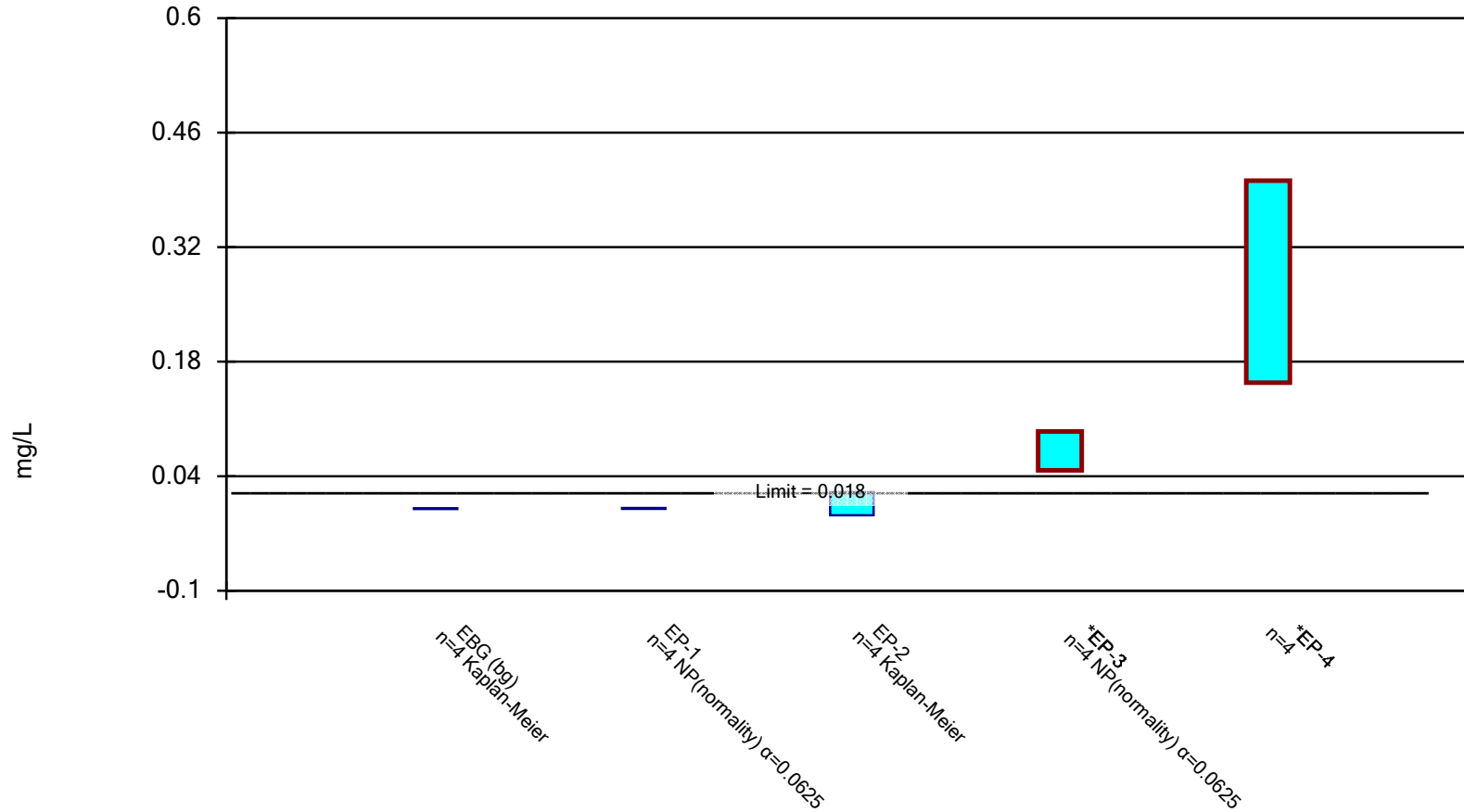


Constituent: Chromium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

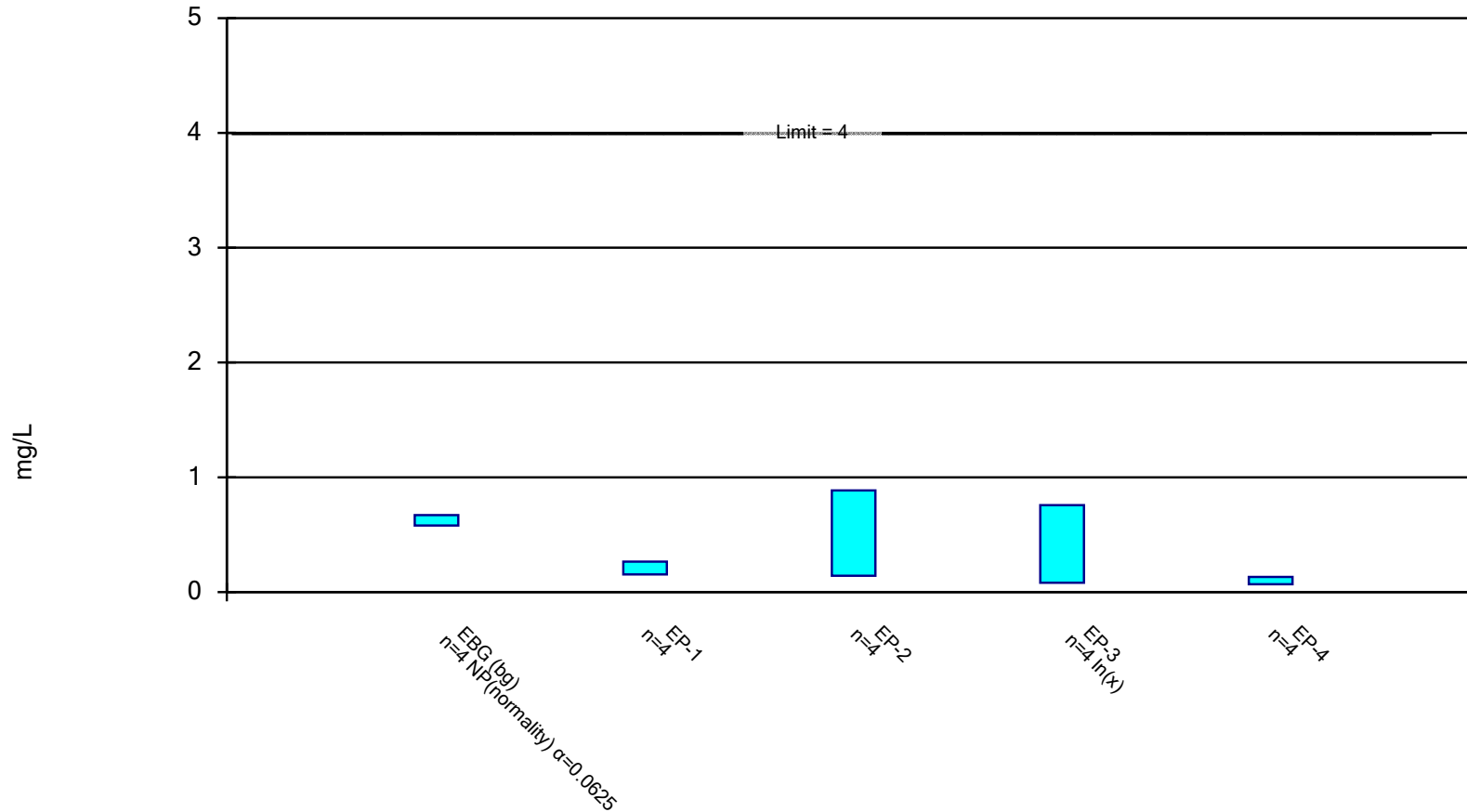


Constituent: Cobalt Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

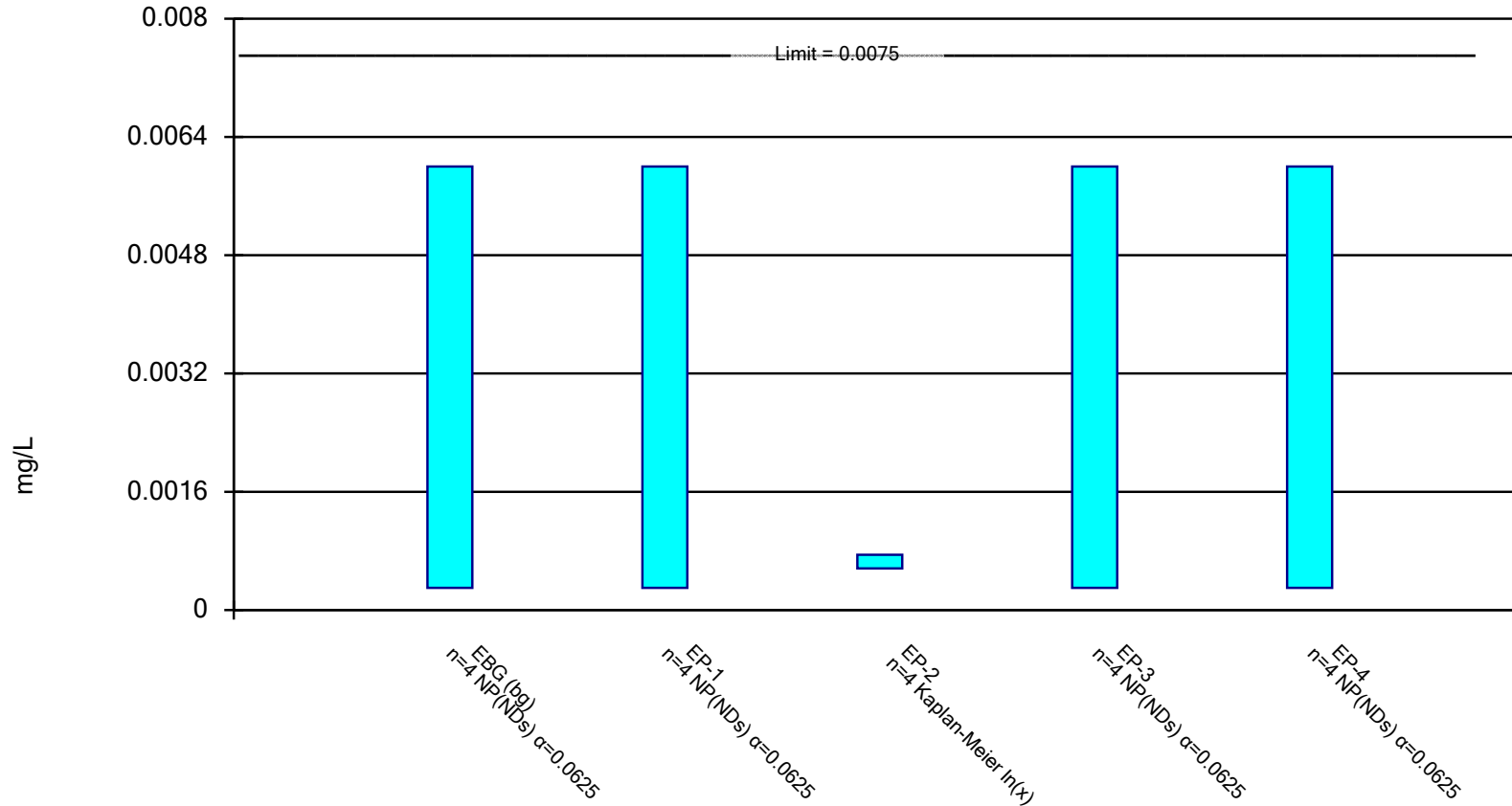


Constituent: Fluoride Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

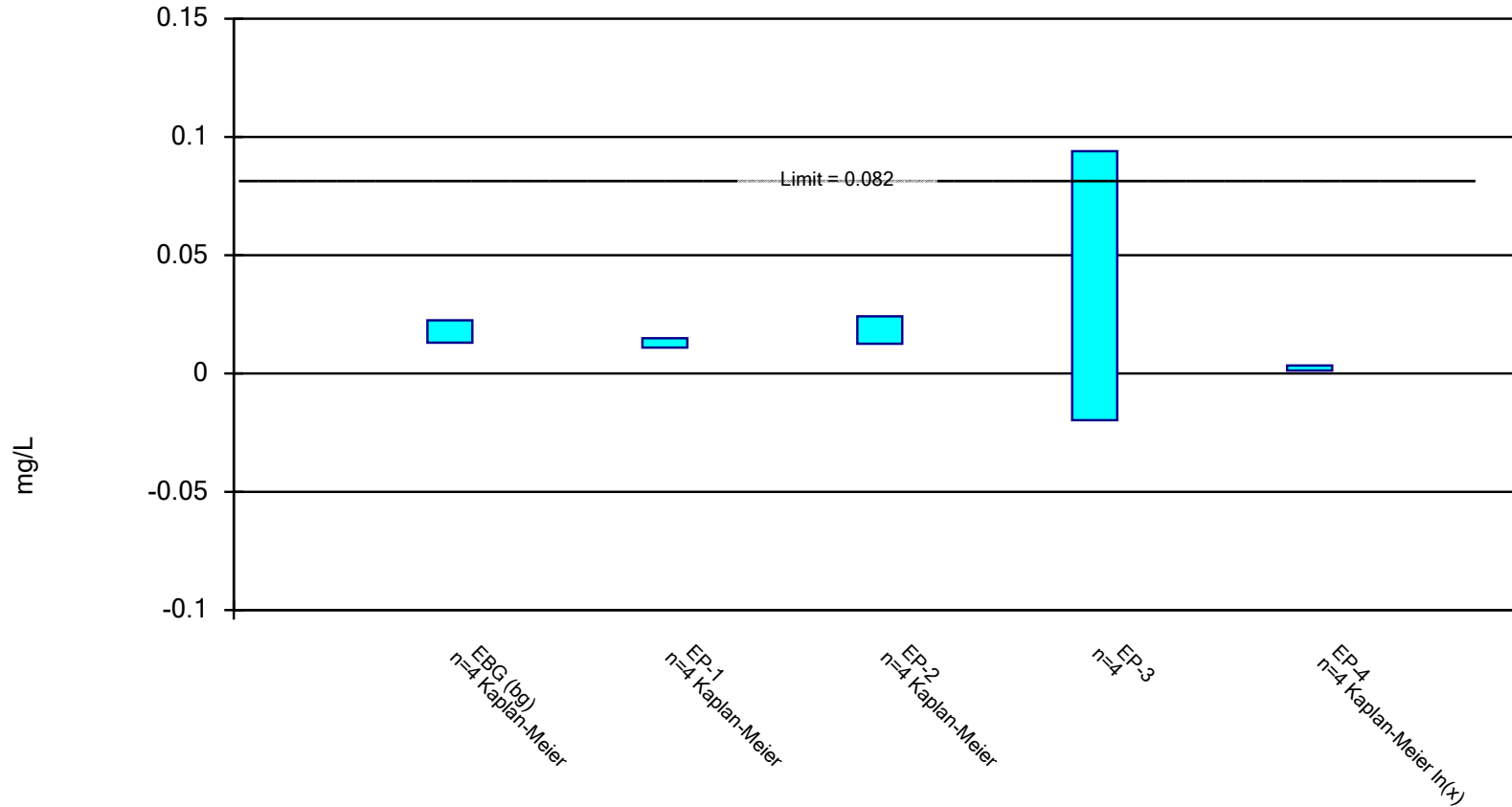


Constituent: Lead Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

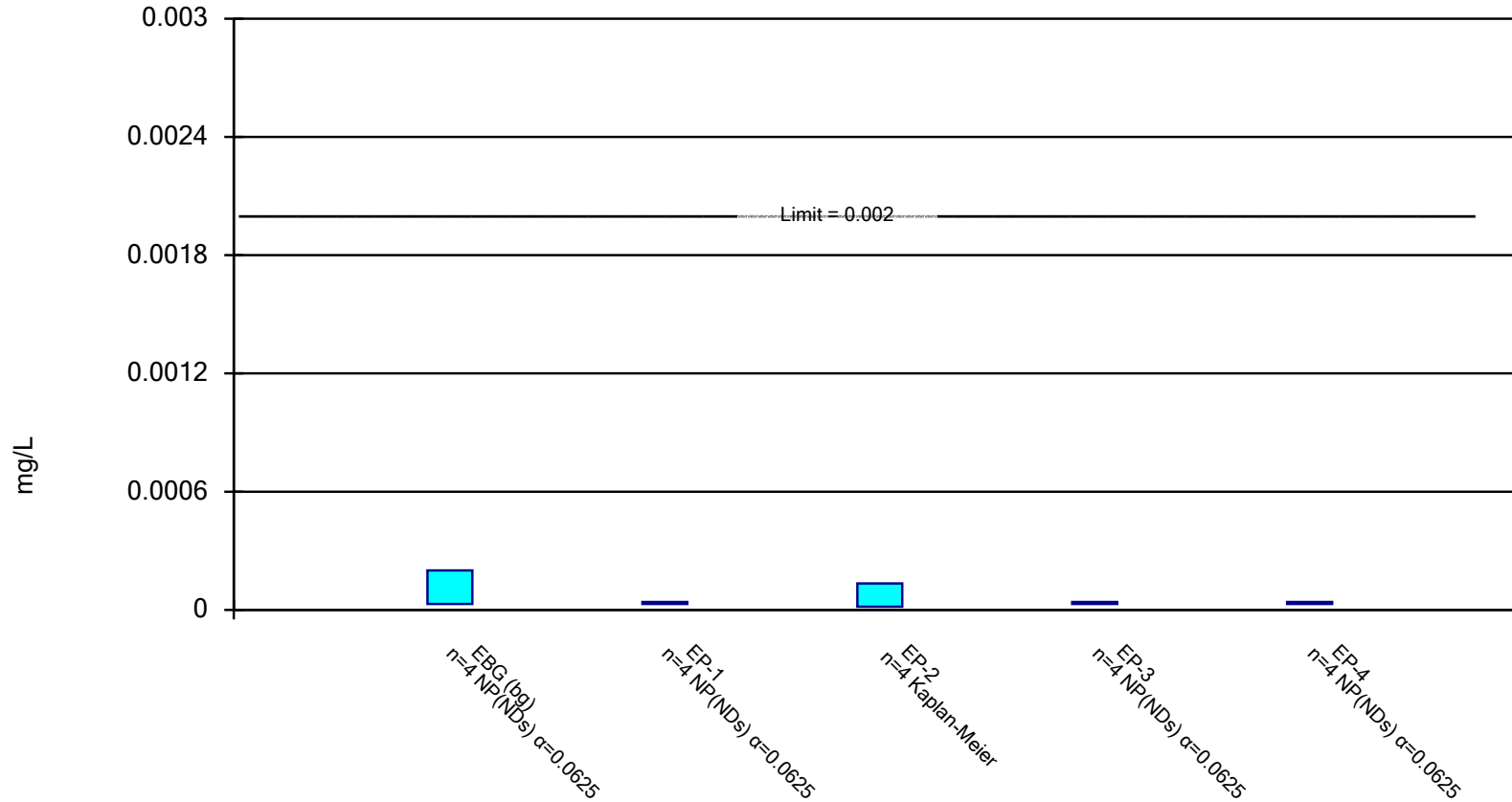


Constituent: Lithium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

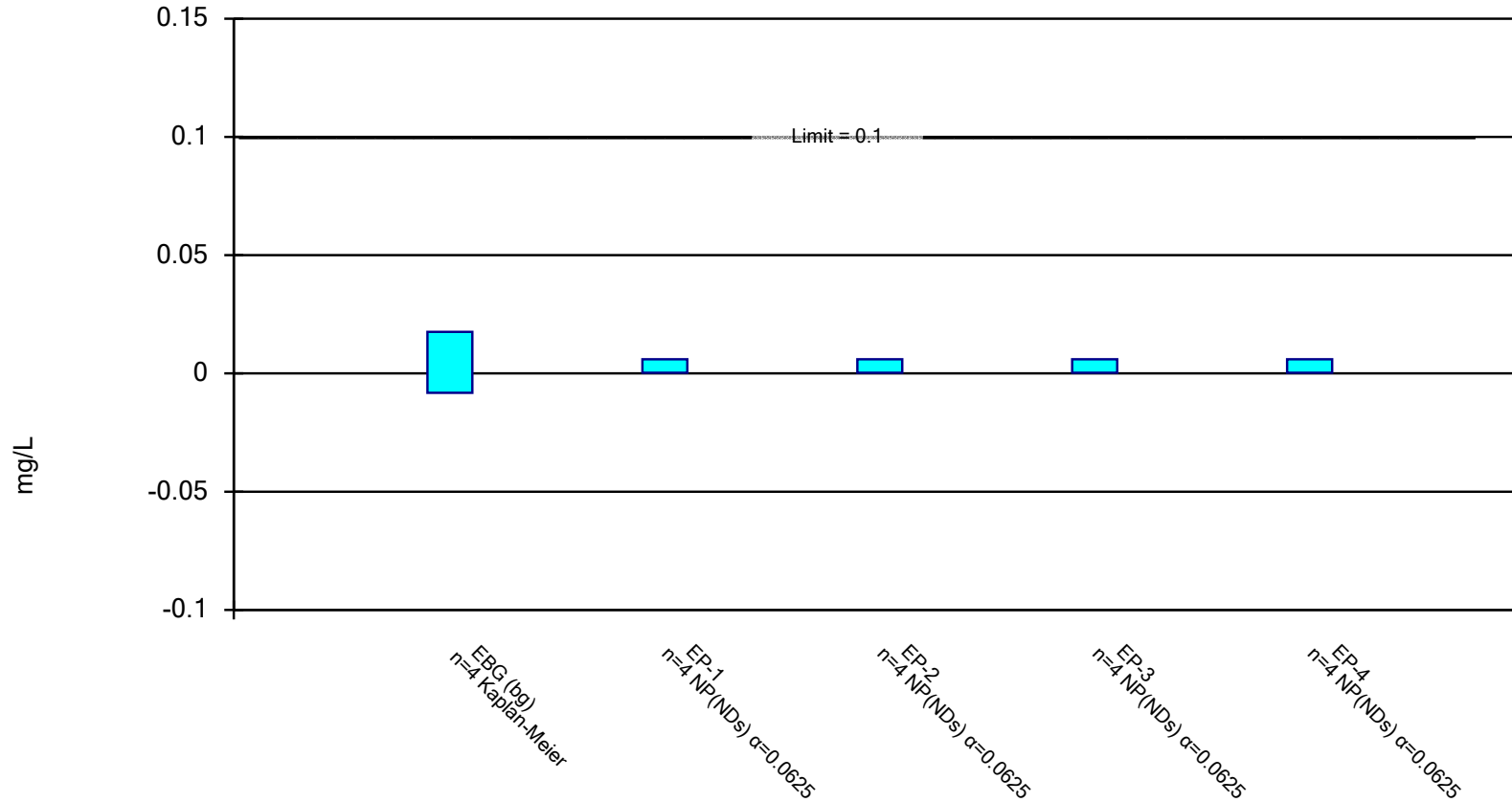


Constituent: Mercury Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

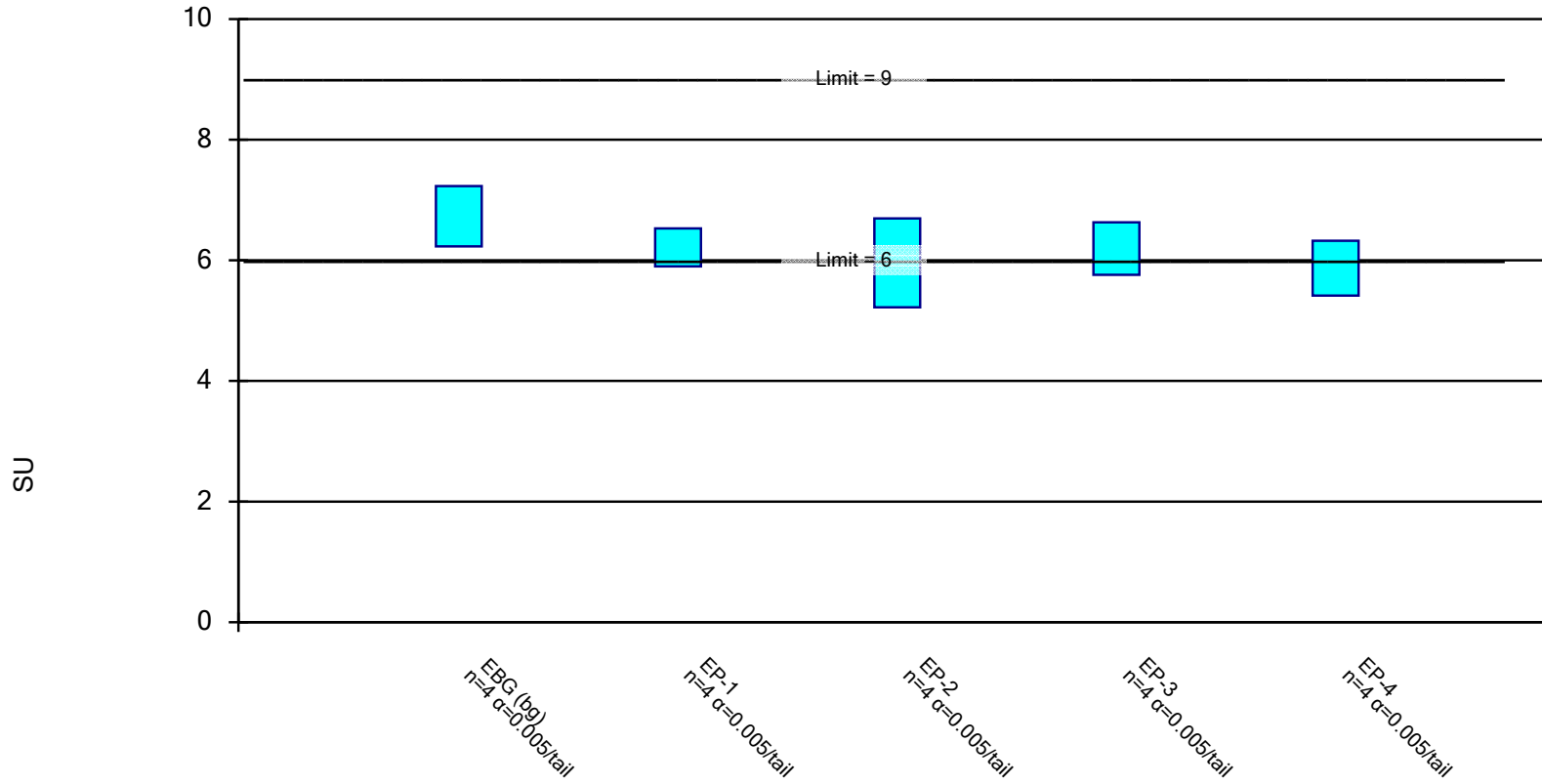


Constituent: Molybdenum Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.

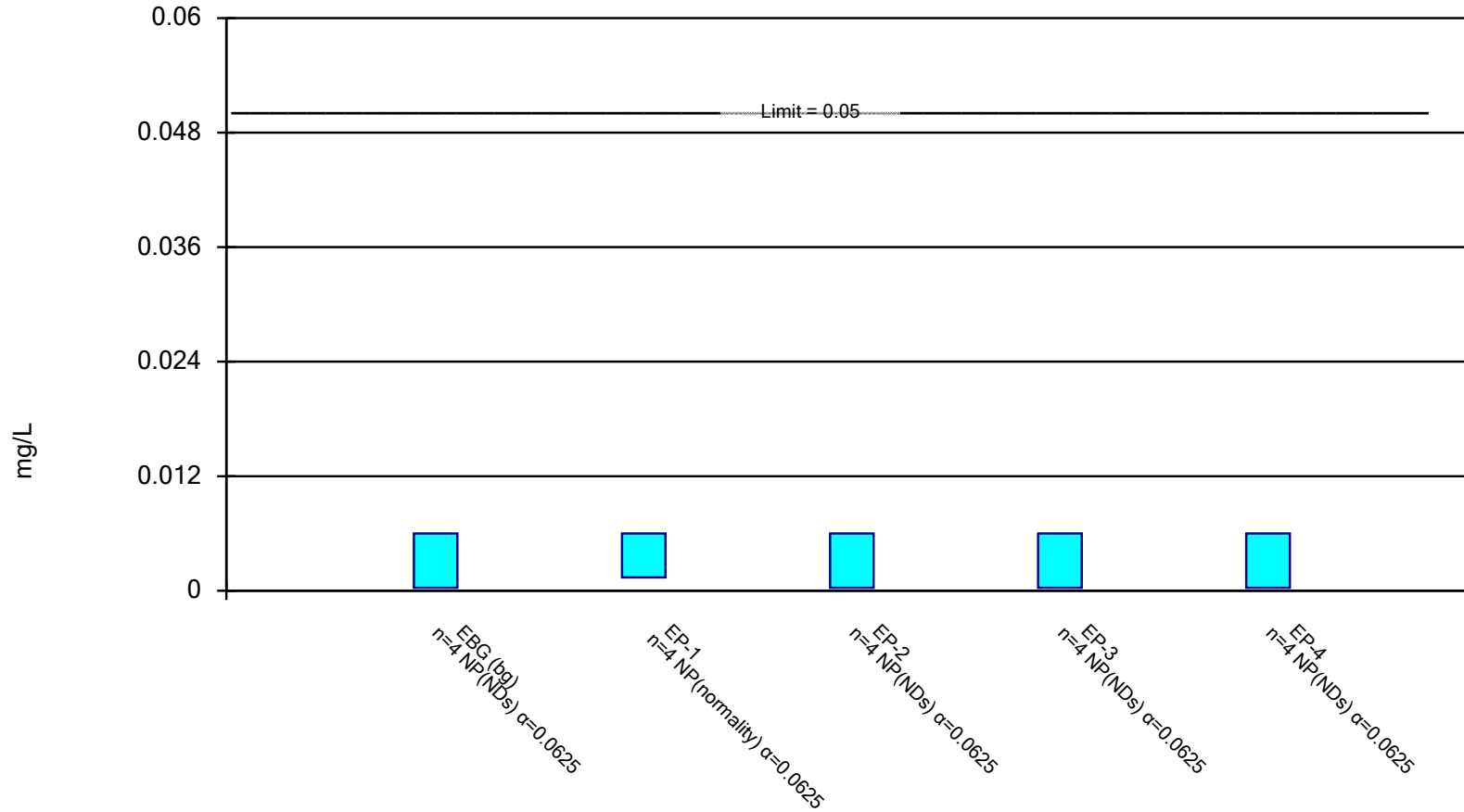


Constituent: pH Analysis Run 5/3/2022 6:26 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

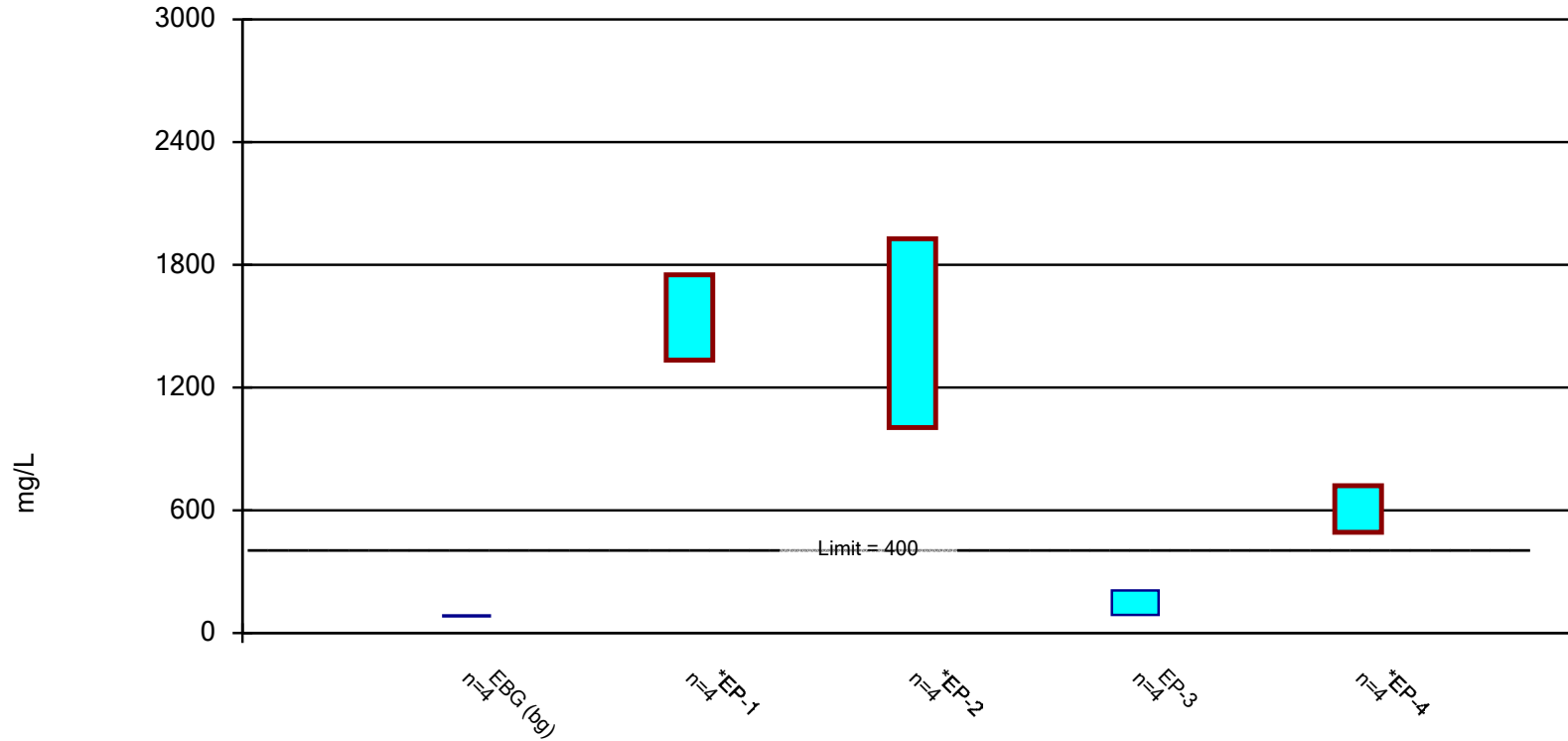


Constituent: Selenium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

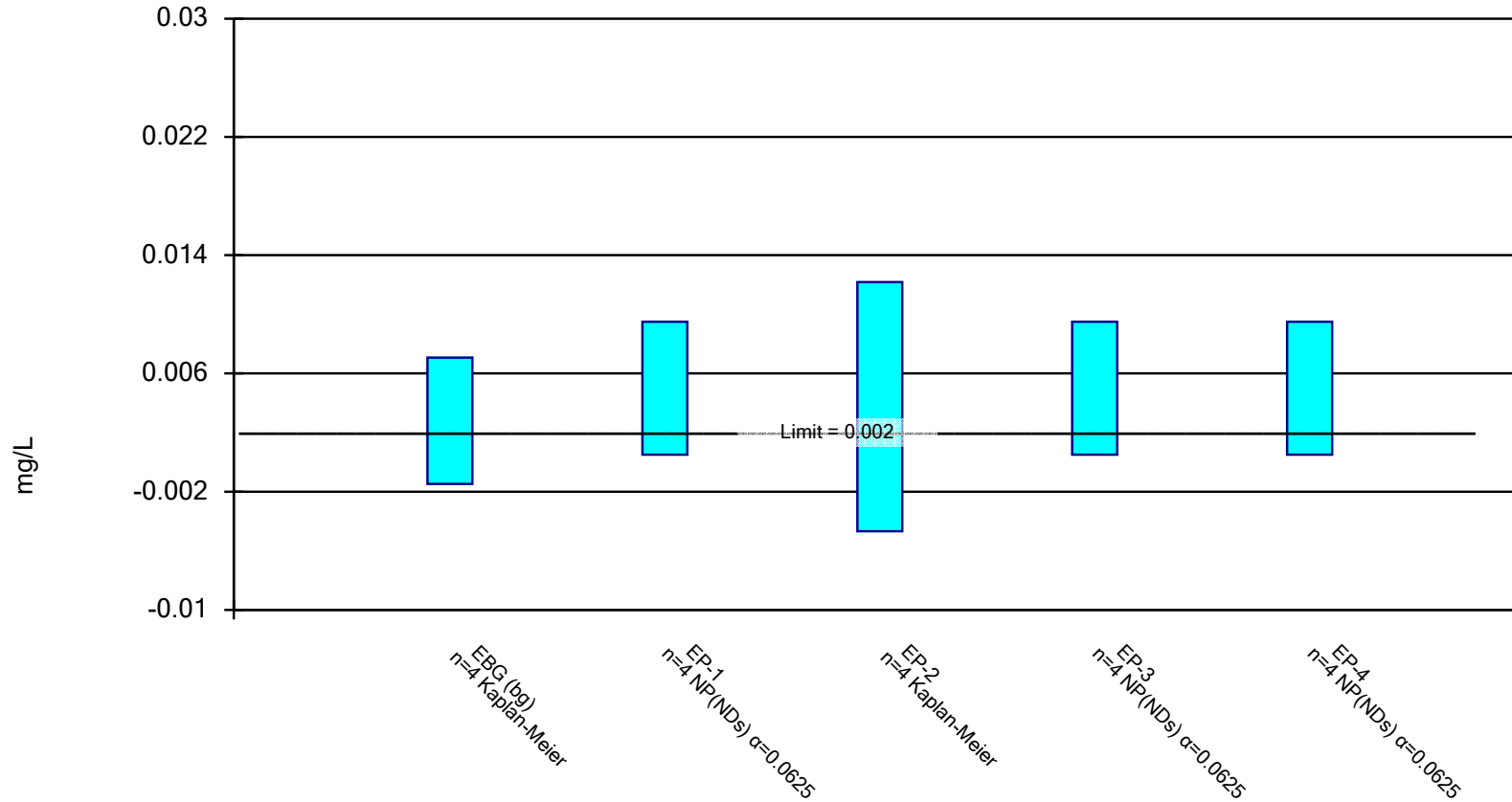


Constituent: Sulfate Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

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.

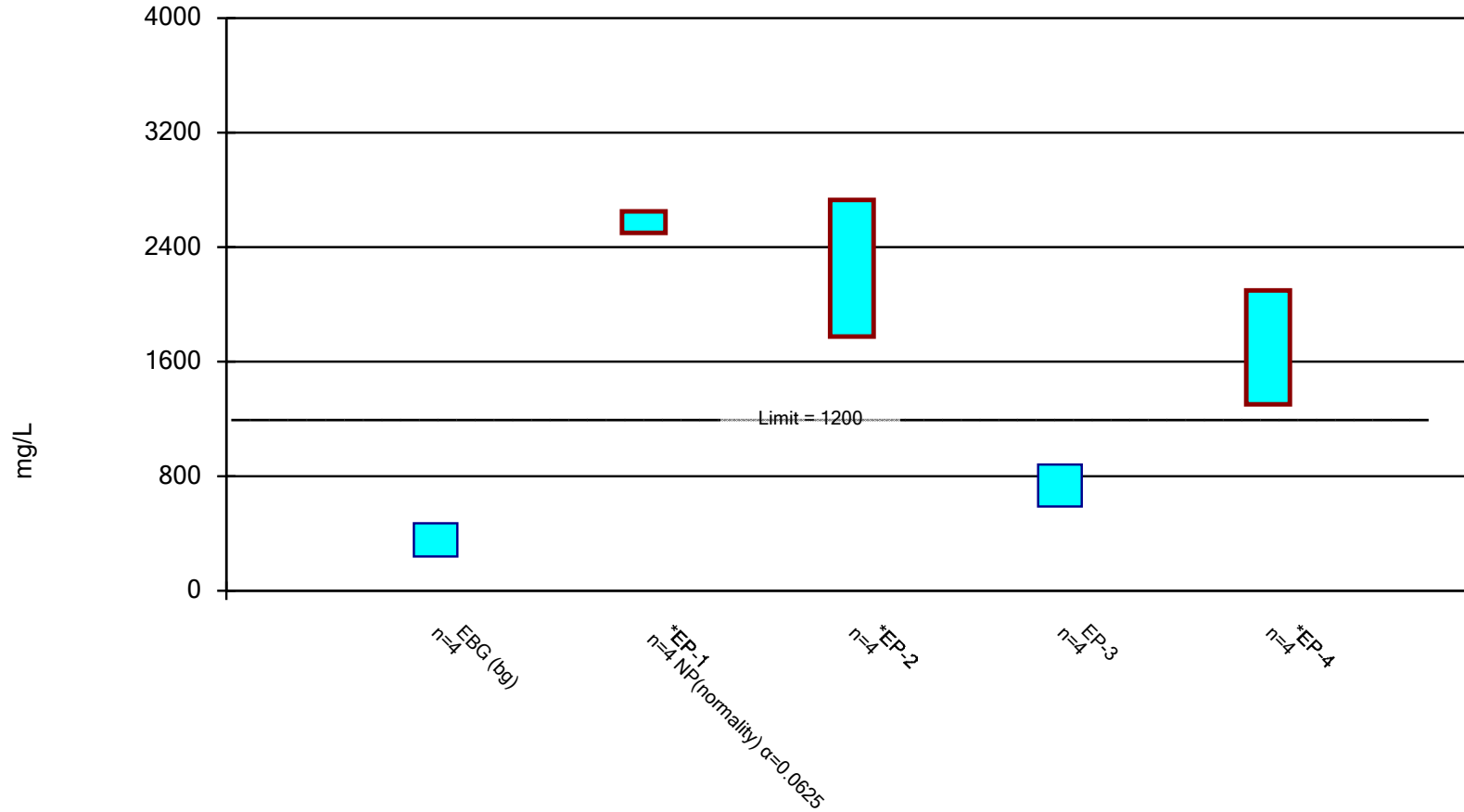


Constituent: Thallium Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

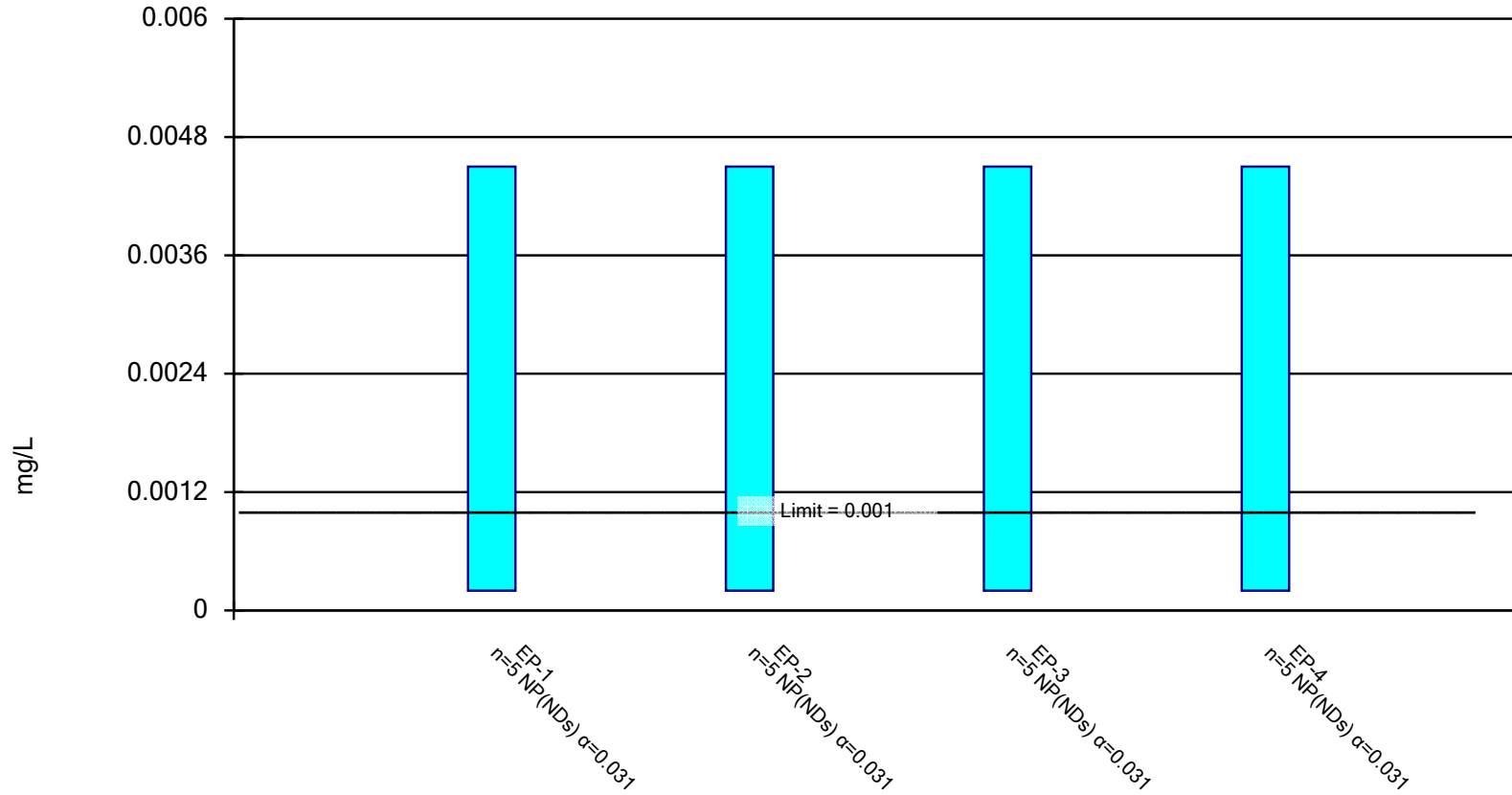
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 5/3/2022 6:21 PM View: Post-Closure Data
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

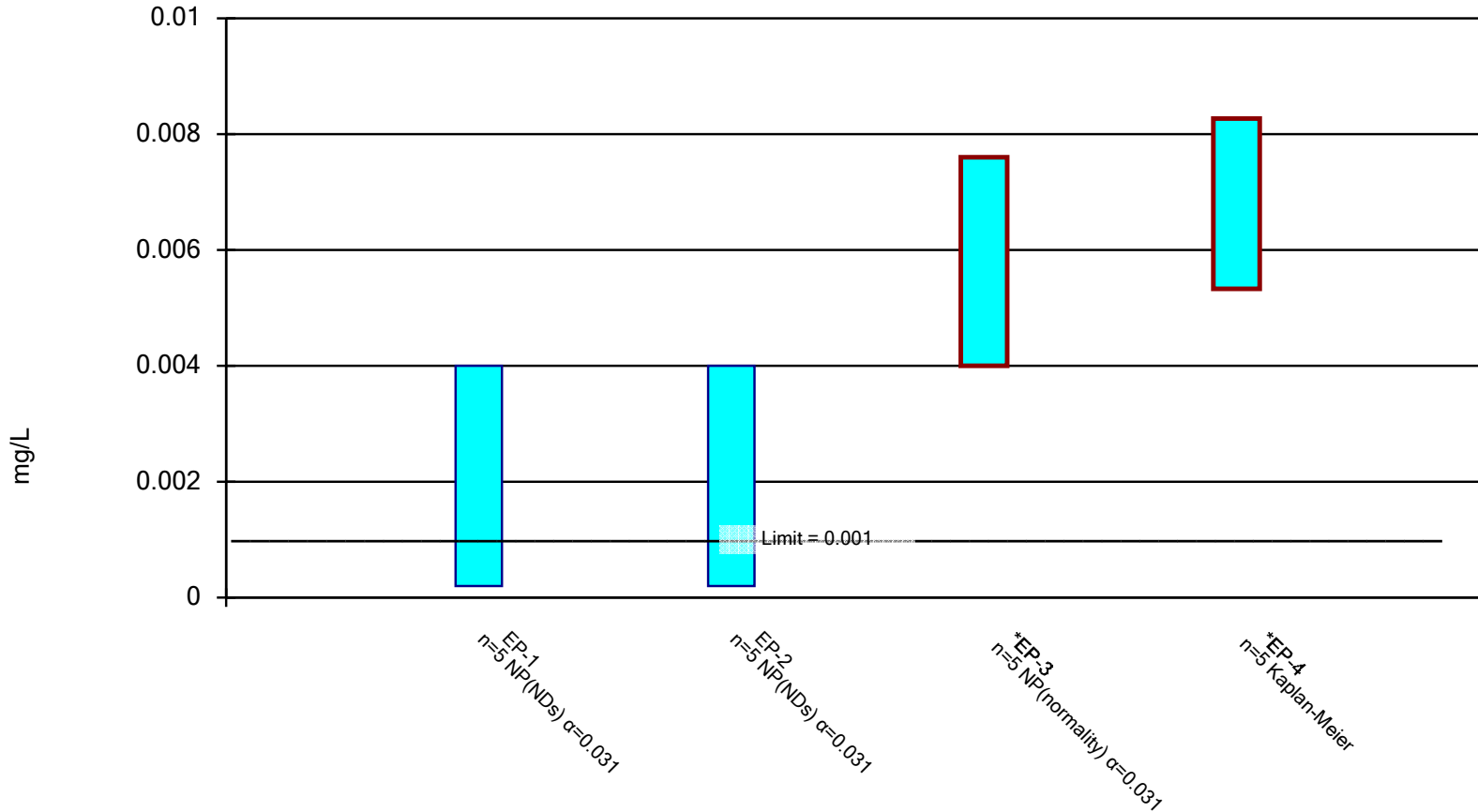


Constituent: Antimony Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

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.

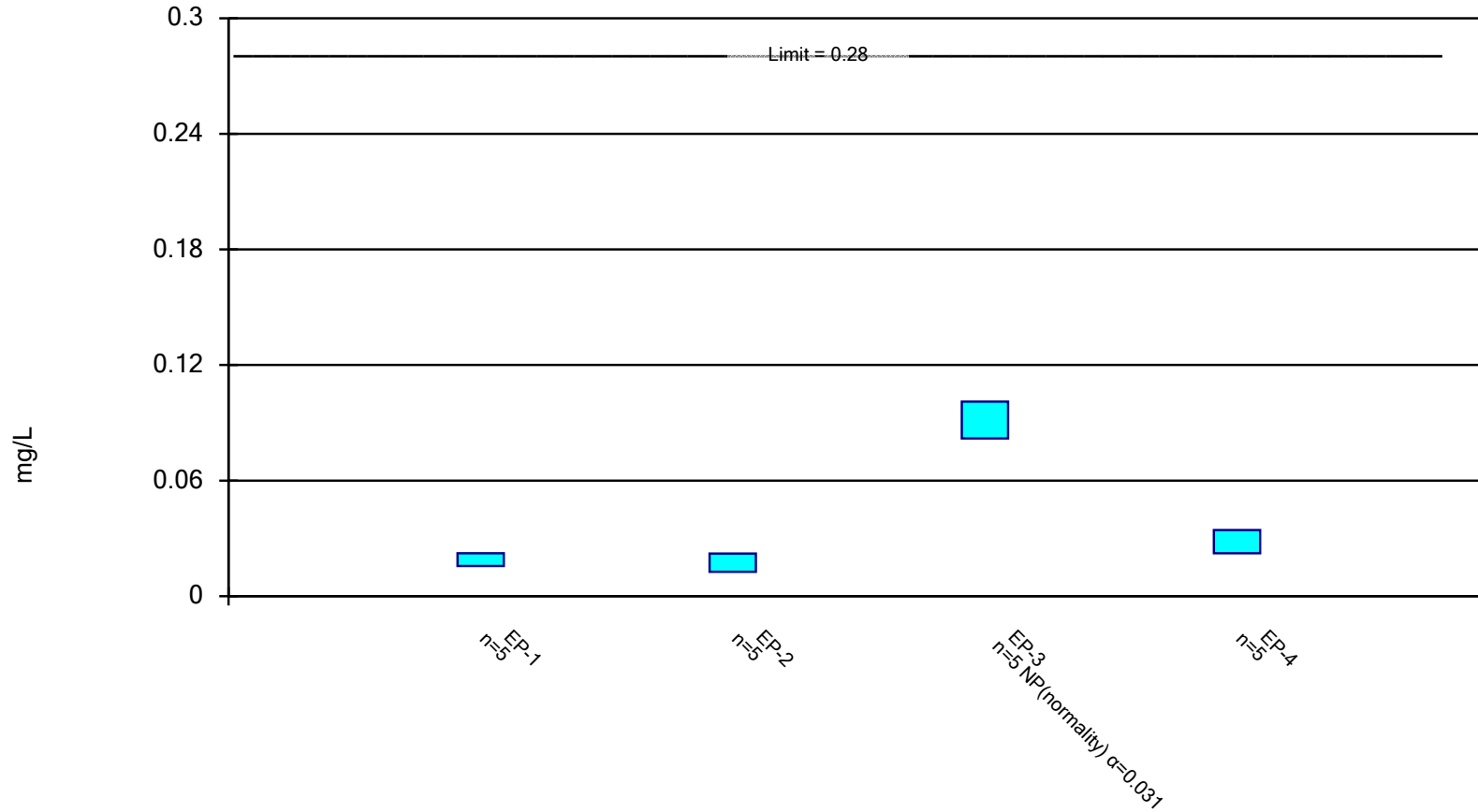


Constituent: Arsenic Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

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.

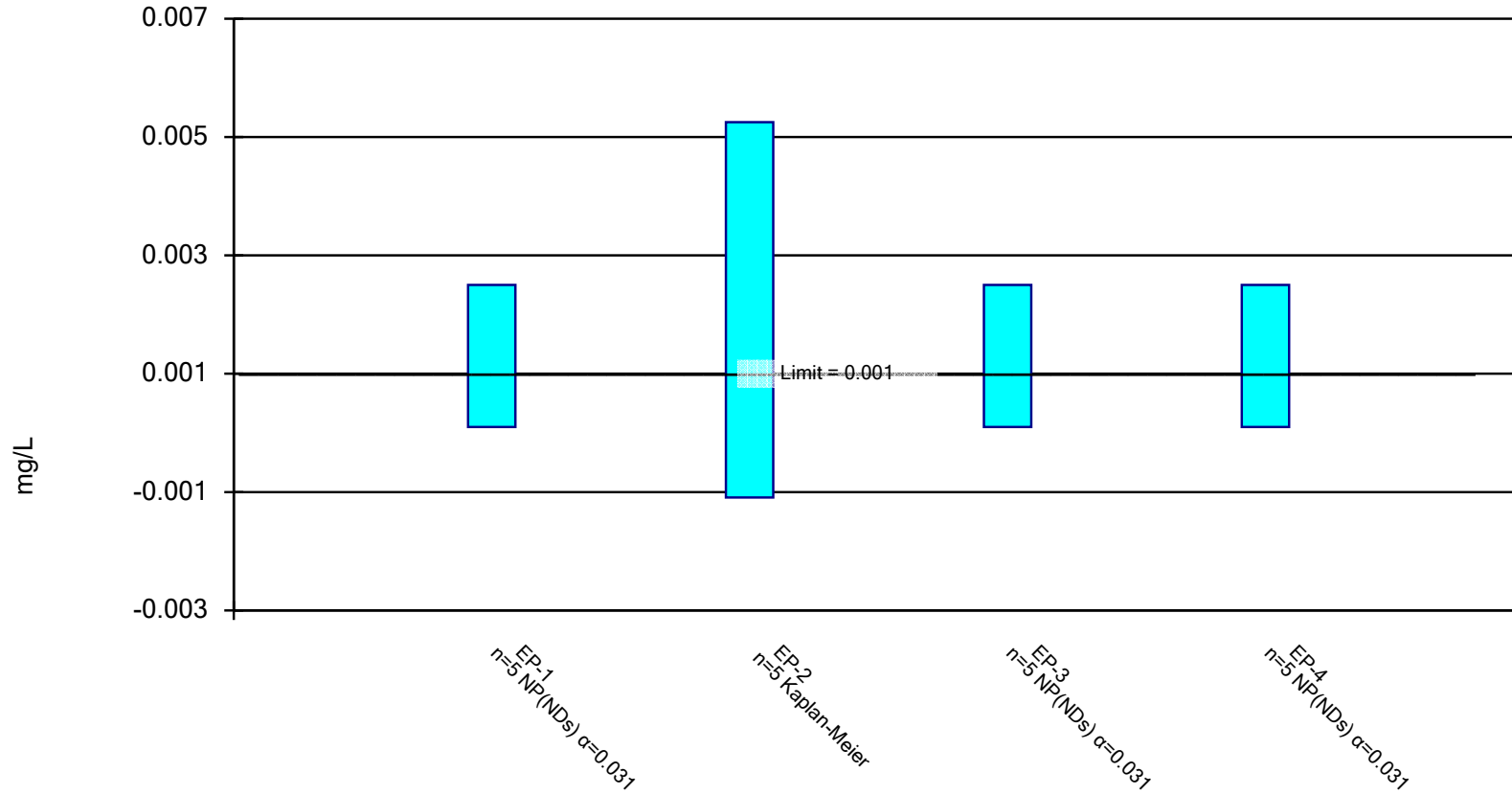


Constituent: Barium Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

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.

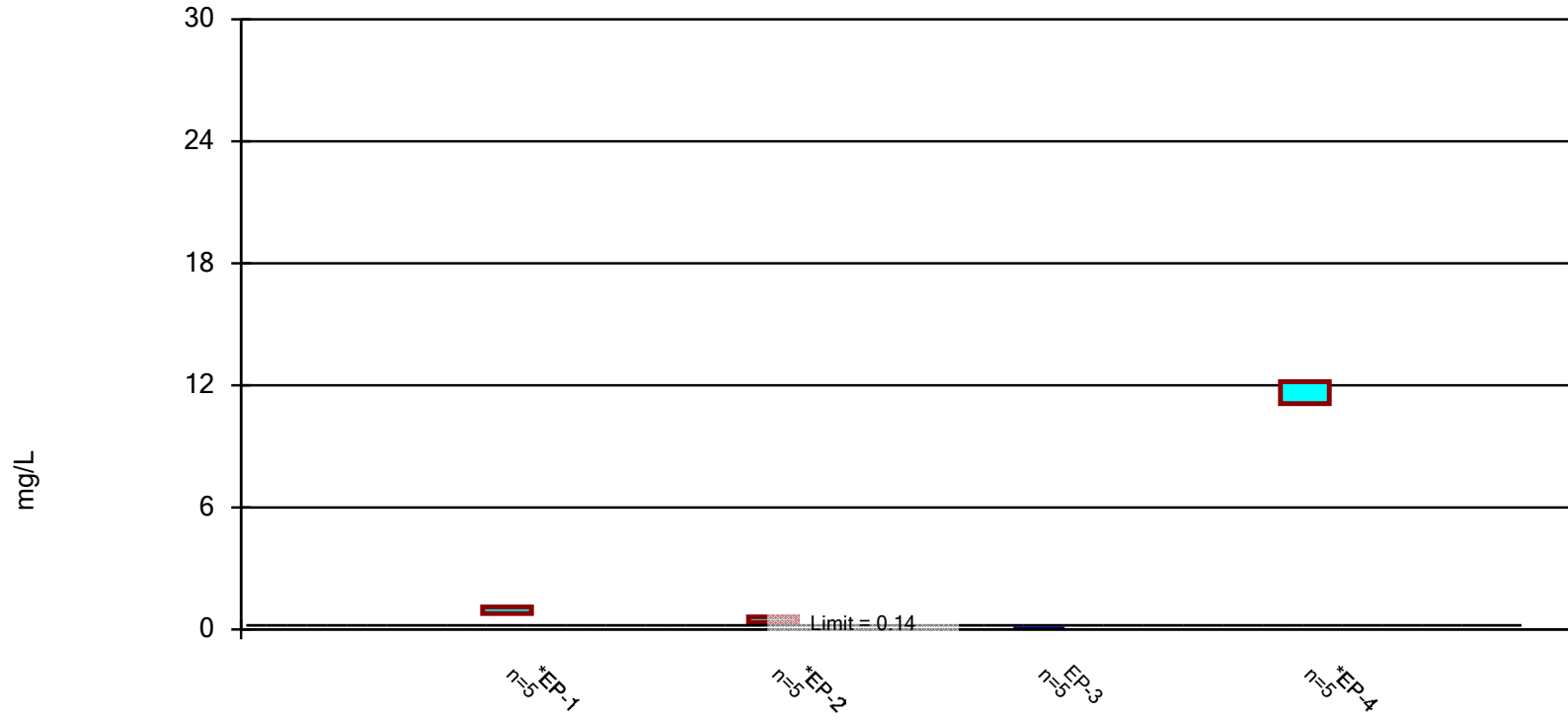


Constituent: Beryllium Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

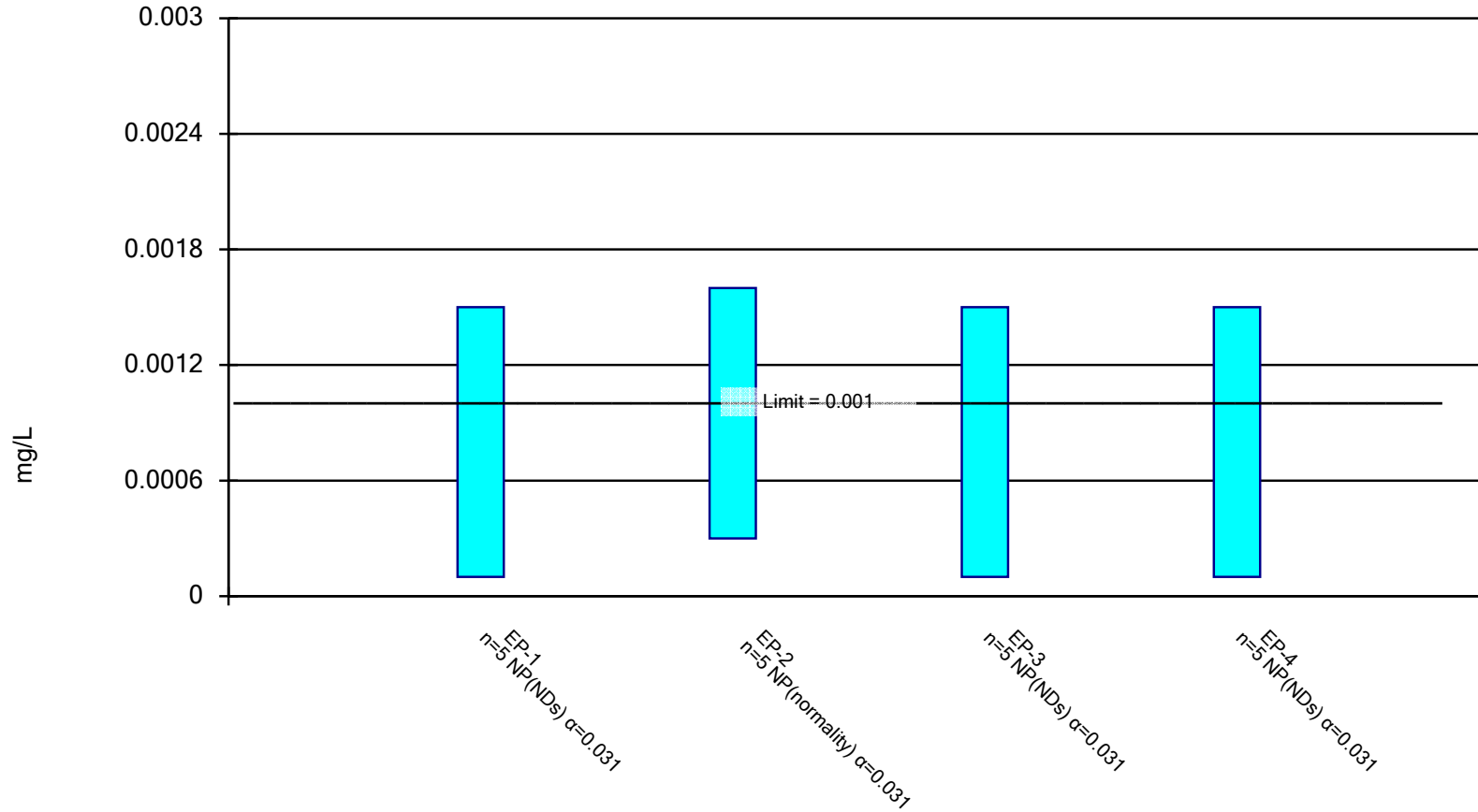
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Boron Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

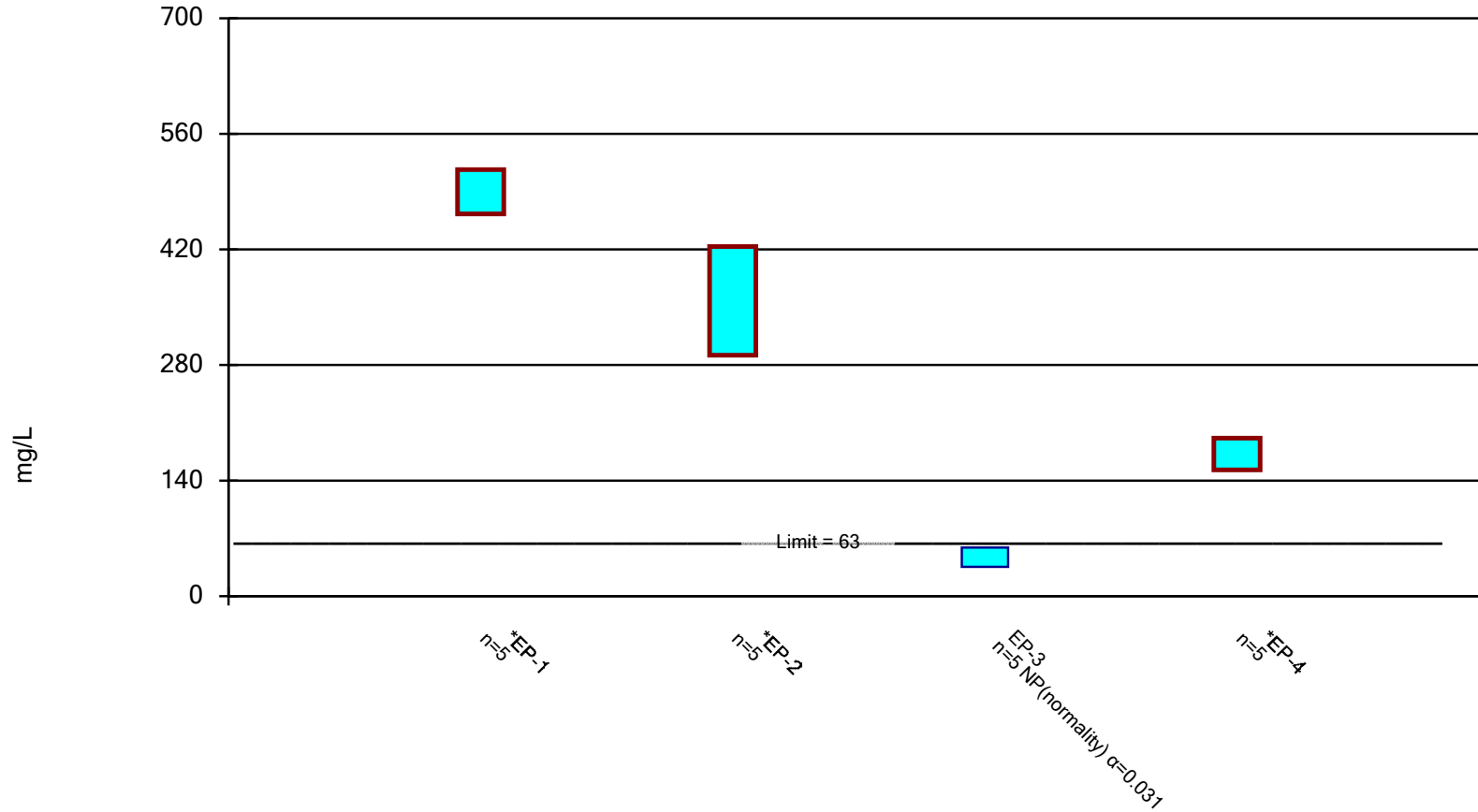


Constituent: Cadmium Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

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.

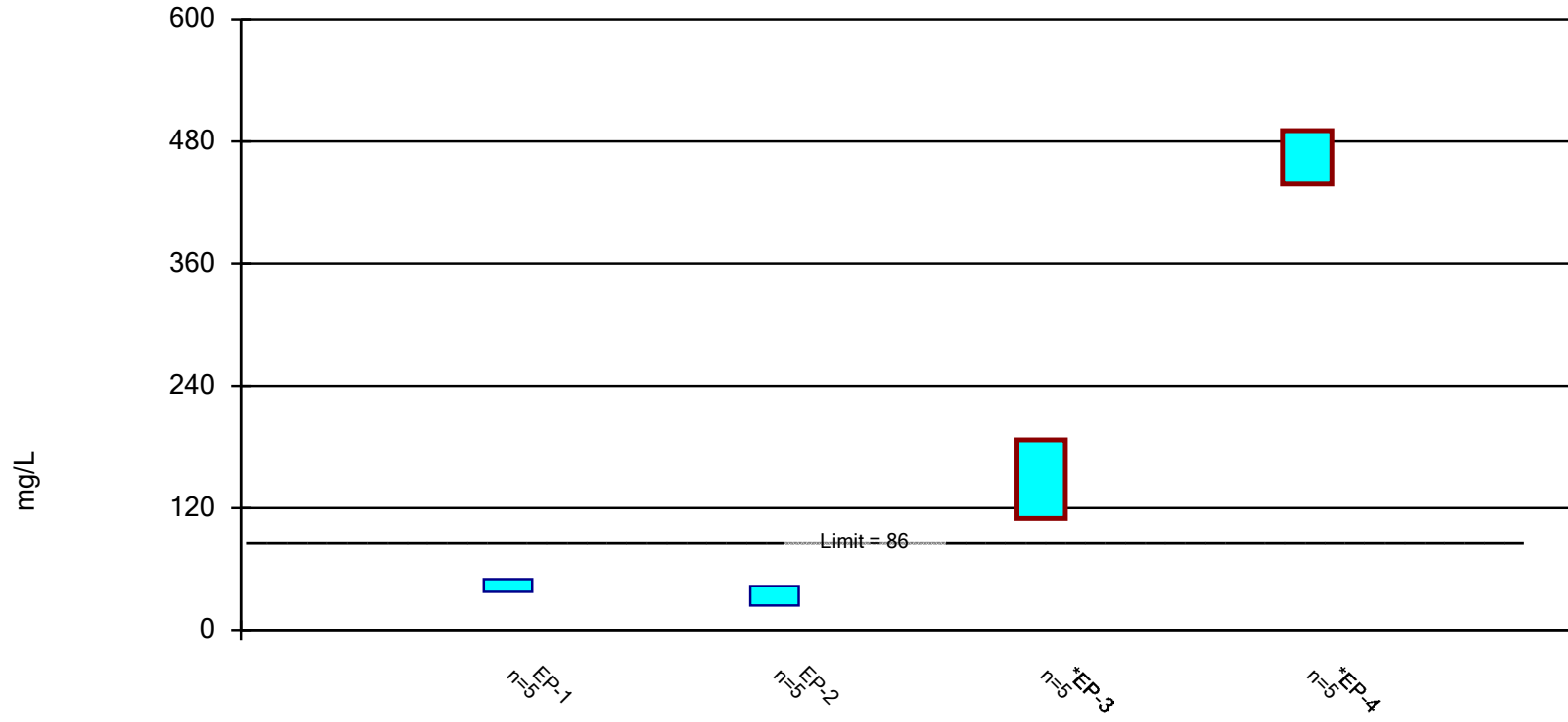


Constituent: Calcium Analysis Run 7/19/2022 11:47 AM View: IEPA SSLs

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.

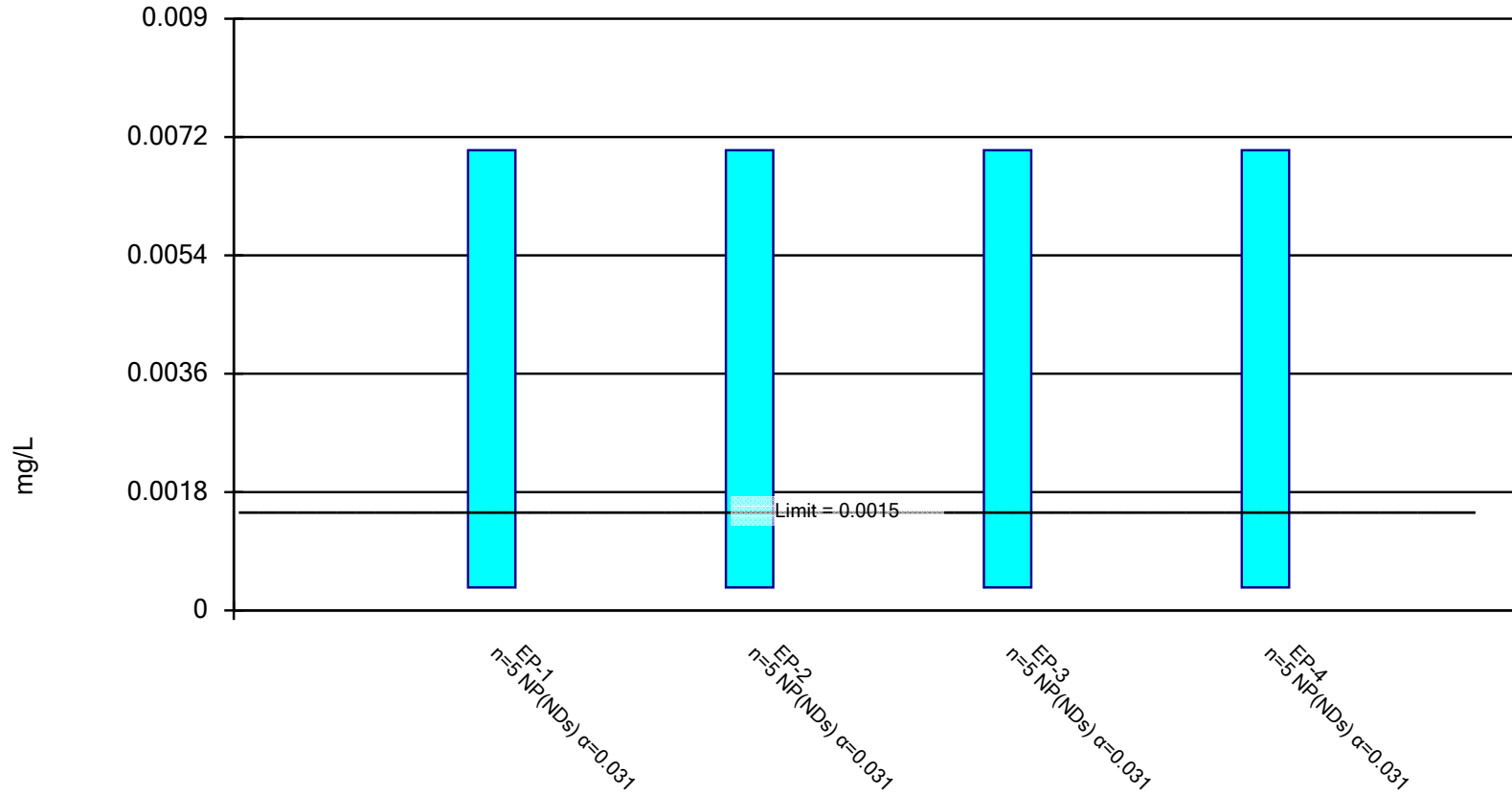


Constituent: Chloride Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

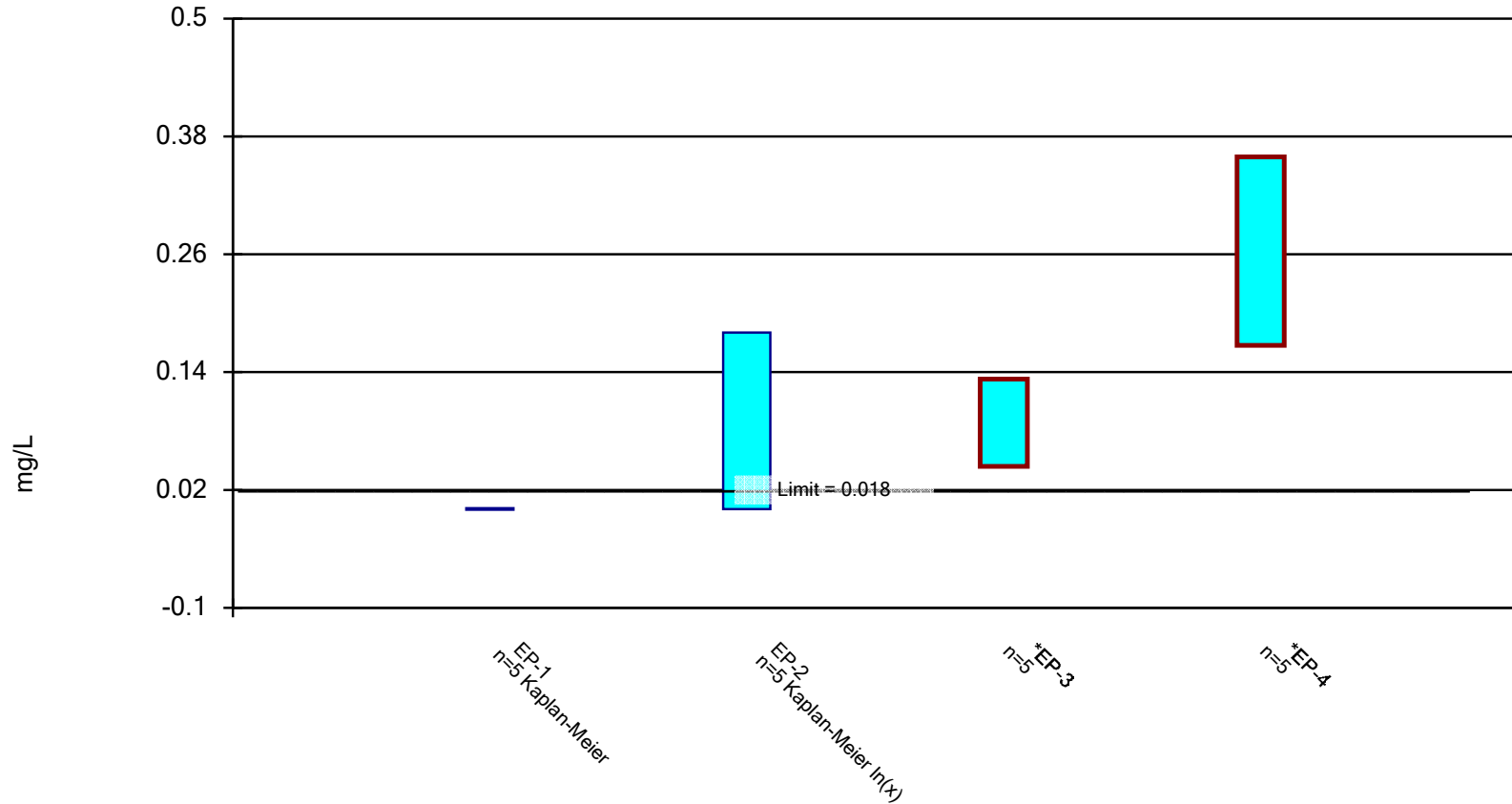


Constituent: Chromium Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

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.

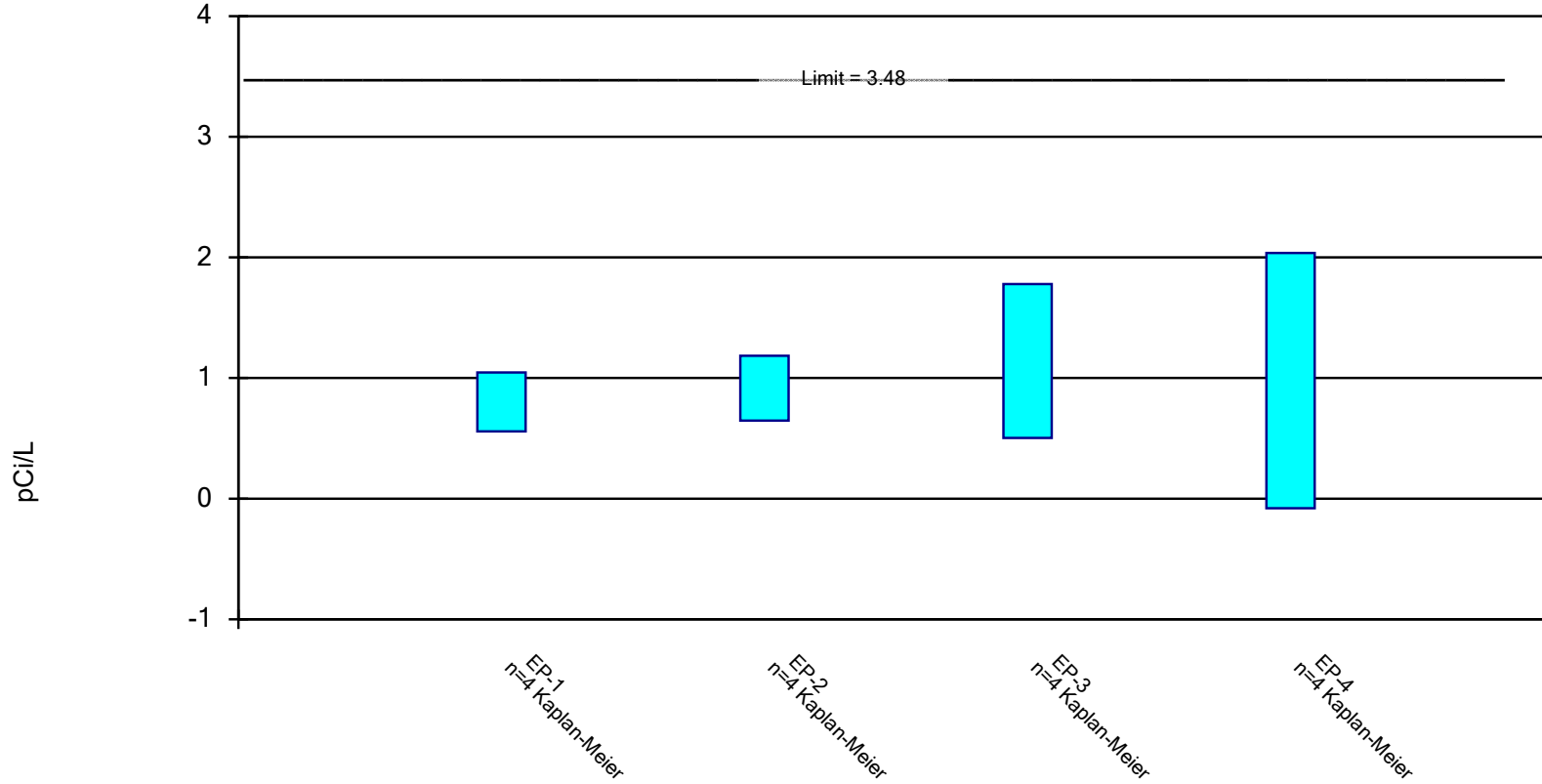


Constituent: Cobalt Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

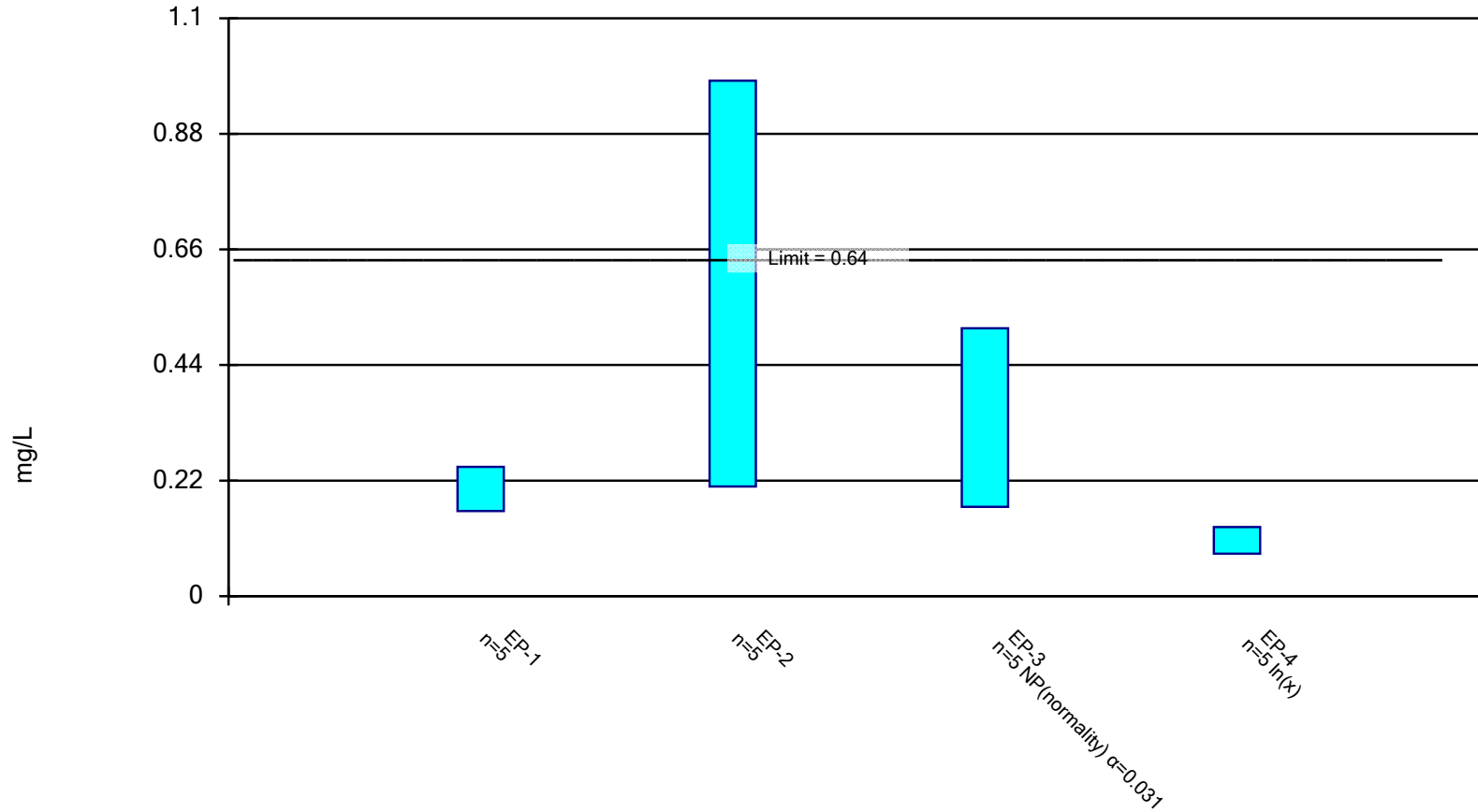
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs
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.

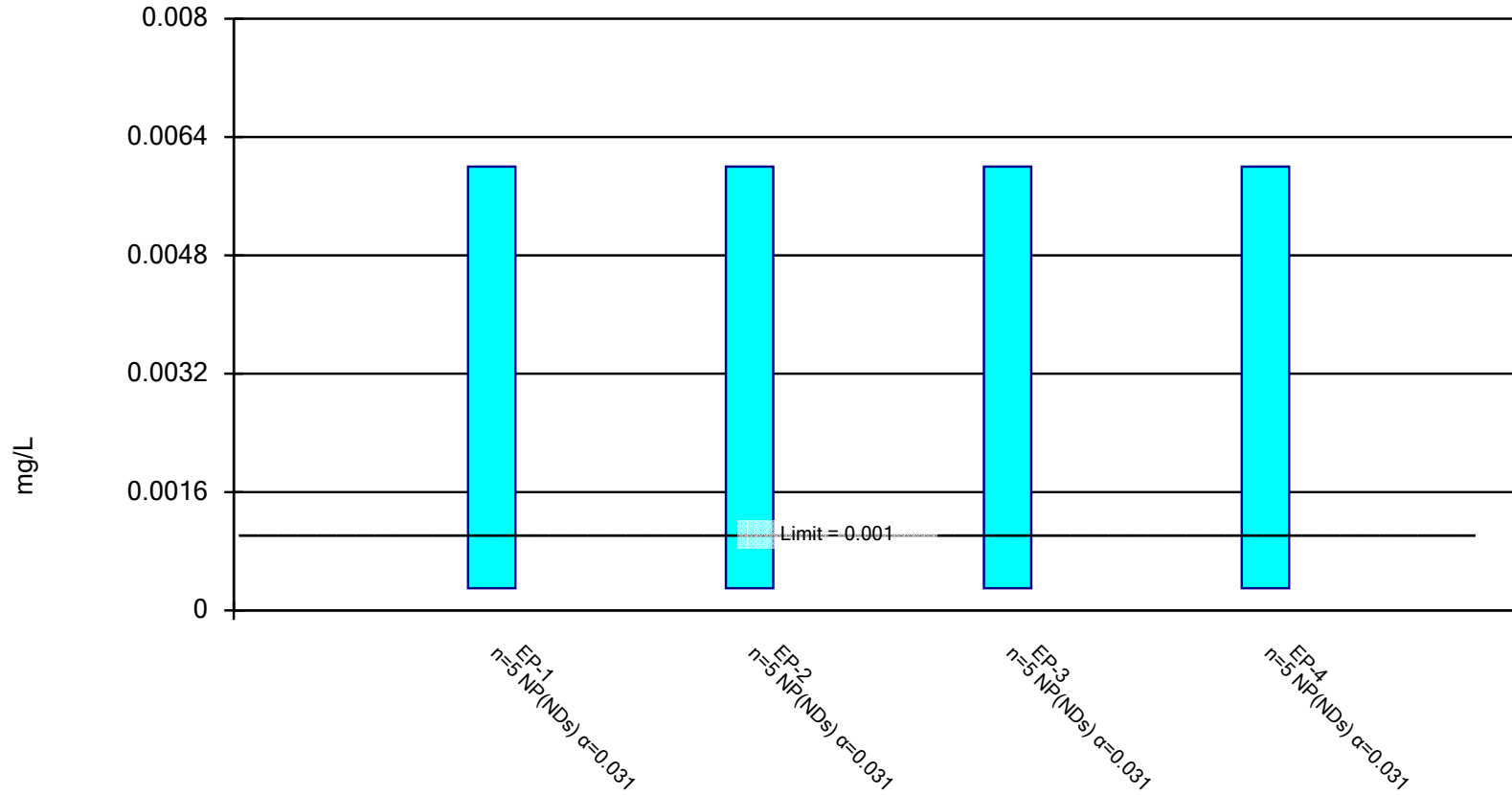


Constituent: Fluoride Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

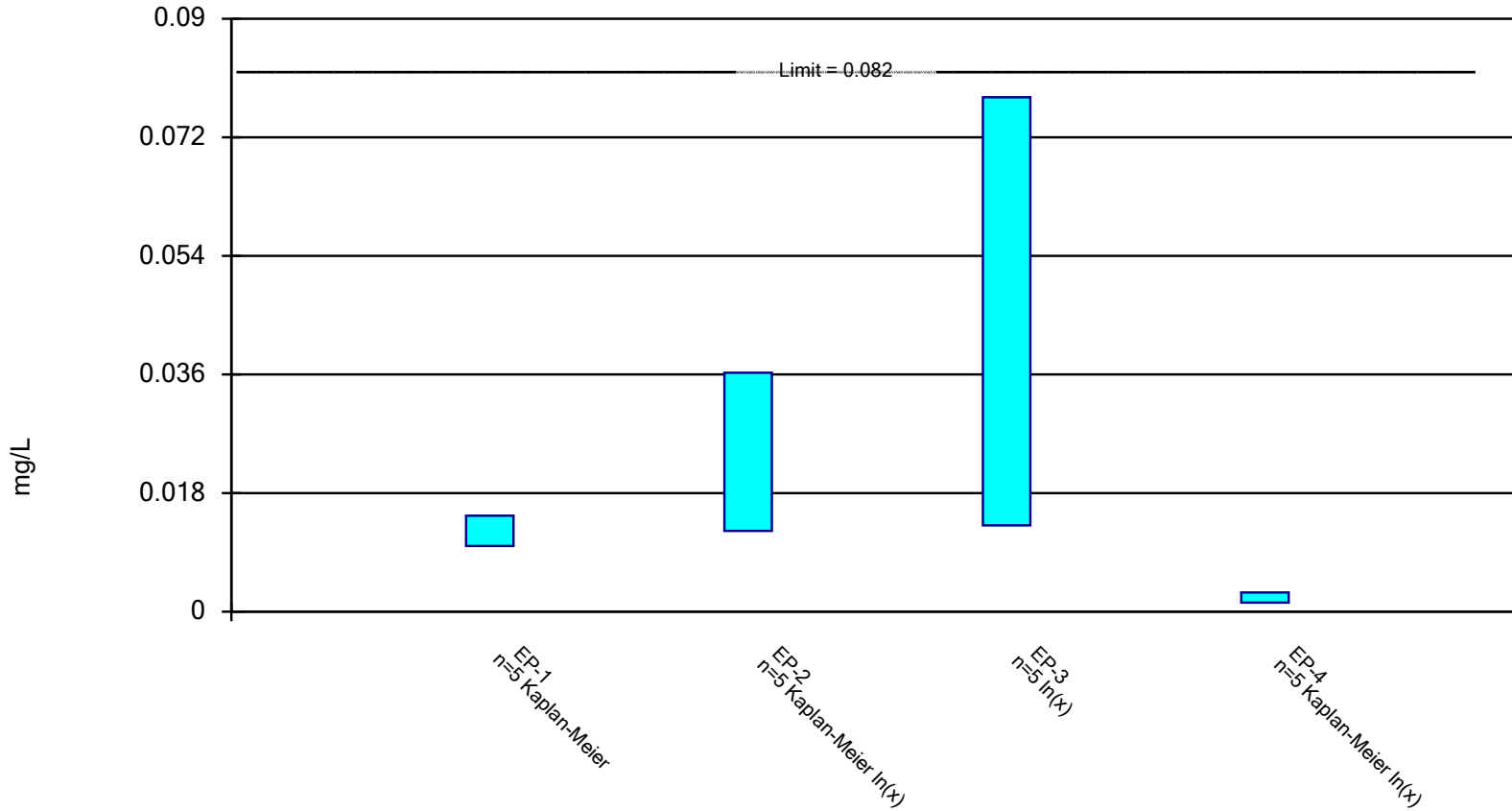


Constituent: Lead Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

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.

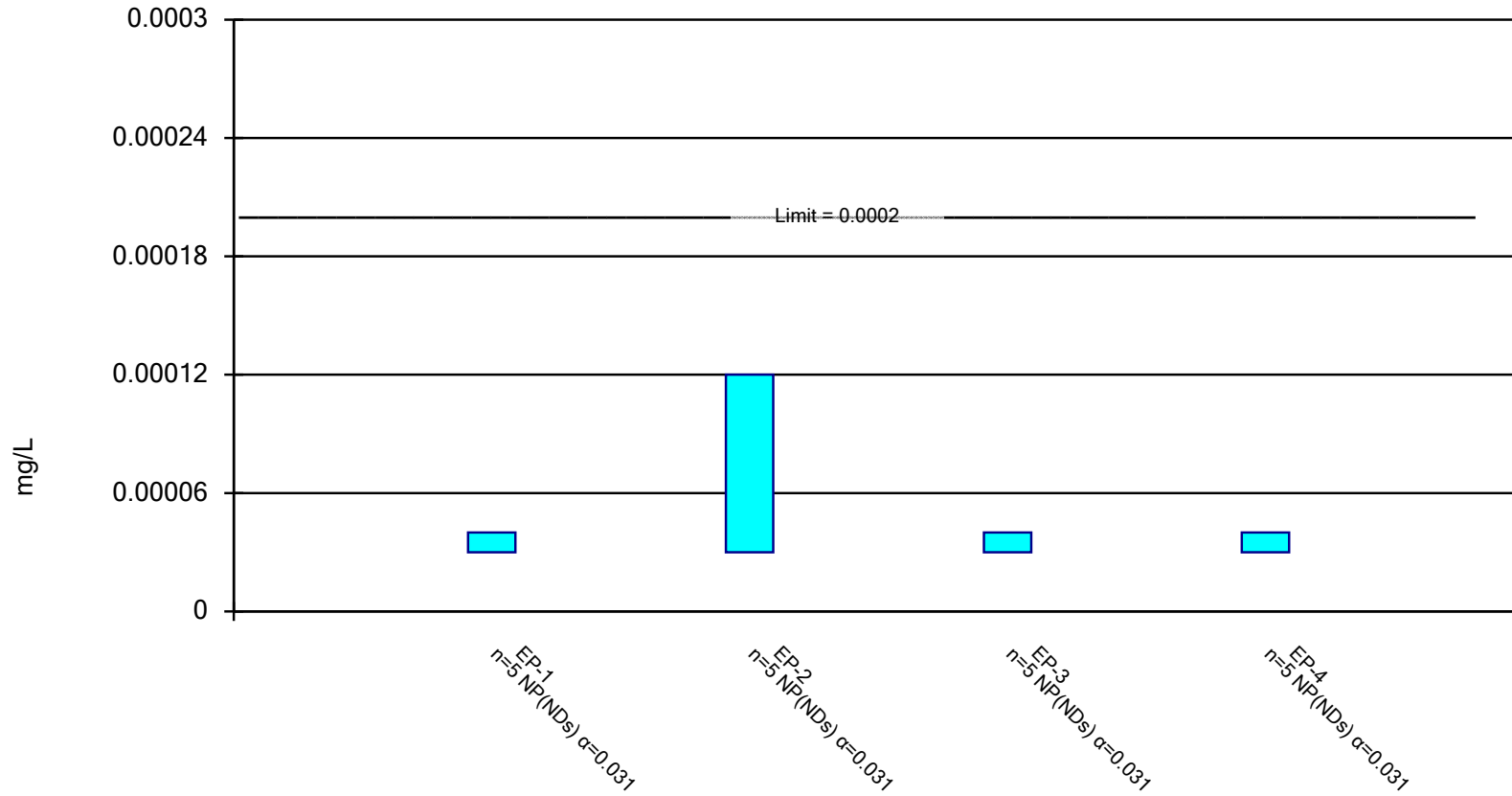


Constituent: Lithium Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

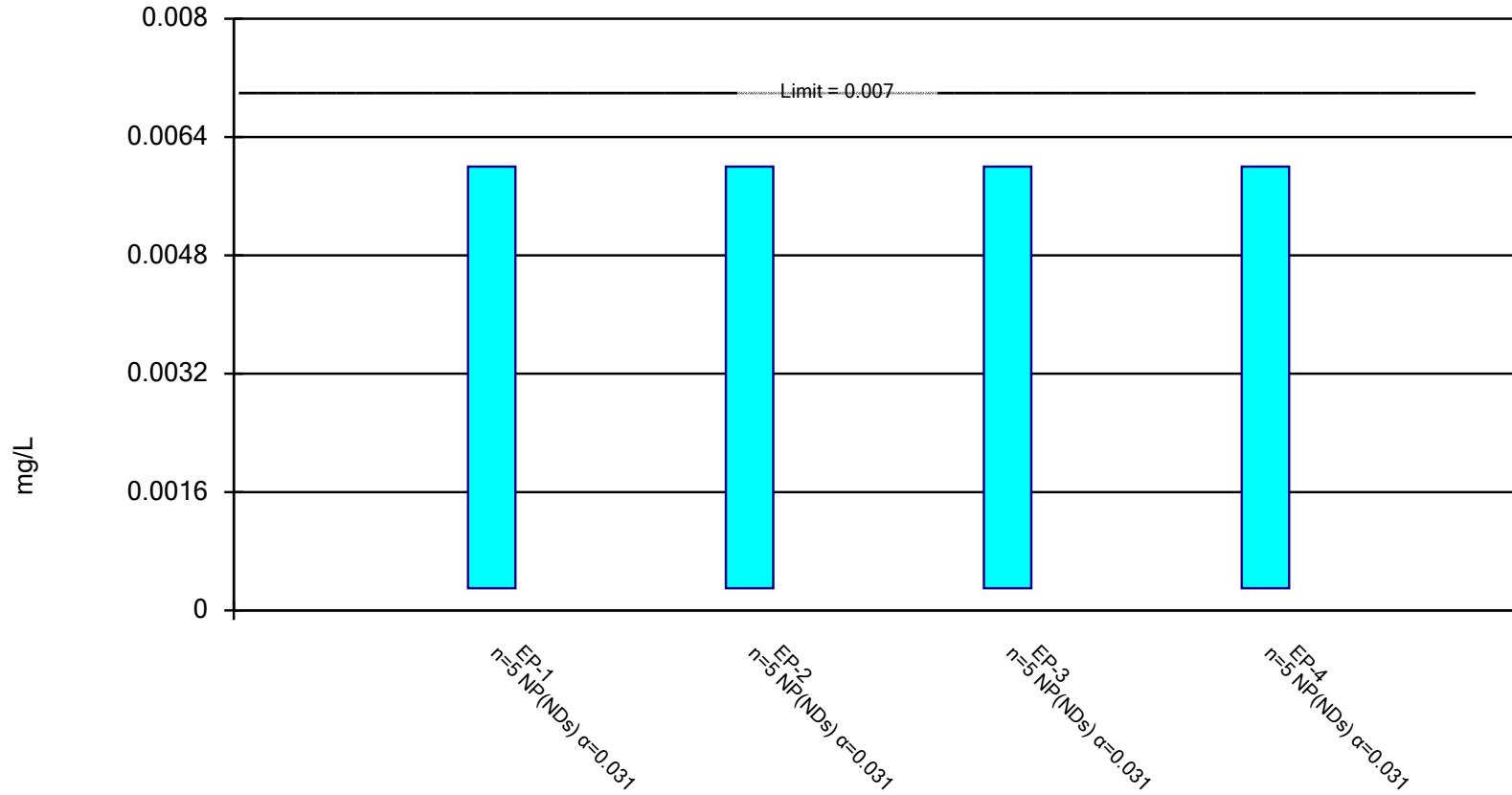


Constituent: Mercury Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

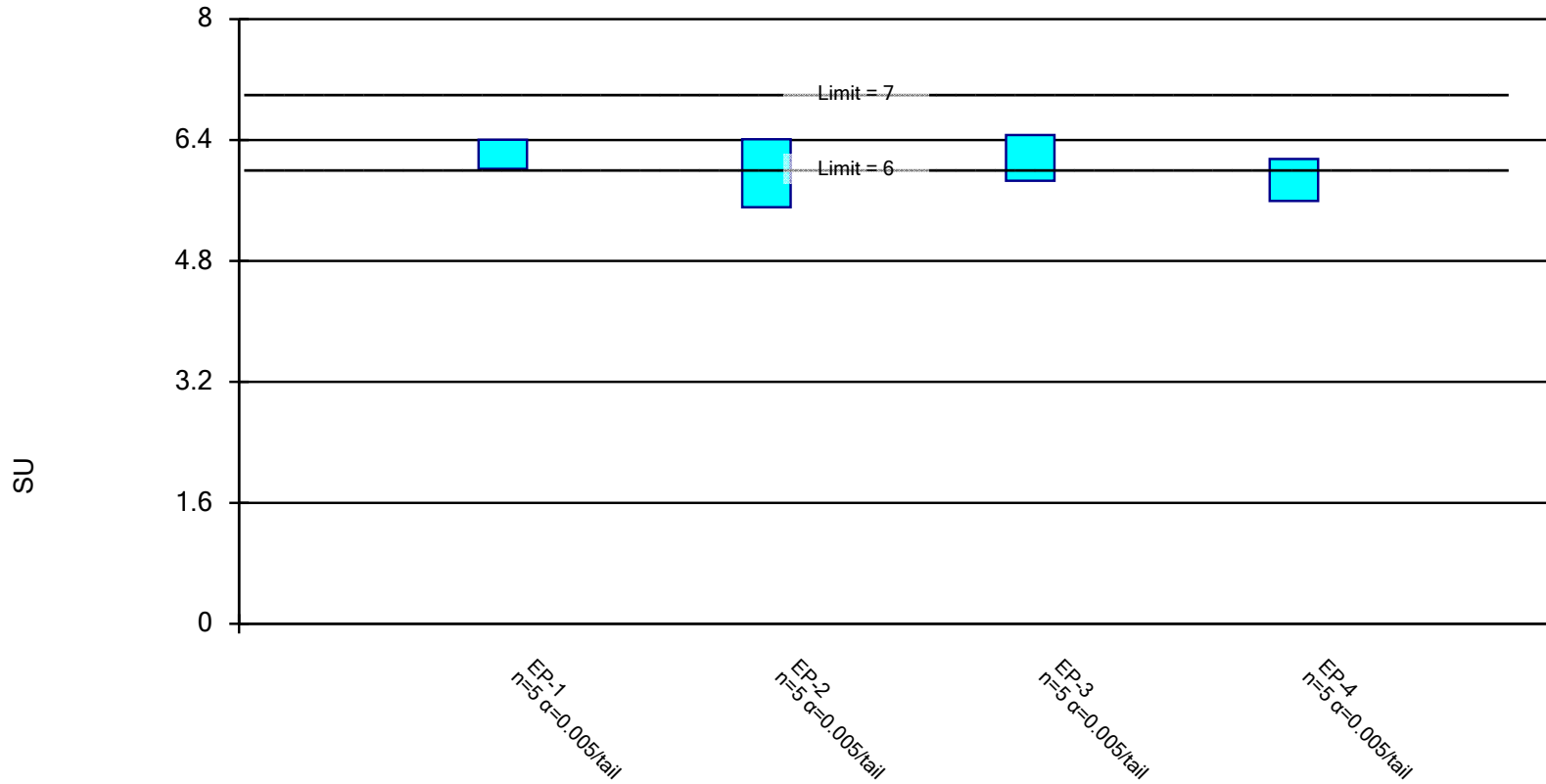


Constituent: Molybdenum Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.

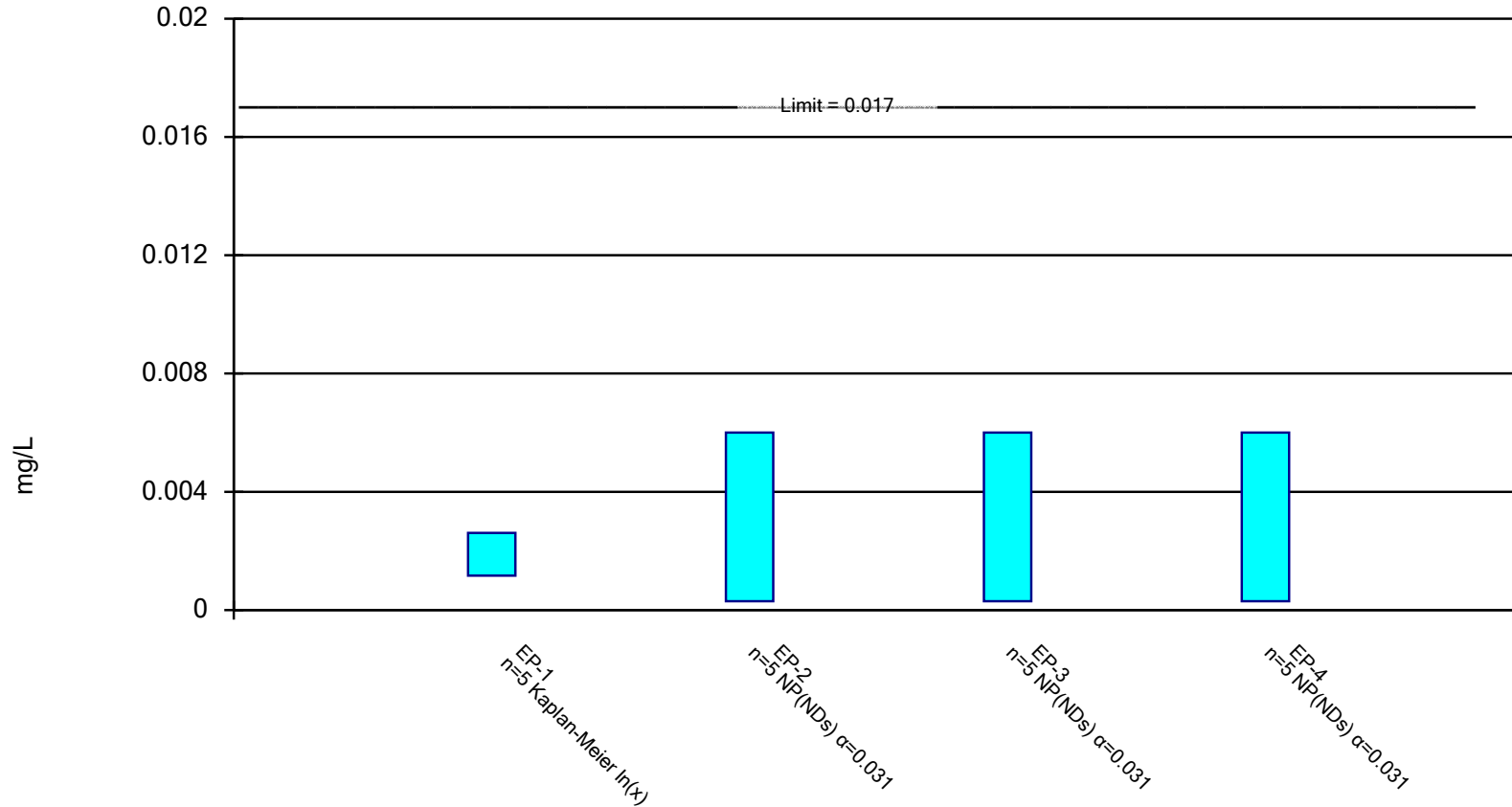


Constituent: pH Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

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.

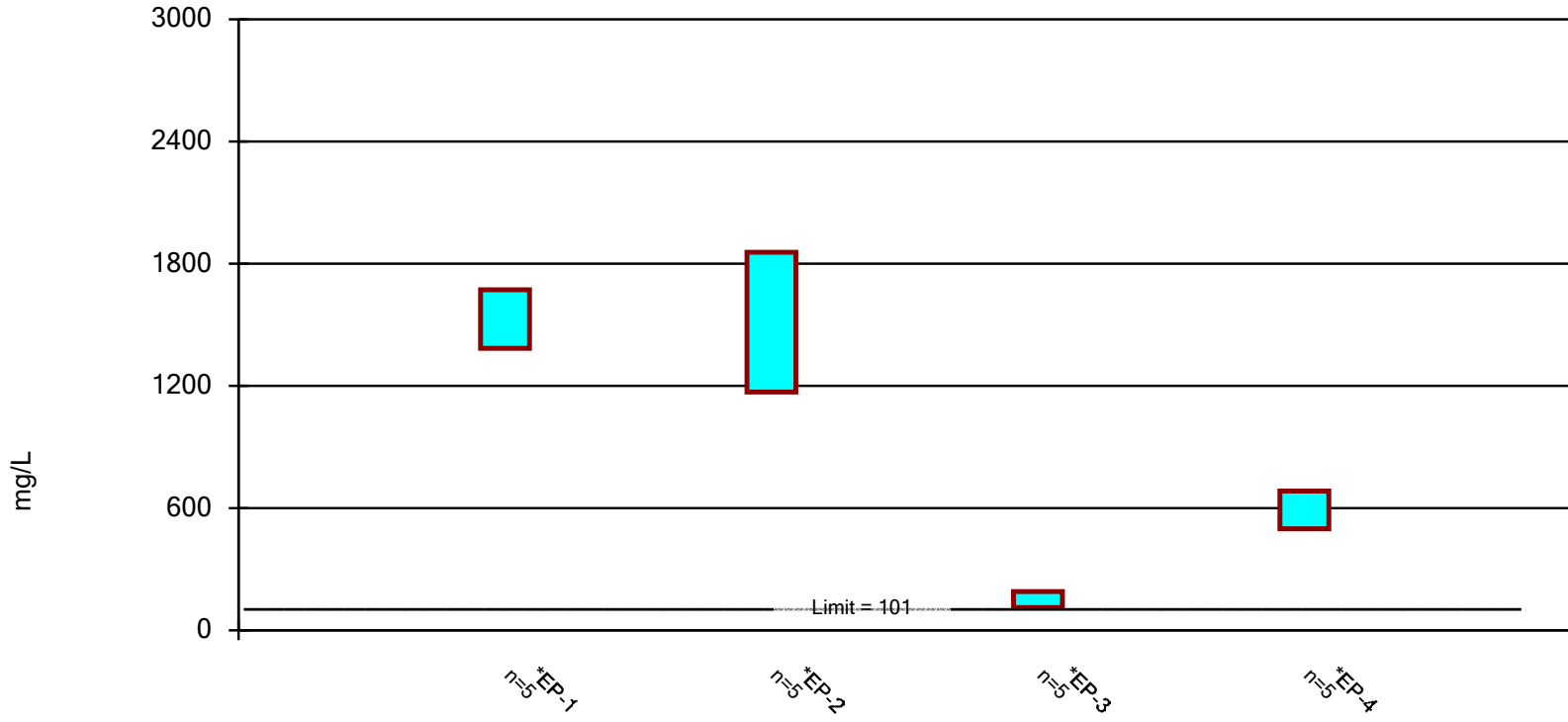


Constituent: Selenium Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

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.

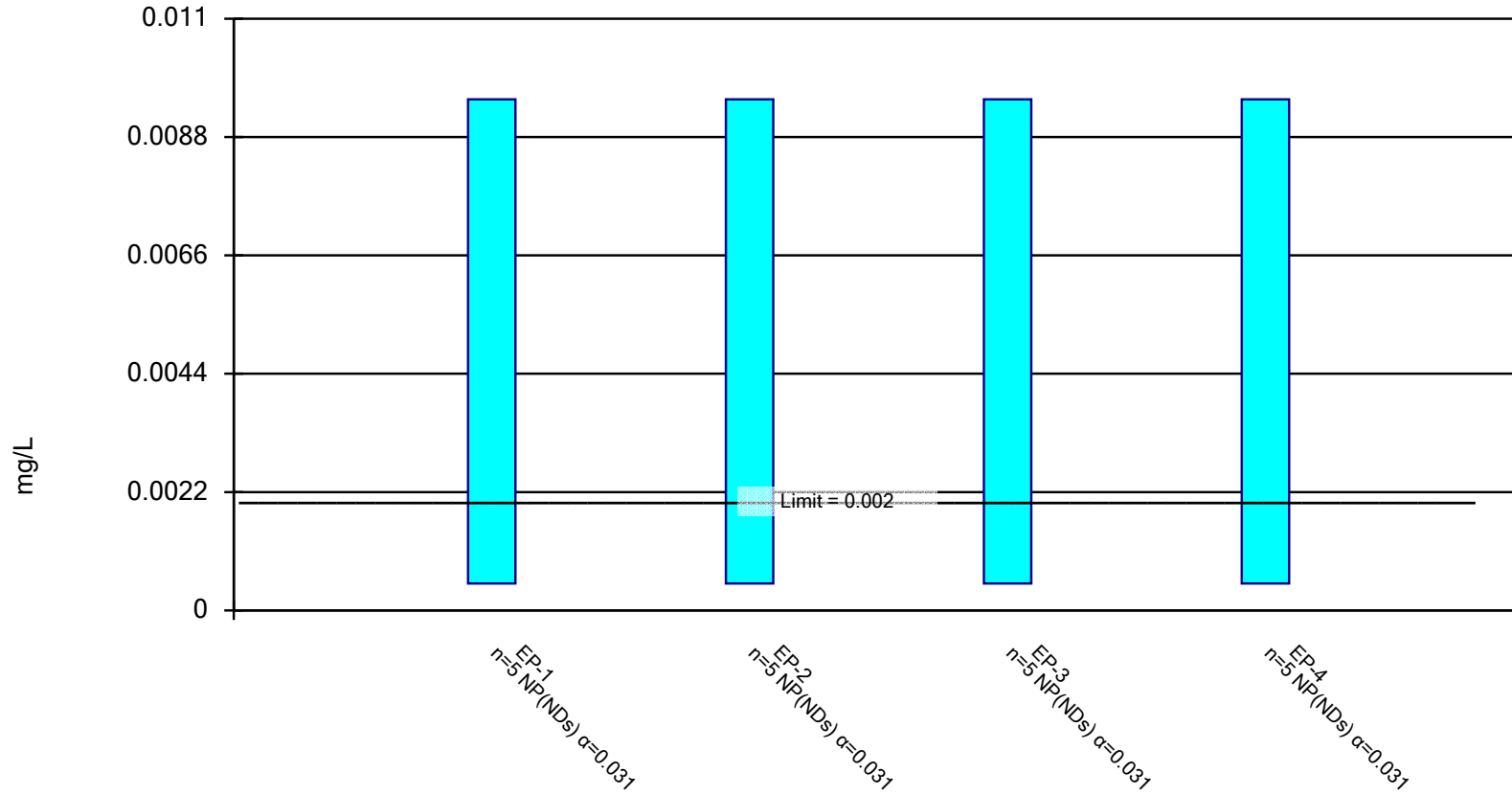


Constituent: Sulfate Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

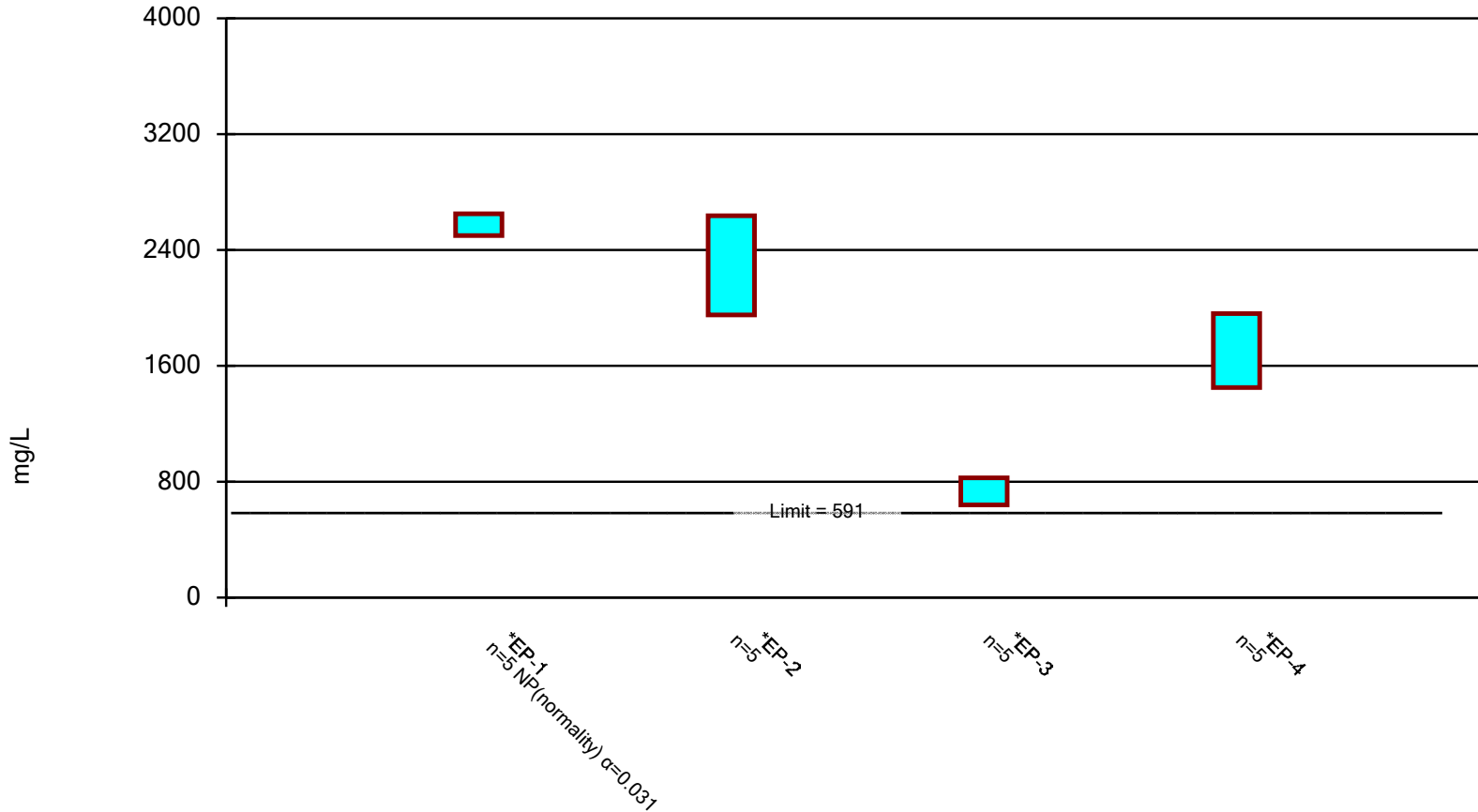


Constituent: Thallium Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

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.

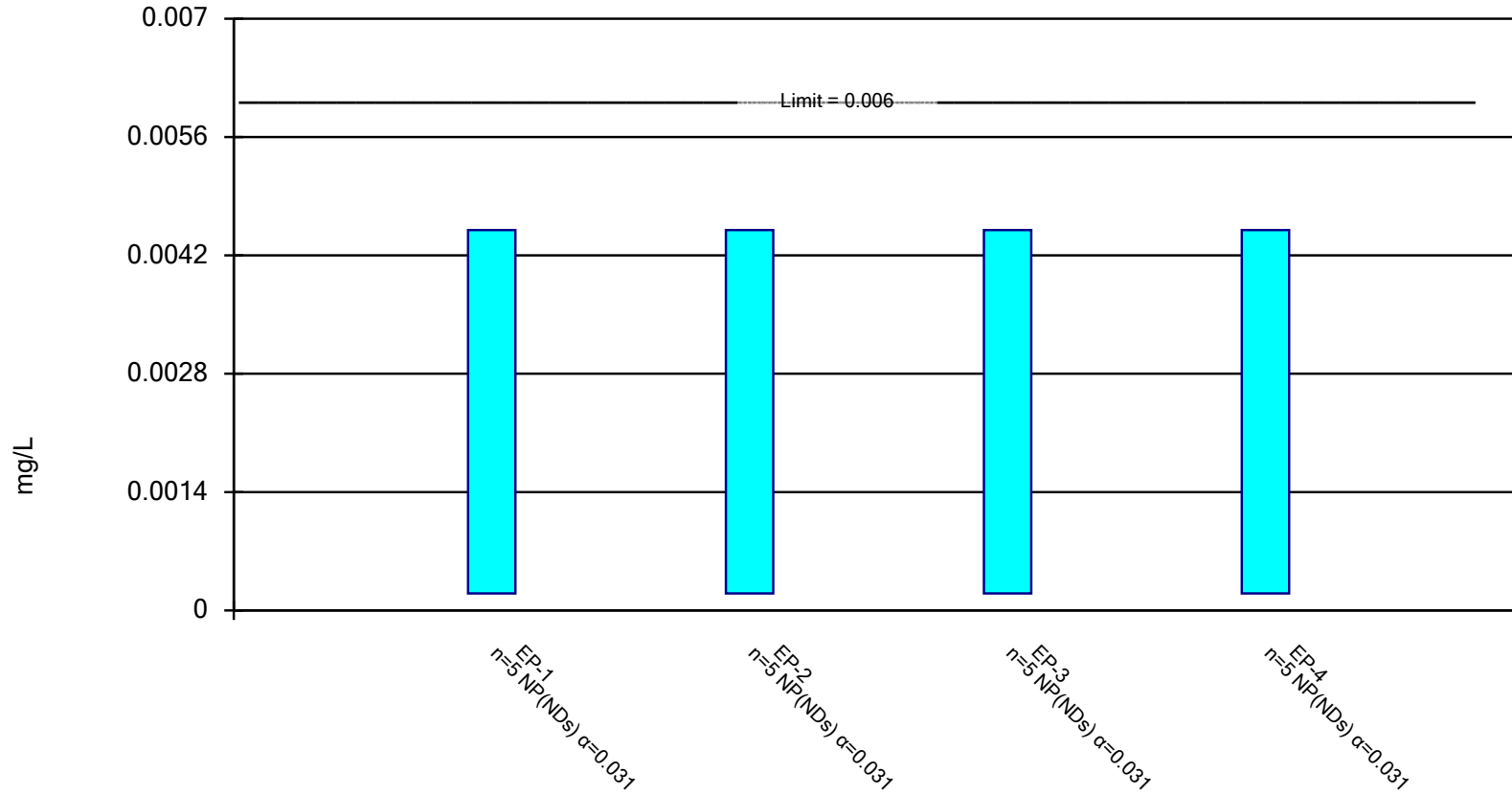


Constituent: Total Dissolved Solids Analysis Run 7/19/2022 11:48 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

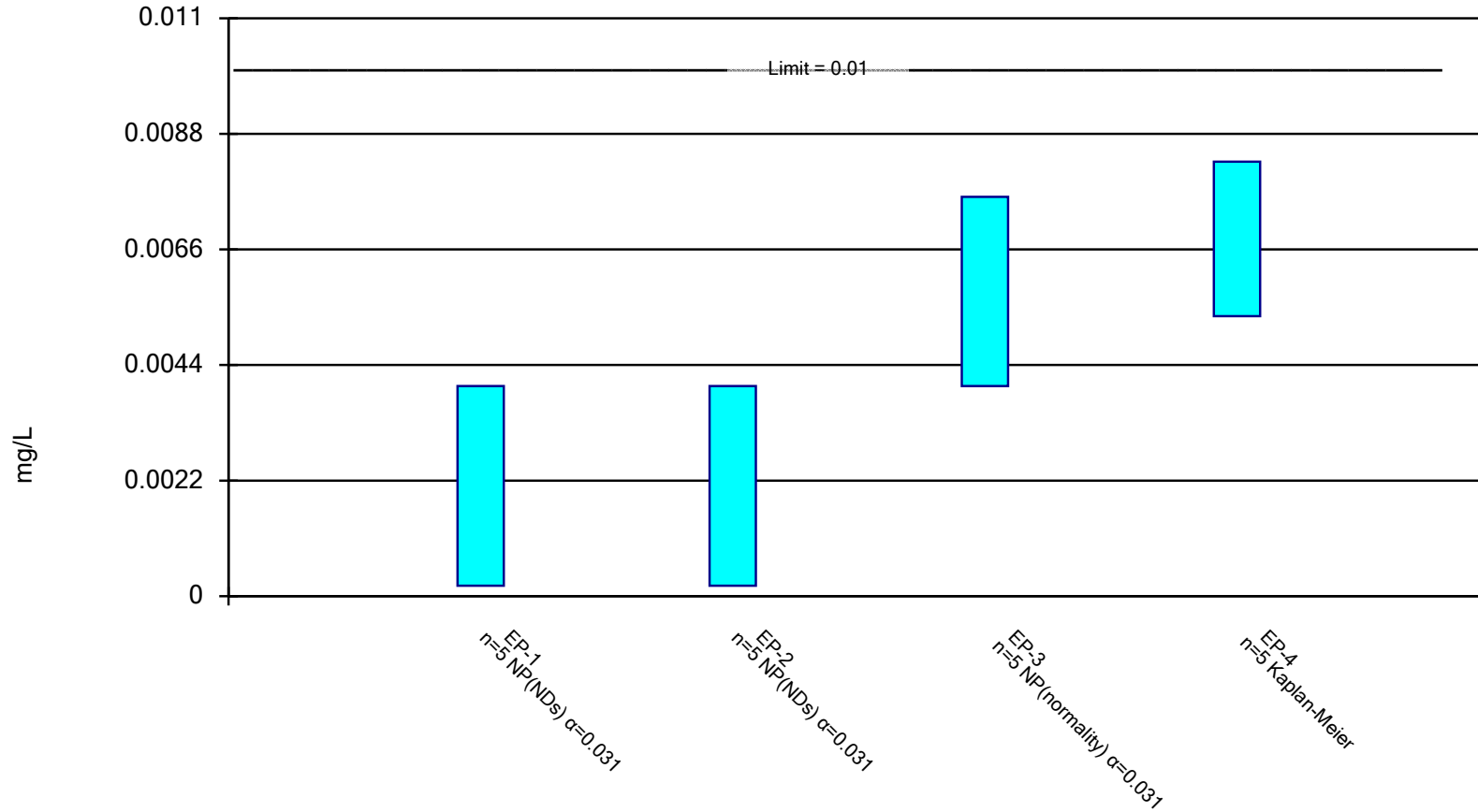


Constituent: Antimony Analysis Run 7/19/2022 11:12 AM View: IEPA SSLs

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.

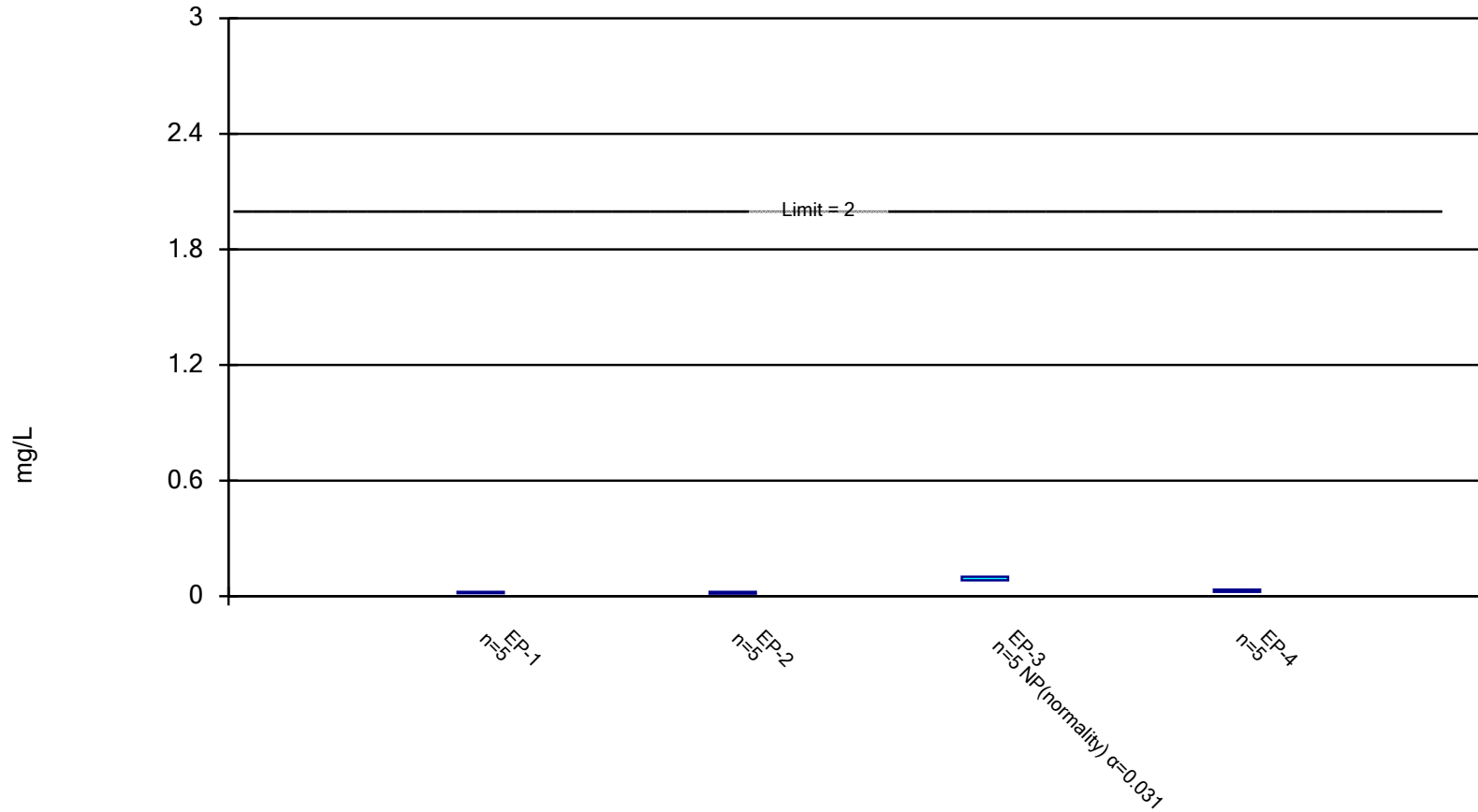


Constituent: Arsenic Analysis Run 7/19/2022 11:12 AM View: IEPA SSLs

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.

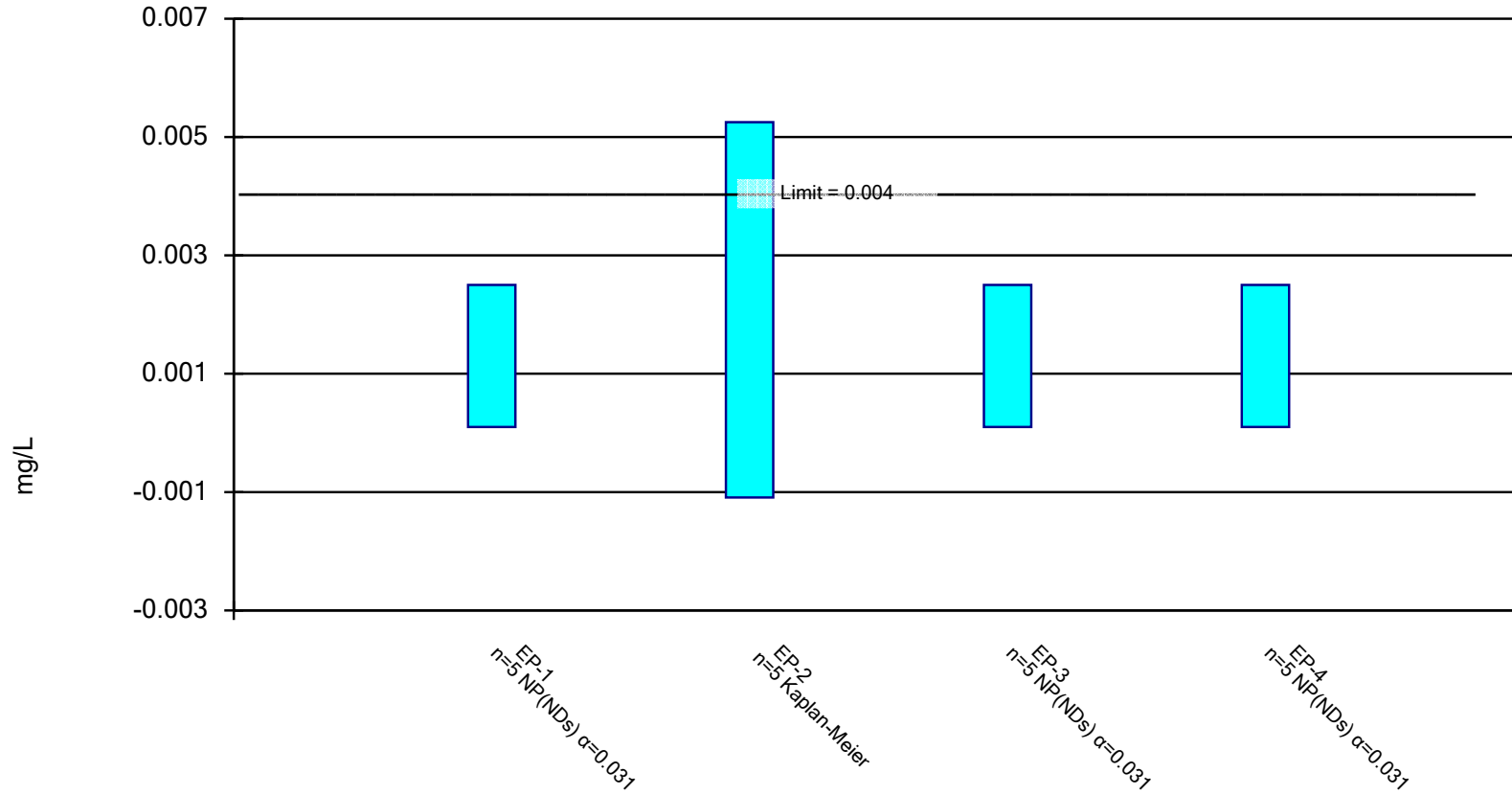


Constituent: Barium Analysis Run 7/19/2022 11:12 AM View: IEPA SSLs

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.

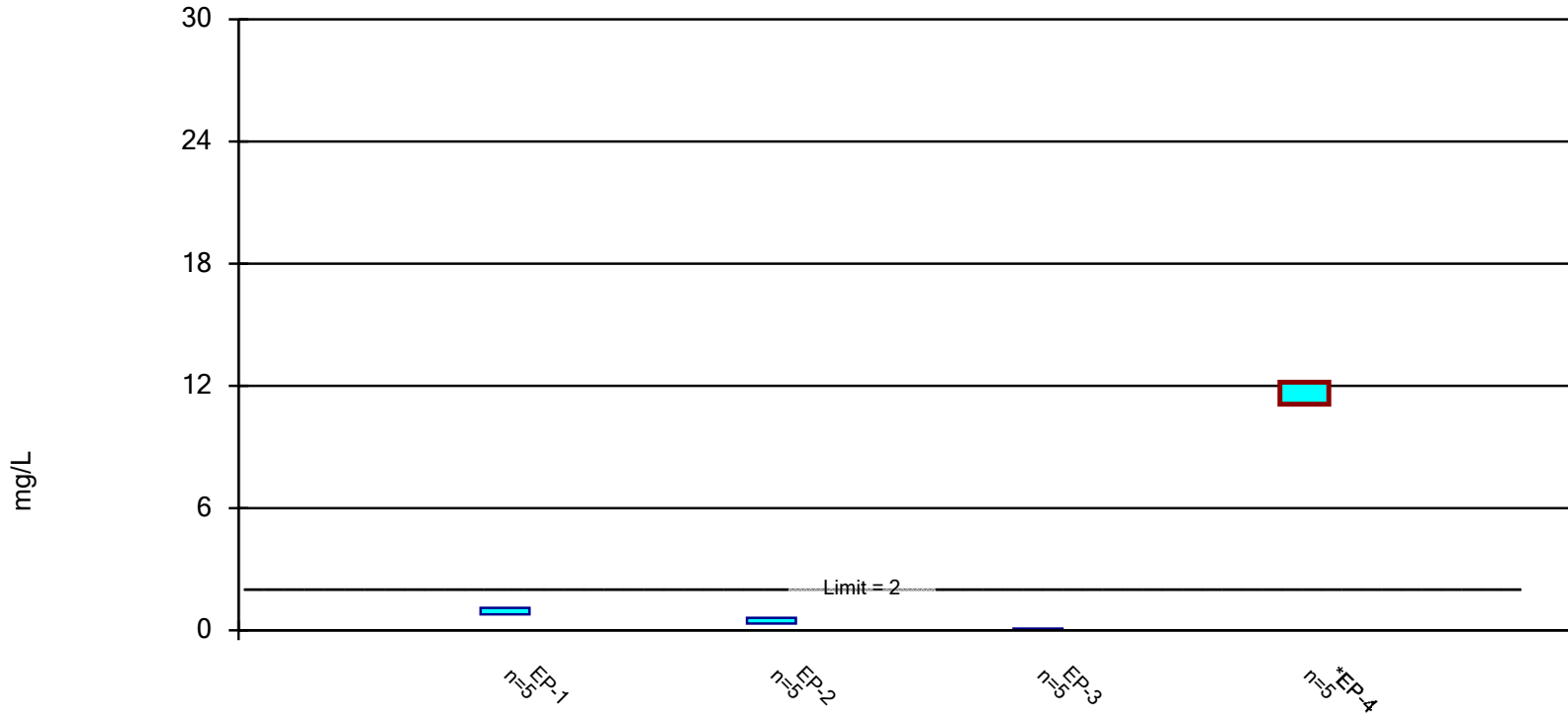


Constituent: Beryllium Analysis Run 7/19/2022 11:12 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

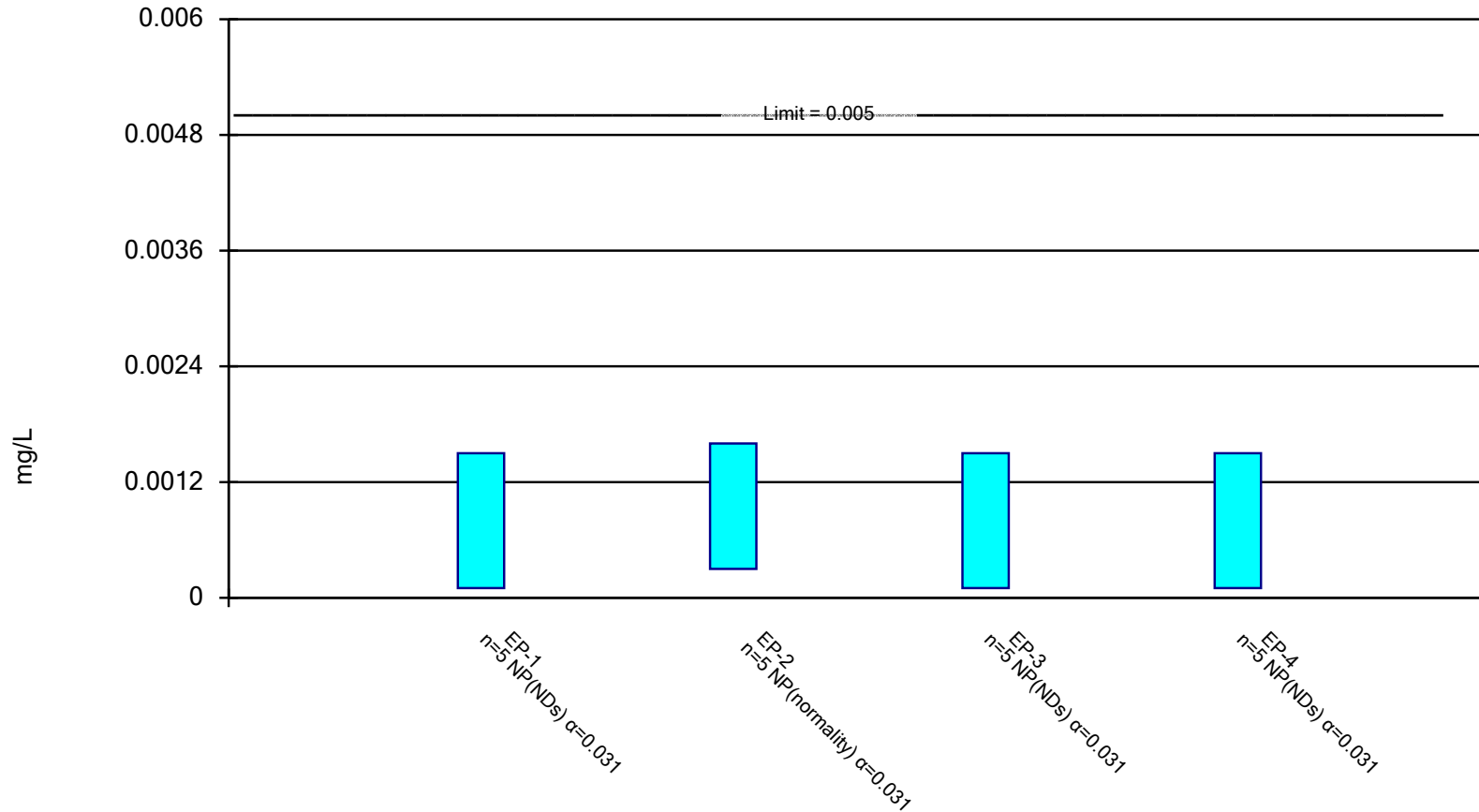
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Boron Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

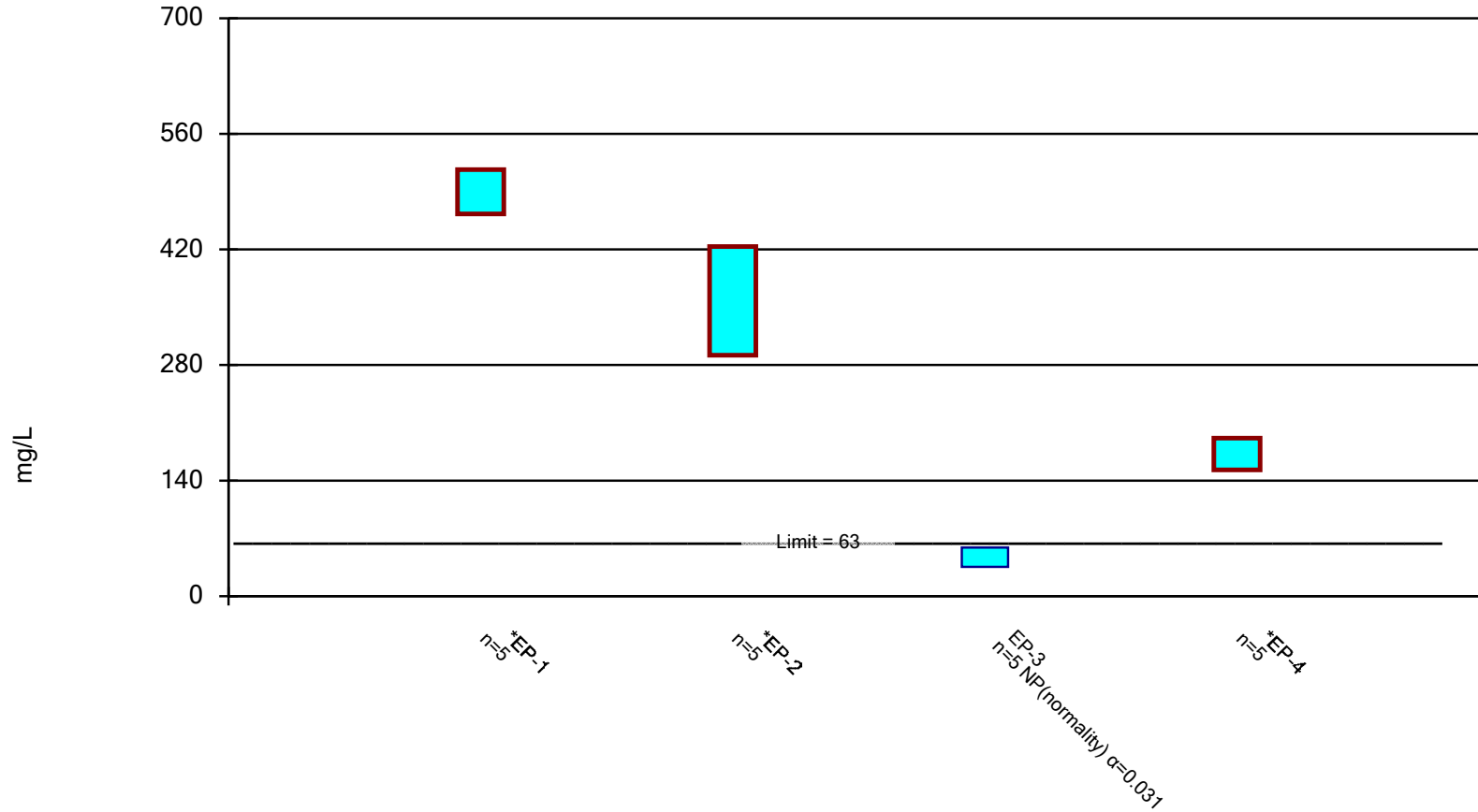


Constituent: Cadmium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

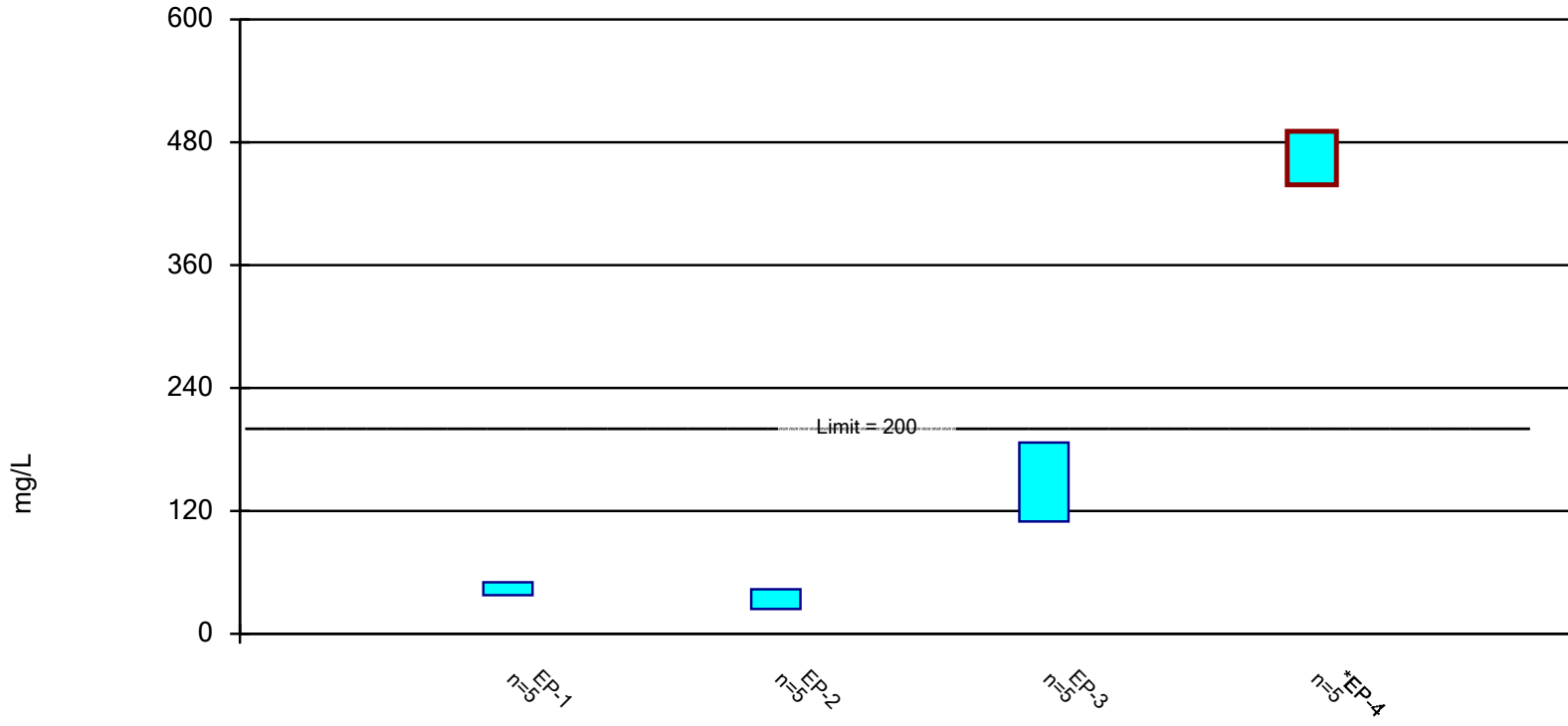


Constituent: Calcium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

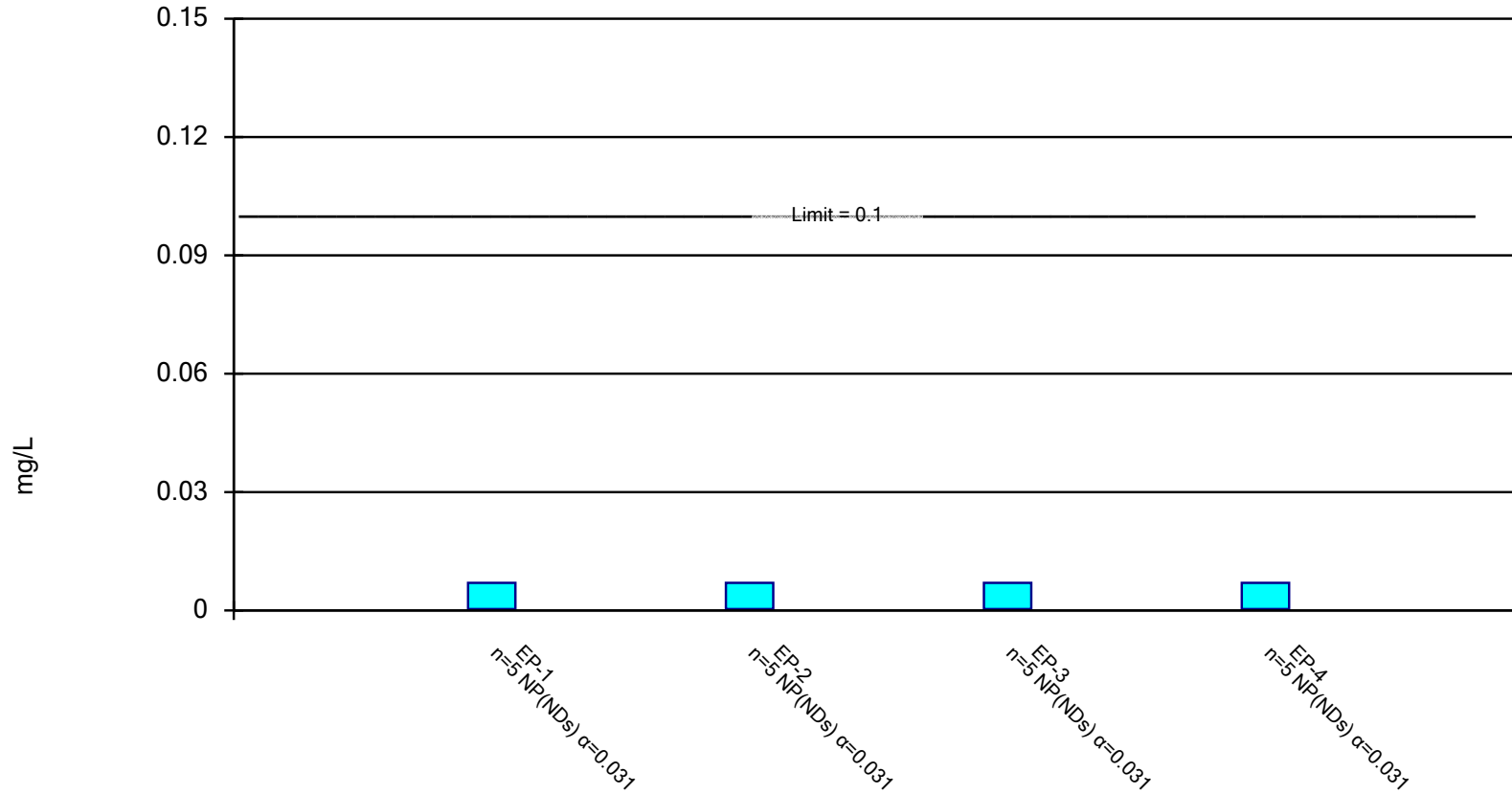


Constituent: Chloride Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

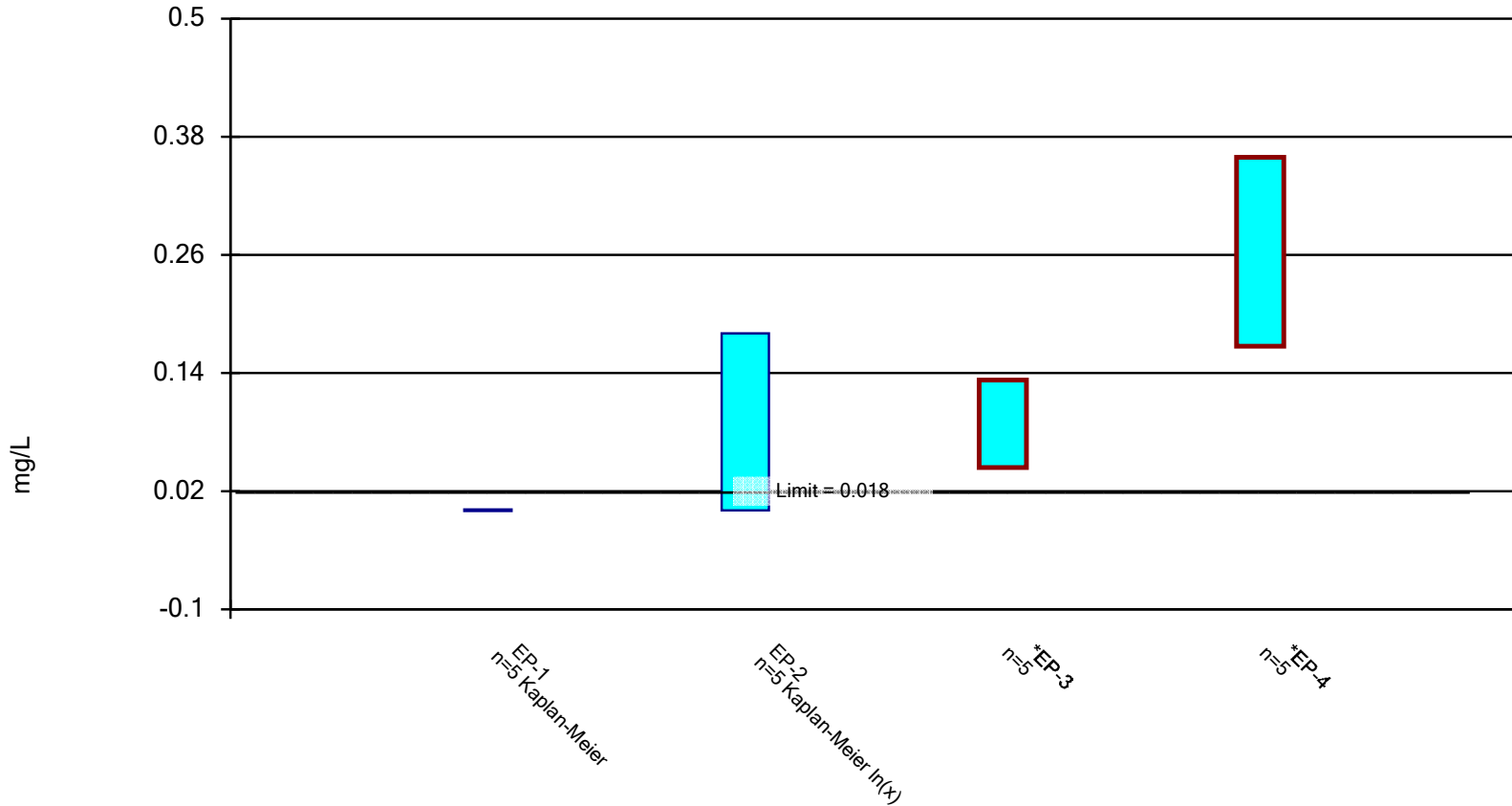


Constituent: Chromium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

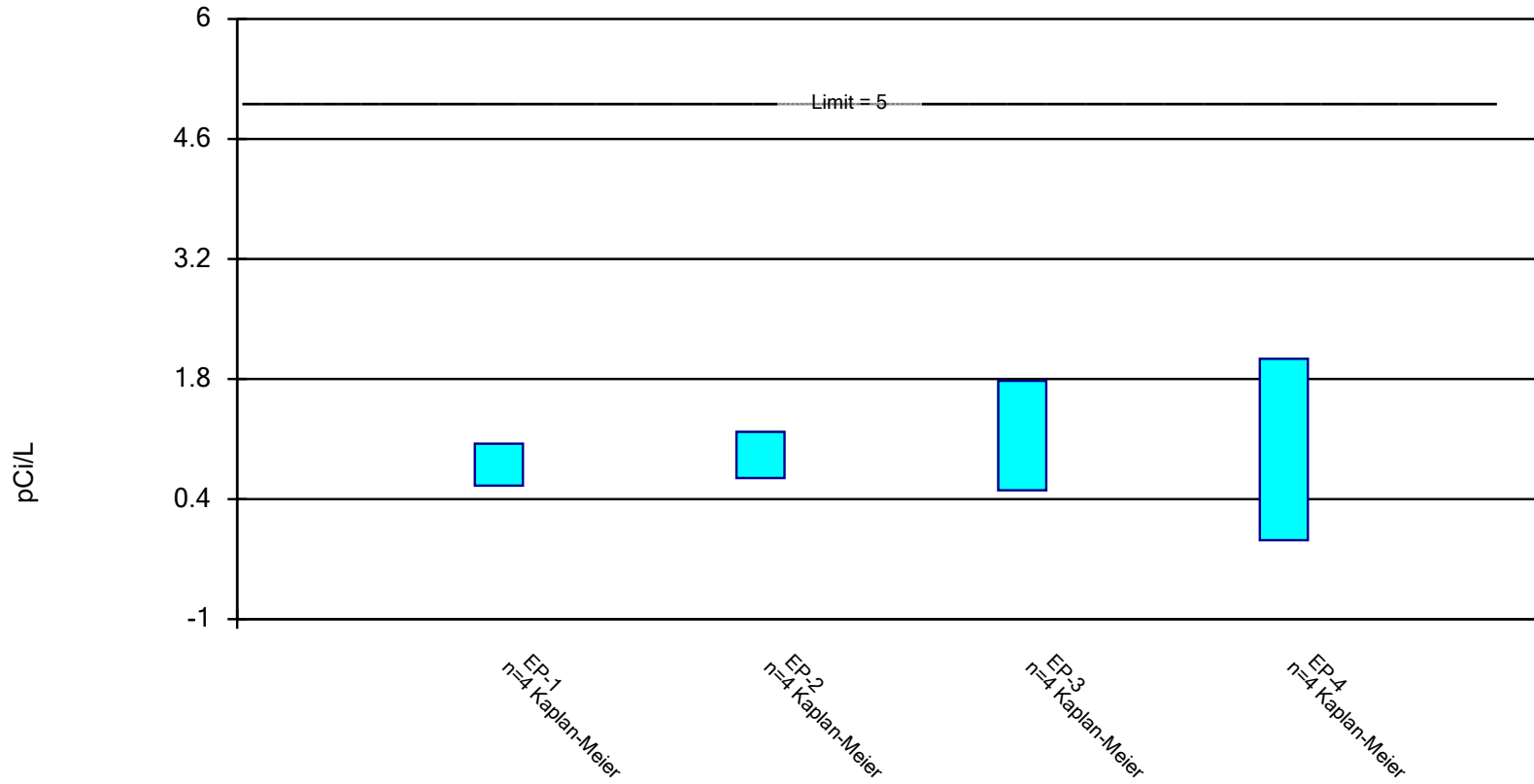


Constituent: Cobalt Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

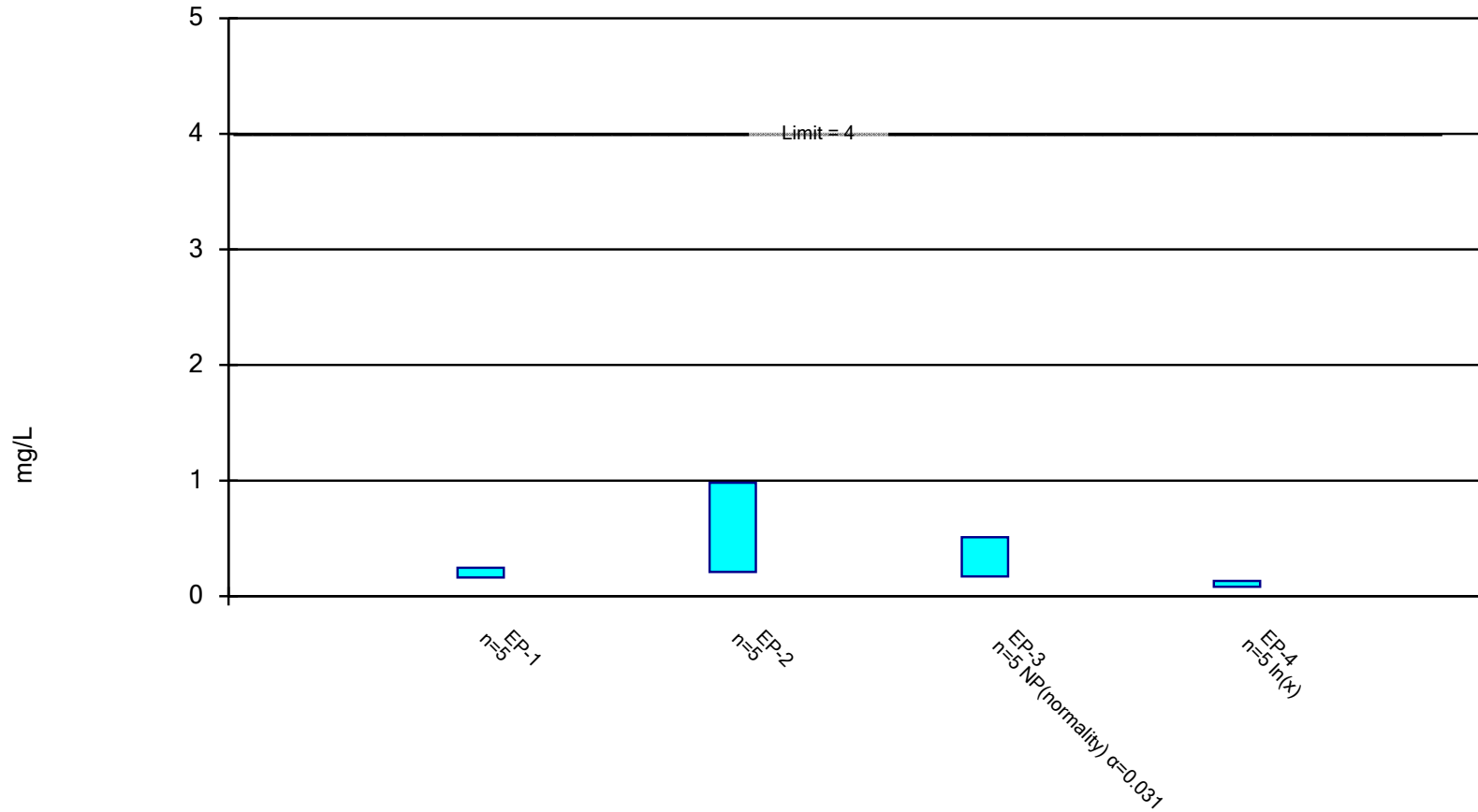


Constituent: Combined Radium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

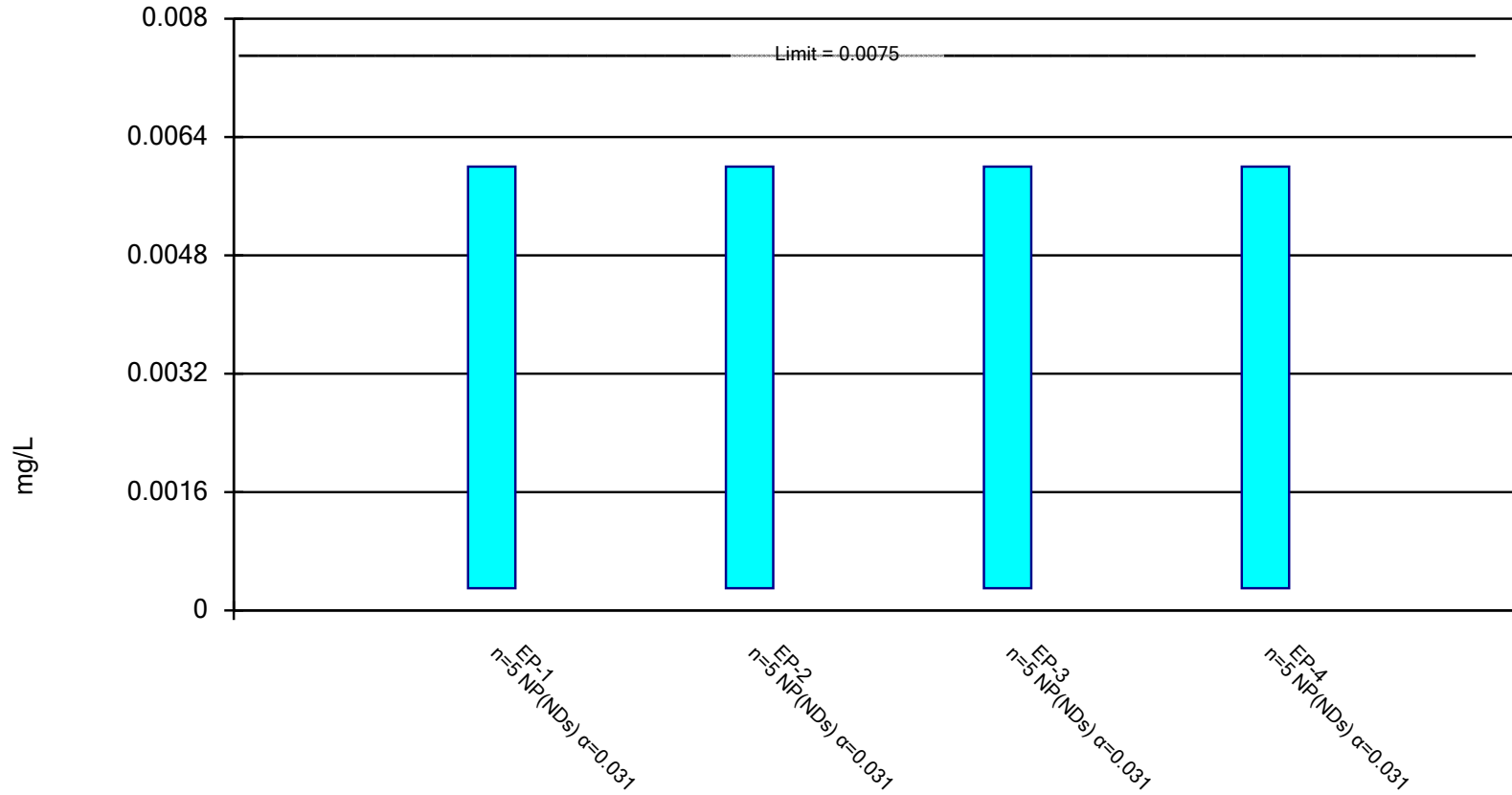


Constituent: Fluoride Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

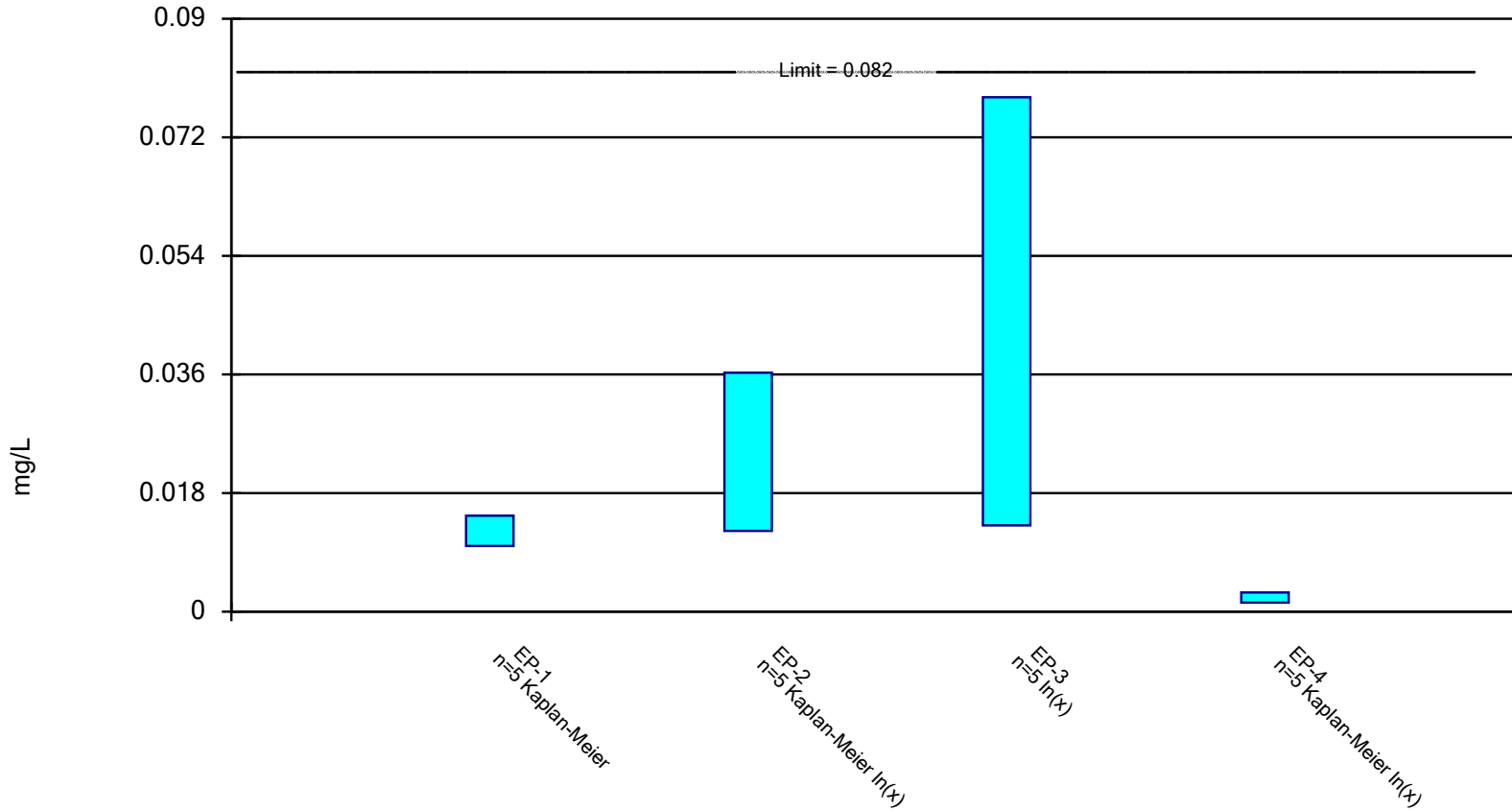


Constituent: Lead Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

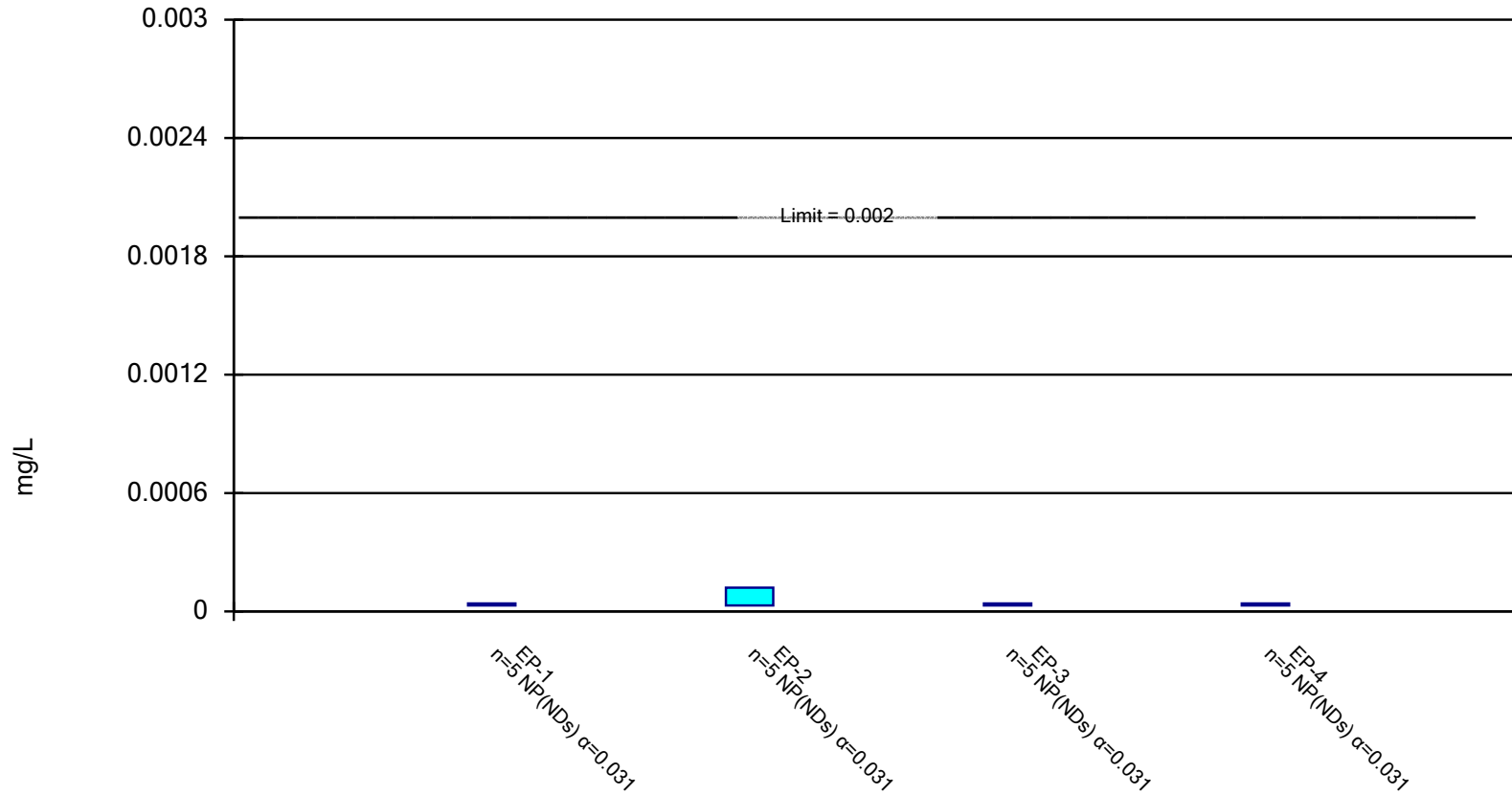


Constituent: Lithium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

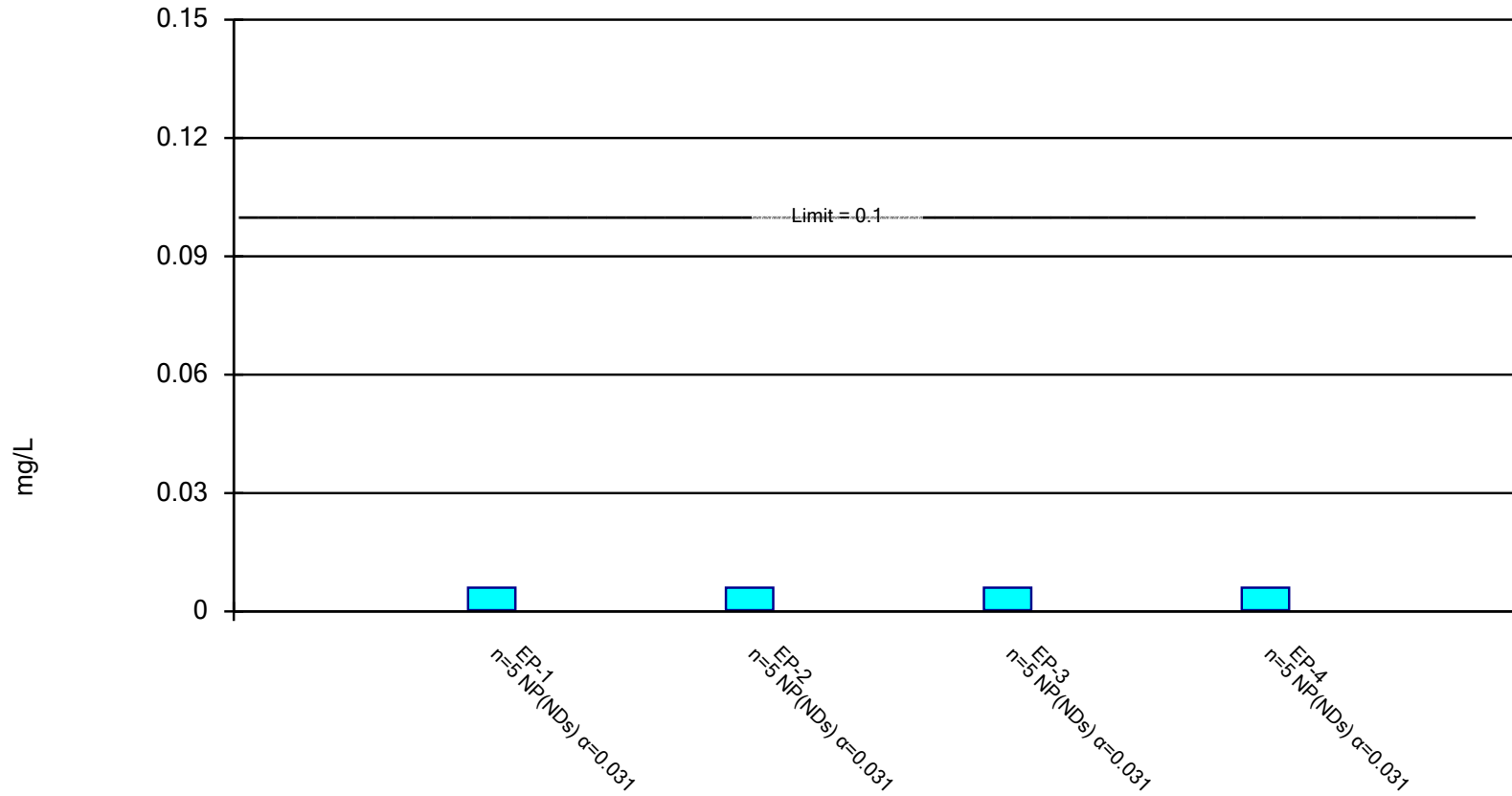


Constituent: Mercury Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

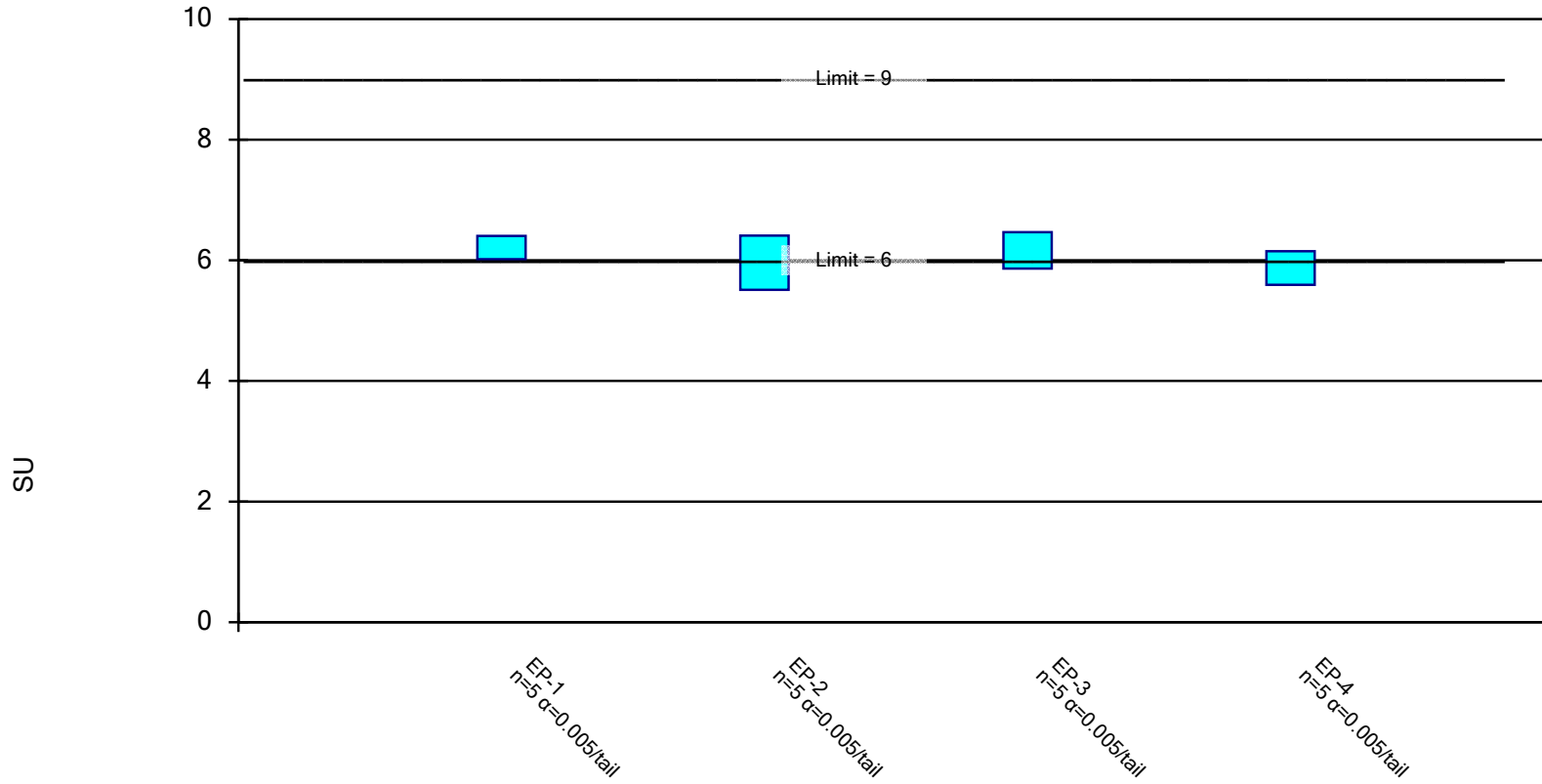


Constituent: Molybdenum Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Normality Test: Shapiro Wilk, alpha based on n.

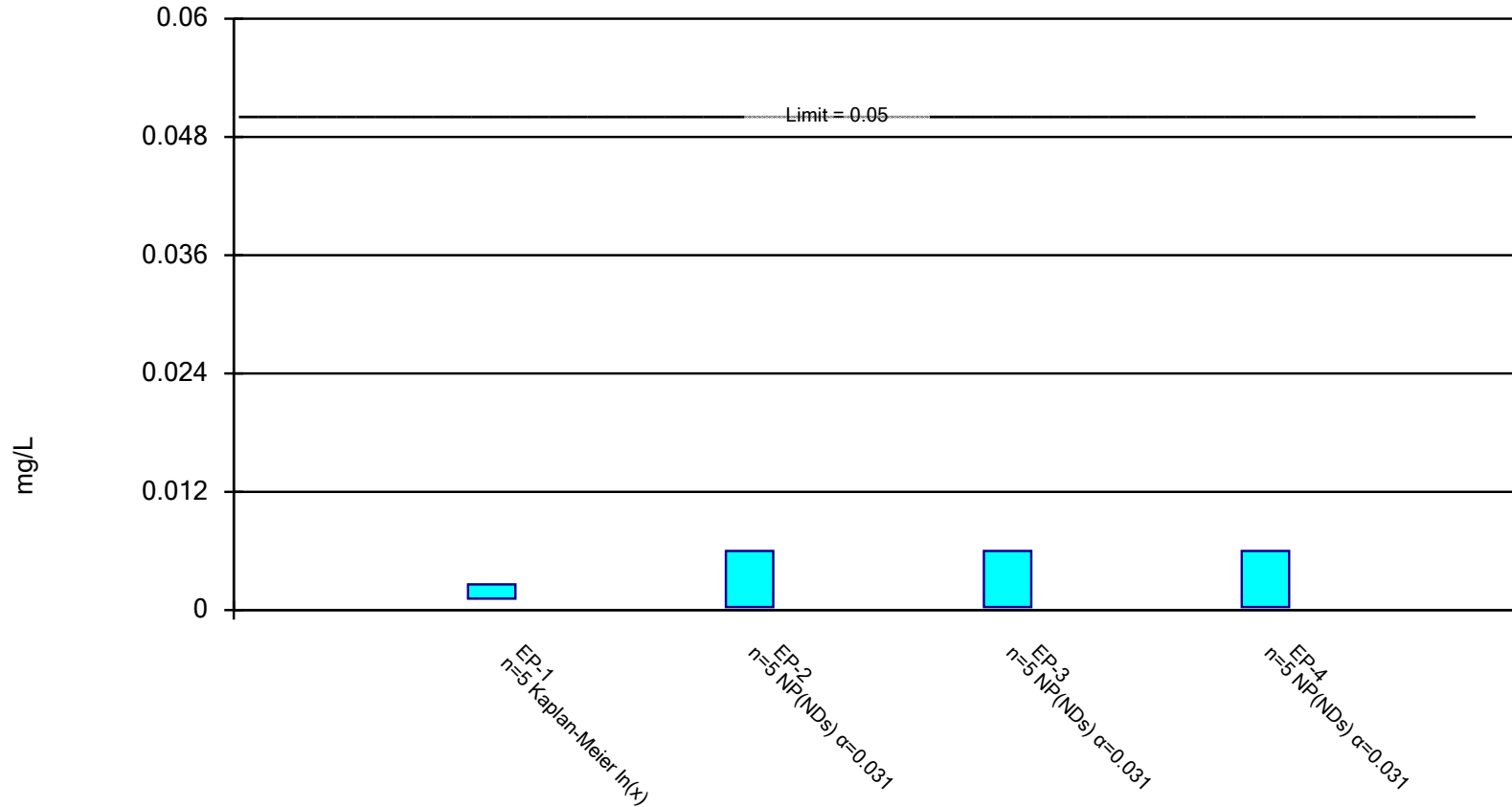


Constituent: pH Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

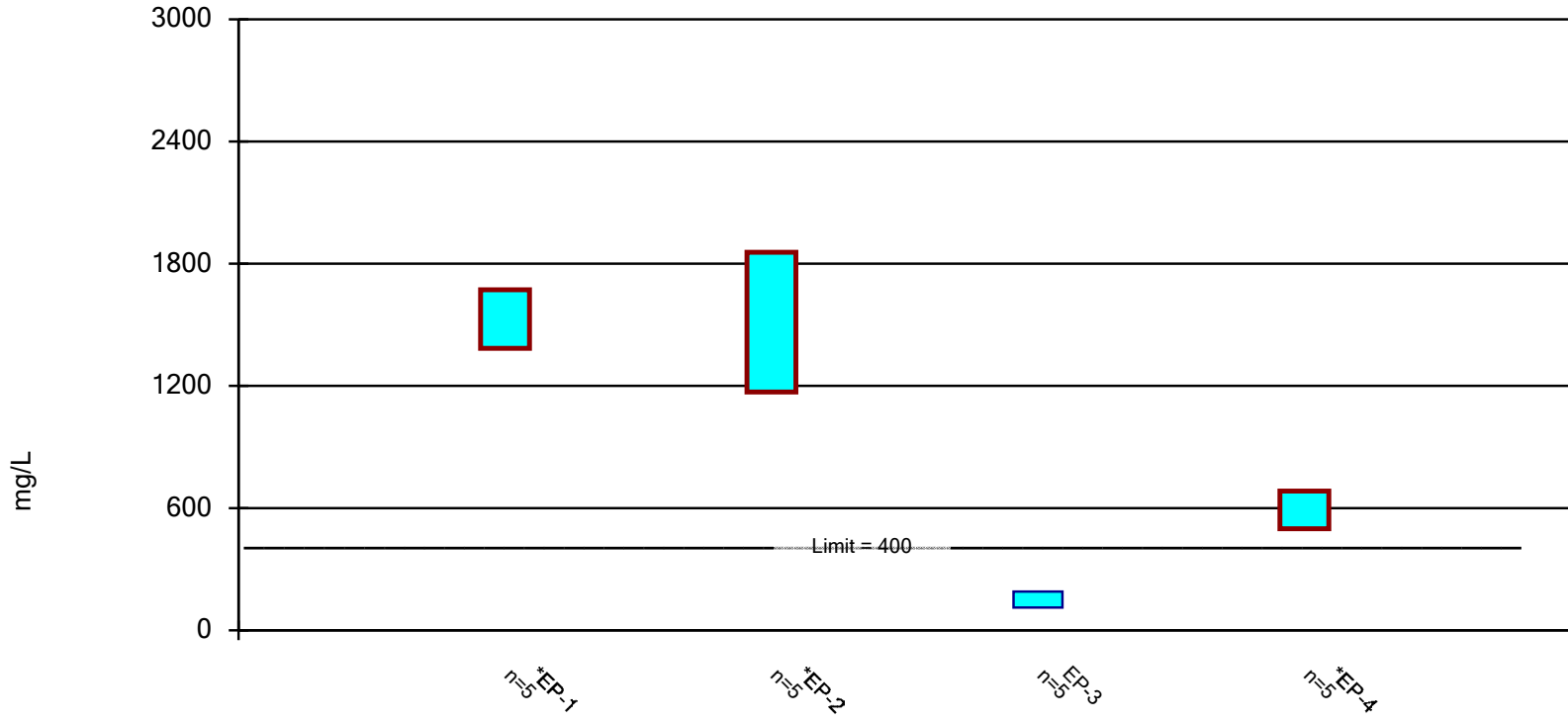


Constituent: Selenium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric Confidence Interval

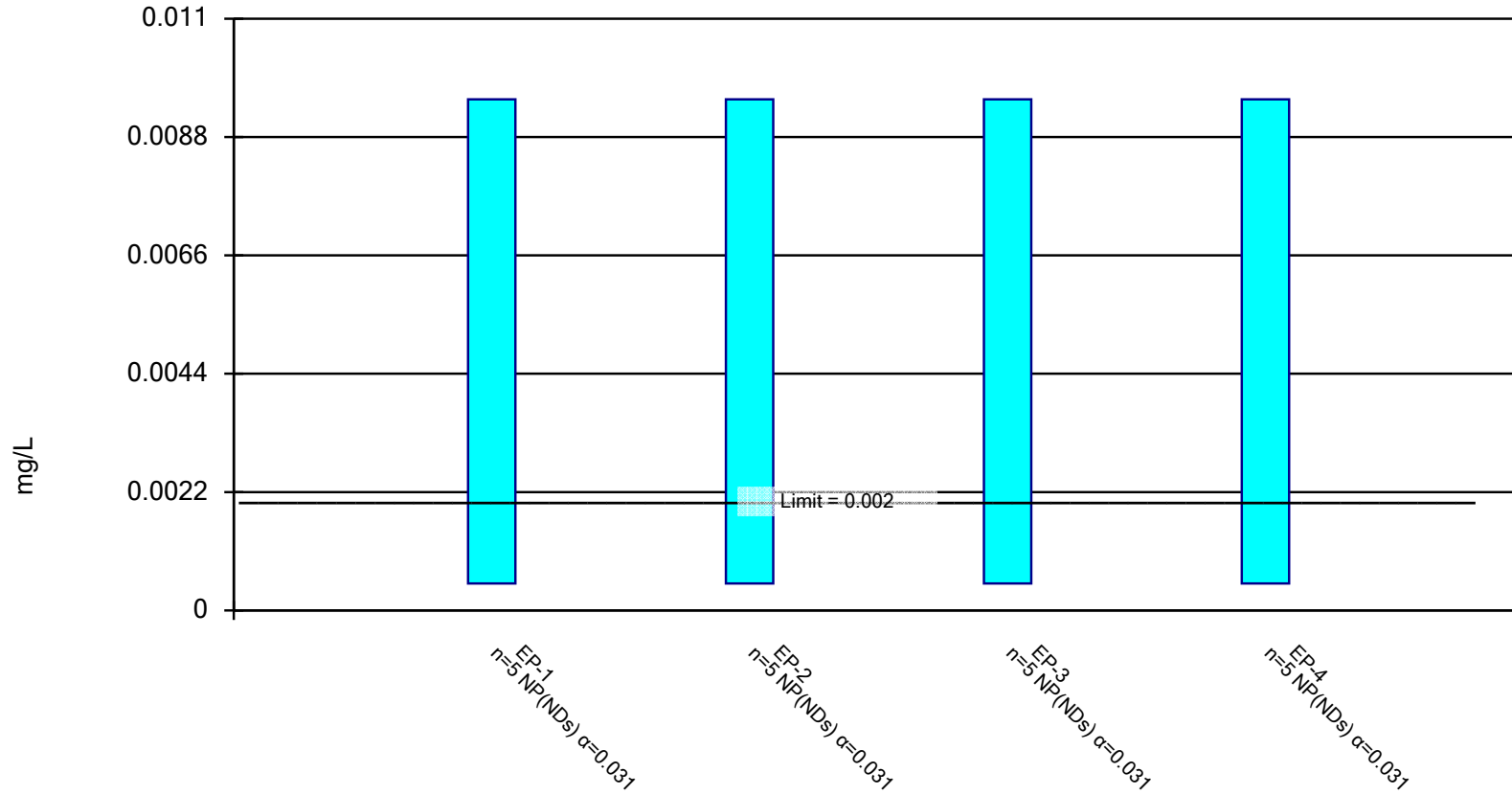
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Sulfate Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

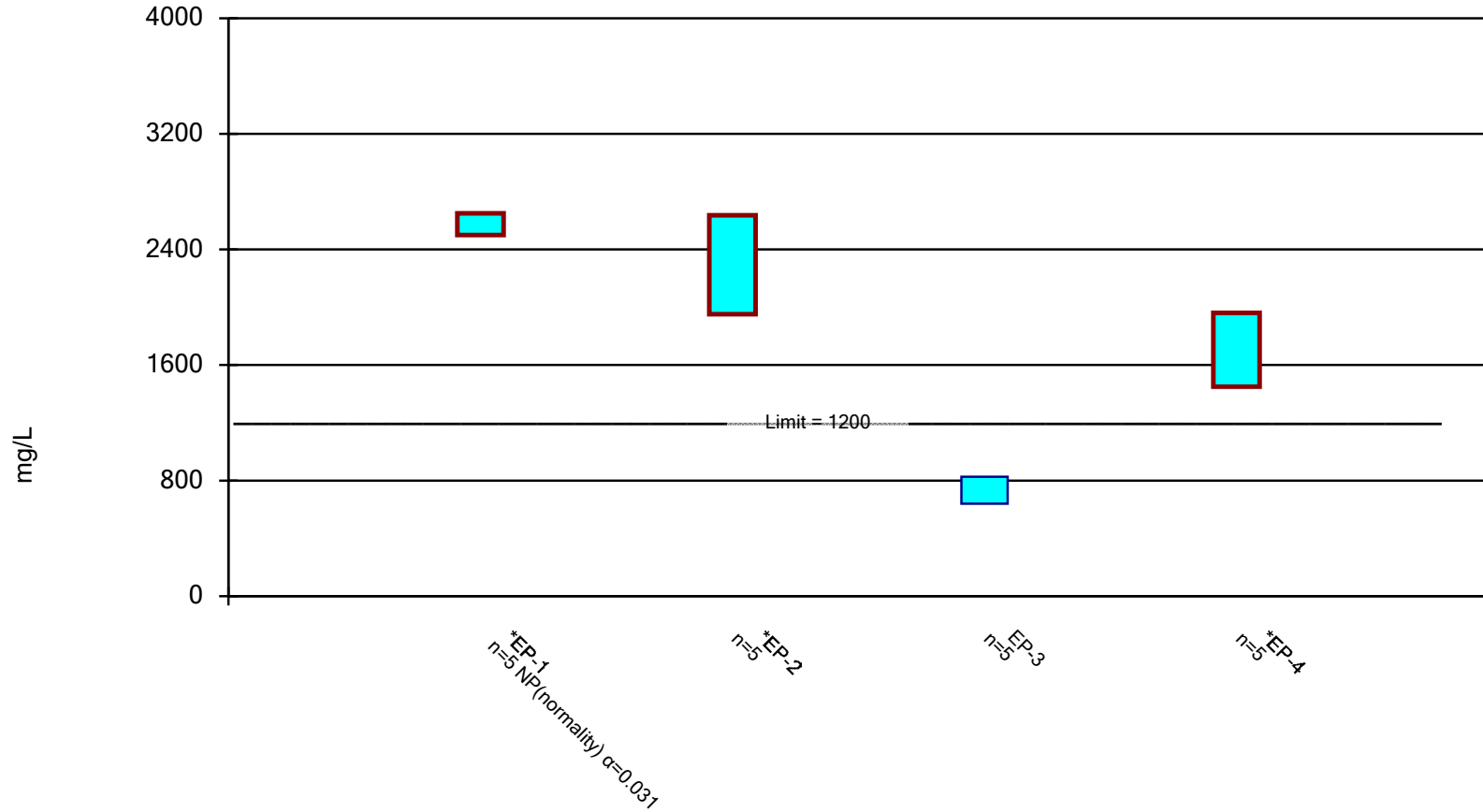


Constituent: Thallium Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

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.

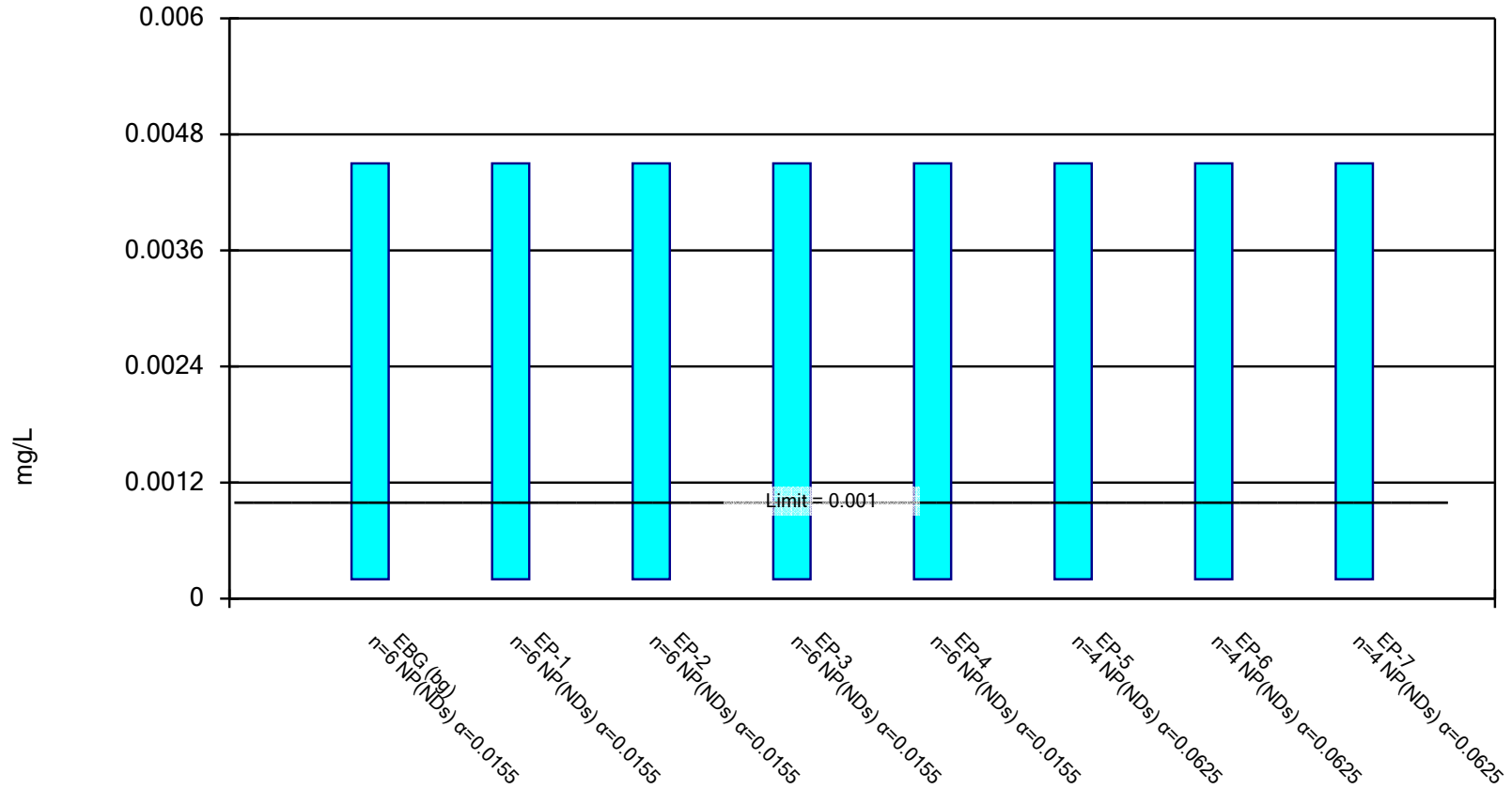


Constituent: Total Dissolved Solids Analysis Run 7/19/2022 11:13 AM View: IEPA SSLs

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

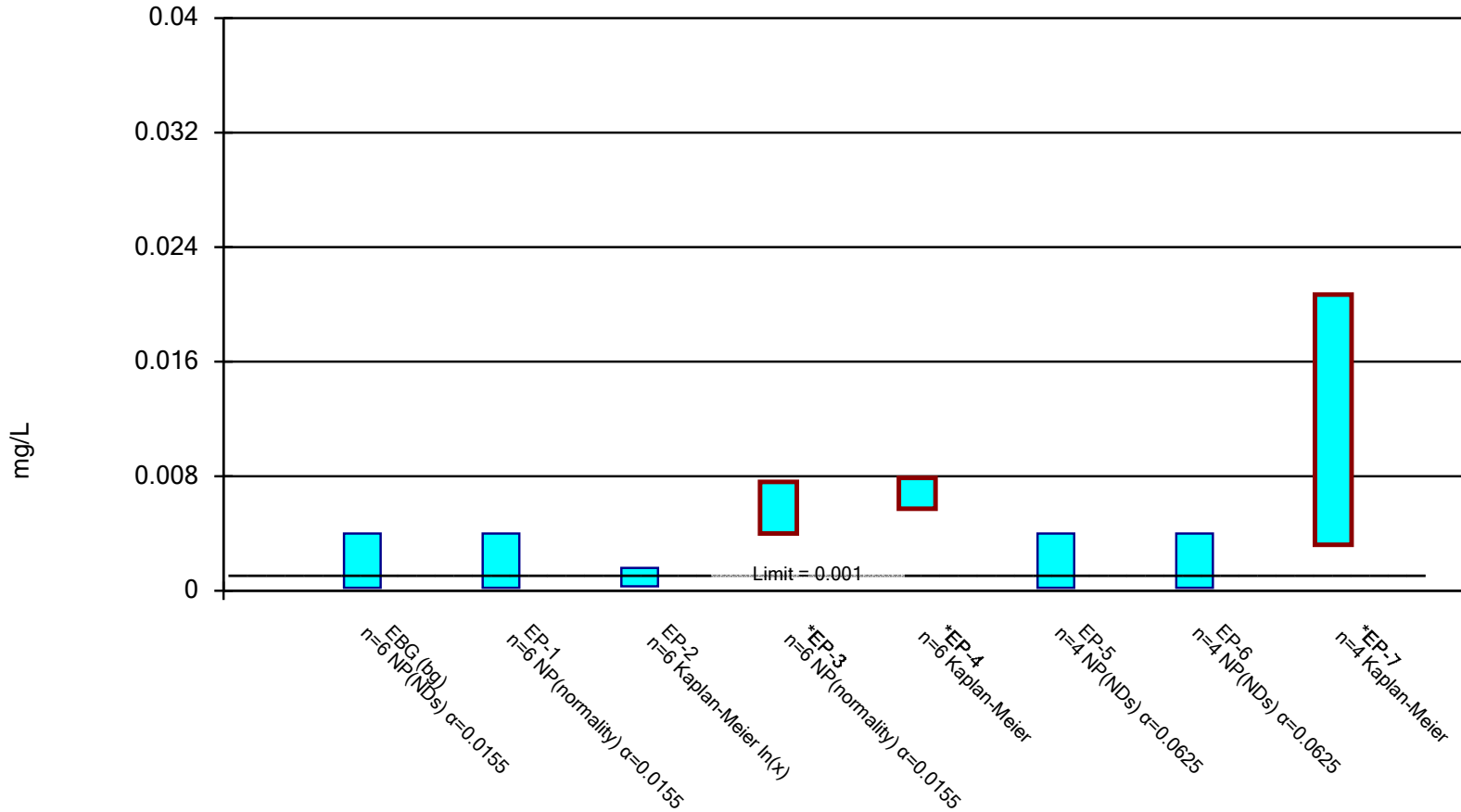


Constituent: Antimony Analysis Run 10/17/2022 12:47 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

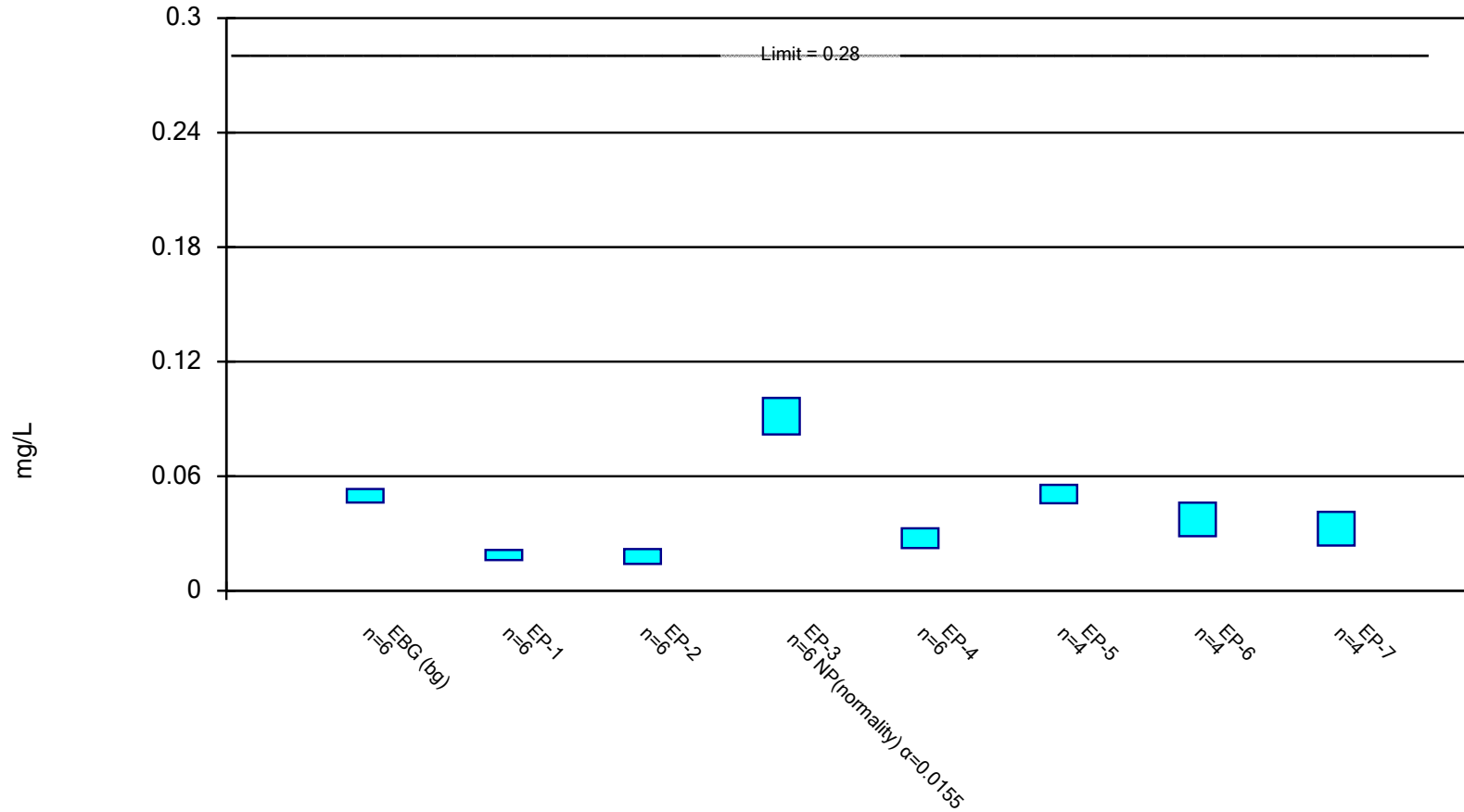
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/17/2022 12:47 PM View: IEPA
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.

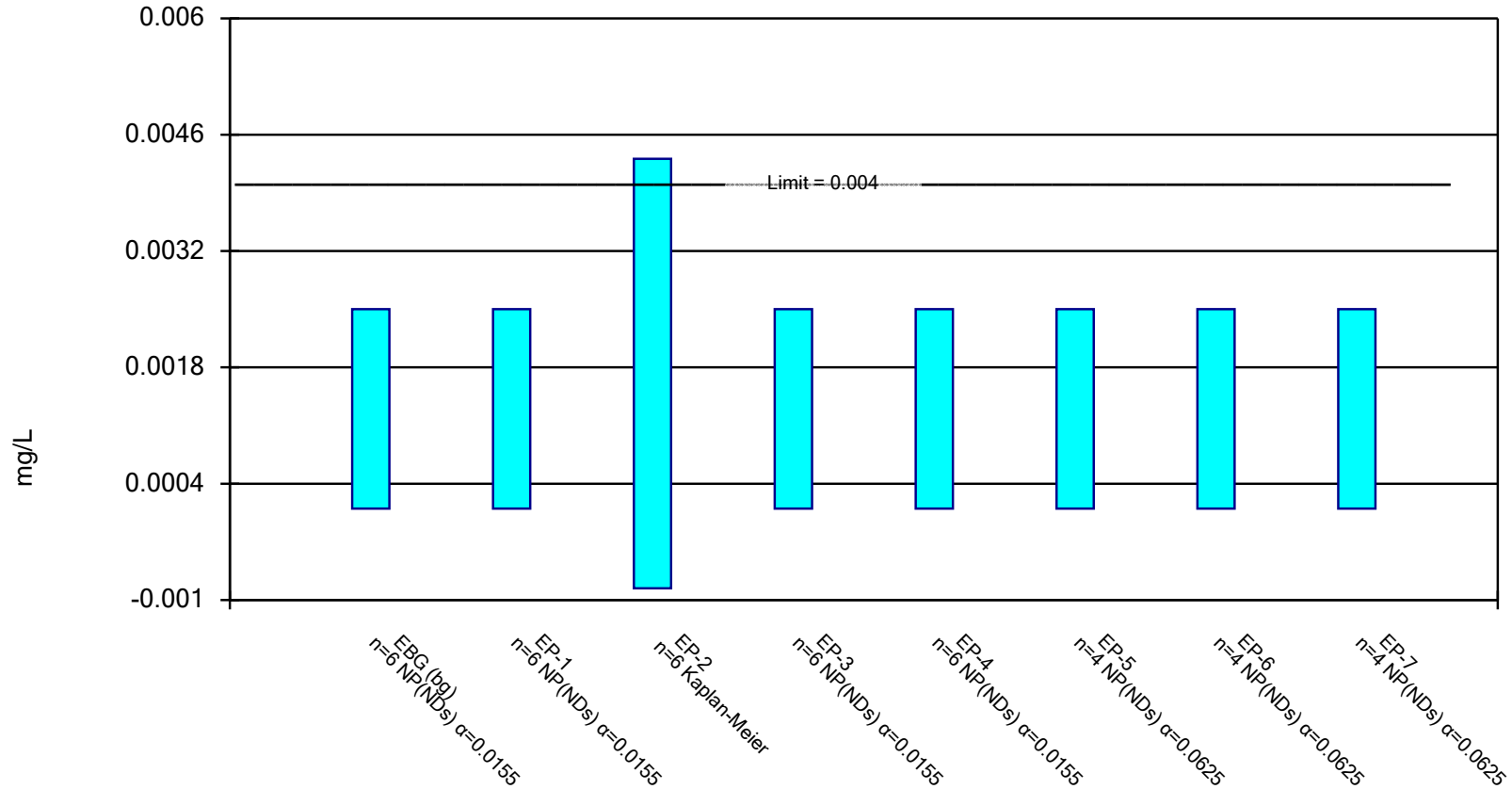


Constituent: Barium Analysis Run 10/17/2022 12:47 PM View: IEPA

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.

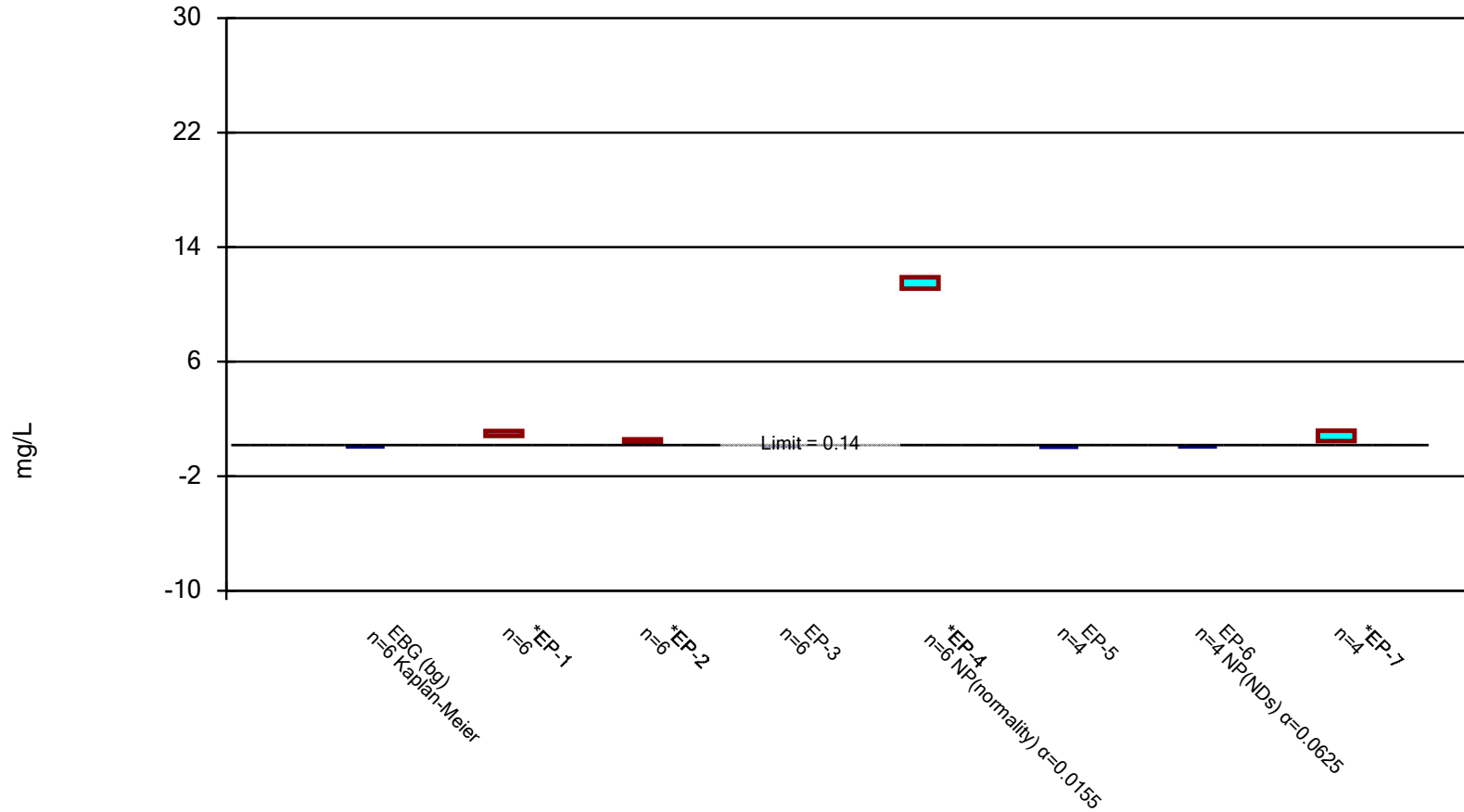


Constituent: Beryllium Analysis Run 10/17/2022 12:47 PM View: IEPA

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.

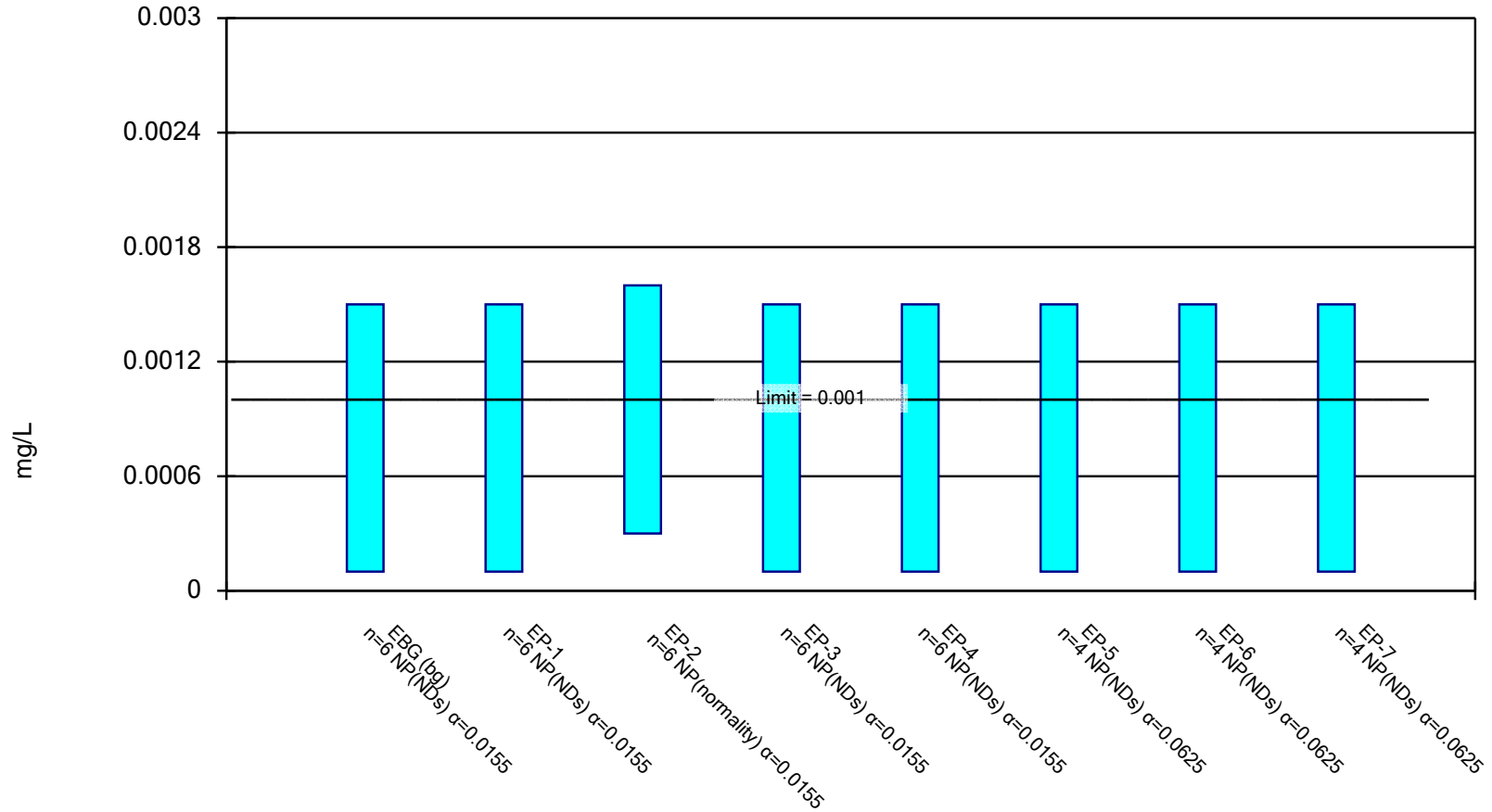


Constituent: Boron Analysis Run 10/17/2022 12:47 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

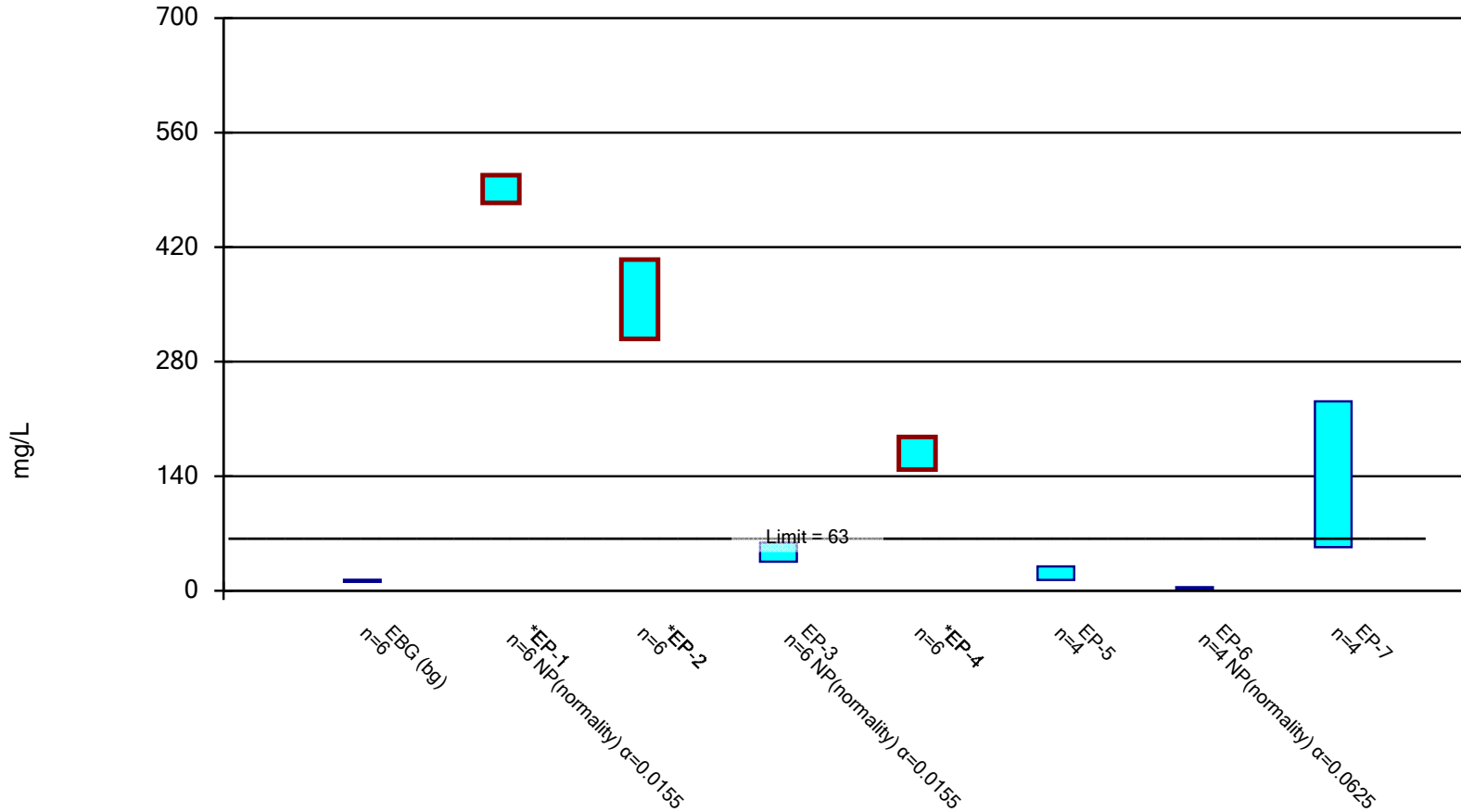


Constituent: Cadmium Analysis Run 10/17/2022 12:47 PM View: IEPA

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.

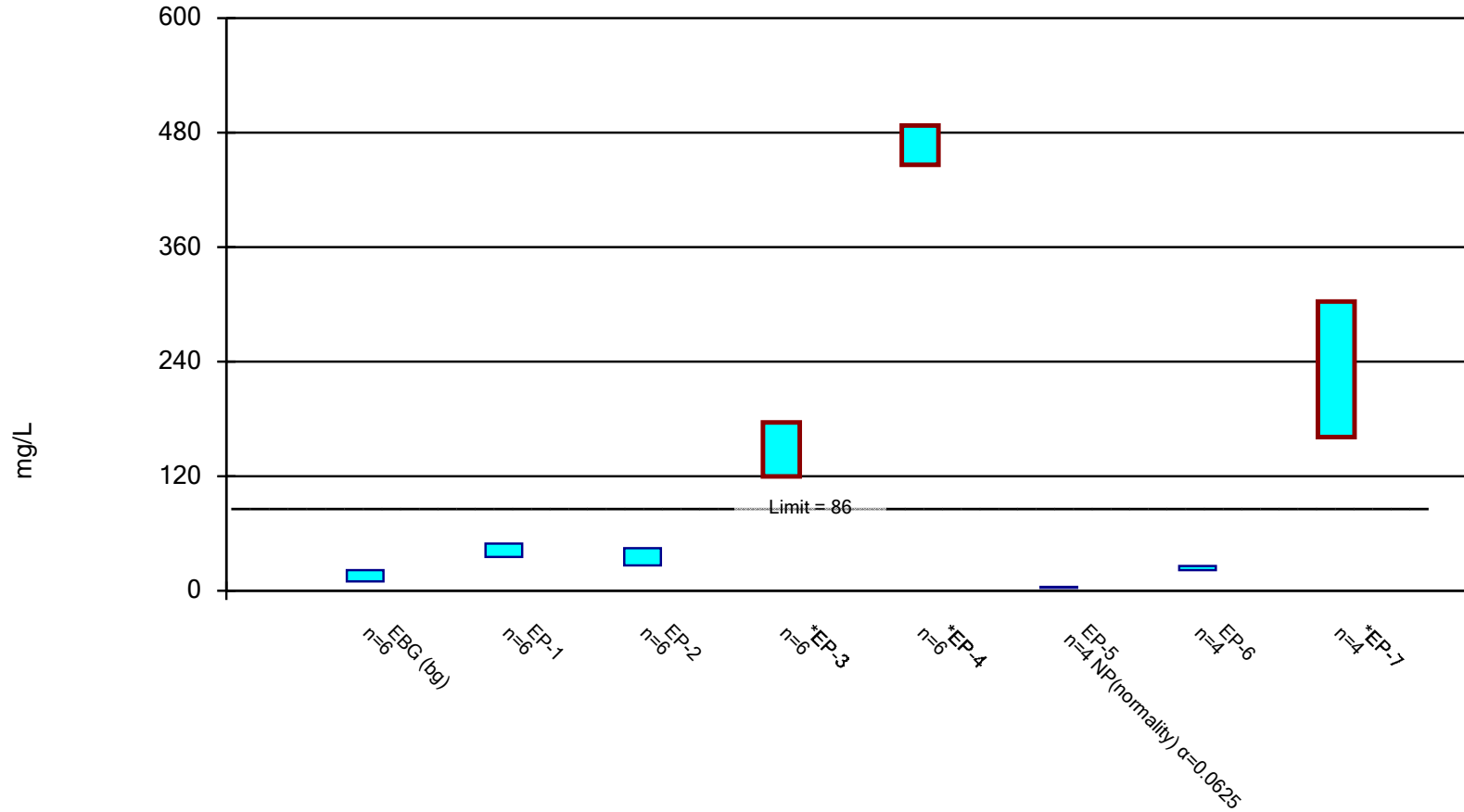


Constituent: Calcium Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

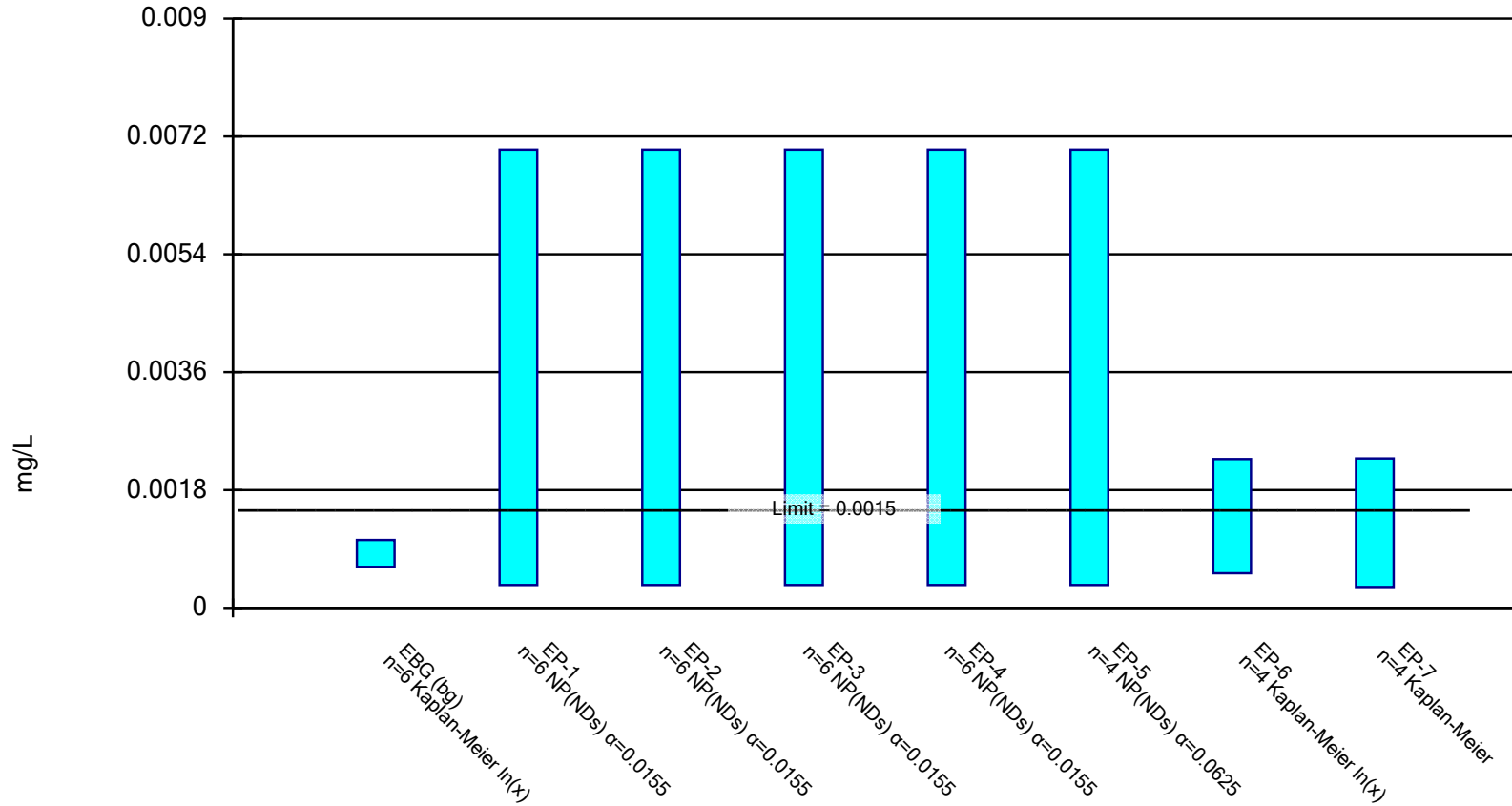


Constituent: Chloride Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

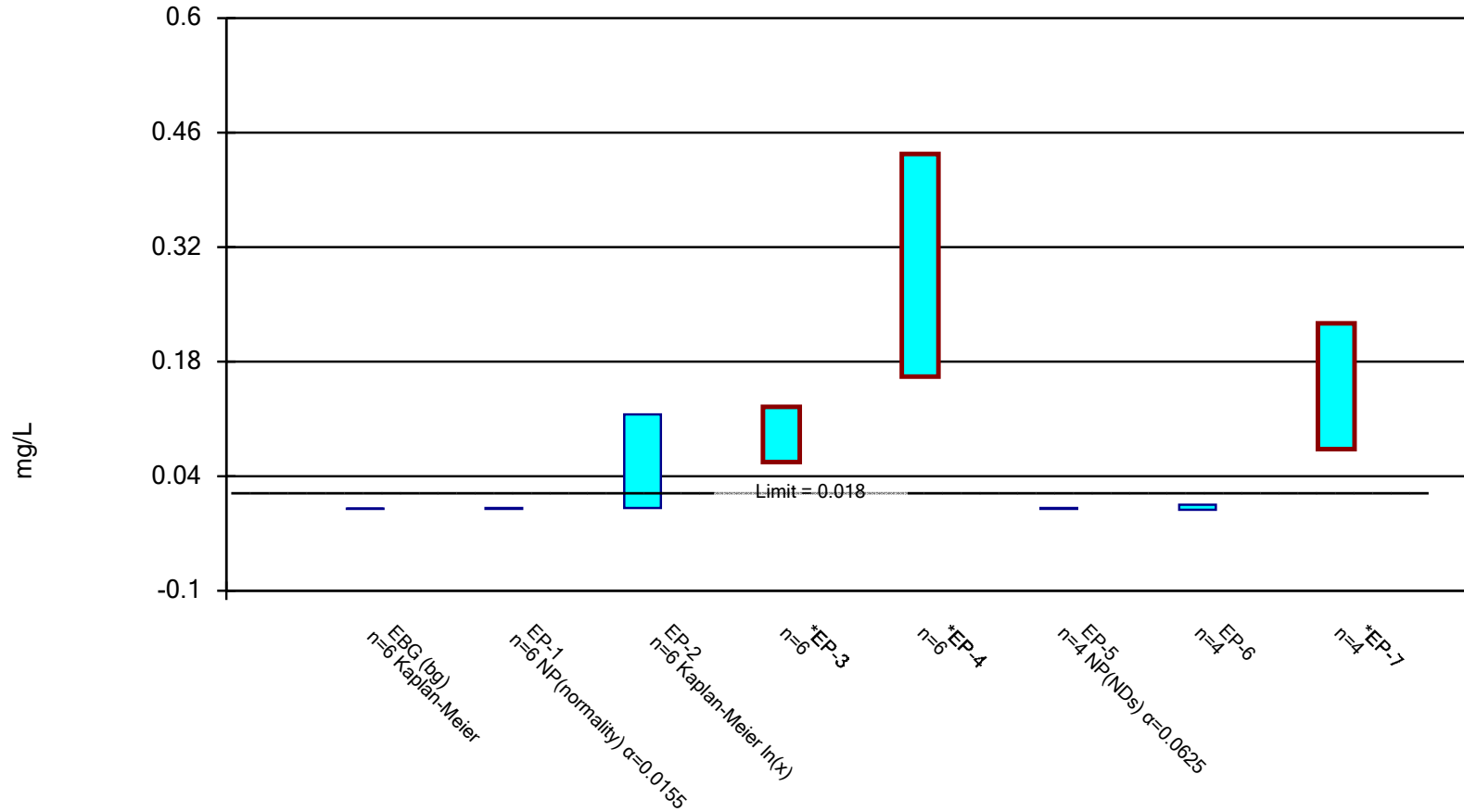


Constituent: Chromium Analysis Run 10/17/2022 12:48 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

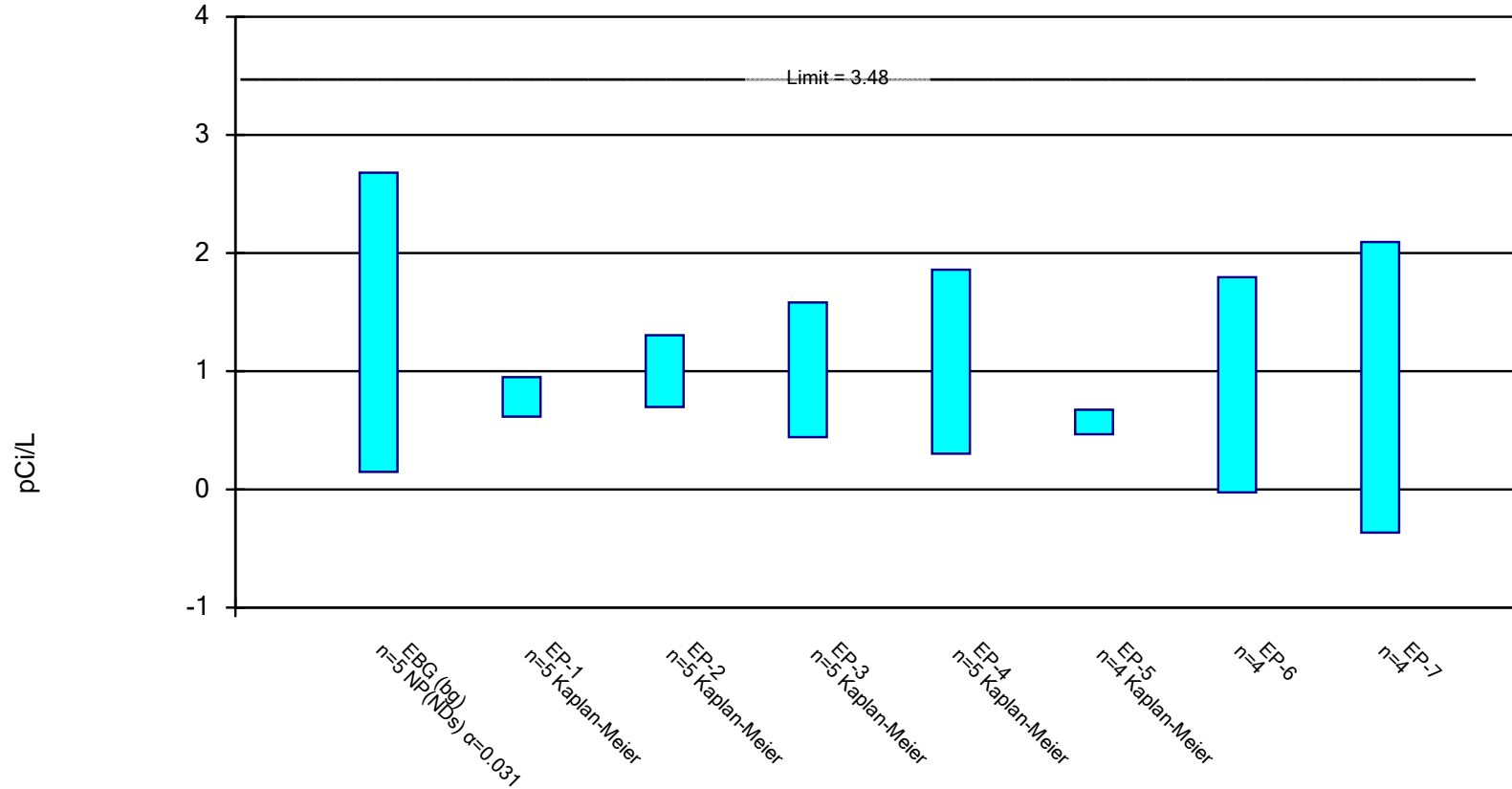
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/17/2022 12:48 PM View: IEPA
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.

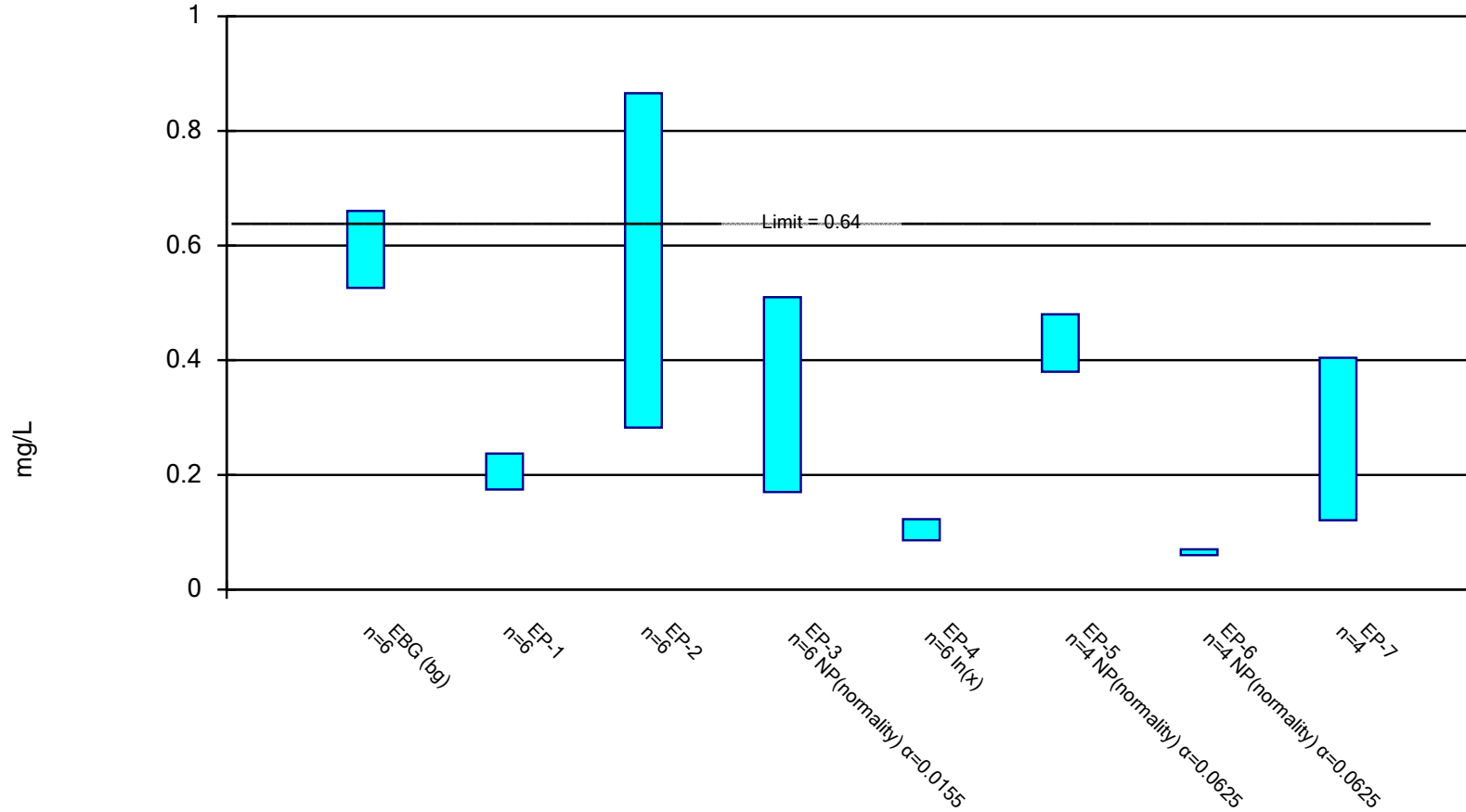


Constituent: Combined Radium Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

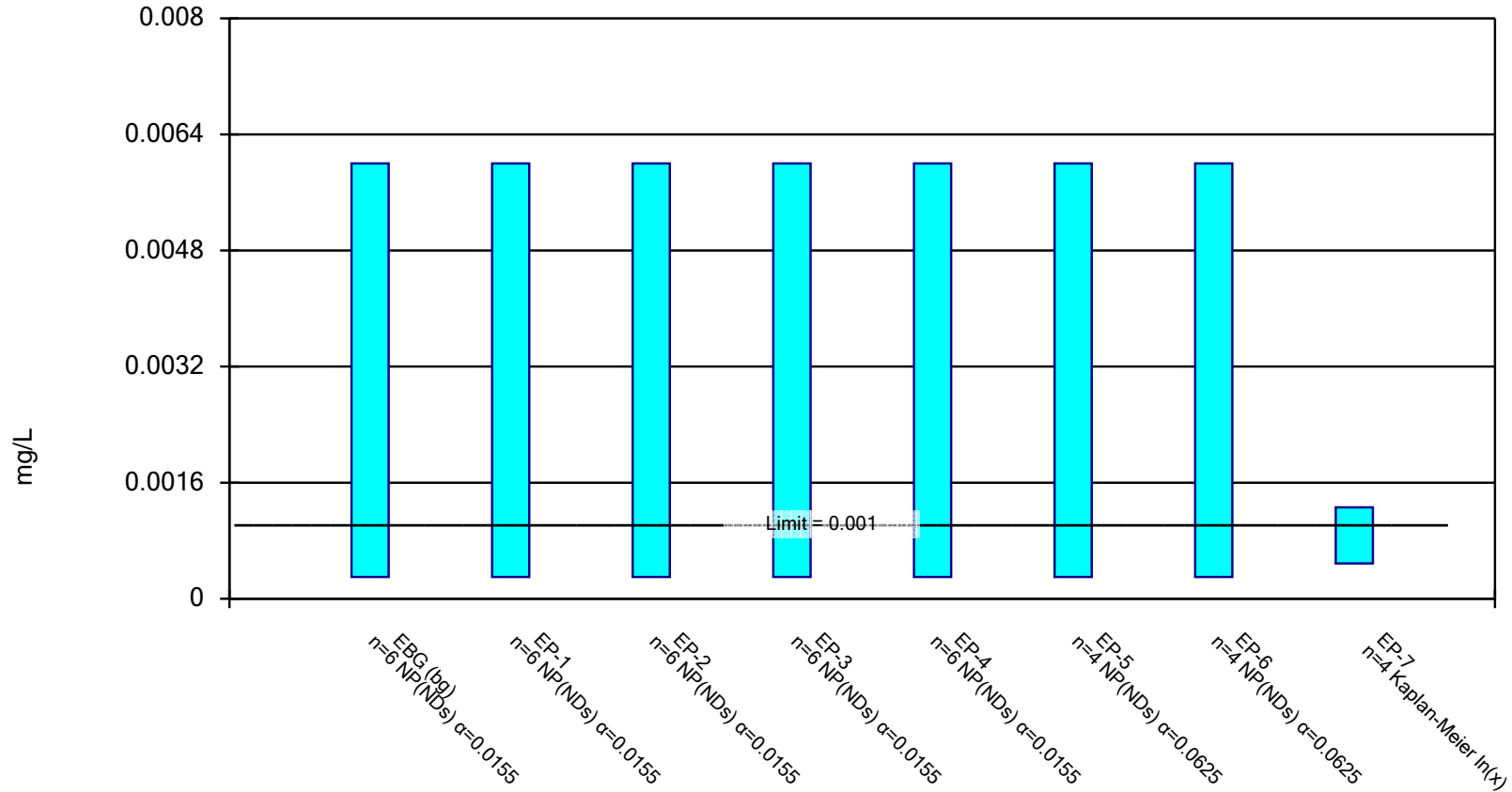


Constituent: Fluoride Analysis Run 10/17/2022 12:48 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

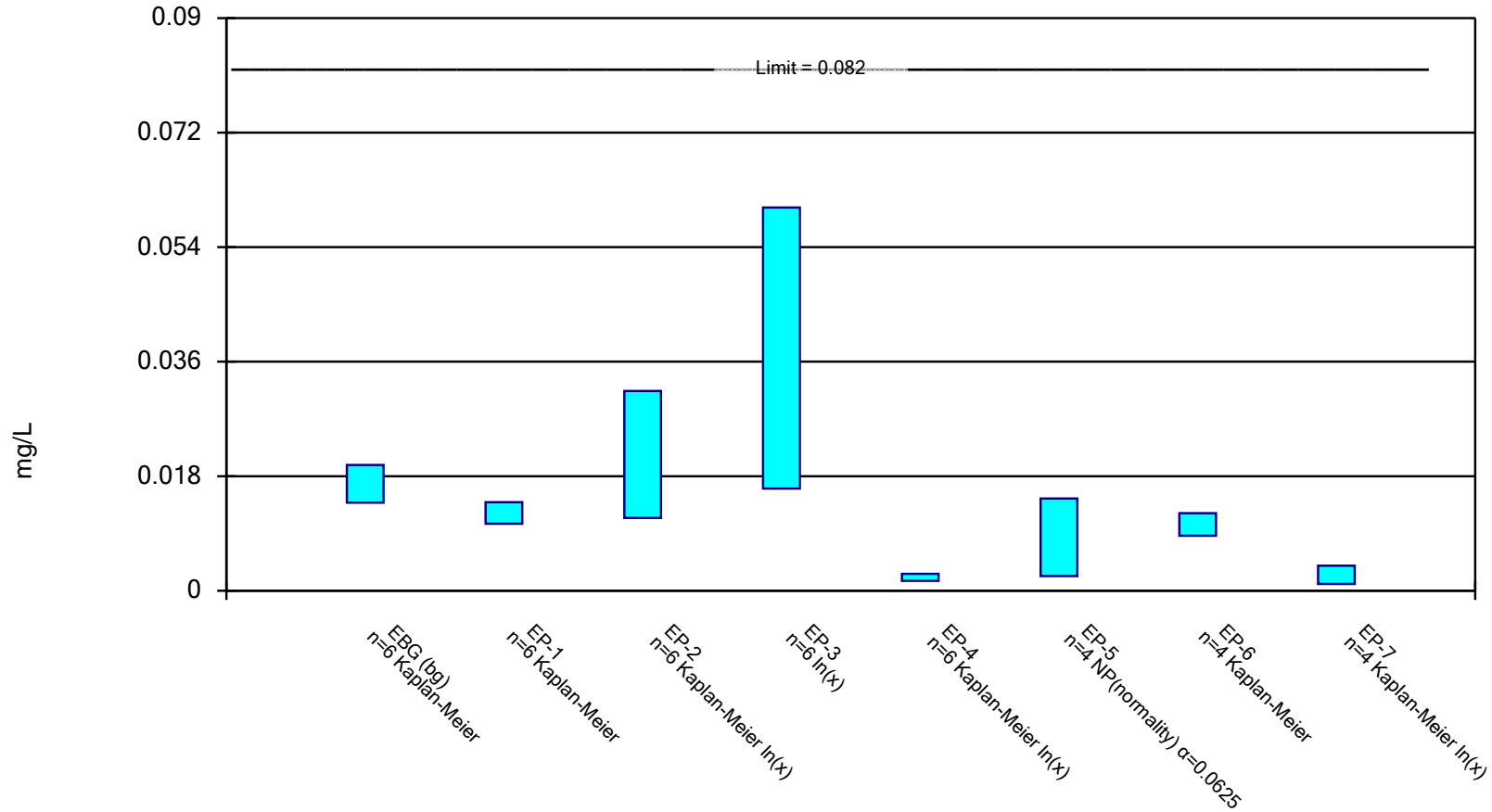
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 10/17/2022 12:48 PM View: IEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

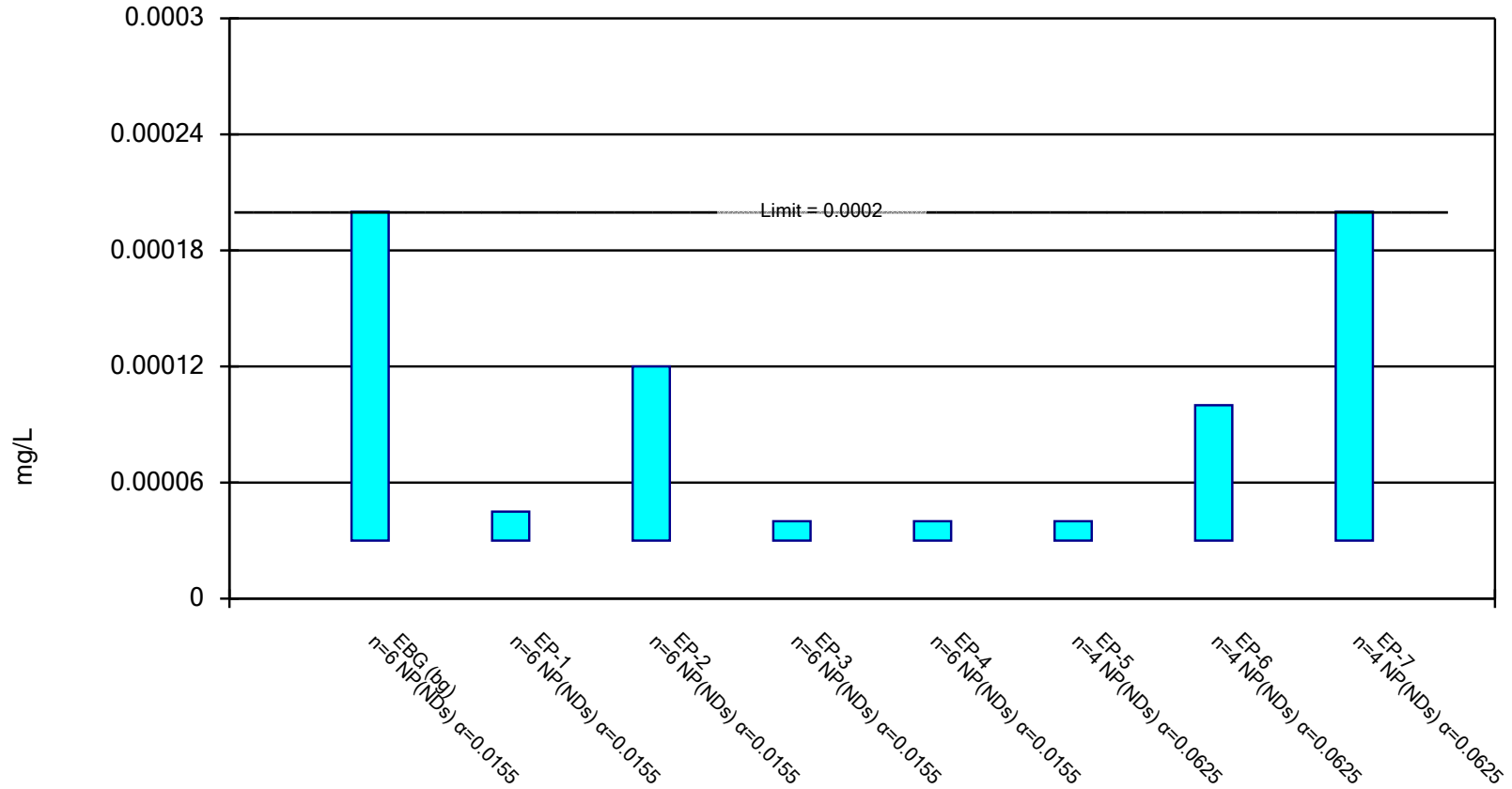
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/17/2022 12:48 PM View: IEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

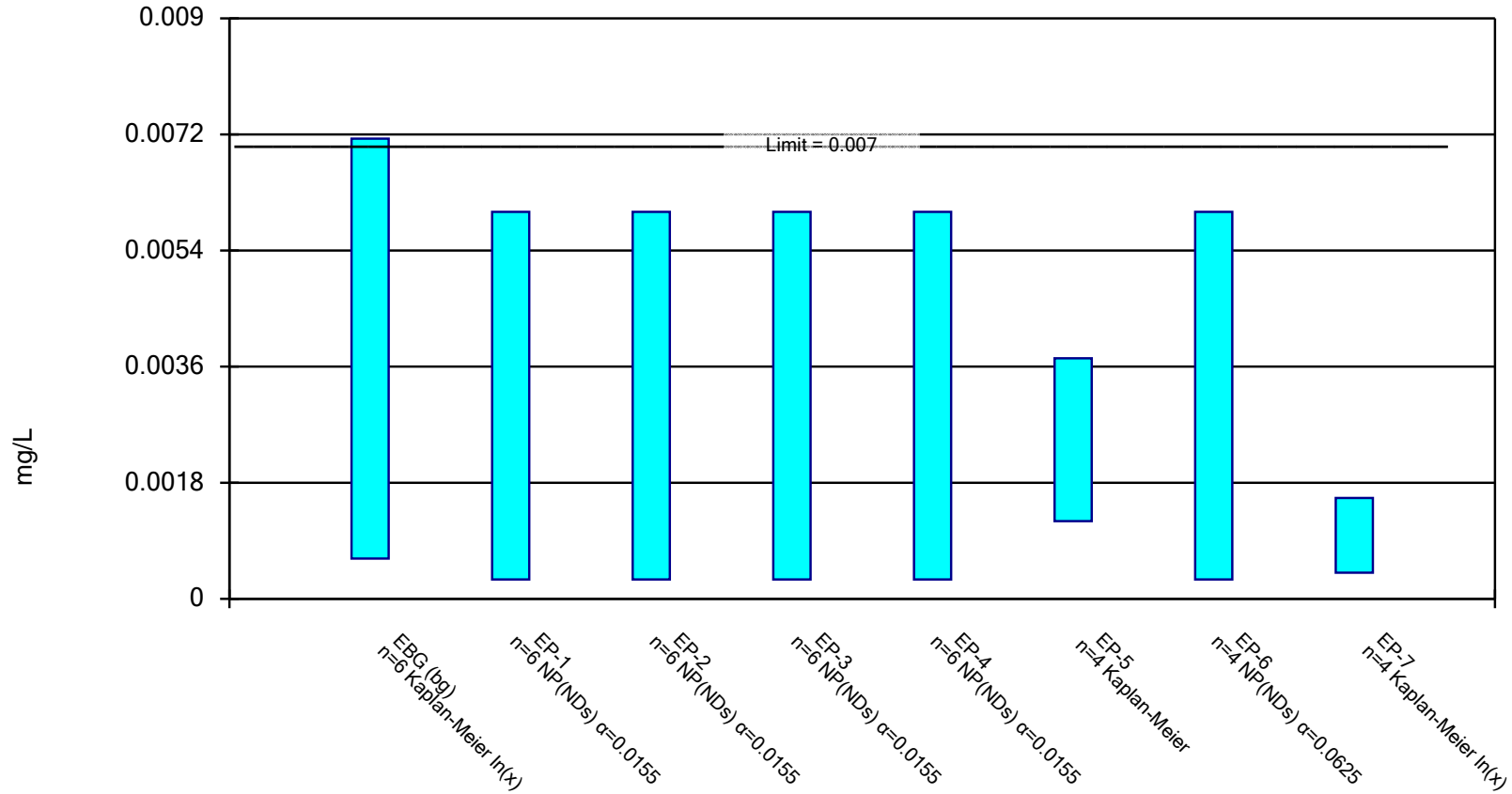


Constituent: Mercury Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

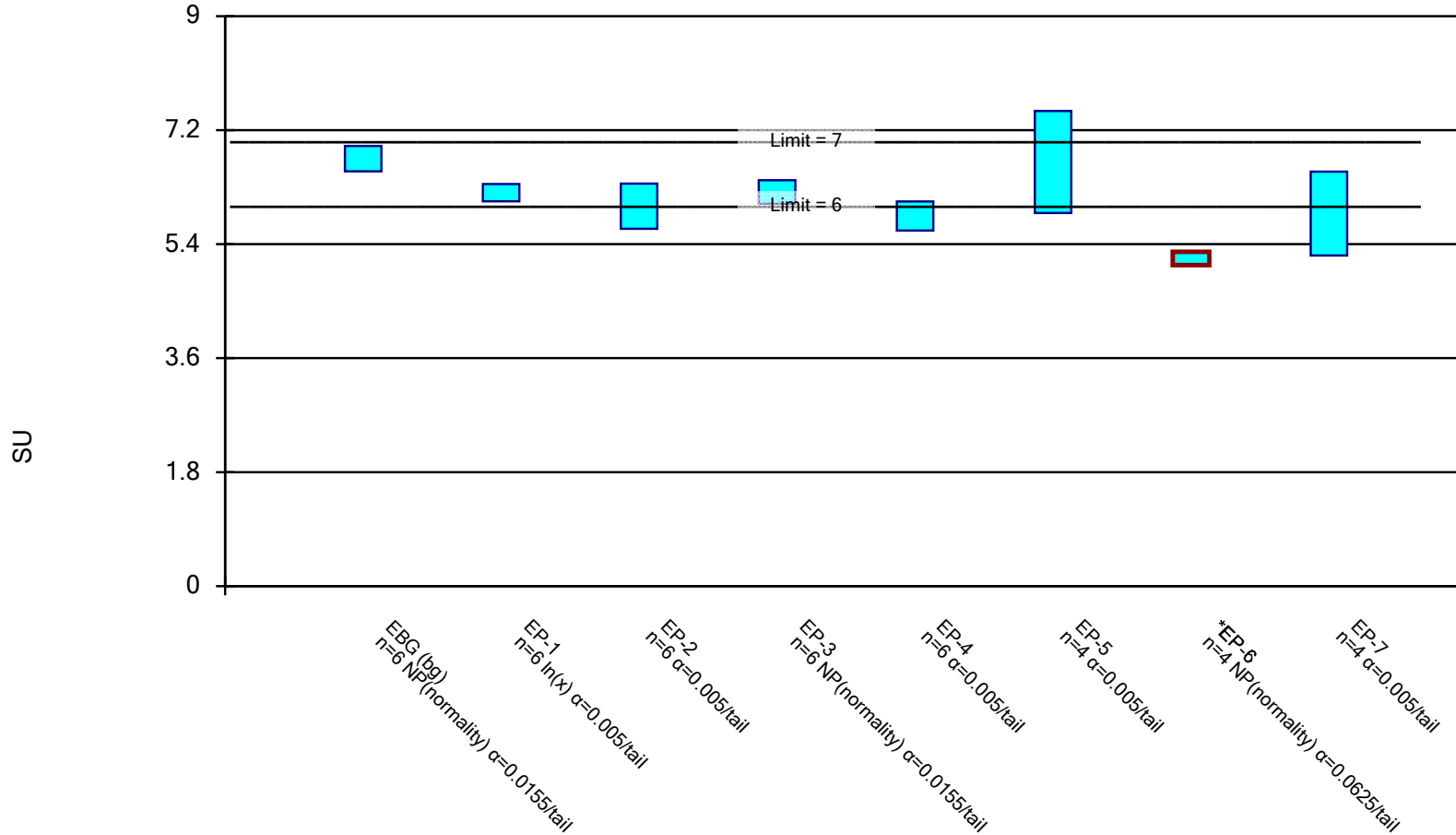


Constituent: Molybdenum Analysis Run 10/17/2022 12:48 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

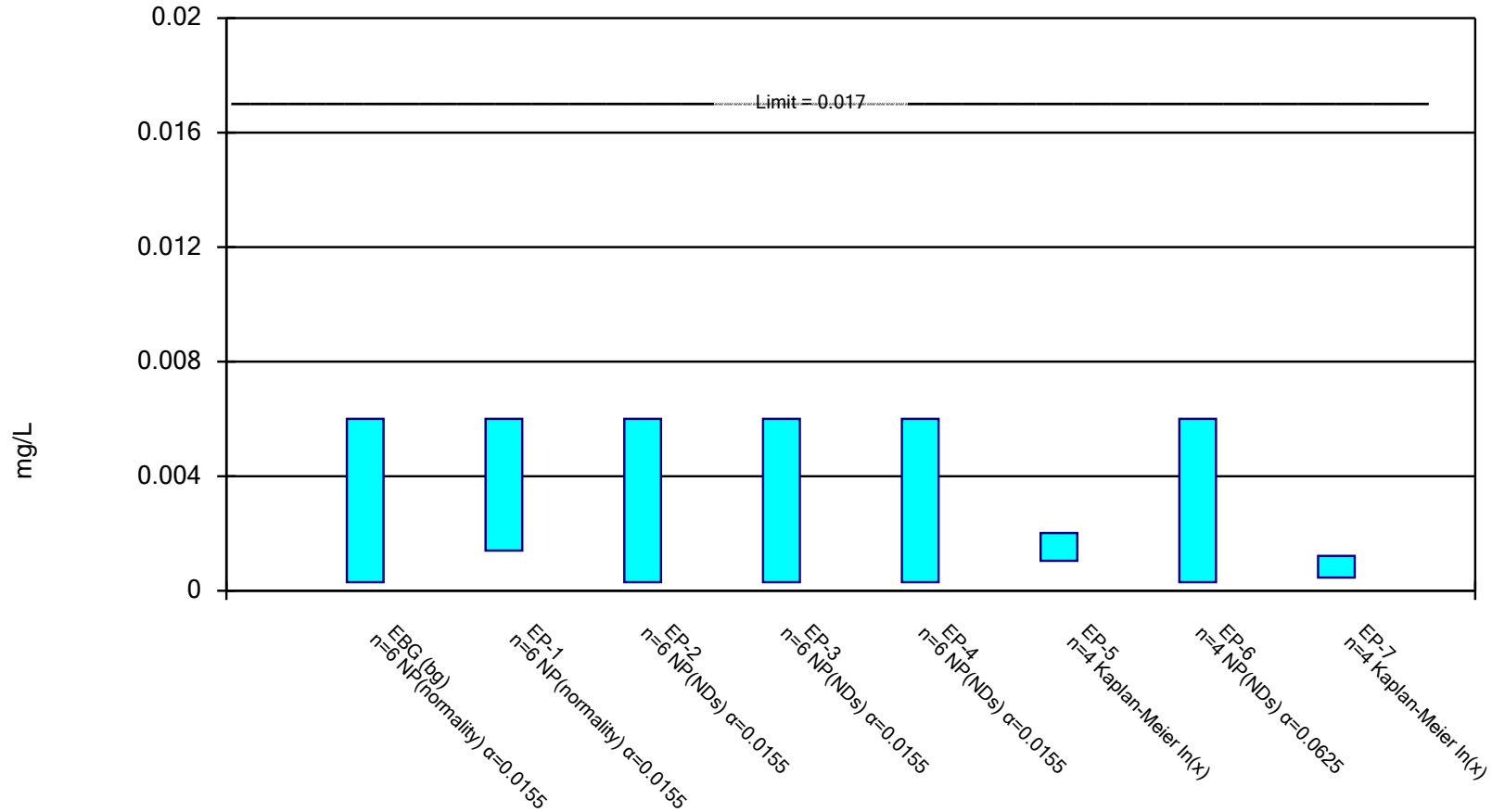
Compliance limit is exceeded.* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: pH Analysis Run 10/17/2022 12:48 PM View: IEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

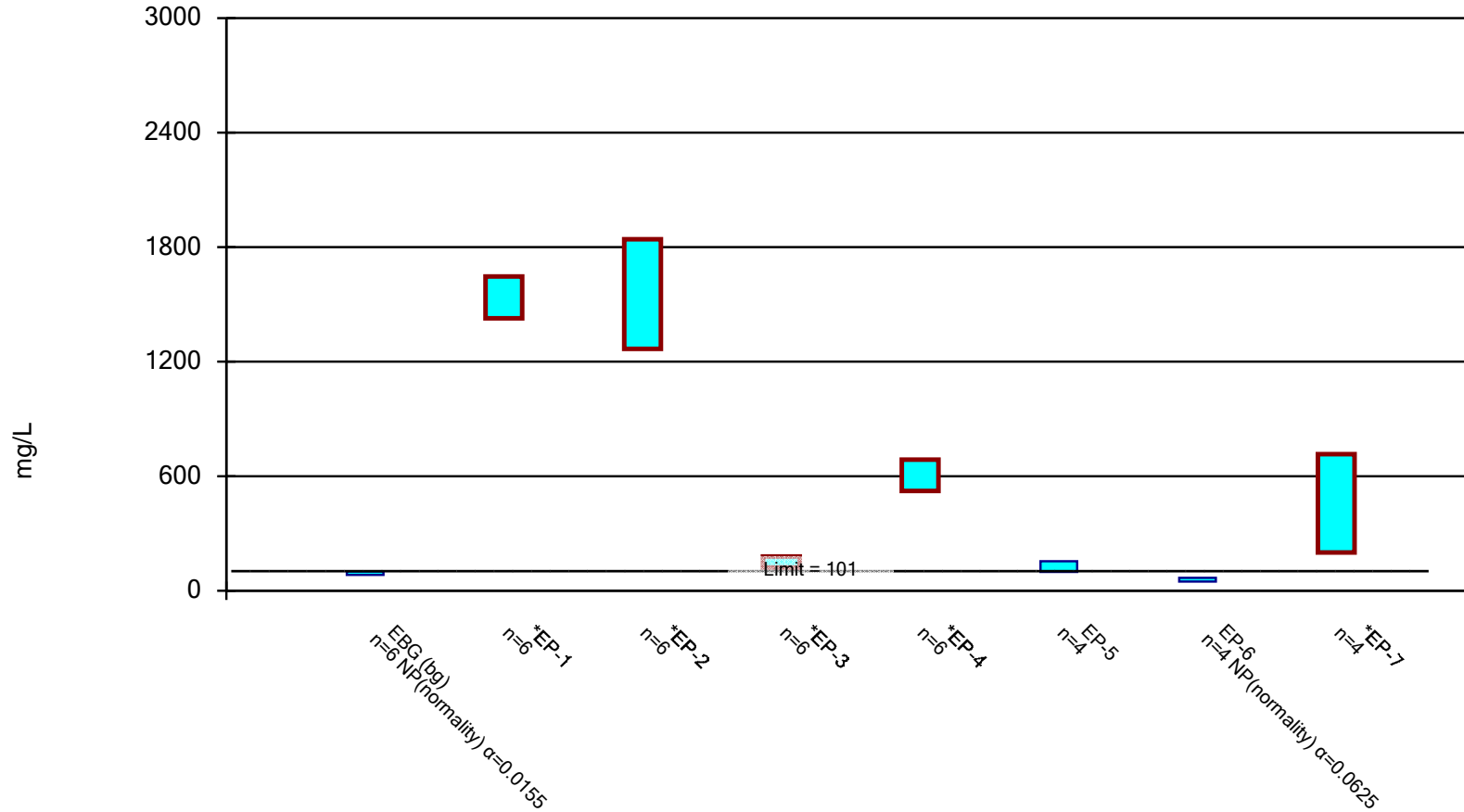
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 10/17/2022 12:48 PM View: IEPA
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.

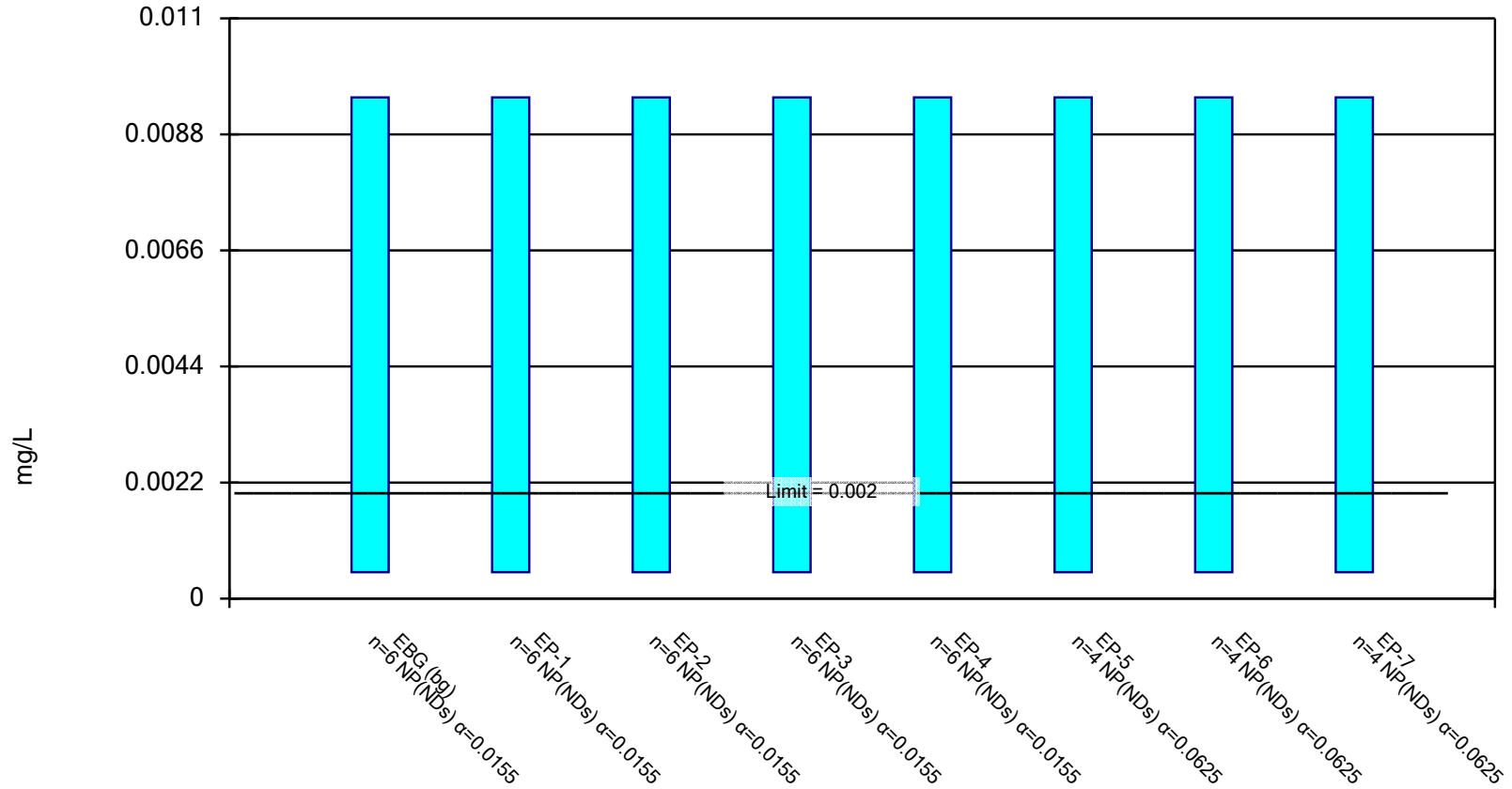


Constituent: Sulfate Analysis Run 10/17/2022 12:48 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

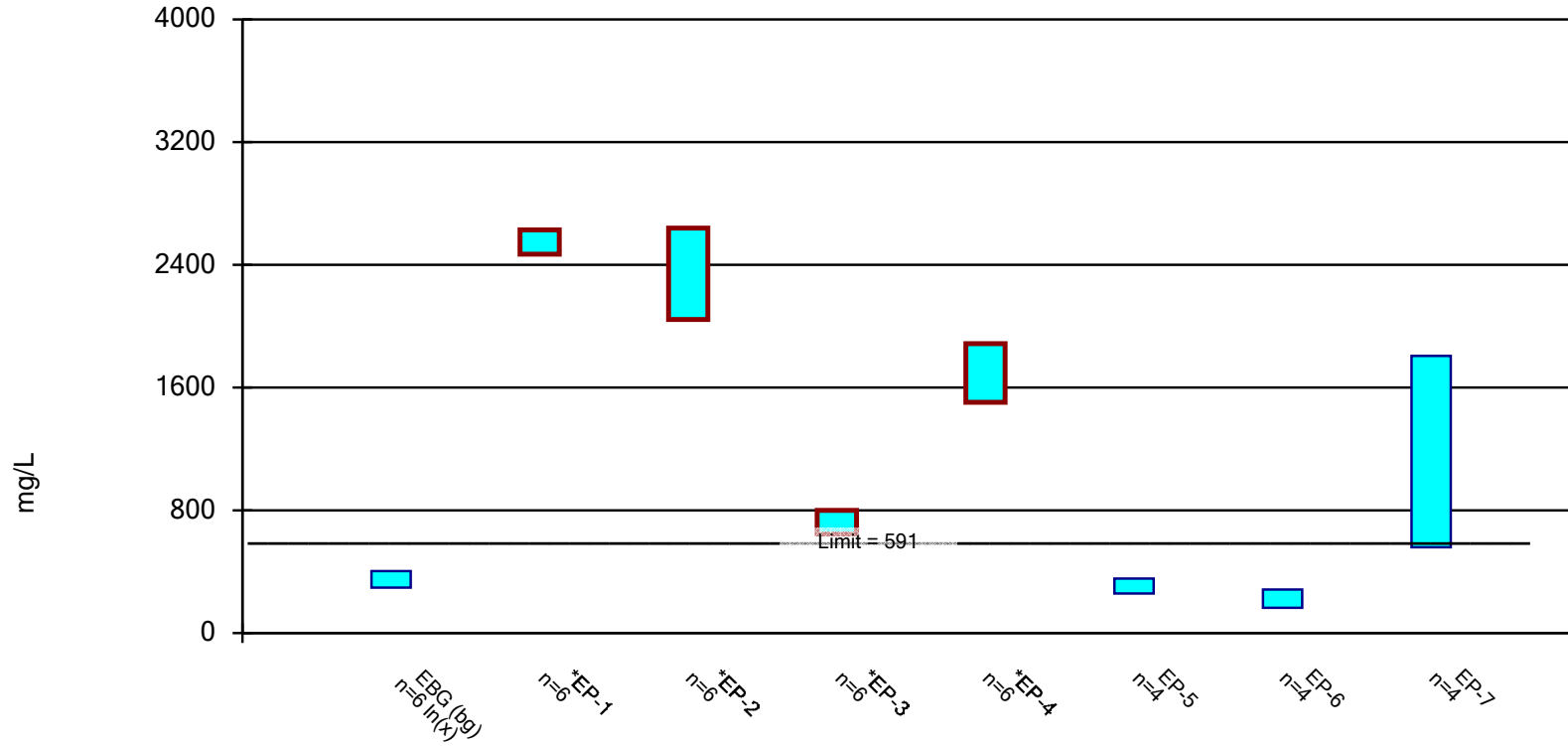


Constituent: Thallium Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

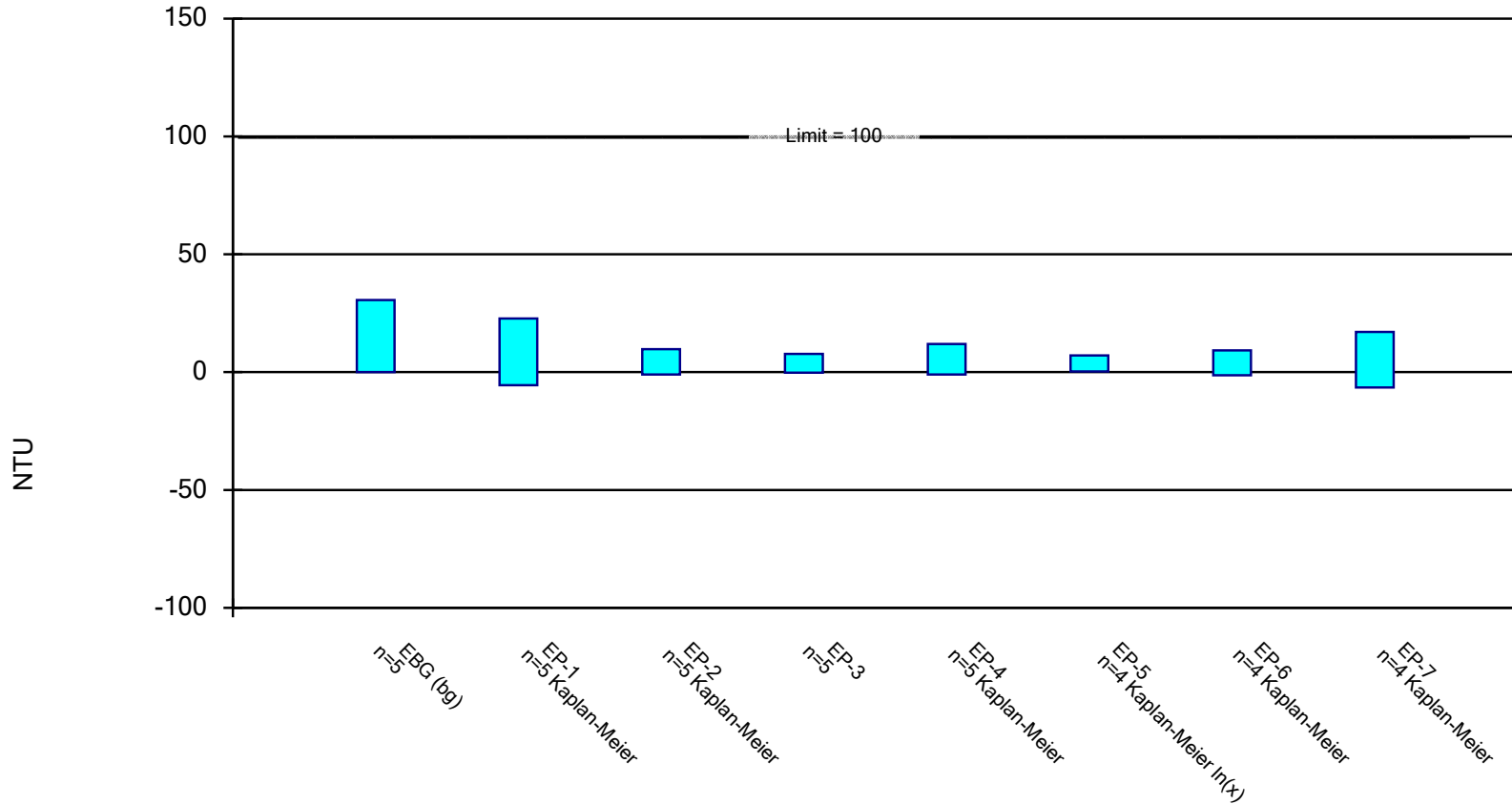


Constituent: Total Dissolved Solids Analysis Run 10/17/2022 12:48 PM View: IEPA

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.

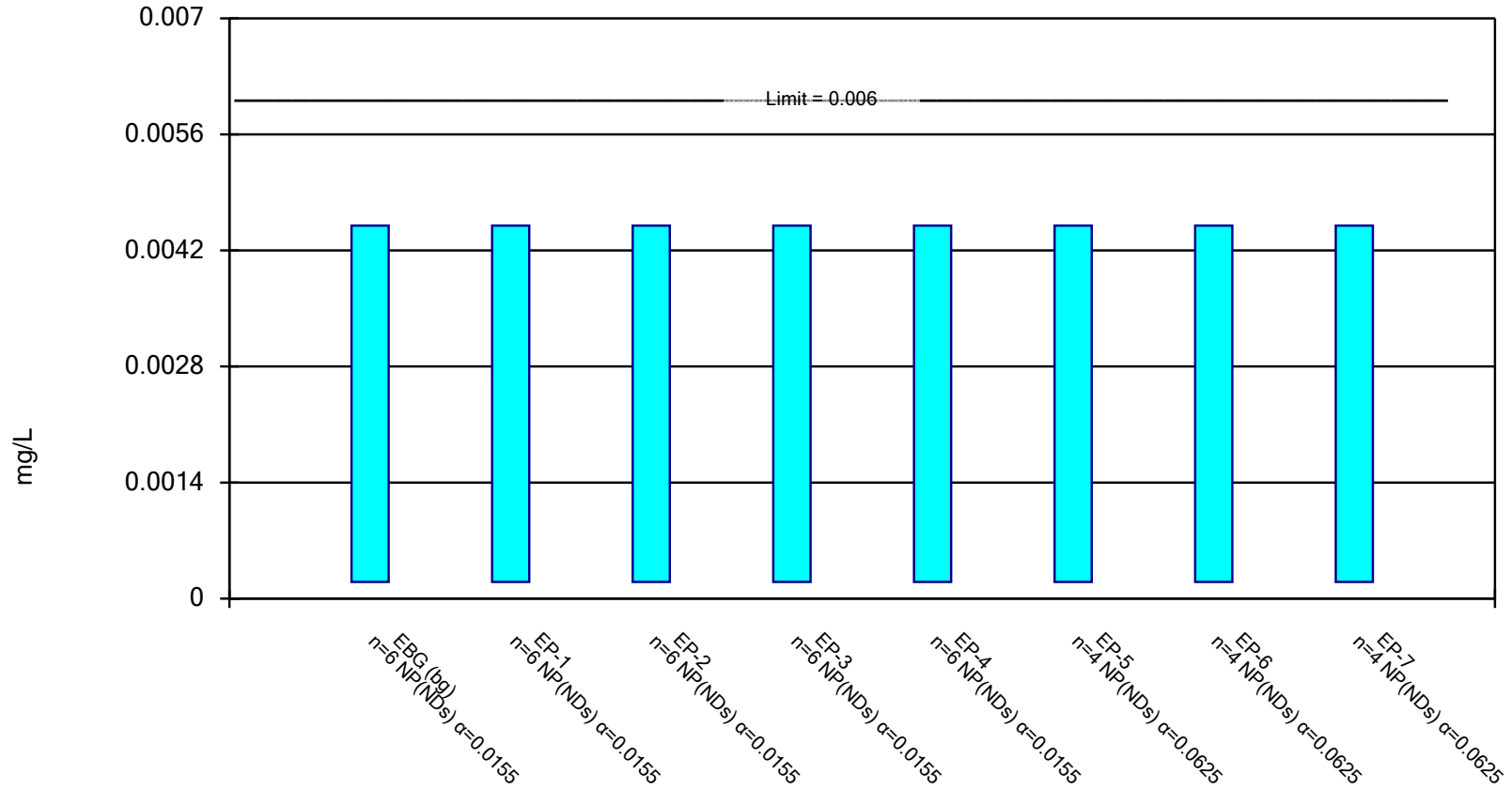


Constituent: Turbidity Analysis Run 10/17/2022 12:48 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

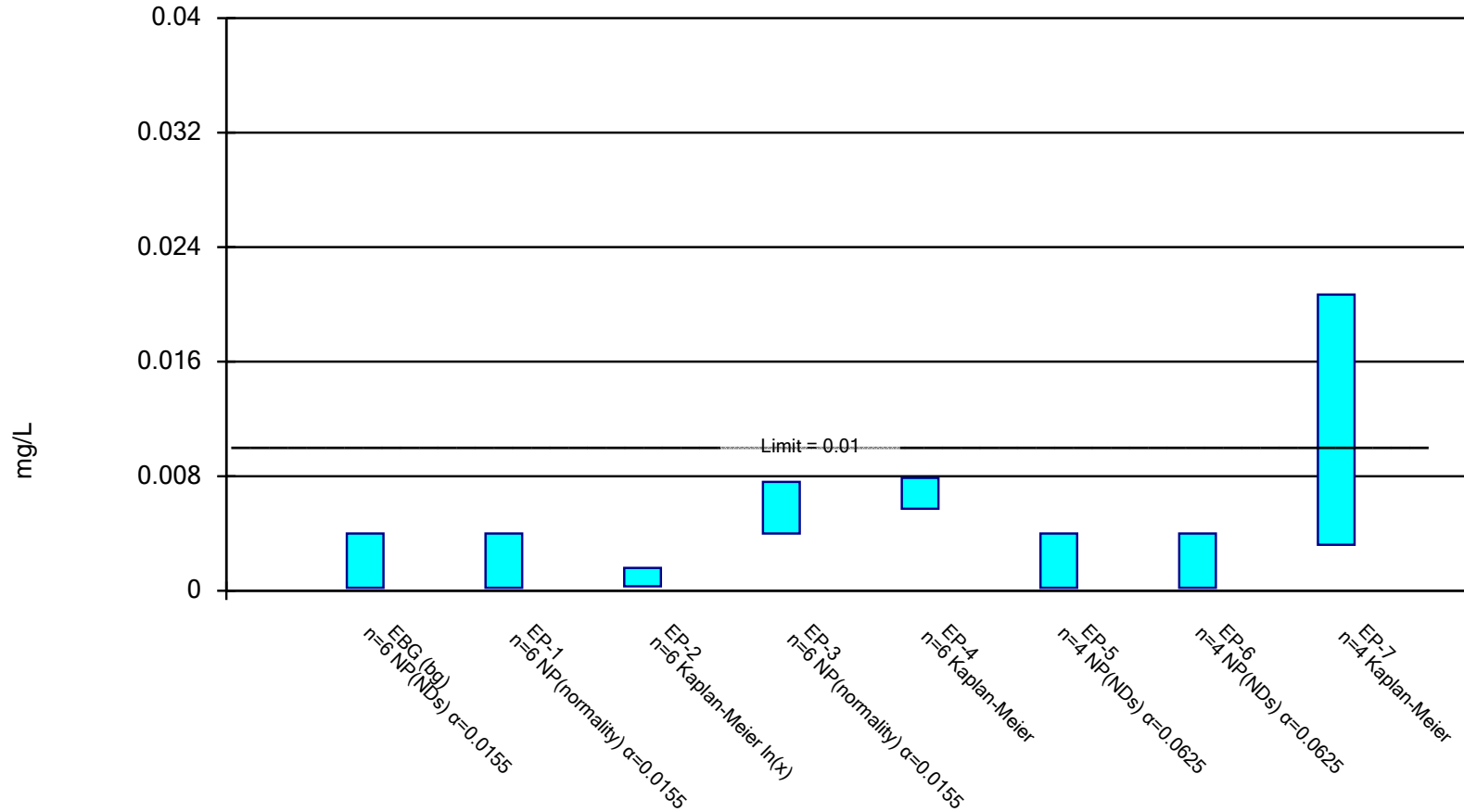


Constituent: Antimony Analysis Run 10/17/2022 12:30 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

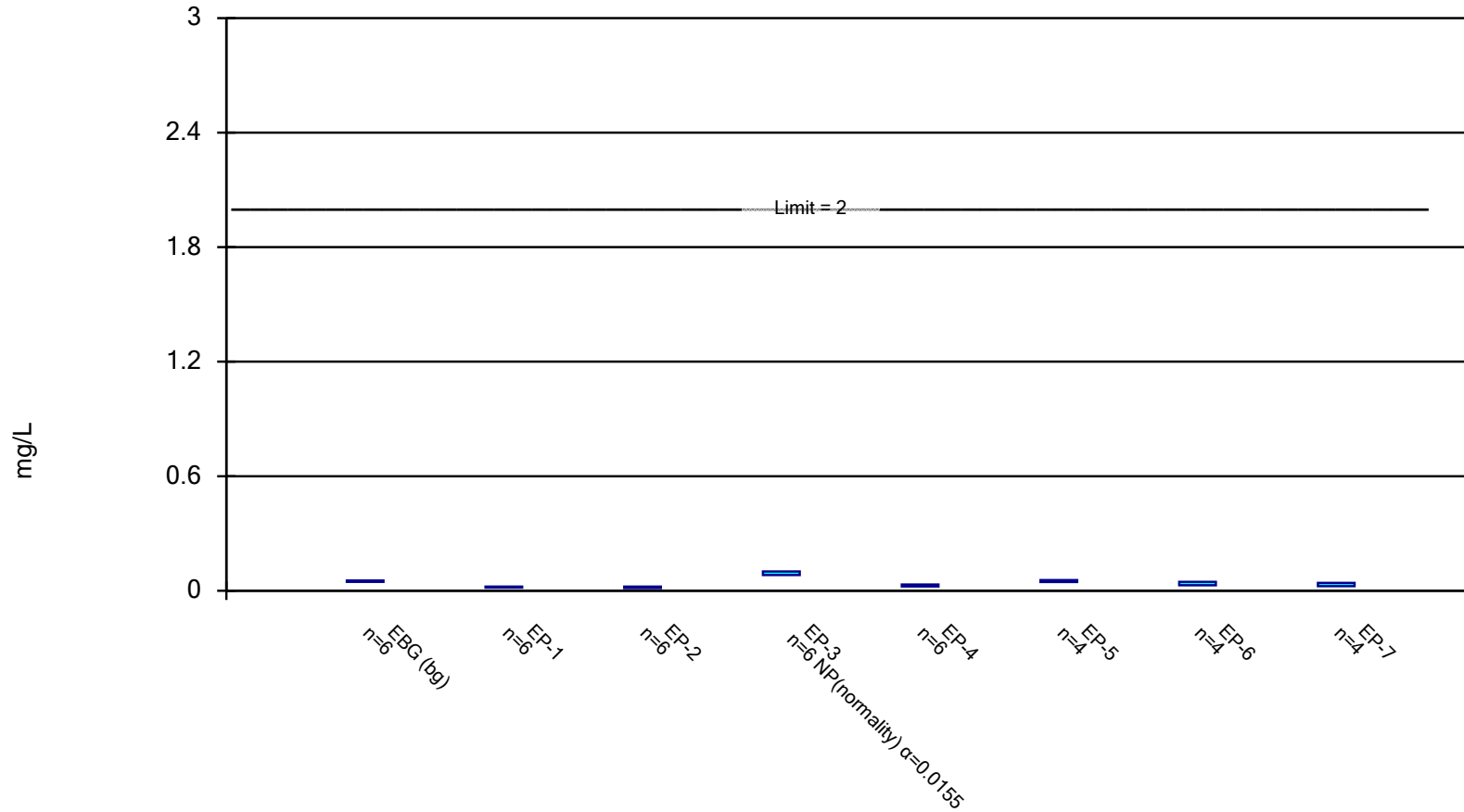
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 10/17/2022 12:30 PM View: IEPA
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.

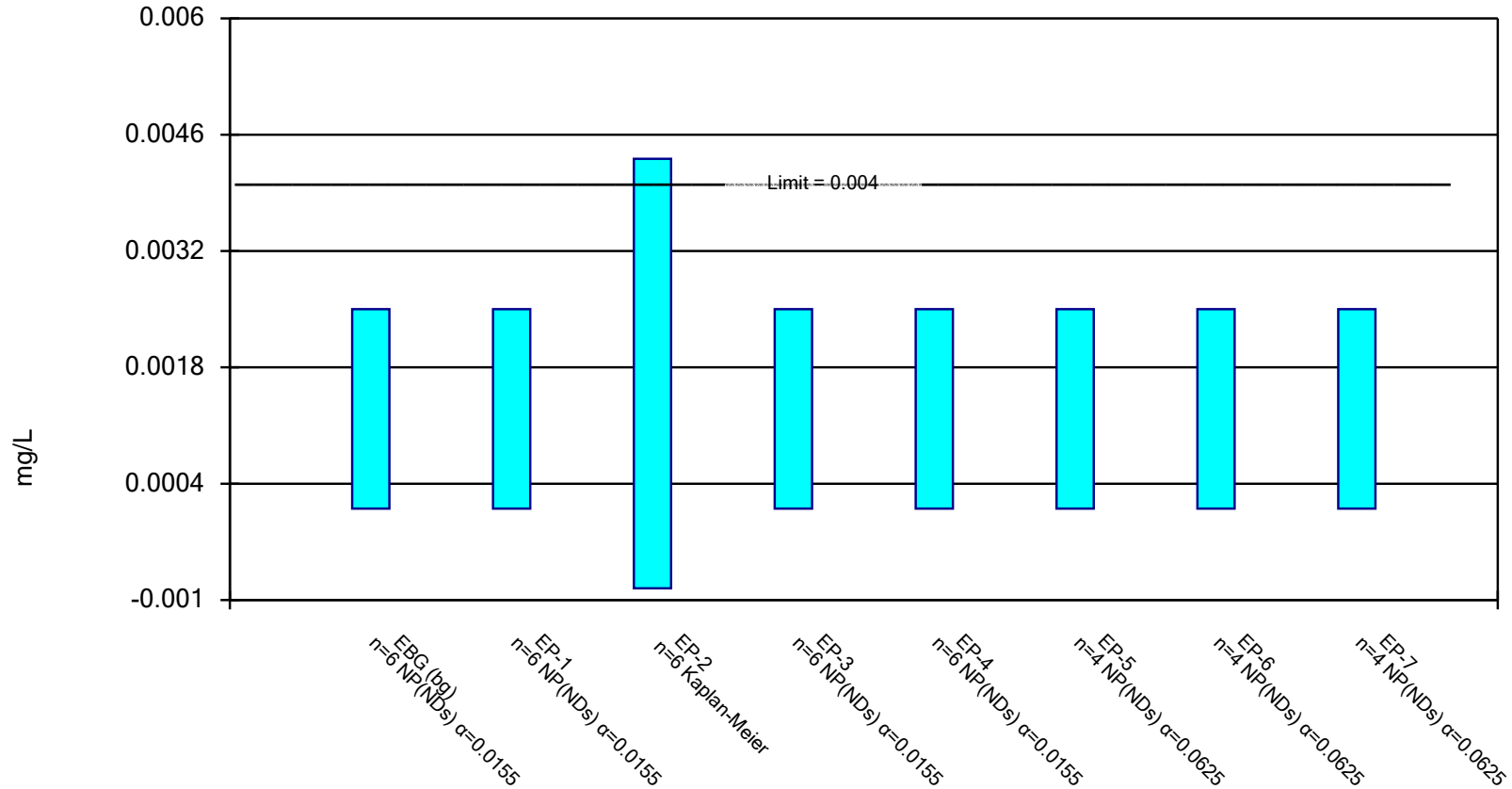


Constituent: Barium Analysis Run 10/17/2022 12:30 PM View: IEPA

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.

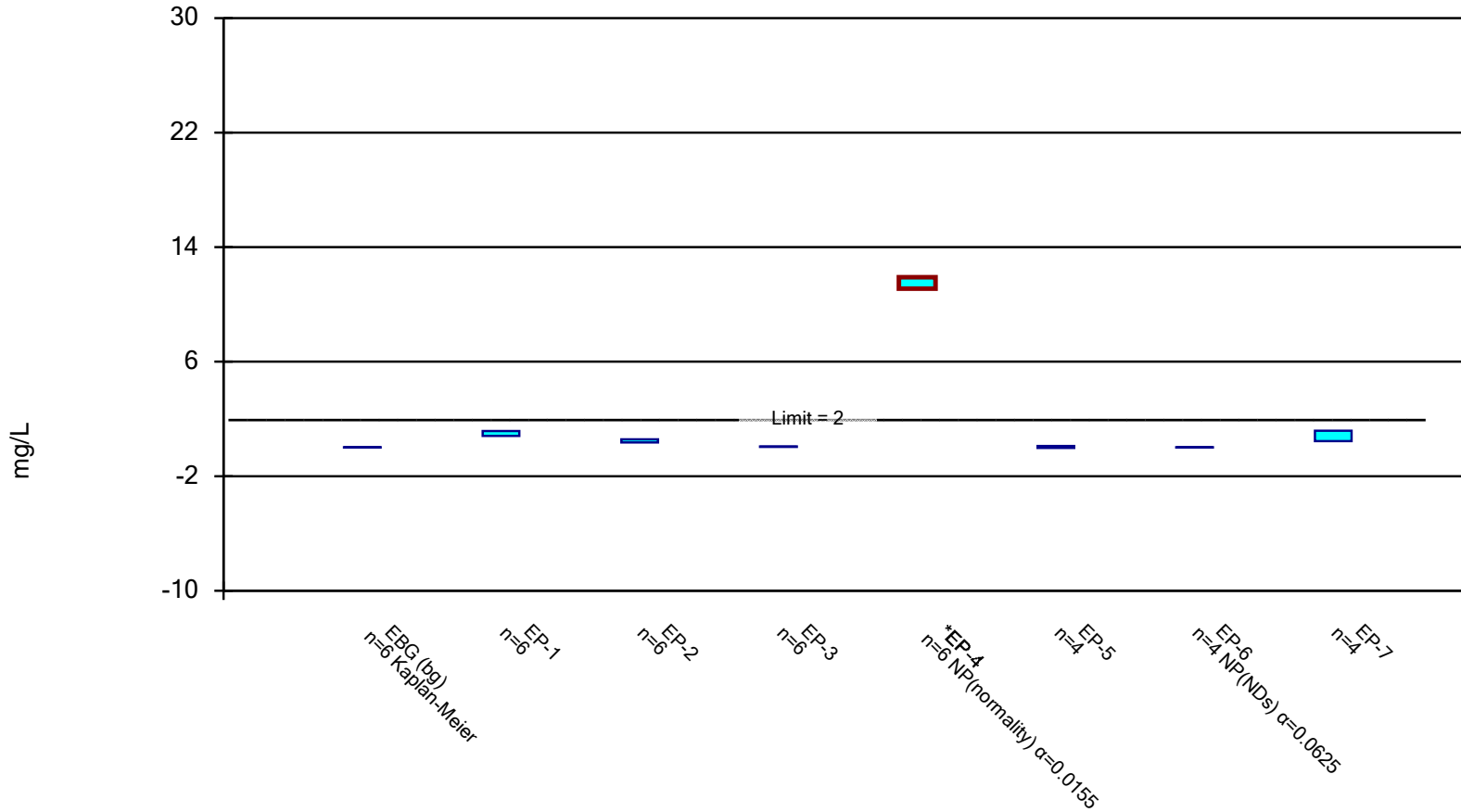


Constituent: Beryllium Analysis Run 10/17/2022 12:30 PM View: IEPA

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.

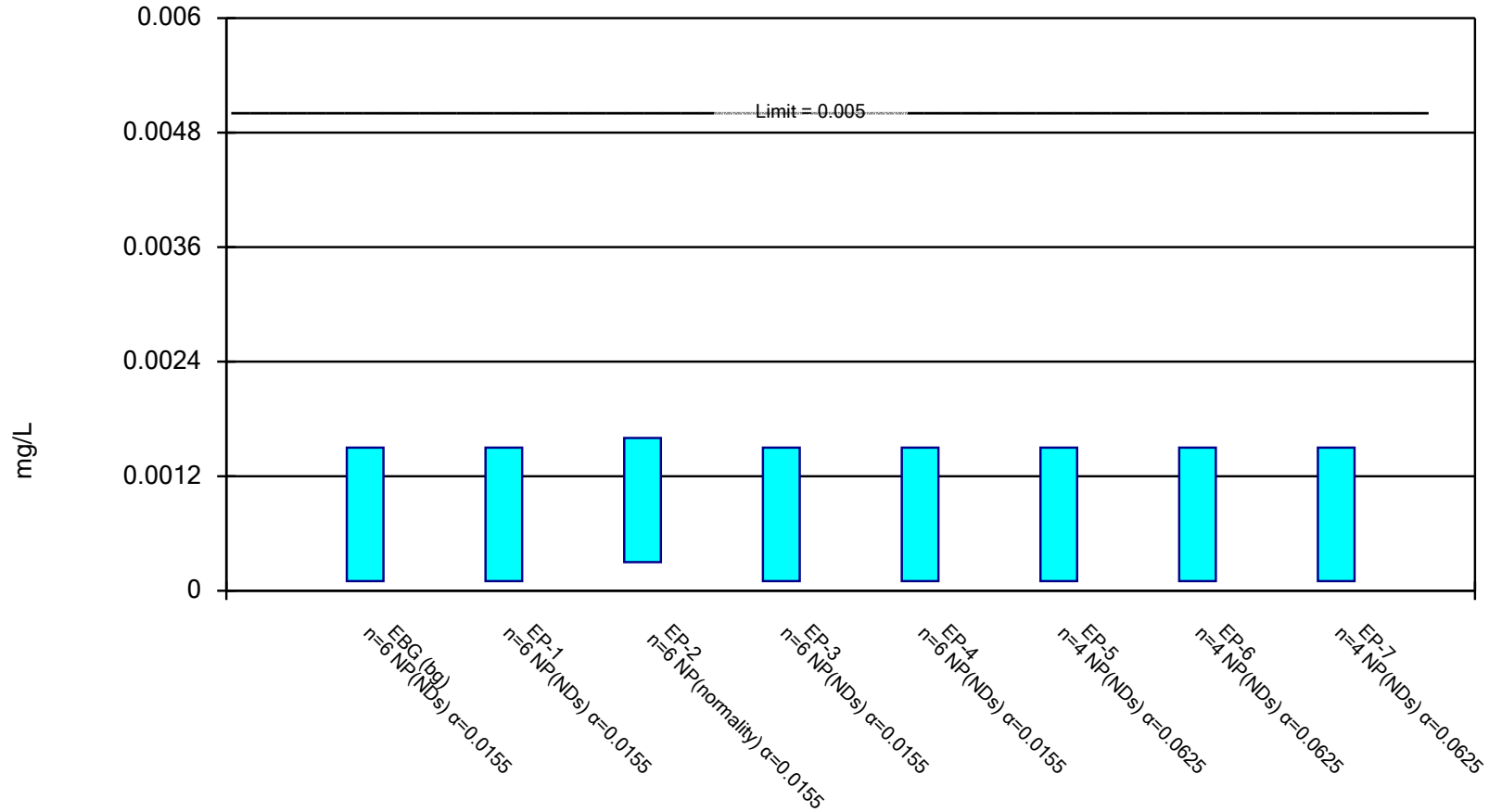


Constituent: Boron Analysis Run 10/17/2022 12:30 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

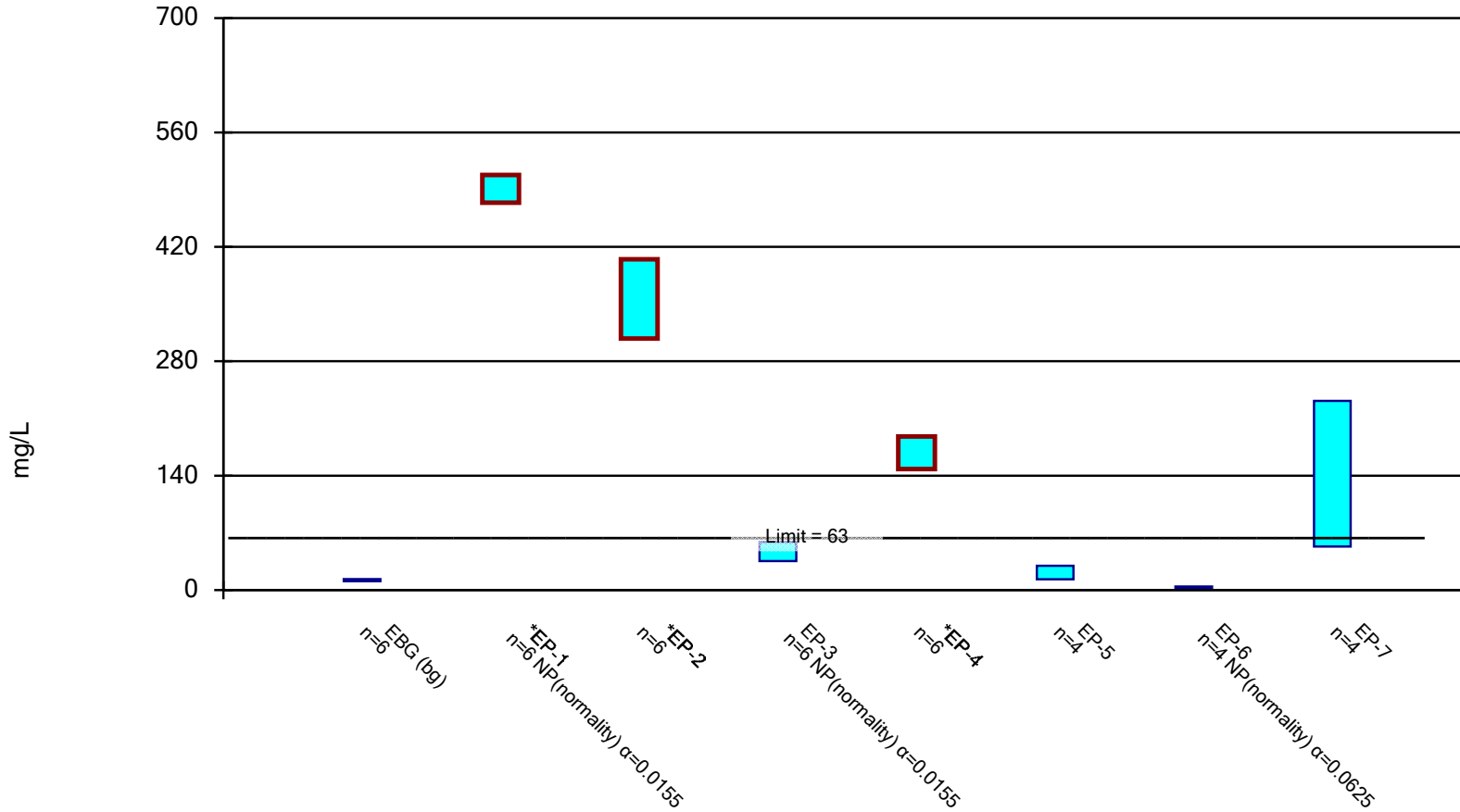


Constituent: Cadmium Analysis Run 10/17/2022 12:30 PM View: IEPA

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.

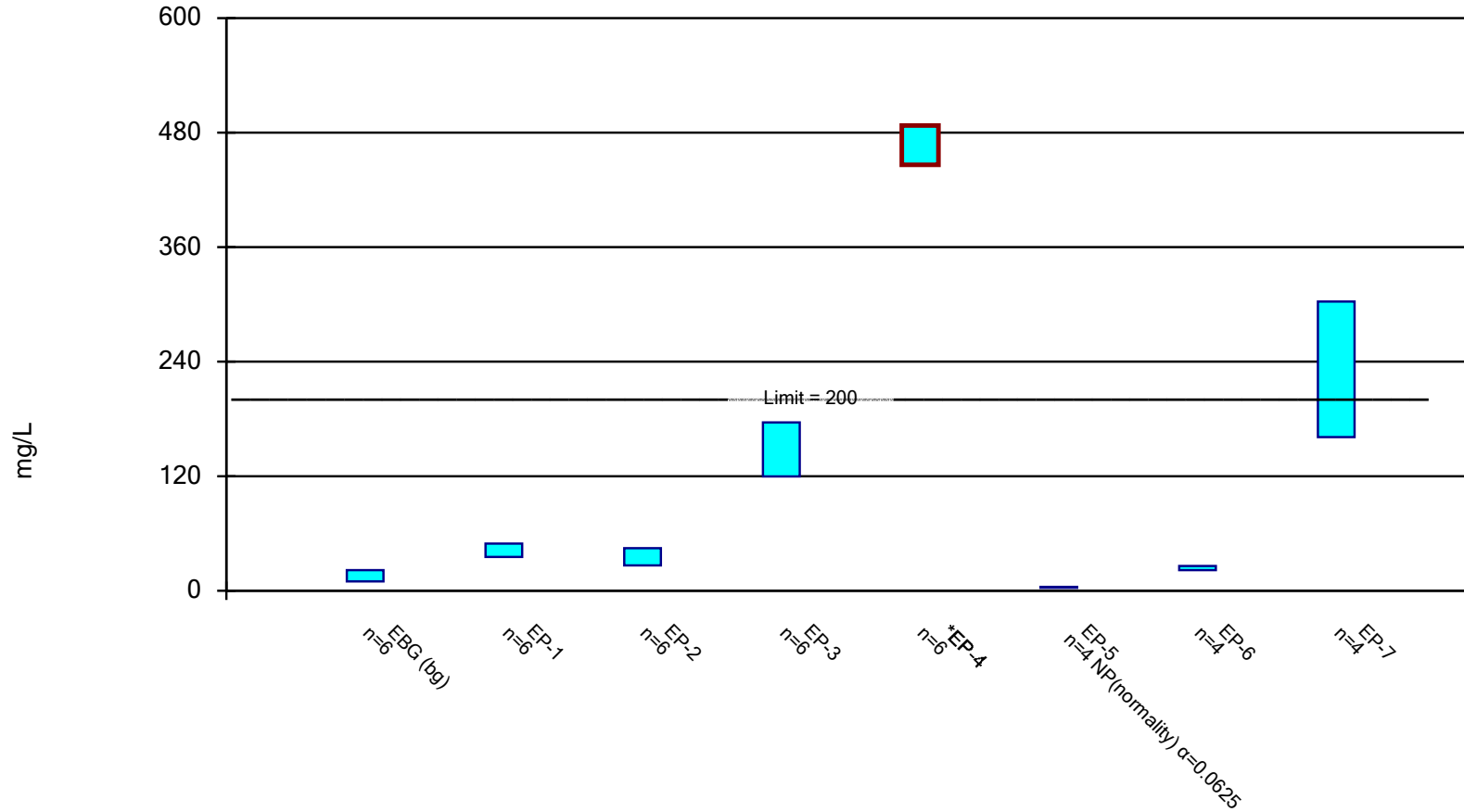


Constituent: Calcium Analysis Run 10/17/2022 12:35 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

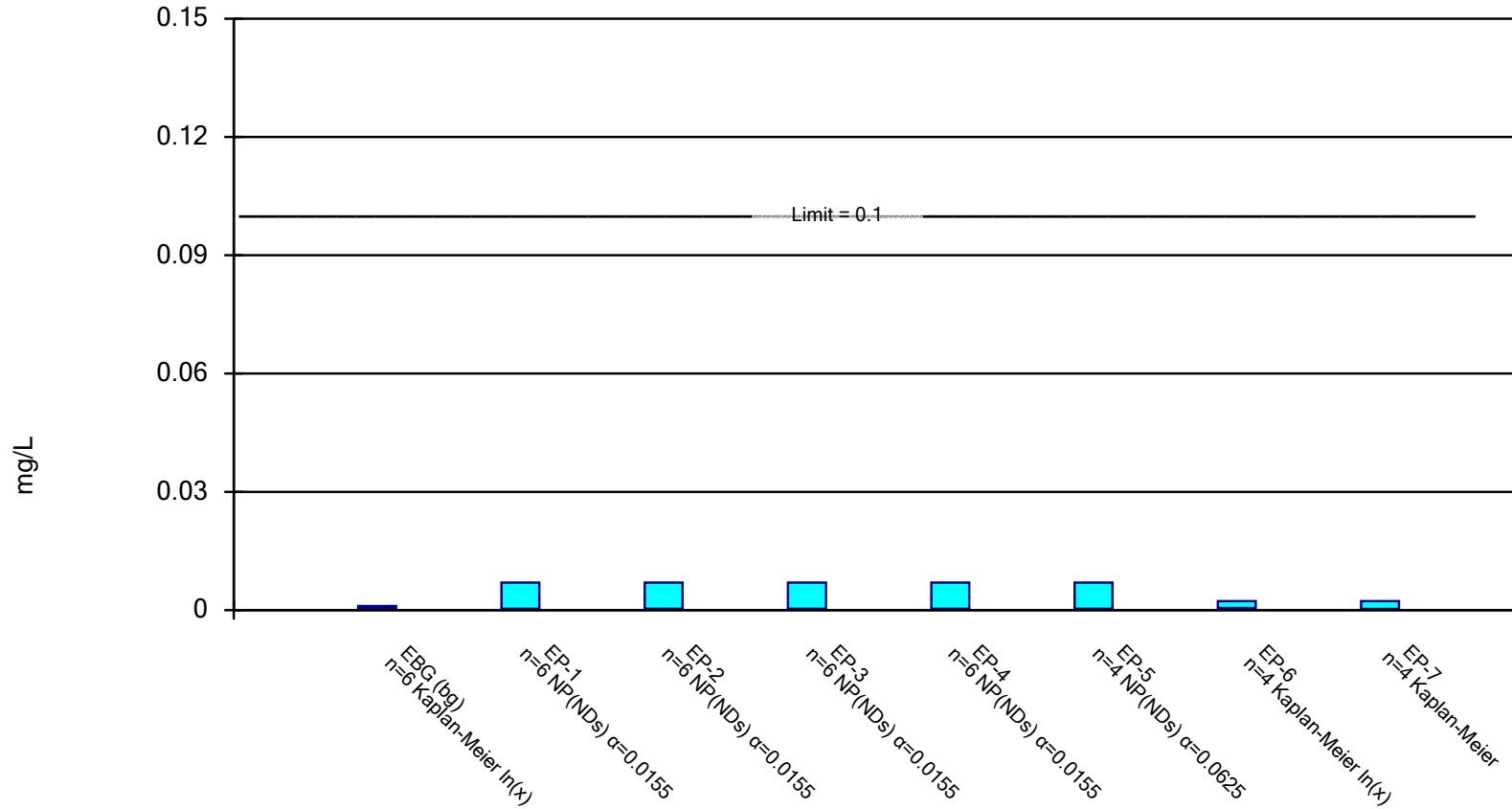
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chloride Analysis Run 10/17/2022 12:36 PM View: IEPA
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.

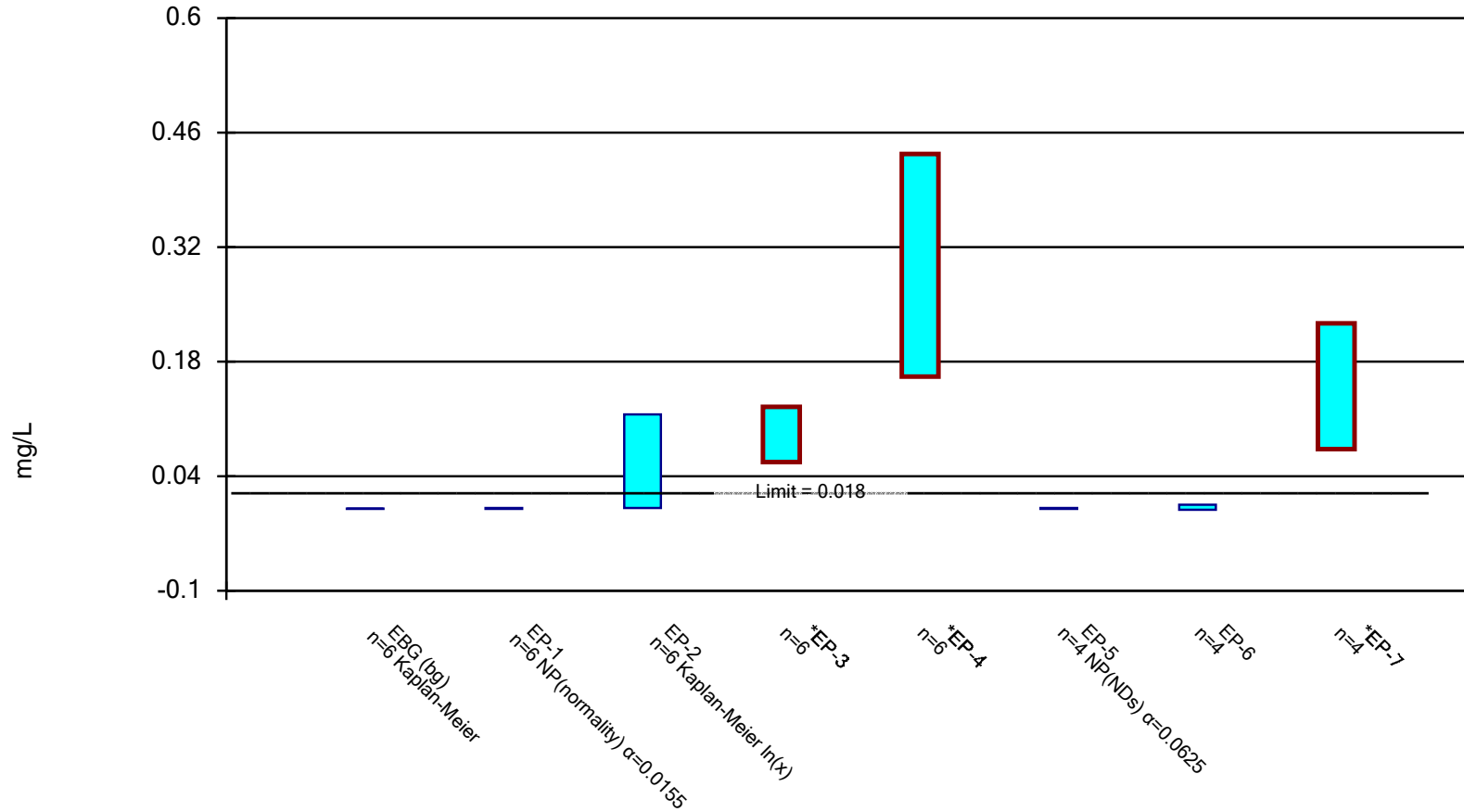


Constituent: Chromium Analysis Run 10/17/2022 12:36 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

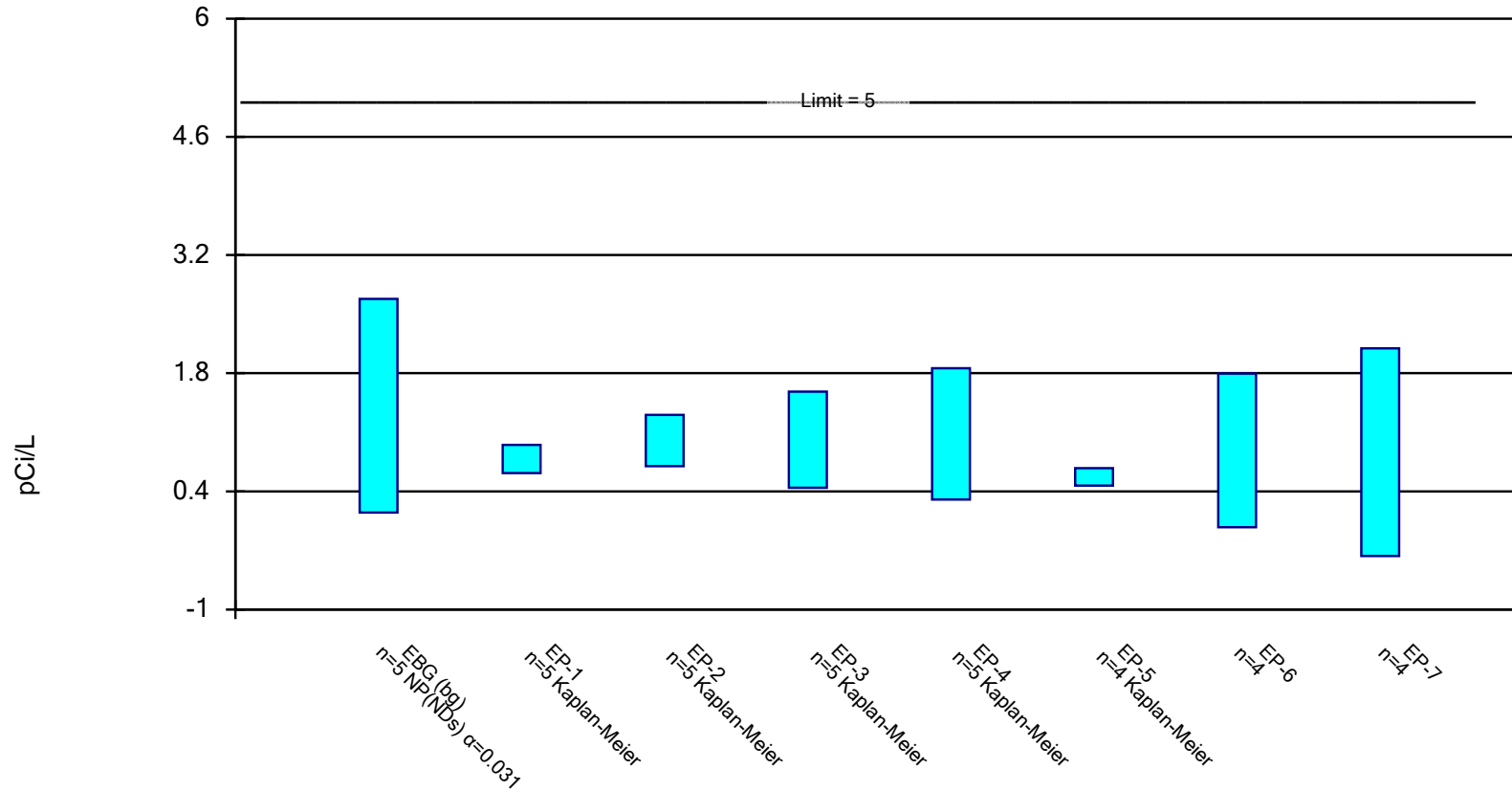
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/17/2022 12:36 PM View: IEPA
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.

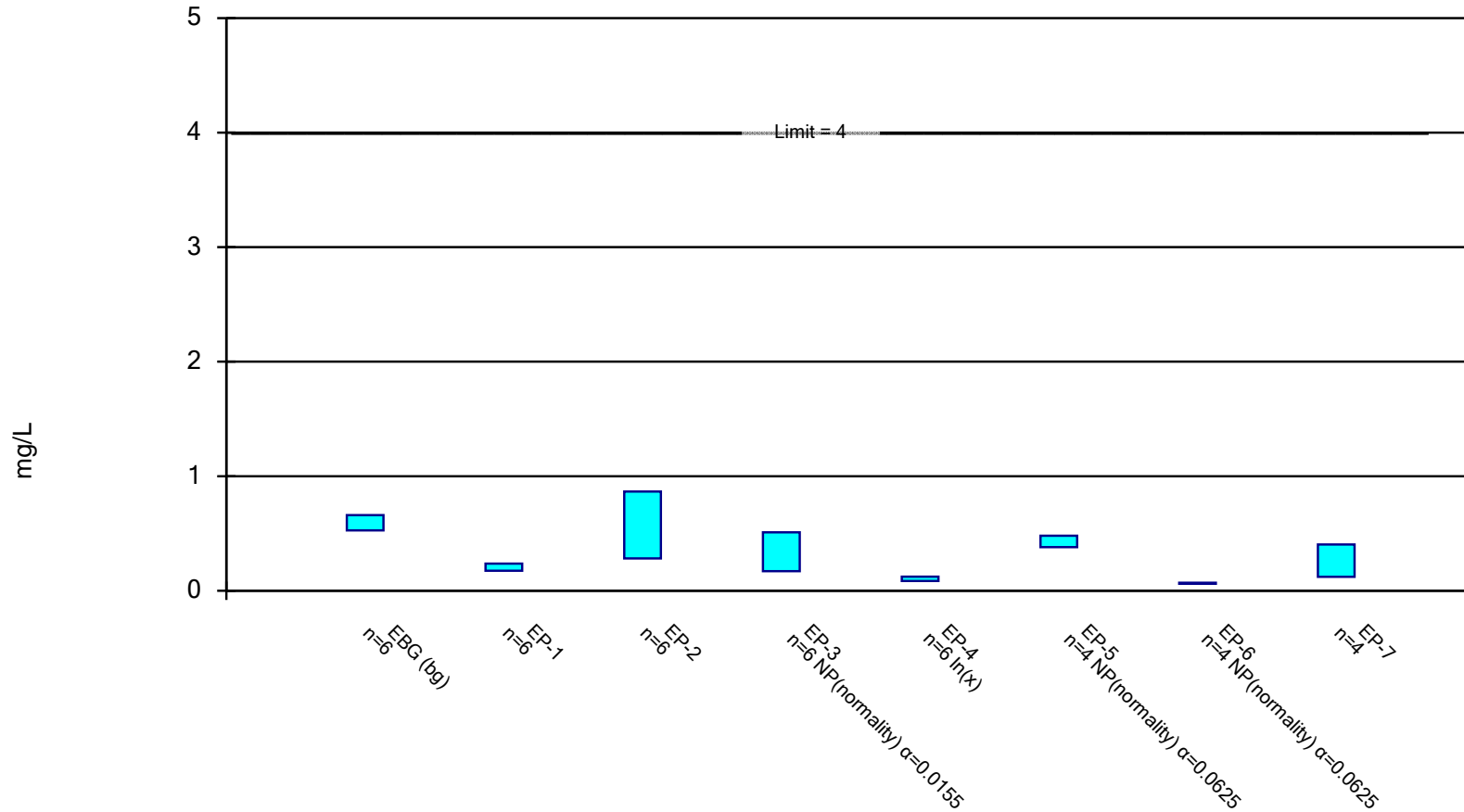


Constituent: Combined Radium Analysis Run 10/17/2022 12:36 PM View: IEPA

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.

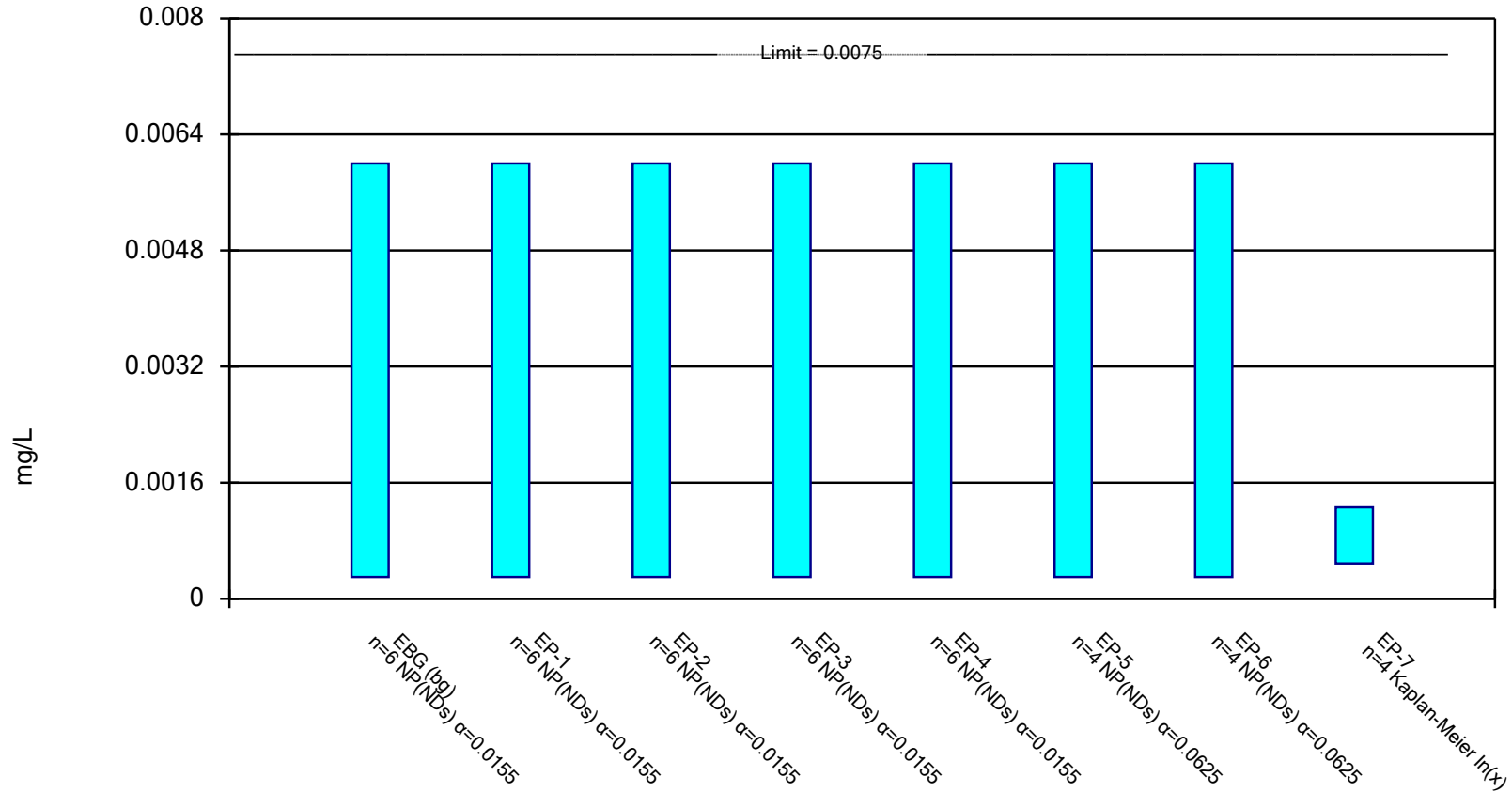


Constituent: Fluoride Analysis Run 10/17/2022 12:36 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

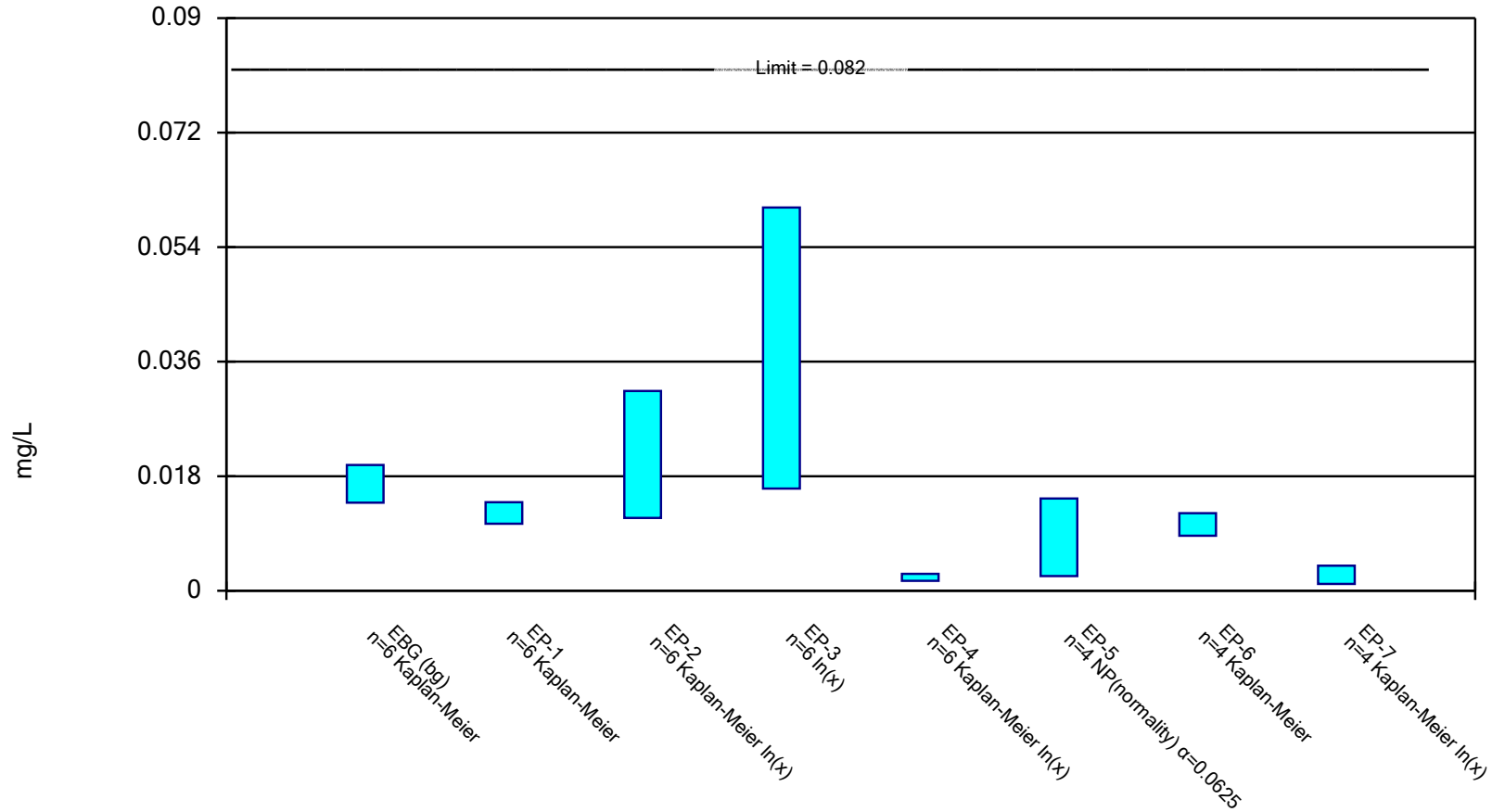
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 10/17/2022 12:36 PM View: IEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

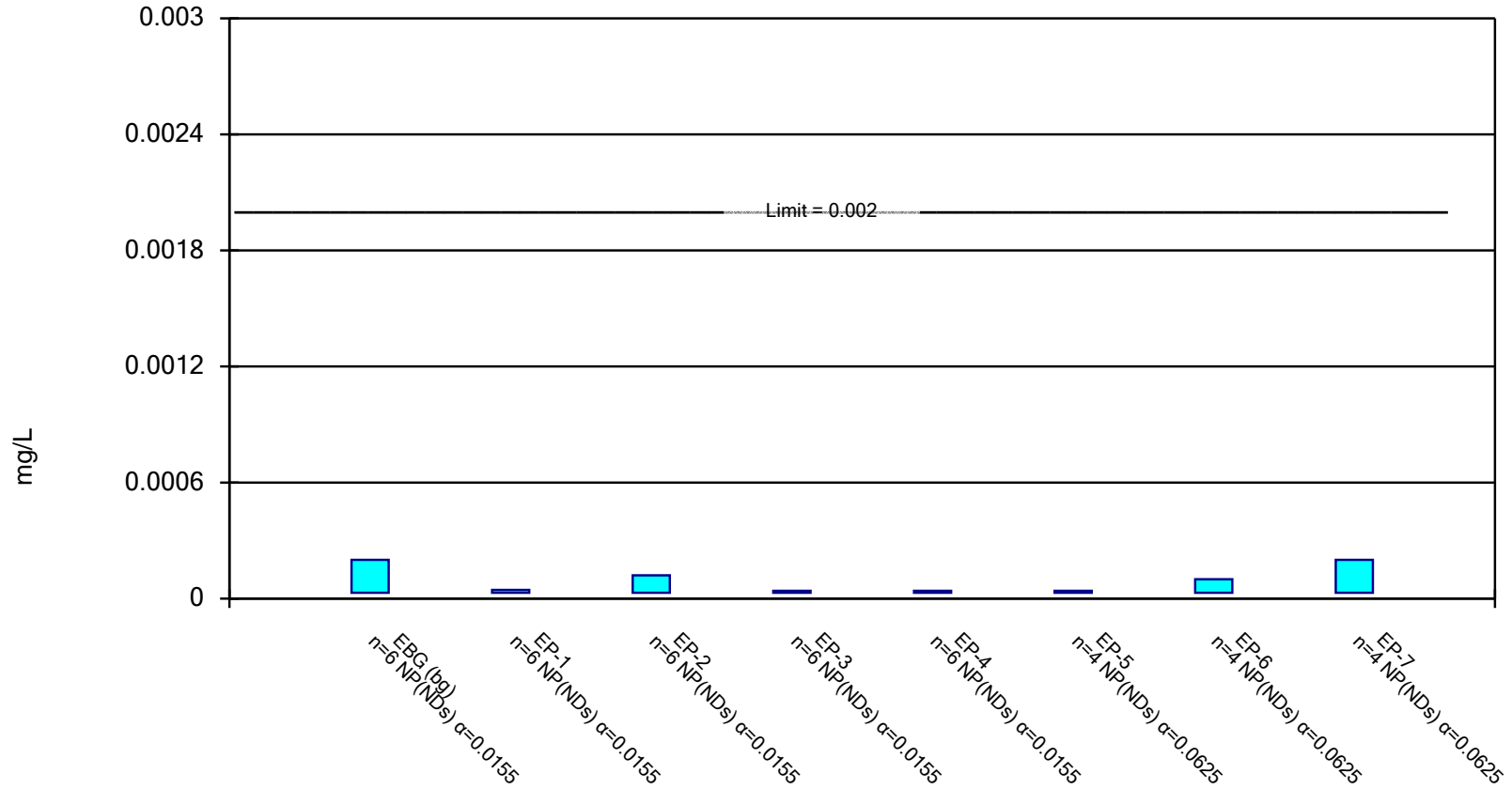
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/17/2022 12:36 PM View: IEPA
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

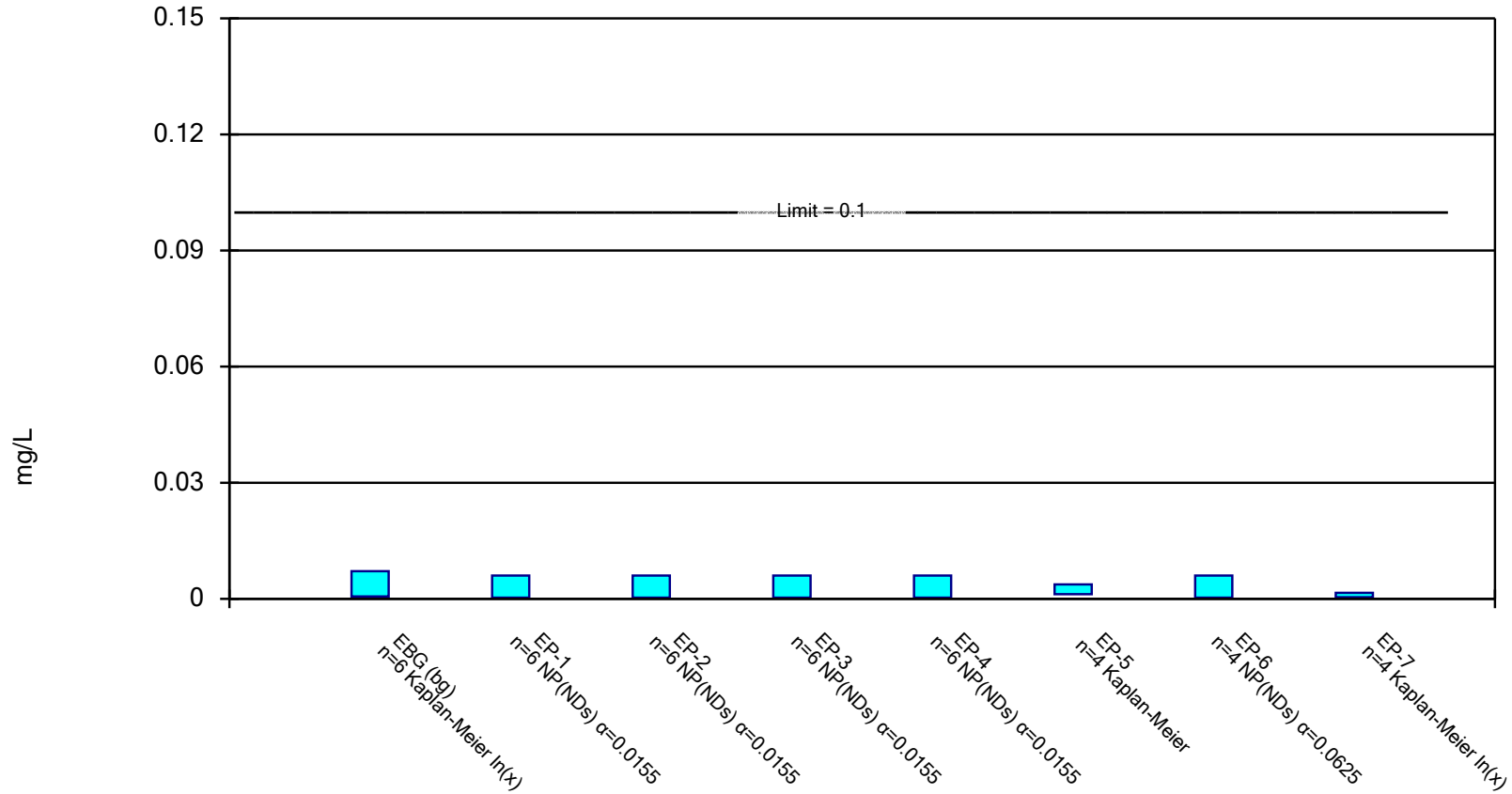


Constituent: Mercury Analysis Run 10/17/2022 12:36 PM View: IEPA

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.

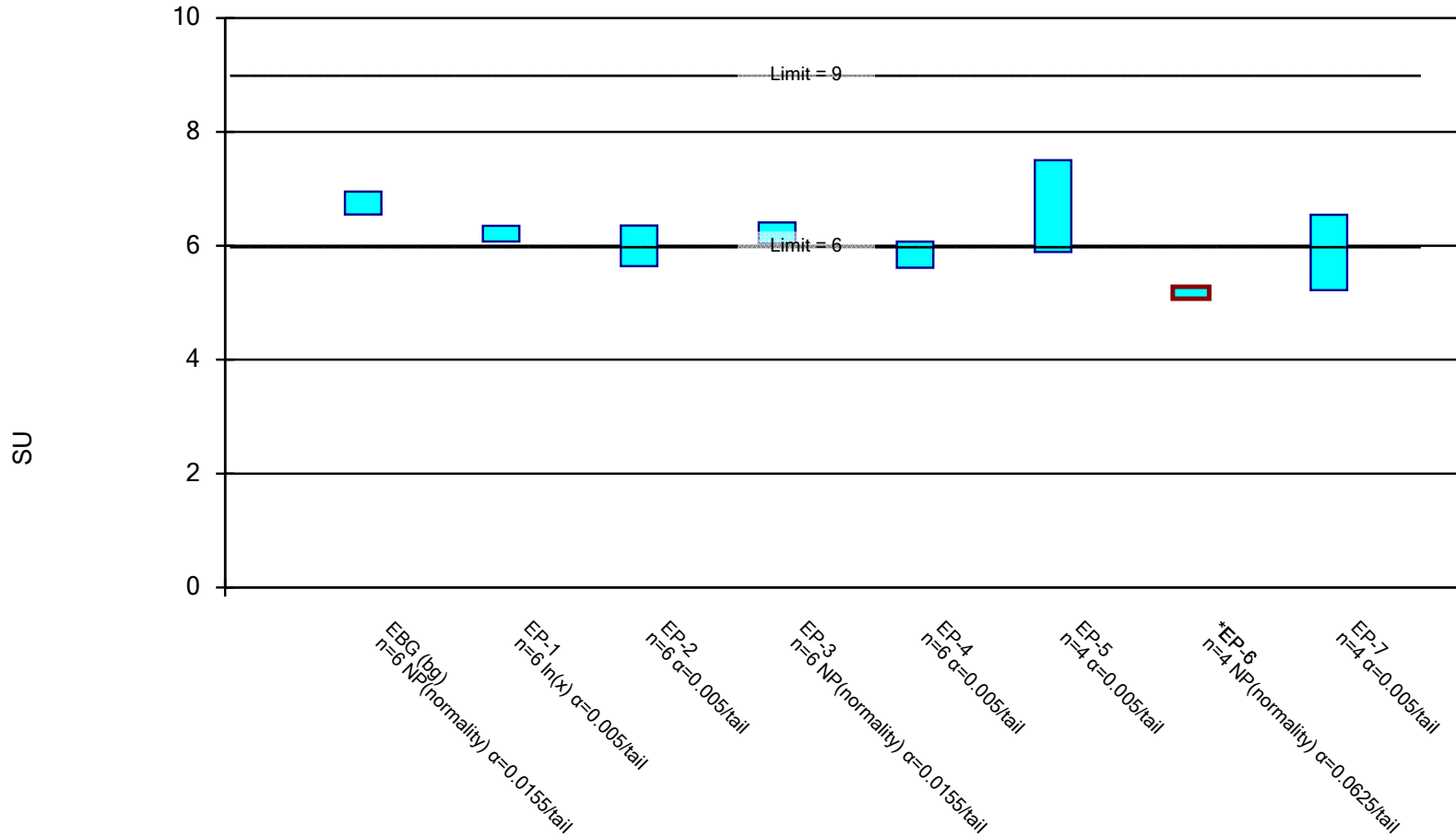


Constituent: Molybdenum Analysis Run 10/17/2022 12:36 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Parametric and Non-Parametric (NP) Confidence Interval

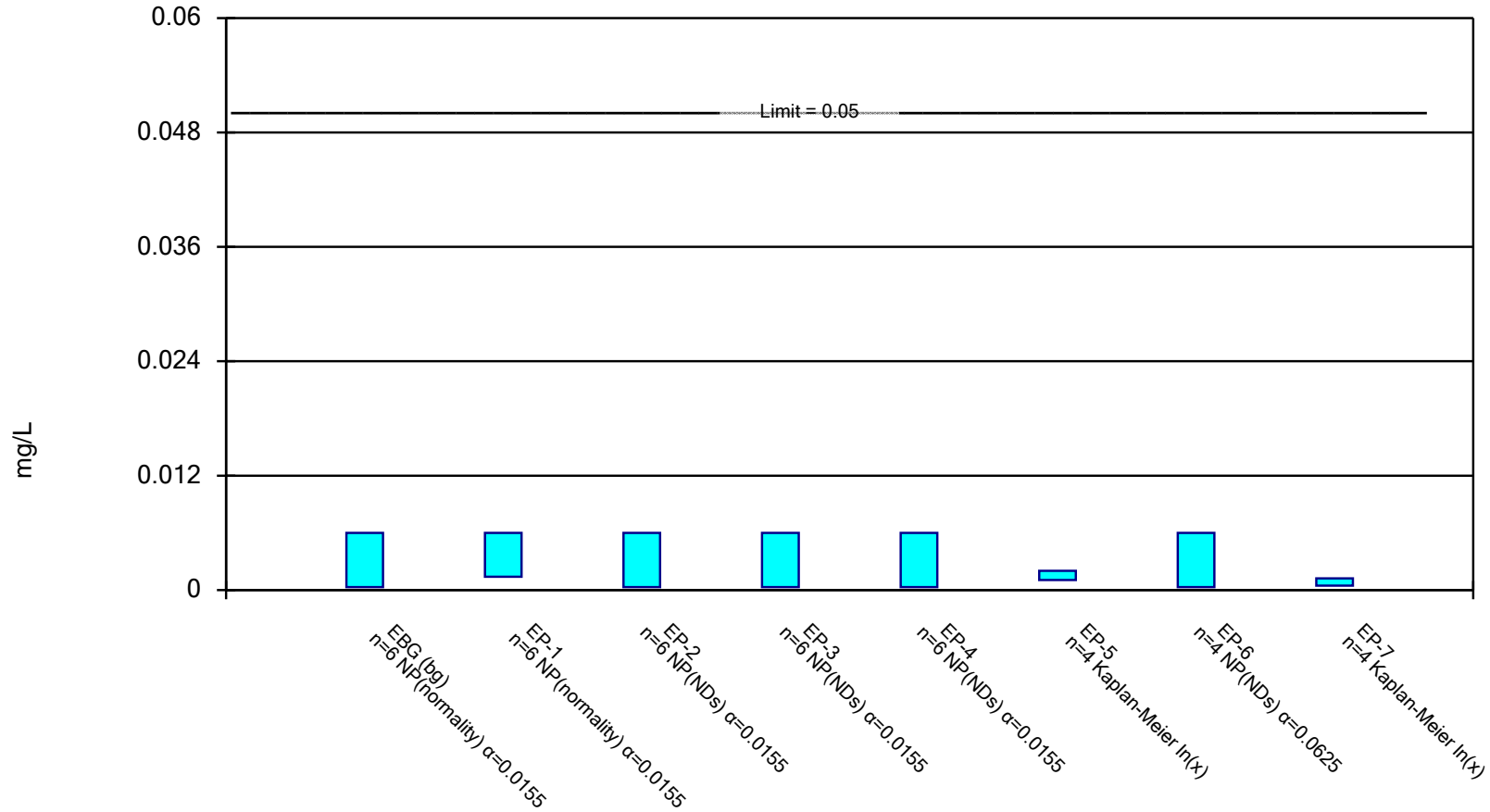
Compliance limit is exceeded.* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: pH Analysis Run 10/17/2022 12:37 PM View: IEPA
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.

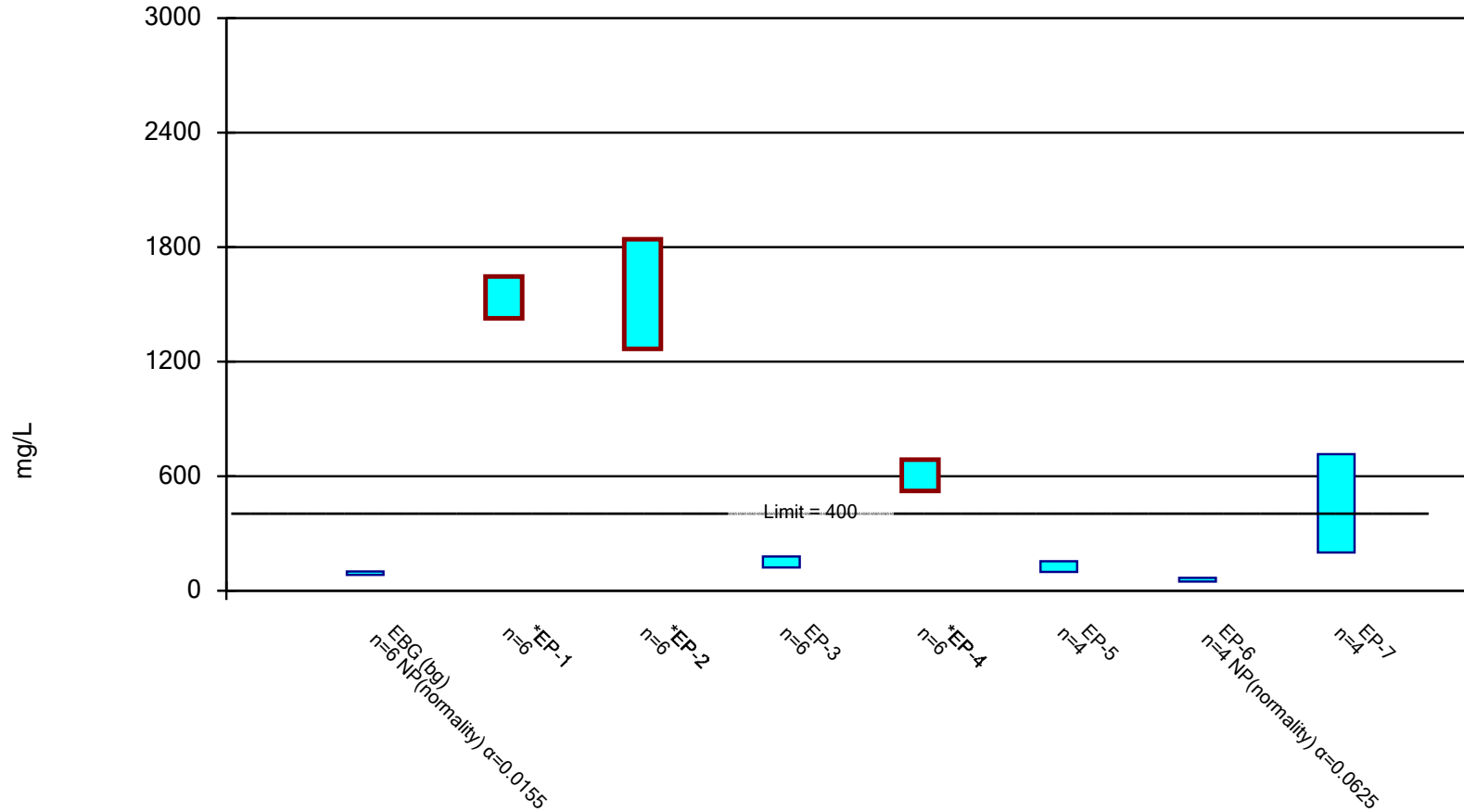


Constituent: Selenium Analysis Run 10/17/2022 12:37 PM View: IEPA

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.

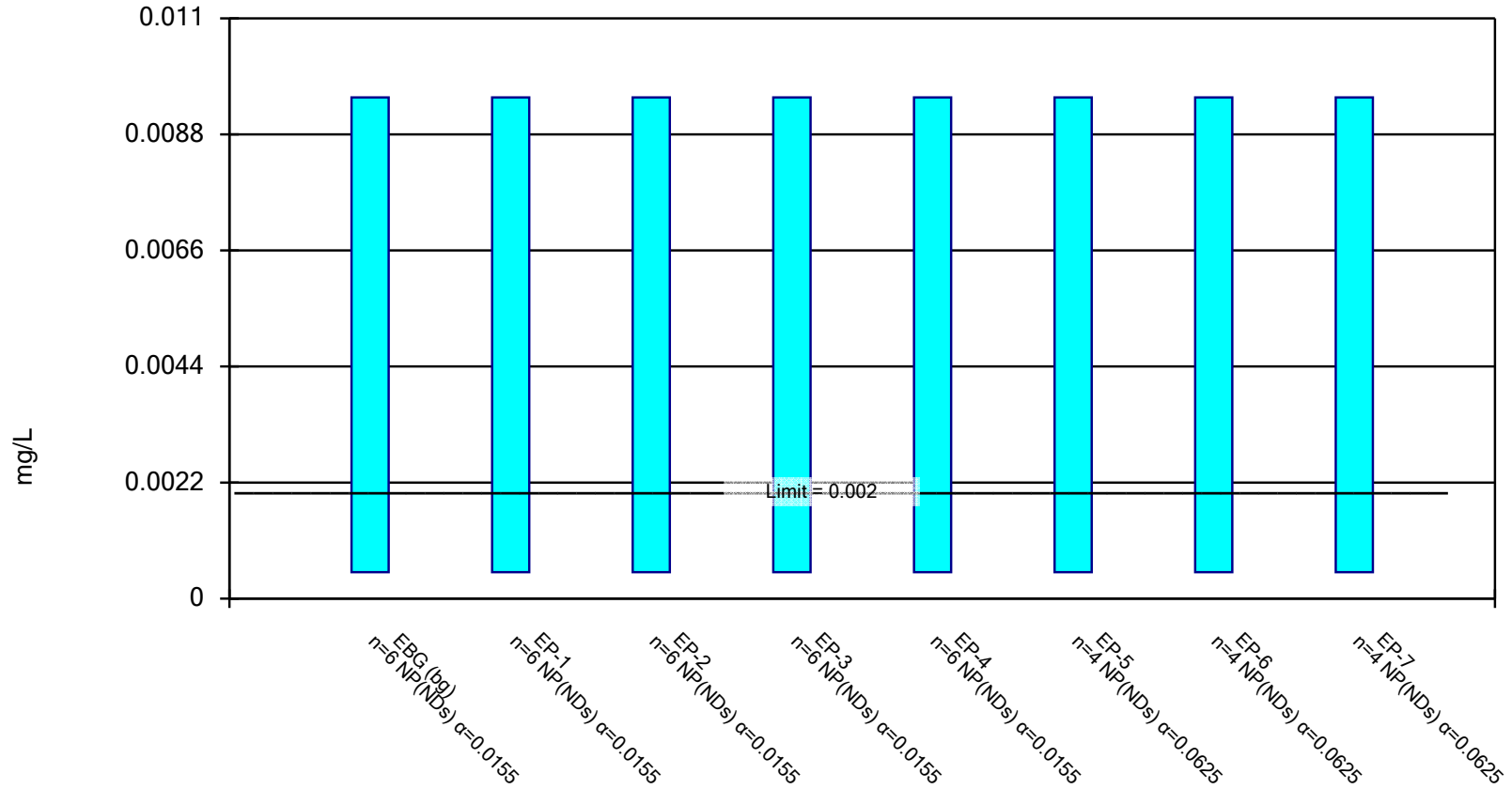


Constituent: Sulfate Analysis Run 10/17/2022 12:37 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

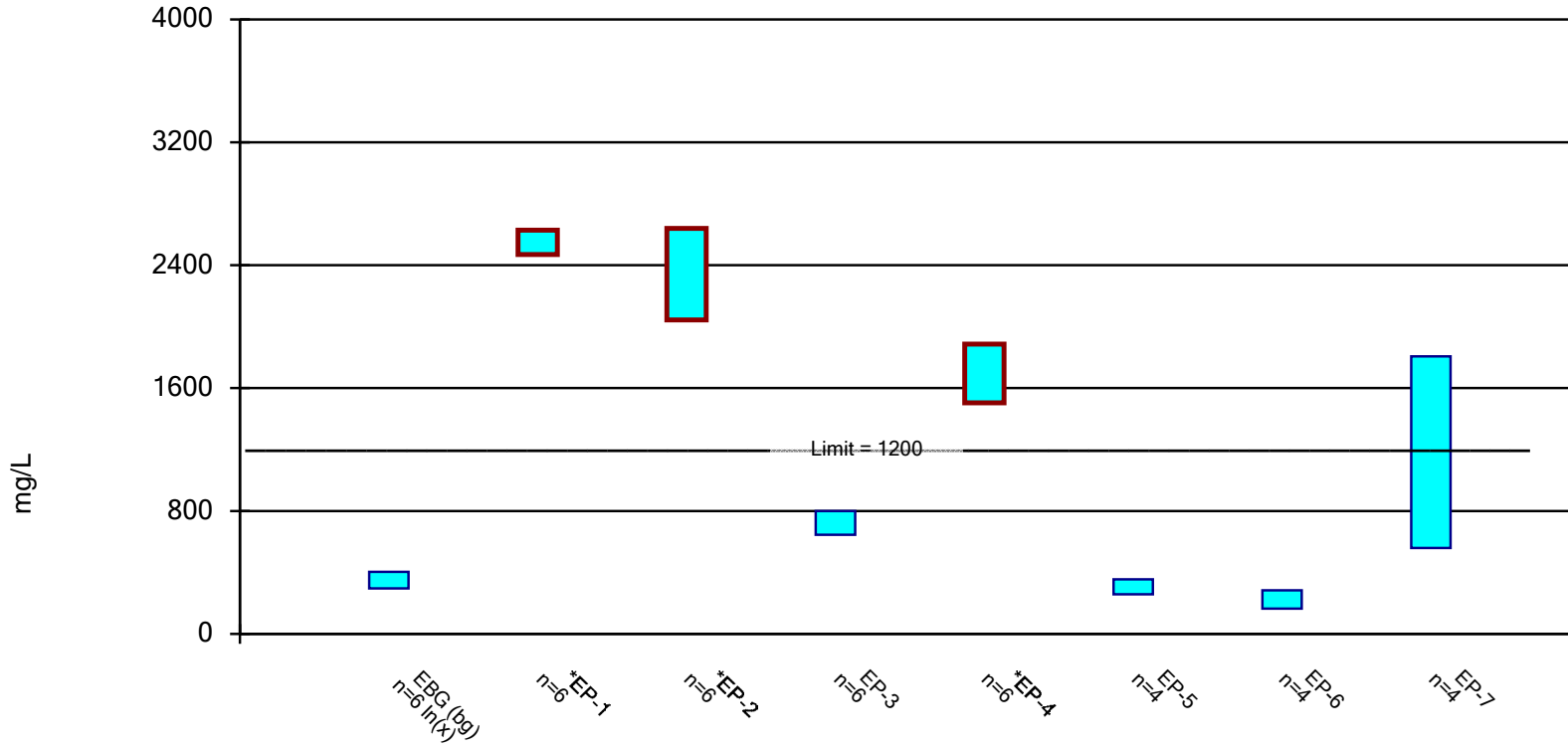


Constituent: Thallium Analysis Run 10/17/2022 12:37 PM View: IEPA

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: Total Dissolved Solids Analysis Run 10/17/2022 12:37 PM View: IEPA

Marion Power Plant Client: SIPC Data: SIPC Statistical Database