



**Southern Illinois  
Power Cooperative**

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January 31, 2024

Illinois Environmental Protection Agency  
DWPC - Permits MC#15

**Attn: Part 845 Coal Combustion Residuals Rule Submittal**  
1021 North Grand Avenue East  
Springfield, IL 62794-9276

**RE: SOUTHERN ILLINOIS POWER COOPERATIVE  
MARION POWER PLANT  
FORMER EMERY POND  
2023 ANNUAL CONSOLIDATED REPORT**

Dear Program Reviewer:

Consistent with the requirements of 35 Illinois Administrative Code (IAC) Part 845.550, enclosed is the 2023 Annual Consolidated Report for the former Emery Pond. The 2023 Annual Groundwater and Corrective Action Report (35 IAC 845.610(e)) is enclosed. Closure by removal of the former Emery Pond was completed on April 5, 2021, therefore, an Annual CCR Fugitive Dust Control Report (35 IAC 845.500(c)) and Annual Inspection Report (35 IAC 845.540(b)) are not required.

Should you have any questions or comments regarding this 2023 Annual Consolidated Report, do not hesitate to contact me via my email address [wwatson@sipower.com](mailto:wwatson@sipower.com).

Sincerely,

*Wendell Watson* *Jan 11/30/24*

Wendell Watson  
Director of Environmental Services  
Southern Illinois Power Cooperative

cc: Mark Haney – WSP USA Inc.  
Danielle Sylvia Cofelice – WSP USA Inc.



*SIPC is an equal opportunity provider and employer.*



# 2023 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:

**Southern Illinois Power Cooperative**

11543 Lake of Egypt Road  
Marion, Illinois 62959

Submitted by:

**WSP USA Inc.**

10 Al Paul Lane, Suite 103  
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GL21467997.002

January 31, 2024

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## EXECUTIVE SUMMARY

This 2023 CCR Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Report) was prepared on behalf of Southern Illinois Power Cooperative (SIPC) for the Marion Power Plant former Emery Pond located in Marion, Illinois (Site). The former Emery Pond is subject to 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 31<sup>st</sup> of the following year.

This 2023 Annual Report documents the status of the CCR groundwater monitoring program for the former Emery Pond, summarizes key actions completed, identifies issues encountered, describes actions taken to resolve identified concerns, and proposes key activities for calendar year 2024. In accordance with 35 IAC §845.610(e)(4), the following provides an overview of the status of groundwater monitoring and corrective action for the former Emery Pond:

- 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.
- Continued operation of the perimeter drain and quarterly Corrective Action Monitoring was completed in 2023 as part of the groundwater remedy.
- 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 2023: 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, EP-4, and EP-7; chloride at EP-3, EP-4, and EP-7; cobalt at EP-2, EP-3, EP-4, and EP-7; pH at EP-6; sulfate at EP-1, EP-2, EP-3, EP-4, EP-5, and EP-7; and total dissolved solids at EP-1, EP-2, EP-3, EP-4, and EP-7.
- The following constituents were detected at SSLs above groundwater protection standards (GPS) in 2023: boron at EP-4; calcium at EP-1, EP-2, EP-4, and EP-7; chloride at EP-4 and EP-7; cobalt at EP-2, 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 2023: arsenic 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 2024 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 *2023 CCR Annual Groundwater Monitoring and Corrective Action Report* (2023 Annual Report) for the Marion Power Plant's (i.e., Facility's) former Emery Pond, 11543 Lake of Egypt Road, Marion, Williamson County, Illinois (Site, see Figure 1). The former Emery Pond was an on-site settling pond, approximately one (1) acre in size, closed via removal by April 5, 2021. The former Emery Pond is subject to the 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 31<sup>st</sup> of the following year.

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

In conformance with the applicable requirements of 35 IAC §845.610(e), the 2023 Annual Report:

- Documents the status of the groundwater monitoring and corrective action activities.
- Provides figures showing the former Emery Pond, monitoring well locations, and groundwater flow direction(s).
- Summarizes key 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 groundwater monitoring and corrective action activities anticipated for 2024.

### 1.1 Key Actions Completed - 2023

SIPC completed the following key actions relative to 35 IAC Part 845 CCR Rule groundwater monitoring and corrective action regulations at the Site in 2023:

- Preparation of the *2022 CCR Annual Groundwater Monitoring and Corrective Action Report* in January 2023 (2022 Annual Report, 35 IAC §845.610(e)).
- Evaluation and notification in February 2023 of detections above background and Groundwater Protection Standards (GPS) from the seventh CAM event (35 IAC §845.610(b)(3)(D)).
- Performance of the eighth CAM event in March 2023 (35 IAC §845.650(b)(1)).
- Evaluation and notification in May 2023 of detections above background and GPS from the eighth CAM event (35 IAC §845.610(b)(3)(D)).
- Performance of the eighth CAM resampling event in May 2023 (35 IAC §845.650(b)(1)).

- Evaluation and notification in June 2023 of detections above background and GPS from the eighth CAM resampling event (35 IAC §845.610(b)(3)(D)).
- Performance of the ninth CAM event in June 2023 (35 IAC §845.650(b)(1)).
- Evaluation and notification in July 2023 of detections above background and GPS from the ninth CAM event (35 IAC §845.610(b)(3)(D)).
- Performance of the tenth CAM event in September 2023 (35 IAC §845.650(b)(1)).
- Evaluation and notification in November 2023 of detections above background and GPS from the tenth CAM event (35 IAC §845.610(b)(3)(D)).
- Performance of the eleventh CAM event in December 2023 (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 ft 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 ft 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 2023 static water levels are summarized in Table 2. Consistent with the requirements of the CCR Rule, the rate and direction of groundwater flow within the uppermost aquifer was determined after each sampling event. The potentiometric surface maps, Figures 3 through 14, were prepared using static water level data obtained monthly in 2023. Groundwater in the vicinity of the former Emery Pond generally flows east/northeast toward the Lake of Egypt. The average groundwater elevation varies between approximately 500 to 520 feet above mean sea level (ft amsl) with an average depth to groundwater of less than 17 ft.

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

$$i = h_L / L$$

Where:  $i$  = hydraulic gradient (unitless)  
 $h_L$  = head loss (elevation difference in feet)  
 $L$  = length (horizontal distance in feet)

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

$$V = ki / \theta$$

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

Notes: feet/min = feet per minute

h<sub>L</sub> = 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 2023. A summary of the sampling events is presented below.

Monitoring Event	Sample Parameters	Sample Dates
8 <sup>th</sup> Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	March 15 - 16, 2023
8 <sup>th</sup> Corrective Action Monitoring Resample Event <sup>1</sup>	35 IAC §845.600(a)(1) Constituents except Radium	May 24, 2023
9 <sup>th</sup> Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	June 6 - 7, 2023
10 <sup>th</sup> Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	September 18 - 21, 2023
11 <sup>th</sup> Corrective Action Monitoring Event	35 IAC §845.600(a)(1) Constituents	December 11 - 12, 2023

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

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

### 4.1 Problems Encountered and Follow-Up Actions for Resolution

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

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

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

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

## 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 flue-gas desulfurization (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 CAM. In accordance with the Site’s Closure Plan (Hanson, revised April 15, 2021) and the GMP Addendum #1 (Golder, 2021a), CAM is completed on a quarterly basis. The first two quarterly CAM events were completed in May and August 2021 and the results were provided in the 2021 Annual Report (Golder, 2022). The third through sixth CAM sampling events were completed in December 2021, March, May, and September 2022 and the results were provided in the 2022 Annual Report (WSP, 2023). The seventh through eleventh CAM sampling events were completed in December 2022 and March/May, June, September, and

December 2023. The results from the December 2022 and the March/May, June and September 2023 sampling events are discussed in Sections 6.1 through 6.5, respectively, and presented in Table 3. The corresponding analytical laboratory reports are provided in Appendix B. The 2023 Data Usability Summary Report is provided in Appendix C. The results from the December 2023 sampling event will be included in the 2024 Annual Report.

## 6.0 STATISTICAL EVALUATION

The former Emery Pond is currently in CAM. After four quarterly CAM groundwater sampling events were completed, the groundwater sampling results were statistically evaluated to determine statistically significant detections above background, statistically significant levels (SSLs) above applicable 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 seventh through tenth CAM events are provided in Appendix D.

### 6.1 Seventh Corrective Action Monitoring Event Statistical Analysis

The seventh CAM event (December 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 GPS are shown on Figure 15.

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		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 seventh CAM event (December 2022) data was 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 for arsenic, pH, and thallium at EP-4. 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 Eighth Corrective Action Monitoring Event Statistical Analysis

The eighth CAM event (March 2023) and eighth CAM resample event (May 2023) data were compared to facility background concentrations and GPS established by WSP in 2021, which are summarized in Table 4. As described in Section 4.1 above, due to field oversight, incomplete purging and stabilization of monitoring wells resulting in samples collected from EP-3, EP-4, and EP-7 with elevated turbidity. Review of laboratory data from the resampling effort confirmed that the March 2023 data were anomalous. The results from eighth CAM event (March 2023) are included in Table 3, however, the results from monitoring wells EP-1, EP-2, EP-3, EP-4, EP-5, and EP-7 were removed from the statistical database as outliers. This data is flagged with an "O" qualifier in Table 3. 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	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		X

Constituent	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7
Total Dissolved Solids	X	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 a decrease relative to the lower limit.

No new SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

### 6.3 Ninth Corrective Action Monitoring Event Statistical Analysis

The ninth CAM event (June 2023) 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	EP-5	EP-6	EP-7
Arsenic			X	X			X
Boron	X	X		X			X
Calcium	X	X		X			X
Chloride			X	X			X
Cobalt		X	X	X			X
pH						X*	
Sulfate	X	X	X	X	X		X

Constituent	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7
Total Dissolved Solids	X	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			X
Chloride				X			
Cobalt		X	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.

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 Tenth Corrective Action Monitoring Event Statistical Analysis

The tenth CAM event (September 2023) 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			X
Chloride			X	X			X
Cobalt		X	X	X			X
pH						X*	
Sulfate	X	X	X	X	X		X



Constituent	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7
Total Dissolved Solids	X	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			X
Chloride				X			X
Cobalt		X	X	X			X
pH				X*		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 tenth CAM event data (September 2023) was evaluated for SSDs and pH was identified as an SSL at EP-4 and therefore is no longer an SSD. No new SSDs were identified. The former Emery Pond has completed closure by removal of all CCR material and is in Corrective Action Monitoring, therefore, no actions beyond reporting these exceedances in this Annual Report are required.

## 6.5 Eleventh Corrective Action Monitoring Event Statistical Evaluation

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

## 7.0 KEY ACTIVITIES PROJECTED FOR 2024

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

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

## 8.0 REFERENCES

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- WSP USA Inc, formerly Golder Associates (2023), "2022 Annual Groundwater Monitoring and Corrective Action Report, Marion Power Plant – Emery Pond, Southern Illinois Power Cooperative", January 31, 2023.

# TABLES

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

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

**Notes:**

ft-msl = Feet above mean sea level

ft-btoc = Feet below top of casing

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

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

GMZ = Groundwater Management Zone

Prepared by: DPJ  
 Checked by: SLG  
 Reviewed by: MAH

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

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

Notes:

- 1.) MSL = mean sea level.
- 2.) DTW = Depth to Water

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

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

Notes:  
 1.) MSL = mean sea level.  
 2.) DTW = Depth to Water

**Created by:** CLS  
**Checked by:** CCC



**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
	Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
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
Calcium	mg/L	23	10	30	23	32	37	35	35	14	15	13	15.2	12	13	15
Chloride	mg/L	55	11	84	68	79	27	86	82	12	16	12	18	7.2	12	13
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
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
Sulfate	mg/L	64	54	42	57	50	61	45	44	63	72	75	77	87	81	78
Total Dissolved Solids	mg/L	480	400	440	470	280	420	380	470	300	360	370	470	280	500	320
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	
Arsenic	mg/L	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.002		<0.002		0.0011	
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	
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	
Cadmium	mg/L	<0.0001	<0.00075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015		<0.000018		<0.00002	
Chromium	mg/L	0.0062	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0026	<0.00014		0.0042	
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	
Lead	mg/L	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0042	<0.00016		<0.0033	
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	
Mercury	mg/L		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.000093		<0.0001		<0.00019	
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		<0.000019	
Radium 226	pCi/L	0.878	<0.223	0.805	<0.262	<0.245	0.43	0.28	0.77		0.933	0.28	0.703		0.468	
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	
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	
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	
Thallium	mg/L	<0.0007	<0.004	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.01	<0.00015		<0.004	
Turbidity	NTU															

Notes:  
 J = Indicates the result is estimated  
 < = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided. For radium the result reported by the laboratory is provided.  
 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier



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

Well ID	Sample Date	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EBG	EP-1	EP-1	EP-1	EP-1	EP-1
	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	Corrective Action Monitoring	Background	Background	Background	Background	Background
ANALYTE	Unit															
Boron	mg/L	<0.009	0.010 J	0.013 J	0.0225	0.019 J	0.012 J	0.014 J	0.011 J	<0.0200	0.016 J	0.13	0.21	0.28	0.26	0.32
Calcium	mg/L	13.3	12.1	11.6	11.9	13.1	10.9	10.4	12	12.1	12.4	220	280	310	310	310
Chloride	mg/L	22	17	12	15	18	10	9	12	12	11	54	54	48	50	50
Fluoride	mg/L	0.6	0.58	0.67	0.58	0.52	0.61	0.68	0.58	0.57	0.63	<0.029	<0.029	<0.029	<0.029	<0.029
pH	SU	6.61	6.58	6.95	6.78	6.55	6.6	Lab Error	6.83	6.4	6.69	6.94	6.89	6.55	6.52	6.64
Sulfate	mg/L	85	83	84	83	90	101	96	85	82	81	820	910	850	850	440
Total Dissolved Solids	mg/L	344	340	308	428	344	322	340 H	314	336	326	2000	2300	2300	2300	2200
Antimony	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010	<0.0010	<0.0010	0.00043 J	<0.0002	<0.0026	0.00057 J	0.00095 J
Arsenic	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	0.0005 J	<0.0010	<0.0010	0.0004 J	0.0004 J	<0.0010	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
Barium	mg/L	0.0505	0.0469	0.0475	0.054	0.0506	0.0491	0.0434	0.0508	0.0441	0.0426	0.045	0.04	0.041	0.032	0.033
Beryllium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0006 J	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002
Cadmium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0001	0.006	<0.0015	<0.0015	<0.0015
Chromium	mg/L	<0.0015	0.0011 J	<0.0300	0.0009 J	0.0007 J	<0.0015	<0.0015	0.0016	<0.0015	0.0008 J	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031
Cobalt	mg/L	<0.0001	0.0003 J	<0.0200	0.0005 J	0.0003 J	0.0002 J	0.0002 J	0.003 J	0.0008 J	<0.0010	0.0017 J	0.00079 J	<0.0018	0.00081 J	0.00057 J
Lead	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026
Lithium	mg/L	0.0207	0.0164	<0.0600	0.0162	0.0166	0.0141	0.0166	0.0191	0.0241	0.0185	0.024 J	0.028 J	<0.0042	0.032 J	0.029 J
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00007 J		<0.00019	<0.00019	<0.00019	<0.00019
Molybdenum	mg/L	0.0145	0.0014 J	<0.0300	0.0014 J	0.0021	0.0012 J	0.002	0.0019	0.0016	0.0052	0.0028 J	0.0016 J	<0.000095	0.00077 J	0.0018 J
Radium 226	pCi/L		<0.21	0.104 J	0.215	<0.0495	<0.0129	<0.0672	0.180 J	0.444	<-0.04	0.603	0.341	0.37	0.313	<0.139
Radium 228	pCi/L		1.02	<0.194	1.18	2.63	0.315 J	<-0.0292	0.968	1.09 J	0.12	<0.0552	0.55	<0.609	0.496	<0.0387
Radium, 226/228 Combined	pCi/L		<1.23	<0.297	1.4	2.68	<0.328	<0.0672	1.15	1.53	0.12	0.603	0.891	0.37	0.809	<0.139
Selenium	mg/L	<0.0010	<0.0010	<0.0200	0.0007 J	0.0007 J	0.0006 J	<0.0010	0.0009 J	0.0011	0.0012	0.0012 J	0.0014 J	<0.0028	0.005 J	0.0025 J
Thallium	mg/L	<0.0020	0.0054	<0.0400	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0012 J	<0.0020	<0.0007	<0.004	<0.0081	<0.01	<0.010
Turbidity	NTU	9.95	28.65	13	16	15	3.5	Lab Error	<1.0	1.8	11					

Notes:  
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 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier





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

Well ID	Sample Date	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1	EP-1
	Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
ANALYTE	Unit																
Boron	mg/L	0.21	0.23	0.17	0.38	0.92	0.75	1.12	1.1	0.92	1	0.816	0.931	1.07	0.914	0.991	1.16
Calcium	mg/L	270	250	240	330	410	410	444	540	470	460	478	483	506	474	508	476
Chloride	mg/L	51	48	48	60	63	70	55	52	34	39	44	48	46	44	38	35
Fluoride	mg/L	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06	<0.06	<0.06	<0.5	<0.2	0.22	0.19	0.24	0.19	0.18	0.21
pH	SU	6.57	6.82	6.79	6.25	6.36	6.33	6.2	7.39	6.15	6.29	6.18	6.12	6.37	6.19	6.2	6.21
Sulfate	mg/L	540	520	440	510	1000	1600	1500	1700	1400	1400	1450	1640	1480	1600	1470	1570
Total Dissolved Solids	mg/L	2200	2100	2100	2400	2700	2800	550	2700	2700	2500	2500	2520	2510	2650	2530	2600
Antimony	mg/L	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016		<0.0026		<0.0010	0.0005 J	<0.0200	<0.0010	<0.0010	<0.0010
Arsenic	mg/L	<0.0014	<0.0014	<0.0014		<0.002		<0.002		<0.0014		<0.0010	0.0005 J	<0.0200	0.0004 J	<0.0010	0.0004 J
Barium	mg/L	0.029	0.028	0.026		0.023		<0.00011		0.019		0.0216	0.02	0.0193	0.0171	0.017	0.017
Beryllium	mg/L	<0.00055	<0.0002	<0.00055		<0.00015	<0.00055	<0.00015		<0.00055		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010
Cadmium	mg/L	<0.0015	<0.0015	<0.0015		<0.0015		<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	0.0002 J	<0.0010	<0.0010
Chromium	mg/L	<0.0031	<0.0031	<0.0031		<0.0031	<0.0026	<0.00014		<0.0011		<0.0020	0.0019	<0.0300	<0.0015	<0.0015	<0.0015
Cobalt	mg/L	<0.00018	0.00074 J	<0.00018		<0.00063	0.00056 J	<0.00063		<0.00018		0.0012	0.0010 J	<0.0200	<0.0010	0.0002 J	<0.0010
Lead	mg/L	<0.0026	<0.0026	<0.0026		<0.0026	<0.0042	<0.00016		<0.0033		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010
Lithium	mg/L	<0.1	0.024 J	<0.0042		<0.0042		<0.04		<0.0042		0.0141	0.0127	<0.0600	0.012	0.0103	0.012
Mercury	mg/L	<0.00019	<0.00019	<0.0002		<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Molybdenum	mg/L	<0.00095	0.0019 J	<0.00095		<0.00014		<0.00028		<0.000095		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015
Radium 226	pCi/L	0.16	0.38	0.24		0.453		0.619		0.42		<0.04	0.501	0.260 J	<0.0628	0.265 J	0.265 J
Radium 228	pCi/L	<0.27	1.04	1.15		0.992		0.0905		0.405		1.78	<0.255	0.439 J	0.888	<-0.449	<-0.449
Radium, 226/228 Combined	pCi/L	0.16	1.42	1.39		1.445		0.71		0.825		<1.82	0.756 J	0.699	0.95	<0.265	<0.265
Selenium	mg/L	<0.0028	0.0011 J	<0.0028		<0.00033	<0.0028	<0.00033		<0.0028		0.0015	0.0014	<0.0200	0.0017	0.0026	0.0015
Thallium	mg/L	<0.010	<0.010	<0.010		<0.0081	<0.01	<0.00015		<0.004		<0.0020	0.0042	<0.0400	<0.0200	<0.0020	<0.0020
Turbidity	NTU											49.8	22.65	13	5	<1.0	<1.0

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 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
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**Table 3: Analytical Data**  
**Former Emery Pond**  
**Southern Illinois Power Cooperative Marion Power Plant**  
**Marion, Illinois**

Well ID	Sample Date	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
	Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
ANALYTE	Unit															
Boron	mg/L	1.06	0.968 O	0.986	0.945	1.29	0.22	0.19	0.2	0.23	0.29	0.26	0.31	0.23	0.24	0.2
Calcium	mg/L	523	523 O	505	499	548	190	170	200	200	470	200	190	180	230	190
Chloride	mg/L	38	32 O	30	30	28	42	39	36	37	36	36	36	36	30	35
Fluoride	mg/L	0.24	0.2 O	0.22	0.21	0.29	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06
pH	SU	Lab Error	6.31 O	6.19	6.31	6.47	6.18	6.39	6.31	6.1	5.75	5.86	5.88	6.33	6.27	6.28
Sulfate	mg/L	1580	1490 O	1520	1430	1430	860	660	780	780	470	430	770	340	420	740
Total Dissolved Solids	mg/L	2460 H	2350 O	2010	2370	2460	1800	1800	1900	1800	1900	1800	1800	1800	1700	1800
Antimony	mg/L	<0.0010 B	<0.0010 O	<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
Arsenic	mg/L	<0.0010	0.0008 JO	0.0007 J	0.0009 J	0.006 J	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.002
Barium	mg/L	0.0158	0.0197 O	0.0163	0.0154	0.0196	0.039	0.035	0.038	0.03	0.029	0.035	0.025	0.025	0.025	0.018
Beryllium	mg/L	0.0006 J	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055		<0.00015
Cadmium	mg/L	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0015	<0.0001	<0.00075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015
Chromium	mg/L	0.0026	<0.0015 O	<0.0015	<0.0015	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	
Cobalt	mg/L	0.0004 J	0.0002 JO	0.0003 J	<0.0010	0.003 J	0.052	0.029	0.023	0.016	0.0087	<0.00018	0.00086 J	<0.00018		<0.00063
Lead	mg/L	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0008	<0.0013	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026
Lithium	mg/L	0.0139	0.0133 O	0.0111	0.0136	0.0099	0.018 J	0.015 J	<0.0042	0.020 J	0.025 J	<0.1	0.021 J	<0.0042		<0.0042
Mercury	mg/L	<0.00020	<0.00020 O	<0.00020	<0.00020	0.00007 J		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002	<0.000093
Molybdenum	mg/L	<0.0015	<0.0015 O	<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
Radium 226	pCi/L	0.144 J	0.227 J		<0.0926	0.13	<0.187	0.338	<0.177	0.197	1.9	0.08	0.14	0.08	1.9	0
Radium 228	pCi/L	0.326 J	0.726		<-0.248	1.28	0.853	<0.0622	<0.126	<0.127	<0.458	0.4	1.35	0.64		0.443
Radium, 226/228 Combined	pCi/L	0.470	0.953		<0.0926	1.41	0.853	0.338	<0.177	0.197	1.9	0.48	1.49	0.72		0.443
Selenium	mg/L	0.0021	0.0051 O	0.0073	0.0082	0.0025	0.0038 J	0.0027 J	<0.0028	0.0074	0.0061	0.0054	0.0046 J	<0.0028		<0.00033
Thallium	mg/L	<0.0020	<0.0020 O	<0.0020	<0.0020	<0.0020	<0.0007	<0.004	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081
Turbidity	NTU	Lab Error	<1.0 O	1.6	<1.0	6.1										

Notes:  
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 mg/L = milligrams per liter  
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 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
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**Table 3: Analytical Data**  
**Former Emery Pond**  
**Southern Illinois Power Cooperative Marion Power Plant**  
**Marion, Illinois**

Well ID	Sample Date	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2	EP-2
	Sample Purpose	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-Resample	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE	Unit																
Boron	mg/L	0.37	0.274	0.56	0.47	0.49 J	0.544	0.499	0.33	0.508	0.48	0.408	0.276	0.359 O	0.418	0.372	
Calcium	mg/L	280	236	430	360	340	372	363	299	406	347	349	306	328 O	318	340	
Chloride	mg/L	25	29	13	19	28	29	34	43	30	33	44	52	29 O	31	35	
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.5	0.28	0.62	0.4	0.36	0.69	0.92	0.47	0.39	1.47 O	1.7	1.57	
pH	SU	6.62	6.18	6.46	5.81	6.37	5.74	5.91	6.32	5.86	5.97	6.19	Lab Error	5.96 O	5.48	6.3	
Sulfate	mg/L	1100	1100	1100	1200	1300	1370	1590	1250	1630	1700	1760	1350	1750 O	1690	1700	
Total Dissolved Solids	mg/L	1900	400	1900	2200	2300	2120	2370	2090	2480	2460	2580	2220 H	2480 O	2380	2570	
Antimony	mg/L		<0.0016		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0050 O	<0.0040	<0.0040	
Arsenic	mg/L		<0.002		<0.00027		<0.0010	0.0005 J	<0.0200	<0.0010	0.0013	0.0016	0.0006 J	<0.0010 O	0.0009 J	0.0023	
Barium	mg/L		<0.00011		0.019		0.0146	0.0198	0.0168	0.0151	0.0208	0.0205	0.017	0.022 O	0.0185	0.0189	
Beryllium	mg/L	<0.00055	<0.0016		<0.00011		0.0011	0.0003 J	<0.0200	0.0019	0.0056	<0.0010	<0.0010	0.0056 O	0.0082	0.0092	
Cadmium	mg/L		<0.000018		<0.00002		0.0015	0.0016	<0.0200	0.0014	0.0003 J	0.0003 J	0.0002 J	0.0009 JO	0.0002 J	<0.0010	
Chromium	mg/L	<0.0026	<0.00014		<0.0011		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	<0.0015	0.0018 O	0.0009 J	<0.0015	
Cobalt	mg/L	0.0007 J	<0.00063		<0.000037		0.0017	0.0052	<0.0200	0.0159	0.211	0.0325	0.0218	0.115 O	0.273	0.301	
Lead	mg/L	<0.0042	<0.00016		<0.0033		<0.0010	0.0007 J	<0.0200	<0.0010	<0.0020	<0.0010	<0.0010	<0.0050 O	<0.0040	<0.0040	
Lithium	mg/L		<0.04		<0.0042		0.0206	0.0148	<0.0600	0.0196	0.0381	0.0123	0.0129	0.0446 O	0.0518	0.0725	
Mercury	mg/L		<0.0001		<0.00019		<0.00020	<0.00020	0.00006 J	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020 O	<0.00020	<0.00020	
Molybdenum	mg/L		<0.00028		<0.000019		<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	0.0009 J	0.0011 J	<0.0015 O	<0.0015	<0.0015	
Radium 226	pCi/L		<0.149		0.0467		<0.02	0.228 J	<0.0315	<0.0325	0.365	<0.0328	<-0.0164			0.182 J	
Radium 228	pCi/L		0.553		0.176		2.51	<0.145	<0.426 J	0.933	0.899	<0.0435	2.0			<0.162	
Radium, 226/228 Combined	pCi/L		0.553		0.222		2.53	0.374 J	<0.458 J	0.965	1.26	<0.0763	2.0			<0.343	
Selenium	mg/L	0.0055	<0.00033		0.0031		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	0.0008 J	<0.0010 O	<0.0010	<0.0010	
Thallium	mg/L	<0.01	<0.00015		<0.004		<0.0020	0.009	<0.0400	<0.0020	<0.0040	<0.0020	<0.0020	<0.0100 O	<0.0080	<0.0080	
Turbidity	NTU						7.34	9.98	1.5	4.9	4.3	<1.0	Lab Error	4.48 O	<1.0	8.2	

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 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
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 NTU = Nephelometric Turbidity Unit  
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 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
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**Table 3: Analytical Data**  
**Former Emery Pond**  
**Southern Illinois Power Cooperative Marion Power Plant**  
**Marion, Illinois**

Well ID	Sample Date	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-3	EP-3	EP-3
	Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
<b>ANALYTE</b>	<b>Unit</b>															
Boron	mg/L	0.11	0.089	0.081	0.057	0.085	0.083	0.09	0.09	0.078	0.082	0.033	<0.08	<0.5	0.024	<0.25
Calcium	mg/L	34	29	45	93	30	32	34	33	34	38	94	76.3	40	80	66
Chloride	mg/L	100	120	140	220	66	110	120	110	110	140	240	150	140	330	230
Fluoride	mg/L	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.25	<0.06	<0.06	<3	<0.06	<0.5	0.35
pH	SU	5.99	5.96	6.03	6.08	6.01	5.96	6.02	6.13	6.1	6.1	6.11	5.98	6.31	6.01	6.24
Sulfate	mg/L	120	180	190	300	73	130	140	110	110	150	340	160	190	410	300
Total Dissolved Solids	mg/L	680	820	1400	560	570	720	630	1000	700	690	750	580	750	960	1500
Antimony	mg/L	0.00022 J	<0.0002	<0.0026	0.00026 J	0.00091 J	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016		<0.00052	
Arsenic	mg/L	<0.0014	0.0088	0.0076	0.0061	<0.0014	0.0093	0.0062	0.0069		<0.002		0.0057 J	0.0067	0.0059	<0.05
Barium	mg/L	0.072	0.059	0.059	0.061	0.065	0.064	0.057	0.058		0.064		<0.00011		0.041	
Beryllium	mg/L	<0.0002	<0.0002	<0.00055	<0.0002	<0.0002	<0.00055	<0.0002	<0.00055		<0.00015	0.00033 J	<0.00015		<0.00011	
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	
Chromium	mg/L	<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	0.11	0.12	0.091	0.037	0.11	0.12	0.1	0.11		0.088	0.044	0.032	0.087	0.047	0.031
Lead	mg/L	<0.0008	0.0056	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026		<0.0026	<0.0042	<0.00016		<0.0033	
Lithium	mg/L	<0.003	0.0095 J	<0.0042	0.12	0.012 J	<0.1	0.028 J	<0.0042		<0.0042		0.119		0.12	
Mercury	mg/L		<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.00019	<0.0002		<0.000093		<0.0001		<0.00019	
Molybdenum	mg/L	0.00037 J	0.00045 J	<0.000095	<0.0002	<0.0002	<0.00095	0.00047 J	<0.00095		<0.00014		<0.00028		<0.00019	
Radium 226	pCi/L	1.64	0.715	1	0.366	0.317	0.19	0.43	0.41		0.679		0.0839		0.513	
Radium 228	pCi/L	<0.438	1.92	<0.633	0.42	<0.397	0.77	2.42	0.77		0.717		0.477		0.304	
Radium, 226/228 Combined	pCi/L	1.64	2.635	1	0.786	0.317	0.96	2.88	1.18		1.396		0.561		0.817	
Selenium	mg/L	0.013	0.011	0.016	0.028	0.013	0.016	0.012	0.022		<0.00033	<0.0028	<0.00033		<0.00056	
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	
Turbidity	NTU															

Notes:  
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 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier



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

Well ID	Sample Date	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	
	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	Corrective Action Monitoring-Resample	Corrective Action Monitoring	Corrective Action Monitoring	Background	Background	Background	Background
ANALYTE	Unit																
Boron	mg/L	0.0556	0.075	0.0501	0.0702	0.067	0.0708	0.063	0.0615 O	0.069	0.0586	0.0611	14	23	14	11	
Calcium	mg/L	40.6	35.5	58.9	36.3	40.1	36.2	42.8	35.7 O	39.1	36.1	52.6	190	170	170	150	
Chloride	mg/L	127	129	183	145	157	147	157	127 O	152	141	144	460	290	380	430	
Fluoride	mg/L	0.22	0.17	0.51	0.2	0.19	0.21	0.23	0.16 O	0.19	0.19	0.25	<0.029	<0.029	<0.029	<0.029	
pH	SU	6.13	6.07	6.41	6.17	6.04	6.05	Lab Error	6.33 O	6.11	6.05	6.26	5.51	5.88	5.77	5.8	
Sulfate	mg/L	148	114	178	153	160	151	170	83 O	141	129	158	620	530	660	730	
Total Dissolved Solids	mg/L	692	672	812	762	728	670	650 H	535 O	735	735	770	2300	2300	2400	2000	
Antimony	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	0.0019 O	<0.0010	<0.0010	<0.0010	0.00028 J	<0.0002	<0.0026	0.00033 J	
Arsenic	mg/L	0.0075	0.0076	<0.0200	0.0068	0.0075	0.007	0.0083	0.0173 O	0.0063	0.009	0.0073	0.035	0.039	0.037	0.053	
Barium	mg/L	0.0819	0.101	0.084	0.0851	0.0846	0.0855	0.0836	0.168 O	0.0949	0.0973	0.0772	0.035	0.026	0.028	0.029	
Beryllium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0002	<0.0002	<0.00055	<0.0002	
Cadmium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0004 JO	<0.0010	<0.0010	<0.0010	<0.0001	0.0052	<0.0015	<0.0015	
Chromium	mg/L	<0.0015	<0.0015	<0.0300	0.0015 J	<0.0015	<0.0015	<0.0015	0.0067 O	<0.0015	0.0011 J	<0.0015	<0.0001	<0.0016	<0.0031	<0.0031	
Cobalt	mg/L	0.0912	0.0882	0.0472	0.0947	0.121	0.104	0.0846	0.0795 O	0.0939	0.124	0.0841	0.39	0.41	0.41	0.44	
Lead	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0028 O	<0.0010	<0.0010	<0.0010	0.009	0.013	0.011	0.017	
Lithium	mg/L	0.0314	0.0169	0.0736	0.0267	0.0321	0.027	0.0425	0.0053 O	0.0317	0.0311	0.0694	0.0044 J	0.0062 J	<0.0042	0.0047 J	
Mercury	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00018 JO	<0.00020	<0.00020	<0.00020		<0.00019	<0.00019	<0.00019	
Molybdenum	mg/L	<0.0015	<0.0015	<0.0300	<0.0015	<0.0015	<0.0015	0.0007 J	0.0014 JO	<0.0015	<0.0015	<0.0015	0.00092 J	0.0011 J	<0.000095	<0.0002	
Radium 226	pCi/L	<0.27	0.196 J	0.365	0.132 J	0.141 J	0.551	0.606		0.302	<0.12	1.1	1.17	<0.0457	0.18		
Radium 228	pCi/L		<0.5	0.768	0.765	1.47	<0.0	1.04	1.25		0.704 J	0.76 J	<0.442	<0.353	0.864	0.897	
Radium, 226/228 Combined	pCi/L		<0.77	0.964	1.13	1.6	<0.141	1.59	1.86		1.01 J	0.76 J	1.1	1.17	0.864	1.077	
Selenium	mg/L	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	0.0008 J	0.0007 J	0.13	0.12	0.13	0.2	
Thallium	mg/L	<0.0020	0.0019 J	<0.0400	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.0020	0.0018 J	<0.0020	<0.0007	0.065	0.092	0.094	
Turbidity	NTU	9.96	6.84	4.2	4.9	1.7	0.42	Lab Error	114.1 O	<1.0	1.9	8.9					

Notes:  
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 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
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 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier



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

Well ID	Sample Date	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	
	Sample Purpose	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE	Unit																	
Boron	mg/L	13	11	14	11	13	11	15	11.5	11	9.9	10	11.9	11.8	11.6	11.1	11.8	
Calcium	mg/L	190	160	150	150	200	150	140	159	170	150	140	179	162	161	171	188	
Chloride	mg/L	250	180	210	210	200	310	420	440	370	380	390	484	446	477	456	460	
Fluoride	mg/L	<0.029	<0.029	<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	
pH	SU	5.81	5.8	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	
Sulfate	mg/L	410	290	330	340	320	520	750	710	630	610	580	670	565	567	623	531	
Total Dissolved Solids	mg/L	2100	2300	2200	2300	2100	1900	2000	130	2000	2500	1900	1860 R	1750	1450	1740	1730	
Antimony	mg/L	0.00051 J	<0.0026	<0.0002	<0.0026		<0.0016		<0.0016		<0.00052		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	
Arsenic	mg/L	0.044	0.044	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	
Barium	mg/L	0.037	0.026	0.031	0.023		0.023		<0.00011		0.027		0.0248	0.027	0.0255	0.0313	0.0329	
Beryllium	mg/L	<0.0002	<0.00055	<0.0002	<0.00055			<0.00055	<0.00015		<0.00055		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	
Cadmium	mg/L	<0.0015	<0.0015	<0.0015	<0.0015		<0.0015		<0.000018		<0.00002		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	
Chromium	mg/L	<0.0031	<0.0031	<0.0031	<0.0031		0.011	<0.0026	<0.00014		<0.0011		<0.0015	<0.0015	<0.0300	0.002	<0.0015	
Cobalt	mg/L	0.34	0.41	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	
Lead	mg/L	<0.0026	0.011	0.012	0.012		0.015	<0.0042	<0.00016		0.018	<0.025	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	
Lithium	mg/L	0.0063 J	<0.1	0.0053 J	<0.0042		<0.0042		<0.04		<0.0042		<0.0015	0.0023 J	<0.0600	0.0025 J	0.0025 J	
Mercury	mg/L	<0.00019	<0.00019	<0.00019	<0.0002		<0.000093		<0.0001		<0.00019		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Molybdenum	mg/L	0.00058 J	<0.00095	0.0010 J	<0.00095		<0.00014		<0.00028		<0.000019		<0.0015	<0.0015	<0.030	<0.0015	<0.0015	
Radium 226	pCi/L	<0.219	0.3	0.15	0.33		0.262	0.15	0.77		0.163		<0.11	0.170 J	0.234	0.144 J		
Radium 228	pCi/L	<0.490	0.44	0.96	2.14		0.79		0.929		0.41		<0.14	1.21	0.658	1.25		
Radium, 226/228 Combined	pCi/L	<0.490	0.74	1.11	2.47		1.052		1.7		0.573		<0.25	1.38	0.893	1.39		
Selenium	mg/L	0.13	0.13	0.11	0.16		0.021	<0.0028	<0.00033		0.0012		<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	
Thallium	mg/L	0.058	<0.0081	0.075	0.075		0.14	0.18	<0.00015		<0.004		<0.0020	0.0012 J	<0.0400	<0.0020	<0.0020	
Turbidity	NTU												19.22	9.75	10	5	1.5	

Notes:  
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 mg/L = milligrams per liter  
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 S = Indicates spike recovery outside recovery limits  
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**Table 3: Analytical Data**  
**Former Emery Pond**  
**Southern Illinois Power Cooperative Marion Power Plant**  
**Marion, Illinois**

Well ID		EP-4	EP-4	EP-4	EP-4	EP-4	EP-4	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5	EP-5
	Sample Date	9/7/2022	12/20/2022	3/21/2023	5/24/2023	6/7/2023	9/21/2023	12/21/2021	3/7/2022	5/24/2022	9/6/2022	12/20/2022	3/15/2023	5/24/2023	6/7/2023	9/20/2023
	Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring-Resample	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-Resample	Corrective Action Monitoring	Corrective Action Monitoring
ANALYTE	Unit															
Boron	mg/L	11.8	10.7	9.68 O	10.6	11.6	10.5	0.0855	0.038	0.0254	0.0222	0.0258	0.0205 O	0.012 J	0.014 J	
Calcium	mg/L	147	165	171 O	184	182	147	25.4	22.5	21	16.7	17.5	18.8 O	16.6	16.3	
Chloride	mg/L	478	489	435 O	467	472	448	4	3	3	3 J	3 J	3 JO	3 J	3 J	
Fluoride	mg/L	0.10 J	0.12	0.14 O	0.17	0.15	0.11	0.48	0.4	0.38	0.38	0.51	0.4 O	0.44	0.41	
pH	SU	5.7	Lab Error	6.12 O	5.94	5.76	5.93	7.07	6.73	6.55	6.44	Lab Error	6.95 O	6.46	6.48	
Sulfate	mg/L	673	499	516 O	517	492	525	119	141	132	114	116	125 O	113	128	
Total Dissolved Solids	mg/L	1640	1640 H	1520 O	1840	1690	1700	294	326	322	282	282 H	262 O	296	286	
Antimony	mg/L	<0.0010	<0.0010 B	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010 O	<0.0010	<0.0010	
Arsenic	mg/L	0.0068	0.0068	0.103 O	0.0134	0.0126	0.0089	<0.0200	0.0004 J	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	
Barium	mg/L	0.0236	0.0295	0.046 O	0.0395	0.0348	0.0239	0.0478	0.0513	0.0529	0.0506	0.0422	0.0533 O	0.0514	0.0482	
Beryllium	mg/L	<0.0010	0.0047	0.0003 JO	<0.0010	0.0006 J	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	
Cadmium	mg/L	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	
Chromium	mg/L	<0.0015	0.0014 J	0.0026 O	<0.0015	<0.0015	<0.0015	<0.0300	0.0008 J	<0.0015	<0.0015	0.0014 J	0.0008 JO	0.002	<0.0015	
Cobalt	mg/L	0.471	0.258	0.134 O	0.137	0.217	0.267	<0.0200	0.0005 J	<0.0010	<0.0010	0.0002 J	<0.0010 O	0.0002 J	<0.0010	
Lead	mg/L	<0.0010	<0.0010	0.0019 O	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010 O	<0.0010	<0.0010	
Lithium	mg/L	0.0021 J	0.0032	0.0034 O	0.0034	0.0032	0.0026 J	<0.0600	0.0027 J	0.0023 J	0.0023 J	0.0026 J	0.0029 JO	0.0027 J	0.0026 J	
Mercury	mg/L	<0.00020	<0.00020	0.00017 JO	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020 O	<0.00020	<0.00020	
Molybdenum	mg/L	<0.0015	<0.0015	0.0014 JO	<0.0015	<0.0015	<0.0015	<0.0300	0.003	0.0027	0.0017	0.0028	0.0017 O	0.0013 J	0.0013 J	
Radium 226	pCi/L	0.276	0.828	0.264 J		<0.048	<0.19	0.564	0.157 J	0.232 J	0.214 J	0.458	0.153 J		0.443	
Radium 228	pCi/L	1.22	0.328 J	1.14		0.564 J	<0.57	<-0.125	0.474 J	<0.287	<-0.235	<-0.281	0.58		<0.154	
Radium, 226/228 Combined	pCi/L	1.49	1.16	1.4		0.612 J	<0.76	0.564 J	0.63	0.519 J	<0.214	0.458 J	0.733		0.597	
Selenium	mg/L	0.0006 J	<0.0010	<0.0010 O	<0.0010	0.0006 J	<0.0010	<0.0200	0.0017	0.0015	0.0012	0.0007 J	0.0007 JO	<0.0010	0.0007 J	
Thallium	mg/L	<0.0020	<0.0020	<0.0020 O	<0.0020	0.0015 J	<0.0020	<0.0400	0.0031	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.0020	<0.0020	
Turbidity	NTU	<1.0	Lab Error	239.84 O	5.6	3.7	7.5	4.9	0.6	<1.0	<1.0	Lab Error	<1.0 O	<1.0	<1.0	

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

Well ID	Sample Date	EP-6	EP-6	EP-6	EP-6	EP-6	EP-6	EP-6	EP-6	EP-7	EP-7	EP-7	EP-7	EP-7	EP-7	EP-7
	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	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring	Corrective Action Monitoring-Resample
ANALYTE	Unit															
Boron	mg/L	0.0252	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.984	0.91	0.682	0.667	0.311	1.15 O	0.639
Calcium	mg/L	4.24	1.92	1.65	1.86	1.69	1.62	1.49	1.26	178	170	128	93.5	40.2	245 O	114
Chloride	mg/L	25	23	24	23	23	20	22	20	186	239	254	249	223	176 O	240
Fluoride	mg/L	0.06 J	0.06 J	0.06 J	0.07 J	0.06 J	0.06 J	0.07 J	0.06 J	0.33	0.3	0.22	0.2	0.11	0.36 O	0.23
pH	SU	5.28	5.1	5.07	5.09	Lab Error	5.15	5.07	5.04	6.16	5.97	5.74	5.66	Lab Error	6.22 O	5.82
Sulfate	mg/L	48	67	63	64	56	66	65	53	549	556	400	326	165	820 O	363
Total Dissolved Solids	mg/L	192	254	238	216	206 H	222	250	212	1270	1450	1210	800	762 H	1720 O	1100
Antimony	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	0.0006 JO	<0.0010
Arsenic	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0200	0.0173	0.0139	0.0086	0.0081	0.114 O	0.0088
Barium	mg/L	0.043	0.0345	0.034	0.0366	0.0475	0.0422	0.035	0.0307	0.0344	0.0271	0.0325	0.036	0.037	0.194 O	0.0354
Beryllium	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0003 J	0.0003 J	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	0.0014 O	<0.0010
Cadmium	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010 B	0.0007 JO	<0.0010
Chromium	mg/L	<0.0300	0.0013 J	0.0008 J	<0.0015	0.0009 J	0.0008 J	0.0016	0.0015	<0.0300	<0.0015	0.0017	<0.0015	0.0008 J	0.0298 O	0.0021
Cobalt	mg/L	0.0040 J	0.0017	0.0007 J	0.0018	0.0068	0.0036	0.0031	0.008 J	0.110	0.139	0.161	0.19	0.179	0.12 O	0.158
Lead	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	0.0008 J	<0.0010	<0.0010	0.0321 O	<0.0010
Lithium	mg/L	<0.0600	0.0113	0.011	0.0094	0.0066	0.0107	0.0182	0.0139	<0.0600	<0.00300	0.0019 J	<0.0030	<0.0030	0.0136 O	<0.0030
Mercury	mg/L	0.00010 J	<0.00020	<0.00020	<0.00020	0.00013 J	0.00009 J	<0.00020	0.00008 J	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00019 JO	<0.00020
Molybdenum	mg/L	<0.0300	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0300	0.0012 J	0.0007 J	<0.0015	<0.0015	0.0154 O	0.0007 J
Radium 226	pCi/L	<0.0641	0.123 J	0.112 J	0.0891 J	<0.137	.124 J	0.174 J	<0.07	0.103 J	0.0766 J	0.242 J	0.0538 J	0.168	0.391	
Radium 228	pCi/L	0.297 J	1.01	<0.183	0.702	<0	<-0.413	0.419 J	<0.17	0.0686 J	0.954	1.23	0.731	0.507	1.61	
Radium, 226/228 Combined	pCi/L	0.362 J	1.13	<0.295	0.791	<0.137	<0.124	0.593 J	<0.24	0.172 J	1.03	1.47	0.785	0.675	2	
Selenium	mg/L	<0.0200	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0200	<0.0010	<0.0010	0.0007 J	<0.0010	<0.0010 O	0.0007 J
Thallium	mg/L	<0.0400	<0.0200	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0400	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020 O	<0.0020
Turbidity	NTU	7.5	4.0	3.3	<1.0	Lab Error	<1.0	2.2	9.3	4.3	14	1.8	<1.0	Lab Error	499.79 O	6.0

Notes:  
 J = Indicates the result is estimated  
 < = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided. For radium the result reported by the laboratory is provided.  
 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier

Created by: CLS

Checked by: CCC

Reviewed by: MAH





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

Well ID	Sample Date	EP-7	EP-7
		6/6/2023	9/19/2023
	Sample Purpose	Corrective Action Monitoring	Corrective Action Monitoring
<b>ANALYTE</b>	<b>Unit</b>		
Boron	mg/L	0.679	0.534
Calcium	mg/L	126	75.4
Chloride	mg/L	252	231
Fluoride	mg/L	0.24	0.18
pH	SU	5.82	5.81
Sulfate	mg/L	396	250
Total Dissolved Solids	mg/L	1160	1010
Antimony	mg/L	<0.0010	<0.0010
Arsenic	mg/L	0.0126	0.0069
Barium	mg/L	0.0331	0.0372
Beryllium	mg/L	<0.0010	<0.0010
Cadmium	mg/L	<0.0010	<0.0010
Chromium	mg/L	0.0019	<0.0015
Cobalt	mg/L	0.203	0.163
Lead	mg/L	0.0008 J	<0.0010
Lithium	mg/L	0.0015 J	<0.0030
Mercury	mg/L	<0.00020	<0.00020 S
Molybdenum	mg/L	0.0015	<0.0015
Radium 226	pCi/L	<0.0636	<0.25
Radium 228	pCi/L	1.06	1.34
Radium, 226/228 Combined	pCi/L	1.12	1.34
Selenium	mg/L	0.0006 J	<0.0010
Thallium	mg/L	0.0013 J	<0.0020
Turbidity	NTU	4.3	8.2

Notes:  
 J = Indicates the result is estimated  
 < = Analyte was not detected above the method detection limit or minimum detectable concentration. For all analytes other than radium, the method detection limit is provided. For radium the result reported by the laboratory is provided.  
 R = relative percent difference for the laboratory duplicate outside recovery limits  
 mg/L = milligrams per liter  
 pCi/L = picoCuries per liter  
 NTU = Nephelometric Turbidity Unit  
 H = Indicates holding times exceeded  
 B = Analyte detected in associated Method Blank  
 Lab Error = Although field parameters were collected according to the Sampling and Analysis Plan (GMP Addendum #1 (Golder, 2021a), the field parameters for the December 2022 event were not recoverable. Documentation of the error is included in the Case Narrative of the final laboratory report.  
 S = Indicates spike recovery outside recovery limits  
 O = Indicates the result was removed from the statistical database as an outlier



**Table 4: Groundwater Protection Standard Summary**

Analyte	Unit	Background Tolerance Limit <sup>1</sup>	35 IAC §845 Standard <sup>2</sup>	GPS <sup>3</sup>
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).

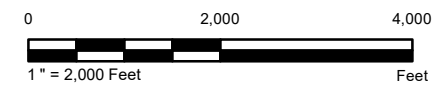
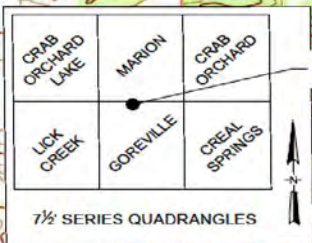
**Abbreviations:**

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

PROJECT NO. CONTROL  
GL21467997.002 -




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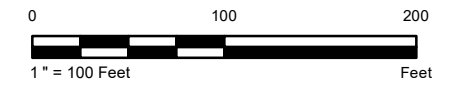
FIGURE  
1

1 in 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
-  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, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, 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	2022-01-25
DESIGNED	DPJ
PREPARED	DTD
REVIEWED	DPJ
APPROVED	MAH

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GL21467997.002 -

REV. -

FIGURE 2

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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 2023 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 6, 2023. 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  
**JANUARY 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

B:\Southern\_Illinois\_Power\_Cooperative\Boring\_Power\_Plant\B99\_PROJ\121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\10\_PROJ\121467997\_0004\_HS-0003.mxd

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**LEGEND**

- Background Monitoring Well
- Downgradient Monitoring Well
- February 2023 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 17, 2023. 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  
**FEBRUARY 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

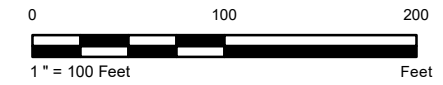
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



**LEGEND**

- Background Monitoring Well
- Downgradient Monitoring Well
- March 2023 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 MARCH 16, 2023. 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

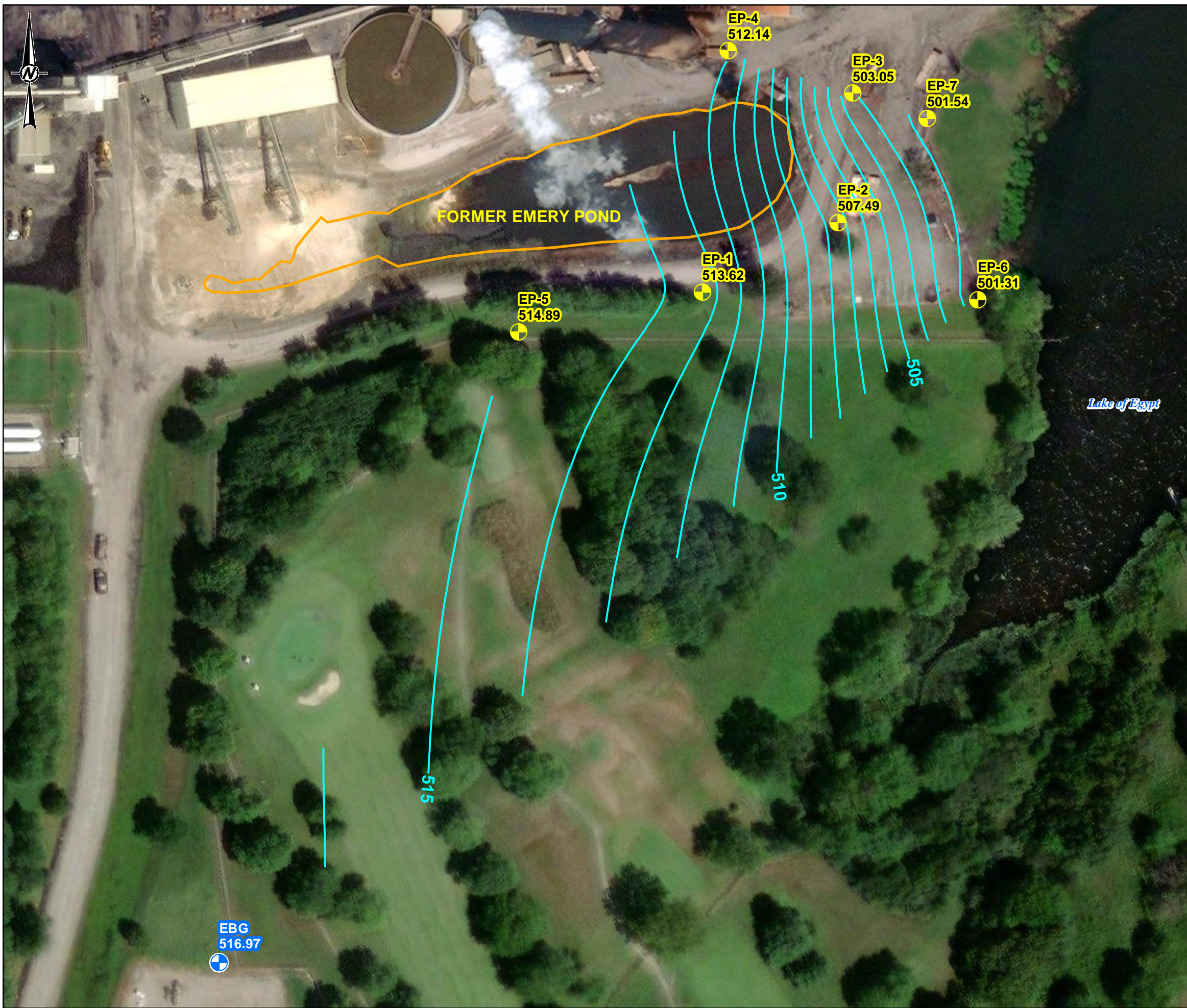
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**MARCH 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

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	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

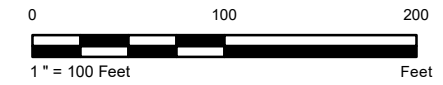
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B





- LEGEND**
- Background Monitoring Well
  - Downgradient Monitoring Well
  - April 2023 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 17, 2023. 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  
 APRIL 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP

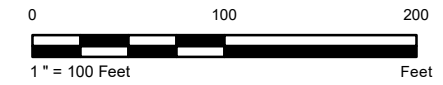
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	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

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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
  - May 2023 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, 2023. 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  
**MAY 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

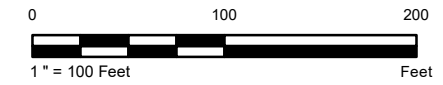
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



**LEGEND**

- Background Monitoring Well
- Downgradient Monitoring Well
- June 2023 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, 2023. 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**

**JUNE 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

**CONSULTANT**



YYYY-MM-DD	2024-01-30
DESIGNED	DPJ
PREPARED	EMM
REVIEWED	DFS
APPROVED	MAH

PROJECT NO. CONTROL  
 GL21467997.002 -

REV. -

FIGURE 8

B:\Southern\_Illinois\_Power\_Cooperative\Borings\_Power\_Plant\B99\_PROJ\121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\10\_PROJ\02\_1467997\_0004\_HS-0008.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
  - July 2023 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 17, 2023. 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  
**JULY 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

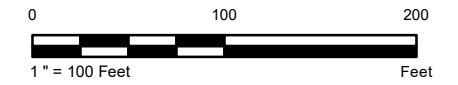
CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

B:\Southern\_Illinois\_Power\_Cooperative\Borings\_Power\_Plant\B99\_PROJ\121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\10\_PROJ\121467997\_0004\_HS-0000.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
  - August 2023 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, 2023. 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 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

B:\Southern\_Illinois\_Power\_Cooperative\Borings\_Power\_Plant\B99\_PRC\0121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\Map\_Countour\_2023\Map\_Countour\_2023\Map\_Countour\_2023\Map\_Countour\_2023\Map\_Countour\_2023.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 2023 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 5, 2023. 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

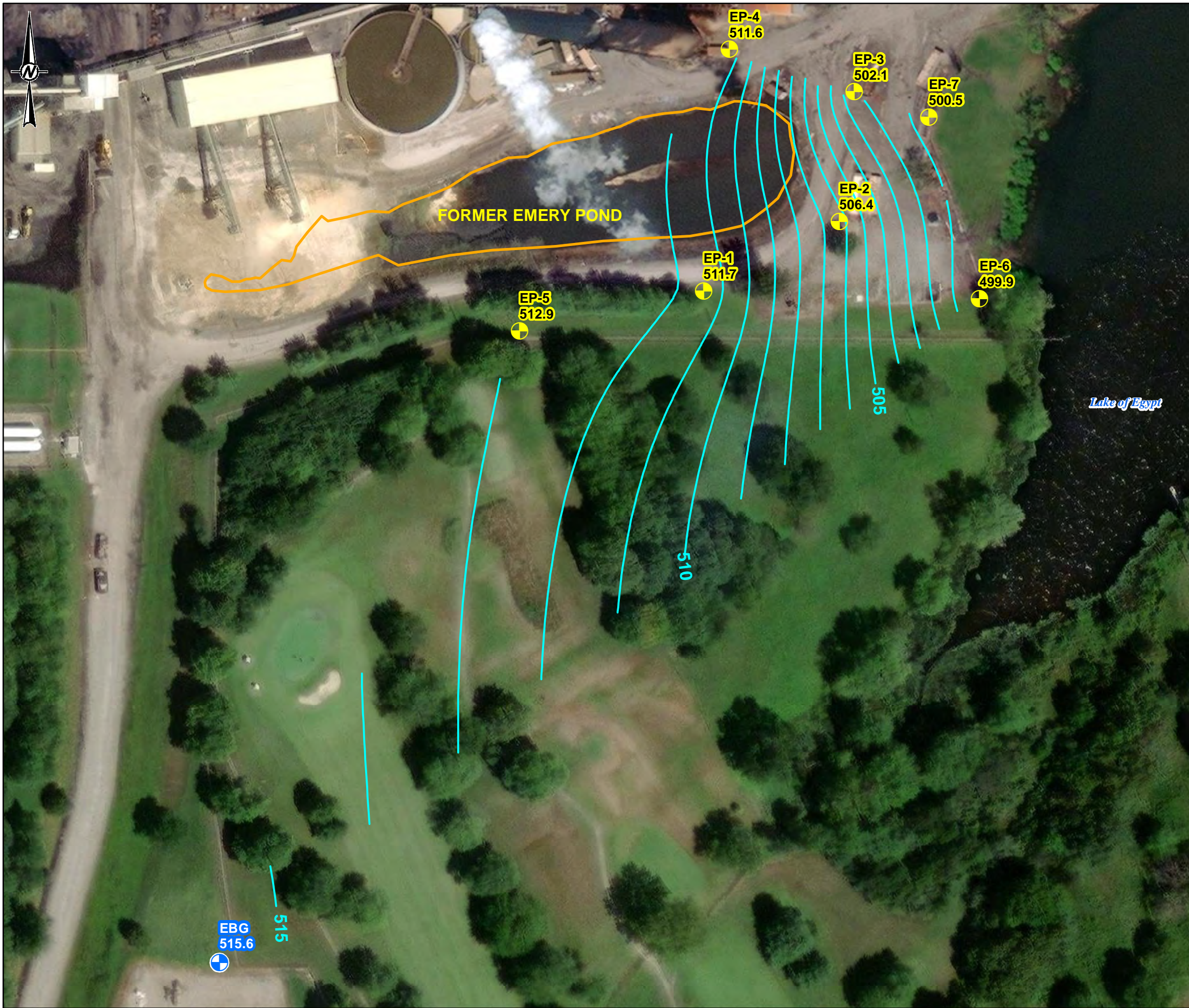
TITLE  
**SEPTEMBER 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

PROJECT NO. CONTROL REV. FIGURE  
 GL21467997.002 - - 11

B:\Southern\_Illinois\_Power\_Cooperative\Boring\_Power\_Plant\B99\_PROJ\121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\10\_PROJ\02\_1467997\_0004\_HS-0011.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
- October 2023 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 16, 2023. 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 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

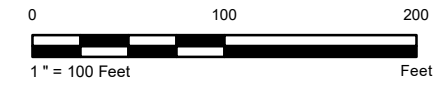
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



**LEGEND**

- Background Monitoring Well
- Downgradient Monitoring Well
- November 2023 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 13, 2023. 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 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

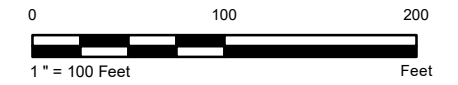
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B





- LEGEND**
- Background Monitoring Well
  - Downgradient Monitoring Well
  - December 2023 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 11, 2023. 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 2023, GROUNDWATER SURFACE ELEVATION  
 CONTOUR MAP

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	DPJ
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

B:\Southern\_Illinois\_Power\_Cooperative\Boring\_Power\_Plant\B99\_PROJ\121467997\_Operating\_Permit\_Application\0004\_Water\_Net\_Map\_Countour\_2023\10\_PROJ\121467997\_0004\_HS-0014.mxd

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

B:\Southern\_Illinois\_Power\_Cooperative\Marion\_Power\_Plant\99\_PRC\121467997\_Operating\_Permit\_Application\0005\_Chem\_Figures\_2023\40\_PRC\0011467997\2005-IB-0015.mxd



EP-4	
Boron	10.7 mg/L
Calcium	165 mg/L
Chloride	489 mg/L
Cobalt	0.258 mg/L
Sulfate	499 mg/L
Total Dissolved Solids	1640 mg/L

EP-3	
Cobalt	0.0846 mg/L

EP-7	
Cobalt	0.179 mg/L

EP-6	
pH	Lab Error

EP-1	
Calcium	523 mg/L
Sulfate	1580 mg/L
Total Dissolved Solids	2460 mg/L

EP-2	
Calcium	306 mg/L
Sulfate	1350 mg/L
Total Dissolved Solids	2220 mg/L

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

**NOTE(S)**

- ONLY SAMPLE RESULTS COLLECTED IN DECEMBER 2022 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
- MG/L - MILLIGRAMS PER LITER
- LAB ERROR = ALTHOUGH FIELD PARAMETERS WERE COLLECTED ACCORDING TO THE SAMPLING AND ANALYSIS PLAN (GMP ADDENDUM #1 (GOLDER, 2021A), THE FIELD PARAMETERS FOR THE DECEMBER 2022 EVENT WERE NOT RECOVERABLE. DOCUMENTATION OF THE ERROR IS INCLUDED IN THE CASE NARRATIVE OF THE FINAL LABORATORY REPORT.

**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

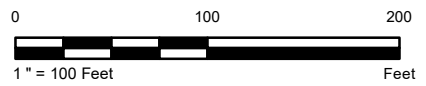
**PROJECT**

ANNUAL GROUNDWATER AND CORRECTIVE ACTION REPORT  
FORMER EMERY POND

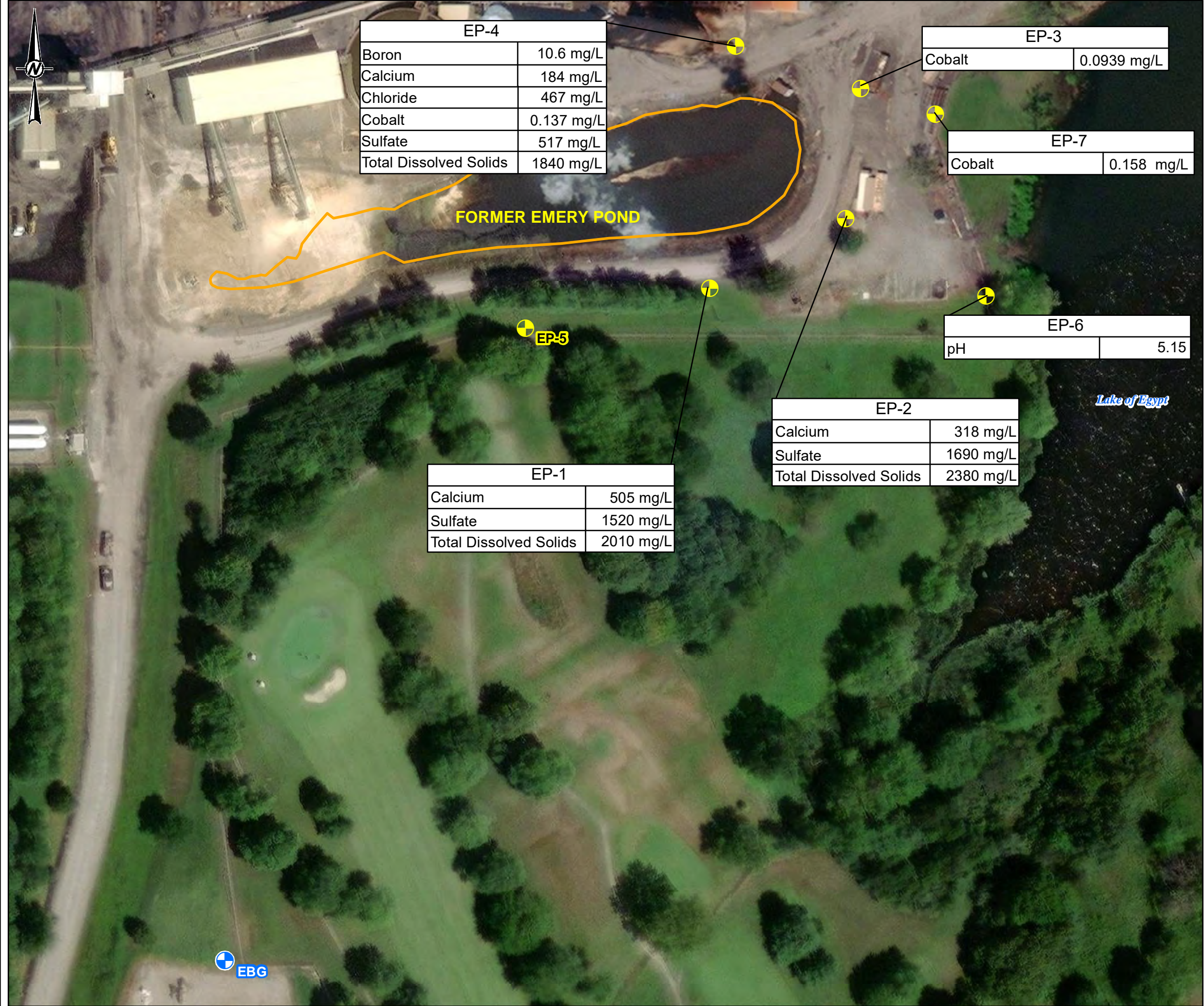
**TITLE**

DECEMBER 2022, EXTENT OF ILLINOIS CCR GROUNDWATER PROTECTION STANDARD EXCEEDANCES

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH



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



EP-4	
Boron	10.6 mg/L
Calcium	184 mg/L
Chloride	467 mg/L
Cobalt	0.137 mg/L
Sulfate	517 mg/L
Total Dissolved Solids	1840 mg/L

EP-3	
Cobalt	0.0939 mg/L

EP-7	
Cobalt	0.158 mg/L

EP-6	
pH	5.15

EP-2	
Calcium	318 mg/L
Sulfate	1690 mg/L
Total Dissolved Solids	2380 mg/L

EP-1	
Calcium	505 mg/L
Sulfate	1520 mg/L
Total Dissolved Solids	2010 mg/L

LEGEND

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

NOTE(S)

1. ONLY SAMPLE RESULTS COLLECTED IN MARCH 2023/MAY 2023 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
2. MG/L- MILLIGRAMS PER LITER
3. EIGHTH CORRECTIVE ACTION MONITORING EVENT WAS COMPLETED ON MARCH 15-16, 2023. EIGHTH CAM RESAMPLING EVENT OF WELLS EP-1, EP-2, EP-3, EP\_4, AND EP-7WAS COMPLETED ON MAY 24, 2023.

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

**MARCH AND MAY 2023, EXTENT OF CONSTITUENTS DETECTED  
AT STATISTICALLY SIGNIFICANT LEVELS ABOVE THE  
GROUNDWATER PROTECTION STANDARDS**

CONSULTANT



YYYY-MM-DD	2024-01-30
DESIGNED	CCC
PREPARED	EMM
REVIEWED	DFS
APPROVED	MAH

PROJECT NO. CONTROL  
GL21467997.002-

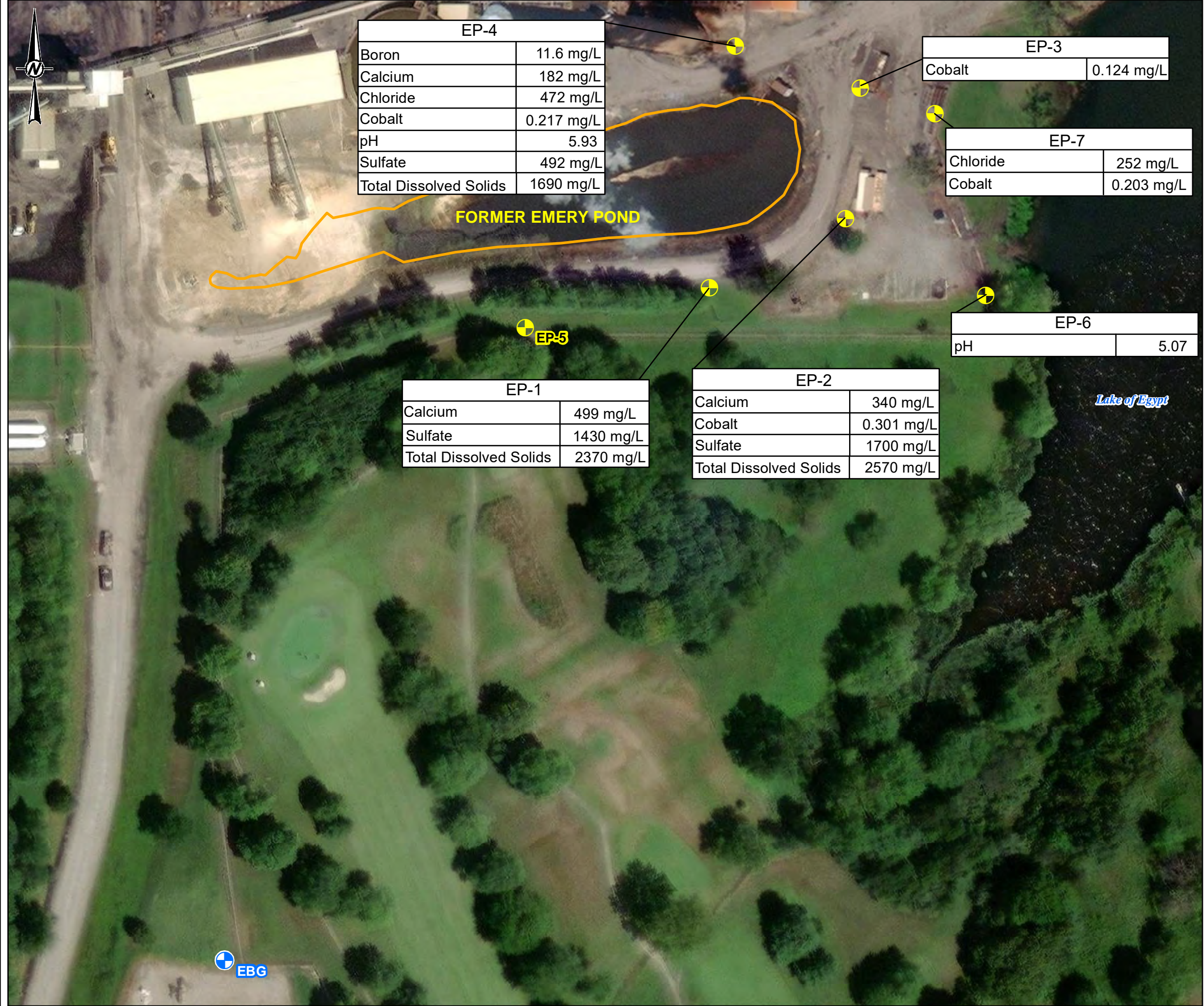
REV.  
-

FIGURE  
16

B:\Southern\_Illinois\_Power\_Cooperative\Marion\_Power\_Plant\09\_PROJ\121467997\_Operating\_Permit\_Application\0005\_Chem\_Figures\_2023\40\_PROJ\0011467997\_0005\_HB-0916.mxd

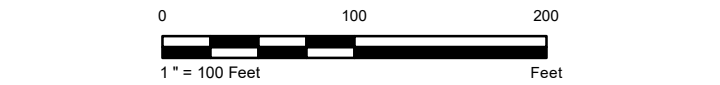
1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B





**LEGEND**

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



**NOTE(S)**

- ONLY SAMPLE RESULTS COLLECTED IN JUNE 2023 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**

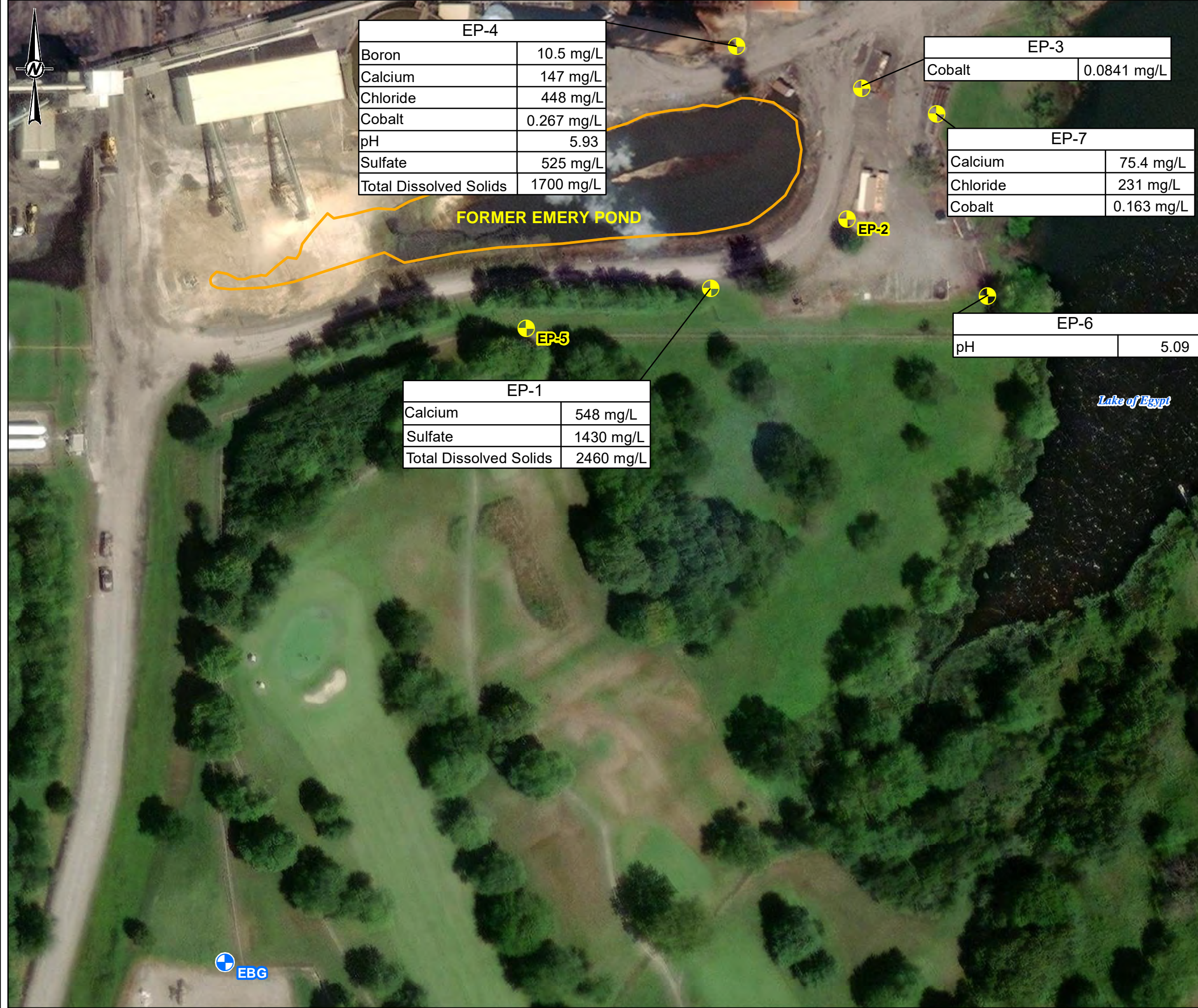
TITLE

**JUNE 2023, EXTENT OF CONSTITUENTS DETECTED AT  
STATISTICALLY SIGNIFICANT LEVELS ABOVE THE  
GROUNDWATER PROTECTION STANDARDS**

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DSC
	APPROVED	MAH

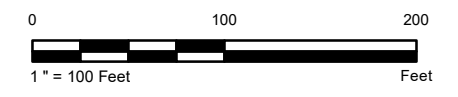
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1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



**LEGEND**

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



**NOTE(S)**

- ONLY SAMPLE RESULTS COLLECTED IN SEPTEMBER 2023 AND DETECTED ABOVE A GROUNDWATER PROTECTION STANDARD ARE PROVIDED ON THIS FIGURE.
- MG/L- MILLIGRAMS PER LITER
- MONITORING WELLS EP-2 AND EP-5 WERE DRY AND NOT SAMPLED IN SEPTEMBER 2023

**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  
SEPTEMBER 2023, EXTENT OF CONSTITUENTS DETECTED AT  
STATISTICALLY SIGNIFICANT LEVELS ABOVE THE  
GROUNDWATER PROTECTION STANDARDS

CONSULTANT	YYYY-MM-DD	2024-01-30
	DESIGNED	CCC
	PREPARED	EMM
	REVIEWED	DFS
	APPROVED	MAH

B:\Southern\_Illinois\_Power\_Cooperative\Marion\_Power\_Plant\09\_PRC\121467997\_Operating\_Permit\_Application\0905\_Chem\_Figures\_2023\40\_PRC\0011467997\_0005-IB-0018.mxd

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

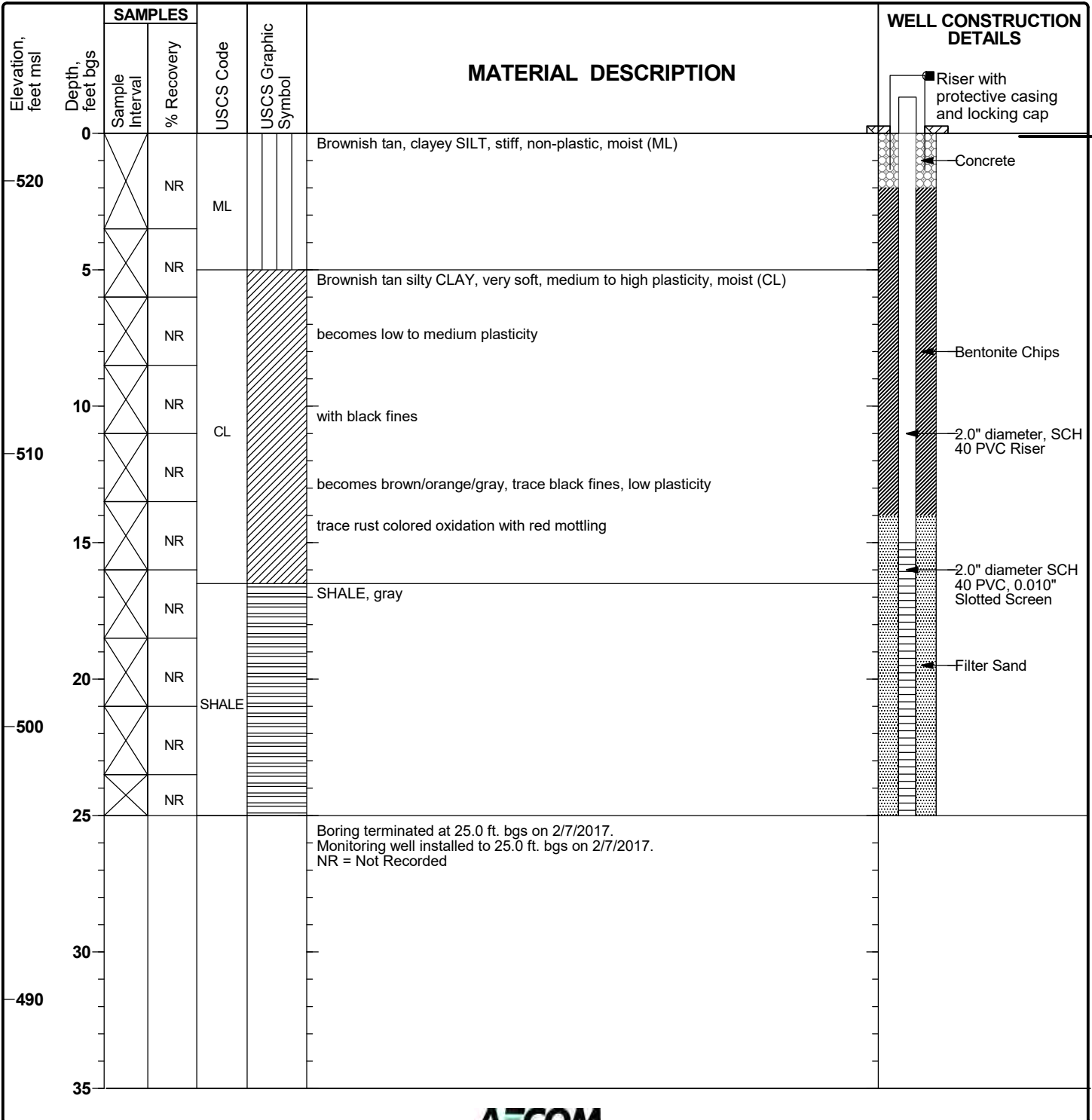
**Project Location: SIPC Marion**

**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**

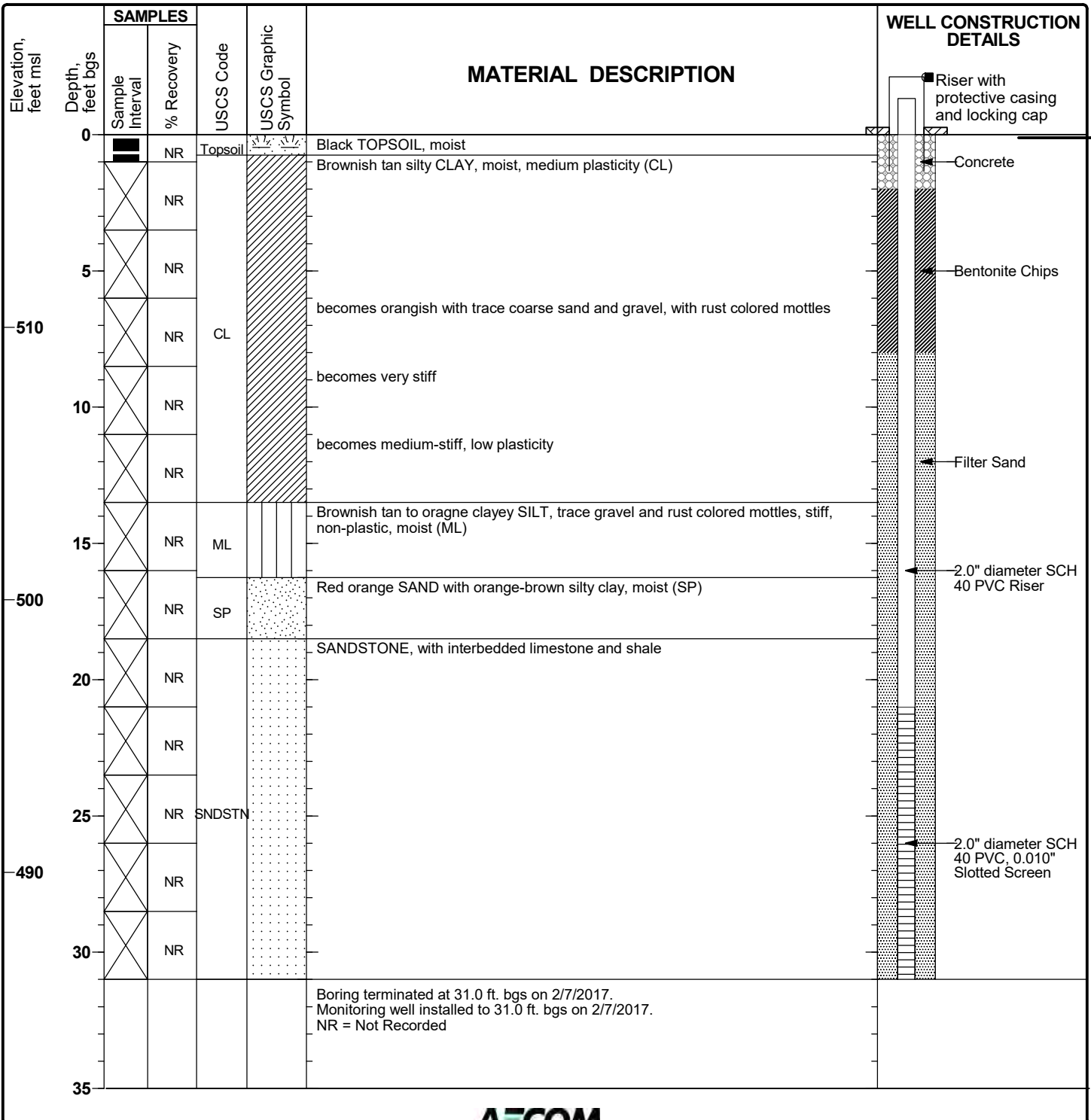
**Project Location: SIPC Marion**

**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



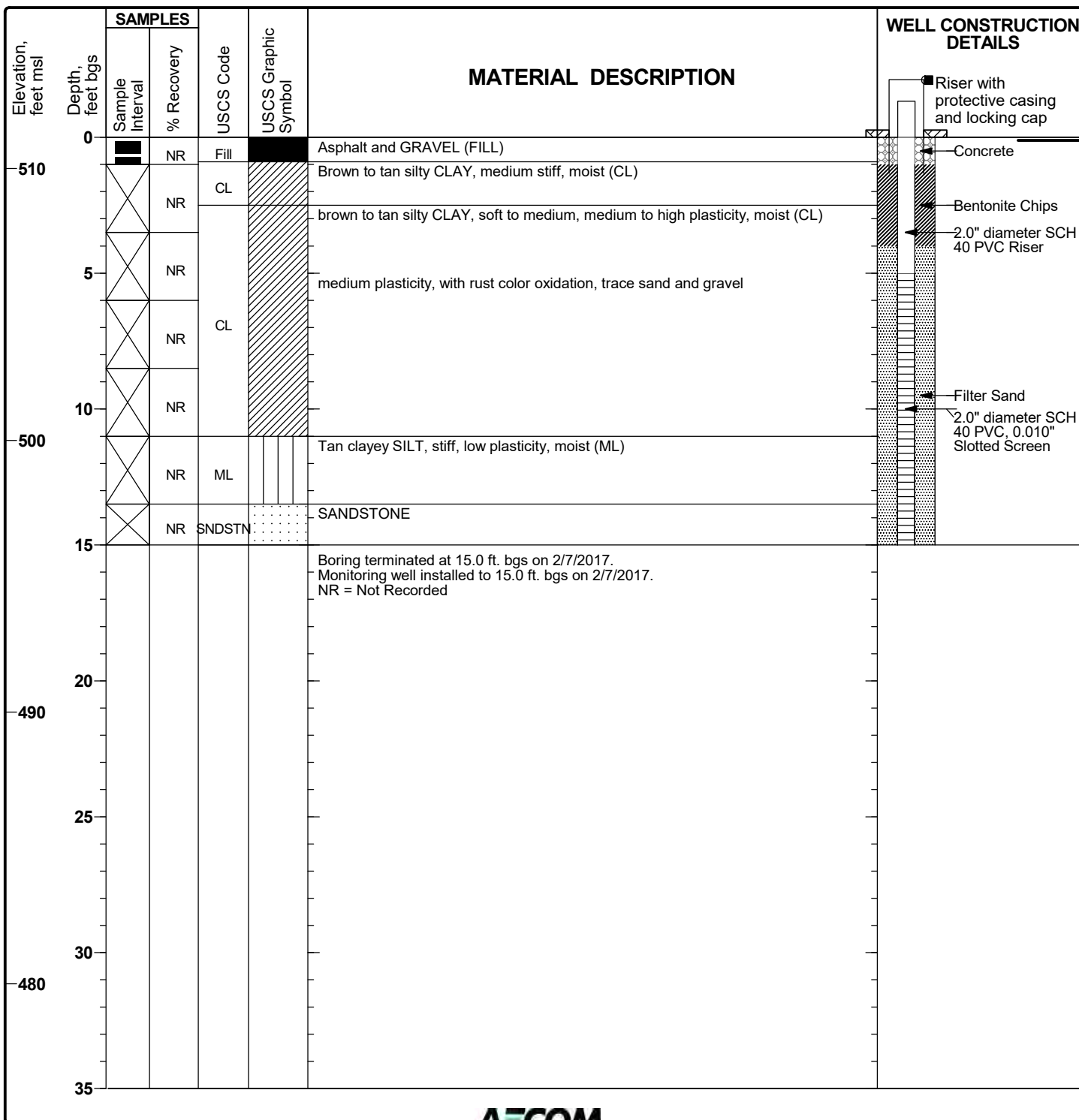
SIPC MARION SIPC MARION.GPJ 10/9/17

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				



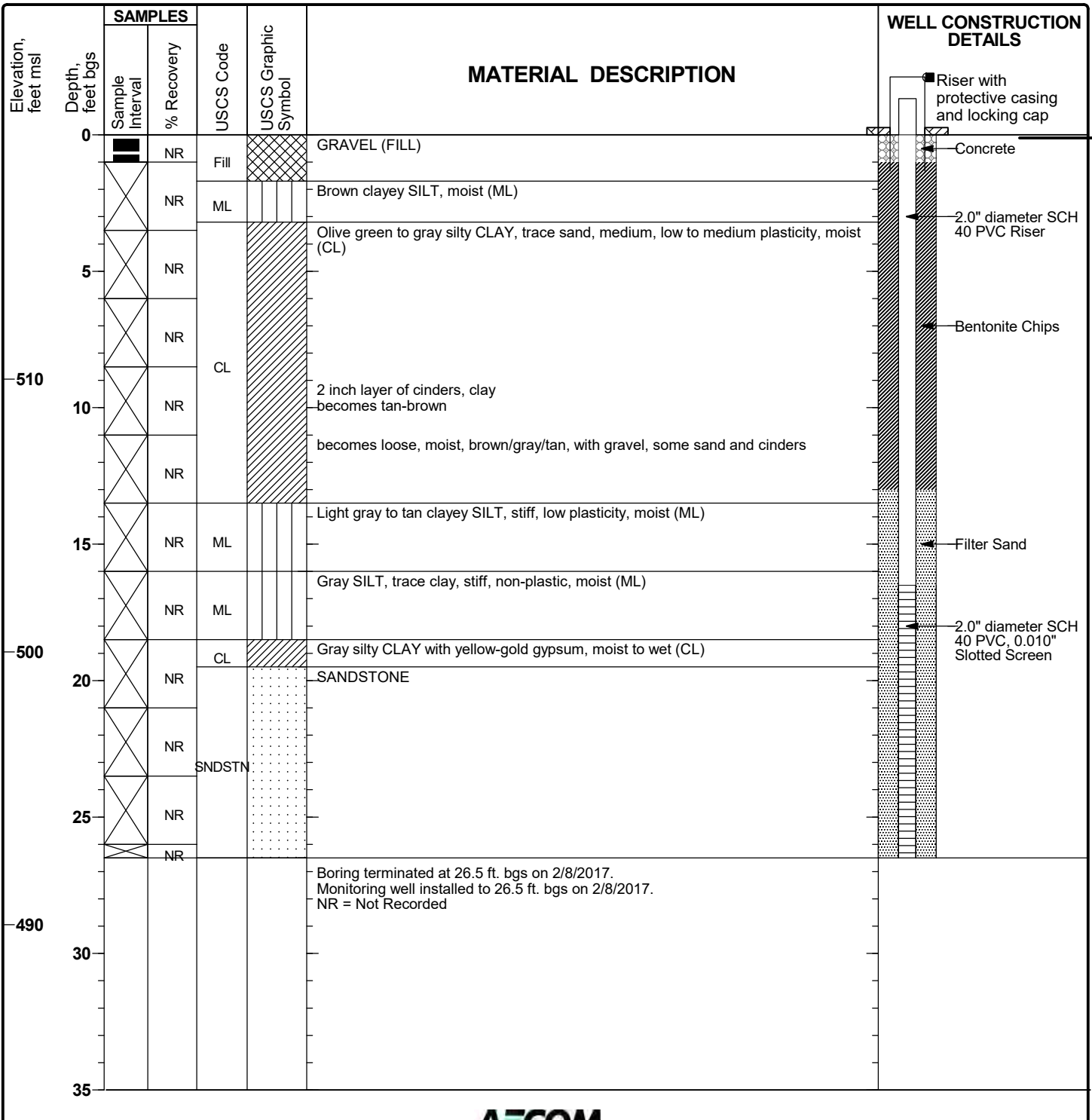
SIPC MARION SIPC MARION.GPJ 10/9/17

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**

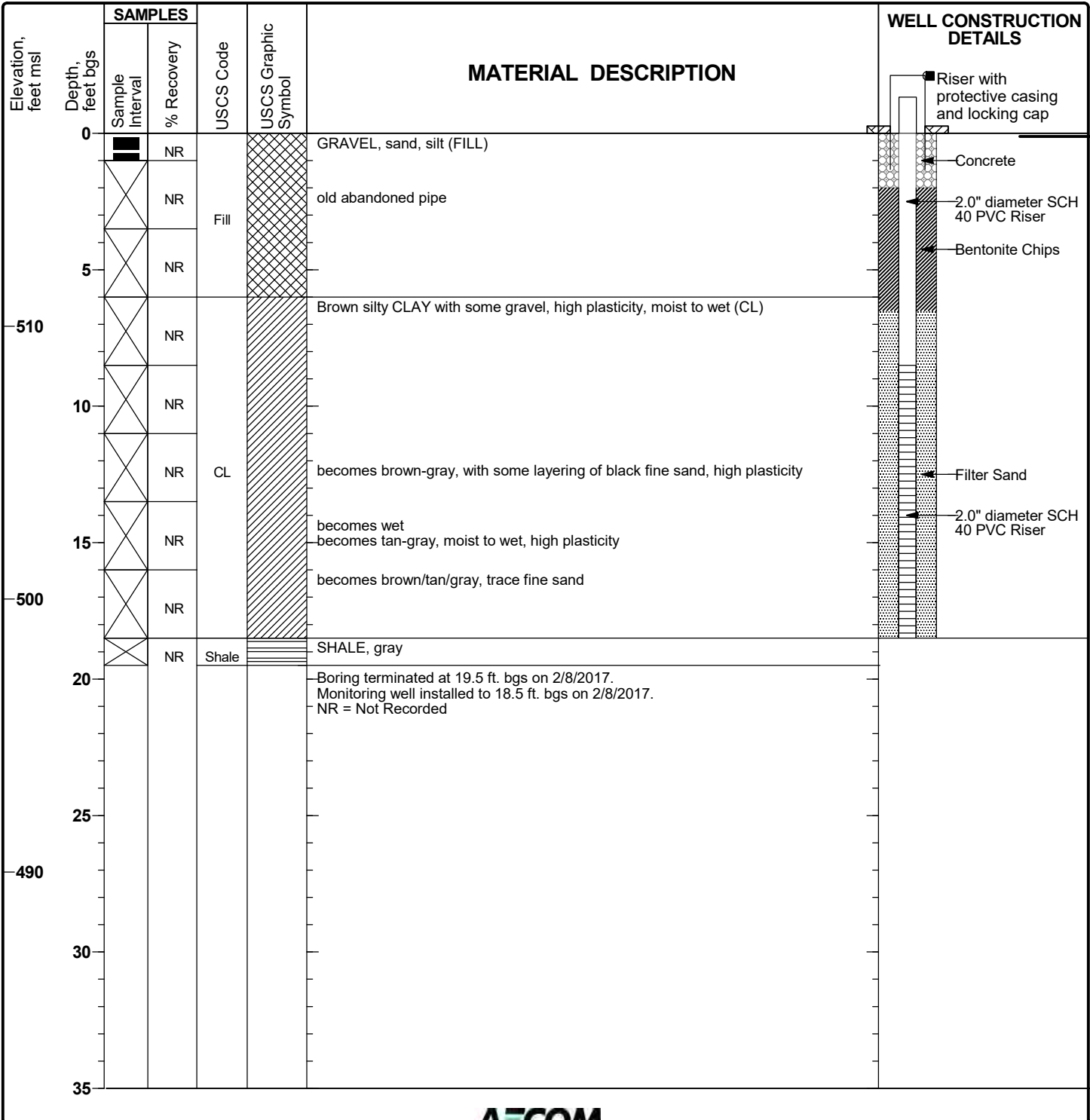
**Project Location: SIPC Marion**

**Project Number: 60535846**

# Log of EP-4

Sheet 1 of 1

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



# 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 <sup>3</sup> )	Qu (tsf) Qp (tsf) Failure Type	TOPOGRAPHIC MAP INFORMATION:		WATER LEVEL INFORMATION:				
							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 <sup>3</sup> )	Qu (tsf) Qp (tsf) Failure Type	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 <sup>3</sup> )	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		18	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**

# 2023 Groundwater Analytical Reports



January 25, 2023

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



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

**RE:** Groundwater Monitoring

**WorkOrder:** 22120076

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 12/21/2022 7:00:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,



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



## Report Contents

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

---

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	27
Receiving Check List	39
Chain of Custody	Appended

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

### Abbr Definition

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

### 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:** 22120076  
**Report Date:** 25-Jan-23

**Cooler Receipt Temp:** 2.0 °C

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

Lab Error: the digital file containing field parameter data and field QC was lost on the external flash drive employed; internal recovery attempts were unsuccessful. Client was notified via telephone and e-mail on 1/12/23. Recovery attempts by an outside data retrieval company was also unsuccessful; client was notified via e-mail on 1/20/23. EAH 1/20/23

Radium-226 and Radium-228 analysis was performed by Pace Analytical National. See attached report for results.

**Locations**

**Collinsville**

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

**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:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-001  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EBG

Collection Date: 12/19/2022 15:54

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		8.45	ft	1	12/19/2022 15:54	R323875
Elevation of groundwater surface	*	0	0		516.42	ft	1	12/19/2022 15:54	R323875
Measuring Point Elevation	*	0	0		524.87	ft	1	12/19/2022 15:54	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/19/2022 15:54	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/19/2022 15:54	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	340	mg/L	1	12/27/2022 14:33	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		9	mg/L	1	12/29/2022 15:56	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	31	50		96	mg/L	5	12/29/2022 16:01	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.68	mg/L	1	12/28/2022 11:46	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0434	mg/L	1	12/22/2022 9:12	201246
Boron	NELAP	0.0090	0.020	J	0.014	mg/L	1	12/22/2022 9:12	201246
Calcium	NELAP	0.0350	0.100		10.4	mg/L	1	12/22/2022 9:12	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:03	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 21:03	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 20:10	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 20:10	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:03	201246
Lithium	*	0.0015	0.0030		0.0166	mg/L	5	01/08/2023 10:54	201246
Molybdenum	NELAP	0.0006	0.0015		0.0020	mg/L	5	12/23/2022 5:37	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 20:10	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:37	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:19	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Lab ID:** 22120076-001

**Client Sample ID:** EBG

**Matrix:** GROUNDWATER

**Collection Date:** 12/19/2022 15:54

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491





# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-002  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EP-1

Collection Date: 12/20/2022 10:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		8.29	ft	1	12/20/2022 10:38	R323875
Elevation of groundwater surface	*	0	0		511.43	ft	1	12/20/2022 10:38	R323875
Measuring Point Elevation	*	0	0		519.72	ft	1	12/20/2022 10:38	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 10:38	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 10:38	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	2460	mg/L	1	12/27/2022 14:34	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		38	mg/L	1	12/29/2022 16:20	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	307	500		1580	mg/L	50	12/29/2022 16:26	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.24	mg/L	1	12/28/2022 11:48	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0158	mg/L	1	12/22/2022 9:29	201246
Boron	NELAP	0.0090	0.0200		1.06	mg/L	1	12/22/2022 9:29	201246
Calcium	NELAP	0.0350	0.100		523	mg/L	1	12/22/2022 9:29	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:10	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 20:16	201246
Beryllium	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	01/05/2023 21:10	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 20:16	201246
Chromium	NELAP	0.0007	0.0015		0.0026	mg/L	5	01/06/2023 20:16	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0004	mg/L	5	01/06/2023 20:16	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:10	201246
Lithium	*	0.0015	0.0030		0.0139	mg/L	5	01/08/2023 11:00	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 5:43	201246
Selenium	NELAP	0.0006	0.0010		0.0021	mg/L	5	01/06/2023 20:16	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:43	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:22	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Lab ID:** 22120076-002

**Client Sample ID:** EP-1

**Matrix:** GROUNDWATER

**Collection Date:** 12/20/2022 10:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-003  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EP-2

Collection Date: 12/20/2022 12:24

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		11.41	ft	1	12/20/2022 12:24	R323875
Elevation of groundwater surface	*	0	0		502.38	ft	1	12/20/2022 12:24	R323875
Measuring Point Elevation	*	0	0		513.79	ft	1	12/20/2022 12:24	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 12:24	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 12:24	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	2220	mg/L	1	12/27/2022 14:34	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	8		52	mg/L	2	01/03/2023 11:26	R323060
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	307	500		1350	mg/L	50	12/29/2022 16:33	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.39	mg/L	1	12/28/2022 11:50	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0170	mg/L	1	12/22/2022 9:39	201246
Boron	NELAP	0.0090	0.0200		0.276	mg/L	1	12/22/2022 9:39	201246
Calcium	NELAP	0.0350	0.100		306	mg/L	1	12/22/2022 9:39	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 21:16	201246
Arsenic	NELAP	0.0004	0.0010	J	0.0006	mg/L	5	01/06/2023 20:22	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 21:16	201246
Cadmium	NELAP	0.0002	0.0010	J	0.0002	mg/L	5	01/06/2023 20:22	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 20:22	201246
Cobalt	NELAP	0.0001	0.0010		0.0218	mg/L	5	01/06/2023 20:22	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 21:16	201246
Lithium	*	0.0015	0.0030		0.0129	mg/L	5	01/08/2023 11:06	201246
Molybdenum	NELAP	0.0006	0.0015	J	0.0011	mg/L	5	12/23/2022 5:50	201246
Selenium	NELAP	0.0006	0.0010	J	0.0008	mg/L	5	01/06/2023 20:22	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:50	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:24	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 22120076-003  
**Matrix:** GROUNDWATER

**Work Order:** 22120076  
**Report Date:** 25-Jan-23

**Client Sample ID:** EP-2  
**Collection Date:** 12/20/2022 12:24

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-004  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EP-3

Collection Date: 12/20/2022 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		18.92	ft	1	12/20/2022 0:00	R323875
Elevation of groundwater surface	*	0	0		500.03	ft	1	12/20/2022 0:00	R323875
Measuring Point Elevation	*	0	0		518.95	ft	1	12/20/2022 0:00	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 0:00	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 0:00	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	80	100	H	650	mg/L	5	12/27/2022 14:35	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	2	20		157	mg/L	5	12/29/2022 16:36	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	31	50		170	mg/L	5	12/29/2022 16:36	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.23	mg/L	1	12/28/2022 11:51	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0836	mg/L	1	12/22/2022 9:50	201246
Boron	NELAP	0.0090	0.0200		0.0630	mg/L	1	12/22/2022 9:50	201246
Calcium	NELAP	0.0350	0.100		42.8	mg/L	1	12/22/2022 9:50	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 22:59	201246
Arsenic	NELAP	0.0004	0.0010		0.0083	mg/L	5	01/06/2023 21:31	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 22:59	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:31	201246
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 21:31	201246
Cobalt	NELAP	0.0001	0.0010		0.0846	mg/L	5	01/06/2023 21:31	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 22:59	201246
Lithium	*	0.0015	0.0030		0.0425	mg/L	5	01/08/2023 11:13	201246
Molybdenum	NELAP	0.0006	0.0015	J	0.0007	mg/L	5	12/23/2022 5:56	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:31	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 5:56	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:26	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Lab ID:** 22120076-004

**Client Sample ID:** EP-3

**Matrix:** GROUNDWATER

**Collection Date:** 12/20/2022 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 12/20/2022 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		7.99	ft	1	12/20/2022 15:10	R323875
Elevation of groundwater surface	*	0	0		511.75	ft	1	12/20/2022 15:10	R323875
Measuring Point Elevation	*	0	0		519.74	ft	1	12/20/2022 15:10	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 15:10	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 15:10	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	40	50	H	1640	mg/L	2.5	12/27/2022 15:16	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		489	mg/L	10	12/29/2022 16:44	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	61	100		499	mg/L	10	12/29/2022 16:45	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.12	mg/L	1	12/28/2022 11:53	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0295	mg/L	1	12/22/2022 10:00	201246
Boron	NELAP	0.0090	0.0200		10.7	mg/L	1	12/22/2022 10:00	201246
Calcium	NELAP	0.0350	0.100		165	mg/L	1	12/22/2022 10:00	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:05	201246
Arsenic	NELAP	0.0004	0.0010		0.0068	mg/L	5	01/06/2023 21:37	201246
Beryllium	NELAP	0.0002	0.0010		0.0047	mg/L	5	01/05/2023 23:05	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:37	201246
Chromium	NELAP	0.0007	0.0015	J	0.0014	mg/L	5	01/06/2023 21:37	201246
Cobalt	NELAP	0.0001	0.0010		0.258	mg/L	5	01/06/2023 21:37	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:05	201246
Lithium	*	0.0015	0.0030		0.0032	mg/L	5	01/08/2023 11:19	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 6:03	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:37	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:03	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:28	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 22120076-005  
**Matrix:** GROUNDWATER

**Work Order:** 22120076  
**Report Date:** 25-Jan-23

**Client Sample ID:** EP-4

**Collection Date:** 12/20/2022 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491





# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-006  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EP-5

Collection Date: 12/20/2022 9:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		13.17	ft	1	12/20/2022 9:50	R323875
Elevation of groundwater surface	*	0	0		514.42	ft	1	12/20/2022 9:50	R323875
Measuring Point Elevation	*	0	0		527.59	ft	1	12/20/2022 9:50	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 9:50	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 9:50	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	282	mg/L	1	12/27/2022 15:16	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4	J	3	mg/L	1	12/29/2022 16:52	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	31	50		116	mg/L	5	12/29/2022 16:58	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.51	mg/L	1	12/28/2022 11:56	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0422	mg/L	1	12/22/2022 11:21	201246
Boron	NELAP	0.0090	0.0200		0.0258	mg/L	1	12/22/2022 11:21	201246
Calcium	NELAP	0.0350	0.100		17.5	mg/L	1	12/22/2022 11:21	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:12	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 21:44	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:12	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:44	201246
Chromium	NELAP	0.0007	0.0015	J	0.0014	mg/L	5	01/06/2023 21:44	201246
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 21:44	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:12	201246
Lithium	*	0.0015	0.0030	J	0.0026	mg/L	5	01/08/2023 12:08	201246
Molybdenum	NELAP	0.0006	0.0015		0.0028	mg/L	5	12/23/2022 6:09	201246
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	01/06/2023 21:44	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:09	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:35	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 22120076-006  
**Matrix:** GROUNDWATER

**Work Order:** 22120076  
**Report Date:** 25-Jan-23

**Client Sample ID:** EP-5

**Collection Date:** 12/20/2022 9:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-007  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: EP-6

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		5.01	ft	1	12/20/2022 11:25	R323875
Elevation of groundwater surface	*	0	0		500.10	ft	1	12/20/2022 11:25	R323875
Measuring Point Elevation	*	0	0		505.11	ft	1	12/20/2022 11:25	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 11:25	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	206	mg/L	1	12/27/2022 15:17	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		23	mg/L	1	12/29/2022 17:16	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	12	20		56	mg/L	2	12/29/2022 17:21	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	12/28/2022 11:58	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0475	mg/L	1	12/22/2022 11:24	201246
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/22/2022 11:24	201246
Calcium	NELAP	0.0350	0.100		1.69	mg/L	1	12/22/2022 11:24	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:18	201246
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:18	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Chromium	NELAP	0.0007	0.0015	J	0.0009	mg/L	5	01/06/2023 21:50	201246
Cobalt	NELAP	0.0001	0.0010		0.0068	mg/L	5	01/06/2023 21:50	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:18	201246
Lithium	*	0.0015	0.0030		0.0066	mg/L	5	01/08/2023 12:14	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 6:15	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:50	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 6:15	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020	J	0.00013	mg/L	1	12/28/2022 9:37	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Lab ID:** 22120076-007

**Client Sample ID:** EP-6

**Matrix:** GROUNDWATER

**Collection Date:** 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 12/20/2022 13:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		13.06	ft	1	12/20/2022 13:05	R323875
Elevation of groundwater surface	*	0	0		502.38	ft	1	12/20/2022 13:05	R323875
Measuring Point Elevation	*	0	0		515.44	ft	1	12/20/2022 13:05	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 13:05	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 13:05	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	762	mg/L	1	12/27/2022 15:17	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		223	mg/L	10	12/29/2022 17:24	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	61	100		165	mg/L	10	12/29/2022 17:24	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.11	mg/L	1	12/28/2022 12:01	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0370	mg/L	1	12/22/2022 11:28	201246
Boron	NELAP	0.0090	0.0200		0.311	mg/L	1	12/22/2022 11:28	201246
Calcium	NELAP	0.0350	0.100		40.2	mg/L	1	12/22/2022 11:28	201246
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010	B	< 0.0010	mg/L	5	01/05/2023 23:24	201246
Arsenic	NELAP	0.0004	0.0010		0.0081	mg/L	5	01/06/2023 21:56	201246
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/05/2023 23:24	201246
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 21:56	201246
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	01/06/2023 21:56	201246
Cobalt	NELAP	0.0001	0.0010		0.179	mg/L	5	01/06/2023 21:56	201246
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/05/2023 23:24	201246
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 12:20	201246
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	12/23/2022 7:19	201246
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 21:56	201246
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	12/23/2022 7:19	201246
<i>Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:40	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 22120076-008  
**Matrix:** GROUNDWATER

**Work Order:** 22120076  
**Report Date:** 25-Jan-23

**Client Sample ID:** EP-7

**Collection Date:** 12/20/2022 13:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-009  
 Matrix: AQUEOUS

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: Equipment Blank

Collection Date: 12/20/2022 15:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	J	16	mg/L	1	12/27/2022 15:17	R322885
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		< 4	mg/L	1	12/29/2022 17:35	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/29/2022 17:35	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2022 12:12	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2022 12:29	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:29	201307
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2022 12:29	201307
<i>CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:35	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:20	201307
Cobalt	NELAP	0.0001	0.0010	J	0.0002	mg/L	5	01/06/2023 17:20	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 10:35	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:45	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:20	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:20	201307
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:42	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 22120076

Client Project: Groundwater Monitoring

Report Date: 25-Jan-23

Lab ID: 22120076-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 12/20/2022 15:26

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	J	16	mg/L	1	12/27/2022 15:18	R322885
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		< 4	mg/L	1	12/29/2022 17:40	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	6	10		< 10	mg/L	1	12/29/2022 17:40	R322958
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	12/28/2022 12:14	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	12/27/2022 12:33	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:33	201307
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	12/27/2022 12:33	201307
<i>CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:41	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:27	201307
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	01/08/2023 10:41	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:51	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:27	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:27	201307
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020	S	< 0.00020	mg/L	1	12/28/2022 9:44	201368
<i>Matrix spike recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable.</i>									
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491





# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 22120076-011  
 Matrix: GROUNDWATER

Work Order: 22120076  
 Report Date: 25-Jan-23

Client Sample ID: Field Duplicate

Collection Date: 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		5.01	ft	1	12/20/2022 11:25	R323875
Elevation of groundwater surface	*	0	0		500.10	ft	1	12/20/2022 11:25	R323875
Measuring Point Elevation	*	0	0		505.11	ft	1	12/20/2022 11:25	R323875
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		Lab Error	gal	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		Lab Error	NTU	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		Lab Error	mV	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		Lab Error	µS/cm	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		Lab Error	°F	1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		Lab Error	mg/L	1	12/20/2022 11:25	R323875
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		Lab Error		1	12/20/2022 11:25	R323875
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20	H	214	mg/L	1	12/27/2022 15:18	R322885
<i>Sample analysis did not meet hold time requirements.</i>									
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		23	mg/L	1	12/29/2022 17:43	R322966
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	12	20		55	mg/L	2	01/03/2023 11:07	R323058
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10	J	0.04	mg/L	1	12/28/2022 12:17	R322877
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0511	mg/L	1	12/27/2022 12:37	201307
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	12/27/2022 12:37	201307
Calcium	NELAP	0.0350	0.100		1.80	mg/L	1	12/27/2022 12:37	201307
<i>CCV for B recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/08/2023 10:48	201307
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	01/06/2023 17:33	201307
Cobalt	NELAP	0.0001	0.0010		0.0067	mg/L	5	01/06/2023 17:33	201307
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Lithium	*	0.0015	0.0030		0.0068	mg/L	5	01/08/2023 10:48	201307
Molybdenum	NELAP	0.0006	0.0015		< 0.0015	mg/L	5	01/09/2023 13:57	201307
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	01/06/2023 17:33	201307
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	01/06/2023 17:33	201307
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00007	0.00020		< 0.00020	mg/L	1	12/28/2022 9:51	201368
<i>LCS recovered outside upper control limits for Hg. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>									



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Lab ID:** 22120076-011

**Client Sample ID:** Field Duplicate

**Matrix:** GROUNDWATER

**Collection Date:** 12/20/2022 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491
Radium-228	*	0	0		See Attached	pci/L	1	01/11/2023 0:00	R323491



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

**Batch R322885**    **SampType: MBLK**    Units mg/L  
 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	12/27/2022
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	12/27/2022
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	12/27/2022

**Batch R322885**    **SampType: LCS**    Units mg/L  
 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	12/27/2022
Total Dissolved Solids		20		976	1000	0	97.6	90	110	12/27/2022
Total Dissolved Solids		20		980	1000	0	98.0	90	110	12/27/2022

**Batch R322885**    **SampType: DUP**    Units mg/L  
 SampID: 22111623-030ADUP

RPD Limit: 5

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20	H	1490				1486	0.00	12/27/2022

**Batch R322885**    **SampType: DUP**    Units mg/L  
 SampID: 22121088-004BDUP

RPD Limit: 5

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20	H	472				464.0	1.71	12/27/2022

**Batch R322885**    **SampType: DUP**    Units mg/L  
 SampID: 22121115-001BDUP

RPD Limit: 5

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50	H	1350				1335	1.12	12/27/2022

**Batch R322885**    **SampType: DUP**    Units mg/L  
 SampID: 22121158-005ADUP

RPD Limit: 5

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20	H	276				276.0	0.00	12/27/2022

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

**Batch R322966**    **SampType: MBLK**    Units mg/L  
 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	12/29/2022



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

Batch R322966		SampType: LCS		Units mg/L							
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		21	20.00	0	104.3	90	110	12/29/2022	

Batch R322966		SampType: MS		Units mg/L							
SampID: 22120101-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		22	20.00	1.890	99.7	85	115	12/29/2022	

Batch R322966		SampType: MSD		Units mg/L							
SampID: 22120101-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		22	20.00	1.890	98.9	21.83	0.74	12/29/2022	

Batch R322966		SampType: MS		Units mg/L							
SampID: 22120101-005BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		28	20.00	9.070	95.1	85	115	12/29/2022	

Batch R322966		SampType: MSD		Units mg/L							
SampID: 22120101-005BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		28	20.00	9.070	96.4	28.09	0.89	12/29/2022	

Batch R322966		SampType: MS		Units mg/L							
SampID: 22120101-006BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		22	20.00	1.830	98.8	85	115	12/29/2022	

Batch R322966		SampType: MSD		Units mg/L							
SampID: 22120101-006BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		22	20.00	1.830	101.0	21.59	2.02	12/29/2022	

Batch R322966		SampType: MS		Units mg/L							
SampID: 22121389-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		80		684	400.0	312.0	93.0	85	115	12/29/2022	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

Batch R322966		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 22121389-003AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		80		<b>687</b>	400.0	312.0	93.6	684.1	0.36	12/29/2022

Batch R322966		SampType: MS		Units mg/L			RPD Limit: 15			
SampID: 22121425-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		80		<b>622</b>	400.0	248.0	93.6	85	115	12/29/2022

Batch R322966		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 22121425-001AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		80		<b>620</b>	400.0	248.0	93.1	622.4	0.34	12/29/2022

Batch R323060		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		4		< 4	0.5000	0	0	-100	100	01/03/2023

Batch R323060		SampType: LCS		Units mg/L			RPD Limit: 15			
SampID: ICV/LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		<b>20</b>	20.00	0	101.2	90	110	01/03/2023

Batch R323060		SampType: MS		Units mg/L			RPD Limit: 15			
SampID: 22120153-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4	E	<b>55</b>	20.00	35.85	94.7	85	115	01/03/2023

Batch R323060		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 22120153-001CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		4	E	<b>54</b>	20.00	35.85	93.1	54.79	0.59	01/03/2023

Batch R323060		SampType: MS		Units mg/L			RPD Limit: 15			
SampID: 22120153-033BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		<b>172</b>	100.0	77.32	94.3	85	115	01/03/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

Batch R323060		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22120153-033BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20		169	100.0	77.32	91.4	171.6	1.69	01/03/2023	

Batch R323060		SampType: MS		Units mg/L				RPD Limit: 15			
SampID: 22121600-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		40		432	200.0	252.2	89.9	85	115	01/03/2023	

Batch R323060		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22121600-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		40		426	200.0	252.2	87.1	432.0	1.30	01/03/2023	

Batch R323060		SampType: MS		Units mg/L				RPD Limit: 15			
SampID: 22121712-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4	E	63	20.00	42.69	102.0	85	115	01/03/2023	

Batch R323060		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22121712-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4	E	63	20.00	42.69	101.6	63.10	0.13	01/03/2023	

### SW-846 9036 (TOTAL)

Batch R322958		SampType: MBLK		Units mg/L				RPD Limit: 15			
SampID: ICB/MBLK											
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	12/29/2022	

Batch R322958		SampType: LCS		Units mg/L				RPD Limit: 15			
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	98.4	90	110	12/29/2022	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**SW-846 9036 (TOTAL)**

Batch R322958		SampType: MS		Units mg/L							Date Analyzed
SampID: 22120101-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		<b>30</b>	20.00	10.18	99.6	85	115	12/29/2022	

Batch R322958		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22120101-002BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		10		<b>29</b>	20.00	10.18	95.1	30.09	3.00	12/29/2022		

Batch R322958		SampType: MS		Units mg/L							Date Analyzed
SampID: 22120101-005BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		<b>40</b>	20.00	19.57	100.2	85	115	12/29/2022	

Batch R322958		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22120101-005BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		10		<b>41</b>	20.00	19.57	104.9	39.62	2.32	12/29/2022		

Batch R322958		SampType: MS		Units mg/L							Date Analyzed
SampID: 22120101-006BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		<b>36</b>	20.00	15.38	101.8	85	115	12/29/2022	

Batch R322958		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22120101-006BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		10		<b>36</b>	20.00	15.38	104.3	35.75	1.33	12/29/2022		

Batch R322958		SampType: MS		Units mg/L							Date Analyzed
SampID: 22121425-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		200		<b>852</b>	400.0	431.4	105.2	90	110	12/29/2022	

Batch R322958		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22121425-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		200	S	<b>790</b>	400.0	431.4	89.7	852.2	7.58	12/29/2022		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**SW-846 9036 (TOTAL)**

Batch R323058		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	01/03/2023

Batch R323058		SampType: MBLK		Units mg/L						
SampID: MB-R323058										
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	01/03/2023

Batch R323058		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		21	20.00	0	103.4	90	110	01/03/2023

Batch R323058		SampType: LCS		Units mg/L						
SampID: LCS-R323058										
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	01/03/2023

Batch R323058		SampType: MS		Units mg/L						
SampID: 22120153-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		149	100.0	55.02	93.5	85	115	01/03/2023

Batch R323058		SampType: MSD		Units mg/L				RPD Limit: 10		
SampID: 22120153-001CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		154	100.0	55.02	98.8	148.5	3.52	01/03/2023

Batch R323058		SampType: MS		Units mg/L						
SampID: 22120153-033BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		198	100.0	95.53	102.9	85	115	01/03/2023

Batch R323058		SampType: MSD		Units mg/L				RPD Limit: 10		
SampID: 22120153-033BMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		50		193	100.0	95.53	97.9	198.4	2.53	01/03/2023





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

### SW-846 9036 (TOTAL)

Batch R323058		SampType: MS		Units mg/L							Date Analyzed
SampID: 22121669-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		500		<b>1720</b>	1000	728.6	99.5	90	110	01/03/2023	

Batch R323058		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22121669-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		500		<b>1730</b>	1000	728.6	100.6	1724	0.63	01/03/2023		

Batch R323058		SampType: MS		Units mg/L							Date Analyzed
SampID: 22121712-001CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10	SE	<b>54</b>	20.00	45.01	43.6	90	110	01/03/2023	

Batch R323058		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 22121712-001CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		10	SE	<b>53</b>	20.00	45.01	42.2	53.72	0.52	01/03/2023		

### SW-846 9214 (TOTAL)

Batch R322877		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		<b>&lt; 0.10</b>	0.0370	0	0	-100	100	12/28/2022	

Batch R322877		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>0.99</b>	1.000	0	99.1	90	110	12/28/2022	

Batch R322877		SampType: MS		Units mg/L							Date Analyzed
SampID: 22120076-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.21</b>	2.000	0.1110	105.0	75	125	12/28/2022	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

### SW-846 9214 (TOTAL)

Batch R322877		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22120076-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.18</b>	2.000	0.1110	103.2	2.210	1.55	12/28/2022	

Batch R322877		SampType: MS		Units mg/L							
SampID: 22121571-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		<b>2.25</b>	2.000	0.2450	100.0	75	125	12/28/2022	

Batch R322877		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 22121571-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.20</b>	2.000	0.2450	97.7	2.246	2.16	12/28/2022	

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

Batch 201246		SampType: MBLK		Units mg/L							
SampID: MBLK-201246											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		< <b>0.0025</b>	0.0007	0	0	-100	100	12/22/2022	
Boron		0.0200		< <b>0.0200</b>	0.0090	0	0	-100	100	12/22/2022	
Calcium		0.100		< <b>0.100</b>	0.0350	0	0	-100	100	12/22/2022	

Batch 201246		SampType: LCS		Units mg/L							
SampID: LCS-201246											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		<b>2.00</b>	2.000	0	100.2	85	115	12/22/2022	
Boron		0.0200		<b>0.506</b>	0.5000	0	101.2	85	115	12/22/2022	
Calcium		0.100		<b>2.51</b>	2.500	0	100.3	85	115	12/22/2022	

Batch 201246		SampType: MS		Units mg/L							
SampID: 22121308-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Calcium		0.100		<b>75.6</b>	2.500	73.36	90.0	75	125	12/22/2022	

Batch 201246		SampType: MSD		Units mg/L				RPD Limit: 20			
SampID: 22121308-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Calcium		0.100		<b>76.0</b>	2.500	73.36	107.2	75.61	0.57	12/22/2022	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

**Batch** 201307      **SampType:** MBLK      Units mg/L

SampID: MBLK-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	12/27/2022
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	01/03/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	12/27/2022
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	01/03/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	12/27/2022
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	01/03/2023

**Batch** 201307      **SampType:** LCS      Units mg/L

SampID: LCS-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.04	2.000	0	101.8	85	115	01/03/2023
Barium		0.0025		2.03	2.000	0	101.6	85	115	12/27/2022
Boron		0.0200		0.510	0.5000	0	102.1	85	115	01/03/2023
Boron		0.0200		0.520	0.5000	0	104.0	85	115	12/27/2022
Calcium		0.100		2.55	2.500	0	102.1	85	115	01/03/2023
Calcium		0.100		2.55	2.500	0	102.1	85	115	12/27/2022

**Batch** 201307      **SampType:** MS      Units mg/L

SampID: 22121384-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Boron		0.0200		4.34	0.5000	3.735	120.4	75	125	12/28/2022

**Batch** 201307      **SampType:** MSD      Units mg/L

SampID: 22121384-001BMDS

RPD Limit: 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Boron		0.0200	S	4.38	0.5000	3.735	128.8	4.337	0.96	12/28/2022



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

**Batch** 201246      **SampType:** MBLK      Units mg/L

SampID: MBLK-201246

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010	JS	<b>0.0010</b>	0.0004	0	213.1	-100	100	12/23/2022
Arsenic		0.0010		< <b>0.0010</b>	0.0004	0	0	-100	100	12/23/2022
Beryllium		0.0010		< <b>0.0010</b>	0.0002	0	0	-100	100	12/23/2022
Cadmium		0.0010		< <b>0.0010</b>	0.0001	0	0	-100	100	12/23/2022
Chromium		0.0015		< <b>0.0015</b>	0.0007	0	0	-100	100	12/23/2022
Cobalt		0.0010		< <b>0.0010</b>	0.0001	0	0	-100	100	12/23/2022
Lead		0.0010		< <b>0.0010</b>	0.0006	0	0	-100	100	12/23/2022
Lithium	*	0.0030		< <b>0.0030</b>	0.0015	0	0	-100	100	12/23/2022
Molybdenum		0.0015		< <b>0.0015</b>	0.0006	0	0	-100	100	12/23/2022
Selenium		0.0010		< <b>0.0010</b>	0.0006	0	0	-100	100	12/23/2022
Thallium		0.0020		< <b>0.0020</b>	0.0010	0	0	-100	100	12/23/2022

**Batch** 201246      **SampType:** LCS      Units mg/L

SampID: LCS-201246

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010	B	<b>0.534</b>	0.5000	0	106.7	80	120	01/05/2023
Arsenic		0.0010		<b>0.527</b>	0.5000	0	105.4	80	120	01/06/2023
Beryllium		0.0010		<b>0.0535</b>	0.0500	0	107.0	80	120	01/05/2023
Cadmium		0.0010		<b>0.0513</b>	0.0500	0	102.6	80	120	01/06/2023
Chromium		0.0015		<b>0.213</b>	0.2000	0	106.5	80	120	01/06/2023
Cobalt		0.0010		<b>0.544</b>	0.5000	0	108.7	80	120	01/06/2023
Lead		0.0010		<b>0.536</b>	0.5000	0	107.1	80	120	01/05/2023
Lithium	*	0.0030		<b>0.591</b>	0.5000	0	118.1	80	120	01/08/2023
Molybdenum		0.0015		<b>0.582</b>	0.5000	0	116.3	80	120	12/23/2022
Selenium		0.0010		<b>0.476</b>	0.5000	0	95.2	80	120	01/06/2023
Thallium		0.0020		<b>0.297</b>	0.2500	0	118.9	80	120	12/23/2022



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

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

**Batch** 201307      **SampType:** MBLK      **Units** mg/L  
**SampID:** MBLK-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		< 0.0010	0.0004	0	0	-100	100	12/28/2022
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	12/28/2022
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	12/28/2022
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	12/28/2022
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	12/28/2022
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	12/28/2022
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	12/28/2022
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	01/06/2023
Molybdenum		0.0015		< 0.0015	0.0006	0	0	-100	100	12/28/2022
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	12/28/2022
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	12/28/2022

**Batch** 201307      **SampType:** LCS      **Units** mg/L  
**SampID:** LCS-201307

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.527	0.5000	0	105.3	80	120	01/06/2023
Arsenic		0.0010		0.532	0.5000	0	106.3	80	120	01/06/2023
Beryllium		0.0010		0.0519	0.0500	0	103.9	80	120	01/08/2023
Cadmium		0.0010		0.0506	0.0500	0	101.2	80	120	01/06/2023
Chromium		0.0015		0.218	0.2000	0	108.9	80	120	01/06/2023
Cobalt		0.0010		0.537	0.5000	0	107.3	80	120	01/06/2023
Lead		0.0010		0.527	0.5000	0	105.4	80	120	01/06/2023
Lithium	*	0.0030		0.561	0.5000	0	112.2	80	120	01/08/2023
Molybdenum		0.0015		0.518	0.5000	0	103.6	80	120	01/09/2023
Selenium		0.0010		0.497	0.5000	0	99.5	85	115	01/06/2023
Thallium		0.0020		0.255	0.2500	0	102.0	80	120	01/06/2023

### SW-846 7470A (TOTAL)

**Batch** 201368      **SampType:** MBLK      **Units** mg/L  
**SampID:** MBLK-201368

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	12/28/2022



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**SW-846 7470A (TOTAL)**

Batch 201368		SampType: LCS		Units mg/L							
SampID: LCS-201368											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020	S	<b>0.00643</b>	0.0050	0	128.5	85	115	12/28/2022	

Batch 201368		SampType: MS		Units mg/L							
SampID: 22120076-010CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020	S	<b>0.00627</b>	0.0050	0	125.5	75	125	12/28/2022	

Batch 201368		SampType: MSD		Units mg/L						RPD Limit: 15		Date Analyzed
SampID: 22120076-010CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Mercury		0.00020		<b>0.00609</b>	0.0050	0	121.8	0.006273	2.93	12/28/2022		

Batch 201368		SampType: MS		Units mg/L							
SampID: 22120101-003DMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020	S	<b>0.00648</b>	0.0050	0	129.5	75	125	12/28/2022	

Batch 201368		SampType: MSD		Units mg/L						RPD Limit: 15		Date Analyzed
SampID: 22120101-003DMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Mercury		0.00020	S	<b>0.00646</b>	0.0050	0	129.2	0.006477	0.22	12/28/2022		



# Receiving Check List

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 22120076

**Client Project:** Groundwater Monitoring

**Report Date:** 25-Jan-23

**Carrier:** Joseph Riley

**Received By:** MLD

**Completed by:**

**Reviewed by:**

**On:**

**On:**

21-Dec-22

21-Dec-22

Lindsey Maddox

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 <b>2.0</b>               |
| 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 #83856. - lmaddox - 12/21/2022 8:59:16 AM

# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 22120076

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1906 - Fax: (618) 344-1905

**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 2.0 °C **LTG#** 5  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** 838516 LM 12/20

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		Sample Collector's Name				MATRIX		INDICATE ANALYSIS REQUESTED																
Groundwater Monitoring		J. RILEY / C. COLLINS				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 checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		UNP	HNO3																					
Lab Use Only	Sample Identification	Date/Time Sampled																						
22120076-001	EBG	12/19/22 1534		1	3																			
002	EP-1	12/20/22 1038		1	3																			
003	EP-2	12/20/22 1227		1	3																			
004	EP-3	12/20/22		1	3																			
005	EP-4	12/26/22 1510		1	3																			
006	EP-5	12/20/22 0750		1	3																			
007	EP-6 *	12/20/22 1125		1	3																			
008	EP-7	12/20/22 1305		1	3																			
009	Equipment Blank	12/20/22 1525		1	3																			
010	Field Blank	12/20/22 1526		1	3																			

<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>
<i>[Signature]</i>	12/21/22 0700	Marilyn L. Darling II	12/21/22 0700



# CHAIN OF CUSTODY

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1994 - Fax: (618) 344-1995

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

Project Name/Number		Sample Collector's Name																																									
Groundwater Monitoring		<i>J. R. Kelly C. Collins</i>																																									
<b>Results Requested</b> <input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		<b>Billing Instructions</b>																																									
<b>Lab Use Only</b>		<b># and Type of Containers</b>																																									
	Sample Identification	Date/Time Sampled																																									
22120076-011	Field Duplicate	12/20/22 1125	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>UNP</th> <th>HNO3</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>	UNP	HNO3																			1	3																		
UNP	HNO3																																										
1	3																																										

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

Relinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>	12/21/22 0700	<i>Martin A. Darling II</i>	12/21/22 0700

**TEKLAB, Inc.**

Sample Delivery Group: L1570795  
Samples Received: 12/27/2022  
Project Number: 22120076  
Description:

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

Entire Report Reviewed By:



Mark W. Beasley  
Project Manager

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

 Pace Analytical National

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

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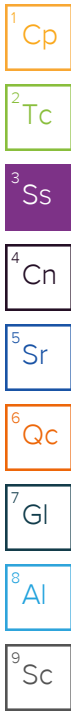
# SAMPLE SUMMARY

## 22120076-001 L1570795-01 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/19/22 15:54      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN



## 22120076-002 L1570795-02 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 10:38      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN

## 22120076-003 L1570795-03 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 12:24      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:09	RGT	Mt. Juliet, TN

## 22120076-004 L1570795-04 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 00:00      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

## 22120076-005 L1570795-05 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 15:10      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

## 22120076-006 L1570795-06 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 09:50      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

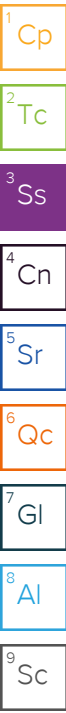
# SAMPLE SUMMARY

## 22120076-007 L1570795-07 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 11:25      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN



## 22120076-008 L1570795-08 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 13:05      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

## 22120076-009 L1570795-09 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 15:25      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

## 22120076-010 L1570795-10 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 15:26      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

## 22120076-011 L1570795-11 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

12/20/22 11:25      12/27/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1981307	1	01/03/23 16:39	01/11/23 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1983193	1	01/05/23 11:19	01/11/23 14:13	RGT	Mt. Juliet, TN

# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0292	<u>U</u>	0.257	0.482	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	106			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	95.6			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0672	<u>U</u>	0.289	0.531	01/11/2023 14:09	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0672	<u>U</u>	0.132	0.222	01/11/2023 14:09	<a href="#">WG1983193</a>
(T) Barium-133	83.0			30.0-143	01/11/2023 14:09	<a href="#">WG1983193</a>

- 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	0.326	J	0.222	0.401	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	90.8			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	95.8			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

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	0.470		0.269	0.438	01/11/2023 14:09	<a href="#">WG1983193</a>

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	0.144	J	0.152	0.175	01/11/2023 14:09	<a href="#">WG1983193</a>
(T) Barium-133	81.7			30.0-143	01/11/2023 14:09	<a href="#">WG1983193</a>

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	0.0435	<u>U</u>	0.203	0.378	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	93.7			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	104			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

- 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	0.0763	<u>U</u>	0.249	0.473	01/11/2023 14:09	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0328	<u>U</u>	0.144	0.285	01/11/2023 14:09	<a href="#">WG1983193</a>
(T) Barium-133	78.2			30.0-143	01/11/2023 14:09	<a href="#">WG1983193</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.04		0.195	0.322	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	104			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	116			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.59		0.407	0.494	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.551		0.357	0.375	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	83.0			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.328	J	0.275	0.500	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	97.4			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	76.8			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

- 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	1.16		0.466	0.571	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.828		0.376	0.276	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	91.7			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.281	<u>U</u>	0.210	0.400	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	96.1			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	108			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.458	<u>J</u>	0.361	0.474	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.458		0.294	0.255	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	82.5			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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>	0.182	0.340	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	97.0			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	108			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.137	<u>U</u>	0.308	0.515	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.137	<u>U</u>	0.249	0.387	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	76.3			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

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	0.507		0.187	0.329	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	98.8			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	108			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.675		0.293	0.464	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.168	J	0.226	0.327	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	67.8			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.411	<u>U</u>	0.187	0.364	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	108			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	113			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

- 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	0.330	<u>J</u>	0.333	0.491	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.330		0.275	0.329	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	80.8			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.425		0.176	0.312	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	105			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	100			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

- 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	0.438		0.193	0.363	01/11/2023 14:13	<a href="#">WG1983193</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0128	<u>U</u>	0.0792	0.185	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	87.7			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.307	J	0.236	0.426	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Barium	97.8			30.0-143	01/11/2023 10:18	<a href="#">WG1981307</a>
(T) Yttrium	110			30.0-136	01/11/2023 10:18	<a href="#">WG1981307</a>

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	0.375	J	0.281	0.501	01/11/2023 14:13	<a href="#">WG1983193</a>

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	0.0681	U	0.152	0.263	01/11/2023 14:13	<a href="#">WG1983193</a>
(T) Barium-133	83.0			30.0-143	01/11/2023 14:13	<a href="#">WG1983193</a>

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3880588-1 01/11/23 10:18

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.194	<u>U</u>	0.143	0.272
(T) Barium	98.7		98.7	
(T) Yttrium	103		103	

L1570795-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1570795-01 01/11/23 10:18 • (DUP) R3880588-5 01/11/23 10:18

Analyte	Original Result	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	-0.0292	0.257	0.482	-0.231	0.265	0.482	1	0.000	0.547	<u>U</u>	20	3
(T) Barium	106			94.2	94.2							
(T) Yttrium	95.6			110	110							

Laboratory Control Sample (LCS)

(LCS) R3880588-2 01/11/23 10:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.59	91.7	80.0-120	
(T) Barium			95.6		
(T) Yttrium			102		

L1571260-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571260-02 01/11/23 10:18 • (MS) R3880588-3 01/11/23 10:18 • (MSD) R3880588-4 01/11/23 10:18

Analyte	Spike Amount	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	10.0	0.880	9.07	9.29	81.9	84.1	1	70.0-130			2.43		20
(T) Barium		96.7			105	108							
(T) Yttrium		89.9			92.6	111							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3880595-1 01/11/23 14:03

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.0599	<u>J</u>	0.0556	0.0693
(T) Barium-133	95.8		95.8	

L1570795-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1570795-11 01/11/23 14:13 • (DUP) R3880595-5 01/11/23 14:03

Analyte	Original Result	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	0.0681	0.152	0.263	0.0205	0.155	0.263	1	108	0.219	<u>U</u>	20	3
(T) Barium-133	83.0			89.8	89.8							

Laboratory Control Sample (LCS)

(LCS) R3880595-2 01/11/23 14:03

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.45	109	80.0-120	
(T) Barium-133			95.9		

L1570795-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1570795-01 01/11/23 14:09 • (MS) R3880595-3 01/11/23 14:03 • (MSD) R3880595-4 01/11/23 14:03

Analyte	Spike Amount	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	0.0672	20.1	20.7	100	103	1	75.0-125			3.04		20
(T) Barium-133		83.0			85.4	85.3							

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# TEKLAB, INC. Chain of Custody

K174

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

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

Teklab Inc  
5445 Horseshoe Lake Road  
Collinsville, IL 62234

Cooler Temp:  Sampler:  QC Level:

Project#

Comments:   
Please analyze for Radium 226/228 on your standard turn around time.  
Samples collected from an IL site.  
Batch QC is required for all analyses requested. EDD requested..

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

Phone:

4570795

**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	22120076-001	12/19/22 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"/>
-02	22120076-002	12/20/22 1038	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	22120076-003	12/20/22 1224	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	22120076-004	12/20/22	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	22120076-005	12/20/22 1510	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	22120076-006	12/20/22 0950	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	22120076-007	12/20/22 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"/>
-08	22120076-008	12/20/22 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	22120076-009	12/20/22 1525	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"/>
-10	22120076-010	12/20/22 1526	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"/>
-11	22120076-011	12/20/22 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"/>

*Relinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>	12/21/22 1800	FedEx <i>[Signature]</i>	12/21/22 1030

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

GBA 25.4 + 0 = 5.4  
5821 5898 4536

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)



April 28, 2023

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



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

**RE:** Groundwater Monitoring

**WorkOrder:** 23030368

Dear Jason McLaurin:

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

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

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

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

Sincerely,



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





## Report Contents

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**This reporting package includes the following:**

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Chain of Custody	Appended

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### Abbr Definition

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### 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:** 23030368  
**Report Date:** 28-Apr-23

**Cooler Receipt Temp:** 3.4 °C

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

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

**Locations**

**Collinsville**

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

**Collinsville Air**

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

**Springfield**

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

**Chicago**

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

**Kansas City**

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



## Accreditations

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-001

Client Sample ID: EBG

Matrix: GROUNDWATER

Collection Date: 03/21/2023 12:44

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**Lab ID:** 23030368-001

**Client Sample ID:** EBG

**Matrix:** GROUNDWATER

**Collection Date:** 03/21/2023 12:44

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23030368-002  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-1

Collection Date: 03/15/2023 15:11

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





# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23030368-002  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-1

**Collection Date:** 03/15/2023 15:11

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:35

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**Lab ID:** 23030368-003

**Client Sample ID:** EP-2

**Matrix:** GROUNDWATER

**Collection Date:** 03/21/2023 13:35

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23030368-004  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-3

Collection Date: 03/21/2023 14:18

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23030368-004  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-3

**Collection Date:** 03/21/2023 14:18

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**Lab ID:** 23030368-005

**Client Sample ID:** EP-4

**Matrix:** GROUNDWATER

**Collection Date:** 03/21/2023 14:42

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-006

Client Sample ID: EP-5

Matrix: GROUNDWATER

Collection Date: 03/15/2023 14:29

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





# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23030368-006  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-5  
**Collection Date:** 03/15/2023 14:29

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 03/15/2023 15:53

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**Lab ID:** 23030368-007

**Client Sample ID:** EP-6

**Matrix:** GROUNDWATER

**Collection Date:** 03/15/2023 15:53

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 03/21/2023 13:56

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23030368-008  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-7  
**Collection Date:** 03/21/2023 13:56

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 03/16/2023 14:02

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 03/16/2023 14:05

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23030368

Client Project: Groundwater Monitoring

Report Date: 28-Apr-23

Lab ID: 23030368-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 03/21/2023 14:42

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





## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23030368-011  
**Matrix:** GROUNDWATER

**Work Order:** 23030368  
**Report Date:** 28-Apr-23  
**Client Sample ID:** Field Duplicate  
**Collection Date:** 03/21/2023 14:42

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### STANDARD METHODS 2510 B FIELD

**Batch R326754**    **SampType: LCS**                      Units  $\mu\text{S/cm}$

SampID: LCS-R326754

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Spec. Conductance, Field	*	0		<b>1440</b>	1409	0	102.2	90	110	03/15/2023
Spec. Conductance, Field	*	0		<b>1507</b>	1409	0	107.0	90	110	03/15/2023

### SW-846 9040B FIELD

**Batch R326754**    **SampType: LCS**                      Units

SampID: LCS-R326754

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
pH	*	1.00		<b>7.04</b>	7.000	0	100.6	98.57	101.4	03/15/2023
pH	*	1.00		<b>7.10</b>	7.000	0	101.4	98.57	101.4	03/21/2023

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

**Batch R326273**    **SampType: MBLK**                      Units  $\text{mg/L}$

SampID: MBLK

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		<b>&lt; 20</b>	16.00	0	0	-100	100	03/20/2023
Total Dissolved Solids		20		<b>&lt; 20</b>	16.00	0	0	-100	100	03/20/2023

**Batch R326273**    **SampType: LCS**                      Units  $\text{mg/L}$

SampID: LCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Total Dissolved Solids		20		<b>230</b>	250.0	0	92.0	90	110	03/20/2023
Total Dissolved Solids		20		<b>922</b>	1000	0	92.2	90	110	03/20/2023

**Batch R326273**    **SampType: DUP**                      Units  $\text{mg/L}$                       RPD Limit: 5

SampID: 23030368-007ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		<b>224</b>				222.0	0.90	03/20/2023

**Batch R326273**    **SampType: DUP**                      Units  $\text{mg/L}$                       RPD Limit: 5

SampID: 23031170-016ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		<b>474</b>				472.0	0.42	03/20/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

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

Batch R326435		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	03/23/2023	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	03/23/2023	

Batch R326435		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>948</b>	1000	0	94.8	90	110	03/23/2023	
Total Dissolved Solids		20		<b>938</b>	1000	0	93.8	90	110	03/23/2023	

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

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

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

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

Batch R326602		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		4		< 4	0.5000	0	0	-100	100	03/28/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

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

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**SW-846 9036 (TOTAL)**

Batch R326589		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	03/28/2023

Batch R326589		SampType: LCS		Units mg/L						
SampID: ICB/LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	99.2	90	110	03/28/2023

Batch R326589		SampType: MS		Units mg/L						
SampID: 23030880-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		83	40.00	49.18	85.7	85	115	03/28/2023

Batch R326589		SampType: MSD		Units mg/L						
SampID: 23030880-001AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		20		86	40.00	49.18	90.9	83.46	2.45	03/28/2023

Batch R326589		SampType: MS		Units mg/L						
SampID: 23031585-008AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		500		1720	1000	772.6	94.7	90	110	03/28/2023

Batch R326589		SampType: MSD		Units mg/L						
SampID: 23031585-008AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Sulfate		500	S	1670	1000	772.6	89.4	1719	3.15	03/28/2023

Batch R326700		SampType: MBLK		Units mg/L						
SampID: MBLK/ICB										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	03/30/2023

Batch R326700		SampType: LCS		Units mg/L						
SampID: LCS/ICV										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	100.6	90	110	03/30/2023



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### SW-846 9036 (TOTAL)

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

Batch R326700		SampType: MSD		Units mg/L							RPD Limit: 10
SampID: 23030368-007AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		<b>161</b>	100.0	66.13	95.1	160.1	0.70	03/30/2023	

### SW-846 9214 (TOTAL)

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

Batch R326251		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		<b>0.92</b>	1.000	0	91.8	90	110	03/21/2023

Batch R326251		SampType: MS		Units mg/L						
SampID: 23030964-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		<b>2.43</b>	2.000	0.4870	97.0	75	125	03/21/2023

Batch R326251		SampType: MSD		Units mg/L							RPD Limit: 15
SampID: 23030964-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.42</b>	2.000	0.4870	96.8	2.426	0.12	03/21/2023	

Batch R326251		SampType: MS		Units mg/L						
SampID: 23030973-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		1.00		<b>60.0</b>	20.00	41.01	94.9	75	125	03/21/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**SW-846 9214 (TOTAL)**

Batch R326251		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23030973-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		1.00		59.5	20.00	41.01	92.4	59.99	0.85	03/21/2023	

Batch R326251		SampType: MS		Units mg/L							
SampID: 23031050-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.45	2.000	0.4740	98.9	75	125	03/21/2023	

Batch R326251		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23031050-006AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.39	2.000	0.4740	95.6	2.452	2.73	03/21/2023	

Batch R326251		SampType: MS		Units mg/L							
SampID: 23031092-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.08	2.000	0.1640	95.6	75	125	03/21/2023	

Batch R326251		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23031092-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.11	2.000	0.1640	97.2	2.077	1.53	03/21/2023	

Batch R326508		SampType: MBLK		Units mg/L							
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	03/27/2023	

Batch R326508		SampType: LCS		Units mg/L							
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.99	1.000	0	98.7	90	110	03/27/2023	

Batch R326508		SampType: MS		Units mg/L							
SampID: 23030368-011AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.14	2.000	0.1340	100.2	75	125	03/27/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### SW-846 9214 (TOTAL)

Batch R326508		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 23030368-011AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		<b>2.04</b>	2.000	0.1340	95.4	2.138	4.54	03/27/2023

Batch R326508		SampType: MS		Units mg/L						
SampID: 23030880-002AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		<b>2.35</b>	2.000	0.2400	105.4	75	125	03/27/2023

Batch R326508		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 23030880-002AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		<b>2.33</b>	2.000	0.2400	104.4	2.348	0.81	03/27/2023

Batch R326508		SampType: MS		Units mg/L						
SampID: 23031585-008AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		1.00		<b>38.4</b>	20.00	17.83	102.8	75	125	03/27/2023

Batch R326508		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 23031585-008AMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		1.00		<b>39.8</b>	20.00	17.83	110.0	38.38	3.68	03/27/2023

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

Batch 204057		SampType: MBLK		Units mg/L						
SampID: MBLK-204057										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>&lt; 0.0025</b>	0.0007	0	0	-100	100	03/20/2023
Boron		0.0200		<b>&lt; 0.0200</b>	0.0090	0	0	-100	100	03/20/2023
Calcium		0.100		<b>&lt; 0.100</b>	0.0350	0	0	-100	100	03/20/2023

Batch 204057		SampType: LCS		Units mg/L						
SampID: LCS-204057										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.18</b>	2.000	0	109.0	85	115	03/20/2023
Boron		0.0200		<b>0.538</b>	0.5000	0	107.5	85	115	03/20/2023
Calcium		0.100		<b>2.79</b>	2.500	0	111.6	85	115	03/20/2023





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

**Batch** 204057    **SampType:** MBLK    **Units** mg/L  
**SampID:** MBLK-204057

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

**Batch** 204057    **SampType:** LCS    **Units** mg/L  
**SampID:** LCS-204057

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

**Batch 204057**      **SampType: MS**      Units mg/L

SampID: 23030368-009CMS

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

**Batch 204057**      **SampType: MSD**      Units mg/L

RPD Limit: **20**

SampID: 23030368-009CMSD

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

**Batch 204201**      **SampType: MBLK**      Units mg/L

SampID: MBLK-204201

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

**Batch 204201**      **SampType: LCS**      Units mg/L

SampID: LCS-204201

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

**Batch 204201**      **SampType: MS**      Units mg/L

SampID: 23030880-001BMS

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

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

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

Batch 204201		SampType: MS		Units mg/L						
SampID: 23031092-001BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Selenium		0.0010		<b>0.892</b>	1.000	0	89.2	70	130	03/24/2023

Batch 204201		SampType: MSD		Units mg/L			RPD Limit: 20			
SampID: 23031092-001BMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Selenium		0.0010		<b>0.889</b>	1.000	0	88.9	0.8921	0.36	03/24/2023

### SW-846 7470A (TOTAL)

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

Batch 204035		SampType: LCS		Units mg/L						
SampID: LCS-204035										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00463</b>	0.0050	0	92.6	85	115	03/20/2023

Batch 204035		SampType: MS		Units mg/L						
SampID: 23030368-009CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00430</b>	0.0050	0	86.0	75	125	03/20/2023

Batch 204035		SampType: MSD		Units mg/L			RPD Limit: 15			
SampID: 23030368-009CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		<b>0.00429</b>	0.0050	0	85.7	0.004299	0.29	03/20/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**SW-846 7470A (TOTAL)**

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

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

### SW-846 7470A (TOTAL)

Batch	SampType:	Units			RPD Limit: 15					
SampID: 23031489-007CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.00020		<b>0.00467</b>	0.0050	0	93.4	0.004658	0.23	03/23/2023



# Receiving Check List

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23030368

**Client Project:** Groundwater Monitoring

**Report Date:** 28-Apr-23

**Carrier:** Joe Riley

**Received By:** ANC

**Completed by:**

**Reviewed by:**

**On:**

**On:**

17-Mar-23

23-Mar-23

Candace Moore

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 <b>3.4</b>               |
| 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 #87147. - TWM/cmooore - 3/17/2023 10:11:13 AM

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

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



# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23030368

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

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

**Samples on:**  ICE  BLUE ICE  NO ICE 34 °C LTG# 1  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** *TM 57147  
 88374 Pat 3/22/23*

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:** *Equipment Issues couldn't complete site*  
 ICP: Ba B-Ca  
 ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti *\* Dup*  
 Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Project Name/Number		Sample Collector's Name			
Groundwater Monitoring		<i>J. RILEY</i>			
Results Requested		Billing Instructions		# and Type of Containers	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)				UNP	HNO3
Lab Use Only	Sample Identification	Date/Time Sampled			
<i>23030368-001</i>	EBG	<i>3/21/23 1244</i>	1	3	
<i>002</i>	EP-1	<i>3/15/23 1511</i>	1	3	
<i>003</i>	EP-2	<i>3/21/23 1335</i>	1	3	
<i>004</i>	EP-3	<i>3/21/23 1418</i>	1	3	
<i>005</i>	EP-4 *	<i>3/21/23 1442</i>	1	3	
<i>006</i>	EP-5	<i>3/15/23 1429</i>	1	3	
<i>007</i>	EP-6 <i>1553</i>	<i>3/15/23 1544</i>	1	3	
<i>008</i>	EP-7	<i>3/21/23 1356</i>	1	3	
<i>009</i>	Equipment Blank	<i>3/16/23 1402</i>	1	3	
<i>010</i>	Field Blank	<i>3/16/23 1405</i>	1	3	

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

Reinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>	<i>03/17/23 0920</i>	<i>Allison Colvin</i>	<i>3/17/23 920</i>
<i>[Signature]</i>	<i>3/22/23 1039</i>	<i>[Signature]</i>	<i>3/22/23 1039</i>

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

BottleOrder: 78631



# CHAIN OF CUSTODY

pg. 2 of 2 Work order # 23030368

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

**Client:** Southern Illinois Power Cooperation  
**Address:** 11543 Lake of Egypt Road  
**City / State / Zip:** Marion, IL 62959  
**Contact:** Jason McLaurin **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 Tl  
 Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity

Project Name/Number		Sample Collector's Name	
Groundwater Monitoring			
Results Requested		Billing Instructions	
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)			
Lab Use Only		Sample Identification	
		Date/Time Sampled	
23030368-011		Field Duplicate 3/21/23 1492	

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:** 3/22/23 1039

**Received By:** *[Signature]* **Date/Time:** 3/22/23 1039

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

BottleOrder: 78631



**TEKLAB, Inc.**

Sample Delivery Group: L1598896  
Samples Received: 03/28/2023  
Project Number: 23030368  
Description:

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

Entire Report Reviewed By:












Mark W. Beasley  
Project Manager

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

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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# SAMPLE SUMMARY

## 23030368-001 L1598896-01 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 12:44      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## 23030368-003 L1598896-02 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 13:35      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

## 23030368-004 L1598896-03 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 14:18      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

## 23030368-005 L1598896-04 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 14:42      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

## 23030368-008 L1598896-05 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 13:56      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

## 23030368-011 L1598896-06 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/21/23 14:42      03/28/23 09:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2047808	1	04/25/23 17:41	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2034934	1	04/24/23 10:21	04/27/23 11:45	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2034934	1	04/24/23 10:21	04/25/23 18:11	RGT	Mt. Juliet, TN

# CASE NARRATIVE

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



Mark W. Beasley  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

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

- 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	1.15		0.487	0.853	04/27/2023 11:45	<a href="#">WG2034934</a>

Radiochemistry by Method SM7500Ra B M

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

## Radiochemistry by Method 904/9320

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

## Radiochemistry by Method Calculation

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

## Radiochemistry by Method SM7500Ra B M

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

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	1.25		0.276	0.484	04/27/2023 11:45	<a href="#">WG2047808</a>
(T) Barium	88.2			30.0-143	04/27/2023 11:45	<a href="#">WG2047808</a>
(T) Yttrium	97.1			30.0-136	04/27/2023 11:45	<a href="#">WG2047808</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

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

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

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

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

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

- 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		0.420	0.676	04/27/2023 11:45	<a href="#">WG2034934</a>

Radiochemistry by Method SM7500Ra B M

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

Radiochemistry by Method 904/9320

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

- 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	2.00		0.652	1.11	04/27/2023 11:45	<a href="#">WG2034934</a>

Radiochemistry by Method SM7500Ra B M

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

Radiochemistry by Method 904/9320

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

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

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

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

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

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

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

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

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

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

Laboratory Control Sample (LCS)

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

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

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

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

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

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

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

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

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

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

Laboratory Control Sample (LCS)

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

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

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

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

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



6319 3616 0043

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 MSAG: 18.2 = 18.2  
 Sufficient volume sent:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N

Pg 1 of 1

B057

LAB, INC. Chain of Custody

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

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

Teklab Inc  
 5445 Horseshoe Lake Road  
 Collinsville, IL 62234

Cooler Temp:  Sampler: Client  QC Level:

Project#

Comments: **Please issue reports and invoices via email only**  
 Please analyze for Radium 22/228 per methods  
 Collected at an IL site.  
 Batch QC is required for all analyses requested. EDD requested.

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

Phone:

159 896

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	228													
	23030368-001	3/21/23 1244	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"/>	-01
	23030368-003	3/21/23 1335	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"/>	-02
	23030368-004	3/21/23 1418	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"/>	-03
	23030368-005	3/21/23 1442	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"/>	-04
	23030368-008	3/21/23 1356	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"/>	-05
	23030368-011	3/21/23 1442	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"/>	-06
			HNO3	Groundwater	<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"/>	
			HNO3	Groundwater	<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"/>	
			HNO3	Groundwater	<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"/>	
			HNO3	Groundwater	<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"/>	
			HNO3	Groundwater	<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>	3-23-23 1700	<i>[Signature]</i>	3-28-23 9150

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

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

hts,

OK

**TEKLAB, Inc.**

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

Entire Report Reviewed By:












Mark W. Beasley  
Project Manager

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

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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# SAMPLE SUMMARY

## 23030368-002 L1597101-01 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/15/23 15:11      03/22/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## 23030368-006 L1597101-02 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/15/23 14:29      03/22/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

## 23030368-007 L1597101-03 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/15/23 15:53      03/22/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

## 23030368-009 L1597101-04 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/16/23 14:02      03/22/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

## 23030368-010 L1597101-05 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

03/16/23 14:05      03/22/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2041628	1	04/24/23 22:30	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2030892	1	04/12/23 12:09	04/26/23 22:00	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2030892	1	04/12/23 12:09	04/13/23 19:24	RGT	Mt. Juliet, TN

# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

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

- 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	0.953		0.436	0.729	04/26/2023 22:00	<a href="#">WG2030892</a>

Radiochemistry by Method SM7500Ra B M

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

Radiochemistry by Method 904/9320

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

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	0.733		0.360	0.600	04/26/2023 22:00	<a href="#">WG2030892</a>

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	0.153	J	0.268	0.409	04/13/2023 19:24	<a href="#">WG2030892</a>
(T) Barium-133	77.6			30.0-143	04/13/2023 19:24	<a href="#">WG2030892</a>

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	-0.413	<u>U</u>	0.246	0.482	04/26/2023 22:00	<a href="#">WG2041628</a>
(T) Barium	91.6			30.0-143	04/26/2023 22:00	<a href="#">WG2041628</a>
(T) Yttrium	102			30.0-136	04/26/2023 22:00	<a href="#">WG2041628</a>

- 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	0.124	<u>U</u>	0.306	0.554	04/26/2023 22:00	<a href="#">WG2030892</a>

Radiochemistry by Method SM7500Ra B M

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



Radiochemistry by Method 904/9320

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

- 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	0.837		0.223	0.429	04/26/2023 22:00	<a href="#">WG2030892</a>

Radiochemistry by Method SM7500Ra B M

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

Radiochemistry by Method 904/9320

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

- 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	0.872		0.399	0.757	04/26/2023 22:00	<a href="#">WG2030892</a>

Radiochemistry by Method SM7500Ra B M

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

Method Blank (MB)

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

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

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

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

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

Laboratory Control Sample (LCS)

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

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

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

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

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

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

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

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

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

Analyte	Original Result	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	0.227	0.281	0.395	-0.0426	0.187	0.395	1	200	0.799	<u>U</u>	20	3
(T) Barium-133	80.7			78.5	78.5							

Laboratory Control Sample (LCS)

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

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

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

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

Analyte	Spike Amount	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	0.256	18.5	17.7	91.4	87.3	1	75.0-125			4.52		20
(T) Barium-133		92.0			87.1	87.1							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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 22/228 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:

**A002**

**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.

Ra226/228	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix
US97101-01	23030368-002	3/15/23 15:11	HNO3	Groundwater
-02	23030368-006	3/15/23 14:29	HNO3	Groundwater
-03	23030368-007	3/15/23 15:53	HNO3	Groundwater
-04	23030368-009	3/16/23 14:02	HNO3	Groundwater
-05	23030368-010	3/16/23 14:05	HNO3	Groundwater
			HNO3	Groundwater
			HNO3	Groundwater
			HNO3	Groundwater
			HNO3	Groundwater
			HNO3	Groundwater
			HNO3	Groundwater

**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

*Relinquished By	Date/Time	Received By	Date/Time
<i>Candace Moore</i>	3/17/23 17:00	<i>(Felix)</i>	
		<i>Harley Pollock</i>	3/22/23 0900

9.1 ± 0.91 NS  
A7





June 08, 2023

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



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

**RE:** Groundwater Monitoring - Q1 2023 resampling

**WorkOrder:** 23051194

Dear Jason McLaurin:

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

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

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

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

Sincerely,



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



## Report Contents

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

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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**This reporting package includes the following:**

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

### Abbr Definition

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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### Qualifiers

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**Cooler Receipt Temp:** 3.2 °C

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

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

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**Locations**

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**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

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**Chicago**

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

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**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:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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



## Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23051194

Client Project: Groundwater Monitoring - Q1 2023 resampling

Report Date: 08-Jun-23

Lab ID: 23051194-001

Client Sample ID: EP-1

Matrix: GROUNDWATER

Collection Date: 05/24/2023 11:23

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring - Q1 2023 resampling  
 Lab ID: 23051194-002  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-2  
 Collection Date: 05/24/2023 17:20

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





# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring - Q1 2023 resampling  
 Lab ID: 23051194-003  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-3  
 Collection Date: 05/24/2023 14:05

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



# Laboratory Results

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

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

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

Client Sample ID: EP-4

Collection Date: 05/24/2023 12:59

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring - Q1 2023 resampling  
 Lab ID: 23051194-005  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-5  
 Collection Date: 05/24/2023 10:40

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring - Q1 2023 resampling  
 Lab ID: 23051194-006  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-7  
 Collection Date: 05/24/2023 16:30

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**Lab ID:** 23051194-007

**Client Sample ID:** Equipment Blank

**Matrix:** GROUNDWATER

**Collection Date:** 05/24/2023 17:26

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**Lab ID:** 23051194-008

**Client Sample ID:** Field Blank

**Matrix:** GROUNDWATER

**Collection Date:** 05/24/2023 16:49

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



# Laboratory Results

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

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

Work Order: 23051194  
 Report Date: 08-Jun-23  
 Client Sample ID: Field Duplicate  
 Collection Date: 05/24/2023 12:59

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

### STANDARD METHODS 2510 B FIELD

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

### SW-846 9040B FIELD

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

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

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

Batch R329577		SampType: LCS		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		966	1000	0	96.6	90	110	05/30/2023	
Total Dissolved Solids		20		988	1000	0	98.8	90	110	05/30/2023	

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

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

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

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





## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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

**Batch R329548**    **SampType: MBLK**    Units mg/L

SampID: MBLK-204908

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

**Batch R329548**    **SampType: LCS**    Units mg/L

SampID: ICB/LCS

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

**Batch R329548**    **SampType: MS**    Units mg/L

SampID: 23050523-003BMS

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

**Batch R329548**    **SampType: MSD**    Units mg/L

SampID: 23050523-003BMSD

RPD Limit: 15

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

**Batch R329548**    **SampType: MS**    Units mg/L

SampID: 23050814-007AMS

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

**Batch R329548**    **SampType: MSD**    Units mg/L

SampID: 23050814-007AMSD

RPD Limit: 15

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

### SW-846 9036 (TOTAL)

**Batch R329494**    **SampType: MBLK**    Units mg/L

SampID: ICB/MBLK

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



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**SW-846 9036 (TOTAL)**

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

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

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

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

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

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

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

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



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

### SW-846 9036 (TOTAL)

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

Batch R329494		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 23050839-005AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		50	S	146	100.0	58.32	87.8	145.5	0.39	05/28/2023		

### SW-846 9214 (TOTAL)

Batch R329513		SampType: MBLK		Units mg/L							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	0.0500	0	0	-100	100	05/30/2023	

Batch R329513		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		0.97	1.000	0	97.0	90	110	05/30/2023	

Batch R329513		SampType: MS		Units mg/L							Date Analyzed
SampID: 23051194-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.40	2.000	0.4380	97.9	75	125	05/30/2023	

Batch R329513		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23051194-005AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.52	2.000	0.4380	104.0	2.396	5.01	05/30/2023		

Batch R329513		SampType: MS		Units mg/L							Date Analyzed
SampID: 23051194-009AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.10	2.000	0.1530	97.6	75	125	05/30/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**SW-846 9214 (TOTAL)**

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

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

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

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

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

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

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



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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

Batch 206609		SampType: MBLK		Units mg/L						
SampID: MBLK-206609										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< 0.0025	0.0007	0	0	-100	100	05/26/2023
Boron		0.0200		< 0.0200	0.0090	0	0	-100	100	05/26/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/26/2023

Batch 206609		SampType: LCS		Units mg/L						
SampID: LCS-206609										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.16	2.000	0	107.8	85	115	05/26/2023
Boron		0.0200		0.523	0.5000	0	104.6	85	115	05/26/2023
Calcium		0.100		2.71	2.500	0	108.6	85	115	05/26/2023

Batch 206609		SampType: MS		Units mg/L						
SampID: 23051194-005CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		2.16	2.000	0.05140	105.5	75	125	05/27/2023
Boron		0.0200		0.520	0.5000	0.01220	101.6	75	125	05/27/2023
Calcium		0.100		19.0	2.500	16.64	95.2	75	125	05/27/2023

Batch 206609		SampType: MSD		Units mg/L							RPD Limit: 20
SampID: 23051194-005CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Barium		0.0025		2.16	2.000	0.05140	105.6	2.162	0.05	05/27/2023	
Boron		0.0200		0.524	0.5000	0.01220	102.4	0.5201	0.82	05/27/2023	
Calcium		0.100		19.0	2.500	16.64	93.6	19.02	0.21	05/27/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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

**Batch** 206609      **SampType:** MBLK      Units mg/L  
 SampID: MBLK-206609

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

**Batch** 206609      **SampType:** LCS      Units mg/L  
 SampID: LCS-206609

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



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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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

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

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

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



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

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

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

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

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

### SW-846 7470A (TOTAL)

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

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

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





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**SW-846 7470A (TOTAL)**

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

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

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



# Receiving Check List

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23051194

**Client Project:** Groundwater Monitoring - Q1 2023 resampling

**Report Date:** 08-Jun-23

**Carrier:** Justin Colp

**Received By:** ANC

**Completed by:**

**Reviewed by:**

**On:**

Allison Colin

**On:**

25-May-23

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 <b>3.2</b>               |
| 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 #88374. - acoln - 5/25/2023 8:49:49 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 3.2 °C LTG# 1  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** PHV 88374 AC 5/25/23

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  
 \* No Pesticides per Danielle S. 5/23/23

**Project Name/Number:** Groundwater Monitoring - Q1 2023 resampling  
**Sample Collector's Name:** \_\_\_\_\_

**Results Requested**  
 Standard  1-2 Day (100% Surcharge)  
 Other  3 Day (50% Surcharge)

**Billing Instructions** \_\_\_\_\_

**# and Type of Containers**

UNP	HNO3								

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3															
23051194-001	EP-1	5-24-23 / 1123	1	3															
002	EP-2	5-24-23 / 1770	1	3															
003	EP-3	5-24-23 / 1405	1	3															
004	EP-4	5-24-23 / 1559	1	3															
005	EP-5	5-24-23 / 1055	1	3															
006	EP-7	5-24-23 / 1630	1	3															
007	Equipment Blank	5-24-23 / 1726	1	3															
008	Field Blank	5-24-23 / 1649	1	3															
009	Field Duplicate	5-24-23 / 1259	1	3															

MATRIX	INDICATE ANALYSIS REQUESTED												
	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	* Pesticides	Sulfate	TDS				
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				

**Relinquished By:** J. Gelp **Date/Time:** 5-24-23 / 1950

**Received By:** Allison Colvin **Date/Time:** 5/24/23 1950

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

23051194



July 11, 2023

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



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

**RE:** Groundwater Monitoring

**WorkOrder:** 23060001

Dear Jason McLaurin:

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

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

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

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

Sincerely,



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



## Report Contents

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**This reporting package includes the following:**

Cover Letter	1
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:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

### Abbr Definition

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)



**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

### 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:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Cooler Receipt Temp:** 13.2 °C

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

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

**Locations**

**Collinsville**

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425

**Phone** (618) 344-1004

**Fax** (618) 344-1005

**Email** jhriley@teklabinc.com

**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:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-001  
 Matrix: GROUNDWATER

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

Client Sample ID: EBG

Collection Date: 06/07/2023 12:04

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-001

**Client Sample ID:** EBG

**Matrix:** GROUNDWATER

**Collection Date:** 06/07/2023 12:04

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-002  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-1

Collection Date: 06/06/2023 13:41

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23060001-002  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-1

**Collection Date:** 06/06/2023 13:41

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-003

Client Sample ID: EP-2

Matrix: GROUNDWATER

Collection Date: 06/06/2023 13:14

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





## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-003

**Client Sample ID:** EP-2

**Matrix:** GROUNDWATER

**Collection Date:** 06/06/2023 13:14

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-004  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-3

Collection Date: 06/06/2023 12:03

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-004

**Client Sample ID:** EP-3

**Matrix:** GROUNDWATER

**Collection Date:** 06/06/2023 12:03

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-005  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-4

Collection Date: 06/07/2023 11:03

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



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-005

**Client Sample ID:** EP-4

**Matrix:** GROUNDWATER

**Collection Date:** 06/07/2023 11:03

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-006  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-5

Collection Date: 06/07/2023 11:27

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23060001-006  
**Matrix:** GROUNDWATER

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

**Client Sample ID:** EP-5

**Collection Date:** 06/07/2023 11:27

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 06/06/2023 12:45

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





## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-007

**Client Sample ID:** EP-6

**Matrix:** GROUNDWATER

**Collection Date:** 06/06/2023 12:45

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-008  
 Matrix: GROUNDWATER

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

Client Sample ID: EP-7

Collection Date: 06/06/2023 11:25

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**Lab ID:** 23060001-008

**Client Sample ID:** EP-7

**Matrix:** GROUNDWATER

**Collection Date:** 06/06/2023 11:25

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-009

Client Sample ID: Equipment Blank

Matrix: AQUEOUS

Collection Date: 06/07/2023 12:10

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Lab ID: 23060001-010

Client Sample ID: Field Blank

Matrix: AQUEOUS

Collection Date: 06/07/2023 11:45

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23060001-011  
 Matrix: GROUNDWATER

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

Client Sample ID: Field Duplicate

Collection Date: 06/06/2023 12:03

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



# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation  
**Client Project:** Groundwater Monitoring  
**Lab ID:** 23060001-011  
**Matrix:** GROUNDWATER

**Work Order:** 23060001  
**Report Date:** 11-Jul-23  
**Client Sample ID:** Field Duplicate  
**Collection Date:** 06/06/2023 12:03

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

### STANDARD METHODS 2510 B FIELD

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

### SW-846 9040B FIELD

Batch R330198		SampType: LCS		Units							Date Analyzed
SampID: LCS-R330198											
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	06/06/2023	
pH	*	1.00		7.08	7.000	0	101.1	98.57	101.4	06/07/2023	

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R330033		SampType: MBLK		Units mg/L							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	06/08/2023	

Batch R330033		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		910	1000	0	91.0	90	110	06/08/2023	

Batch R330033		SampType: DUP		Units mg/L							Date Analyzed
SampID: 23060001-001ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		342				336.0	1.77	06/08/2023	

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

Batch R330429		SampType: MBLK		Units mg/L							Date Analyzed
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	06/16/2023	

Batch R330429		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		4		20	20.00	0	101.6	90	110	06/16/2023	





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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

Batch R330429		SampType: MS		Units mg/L							Date Analyzed
SampID: 23051926-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		40		<b>361</b>	200.0	182.3	89.4	85	115	06/17/2023	

Batch R330429		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23051926-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		40		<b>360</b>	200.0	182.3	88.9	361.0	0.28	06/17/2023		

Batch R330429		SampType: MS		Units mg/L							Date Analyzed
SampID: 23060001-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>31</b>	20.00	11.95	95.8	85	115	06/16/2023	

Batch R330429		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23060001-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>31</b>	20.00	11.95	96.0	31.11	0.16	06/16/2023		

Batch R330429		SampType: MS		Units mg/L							Date Analyzed
SampID: 23060002-001BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>34</b>	20.00	14.79	96.2	85	115	06/17/2023	

Batch R330429		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23060002-001BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>34</b>	20.00	14.79	94.4	34.03	1.03	06/17/2023		

Batch R330429		SampType: MS		Units mg/L							Date Analyzed
SampID: 23060374-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>22</b>	20.00	2.410	100.1	85	115	06/16/2023	

Batch R330429		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23060374-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>22</b>	20.00	2.410	99.4	22.43	0.58	06/16/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**SW-846 9036 (TOTAL)**

Batch R330416		SampType: MBLK		Units mg/L						
SampID: ICB/MBLK										
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	06/16/2023

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

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**SW-846 9036 (TOTAL)**

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

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

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

### SW-846 9036 (TOTAL)

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

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

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

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

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

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

### SW-846 9214 (TOTAL)

Batch R329994		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		<b>&lt; 0.10</b>	0.0500	0	0	-100	100	06/08/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**SW-846 9214 (TOTAL)**

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

Batch R329994		SampType: MS		Units mg/L							
SampID: 23060001-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		<b>2.21</b>	2.000	0.2450	98.4	75	125	06/08/2023	

Batch R329994		SampType: MSD		Units mg/L							
SampID: 23060001-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.24</b>	2.000	0.2450	99.6	2.212	1.08	06/08/2023	

Batch R329994		SampType: MS		Units mg/L							
SampID: 23060287-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		<b>2.40</b>	2.000	0.5660	91.9	75	125	06/08/2023	

Batch R329994		SampType: MSD		Units mg/L							
SampID: 23060287-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.55</b>	2.000	0.5660	99.4	2.404	6.01	06/08/2023	

Batch R329994		SampType: MS		Units mg/L							
SampID: 23060296-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		<b>2.41</b>	2.000	0.4770	96.7	75	125	06/08/2023	

Batch R329994		SampType: MSD		Units mg/L							
SampID: 23060296-006AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.40</b>	2.000	0.4770	96.2	2.411	0.37	06/08/2023	

Batch R329994		SampType: MS		Units mg/L							
SampID: 23060443-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		<b>2.15</b>	2.000	0.2540	94.8	75	125	06/08/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

### SW-846 9214 (TOTAL)

Batch R329994		SampType: MSD		Units mg/L				RPD Limit: 15			Date Analyzed
SampID: 23060443-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.17</b>	2.000	0.2540	96.0	2.149	1.11	06/08/2023	

Batch R329994		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 23060666-013AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		<b>2.36</b>	2.000	0.3790	99.2	75	125	06/09/2023

Batch R329994		SampType: MSD		Units mg/L				RPD Limit: 15			Date Analyzed
SampID: 23060666-013AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		<b>2.36</b>	2.000	0.3790	98.8	2.364	0.38	06/09/2023	

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

Batch 207065		SampType: MBLK		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: MBLK-207065										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< <b>0.0025</b>	0.0007	0	0	-100	100	06/08/2023
Boron		0.0200		< <b>0.0200</b>	0.0090	0	0	-100	100	06/08/2023
Calcium		0.100		< <b>0.100</b>	0.0350	0	0	-100	100	06/08/2023

Batch 207065		SampType: LCS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: LCS-207065										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.05</b>	2.000	0	102.5	85	115	06/08/2023
Boron		0.0200		<b>0.499</b>	0.5000	0	99.8	85	115	06/08/2023
Calcium		0.100		<b>2.67</b>	2.500	0	106.7	85	115	06/08/2023

Batch 207065		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 23060001-007CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.13</b>	2.000	0.03500	104.8	75	125	06/08/2023
Boron		0.0200		<b>0.502</b>	0.5000	0	100.4	75	125	06/08/2023
Calcium		0.100		<b>4.14</b>	2.500	1.492	105.8	75	125	06/08/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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

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

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

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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

**Batch** 207065      **SampType:** LCS      **Units** mg/L

SampID: LCS-207065

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

**Batch** 207065      **SampType:** MS      **Units** mg/L

SampID: 23060001-007CMS

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





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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

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

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



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

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

**Batch 207068**      **SampType: LCS**      Units mg/L

SampID: LCS-207068

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

**Batch 207068**      **SampType: MS**      Units mg/L

SampID: 23060443-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Selenium		0.0010		<b>0.509</b>	0.5000	0	101.7	70	130	06/09/2023

**Batch 207068**      **SampType: MSD**      Units mg/L

SampID: 23060443-001BMSSD

RPD Limit: 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Selenium		0.0010		<b>0.500</b>	0.5000	0	100.0	0.5086	1.66	06/09/2023

### SW-846 7470A (TOTAL)

**Batch 206486**      **SampType: MBLK**      Units mg/L

SampID: MBLK-206486

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>&lt; 0.00020</b>	0.0001	0	0	-100	100	06/12/2023
Mercury		0.00020		<b>&lt; 0.00020</b>	0.0001	0	0	-100	100	06/12/2023

**Batch 206486**      **SampType: LCS**      Units mg/L

SampID: LCS-206486

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00464</b>	0.0050	0	92.9	85	115	06/12/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23060001

**Client Project:** Groundwater Monitoring

**Report Date:** 11-Jul-23

**SW-846 7470A (TOTAL)**

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

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

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

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



# Receiving Check List

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

Client: Southern Illinois Power Cooperation

Work Order: 23060001

Client Project: Groundwater Monitoring

Report Date: 11-Jul-23

Carrier: Justin Colp

Received By: MBP

Completed by:

Reviewed by:

On:

07-Jun-23

Timothy W. Mathis

On:

07-Jun-23

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **13.2**
- 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 #88374. - acoln - 6/7/2023 8:38:43 AM

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

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

# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23060001

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

<b>Client:</b> Southern Illinois Power Cooperation <b>Address:</b> 11543 Lake of Egypt Road <b>City / State / Zip:</b> Marion, IL 62959 <b>Contact:</b> Jason McLaurin <b>Phone:</b> (618) 964-1448 <b>E-Mail:</b> jmclaurin@sipower.org <b>Fax:</b>	<b>Samples on:</b> <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>24.8 °C</u> LTG# _____ <b>Preserved in:</b> <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> <b>Lab Notes:</b> PH 8.874 AC 017
<b>Client Comments</b> 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	

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

Project Name/Number		Sample Collector's Name		MATRIX		INDICATE ANALYSIS REQUESTED													
Groundwater Monitoring		Justin Colp		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 checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge)		UNP	HNO3																
<input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)																			
Lab Use Only	Sample Identification	Date/Time Sampled																	
23060001-001	EBG	1	3			X	X	X	X	X	X	X	X	X					
002	EP-1	6-6-23	1341	1	3	X	X	X	X	X	X	X	X	X					
003	EP-2	↓	1314	1	3	X	X	X	X	X	X	X	X	X					
004	EP-3	↓	1203	1	3	X	X	X	X	X	X	X	X	X					
005	EP-4			1	3	X	X	X	X	X	X	X	X	X					
006	EP-5			1	3	X	X	X	X	X	X	X	X	X					
007	EP-6	6-6-23	1245	1	3	X	X	X	X	X	X	X	X	X					
008	EP-7	↓	1125	1	3	X	X	X	X	X	X	X	X	X					
009	Equipment Blank			1	3	X		X	X	X	X	X	X	X					
010	Field Blank			1	3	X		X	X	X	X	X	X	X					

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	6-6-23 1625	Moussa Petre	6/6/23 1625

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

BottleOrder: 80758



# CHAIN OF CUSTODY

pg. 2 of 2 Work order # 23060001

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

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

<b>Samples on:</b> <input checked="" type="checkbox"/> ICE <input checked="" type="checkbox"/> BLUE ICE <input checked="" type="checkbox"/> NO ICE _____ °C LTG# _____
<b>Preserved in:</b> <input checked="" type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <span style="float: right;"><b>FOR LAB USE ONLY</b></span>
<b>Lab Notes:</b>

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

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

Project Name/Number		Sample Collector's Name	
Groundwater Monitoring			
Results Requested		Billing Instructions	
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)			
Lab Use Only		Sample Identification	
2306000 1-011		Field Duplicate	
Date/Time Sampled		# and Type of Containers	
6-23/ 1703		UNP	HNO3
		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	Date/Time	Received By	Date/Time
J. Colp	6-6-23 1625	Morgan Petin	6/16/23 1625

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

BottleOrder: 80758



# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23060001

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

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

**Samples on:**  ICE  BLUE ICE  NO ICE 13.2 °C **LTG#** 5  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** 80574  
LM 6/7

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

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

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

**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	# and Type of Containers												
			UNP	HNO3											
23060001-001	EBG	6-7-23 / 1204	1	3											
002	EP-1		1	3											
003	EP-2		1	3											
004	EP-3		1	3											
005	EP-4	6-7-23 / 1103	1	3											
006	EP-5	6-7-23 / 1127	1	3											
007	EP-6		1	3											
008	EP-7		1	3											
009	Equipment Blank	6-7-23 / 1210	1	3											
010	Field Blank	6-7-23 / 1145	1	3											

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

**Relinquished By:** J. GVP **Date/Time:** 6-7-23 1416

**Received By:** Mousam Yehia **Date/Time:** 6/7/23 1416

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

BottleOrder: 80758



LM  
6/7

## TEKLAB, Inc.

Sample Delivery Group: L1626093  
Samples Received: 06/14/2023  
Project Number: 23060001  
Description:

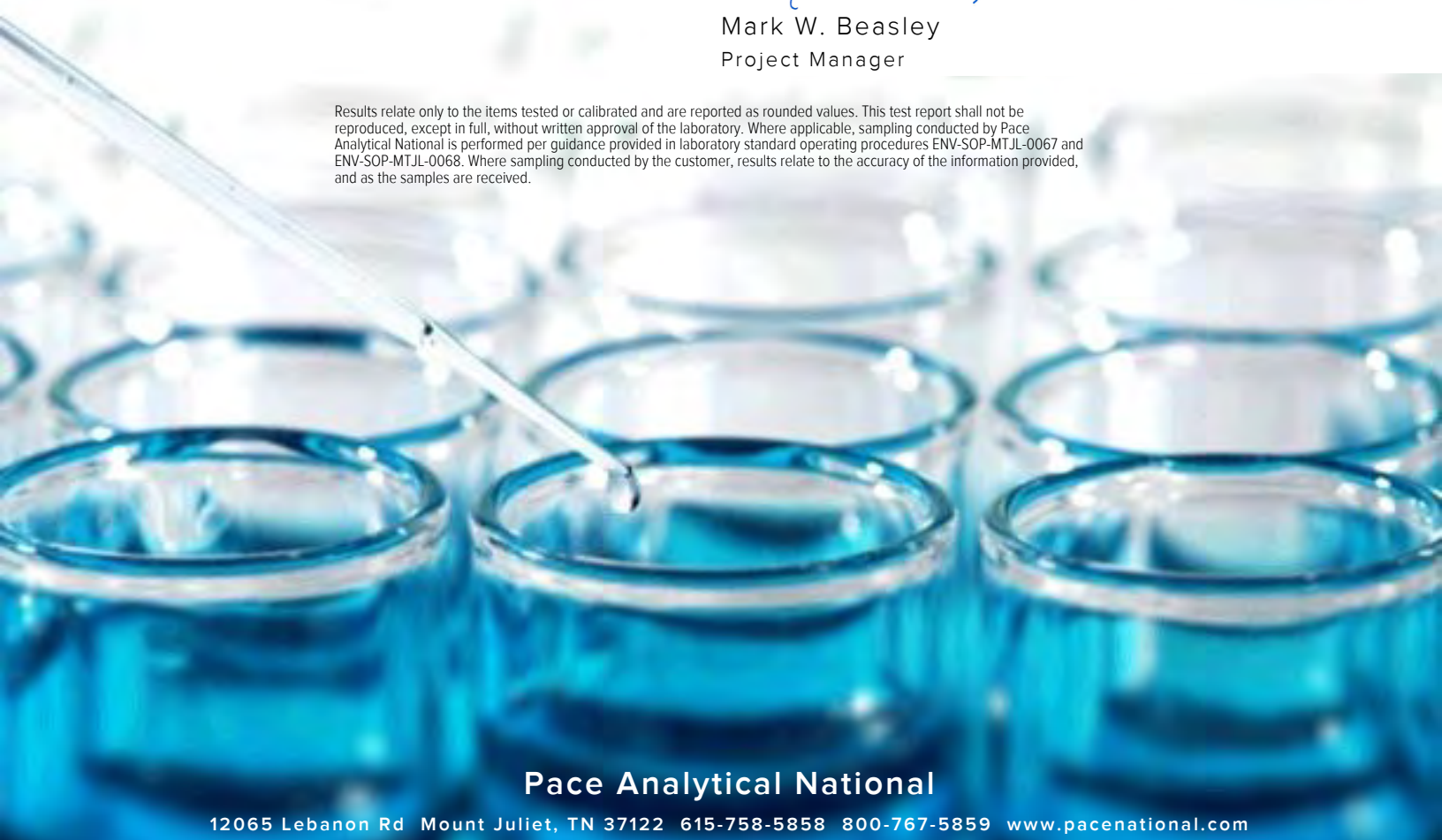
Report To: Elizabeth Hurley  
5445 Horseshoe Lake Road  
Collinsville, IL 62234

Entire Report Reviewed By:



Mark W. Beasley  
Project Manager

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



Pace Analytical National

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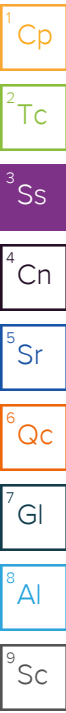
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# SAMPLE SUMMARY

## 23060001-001 L1626093-01 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/07/23 12:04 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/30/23 13:37	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/30/23 13:37	RGT	Mt. Juliet, TN



## 23060001-002 L1626093-02 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/06/23 13:41 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## 23060001-003 L1626093-03 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/06/23 13:14 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## 23060001-004 L1626093-04 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/06/23 12:03 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## 23060001-005 L1626093-05 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/07/23 11:03 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## 23060001-006 L1626093-06 Non-Potable Water

Collected by \_\_\_\_\_ Collected date/time 06/07/23 11:27 Received date/time 06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

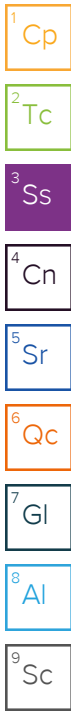
# SAMPLE SUMMARY

## 23060001-007 L1626093-07 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

06/06/23 12:45    06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN



## 23060001-008 L1626093-08 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

06/06/23 11:25    06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:47	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## 23060001-009 L1626093-09 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

06/07/23 12:10    06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 18:59	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:59	RGT	Mt. Juliet, TN

## 23060001-010 L1626093-10 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

06/07/23 11:45    06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084680	1	06/28/23 16:44	07/01/23 13:56	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084680	1	06/28/23 16:44	07/01/23 13:56	RGT	Mt. Juliet, TN

## 23060001-011 L1626093-11 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

06/06/23 12:03    06/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081142	1	06/20/23 19:26	06/26/23 17:55	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084680	1	06/28/23 16:44	07/01/23 13:56	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084680	1	06/28/23 16:44	07/01/23 13:56	RGT	Mt. Juliet, TN

# CASE NARRATIVE

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



Mark W. Beasley  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.09	J	0.639	1.15	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	135			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	106			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

- 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	1.53		0.708	1.20	06/30/2023 13:37	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.444		0.304	0.329	06/30/2023 13:37	<a href="#">WG2084678</a>
(T) Barium-133	116			30.0-143	06/30/2023 13:37	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.248	<u>U</u>	0.653	1.23	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	133			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	88.8			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

- 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	0.0926	<u>U</u>	0.692	1.29	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0926	<u>U</u>	0.230	0.380	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	90.0			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.162	<u>U</u>	0.507	0.939	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	132			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	106			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.343	<u>U</u>	0.549	0.982	06/29/2023 20:50	<a href="#">WG2084678</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.182	<u>J</u>	0.211	0.287	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	94.5			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.704	J	0.611	1.11	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	127			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	109			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

- 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	1.01	J	0.654	1.14	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.302		0.234	0.249	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	105			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.564	J	0.532	0.970	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	119			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	102			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

- 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	0.612	J	0.559	1.02	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0480	U	0.173	0.302	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	107			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.154	<u>U</u>	0.218	0.389	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	108			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	114			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

- 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	0.597		0.348	0.459	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.443		0.271	0.244	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	105			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.419	J	0.283	0.498	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	113			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	115			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.593	J	0.371	0.608	06/29/2023 18:47	<a href="#">WG2084678</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.174	J	0.240	0.348	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	81.4			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.06		0.286	0.483	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	96.7			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	104			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

- 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	1.12		0.307	0.515	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0636	<u>U</u>	0.111	0.180	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	103			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.130	<u>U</u>	0.234	0.420	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	117			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	100			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.152	<u>U</u>	0.292	0.534	06/29/2023 18:59	<a href="#">WG2084678</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0230	<u>U</u>	0.174	0.329	06/29/2023 18:59	<a href="#">WG2084678</a>
(T) Barium-133	101			30.0-143	06/29/2023 18:59	<a href="#">WG2084678</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.31		0.298	0.472	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	118			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	102			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.57		0.356	0.512	07/01/2023 13:56	<a href="#">WG2084680</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.261		0.195	0.198	07/01/2023 13:56	<a href="#">WG2084680</a>
(T) Barium-133	90.9			30.0-143	07/01/2023 13:56	<a href="#">WG2084680</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.15		0.250	0.413	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Barium	104			30.0-143	06/26/2023 17:55	<a href="#">WG2081142</a>
(T) Yttrium	100			30.0-136	06/26/2023 17:55	<a href="#">WG2081142</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.51		0.338	0.460	07/01/2023 13:56	<a href="#">WG2084680</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.364		0.228	0.202	07/01/2023 13:56	<a href="#">WG2084680</a>
(T) Barium-133	98.1			30.0-143	07/01/2023 13:56	<a href="#">WG2084680</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3945508-1 06/29/23 20:50

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.137	<u>J</u>	0.149	0.273
(T) Barium	122		122	
(T) Yttrium	109		109	

L1621260-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1621260-03 06/29/23 20:50 • (DUP) R3945508-5 06/29/23 20:50

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.341	0.351	0.638	0.307	0.394	0.638	1	10.6	0.0650	<u>U</u>	20	3
(T) Barium	125			136	136							
(T) Yttrium	102			113	113							

Laboratory Control Sample (LCS)

(LCS) R3945508-2 06/29/23 20:50

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.51	90.1	80.0-120	
(T) Barium			129		
(T) Yttrium			111		

L1621139-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-06 06/29/23 20:50 • (MS) R3945508-3 06/29/23 20:50 • (MSD) R3945508-4 06/29/23 20:50

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.44	16.4	15.1	89.7	82.0	1	70.0-130			8.18		20
(T) Barium		114			124	122							
(T) Yttrium		96.6			102	114							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3945879-1 06/26/23 17:55

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.601		0.170	0.288
<i>(T) Barium</i>	104		104	
<i>(T) Yttrium</i>	94.0		94.0	

L1621698-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1621698-14 06/26/23 17:55 • (DUP) R3945879-5 06/26/23 17:55

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.810	0.254	0.433	1.72	0.405	0.433	1	71.8	1.90		20	3
<i>(T) Barium</i>	113			116	116							
<i>(T) Yttrium</i>	99.4			107	107							

Laboratory Control Sample (LCS)

(LCS) R3945879-2 06/26/23 17:55

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.93	98.6	80.0-120	
<i>(T) Barium</i>			119		
<i>(T) Yttrium</i>			97.2		

L1621698-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621698-06 06/26/23 17:55 • (MS) R3945879-3 06/26/23 17:55 • (MSD) R3945879-4 06/26/23 17:55

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.447	10.8	11.3	104	108	1	70.0-130			4.08		20
<i>(T) Barium</i>		111			110	111							
<i>(T) Yttrium</i>		99.8			103	99.8							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3943663-1 06/29/23 18:42

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.0106	<u>U</u>	0.0235	0.0572
(T) Barium-133	93.2		93.2	

L1626093-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1626093-09 06/29/23 18:59 • (DUP) R3943663-5 06/29/23 18:47

Analyte	Original Result	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	0.0230	0.174	0.329	0.0656	0.146	0.329	1	96.2	0.188	<u>U</u>	20	3
(T) Barium-133	101			104	104							

Laboratory Control Sample (LCS)

(LCS) R3943663-2 06/29/23 18:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.34	86.7	80.0-120	
(T) Barium-133			87.4		

L1621139-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-09 06/29/23 18:47 • (MS) R3943663-3 06/29/23 18:47 • (MSD) R3943663-4 06/29/23 18:47

Analyte	Spike Amount	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	0.888	19.5	18.9	93.2	90.3	1	75.0-125			3.02		20
(T) Barium-133		95.1			95.1	101							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3944988-1 07/01/23 13:56

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0385	↓	0.0473	0.0662
(T) Barium-133	98.0		98.0	

L1621970-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621970-02 07/01/23 13:56 • (DUP) R3944988-5 07/01/23 13:56

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.877	0.358	0.262	0.698	0.362	0.262	1	22.7	0.351		20	3
(T) Barium-133	94.7			85.2	85.2							

Laboratory Control Sample (LCS)

(LCS) R3944988-2 07/01/23 13:56

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.58	91.4	80.0-120	
(T) Barium-133			97.1		

L1626093-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626093-10 07/01/23 13:56 • (MS) R3944988-3 07/01/23 13:56 • (MSD) R3944988-4 07/01/23 13:56

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.261	17.3	17.9	85.2	88.0	1	75.0-125			3.13		20
(T) Barium-133		90.9			96.9	92.2							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

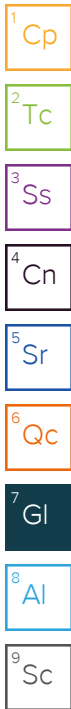
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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  FieldTeklab Inc  
5445 Horseshoe Lake Road  
Collinsville, IL 62234Cooler Temp:  Sampler:  QC Level: Project# Comments: 

Please analyze for Radium 226/228 per methods specified for Vistra/Ramboll projects.

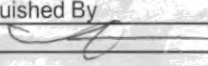
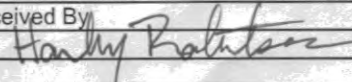
Collected at an IL site.

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

Contact: Email: Requested Due Date: Billing/PO: Phone: **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													
<u>11021093-a</u>	23060001-001	6/7/23 1204	HNO3	Groundwater	✓													
<u>-02</u>	23060001-002	6/6/23 1341	HNO3	Groundwater	✓													
<u>-03</u>	23060001-003	6/6/23 1314	HNO3	Groundwater	✓													
<u>-04</u>	23060001-004	6/6/23 1203	HNO3	Groundwater	✓													
<u>-05</u>	23060001-005	6/7/23 1103	HNO3	Groundwater	✓													
<u>-06</u>	23060001-006	6/7/23 1127	HNO3	Groundwater	✓													
<u>-07</u>	23060001-007	6/6/23 1245	HNO3	Groundwater	✓													
<u>-08</u>	23060001-008	6/6/23 1125	HNO3	Groundwater	✓													
<u>-09</u>	23060001-009	6/7/23 1210	HNO3	Groundwater	✓													
<u>-10</u>	23060001-010	6/7/23 1145	HNO3	Groundwater	✓													
<u>-11</u>	23060001-011	6/6/23 1203	HNO3	Groundwater	✓													

*Relinquished By	Date/Time	Received By	Date/Time
			6/14/23 0845

G.B. AT  
22.0 ± 0.220  
1724 13392365

**Sample Receipt Checklist**

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

does not provide client/sampler information without proper authorization, and proprietary right  
 as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

PH-13BDH4321 TRC-2:42141  
CR6-0221V

DocRevA  
2016



October 17, 2023

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



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

**RE:** Groundwater Monitoring

**WorkOrder:** 23090001

Dear Jason McLaurin:

TEKLAB, INC received 11 samples on 9/21/2023 2:21:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,



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





## Report Contents

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	23
Receiving Check List	49
Chain of Custody	Appended

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### Abbr Definition

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

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

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

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

DNI Did not ignite

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

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

IDPH IL Dept. of Public Health

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

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

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

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

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

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

MW Molecular weight

NC Data is not acceptable for compliance purposes

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

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

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

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

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

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

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

TNTC Too numerous to count (> 200 CFU)

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### 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:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Cooler Receipt Temp:** 2.8 °C

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

EP-2 went dry prior to sample collection. EP-5 went dry during purging.

Ra226/228 was performed by Summit Environmental Technologies, Inc. See attached report for results and QC.

### Locations

#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425

**Phone** (618) 344-1004

**Fax** (618) 344-1005

**Email** jhriley@teklabinc.com

#### Collinsville Air

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#### Springfield

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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:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23090001-001  
 Matrix: GROUNDWATER

Work Order: 23090001  
 Report Date: 17-Oct-23

Client Sample ID: EBG

Collection Date: 09/18/2023 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		9.20	ft	1	09/18/2023 11:25	R337079
Elevation of groundwater surface	*	0	0		515.67	ft	1	09/18/2023 11:25	R337079
Measuring Point Elevation	*	0	0		524.87	ft	1	09/18/2023 11:25	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		5.20	gal	1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		11	NTU	1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		84	mV	1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		0.567	mS/cm	1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		18.1	°C	1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		1.74	mg/L	1	09/18/2023 11:25	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		6.69		1	09/18/2023 11:25	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		326	mg/L	1	09/21/2023 9:43	R336743
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		11	mg/L	1	09/21/2023 18:04	R336730
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	31	50		81	mg/L	5	09/21/2023 18:15	R336705
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.63	mg/L	1	09/20/2023 10:38	R336590
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0426	mg/L	1	09/21/2023 9:34	212166
Boron	NELAP	0.0090	0.020	J	0.016	mg/L	1	09/21/2023 9:34	212166
Calcium	NELAP	0.0350	0.100		12.4	mg/L	1	09/21/2023 9:34	212166
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Chromium	NELAP	0.0007	0.0015	J	0.0008	mg/L	5	09/21/2023 23:49	212166
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/21/2023 23:49	212166
Lithium	*	0.0015	0.0030		0.0185	mg/L	5	09/23/2023 4:23	212166
Molybdenum	*	0.0006	0.0015		0.0052	mg/L	5	09/23/2023 4:23	212166
Selenium	NELAP	0.0006	0.0010		0.0012	mg/L	5	09/23/2023 4:23	212166
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/21/2023 23:49	212166
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020	J	0.00007	mg/L	1	09/20/2023 9:29	212187
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/13/2012 14:22	R337811



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-001

**Client Sample ID:** EBG

**Matrix:** GROUNDWATER

**Collection Date:** 09/18/2023 11:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-228	*	0	0		See Attached	pci/L	1	10/13/2012 14:22	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23090001-002  
 Matrix: GROUNDWATER

Work Order: 23090001  
 Report Date: 17-Oct-23

Client Sample ID: EP-1

Collection Date: 09/18/2023 15:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		7.88	ft	1	09/18/2023 15:27	R337079
Elevation of groundwater surface	*	0	0		511.84	ft	1	09/18/2023 15:27	R337079
Measuring Point Elevation	*	0	0		519.72	ft	1	09/18/2023 15:27	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		5.20	gal	1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		6.1	NTU	1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		68	mV	1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		2.91	mS/cm	1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		16.5	°C	1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		0.97	mg/L	1	09/18/2023 15:27	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		6.47		1	09/18/2023 15:27	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		2460	mg/L	1	09/21/2023 9:43	R336743
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		28	mg/L	1	09/21/2023 18:25	R336730
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	307	500		1430	mg/L	50	09/21/2023 18:31	R336705
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.29	mg/L	1	09/20/2023 10:40	R336590
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0196	mg/L	1	09/21/2023 9:36	212166
Boron	NELAP	0.0090	0.0200		1.29	mg/L	1	09/21/2023 9:36	212166
Calcium	NELAP	0.0350	0.100		548	mg/L	1	09/21/2023 9:36	212166
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/22/2023 0:19	212166
Arsenic	NELAP	0.0004	0.0010	J	0.0006	mg/L	5	09/22/2023 0:19	212166
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/22/2023 0:19	212166
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/22/2023 0:19	212166
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/22/2023 0:19	212166
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	09/22/2023 0:19	212166
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/22/2023 0:19	212166
Lithium	*	0.0015	0.0030		0.0099	mg/L	5	09/23/2023 4:30	212166
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/23/2023 4:30	212166
Selenium	NELAP	0.0006	0.0010		0.0025	mg/L	5	09/23/2023 4:30	212166
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/22/2023 0:19	212166
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020	J	0.00007	mg/L	1	09/20/2023 9:31	212187
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811





# Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-002

**Client Sample ID:** EP-1

**Matrix:** GROUNDWATER

**Collection Date:** 09/18/2023 15:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23090001-004  
 Matrix: GROUNDWATER

Work Order: 23090001  
 Report Date: 17-Oct-23

Client Sample ID: EP-3

Collection Date: 09/20/2023 14:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		16.83	ft	1	09/20/2023 14:05	R337079
Elevation of groundwater surface	*	0	0		502.12	ft	1	09/20/2023 14:05	R337079
Measuring Point Elevation	*	0	0		518.95	ft	1	09/20/2023 14:05	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		3.12	gal	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		8.9	NTU	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		-77	mV	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		1.64	mS/cm	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		22.3	°C	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		0.53	mg/L	1	09/20/2023 14:05	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		6.26		1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	40	50		770	mg/L	2.5	09/22/2023 11:31	R336815
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		144	mg/L	10	09/22/2023 17:22	R336801
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	31	50		158	mg/L	5	09/27/2023 12:39	R337008
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.25	mg/L	1	09/26/2023 10:51	R336875
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0772	mg/L	1	09/22/2023 12:03	212299
Boron	NELAP	0.0090	0.0200		0.0611	mg/L	1	09/22/2023 12:03	212299
Calcium	NELAP	0.0350	0.100		52.6	mg/L	1	09/22/2023 15:00	212299
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/23/2023 10:01	212299
Arsenic	NELAP	0.0004	0.0010		0.0073	mg/L	5	09/23/2023 10:01	212299
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/23/2023 10:01	212299
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/23/2023 10:01	212299
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/23/2023 10:01	212299
Cobalt	NELAP	0.0001	0.0010		0.0841	mg/L	5	09/23/2023 10:01	212299
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/23/2023 10:01	212299
Lithium	*	0.0015	0.0030		0.0694	mg/L	5	09/29/2023 16:19	212299
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/23/2023 10:01	212299
Selenium	NELAP	0.0006	0.0010	J	0.0007	mg/L	5	09/23/2023 10:01	212299
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/23/2023 10:01	212299
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/29/2023 9:37	212516
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-004

**Client Sample ID:** EP-3

**Matrix:** GROUNDWATER

**Collection Date:** 09/20/2023 14:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23090001

Client Project: Groundwater Monitoring

Report Date: 17-Oct-23

Lab ID: 23090001-005

Client Sample ID: EP-4

Matrix: GROUNDWATER

Collection Date: 09/21/2023 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		7.39	ft	1	09/21/2023 11:50	R337079
Elevation of groundwater surface	*	0	0		512.35	ft	1	09/21/2023 11:50	R337079
Measuring Point Elevation	*	0	0		519.74	ft	1	09/21/2023 11:50	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		5.20	gal	1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		7.5	NTU	1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		-46	mV	1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		2.73	mS/cm	1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		24.3	°C	1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		0.76	mg/L	1	09/21/2023 11:50	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		5.93		1	09/21/2023 11:50	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	40	50		1700	mg/L	2.5	09/25/2023 11:09	R336867
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		448	mg/L	10	09/26/2023 15:27	R336945
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	123	200		525	mg/L	20	09/27/2023 12:42	R337008
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.11	mg/L	1	09/26/2023 10:53	R336875
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0239	mg/L	1	09/26/2023 10:54	212370
Boron	NELAP	0.0090	0.0200		10.5	mg/L	1	09/26/2023 10:54	212370
Calcium	NELAP	0.0350	0.100		147	mg/L	1	09/26/2023 10:54	212370
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/28/2023 6:24	212370
Arsenic	NELAP	0.0004	0.0010		0.0089	mg/L	5	09/28/2023 6:24	212370
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/29/2023 16:30	212370
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/28/2023 6:24	212370
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/29/2023 16:30	212370
Cobalt	NELAP	0.0001	0.0010		0.267	mg/L	5	09/29/2023 16:30	212370
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:24	212370
Lithium	*	0.0015	0.0030	J	0.0026	mg/L	5	09/29/2023 16:30	212370
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/28/2023 6:24	212370
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:24	212370
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/28/2023 6:24	212370
<i>CCV recovered outside the upper control limits for Be. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/29/2023 9:39	212516



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-005

**Client Sample ID:** EP-4

**Matrix:** GROUNDWATER

**Collection Date:** 09/21/2023 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23090001

Client Project: Groundwater Monitoring

Report Date: 17-Oct-23

Lab ID: 23090001-007

Client Sample ID: EP-6

Matrix: GROUNDWATER

Collection Date: 09/19/2023 13:32

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		3.97	ft	1	09/19/2023 13:32	R337079
Elevation of groundwater surface	*	0	0		501.14	ft	1	09/19/2023 13:32	R337079
Measuring Point Elevation	*	0	0		505.11	ft	1	09/19/2023 13:32	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		5.33	gal	1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		9.3	NTU	1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		158	mV	1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		0.294	mS/cm	1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		22.2	°C	1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		1.00	mg/L	1	09/19/2023 13:32	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		5.04		1	09/19/2023 13:32	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		212	mg/L	1	09/21/2023 9:44	R336743
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		20	mg/L	1	09/21/2023 18:33	R336730
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	12	20		53	mg/L	2	09/21/2023 18:39	R336705
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10	J	0.06	mg/L	1	09/20/2023 10:42	R336590
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0307	mg/L	1	09/21/2023 15:31	212216
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	09/21/2023 15:31	212216
Calcium	NELAP	0.0350	0.100		1.26	mg/L	1	09/21/2023 15:31	212216
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/22/2023 2:00	212216
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/22/2023 2:00	212216
Beryllium	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	09/22/2023 2:00	212216
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/22/2023 2:00	212216
Chromium	NELAP	0.0010	0.0015		0.0015	mg/L	5	09/22/2023 2:00	212216
Cobalt	NELAP	0.0001	0.0010	J	0.0008	mg/L	5	09/22/2023 2:00	212216
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/22/2023 2:00	212216
Lithium	*	0.0015	0.0030		0.0139	mg/L	5	09/29/2023 9:18	212216
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/22/2023 2:00	212216
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/23/2023 7:03	212216
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/22/2023 2:00	212216
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020	J	0.00008	mg/L	1	09/21/2023 9:13	212243
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-007

**Client Sample ID:** EP-6

**Matrix:** GROUNDWATER

**Collection Date:** 09/19/2023 13:32

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23090001

Client Project: Groundwater Monitoring

Report Date: 17-Oct-23

Lab ID: 23090001-008

Client Sample ID: EP-7

Matrix: GROUNDWATER

Collection Date: 09/19/2023 11:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		14.26	ft	1	09/19/2023 11:05	R337079
Elevation of groundwater surface	*	0	0		501.18	ft	1	09/19/2023 11:05	R337079
Measuring Point Elevation	*	0	0		515.44	ft	1	09/19/2023 11:05	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		5.20	gal	1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		8.2	NTU	1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		-36	mV	1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		1.81	mS/cm	1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		19.7	°C	1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		0.45	mg/L	1	09/19/2023 11:05	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		5.81		1	09/19/2023 11:05	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		1010	mg/L	1	09/21/2023 9:44	R336743
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		231	mg/L	10	09/21/2023 18:57	R336730
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	61	100		250	mg/L	10	09/21/2023 18:58	R336705
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.18	mg/L	1	09/20/2023 10:44	R336590
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0372	mg/L	1	09/21/2023 15:32	212216
Boron	NELAP	0.0090	0.0200		0.534	mg/L	1	09/21/2023 15:32	212216
Calcium	NELAP	0.0350	0.100		75.4	mg/L	1	09/21/2023 15:32	212216
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/22/2023 2:06	212216
Arsenic	NELAP	0.0004	0.0010		0.0069	mg/L	5	09/22/2023 2:06	212216
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/22/2023 2:06	212216
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/22/2023 2:06	212216
Chromium	NELAP	0.0010	0.0015		< 0.0015	mg/L	5	09/22/2023 2:06	212216
Cobalt	NELAP	0.0001	0.0010		0.163	mg/L	5	09/22/2023 2:06	212216
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/22/2023 2:06	212216
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	09/29/2023 9:23	212216
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/22/2023 2:06	212216
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/23/2023 7:09	212216
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/22/2023 2:06	212216
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020	S	< 0.00020	mg/L	1	09/21/2023 9:15	212243

Matrix spike did not recover within control limits due to matrix interference. Verified by bench spike.





## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-008

**Client Sample ID:** EP-7

**Matrix:** GROUNDWATER

**Collection Date:** 09/19/2023 11:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation  
 Client Project: Groundwater Monitoring  
 Lab ID: 23090001-009  
 Matrix: AQUEOUS

Work Order: 23090001  
 Report Date: 17-Oct-23

Client Sample ID: Equipment Blank

Collection Date: 09/21/2023 12:04

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	09/25/2023 11:10	R336867
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		< 4	mg/L	1	09/26/2023 15:35	R336945
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	6	10		< 10	mg/L	1	09/27/2023 12:47	R337008
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	09/26/2023 10:55	R336875
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	09/26/2023 10:55	212370
Boron	NELAP	0.0090	0.020	J	0.0099	mg/L	1	09/26/2023 10:55	212370
Calcium	NELAP	0.0350	0.100		< 0.100	mg/L	1	09/26/2023 10:55	212370
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/28/2023 6:30	212370
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/28/2023 6:30	212370
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/29/2023 16:36	212370
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/28/2023 6:30	212370
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/29/2023 16:36	212370
Cobalt	NELAP	0.0001	0.0010		< 0.0010	mg/L	5	09/29/2023 16:36	212370
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:30	212370
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	09/29/2023 16:36	212370
Molybdenum	*	0.0006	0.0015		0.0025	mg/L	5	09/28/2023 6:30	212370
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:30	212370
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/28/2023 6:30	212370
<i>CCV recovered outside the upper control limits for Be. Sample results are below the reporting limit. Data is reportable per the TNI standard.</i>									
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/29/2023 9:41	212516
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-010

**Client Sample ID:** Field Blank

**Matrix:** AQUEOUS

**Collection Date:** 09/21/2023 12:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	16	20		< 20	mg/L	1	09/25/2023 11:10	R336867
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	1	4		< 4	mg/L	1	09/26/2023 15:40	R336945
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	6	10		< 10	mg/L	1	09/27/2023 12:50	R337008
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		< 0.10	mg/L	1	09/26/2023 10:58	R336875
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		< 0.0025	mg/L	1	09/26/2023 10:56	212370
Boron	NELAP	0.0090	0.0200		< 0.0200	mg/L	1	09/26/2023 10:56	212370
Calcium	NELAP	0.035	0.10	J	0.049	mg/L	1	09/26/2023 10:56	212370
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/28/2023 6:36	212370
Arsenic	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/28/2023 6:36	212370
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	10/02/2023 10:34	212370
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/28/2023 6:36	212370
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/29/2023 17:16	212370
Cobalt	NELAP	0.0001	0.0010	J	0.0003	mg/L	5	09/29/2023 17:16	212370
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:36	212370
Lithium	*	0.0015	0.0030		< 0.0030	mg/L	5	10/02/2023 10:34	212370
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/28/2023 6:36	212370
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/28/2023 6:36	212370
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/28/2023 6:36	212370
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/29/2023 9:44	212516
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



# Laboratory Results

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

Client: Southern Illinois Power Cooperation

Work Order: 23090001

Client Project: Groundwater Monitoring

Report Date: 17-Oct-23

Lab ID: 23090001-011

Client Sample ID: Field Duplicate

Matrix: GROUNDWATER

Collection Date: 09/20/2023 14:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>									
Depth to water from measuring point	*	0	0		16.83	ft	1	09/20/2023 14:05	R337079
Elevation of groundwater surface	*	0	0		502.12	ft	1	09/20/2023 14:05	R337079
Measuring Point Elevation	*	0	0		518.95	ft	1	09/20/2023 14:05	R337079
<b>FIELD PURGE VOLUME</b>									
Purge Volume	*	0	0		3.12	gal	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2130 B FIELD</b>									
Turbidity	*	1.0	1.0		8.9	NTU	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 18TH ED. 2580 B FIELD</b>									
Oxidation-Reduction Potential	*	-300	-300		-77	mV	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2510 B FIELD</b>									
Spec. Conductance, Field	*	0	0		1.64	mS/cm	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2550 B FIELD</b>									
Temperature	*	0	0		22.3	°C	1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 4500-O G FIELD</b>									
Oxygen, Dissolved	*	0	0		0.53	mg/L	1	09/20/2023 14:05	R337079
<b>SW-846 9040B FIELD</b>									
pH	*	0	1.00		6.26		1	09/20/2023 14:05	R337079
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>									
Total Dissolved Solids	NELAP	40	50		665	mg/L	2.5	09/22/2023 11:31	R336815
<b>STANDARD METHODS 4500-CL E (TOTAL) 1997, 2011</b>									
Chloride	NELAP	5	40		120	mg/L	10	09/22/2023 17:28	R336801
<b>SW-846 9036 (TOTAL)</b>									
Sulfate	NELAP	61	100		109	mg/L	10	09/22/2023 17:28	R336796
<b>SW-846 9214 (TOTAL)</b>									
Fluoride	NELAP	0.04	0.10		0.20	mg/L	1	09/26/2023 11:09	R336875
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>									
Barium	NELAP	0.0007	0.0025		0.0930	mg/L	1	09/22/2023 12:56	212299
Boron	NELAP	0.0090	0.0200		0.0778	mg/L	1	09/22/2023 12:56	212299
Calcium	NELAP	0.0350	0.100		37.1	mg/L	1	09/22/2023 12:56	212299
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>									
Antimony	NELAP	0.0004	0.0010		< 0.0010	mg/L	5	09/23/2023 10:07	212299
Arsenic	NELAP	0.0004	0.0010		0.0089	mg/L	5	09/23/2023 10:07	212299
Beryllium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/23/2023 10:07	212299
Cadmium	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	09/23/2023 10:07	212299
Chromium	NELAP	0.0007	0.0015		< 0.0015	mg/L	5	09/23/2023 10:07	212299
Cobalt	NELAP	0.0001	0.0010		0.105	mg/L	5	09/23/2023 10:07	212299
Lead	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/23/2023 10:07	212299
Lithium	*	0.0015	0.0030		0.0268	mg/L	5	09/29/2023 16:25	212299
Molybdenum	*	0.0006	0.0015		< 0.0015	mg/L	5	09/23/2023 10:07	212299
Selenium	NELAP	0.0006	0.0010		< 0.0010	mg/L	5	09/23/2023 10:07	212299
Thallium	NELAP	0.0010	0.0020		< 0.0020	mg/L	5	09/23/2023 10:07	212299
<b>SW-846 7470A (TOTAL)</b>									
Mercury	NELAP	0.00006	0.00020		< 0.00020	mg/L	1	09/29/2023 9:46	212516
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-226	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



## Laboratory Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Lab ID:** 23090001-011

**Client Sample ID:** Field Duplicate

**Matrix:** GROUNDWATER

**Collection Date:** 09/20/2023 14:05

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>									
Radium-228	*	0	0		See Attached	pci/L	1	10/11/2023 14:59	R337811



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### STANDARD METHODS 2510 B FIELD

Batch R337079		SampType: LCS		Units mS/cm							
SampID: LCS-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1.42	1.412	0	100.7	90	110	09/18/2023	

Batch R337079		SampType: LCS		Units mS/cm							
SampID: LCS-2											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1.42	1.412	0	100.4	90	110	09/19/2023	

Batch R337079		SampType: LCS		Units mS/cm							
SampID: LCS-3											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1.42	1.412	0	100.2	90	110	09/20/2023	

Batch R337079		SampType: LCS		Units mS/cm							
SampID: LCS-4											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Spec. Conductance, Field	*	0		1.41	1.412	0	100.1	90	110	09/21/2023	

### SW-846 9040B FIELD

Batch R337079		SampType: LCS		Units							
SampID: LCS-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		6.99	7.000	0	99.9	98.57	101.4	09/18/2023	

Batch R337079		SampType: LCS		Units							
SampID: LCS-2											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		7.01	7.000	0	100.1	98.57	101.4	09/19/2023	

Batch R337079		SampType: LCS		Units							
SampID: LCS-3											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		7.01	7.000	0	100.1	98.57	101.4	09/20/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### SW-846 9040B FIELD

Batch R337079		SampType: LCS		Units							
SampID: LCS-4											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
pH	*	1.00		7.00	7.000	0	100.0	98.57	101.4	09/21/2023	

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R336743		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	09/21/2023	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	09/21/2023	

Batch R336743		SampType: LCS		Units mg/L							
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		948	1000	0	94.8	90	110	09/21/2023	
Total Dissolved Solids		20		940	1000	0	94.0	90	110	09/21/2023	

Batch R336743		SampType: DUP		Units mg/L							
SampID: 23091311-002ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		50		425				435.0	2.33	09/21/2023	

Batch R336743		SampType: DUP		Units mg/L							
SampID: 23091314-002ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		50		425				435.0	2.33	09/21/2023	

Batch R336743		SampType: DUP		Units mg/L							
SampID: 23091454-003BDUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		558				538.0	3.65	09/21/2023	

Batch R336743		SampType: DUP		Units mg/L							
SampID: 23091500-001ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		660				636.0	3.70	09/21/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R336815		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	09/22/2023
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	09/22/2023
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	09/22/2023

Batch R336815		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		962	1000	0	96.2	90	110	09/22/2023
Total Dissolved Solids		20		964	1000	0	96.4	90	110	09/22/2023
Total Dissolved Solids		20		950	1000	0	95.0	90	110	09/22/2023

Batch R336815		SampType: DUP		Units mg/L							RPD Limit 10
SampID: 23080690-014BDUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		542				524.0	3.38	09/22/2023	

Batch R336815		SampType: DUP		Units mg/L							RPD Limit 10
SampID: 23091500-006ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		50		585				565.0	3.48	09/22/2023	

Batch R336815		SampType: DUP		Units mg/L							RPD Limit 10
SampID: 23091500-015ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		20		380				386.0	1.57	09/22/2023	

Batch R336867		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	09/25/2023

Batch R336867		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		938	1000	0	93.8	90	110	09/25/2023





## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R336867		SampType: DUP		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 23091595-002ADUP											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Total Dissolved Solids		50		<b>350</b>				365.0	4.20	09/25/2023	

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

Batch R336730		SampType: MBLK		Units mg/L				Low Limit		High Limit	Date Analyzed
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	09/21/2023	

### Batch R336730 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		<b>19</b>	20.00	0	94.2	90	110	09/21/2023

### Batch R336730 SampType: MS Units mg/L

SampID: 23090001-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		<b>29</b>	20.00	11.05	90.8	85	115	09/21/2023

### Batch R336730 SampType: MSD Units mg/L

Batch R336730		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 23090001-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		<b>29</b>	20.00	11.05	90.2	29.20	0.41	09/21/2023	

### Batch R336730 SampType: MS Units mg/L

SampID: 23091311-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		<b>43</b>	20.00	24.87	90.2	85	115	09/21/2023

### Batch R336730 SampType: MSD Units mg/L

Batch R336730		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 23091311-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		<b>43</b>	20.00	24.87	90.6	42.92	0.16	09/21/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

Batch R336730		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091314-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		20		<b>160</b>	100.0	70.73	89.1	85	115	09/21/2023	

Batch R336730		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091314-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		20		<b>162</b>	100.0	70.73	91.0	159.8	1.21	09/21/2023		

Batch R336801		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>&lt; 4</b>	0.5000	0	0	-100	100	09/22/2023	

Batch R336801		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>19</b>	20.00	0	93.4	90	110	09/22/2023	

Batch R336801		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091500-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>33</b>	20.00	14.98	87.7	85	115	09/22/2023	

Batch R336801		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091500-004AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>33</b>	20.00	14.98	89.0	32.52	0.80	09/22/2023		

Batch R336801		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091500-012AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>27</b>	20.00	9.220	90.3	85	115	09/22/2023	

Batch R336801		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091500-012AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>28</b>	20.00	9.220	94.3	27.28	2.89	09/22/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

Batch R336801		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091535-002CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>32</b>	20.00	14.99	86.1	85	115	09/22/2023	

Batch R336801		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091535-002CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>32</b>	20.00	14.99	87.2	32.21	0.65	09/22/2023		

Batch R336801		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091595-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>25</b>	20.00	6.850	89.6	85	115	09/22/2023	

Batch R336801		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091595-002AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>24</b>	20.00	6.850	88.0	24.76	1.26	09/22/2023		

Batch R336945		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		< 4	0.5000	0	0	-100	100	09/26/2023	

Batch R336945		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>21</b>	20.00	0	105.2	90	110	09/26/2023	

Batch R336945		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091812-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4	S	<b>37</b>	20.00	20.84	82.7	85	115	09/26/2023	

Batch R336945		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091812-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4	S	<b>37</b>	20.00	20.84	83.1	37.37	0.24	09/26/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

Batch R336945		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091812-012AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		8	S	81	40.00	48.95	81.3	85	115	09/26/2023	

Batch R336945		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091812-012AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		8	S	82	40.00	48.95	82.6	81.47	0.62	09/26/2023		

Batch R337023		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		< 4	0.5000	0	0	-100	100	09/27/2023	

Batch R337023		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		20	20.00	0	99.6	90	110	09/27/2023	

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091473-035AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		24	20.00	3.980	100.2	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091473-035AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		24	20.00	3.980	98.1	24.03	1.81	09/27/2023		

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091473-035BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		25	20.00	3.760	107.0	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091473-035BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		24	20.00	3.760	102.4	25.17	3.81	09/27/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091473-038AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>39</b>	20.00	20.03	96.3	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091473-038AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>39</b>	20.00	20.03	95.7	39.29	0.33	09/27/2023		

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091473-038BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		<b>39</b>	20.00	19.98	93.2	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091473-038BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		<b>39</b>	20.00	19.98	95.2	38.62	1.06	09/27/2023		

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091813-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		20		<b>215</b>	100.0	125.0	90.0	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091813-006AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		20		<b>214</b>	100.0	125.0	89.0	215.0	0.48	09/27/2023		

Batch R337023		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091813-009AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		40		<b>282</b>	200.0	93.53	94.1	85	115	09/27/2023	

Batch R337023		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091813-009AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		40		<b>284</b>	200.0	93.53	95.3	281.7	0.86	09/27/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R336705		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	09/21/2023	

Batch R336705		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-212238											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate	*	10		< 10	6.000	0	0	-100	100	09/21/2023	

Batch R336705		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	95.5	90	110	09/21/2023	

Batch R336705		SampType: MS		Units mg/L							Date Analyzed
SampID: 23090001-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		171	100.0	81.15	90.3	85	115	09/21/2023	

Batch R336705		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 23090001-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		50		172	100.0	81.15	90.8	171.4	0.29	09/21/2023		

Batch R336705		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091311-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		45	20.00	26.37	93.3	85	115	09/21/2023	

Batch R336705		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 23091311-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		10		45	20.00	26.37	95.0	45.03	0.73	09/21/2023		

Batch R336705		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091314-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		30	20.00	13.14	86.4	85	115	09/21/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R336705		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091314-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		31	20.00	13.14	87.5	30.41	0.72	09/21/2023	

Batch R336705		SampType: MS		Units mg/L							
SampID: 23091441-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		196	100.0	103.6	92.0	85	115	09/21/2023	

Batch R336705		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091441-007AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		199	100.0	103.6	95.4	195.5	1.75	09/21/2023	

Batch R336796		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	09/22/2023	

Batch R336796		SampType: MBLK		Units mg/L							
SampID: MB-R336796											
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	09/22/2023	

Batch R336796		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		18	20.00	0	90.1	90	110	09/22/2023	

Batch R336796		SampType: LCS		Units mg/L							
SampID: LCS-R336796											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		18	20.00	0	90.1	90	110	09/22/2023	

Batch R336796		SampType: MS		Units mg/L							
SampID: 23091454-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20	S	85	40.00	51.08	84.8	90	110	09/22/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R336796		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091454-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20	S	<b>86</b>	40.00	51.08	87.6	84.98	1.36	09/22/2023	

Batch R336796		SampType: MS		Units mg/L							
SampID: 23091500-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	<b>12</b>	20.00	0	60.6	85	115	09/22/2023	

Batch R336796		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091500-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	<b>13</b>	20.00	0	63.8	12.11	5.15	09/22/2023	

Batch R336796		SampType: MS		Units mg/L							
SampID: 23091595-002AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	<b>26</b>	20.00	10.35	77.0	85	115	09/22/2023	

Batch R336796		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091595-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	<b>26</b>	20.00	10.35	77.4	25.75	0.27	09/22/2023	

Batch R336910		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	09/26/2023	

Batch R336910		SampType: MBLK		Units mg/L							
SampID: MB-R336910											
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	09/26/2023	

Batch R336910		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		<b>18</b>	20.00	0	90.5	90	110	09/26/2023	





## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R336910		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-R336910											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		<b>18</b>	20.00	0	90.5	90	110	09/26/2023	

Batch R336910		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091535-002CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100	S	<b>266</b>	200.0	105.8	80.2	90	110	09/26/2023	

Batch R336910		SampType: MSD		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 23091535-002CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		100	S	<b>263</b>	200.0	105.8	78.5	266.1	1.26	09/26/2023		

Batch R337008		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		<b>&lt; 10</b>	6.140	0	0	-100	100	09/27/2023	

Batch R337008		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MB-R337008											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		<b>&lt; 10</b>	6.140	0	0	-100	100	09/27/2023	

Batch R337008		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		<b>19</b>	20.00	0	93.6	90	110	09/27/2023	

Batch R337008		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-R337008											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		<b>19</b>	20.00	0	93.6	90	110	09/27/2023	

Batch R337008		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091290-001BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		5000		<b>23300</b>	10000	13420	99.0	90	110	09/28/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091290-001BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		5000		<b>23500</b>	10000	13420	100.6	23320	0.69	09/28/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091473-035AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100	S	<b>489</b>	200.0	127.1	181.0	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091473-035AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100	SR	<b>120</b>	200.0	127.1	-3.3	489.0	120.93	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091473-035BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100	S	<b>289</b>	200.0	124.6	82.3	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091473-035BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		<b>296</b>	200.0	124.6	85.5	289.1	2.20	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091473-038AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		<b>354</b>	200.0	179.5	87.1	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091473-038AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		<b>360</b>	200.0	179.5	90.1	353.8	1.65	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091473-038BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		<b>360</b>	200.0	178.3	90.7	85	115	09/27/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9036 (TOTAL)**

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091473-038BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		<b>363</b>	200.0	178.3	92.6	359.6	1.03	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091500-012AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20	E	<b>103</b>	40.00	66.47	92.1	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091500-012AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20	E	<b>105</b>	40.00	66.47	96.3	103.3	1.63	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091807-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		<b>356</b>	200.0	165.6	95.2	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091807-003AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		<b>339</b>	200.0	165.6	86.9	355.9	4.74	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091812-012AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100	E	<b>517</b>	200.0	335.3	91.0	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091812-012AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100	E	<b>530</b>	200.0	335.3	97.5	517.3	2.47	09/27/2023	

Batch R337008		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 23091813-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		<b>403</b>	200.0	222.8	90.0	85	115	09/27/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### SW-846 9036 (TOTAL)

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091813-006AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		412	200.0	222.8	94.7	402.9	2.27	09/27/2023	

Batch R337008		SampType: MS		Units mg/L							
SampID: 23091813-009AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100	E	629	200.0	428.4	100.1	85	115	09/27/2023	

Batch R337008		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 23091813-009AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100	E	636	200.0	428.4	104.0	628.6	1.24	09/27/2023	

### SW-846 9214 (TOTAL)

Batch R336590		SampType: MBLK		Units mg/L							
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	09/20/2023	

Batch R336590		SampType: LCS		Units mg/L							
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.98	1.000	0	97.5	90	110	09/20/2023	

Batch R336590		SampType: MS		Units mg/L							
SampID: 23091020-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.50	2.000	0.2920	110.6	75	125	09/20/2023	

Batch R336590		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 23091020-002BMDS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.44	2.000	0.2920	107.2	2.504	2.71	09/20/2023	



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9214 (TOTAL)**

Batch R336590		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091090-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.31	2.000	0.3170	99.6	75	125	09/20/2023	

Batch R336590		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091090-008AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.12	2.000	0.3170	90.4	2.308	8.30	09/20/2023		

Batch R336590		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091201-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.27	2.000	0.2940	98.8	75	125	09/20/2023	

Batch R336590		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091201-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.36	2.000	0.2940	103.3	2.270	3.89	09/20/2023		

Batch R336590		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091290-003BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.88	2.000	0.8540	101.4	75	125	09/20/2023	

Batch R336590		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091290-003BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.86	2.000	0.8540	100.4	2.882	0.70	09/20/2023		

Batch R336875		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	0.0500	0	0	-100	100	09/26/2023	

Batch R336875		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		1.03	1.000	0	103.3	90	110	09/26/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 9214 (TOTAL)**

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23080690-013BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.12</b>	2.000	0.09100	101.2	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23080690-013BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		<b>2.09</b>	2.000	0.09100	100.2	2.115	1.00	09/26/2023		

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23080690-014BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.32</b>	2.000	0.3130	100.3	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23080690-014BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		<b>2.39</b>	2.000	0.3130	103.6	2.319	2.85	09/26/2023		

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23090001-010AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.05</b>	2.000	0	102.6	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23090001-010AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		<b>2.16</b>	2.000	0	108.0	2.052	5.17	09/26/2023		

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091408-008BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.43</b>	2.000	0.2180	110.4	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 23091408-008BMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		<b>2.23</b>	2.000	0.2180	100.8	2.425	8.20	09/26/2023		



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

### SW-846 9214 (TOTAL)

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091500-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.25</b>	2.000	0.2180	101.5	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							Date Analyzed
SampID: 23091500-007AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	RPD Limit 15	
Fluoride		0.10		<b>2.23</b>	2.000	0.2180	100.7	2.247	0.67	09/26/2023	

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091500-015AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.36</b>	2.000	0.1890	108.4	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							Date Analyzed
SampID: 23091500-015AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	RPD Limit 15	
Fluoride		0.10		<b>2.24</b>	2.000	0.1890	102.6	2.358	5.09	09/26/2023	

Batch R336875		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091560-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		<b>2.91</b>	2.000	0.7870	106.1	75	125	09/26/2023	

Batch R336875		SampType: MSD		Units mg/L							Date Analyzed
SampID: 23091560-005AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	RPD Limit 15	
Fluoride		0.10		<b>2.86</b>	2.000	0.7870	103.6	2.909	1.70	09/26/2023	

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

Batch 212166		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-212166											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		0.0025		<b>&lt; 0.0025</b>	0.0007	0	0	-100	100	09/21/2023	
Boron		0.0200		<b>&lt; 0.0200</b>	0.0090	0	0	-100	100	09/21/2023	
Calcium		0.100		<b>&lt; 0.100</b>	0.0350	0	0	-100	100	09/21/2023	
Calcium		0.100		<b>&lt; 0.100</b>	0.0350	0	0	-100	100	09/21/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

**Batch 212166**      **SampType: LCS**      Units mg/L

SampID: LCS-212166

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.07</b>	2.000	0	103.5	85	115	09/21/2023
Boron		0.0200		<b>0.522</b>	0.5000	0	104.4	85	115	09/21/2023
Calcium		0.100		<b>2.66</b>	2.500	0	106.5	85	115	09/21/2023
Calcium		0.100		<b>2.67</b>	2.500	0	107.0	85	115	09/21/2023

**Batch 212216**      **SampType: MBLK**      Units mg/L

SampID: MBLK-212216

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< <b>0.0025</b>	0.0007	0	0	-100	100	09/21/2023
Boron		0.0200		< <b>0.0200</b>	0.0090	0	0	-100	100	09/21/2023
Calcium		0.100		< <b>0.100</b>	0.0350	0	0	-100	100	09/21/2023

**Batch 212216**      **SampType: LCS**      Units mg/L

SampID: LCS-212216

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.03</b>	2.000	0	101.5	85	115	09/21/2023
Boron		0.0200		<b>0.496</b>	0.5000	0	99.2	85	115	09/21/2023
Calcium		0.100		<b>2.59</b>	2.500	0	103.7	85	115	09/21/2023

**Batch 212299**      **SampType: MBLK**      Units mg/L

SampID: MBLK-212299

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		< <b>0.0025</b>	0.0007	0	0	-100	100	09/22/2023
Boron		0.0200		< <b>0.0200</b>	0.0090	0	0	-100	100	09/22/2023
Calcium		0.100		< <b>0.100</b>	0.0350	0	0	-100	100	09/22/2023

**Batch 212299**      **SampType: LCS**      Units mg/L

SampID: LCS-212299

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		0.0025		<b>2.03</b>	2.000	0	101.5	85	115	09/22/2023
Boron		0.0200		<b>0.514</b>	0.5000	0	102.7	85	115	09/22/2023
Calcium		0.100		<b>2.71</b>	2.500	0	108.3	85	115	09/22/2023





## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

Batch 212299		SampType: MS		Units mg/L							Date Analyzed
SampID: 23091090-013CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Boron		0.0200		<b>0.537</b>	0.5000	0.02560	102.4	75	125	09/22/2023	

Batch 212299		SampType: MSD		Units mg/L							RPD Limit 20	Date Analyzed
SampID: 23091090-013CMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Boron		0.0200		<b>0.545</b>	0.5000	0.02560	103.8	0.5374	1.33	09/22/2023		

Batch 212370		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-212370											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		< <b>0.0025</b>	0.0007	0	0	-100	100	09/26/2023	
Boron		0.0200		< <b>0.0200</b>	0.0090	0	0	-100	100	09/26/2023	
Calcium		0.100		< <b>0.100</b>	0.0350	0	0	-100	100	09/26/2023	

Batch 212370		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS-212370											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Barium		0.0025		<b>1.98</b>	2.000	0	99.1	85	115	09/26/2023	
Boron		0.0200		<b>0.486</b>	0.5000	0	97.2	85	115	09/26/2023	
Calcium		0.100		<b>2.48</b>	2.500	0	99.4	85	115	09/26/2023	

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

Batch 212166		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK-212166											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Antimony		0.0010		< <b>0.0010</b>	0.0004	0	0	-100	100	09/21/2023	
Arsenic		0.0010		< <b>0.0010</b>	0.0004	0	0	-100	100	09/21/2023	
Beryllium		0.0010		< <b>0.0010</b>	0.0002	0	0	-100	100	09/21/2023	
Cadmium		0.0010		< <b>0.0010</b>	0.0001	0	0	-100	100	09/21/2023	
Chromium		0.0015		< <b>0.0015</b>	0.0007	0	0	-100	100	09/21/2023	
Lead		0.0010		< <b>0.0010</b>	0.0006	0	0	-100	100	09/21/2023	
Lithium	*	0.0030		< <b>0.0030</b>	0.0015	0	0	-100	100	09/23/2023	
Molybdenum	*	0.0015		< <b>0.0015</b>	0.0006	0	0	-100	100	09/23/2023	
Selenium		0.0010		< <b>0.0010</b>	0.0006	0	0	-100	100	09/21/2023	
Thallium		0.0020		< <b>0.0020</b>	0.0010	0	0	-100	100	09/21/2023	



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

**Batch 212166**      **SampType: LCS**      Units mg/L

SampID: LCS-212166

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		<b>0.523</b>	0.5000	0	104.6	85	115	09/21/2023
Arsenic		0.0010		<b>0.520</b>	0.5000	0	104.1	85	115	09/21/2023
Beryllium		0.0010		<b>0.0459</b>	0.0500	0	91.7	85	115	09/21/2023
Cadmium		0.0010		<b>0.0488</b>	0.0500	0	97.6	85	115	09/21/2023
Chromium		0.0015		<b>0.194</b>	0.2000	0	97.0	85	115	09/21/2023
Cobalt		0.0010		<b>0.495</b>	0.5000	0	98.9	85	115	09/21/2023
Lead		0.0010	E	<b>0.515</b>	0.5000	0	103.0	85	115	09/21/2023
Lithium	*	0.0030		<b>0.485</b>	0.5000	0	97.1	85	115	09/23/2023
Molybdenum	*	0.0015		<b>0.487</b>	0.5000	0	97.5	85	115	09/23/2023
Selenium		0.0010		<b>0.492</b>	0.5000	0	98.4	85	115	09/23/2023
Thallium		0.0020		<b>0.249</b>	0.2500	0	99.5	85	115	09/21/2023

**Batch 212166**      **SampType: MS**      Units mg/L

SampID: 23091116-003AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		0.0010		<b>0.514</b>	0.5000	0.001306	102.5	75	125	09/22/2023
Lead		0.0010		<b>0.514</b>	0.5000	0	102.7	75	125	09/22/2023
Selenium		0.0010		<b>0.528</b>	0.5000	0	105.6	75	125	09/23/2023

**Batch 212166**      **SampType: MSD**      Units mg/L

RPD Limit **20**

SampID: 23091116-003AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Arsenic		0.0010		<b>0.527</b>	0.5000	0.001306	105.1	0.5136	2.50	09/22/2023
Lead		0.0010		<b>0.509</b>	0.5000	0	101.7	0.5136	0.96	09/22/2023
Selenium		0.0010		<b>0.498</b>	0.5000	0	99.6	0.5279	5.87	09/23/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

**Batch 212216**      **SampType: MBLK**      Units mg/L

SampID: MBLK-212216

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	09/22/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	09/22/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	09/22/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	09/22/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	09/22/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	09/22/2023
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	09/22/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	09/23/2023
Molybdenum	*	0.0015		< 0.0015	0.0006	0	0	-100	100	09/22/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	09/22/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	09/23/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	09/22/2023

**Batch 212216**      **SampType: LCS**      Units mg/L

SampID: LCS-212216

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.522	0.5000	0	104.5	85	115	09/22/2023
Arsenic		0.0010		0.500	0.5000	0	100.0	85	115	09/22/2023
Beryllium		0.0010		0.0499	0.0500	0	99.8	85	115	09/22/2023
Cadmium		0.0010		0.0485	0.0500	0	97.0	85	115	09/22/2023
Chromium		0.0015		0.198	0.2000	0	98.8	85	115	09/22/2023
Cobalt		0.0010		0.494	0.5000	0	98.8	85	115	09/22/2023
Lead		0.0010	E	0.510	0.5000	0	102.1	85	115	09/22/2023
Lithium	*	0.0030		0.517	0.5000	0	103.4	85	115	09/29/2023
Molybdenum	*	0.0015		0.477	0.5000	0	95.5	85	115	09/22/2023
Selenium		0.0010		0.520	0.5000	0	103.9	85	115	09/23/2023
Thallium		0.0020		0.247	0.2500	0	98.7	85	115	09/22/2023



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

**Batch** 212299    **SampType:** MBLK    Units mg/L  
**SampID:** MBLK-212299

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	09/23/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	09/23/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	09/23/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	09/23/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	09/23/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	09/23/2023
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	09/23/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	09/23/2023
Molybdenum	*	0.0015		< 0.0015	0.0006	0	0	-100	100	09/23/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	09/23/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	09/23/2023

**Batch** 212299    **SampType:** LCS    Units mg/L  
**SampID:** LCS-212299

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.519	0.5000	0	103.7	80	120	09/23/2023
Arsenic		0.0010		0.536	0.5000	0	107.2	80	120	09/23/2023
Beryllium		0.0010		0.0501	0.0500	0	100.2	80	120	09/23/2023
Cadmium		0.0010		0.0514	0.0500	0	102.8	80	120	09/23/2023
Chromium		0.0015		0.205	0.2000	0	102.3	80	120	09/23/2023
Cobalt		0.0010		0.512	0.5000	0	102.4	80	120	09/23/2023
Lead		0.0010		0.529	0.5000	0	105.8	80	120	09/23/2023
Lithium	*	0.0030		0.508	0.5000	0	101.6	80	120	10/02/2023
Molybdenum	*	0.0015		0.497	0.5000	0	99.5	80	120	09/23/2023
Selenium		0.0010		0.496	0.5000	0	99.1	80	120	09/23/2023
Thallium		0.0020		0.248	0.2500	0	99.2	80	120	09/23/2023



## Quality Control Results

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**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

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

**Batch** 212370    **SampType:** MBLK    Units mg/L  
**SampID:** MBLK-212370

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	09/28/2023
Arsenic		0.0010		< 0.0010	0.0004	0	0	-100	100	09/28/2023
Beryllium		0.0010		< 0.0010	0.0002	0	0	-100	100	09/29/2023
Cadmium		0.0010		< 0.0010	0.0001	0	0	-100	100	09/28/2023
Chromium		0.0015		< 0.0015	0.0007	0	0	-100	100	09/29/2023
Cobalt		0.0010		< 0.0010	0.0001	0	0	-100	100	09/29/2023
Lead		0.0010		< 0.0010	0.0006	0	0	-100	100	09/28/2023
Lithium	*	0.0030		< 0.0030	0.0015	0	0	-100	100	09/29/2023
Molybdenum	*	0.0015		< 0.0015	0.0006	0	0	-100	100	09/28/2023
Selenium		0.0010		< 0.0010	0.0006	0	0	-100	100	09/28/2023
Thallium		0.0020		< 0.0020	0.0010	0	0	-100	100	09/28/2023

**Batch** 212370    **SampType:** LCS    Units mg/L  
**SampID:** LCS-212370

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0010		0.500	0.5000	0	100.0	85	115	09/28/2023
Arsenic		0.0010		0.489	0.5000	0	97.8	85	115	09/28/2023
Beryllium		0.0010		0.0567	0.0500	0	113.5	85	115	10/02/2023
Cadmium		0.0010		0.0508	0.0500	0	101.7	85	115	09/28/2023
Chromium		0.0015		0.199	0.2000	0	99.6	85	115	09/29/2023
Cobalt		0.0010		0.490	0.5000	0	98.0	85	115	09/29/2023
Lead		0.0010		0.499	0.5000	0	99.8	85	115	09/28/2023
Lithium	*	0.0030		0.556	0.5000	0	111.2	85	115	09/29/2023
Molybdenum	*	0.0015		0.479	0.5000	0	95.7	85	115	09/28/2023
Selenium		0.0010		0.442	0.5000	0	88.4	85	115	09/28/2023
Thallium		0.0020		0.243	0.2500	0	97.1	85	115	09/28/2023

### SW-846 7470A (TOTAL)

**Batch** 212187    **SampType:** MBLK    Units mg/L  
**SampID:** MBLK-212187

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	09/20/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 7470A (TOTAL)**

Batch 212187		SampType: LCS		Units mg/L						
SampID: LCS-212187										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00478</b>	0.0050	0	95.7	85	115	09/20/2023

Batch 212187		SampType: MS		Units mg/L						
SampID: 23091116-002AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00513</b>	0.0050	0	102.7	75	125	09/20/2023

Batch 212187		SampType: MSD		Units mg/L							RPD Limit 15
SampID: 23091116-002AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		<b>0.00507</b>	0.0050	0	101.3	0.005134	1.32	09/20/2023	

Batch 212187		SampType: MS		Units mg/L						
SampID: 23091116-007AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00519</b>	0.0050	0	103.9	75	125	09/20/2023

Batch 212187		SampType: MSD		Units mg/L							RPD Limit 15
SampID: 23091116-007AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		<b>0.00512</b>	0.0050	0	102.4	0.005193	1.37	09/20/2023	

Batch 212243		SampType: MBLK		Units mg/L						
SampID: MBLK-212243										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>&lt; 0.00020</b>	0.0001	0	0	-100	100	09/21/2023

Batch 212243		SampType: LCS		Units mg/L						
SampID: LCS-212243										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020		<b>0.00500</b>	0.0050	0	99.9	85	115	09/21/2023

Batch 212243		SampType: MS		Units mg/L						
SampID: 23090001-008CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.00020	S	<b>0.00271</b>	0.0050	0	54.3	75	125	09/21/2023



## Quality Control Results

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**SW-846 7470A (TOTAL)**

Batch 212243		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 23090001-008CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020	S	<b>0.00267</b>	0.0050	0	53.5	0.002715	1.57	09/21/2023	

Batch 212516		SampType: MBLK		Units mg/L							
SampID: MBLK-212516											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		<b>&lt; 0.00020</b>	0.0001	0	0	-100	100	09/29/2023	

Batch 212516		SampType: LCS		Units mg/L							
SampID: LCS-212516											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		<b>0.00522</b>	0.0050	0	104.3	85	115	09/29/2023	

Batch 212516		SampType: MS		Units mg/L							
SampID: 23091473-041CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		<b>0.00512</b>	0.0050	0	102.4	75	125	09/29/2023	

Batch 212516		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 23091473-041CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		<b>0.00498</b>	0.0050	0	99.6	0.005119	2.74	09/29/2023	

Batch 212516		SampType: MS		Units mg/L							
SampID: 23091500-015CMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Mercury		0.00020		<b>0.00518</b>	0.0050	0	103.5	75	125	09/29/2023	

Batch 212516		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 23091500-015CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.00020		<b>0.00489</b>	0.0050	0	97.8	0.005176	5.69	09/29/2023	



# Receiving Check List

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

**Client:** Southern Illinois Power Cooperation

**Work Order:** 23090001

**Client Project:** Groundwater Monitoring

**Report Date:** 17-Oct-23

**Carrier:** Justin Colp

**Received By:** MBP

**Completed by:**

**Reviewed by:**

**On:**

**On:**

19-Sep-23

22-Sep-23

Lindsey Maddox

Ellie Hopkins

**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 <b>2.8</b>
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 #90719. - AMD/Imaddox - 9/19/2023 9:28:18 AM

pH strip #90719. - amberdilallo - 9/20/2023 8:57:20 AM

pH strip #90719 - Tmathis - 9/21/23 12:50:08 PM

Samples collected on 9/19/23 were delivered to the laboratory on 9/19/23 at 1515 (on ice 1.0C - LTG1). AMD/ERH 9/20/23

Samples collected on 9/18/23 and 9/20/23 were delivered to the laboratory on 9/20/23 at 1639 (on ice 5.47C - LTG5). MP/ERH 9/20/23

pH strip #90719. - TMathis - 9/22/2023 9:09:03 AM

Samples collected on 9/21/23 were delivered to the laboratory on 9/21/23 at 1421 (on ice 6.8C - LTG5). MP/ERH 9/21/23



# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23090001

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

<b>Client:</b> Southern Illinois Power Cooperation <b>Address:</b> 11543 Lake of Egypt Road <b>City / State / Zip:</b> Marion, IL 62959 <b>Contact:</b> Jason McLaurin <b>Phone:</b> (618) 964-1448 <b>E-Mail:</b> jmcldaurin@sipower.org <b>Fax:</b>	<b>Samples on:</b> <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>2.8</u> °C LTG# <u>5</u> <b>Preserved in:</b> <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> <b>Lab Notes:</b> <i>90714 W/O Bubbles</i>
---	---

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

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

Project Name/Number		Sample Collector's Name		MATRIX		INDICATE ANALYSIS REQUESTED																		
Groundwater Monitoring		Justin Gelp		Groundwater	Aqueous	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Ra226/228	Sulfate	TDS										
Results Requested	Billing Instructions	# and Type of Containers																						
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		UNP	HNO3																					
Lab Use Only	Sample Identification	Date/Time Sampled																						
23090001-001	EBG	9-18-23 / 1125		1	3																			
002	EP-1	9-18-23 / 1527		1	3																			
003	EP-2			1	3																			
004	EP-3			1	3																			
005	EP-4			1	3																			
006	EP-5			1	3																			
007	EP-6			1	3																			
008	EP-7			1	3																			
009	Equipment Blank			1	3																			
010	Field Blank			1	3																			

Relinquished By		Date/Time		Received By		Date/Time	
J. Gelp		9-18-23 1732		Miguel Perea		9/18/23 1732	

# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23090001

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

<b>Client:</b> Southern Illinois Power Cooperation	<b>Samples on:</b> <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>1.0</u> °C LTG# <u>1</u>
<b>Address:</b> 11543 Lake of Egypt Road	<b>Preserved in:</b> <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b>
<b>City / State / Zip:</b> Marion, IL 62959	<b>Lab Notes:</b> <i>90719 LTM 9/19/23</i>
<b>Contact:</b> Jason McLaurin <b>Phone:</b> (618) 964-1448	
<b>E-Mail:</b> jmclaurin@sipower.org <b>Fax:</b>	

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

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

Project Name/Number		Sample Collector's Name				MATRIX		INDICATE ANALYSIS REQUESTED																
Groundwater Monitoring		<i>Justin Galp</i>				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 checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		UNP	HNO3																					
Lab Use Only	Sample Identification	Date/Time Sampled																						
<i>23090001-001</i>	EBG		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>002</i>	EP-1		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>003</i>	EP-2		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>004</i>	EP-3		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>005</i>	EP-4		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>006</i>	EP-5		1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>007</i>	EP-6	<i>9-19-23 / 1332</i>	1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>008</i>	EP-7	<i>9-19-23 / 1105</i>	1	3			X	X	X	X	X	X	X	X	X	X	X							
<i>009</i>	Equipment Blank		1	3			X		X	X	X	X	X	X	X	X	X							
<i>010</i>	Field Blank		1	3			X		X	X	X	X	X	X	X	X	X							

Relinquished By	Date/Time	Received By	Date/Time
<i>J. Galp</i>	<i>9-19-23 1620</i>	<i>Imber Seales</i>	<i>9/19/23 1620</i>

# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23090001

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 5.4 °C **LTG#** 5  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** *Jim 9/20/23*

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

**Client Comments**  
 ICP: Ba B Ca  
 ICP/MS: Sb As Be Cd Cr Co Pb Li Mo Se Ti  
 Field Parameters = Elevations, Purge Volume, pH, Conductivity, Temperature, DO, ORP, and Turbidity  
*\* = Dry during reals      0 = Dry during purging*

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

**Results Requested**  
 Standard  1-2 Day (100% Surcharge)  
 Other \_\_\_\_\_  3 Day (50% Surcharge)

**Billing Instructions** \_\_\_\_\_

**# and Type of Containers**

UNP	HNO3								

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3																
<i>23090001-001</i>	EBG		1	3																
<i>002</i>	EP-1		1	3																
<i>003</i>	EP-2 <i>* DRY</i>	<i>9-20-23 / DRY</i>	1	3																
<i>004</i>	EP-3	<i>9-20-23 / 1405</i>	1	3																
<i>005</i>	EP-4		1	3																
<i>006</i>	EP-5 <i>0 DRY</i>	<i>9-18-23 / DRY</i>	1	3																
<i>007</i>	EP-6		1	3																
<i>008</i>	EP-7		1	3																
<i>009</i>	Equipment Blank		1	3																
<i>010</i>	Field Blank		1	3																

MATRIX		INDICATE ANALYSIS REQUESTED																			
Groundwater	Aqueous	Chloride	Field Parameters	Fluoride	ICP Metals	ICP/MS Metals	Mercury	Pb226/228	Sulfate	TDS											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											
X		X	X	X	X	X	X	X	X	X											

Relinquished By	Date/Time	Received By	Date/Time
<i>J. Colp</i>	<i>9-20-23 1639</i>	<i>Wesleyan Porter</i>	<i>9/20/23 1639</i>

# CHAIN OF CUSTODY

pg. 2 of 2 Work order # 23090001

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

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

<b>Samples on:</b> <input checked="" type="checkbox"/> ICE <input checked="" type="checkbox"/> BLUE ICE <input checked="" type="checkbox"/> NO ICE _____ °C LTG# _____
<b>Preserved in:</b> <input checked="" type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <span style="float: right;"><b>FOR LAB USE ONLY</b></span>
<b>Lab Notes:</b>

Are these samples known to be involved in litigation? If yes, a surcharge will apply  Yes  No  
 Are these samples known to be hazardous? If yes, include details of the hazard.  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		Justin Gp				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																								
23090001-011	Field Duplicate	9-20-23 / 1405		1	3		X	X	X	X	X	X	X	X	X											

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	9-20-23 1639	Moeyus Peterson	9/20/23 1639

# CHAIN OF CUSTODY

pg. 1 of 2 Work order # 23090001

**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 6.8 °C **LTG#** 5  
**Preserved in:**  LAB  FIELD **FOR LAB USE ONLY**  
**Lab Notes:** TM 90719

Are these samples known to be involved in litigation? If yes, a surcharge will apply  Yes  No  
 Are these samples known to be hazardous? If yes, include details of the hazard.  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:** Groundwater Monitoring  
**Sample Collector's Name:** Justin Cole

**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																	
23090001-001	EBG		1	3																	
002	EP-1		1	3																	
003	EP-2		1	3																	
004	EP-3		1	3																	
005	EP-4	9-21-23 / 1150	1	3																	
006	EP-5		1	3																	
007	EP-6		1	3																	
008	EP-7		1	3																	
009	Equipment Blank	9-21-23 / 1204	1	3																	
010	Field Blank	9-21-23 / 1210	1	3																	

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

Relinquished By	Date/Time	Received By	Date/Time
J. Cole	9-21-23 / 1421	Morgan Peck	9/21/23 1421



Summit Environmental Technologies, Inc.  
3310 Win St.  
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October 16, 2023

Elizabeth Hurley  
TEKLAB Inc,  
5445 Horseshoe lake Road  
Collinsville, IL 62234  
TEL:  
FAX:  
RE: 23090001

Order No.: 23091980

Dear Elizabeth Hurley:

Summit Environmental Technologies, Inc. received 11 sample(s) on 9/28/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

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

Sincerely,

Jennifer Woolf  
Project Manager  
3310 Win St.  
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C



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## Case Narrative

WO#: 23091980  
Date: 10/16/2023

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**CLIENT:** TEKLAB Inc,  
**Project:** 23090001

---

This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

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Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

### Qualifiers

<b>U</b>	The compound was analyzed for but was not detected above the MDL.
<b>J</b>	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
<b>H</b>	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
<b>D</b>	The result is reported from a dilution.
<b>E</b>	The result exceeded the linear range of the calibration or is estimated due to interference.
<b>MC</b>	The result is below the Minimum Compound Limit.
<b>*</b>	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
<b>m</b>	Manual integration was used to determine the area response.
<b>d</b>	Manual integration in which peak was deleted
<b>N</b>	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
<b>P</b>	The second column confirmation exceeded 25% difference.
<b>C</b>	The result has been confirmed by GC/MS.
<b>X</b>	The result was not confirmed when GC/MS Analysis was performed.
<b>B</b>	The analyte was detected in the Method Blank at a concentration greater than the RL.
<b>MB+</b>	The analyte was detected in the Method Blank at a concentration greater than the MDL.
<b>G</b>	The ICB or CCB contained reportable amounts of analyte.
<b>QC-/+</b>	The CCV recovery failed low (-) or high (+).
<b>R/QDR</b>	The RPD was outside of accepted recovery limits.
<b>QL-/+</b>	The LCS or LCSD recovery failed low (-) or high (+).
<b>QLR</b>	The LCS/LCSD RPD was outside of accepted recovery limits.
<b>QM-/+</b>	The MS or MSD recovery failed low (-) or high (+).
<b>QMR</b>	The MS/MSD RPD was outside of accepted recovery limits.
<b>QV-/+</b>	The ICV recovery failed low (-) or high (+).
<b>S</b>	The spike result was outside of accepted recovery limits.
<b>W</b>	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
<b>Z</b>	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

<b>ND</b>	Not Detected	<b>RL</b>	Reporting Limit
<b>QC</b>	Quality Control	<b>MDL</b>	Method Detection Limit
<b>MB</b>	Method Blank	<b>LOD</b>	Level of Detection
<b>LCS</b>	Laboratory Control Sample	<b>LOQ</b>	Level of Quantitation
<b>LCSD</b>	Laboratory Control Sample Duplicate	<b>PQL</b>	Practical Quantitation Limit
<b>QCS</b>	Quality Control Sample	<b>CRQL</b>	Contract Required Quantitation Limit
<b>DUP</b>	Duplicate	<b>PL</b>	Permit Limit
<b>MS</b>	Matrix Spike	<b>RegLvl</b>	Regulatory Limit
<b>MSD</b>	Matrix Spike Duplicate	<b>MCL</b>	Maximum Contamination Limit
<b>RPD</b>	Relative Percent Different	<b>MinCL</b>	Minimum Compound Limit
<b>ICV</b>	Initial Calibration Verification	<b>RA</b>	Reanalysis
<b>ICB</b>	Initial Calibration Blank	<b>RE</b>	Reextraction
<b>CCV</b>	Continuing Calibration Verification	<b>TIC</b>	Tentatively Identified Compound
<b>CCB</b>	Continuing Calibration Blank	<b>RT</b>	Retention Time
<b>RLC</b>	Reporting Limit Check	<b>CF</b>	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.





Summit Environmental Technologies, Inc.  
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**Workorder**  
**Sample Summary**  
 WO#: **23091980**  
**16-Oct-23**

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23091980-001	23090001-001B		9/18/2023 11:25:00 AM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-002	23090001-002B		9/18/2023 3:27:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-003	23090001-003B			9/28/2023 12:45:00 PM	Non-Potable Water
23091980-004	23090001-004B		9/20/2023 2:05:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-005	23090001-005B		9/21/2023 11:50:00 AM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-006	23090001-006B			9/28/2023 12:45:00 PM	Non-Potable Water
23091980-007	23090001-007B		9/19/2023 1:32:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-008	23090001-008B		9/19/2023 11:05:00 AM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-009	23090001-009B		9/21/2023 12:04:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-010	23090001-010B		9/21/2023 12:10:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water
23091980-011	23090001-011B		9/20/2023 2:05:00 PM	9/28/2023 12:45:00 PM	Non-Potable Water



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# DATES REPORT

WO#: **23091980**  
**16-Oct-23**

**Client:** TEKLAB Inc,  
**Project:** 23090001

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23091980-001A	23090001-001B	9/18/2023 11:25:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		10/3/2023 12:20:13 PM	10/16/2023 10:09:00 AM
				Radium-228 (EPA 904.0)		10/3/2023 12:20:13 PM	10/13/2023 2:22:00 PM
23091980-002A	23090001-002B	9/18/2023 3:27:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-004A	23090001-004B	9/20/2023 2:05:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-005A	23090001-005B	9/21/2023 11:50:00 AM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-007A	23090001-007B	9/19/2023 1:32:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-008A	23090001-008B	9/19/2023 11:05:00 AM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-009A	23090001-009B	9/21/2023 12:04:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-010A	23090001-010B	9/21/2023 12:10:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM
23091980-011A	23090001-011B	9/20/2023 2:05:00 PM		Radium-226 (EPA 903.0)		10/6/2023 2:50:30 PM	10/12/2023 11:51:00 AM
				Radium-228 (EPA 904.0)		10/6/2023 2:50:30 PM	10/11/2023 2:59:00 PM

Original



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# Analytical Report

(consolidated)

WO#: **23091980**

Date Reported: **10/16/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-001  
**Client Sample ID:** 23090001-001B

**Collection Date:** 9/18/2023 11:25:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	-0.04	1.00	U	pCi/L	± 0.05	1	10/16/2023 10:09:00 A
Yield	1					1	10/16/2023 10:09:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-228	0.12	1.00	U	pCi/L	± 0.52	1	10/13/2023 2:22:00 PM
Yield	0.92					1	10/13/2023 2:22:00 PM

<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: 23091980

Date Reported: 10/16/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-002  
**Client Sample ID:** 23090001-002B

**Collection Date:** 9/18/2023 3:27:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.13	1.00	U	pCi/L	± 0.07	1	10/12/2023 11:51:00 A
Yield	0.96					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>
Radium-228	1.28	1.00		pCi/L	± 0.63	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: 23091980

Date Reported: 10/16/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-004  
**Client Sample ID:** 23090001-004B

**Collection Date:** 9/20/2023 2:05:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.12	1.00	U	pCi/L	± 0.06	1	10/12/2023 11:51:00 A
Yield	0.95					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>
Radium-228	0.76	1.00	J	pCi/L	± 0.54	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: 23091980

Date Reported: 10/16/2023

**CLIENT:** TEKLAB Inc, **Collection Date:** 9/21/2023 11:50:00 AM  
**Project:** 23090001  
**Lab ID:** 23091980-005 **Matrix:** NON-POTABLE WATER  
**Client Sample ID:** 23090001-005B

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.19	1.00	U	pCi/L	± 0.08	1	10/12/2023 11:51:00 A
Yield	0.96					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>	
Radium-228	0.57	1.00	U	pCi/L	± 0.61	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: 23091980

Date Reported: 10/16/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-007  
**Client Sample ID:** 23090001-007B

**Collection Date:** 9/19/2023 1:32:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.07	1.00	U	pCi/L	± 0.05	1	10/12/2023 11:51:00 A
Yield	0.98					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>	
Radium-228	0.17	1.00	U	pCi/L	± 0.5	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: **23091980**

Date Reported: **10/16/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-008  
**Client Sample ID:** 23090001-008B

**Collection Date:** 9/19/2023 11:05:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.25	1.00	U	pCi/L	± 0.09	1	10/12/2023 11:51:00 A
Yield	0.95					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>	
Radium-228	1.34	1.00		pCi/L	± 0.72	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit





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# Analytical Report

(consolidated)

WO#: **23091980**

Date Reported: **10/16/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-009  
**Client Sample ID:** 23090001-009B

**Collection Date:** 9/21/2023 12:04:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.04	1.00	U	pCi/L	± 0.04	1	10/12/2023 11:51:00 A
Yield	1					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>
Radium-228	0.19	1.00	U	pCi/L	± 0.49	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# Analytical Report

(consolidated)

WO#: 23091980

Date Reported: 10/16/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-010  
**Client Sample ID:** 23090001-010B

**Collection Date:** 9/21/2023 12:10:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.01	1.00	U	pCi/L	± 0.04	1	10/12/2023 11:51:00 A
Yield	1					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>
Radium-228	2.84	1.00		pCi/L	± 0.92	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



Summit Environmental Technologies, Inc.  
3310 Win St.  
Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
Website: <http://www.settek.com>

# Analytical Report

(consolidated)

WO#: **23091980**

Date Reported: **10/16/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23090001  
**Lab ID:** 23091980-011  
**Client Sample ID:** 23090001-011B

**Collection Date:** 9/20/2023 2:05:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.12	1.00	U	pCi/L	± 0.06	1	10/12/2023 11:51:00 A
Yield	0.98					1	10/12/2023 11:51:00 A
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>DHF</b>
Radium-228	0.21	1.00	U	pCi/L	± 0.51	1	10/11/2023 2:59:00 PM
Yield	1					1	10/11/2023 2:59:00 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit



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# QC SUMMARY REPORT

WO#: **23091980**  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>23091975-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657493</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.70	1.00	5.000	0.8500	77.0	70	130				
Yield	0.970			1.000	0						

Sample ID: <b>23091975-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657496</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0.8100	200	30	RU
Yield	1.00			0	0			0.9700	3.05		

Sample ID: <b>23091975-003ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657498</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.690	1.00		0	0			0.9900	35.7	30	JR
Yield	0.970			0	0			0.9400	3.14		

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.settek.com>

# QC SUMMARY REPORT

WO#: 23091980  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>MB-69189</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>PBW</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657487</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.910	1.00		0	0						J
Yield	1.00			0	0						

Sample ID: <b>LCS-69189</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657488</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.60	1.00	5.000	0	72.0	70	130				
Yield	0.970			0	0						

Sample ID: <b>RLC-69189</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657491</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.830	1.00	1.000	0	83.0	50	150				J
Yield	1.00			0	0						

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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# QC SUMMARY REPORT

WO#: **23091980**  
**16-Oct-23**

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>RLCD-69189</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172738</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/13/2023</b>	SeqNo: <b>4657492</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.710	1.00	1.000	0	71.0	50	150				J
Yield	1.00			0	0						

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analy
	J Analyte detected below quantitation limits	M Manual Integration used to determine area response	MC Value is below Minimum Compound
	ND Not Detected	OG1	P Second column confirmation exceeds
	PL Permit Limit	R RPD outside accepted recovery limits	RL Reporting Detection Limit

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# QC SUMMARY REPORT

WO#: **23091980**  
**16-Oct-23**

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>23091975-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658312</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.71	1.00	5.000	0	94.2	70	130				

Sample ID: <b>23091975-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658315</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	U
Yield	0.990							1.000	1.01	0	

Sample ID: <b>23091975-003ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658317</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	U
Yield	0.990							1.000	1.01	0	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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# QC SUMMARY REPORT

WO#: **23091980**  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>MB-69189</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>PBW</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658306</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.920										

Sample ID: <b>LCS-69189</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658307</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.06	1.00	5.000	0	101	70	130				

Sample ID: <b>LCSD-69189</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658308</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.60	1.00	5.000	0	92.0	70	130	5.060	9.52	20	

Sample ID: <b>RLC-69189</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658310</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original





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# QC SUMMARY REPORT

WO#: 23091980  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69189

Sample ID: <b>RLC-69189</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658310</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.980	1.00	1.000	0	98.0	50	150				J

Sample ID: <b>RLCD-69189</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/3/2023</b>	RunNo: <b>172765</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69189</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/16/2023</b>	SeqNo: <b>4658311</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.06	1.00	1.000	0	106	50	150				

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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# QC SUMMARY REPORT

WO#: 23091980  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69327

Sample ID: <b>MB-69327</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>						
Client ID: <b>PBW</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652673</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						U
Yield	0.980			0	0						

Sample ID: <b>LCS-69327</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652674</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.21	1.00	5.000	0	84.2	70	130				
Yield	0.970			0	0						

Sample ID: <b>LCSD-69327</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652675</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.67	1.00	5.000	0	73.4	70	130	4.210	13.7	20	
Yield	1.00			0	0			0.9700	3.05		

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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# QC SUMMARY REPORT

WO#: **23091980**  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69327

Sample ID: <b>RLCD-69327</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>				
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652678</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.970	1.00	1.000	0	97.0	50	150				J
Yield	0.940			0	0						

Sample ID: <b>23092077-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>				
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652679</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.76	1.00	5.000	1.200	31.2	70	130				S
Yield	1.00			1.000	0						

Sample ID: <b>23092079-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>				
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652684</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	U
Yield	1.00			0	0			1.000	0		

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



Summit Environmental Technologies, Inc.  
 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.settek.com>

## QC SUMMARY REPORT

WO#: 23091980  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69327

Sample ID: <b>23100105-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172624</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>10/11/2023</b>	SeqNo: <b>4652686</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.700	1.00		0	0			0	200	20	JR
Yield	1.00			0	0			1.000	0		

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analy
	J Analyte detected below quantitation limits	M Manual Integration used to determine area response	MC Value is below Minimum Compound
	ND Not Detected	OG1	P Second column confirmation exceeds
	PL Permit Limit	R RPD outside accepted recovery limits	RL Reporting Detection Limit

Original



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 Website: <http://www.settek.com>

# QC SUMMARY REPORT

WO#: **23091980**  
**16-Oct-23**

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69327

Sample ID: <b>MB-69327</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>PBW</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653734</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.980										

Sample ID: <b>LCS-69327</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.38	1.00	5.000	0	108	70	130				

Sample ID: <b>LCSD-69327</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.93	1.00	5.000	0	98.6	70	130	5.380	8.73	20	

Sample ID: <b>RLC-69327</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.settek.com>

# QC SUMMARY REPORT

WO#: 23091980  
 16-Oct-23

**Client:** TEKLAB Inc,  
**Project:** 23090001

**BatchID:** 69327

Sample ID: <b>RLC-69327</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653738</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.03	1.00	1.000	0	103	50	150				

Sample ID: <b>RLCD-69327</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653739</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.770	1.00	1.000	0	77.0	50	150				J

Sample ID: <b>23100105-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>10/6/2023</b>	RunNo: <b>172639</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>69327</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>10/12/2023</b>	SeqNo: <b>4653741</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	U
Yield	0.980							0.9700	1.03	0	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Pg 23091980 of 23091980

**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

Project#: 23090001

Contact: Elizabeth Hurley Email: ehurley@teklabinc.com

Requested Due Date: Standard TAT Billing/PO: 35060

Cooler Temp:  Sampler: J. Colp (Teklab) QC Level: 3

Phone: 618 344-1004 ext. 33

Comments: Please issue reports and invoices via email only  
Please analyze for Radium 226/228 per standard GW methods.  
Changes to methods must be approved by Teklab, Inc.  
Batch QC is required for all analyses requested. Excel EDD requested. IL site.

**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
	23090001-001B	09/18/23 1125	HNO3	Groundwater
	23090001-002B	09/18/23 1527	HNO3	Groundwater
	23090001-003B	Dry	HNO3	Groundwater
	23090001-004B	9/20/23 1405	HNO3	Groundwater
	23090001-005B	9/21/23 1150	HNO3	Groundwater
	23090001-006B	Dry	HNO3	Groundwater
	23090001-007B	9/19/23 1332	HNO3	Groundwater
	23090001-008B	9/19/23 1105	HNO3	Groundwater
	23090001-009B	9/21/23 1204	HNO3	Groundwater
	23090001-010B	9/21/23 1210	HNO3	Groundwater
	23090001-011B	9/20/23 1405	HNO3	Groundwater

Handwritten notes and signatures in the top section of the form, including "JCM" and "JH".

Relinquished By: Smile DeLano Date/Time: 9/23/23 1100  
Received By: John Steel Date/Time: 9/23/23 1100

Handwritten notes: "17.9", "radon", "NO3", "NO2", "NOx".

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)

SubContract 3/2/2016



# Sample Log-In Check List

Client Name: **TEK-IL-62234-A**

Work Order Number: **23091980**

RcptNo: **1**

Logged by:	<b>Anthony W. Britton</b>	<b>9/28/2023 12:45:00 PM</b>	<i>Anthony Britton</i>
Completed By:	<b>Anthony W. Britton</b>	<b>9/29/2023 8:26:18 AM</b>	<i>Anthony Britton</i>
Reviewed By:	<b>Jennifer Woolf</b>	<b>9/29/2023 12:32:23 PM</b>	<i>Jennifer Woolf</i>

### Chain of Custody

- Were seals intact? Yes  No  Not Present
- Is Chain of Custody complete? Yes  No  Not Present
- How was the sample delivered? FedEx

### Log In

- Coolers are present? Yes  No  NA
- Was an attempt made to cool the samples? Yes  No  NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- Sample(s) in proper container(s)? Yes  No
- Sufficient sample volume for indicated test(s)? Yes  No
- Are samples (except VOA and ONG) properly preserved? Yes  No
- Was preservative added to bottles? Yes  No  NA
- Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials
- Were any sample containers received broken? Yes  No
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
- Are matrices correctly identified on Chain of Custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

### Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

- Additional remarks:

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.9	Good	Not Present			



**APPENDIX C**

# 2023 Data Usability Assessment Report

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Project Name:** SIPC Groundwater Monitoring  
**Reviewing Company:** WSP USA  
**Data Evaluator:** Candace Cocca  
**Checked by:** Danielle Sylvia Cofelice  
**Laboratory:** Teklab, Inc., Pace Analytical Services, LLC  
**Matrix:**  Water  Soil  Sed.  Waste  Other:

**Project Number:** GL21467997.001  
**Project Manager:** Danielle Sylvia Cofelice  
**Data Evaluation Date:** February 7, 2023  
**Review Date:** February 8, 2023  
**Lab Job #:** 22120076

**Analytical Methods (type and no.):** Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

**Sample Information:** See Table 1

**Applicable Data Validation Guidance:** EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

<b>COC and Sample Receipt</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) COC complete and correct? (Project location, project contacts, sample IDs, sample dates, field QC samples identified, analyses identified, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 1 _____
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"/>	_____

<b>Data Package Information</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) All samples reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Requested analyte list reported?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 2 _____
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
g) Solid samples met %moisture criteria (> _____ %)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
h) Were any sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i) Results below the RL appropriately qualified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

<b>Laboratory Case Narrative</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Does the laboratory narrative indicate deficiencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See items below _____

<b>Holding Times</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Were holding times met for sample extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were holding times met for sample analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 3 _____

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

<b>Blanks</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4_____
c) Were analytes detected in the equipment blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4_____
d) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4_____

<b>Duplicates</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Were field duplicates collected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Table 1_____
b) Field dup. met precision criteria (RPD 30%)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 5_____

<b>Overall Evaluation</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENTS</b>
a) Were there any other technical problems not previously addressed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes 6-10_____
b) Data are acceptable and usable except as noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Comments/Notes:**

- 1) A sample time was not recorded on the COC for sample EP-3. The laboratory used a sample time of 00:00. No action was taken other than to note.
- 2) Field parameter data was not included in the data package due to lab error. The digital file containing the information was lost on the external flash drive. The client was notified on January 12, 2023. There is no action other than to note.
- 3) All samples were analyzed outside the hold time for total dissolved solids. The hold time for total dissolved solids is 7 days and the samples were analyzed a few hours outside of holding time. Associated detected results are considered potentially biased low.
- 4) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Field and equipment blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
FB 22120076-010	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
EB 22120076-009	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
EB 22120076-009	Metals	Cobalt	0.0002 J	0.0010	mg/L
EB 22120076-009	Radium	Radium-226	0.330	0.329	pCi/L
EB 22120076-009	Radium	Combined Radium	0.330 J	0.491	pCi/L
FB 22120076-010	Radium	Radium-228	0.425	0.312	pCi/L
FB 22120076-010	Radium	Combined Radium	0.438	0.363	pCi/L
MBLK-201246	Metals	Antimony	0.0010 J	0.0010	mg/L
(MB) R3880595-1	Radium	Radium-226	0.0599 J	0.0693	pCi/L

- 5) Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected.

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-6	Anions	Fluoride	0.06 J	0.04 J	0.10	0.10	mg/L	<b>40</b>
EP-6	Metals	Chromium	0.0009 J	< 0.0015 U	0.0015	0.0015	mg/L	<b>50</b>
EP-6	Metals	Mercury	0.00013 J	< 0.00020 U	0.00020	0.00020	mg/L	<b>42</b>
EP-6	Radium	Combined Radium	< 0.515 U	0.375 J	0.515	0.501	pCi/L	<b>31.5</b>

- 6) Sulfate matrix spike and/or matrix spike duplicate recoveries, associated with batches R322958 and R323058, are below QC limits. The spiked samples were not collected from the project site. Data usability is not affected.
- 7) The boron matrix spike duplicate recovery, associated with batch 201307, is above QC limits. The associated matrix spike and relative percent difference is within QC limits. The spiked sample was not collected from the project site. Data usability is not affected.
- 8) Mercury matrix spike and/or matrix spike duplicate recoveries, associated with batch 201368 (all results), are above QC limits. The spiked samples were either not collected from the project site or the associated matrix spike duplicate and relative percent difference is within QC limits. Data usability is not affected.
- 9) The mercury laboratory control sample recovery (128.5%), associated with batch 201368 (all results), is above QC limits (115%). A laboratory control sample duplicate was not analyzed. The associated detected results are considered potentially biased high.
- 10) The radium-226 laboratory duplicate relative percent difference (108), associated with sample Field Duplicate (L1570795-11), is above QC limits (20). Both the primary sample and the duplicate are non-detect. Data usability is not affected.

**Definitions:**

COC: Chain of Custody

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
22120076-001	EBG	12/19/2022	EBG	GW	-	X		X	X	X	X	X	X
22120076-002	EP-1	12/20/2022	EP-1	GW	-	X		X	X	X	X	X	X
22120076-003	EP-2	12/20/2022	EP-2	GW	-	X		X	X	X	X	X	X
22120076-004	EP-3	12/20/2022	EP-3	GW	-	X		X	X	X	X	X	X
22120076-005	EP-4	12/20/2022	EP-4	GW	-	X		X	X	X	X	X	X
22120076-006	EP-5	12/20/2022	EP-5	GW	-	X		X	X	X	X	X	X
22120076-007	EP-6	12/20/2022	EP-6	GW	-	X		X	X	X	X	X	X
22120076-008	EP-7	12/20/2022	EP-7	GW	-	X		X	X	X	X	X	X
22120076-009	Equipment Blank	12/20/2022	-	WQ	EB	X		X	X	X	X	X	X
22120076-010	Field Blank	12/20/2022	-	WQ	FB	X		X	X	X	X	X	X
22120076-011	Field Duplicate	12/20/2022	EP-6	GW	FD	X		X	X	X	X	X	X

**Notes:**

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories.

**Abbreviations:**

- FB: Field Blank
- FD: Field Duplicate
- GW: Ground Water
- WQ: Water Quality
- QC: Quality Control

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

---

**Project Name:** SIPC Groundwater Monitoring  
**Reviewing Company:** WSP USA  
**Data Evaluator:** Candace Cocca  
**Checked by:** Danielle Sylvia Cofelice  
**Laboratory:** Teklab, Inc., Pace Analytical Services, LLC

**Project Number:** GL21467997.001  
**Project Manager:** Danielle Sylvia Cofelice  
**Data Evaluation Date:** April 25, 2023  
**Review Date:** May 16, 2023  
**Lab Job #:** 23030368

**Matrix:**  Aqueous  Soil  Sediment  Waste  Air  Other:

**Analytical Methods:** Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

**Sample Information:** See Table 1.

**Data Qualification:** No qualifications required

**Work Plan or QAPP reference:**

**Data Validation Guidance:** EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

<b>Chain of Custody (COC) and Sample Receipt</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

<b>Data Package Information</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

<b>Analytical Assessment</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Analytical Assessment** **YES NO NA** **COMMENT**

- d) Were detected concentrations less than the QL qualified by the laboratory?
- e) All detected sample results within the calibrated range?
- f) Did the laboratory satisfy the requested sensitivity requirements?

**Laboratory Case Narrative** **YES NO NA** **COMMENT**

- a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?

**Sample Preservation and Holding Time** **YES NO NA** **COMMENT**

- a) Were samples properly preserved?
- b) Were holding times met for sample preparation and/or extraction?
- c) Were holding times met for sample analysis?

**Blanks** **YES NO NA** **COMMENTS**

- a) No analytes detected in the associated preparation/method blank(s)?   See Note 1
- b) No analytes detected in the associated trip blank(s)?
- c) No analytes detected in the associated field or equipment/rinsate blank(s)?    See Note 1

**Duplicates** **YES NO NA** **COMMENTS**

- a) Were field duplicates reported?
- b) Was field duplicate RPD or absolute difference criteria acceptable?    See Note 2

**Overall Evaluation** **YES NO NA** **COMMENTS**

- a) No other technical problems that lead to data rejection identified by laboratory?
- b) Were data acceptable and usable, except where noted?

**Comments/Notes:**

- 1) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Field and equipment blanks are compared to primary samples collected on the same day, however, due to field oversight no primary samples were collected on the same day as the equipment and field blanks. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
EB 23030368-009	Metals	Chromium	0.0014 J	0.0015	mg/L
FB 23030368-010	Metals	Chromium	0.0008 J	0.0015	mg/L
(MB) R3918340-1	Radium	Radium-228	0.255 J	0.255	pCi/L

- 2) Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated.

## QA LEVEL I - DATA VERIFICATION CHECKLIST

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Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-4	Metals	Chromium	0.0026	0.0038	0.0015	0.0015	mg/L	38



**TABLE 1**  
**Sample Collection and Analysis Summary**  
**SIPC CCR Groundwater Monitoring**

Lab ID	Field Identification	Collection Date	Location	Matrix	QC Samples								
						Chloride	Field Parameters	Fluoride	ICP Metals	Mercury	Radium-226/228	Sulfate	TDS
23030368-001	EBG	3/21/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23030368-002	EP-1	3/15/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23030368-003	EP-2	3/21/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23030368-004	EP-3	3/21/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23030368-005	EP-4	3/21/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23030368-006	EP-5	3/15/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23030368-007	EP-6	3/15/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23030368-008	EP-7	3/21/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23030368-009	Equipment Blank	3/16/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23030368-010	Field Blank	3/16/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23030368-011	Field Duplicate	3/21/2023	EP-4	GW	FD	X	X	X	X	X	X	X	X

**Notes:**

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories

**Abbreviations:**

- FB: Field Blank
- EB: Equipment Blank
- FD: Field Duplicate
- GW: Ground Water
- WQ: Water Quality
- QC: Quality Control

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Project Name:** SIPC Groundwater Monitoring  
**Reviewing Company:** WSP USA  
**Data Evaluator:** Candace Cocca  
**Checked by:** Danielle Sylvia Cofelice  
**Laboratory:** Teklab, Inc.

**Project Number:** GL21467997.001  
**Project Manager:** Danielle Sylvia Cofelice  
**Data Evaluation Date:** June 7, 2023  
**Review Date:** June 16, 2023  
**Lab Job #:** 23051194

**Matrix:**  Aqueous  Soil  Sediment  Waste  Air  Other:

**Analytical Methods:** Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A

**Sample Information:** See Table 1.

**Data Qualification:** No qualifications required.

**Work Plan or QAPP reference:**

**Data Validation Guidance:** EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

<b>Chain of Custody (COC) and Sample Receipt</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>Data Package Information</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>Analytical Assessment</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Analytical Assessment** YES NO NA COMMENT

- e) All detected sample results within the calibrated range?
- f) Did the laboratory satisfy the requested sensitivity requirements?

**Laboratory Case Narrative** YES NO NA COMMENT

- a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?

**Sample Preservation and Holding Time** YES NO NA COMMENT

- a) Were samples properly preserved?
- b) Were holding times met for sample preparation and/or extraction?
- c) Were holding times met for sample analysis?

**Blanks** YES NO NA COMMENTS

- a) No analytes detected in the associated preparation/method blank(s)?
- b) No analytes detected in the associated trip blank(s)?
- c) No analytes detected in the associated field or equipment/rinsate blank(s)?    See Note 1

**Duplicates** YES NO NA COMMENTS

- a) Were field duplicates reported?
- b) Was field duplicate RPD or absolute difference criteria acceptable?

**Overall Evaluation** YES NO NA COMMENTS

- a) No other technical problems that lead to data rejection identified by laboratory?
- b) Were data acceptable and usable, except where noted?

**Comments/Notes:**

- 1) Analytes were detected in the equipment blank, as shown in the table below. Equipment blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
Equipment Blank	Metals	Calcium	0.044 J	0.10	mg/L
Equipment Blank	Metals	Cobalt	0.0003 J	0.0010	mg/L

**TABLE 1**

**Sample Collection and Analysis Summary  
SIPC CCR Groundwater Monitoring**

<i>Lab ID</i>	<i>Field Identification</i>	<i>Collection Date</i>	<i>Location</i>	<i>Matrix</i>	<i>QC Samples</i>	<i>Chloride</i>	<i>Field Parameters</i>	<i>Fluoride</i>	<i>ICP Metals</i>	<i>Mercury</i>	<i>Sulfate</i>	<i>TDS</i>
23051194-001	EP-1	5/24/2023	EP-1	GW	-	X	X	X	X	X	X	X
23051194-002	EP-2	5/24/2023	EP-2	GW	-	X	X	X	X	X	X	X
23051194-003	EP-3	5/24/2023	EP-3	GW	-	X	X	X	X	X	X	X
23051194-004	EP-4	5/24/2023	EP-4	GW	-	X	X	X	X	X	X	X
23051194-005	EP-5	5/24/2023	EP-5	GW	-	X	X	X	X	X	X	X
23051194-006	EP-7	5/24/2023	EP-7	GW	-	X	X	X	X	X	X	X
23051194-007	Equipment Blank	5/24/2023	-	WQ	EB	X	-	X	X	X	X	X
23051194-008	Field Blank	5/24/2023	-	WQ	FB	X	-	X	X	X	X	X
23051194-009	Field Duplicate	5/24/2023	EP-4	GW	FD	X	X	X	X	X	X	X

**Notes:**

All analyses performed by Teklab in Collinsville, IL

**Abbreviations:**

- FB: Field Blank
- EB: Equipment Blank
- FD: Field Duplicate
- GW: Ground Water
- WQ: Water Quality
- QC: Quality Control
- TDS: Total Dissolved Solids

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Project Name:** SIPC Groundwater Monitoring  
**Reviewing Company:** WSP USA  
**Data Evaluator:** Candace Cocca  
**Checked by:** Danielle Sylvia Cofelice  
**Laboratory:** : Teklab, Inc., Pace Analytical Services, LLC

**Project Number:** GL21467997.001  
**Project Manager:** Danielle Sylvia Cofelice  
**Data Evaluation Date:** July 14, 2023  
**Review Date:** July 27, 2023  
**Lab Job #:** 23060001

**Matrix:**  Aqueous  Soil  Sediment  Waste  Air  Other:

**Analytical Methods:** Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

**Sample Information:** See Table 1.

**Data Qualification:** No qualifications required.

**Work Plan or QAPP reference:** None

**Data Validation Guidance:** EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

<b>Chain of Custody (COC) and Sample Receipt</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1

<b>Data Package Information</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

<b>Analytical Assessment</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Analytical Assessment** **YES NO NA** **COMMENT**

- e) All detected sample results within the calibrated range?
- f) Did the laboratory satisfy the requested sensitivity requirements?

**Laboratory Case Narrative** **YES NO NA** **COMMENT**

- a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?

**Sample Preservation and Holding Time** **YES NO NA** **COMMENT**

- a) Were samples properly preserved?
- b) Were holding times met for sample preparation and/or extraction?
- c) Were holding times met for sample analysis?

**Blanks** **YES NO NA** **COMMENTS**

- a) No analytes detected in the associated preparation/method blank(s)?    See Note 2
- b) No analytes detected in the associated trip blank(s)?
- c) No analytes detected in the associated field or equipment/rinsate blank(s)?    See Note 2

**Duplicates** **YES NO NA** **COMMENTS**

- a) Were field duplicates reported?
- b) Was field duplicate RPD or absolute difference criteria acceptable?    See Note 3

**Overall Evaluation** **YES NO NA** **COMMENTS**

- a) No other technical problems that lead to data rejection identified by laboratory?
- b) Were data acceptable and usable, except where noted?

**Comments/Notes:**

- 1) The cooler temperatures were outside QC limits ( $4 \pm 2^\circ\text{C}$ ) upon receipt to the laboratory ( $13.2^\circ\text{C}$  and  $24.8^\circ\text{C}$ ). Following Guidelines and using professional judgment, no qualifications were required as samples were submitted on ice to the laboratory on the same day as sample collection.
- 2) Analytes were detected in the method, field, and equipment blanks, as shown in the table below. Equipment and field blanks are compared to primary samples collected on the same day. Associated detected results are considered potentially biased high.

Sample Name	Parameter	Analyte	Blank Result	RL/MDC	Units
Equipment Blank	General Chemistry	Total Dissolved Solids	16 J	20	mg/L
Equipment Blank	Metals	Calcium	0.090 J	0.10	mg/L
Field Blank	Radium	Radium-228	2.31	0.472	pCi/L
Field Blank	Radium	Radium-226	0.261	0.198	pCi/L
Field Blank	Radium	Combined Radium	2.57	0.512	pCi/L
(MB) R3945503-1	Radium	Radium-228	0.137 J	0.273	pCi/L
(MB) R3945879-1	Radium	Radium-228	0.601	0.288	pCi/L
(MB) R3944988-1	Radium	Radium-226	0.0385 J	0.0662	pCi/L

## QA LEVEL I - DATA VERIFICATION CHECKLIST

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3. Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected. When the results are less than 5x the reporting limit and the absolute value between the results is greater than the reporting limit, associated detected results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-3	Metals	Beryllium	< 0.0010	0.0006 J	0.0010	0.0010	mg/L	<b>50</b>
EP-3	Metals	Chromium	0.0011 J	<0.0015	0.0015	0.0015	mg/L	<b>31</b>
EP-3	Radium	Radium-228	0.704 J	1.15	1.11	0.413	pci/L	<b>48.1</b>
EP-3	Radium	Combined Radium	1.01 J	1.51	1.14	0.460	pci/L	<b>39.7</b>

**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
23060001-001	EBG	6/7/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23060001-002	EP-1	6/6/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23060001-003	EP-2	6/6/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23060001-004	EP-3	6/6/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23060001-005	EP-4	6/7/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23060001-006	EP-5	6/7/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23060001-007	EP-6	6/6/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23060001-008	EP-7	6/6/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23060001-009	Equipment Blank	6/7/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23060001-010	Field Blank	6/7/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23060001-011	Field Duplicate	6/6/2023	EP-3	GW	FD	X	X	X	X	X	X	X	X

**Notes:**

All analyses performed by Teklab in Collinsville, IL and PACE Mount Juliet, TN laboratories

**Abbreviations:**

- EB: Equipment Blank
- FB: Field Blank
- FD: Field Duplicate
- GW: Ground Water
- QC: Quality Control
- TDS: Total Dissolved Solids
- WQ: Water Quality



**QA LEVEL I - DATA VERIFICATION CHECKLIST**

**Project Name:** SIPC Groundwater Monitoring

**Project Number:** GL21467997.001

**Reviewing Company:** WSP USA

**Project Manager:** Danielle Sylvia Cofelice

**Data Evaluator:** Candace Cocca

**Data Evaluation Date:** November 16, 2023

**Checked by:** Danielle Sylvia Cofelice

**Review Date:** November 17, 2023

**Laboratory:** : Teklab, Inc., Summit Environmental Technologies, Inc.

**Lab Job #:** 23090001

**Matrix:**  Aqueous  Soil  Sediment  Waste  Air  Other:

**Analytical Methods:** Total dissolved solids by SM 2540C; chloride by 4500-CL E; sulfate by SW-846 9036; fluoride by SW-846 9214; total metals by SW-846 3005A, 6010B and 6020A; mercury by SW-846 7470A; Radium226/228 by EPA 903.0/904.0

**Sample Information:** See Table 1.

**Data Qualification:** No qualifications required.

**Work Plan or QAPP reference:** None

**Data Validation Guidance:** EPA Guidance on Environmental Data Verification and Data Validation (EPA QA/G-8)

<b>Chain of Custody (COC) and Sample Receipt</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) COC complete and correct? (Project location, contacts, sample IDs, sample dates, field QC samples, analyses identified, et c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EB, FB, FD
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Were cooler temperatures within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>Data Package Information</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1
c) Requested analytical methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
g) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>Analytical Assessment</b>	<b>YES</b>	<b>NO</b>	<b>NA</b>	<b>COMMENT</b>
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

**QA LEVEL I - DATA VERIFICATION CHECKLIST**

3. Field duplicate RPDs did not meet acceptance criteria. Reporting limits were used to calculate RPDs for non-detect results. Using professional judgment, RPDs were first calculated, and analytes with RPDs above 30% were evaluated. Using professional judgement for inorganics, when the results are less than 5x the reporting limit and the absolute difference between the results is less than the reporting limit, no bias is suspected. When the results are less than 5x the reporting limit and the absolute value between the results is greater than the reporting limit, associated detected results are considered potentially biased. When the results are greater than 5x the reporting limit, associated results are considered potentially biased.

Primary Sample Name	Parameter	Analyte	Primary Sample Result	Duplicate Sample Result	RL/MDA Primary Sample	RL/MDA Duplicate Sample	Unit	RPD (%)
EP-3	General Chemistry	Sulfate	158	109	50	100	mg/L	<b>37</b>
EP-3	Metals	Calcium	52.6	37.1	0.100	0.100	mg/L	<b>34.6</b>
EP-3	Metals	Lithium	0.0694	0.0268	0.0030	0.0030	mg/L	<b>88.6</b>
EP-3	Metals	Selenium	0.0007 J	0.0010 U	0.0010	0.0010	mg/L	<b>36</b>

**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
23090001-001	EBG	9/18/2023	EBG	GW	-	X	X	X	X	X	X	X	X
23090001-002	EP-1	9/18/2023	EP-1	GW	-	X	X	X	X	X	X	X	X
23090001-003	EP-2	9/20/2023	EP-2	GW	-	X	X	X	X	X	X	X	X
23090001-004	EP-3	9/20/2023	EP-3	GW	-	X	X	X	X	X	X	X	X
23090001-005	EP-4	9/21/2023	EP-4	GW	-	X	X	X	X	X	X	X	X
23090001-006	EP-5	9/18/2023	EP-5	GW	-	X	X	X	X	X	X	X	X
23090001-007	EP-6	9/19/2023	EP-6	GW	-	X	X	X	X	X	X	X	X
23090001-008	EP-7	9/19/2023	EP-7	GW	-	X	X	X	X	X	X	X	X
23090001-009	Equipment Blank	9/21/2023	-	WQ	EB	X	-	X	X	X	X	X	X
23090001-010	Field Blank	9/21/2023	-	WQ	FB	X	-	X	X	X	X	X	X
23090001-011	Field Duplicate	9/20/2023	EP-3	GW	FD	X	X	X	X	X	X	X	X

**Notes:**

All analyses performed by Teklab in Collinsville, IL and Summit Environmental Technologies in Cuyahoga Falls, OH

**Abbreviations:**

- EB: Equipment Blank
- FB: Field Blank
- FD: Field Duplicate
- GW: Ground Water
- QC: Quality Control
- TDS: Total Dissolved Solids
- WQ: Water Quality

**APPENDIX D**

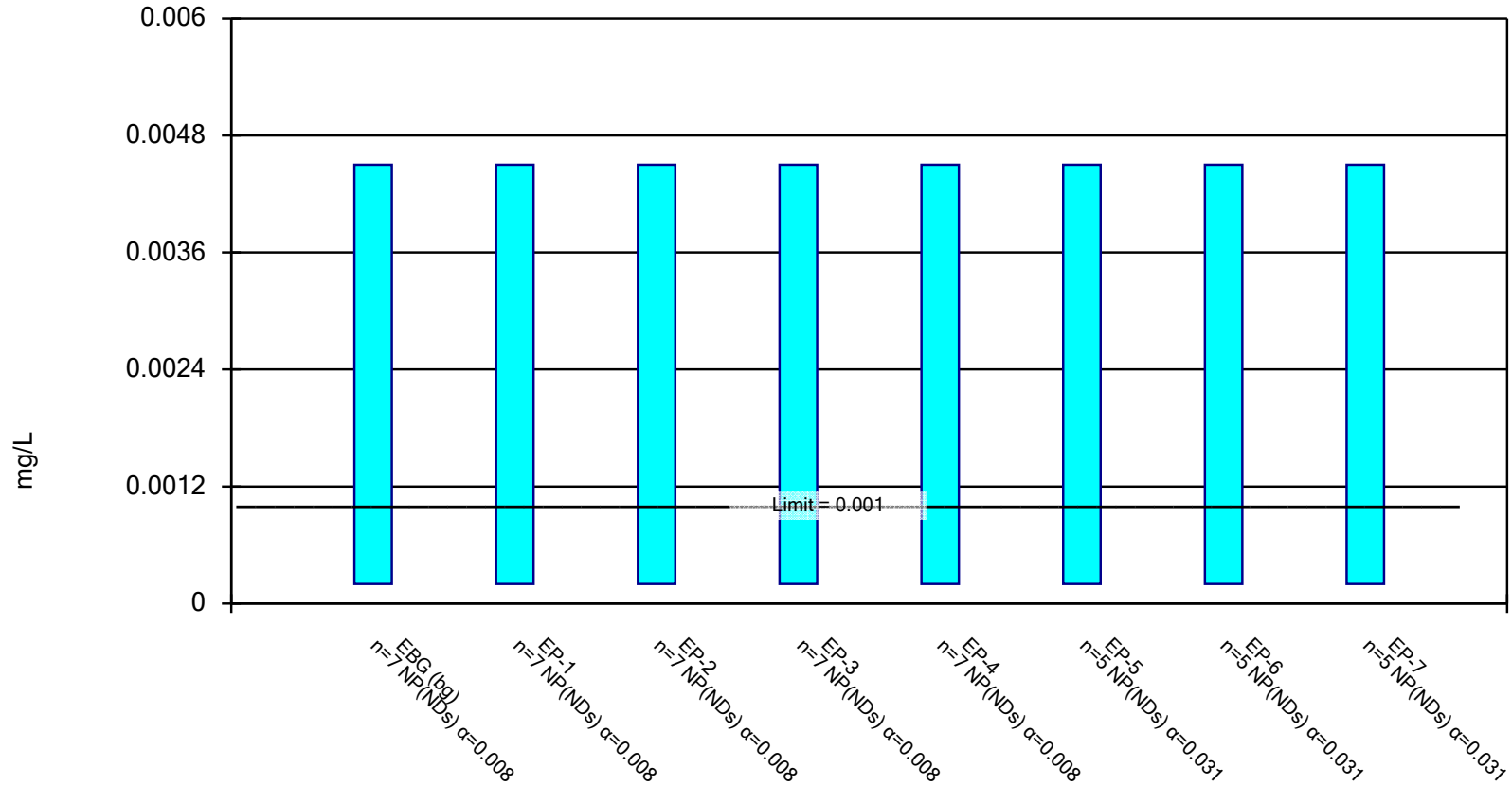
# 2023 Statistical Evaluation

**APPENDIX D-1**

## **Q4 2022 Background Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

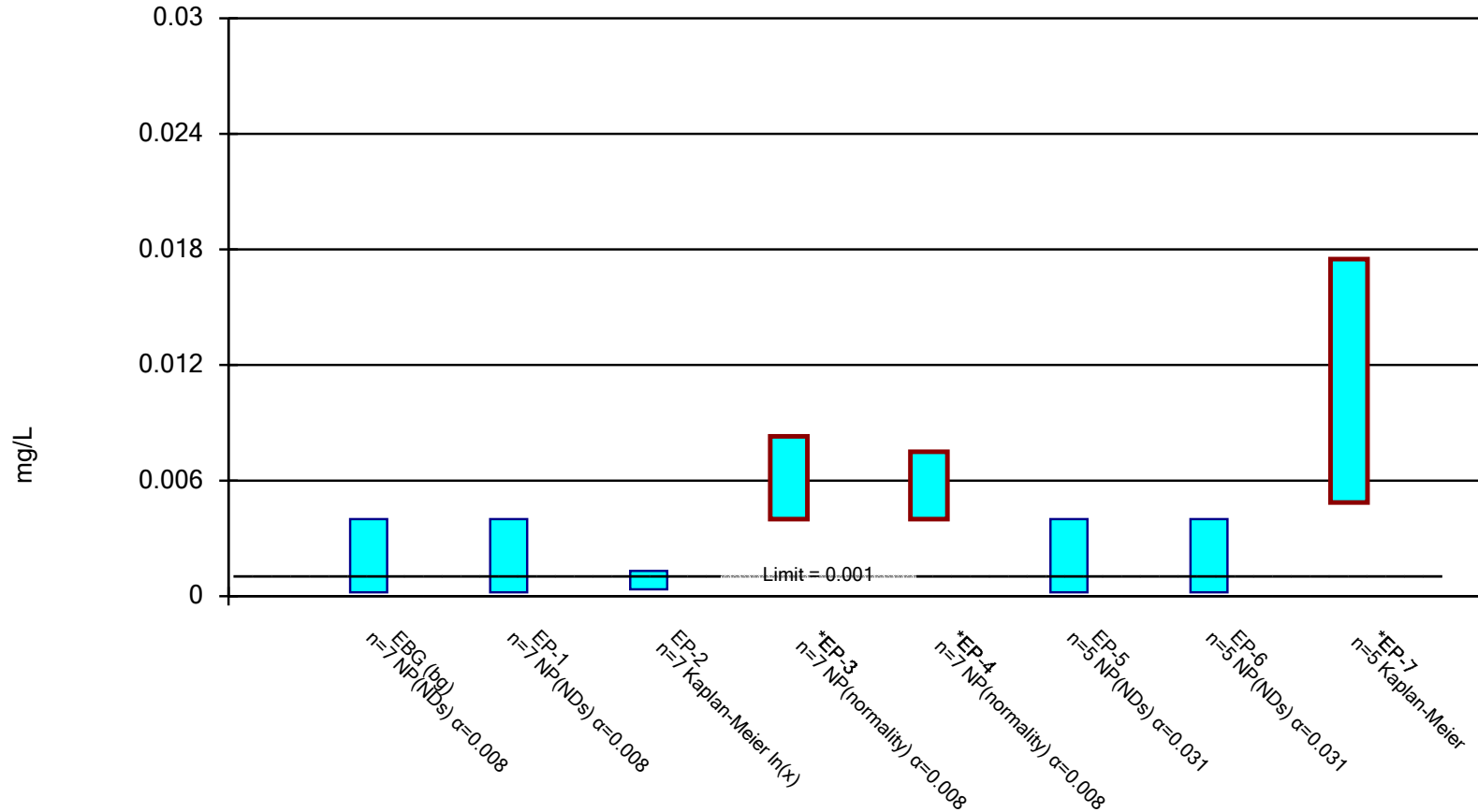


Constituent: Antimony Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

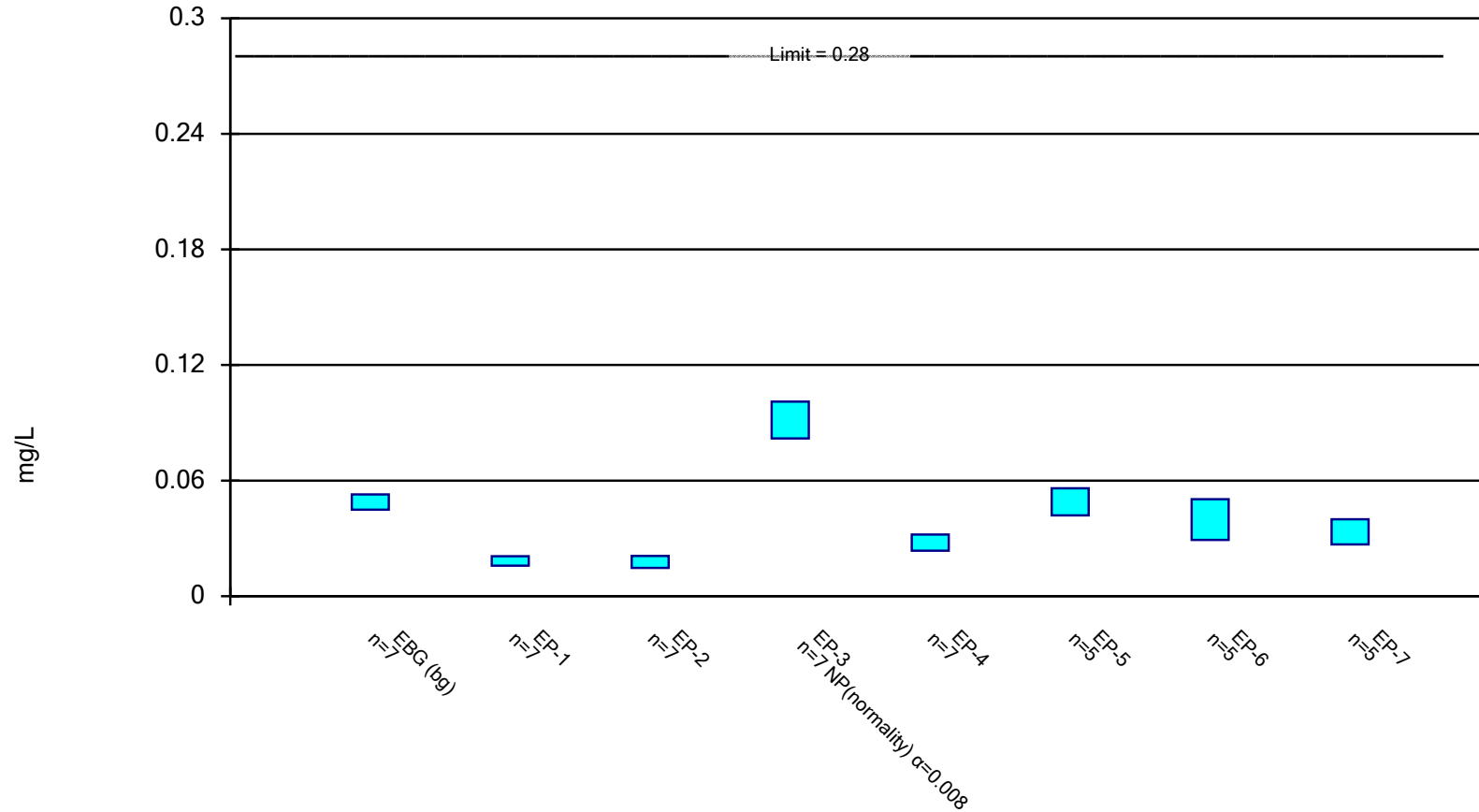


Constituent: Arsenic Analysis Run 2/3/2023 2:10 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



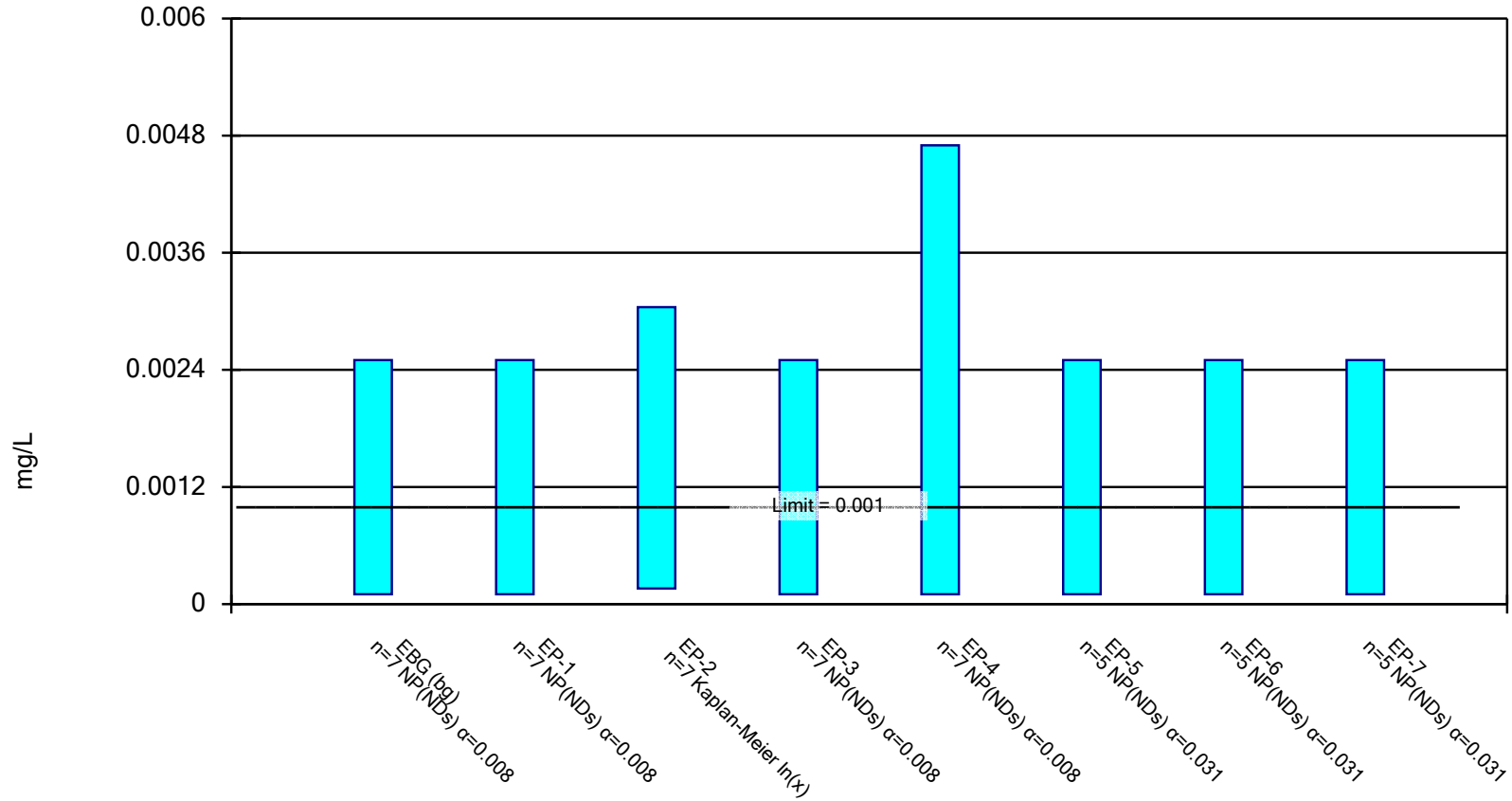
Constituent: Barium Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

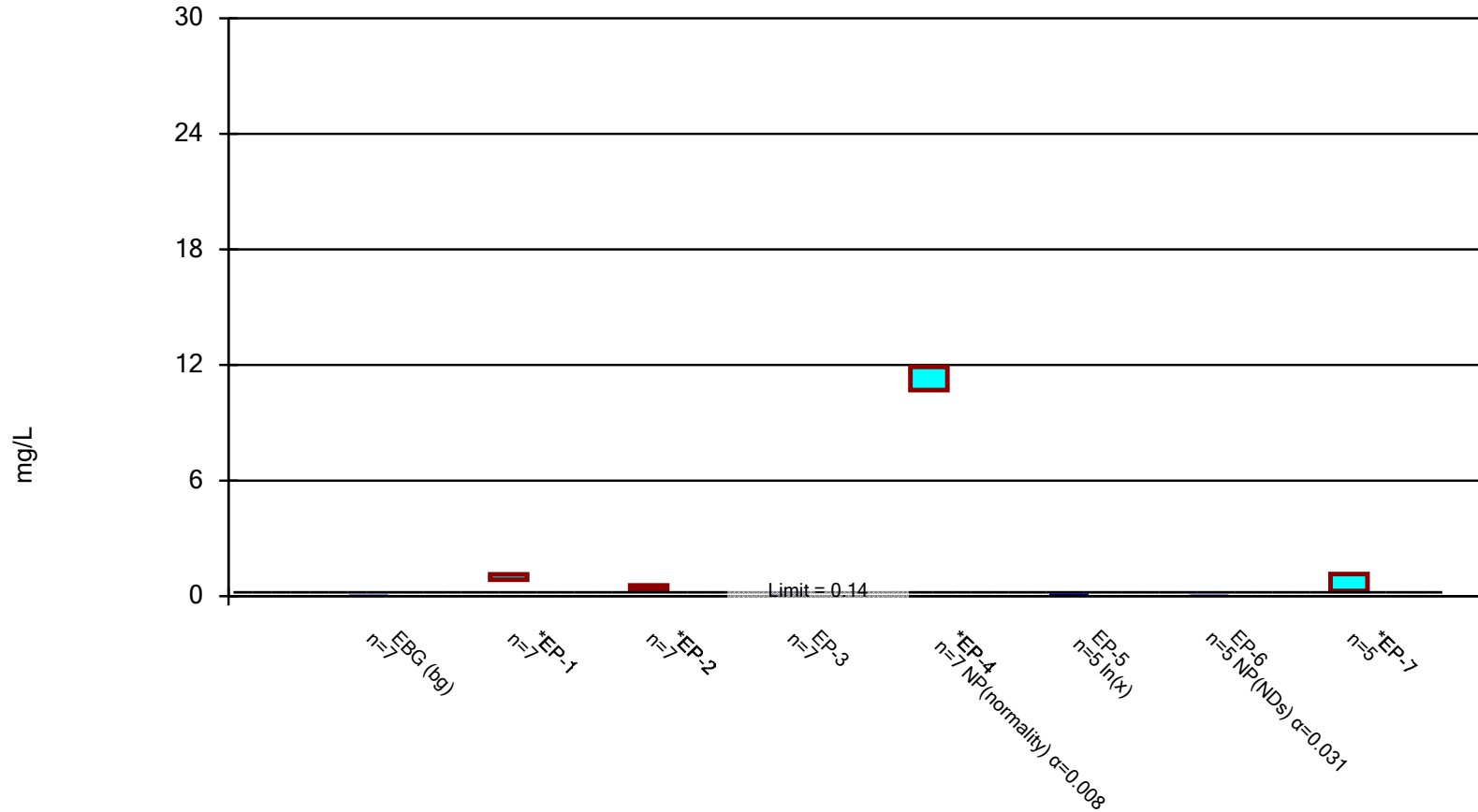


Constituent: Beryllium Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

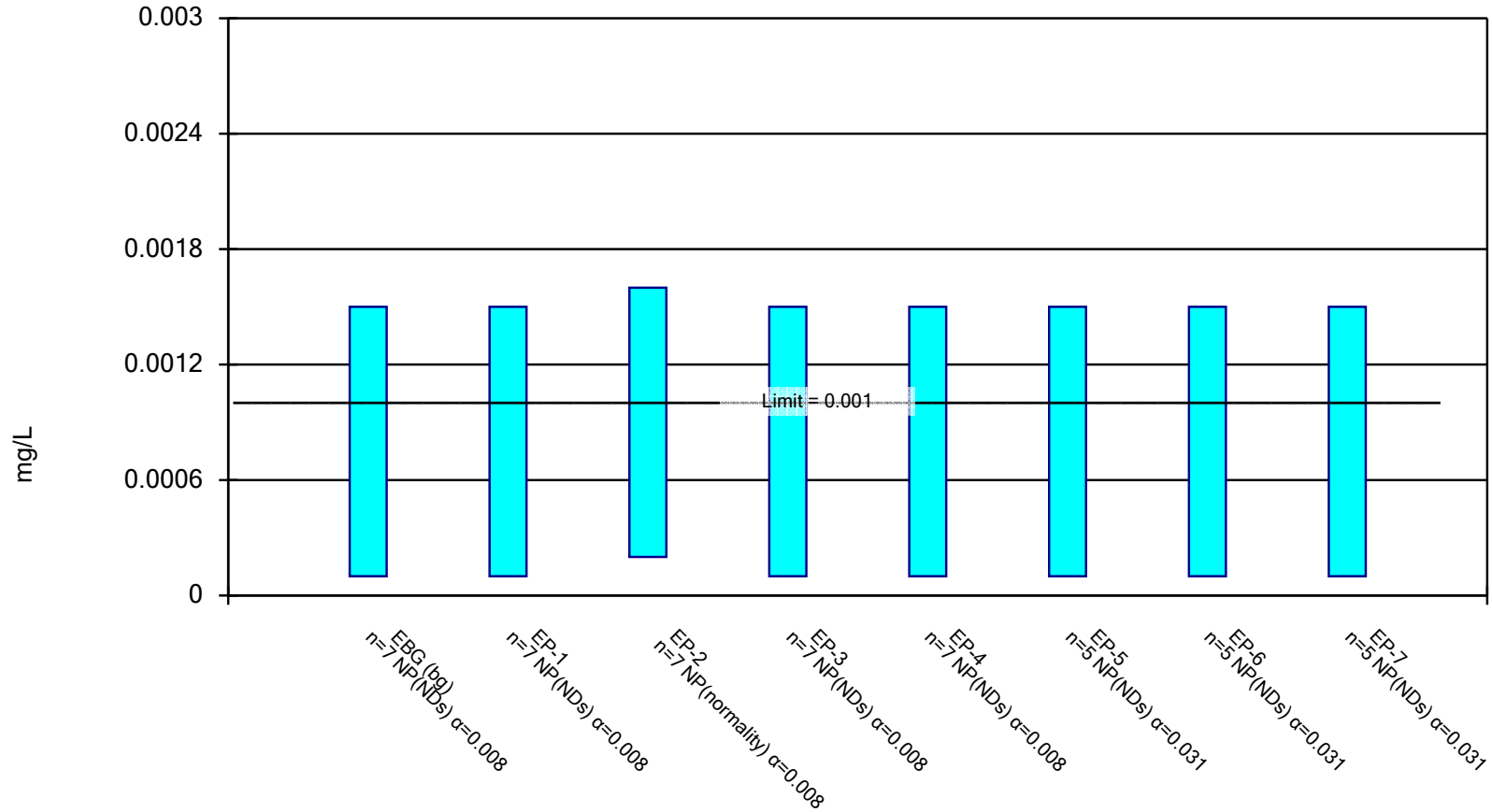


Constituent: Boron Analysis Run 2/3/2023 2:10 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

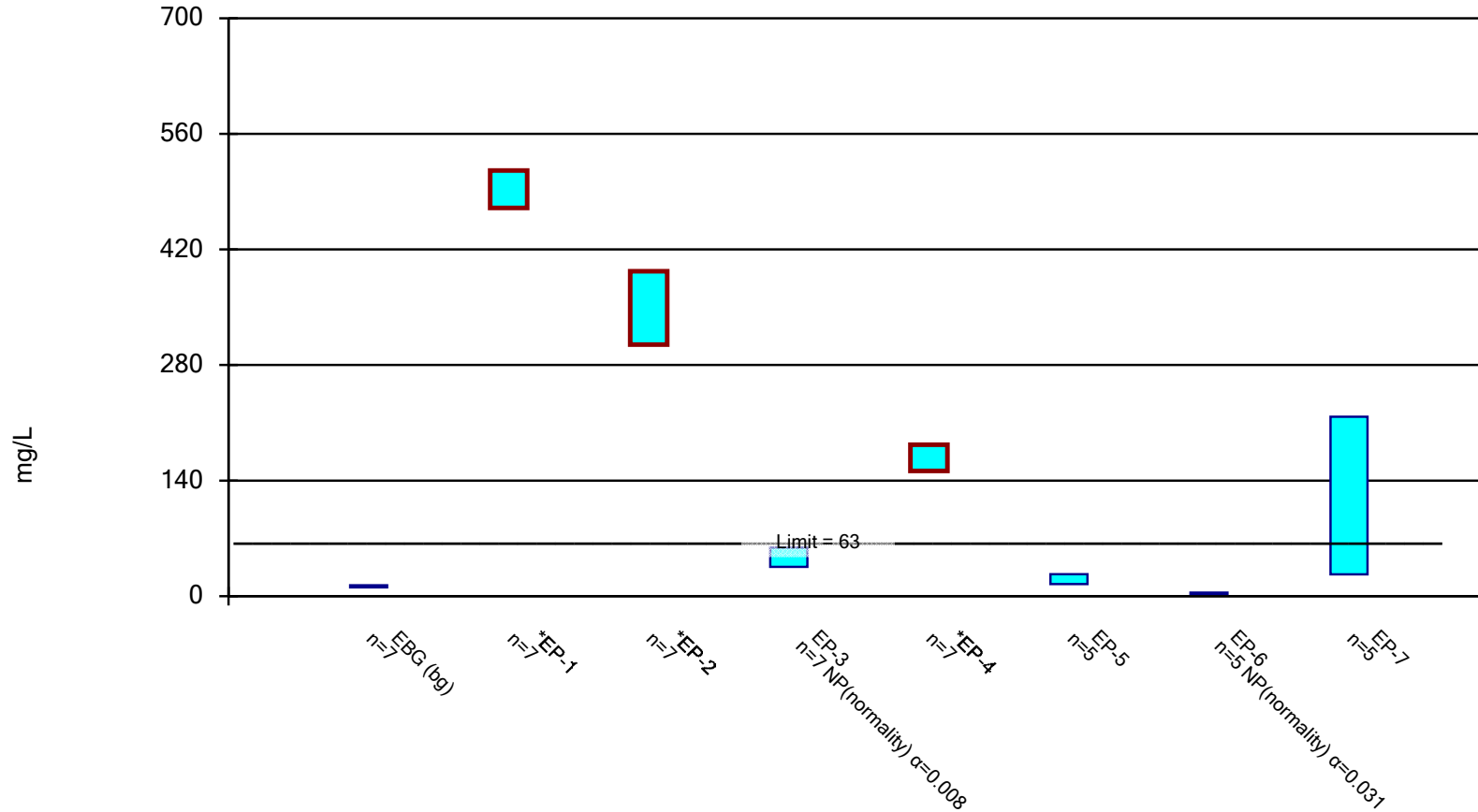


Constituent: Cadmium Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

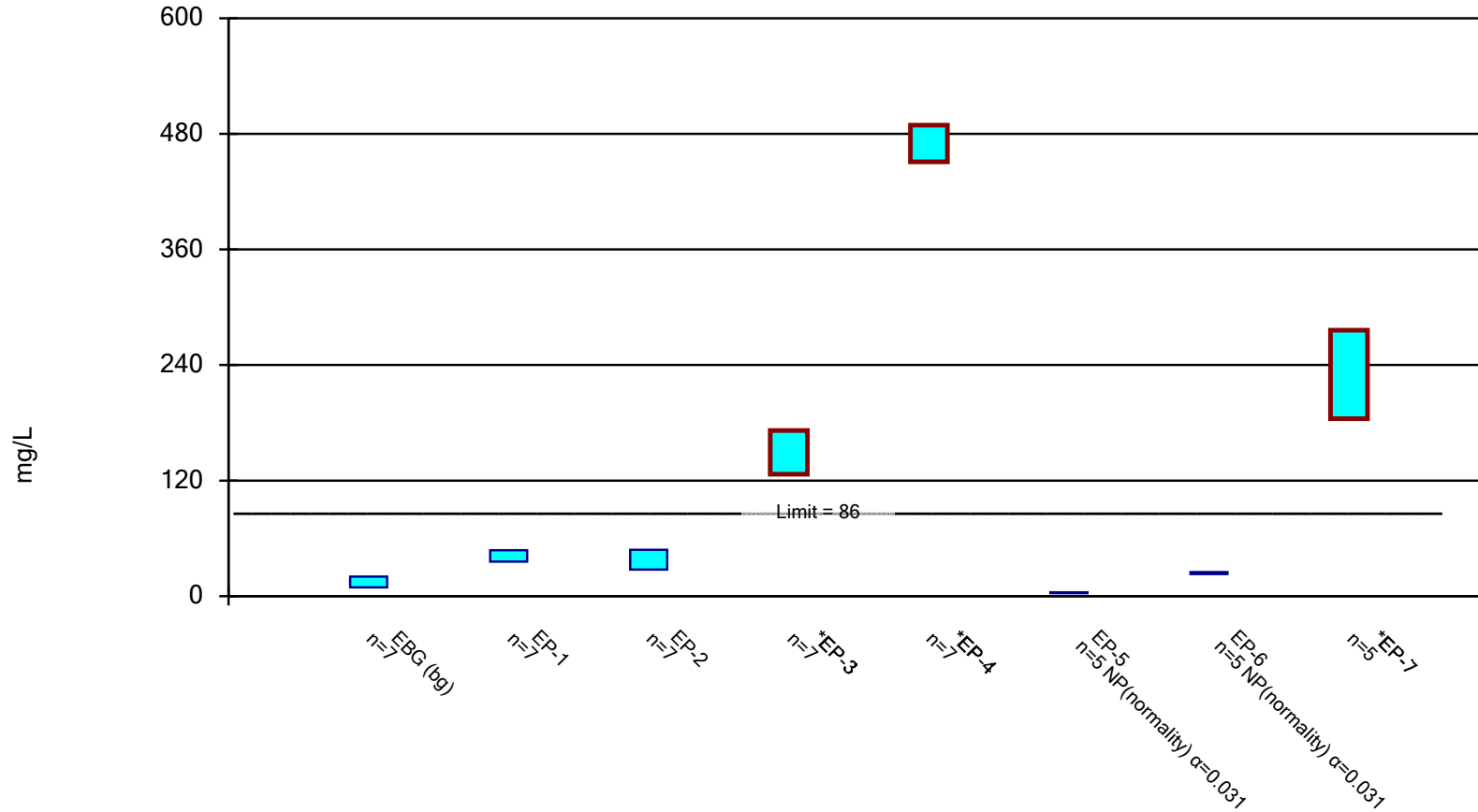


Constituent: Calcium Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

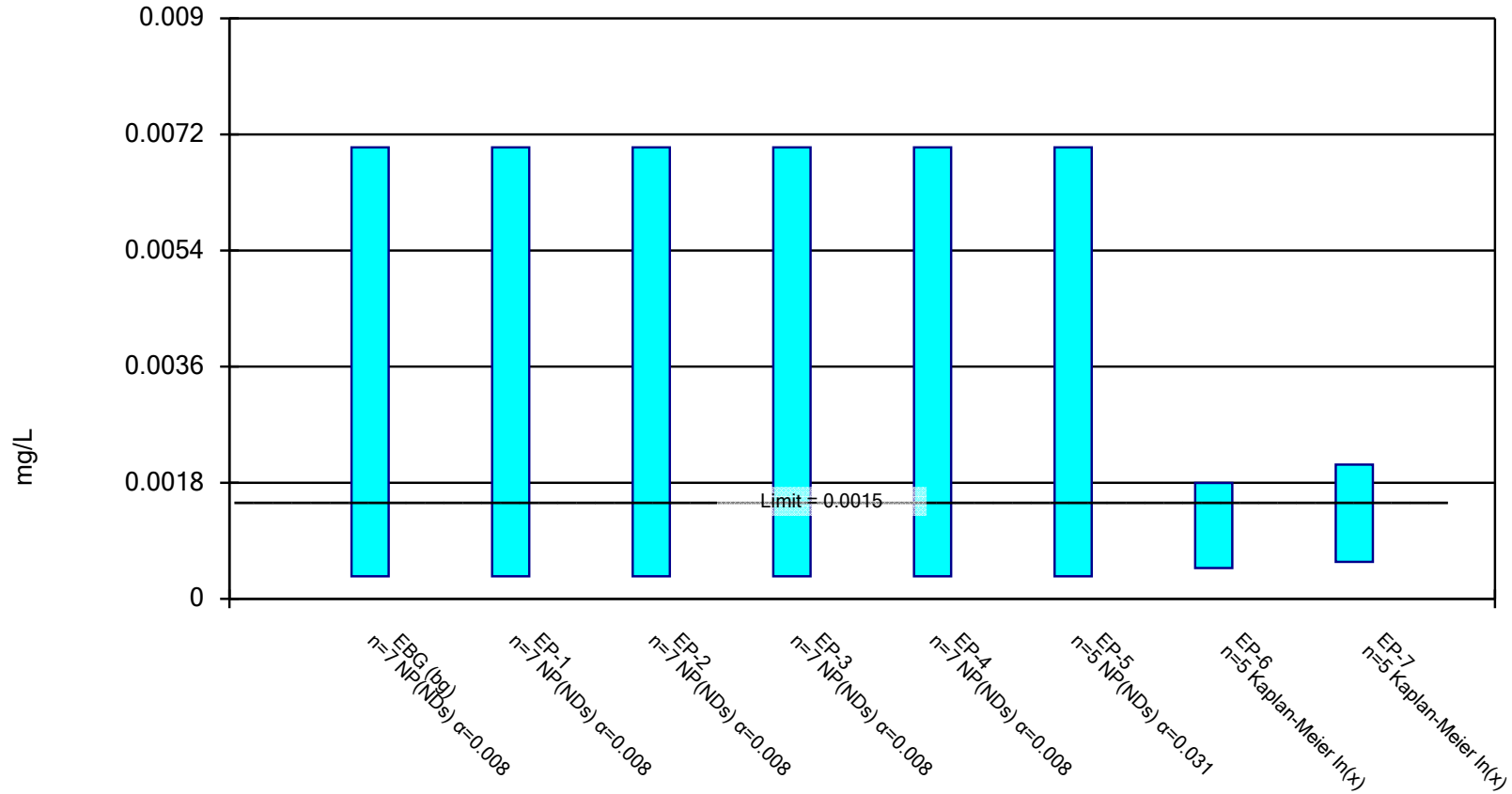


Constituent: Chloride Analysis Run 2/3/2023 2:10 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

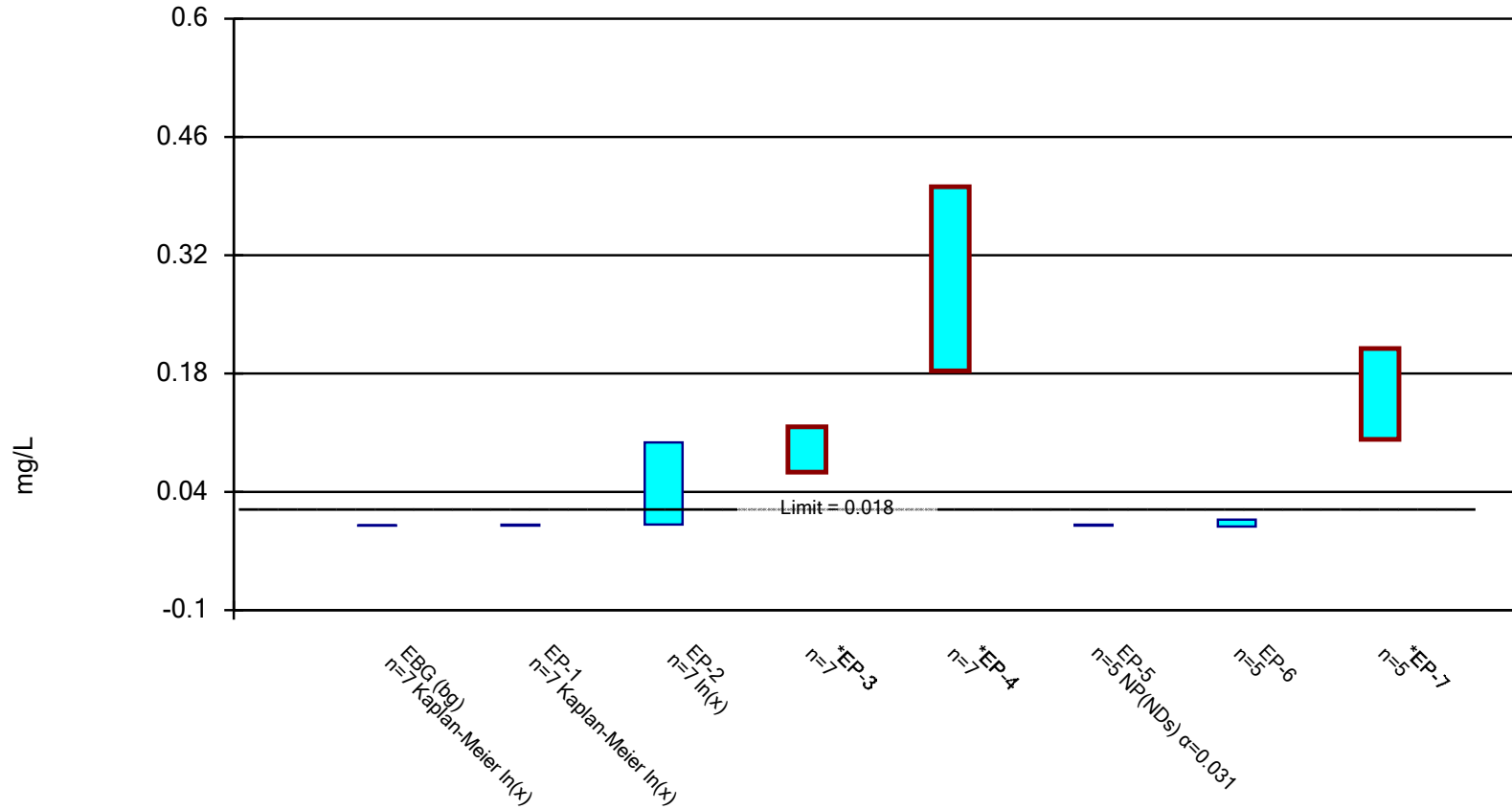


Constituent: Chromium Analysis Run 2/3/2023 2:10 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

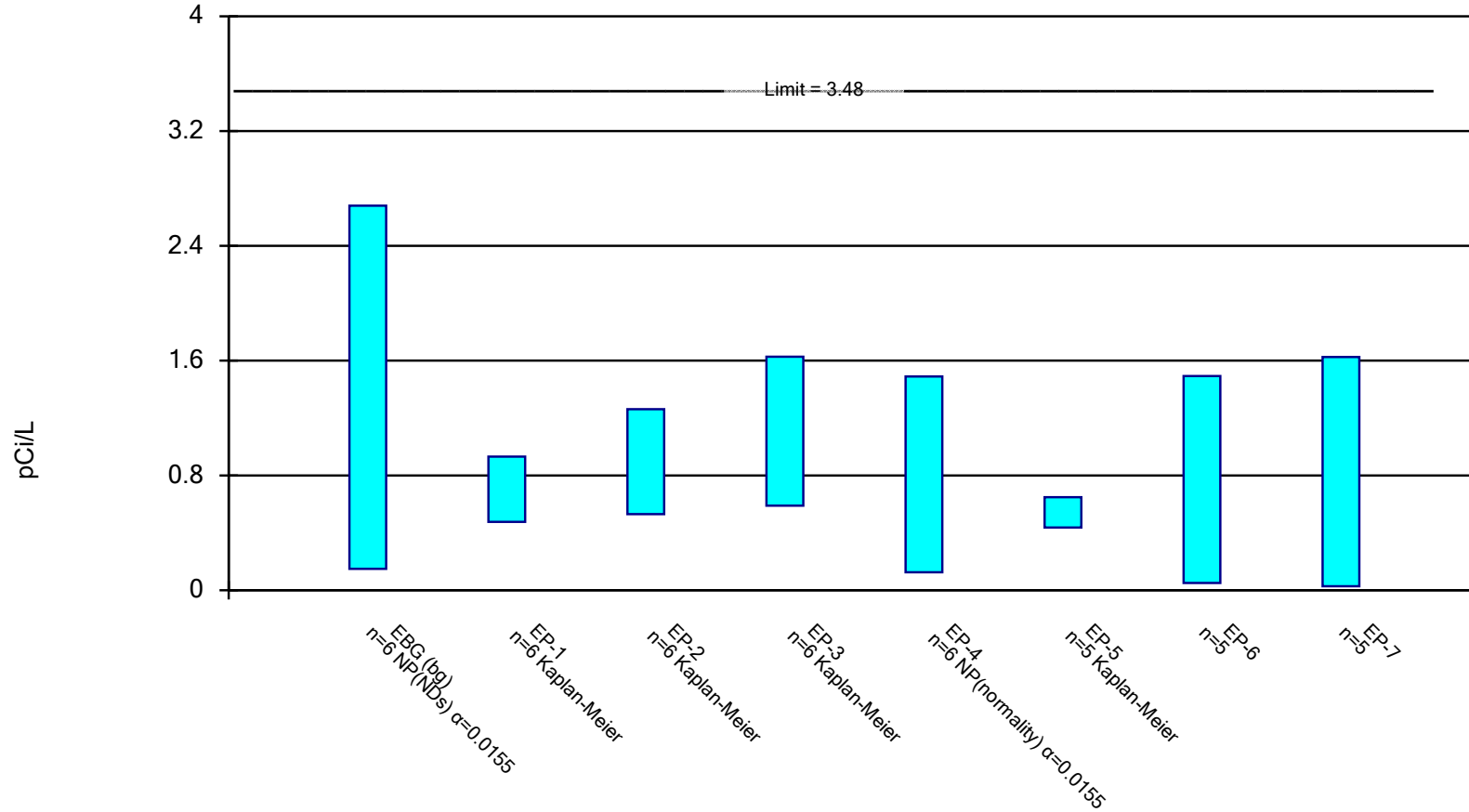


Constituent: Cobalt Analysis Run 2/3/2023 2:10 PM View: IEPA Background

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.

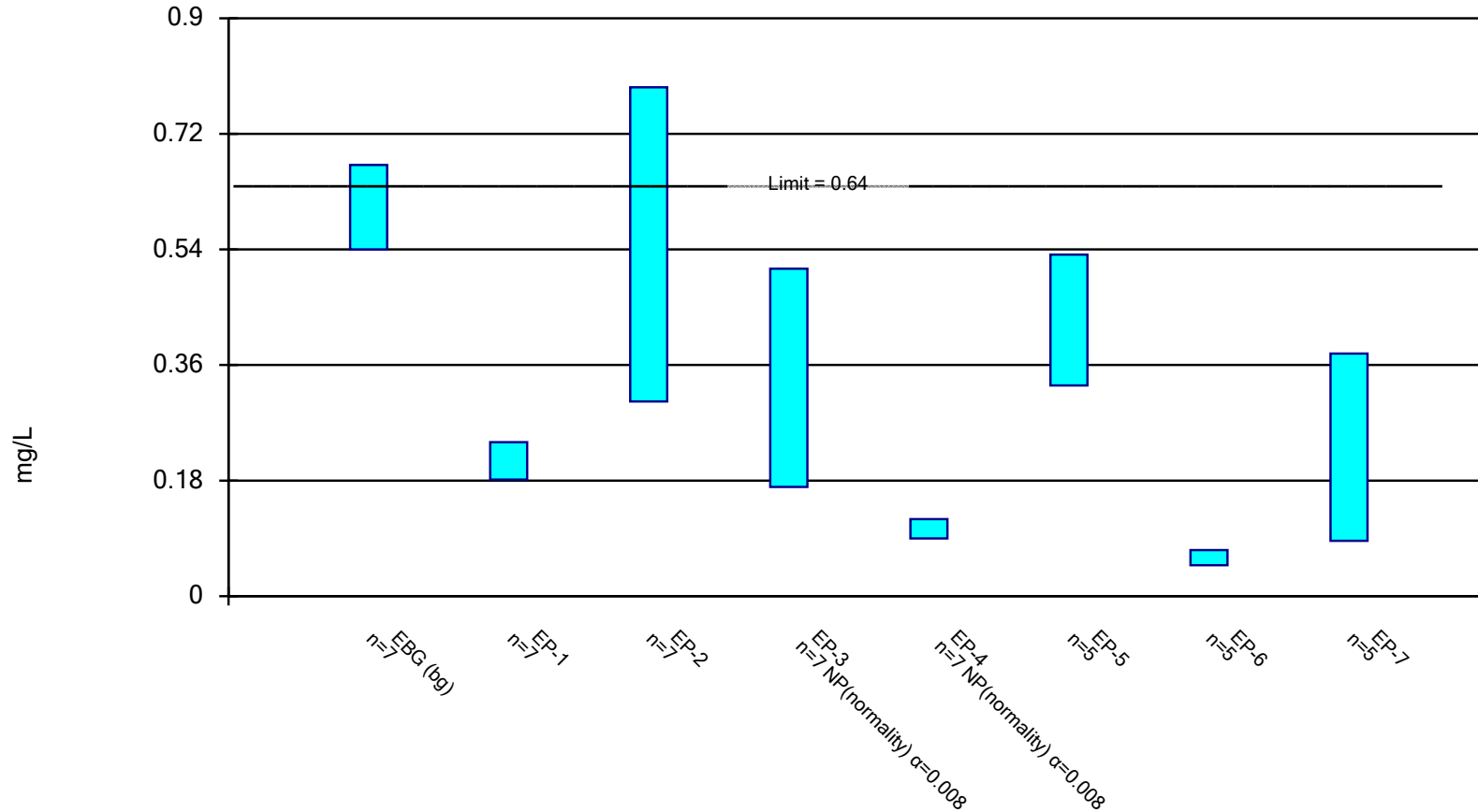


Constituent: Combined Radium    Analysis Run 2/3/2023 2:11 PM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database



## 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.

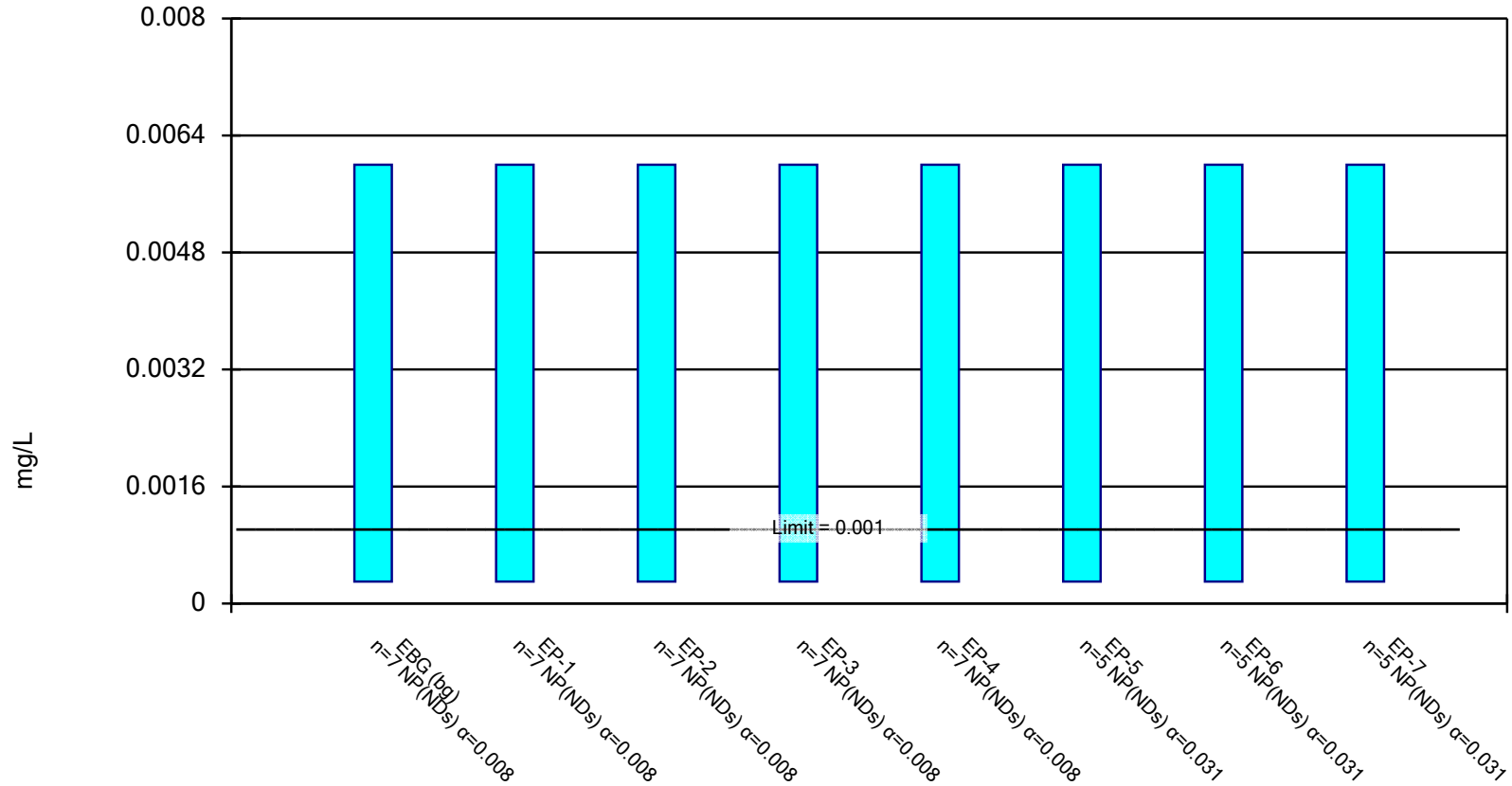


Constituent: Fluoride Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

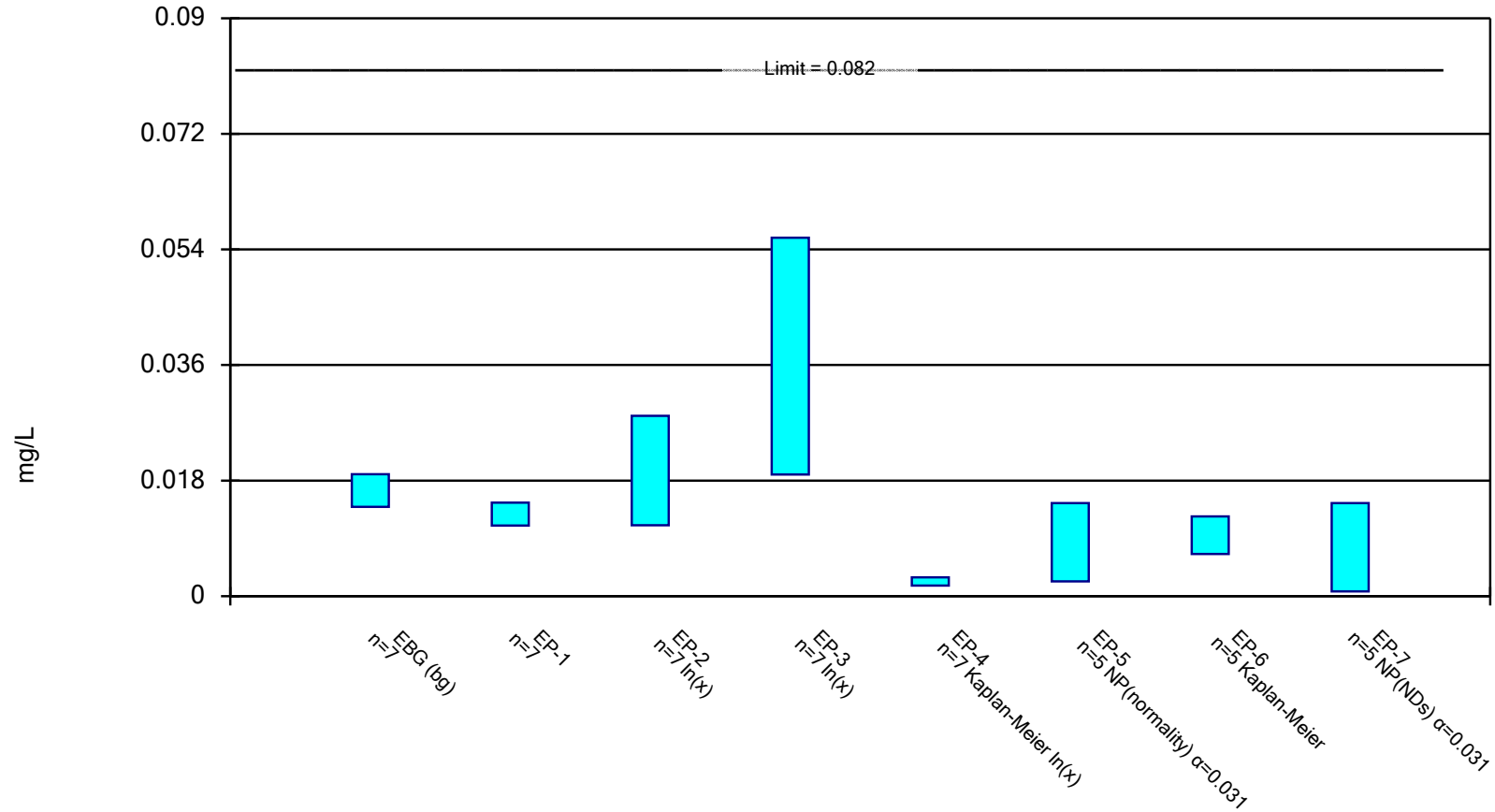


Constituent: Lead Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

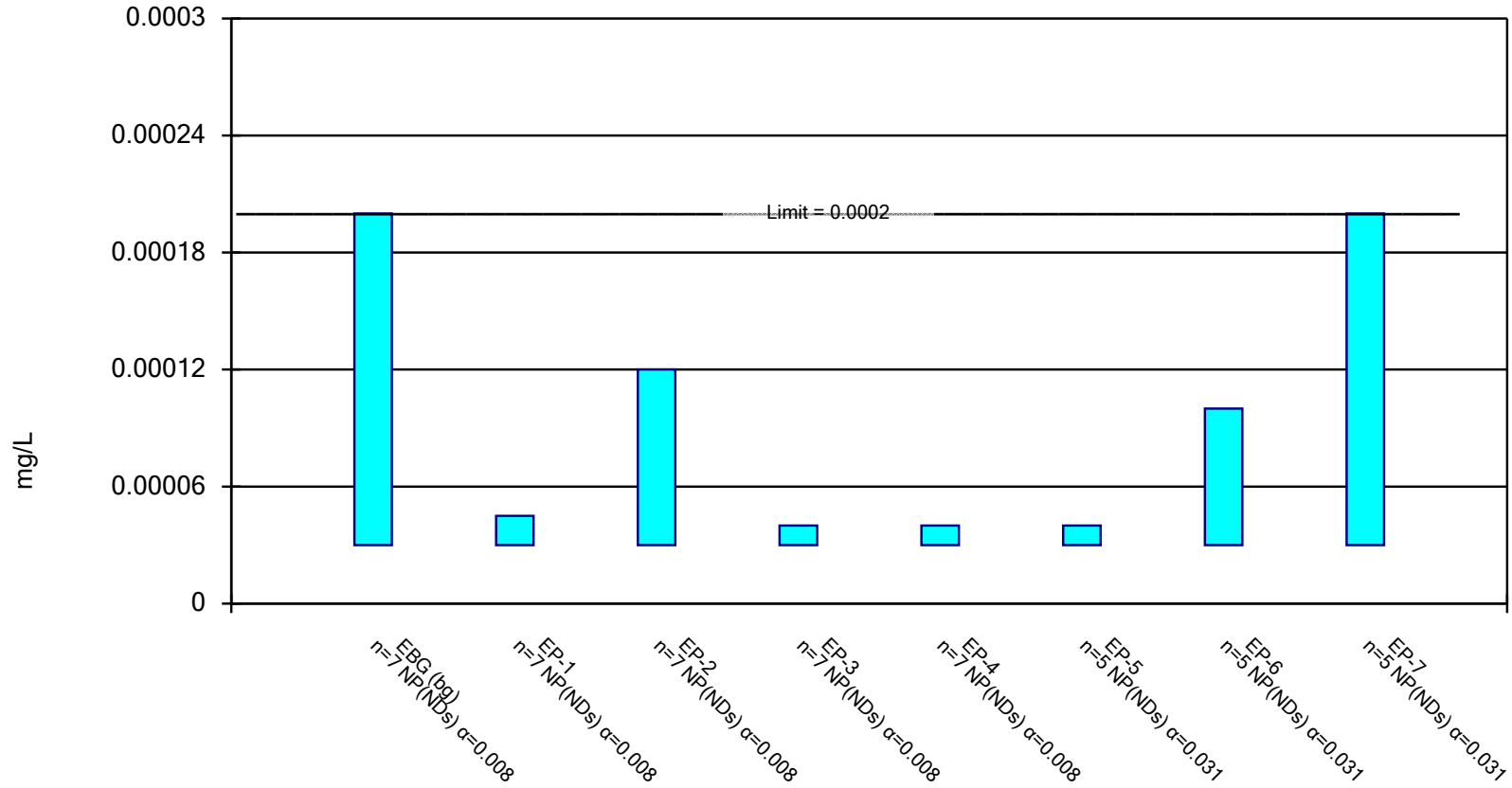


Constituent: Lithium Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

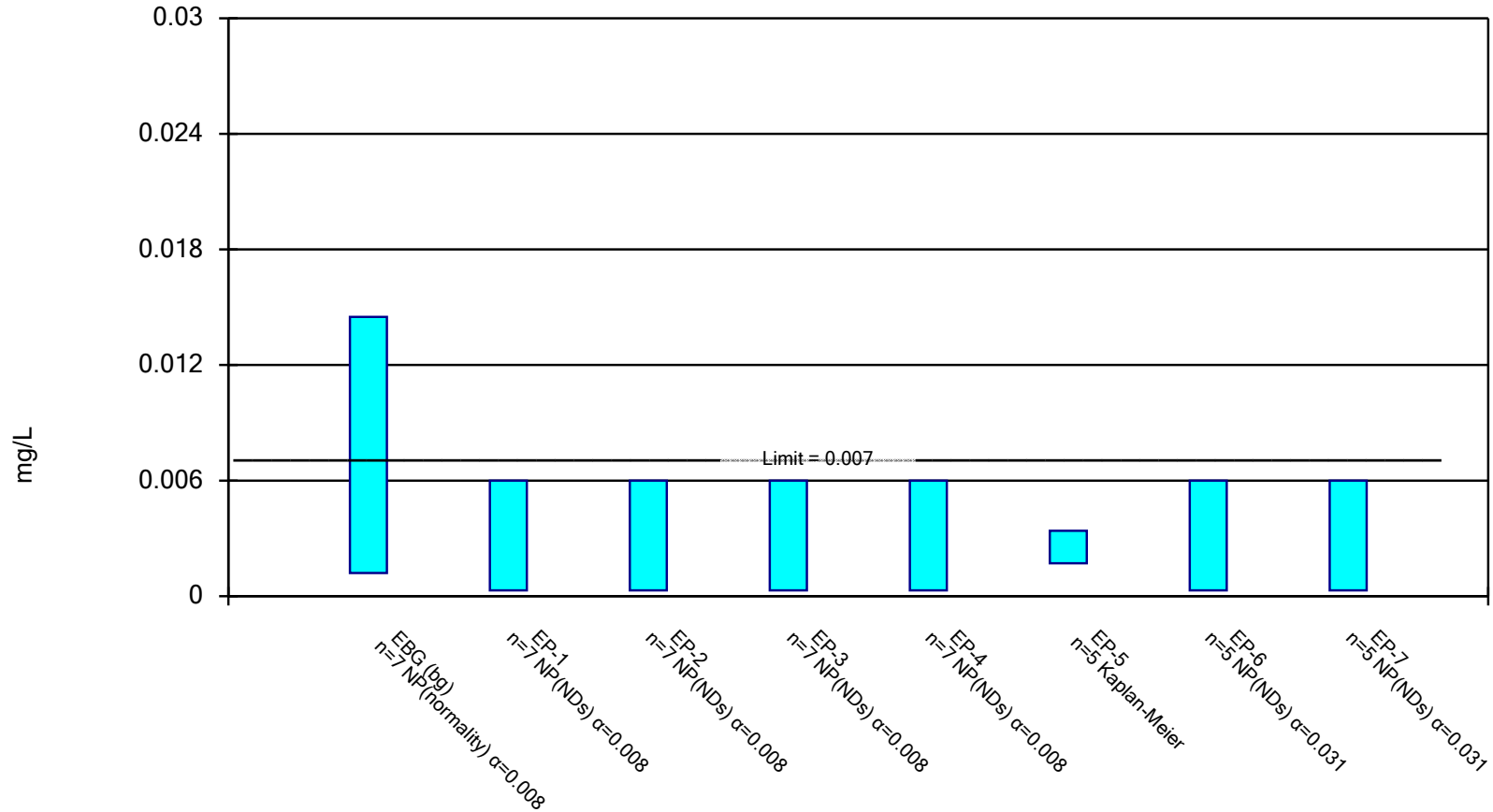


Constituent: Mercury Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

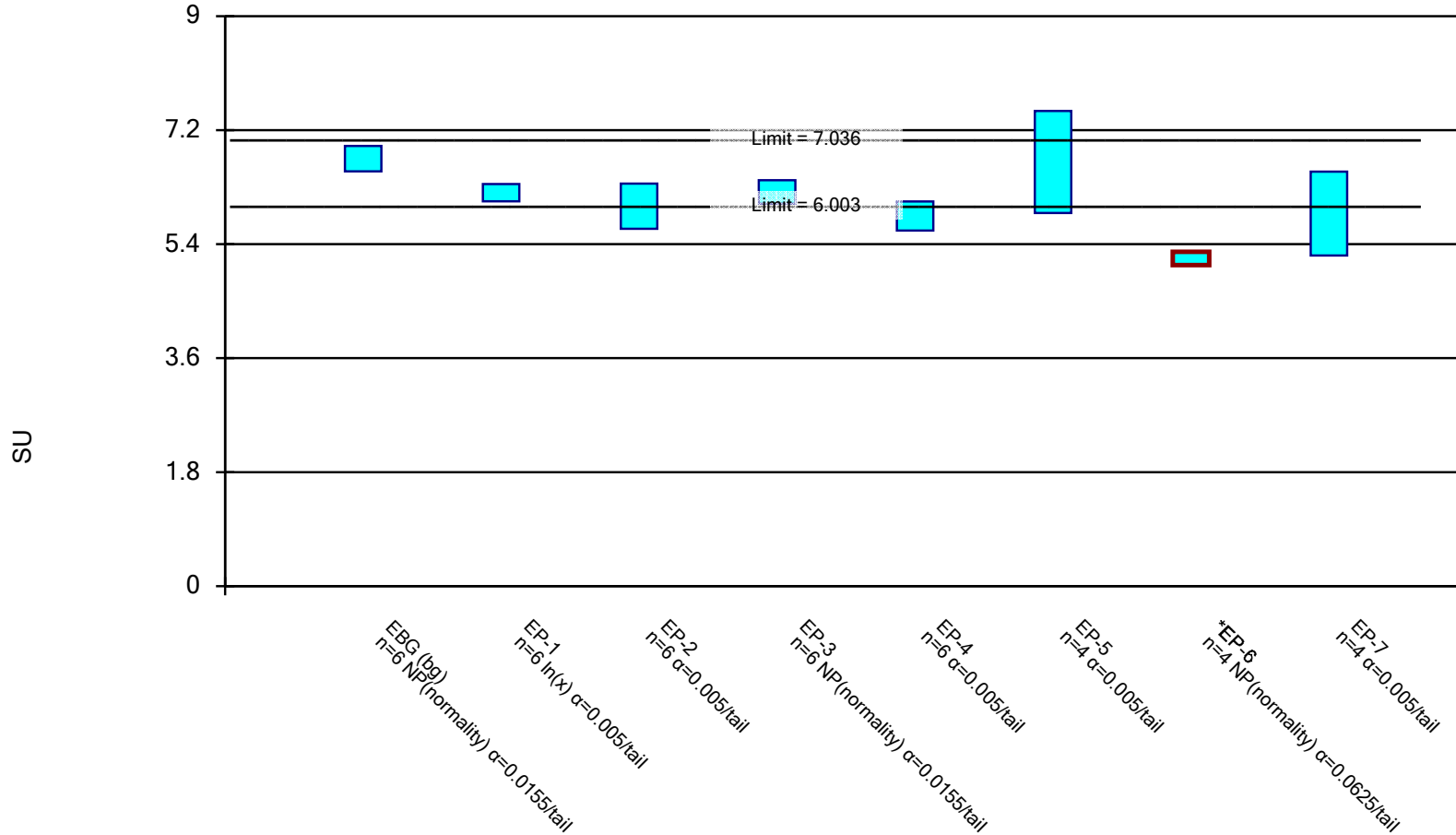


Constituent: Molybdenum Analysis Run 2/3/2023 2:11 PM View: IEPA Background

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.

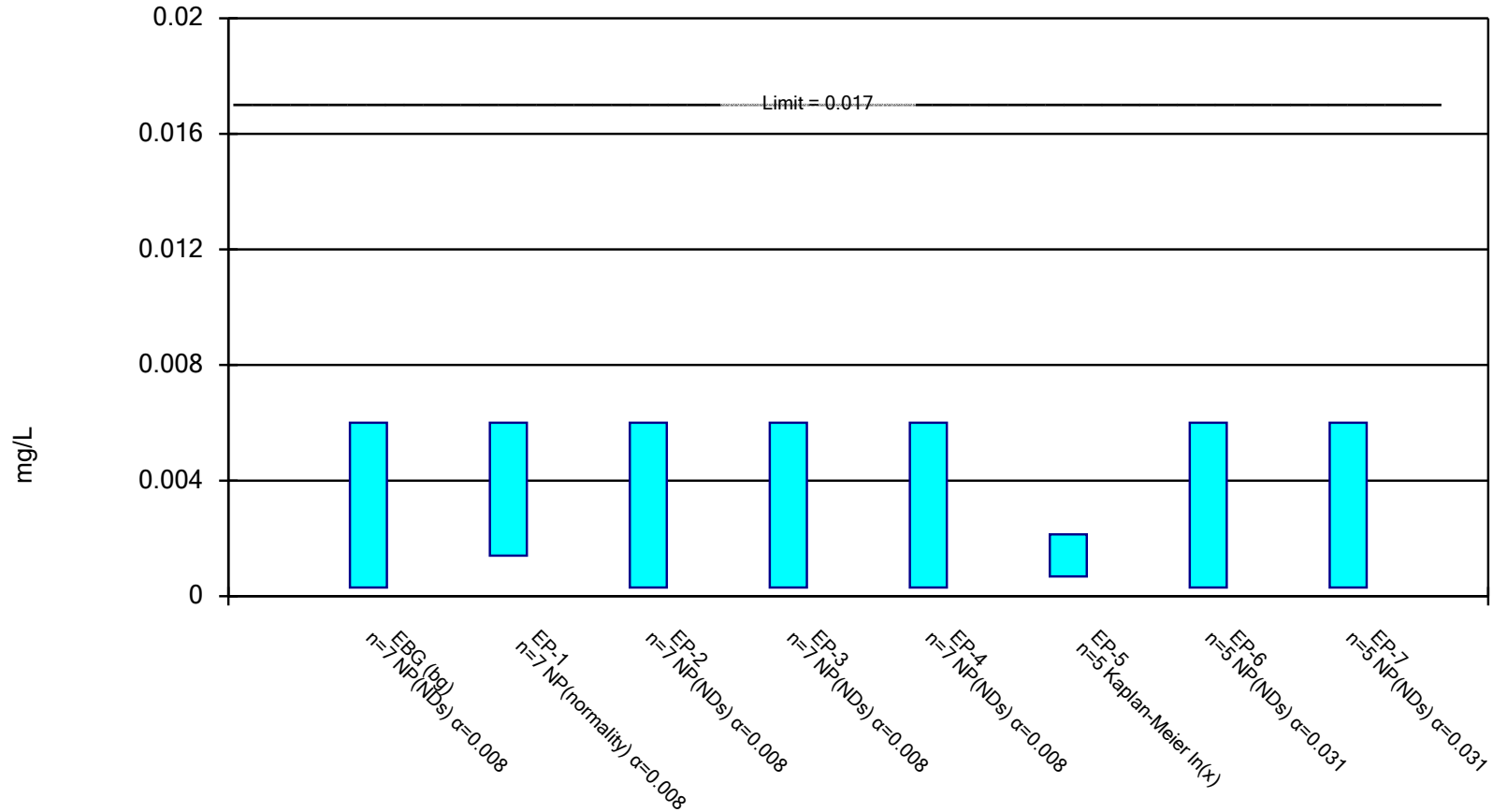


Constituent: pH Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

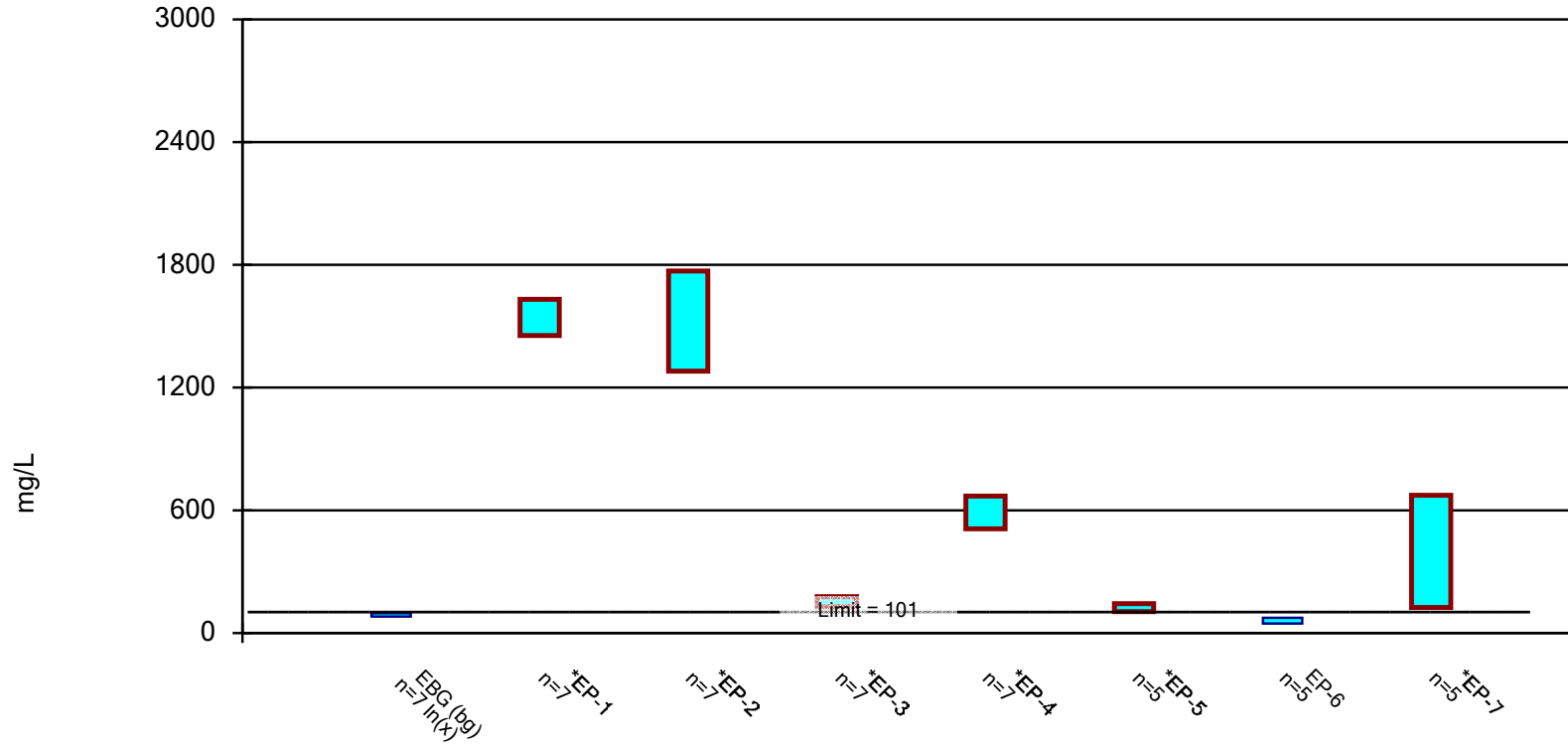


Constituent: Selenium Analysis Run 2/3/2023 2:11 PM View: IEPA Background

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.



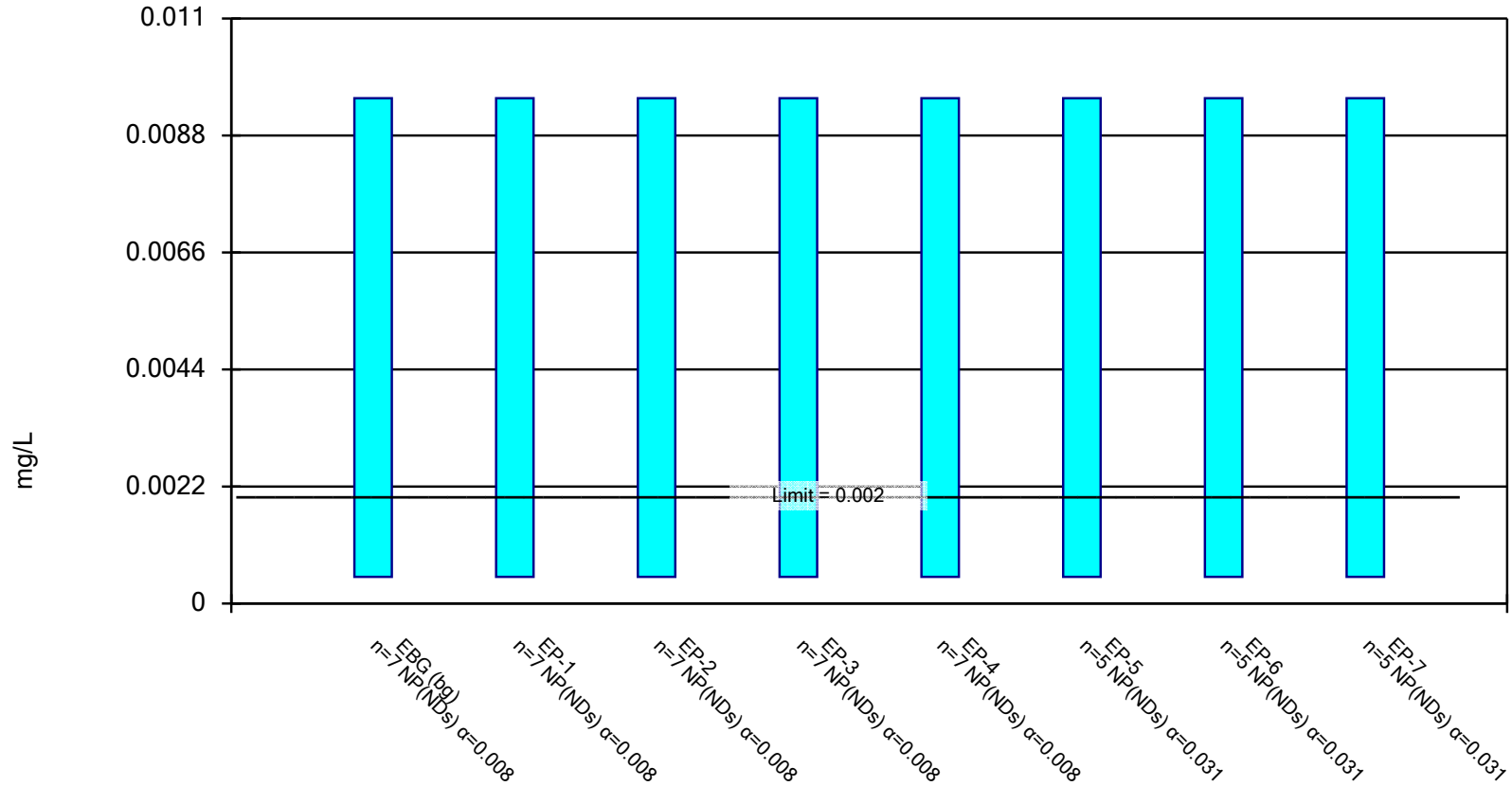
Constituent: Sulfate Analysis Run 2/3/2023 2:11 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

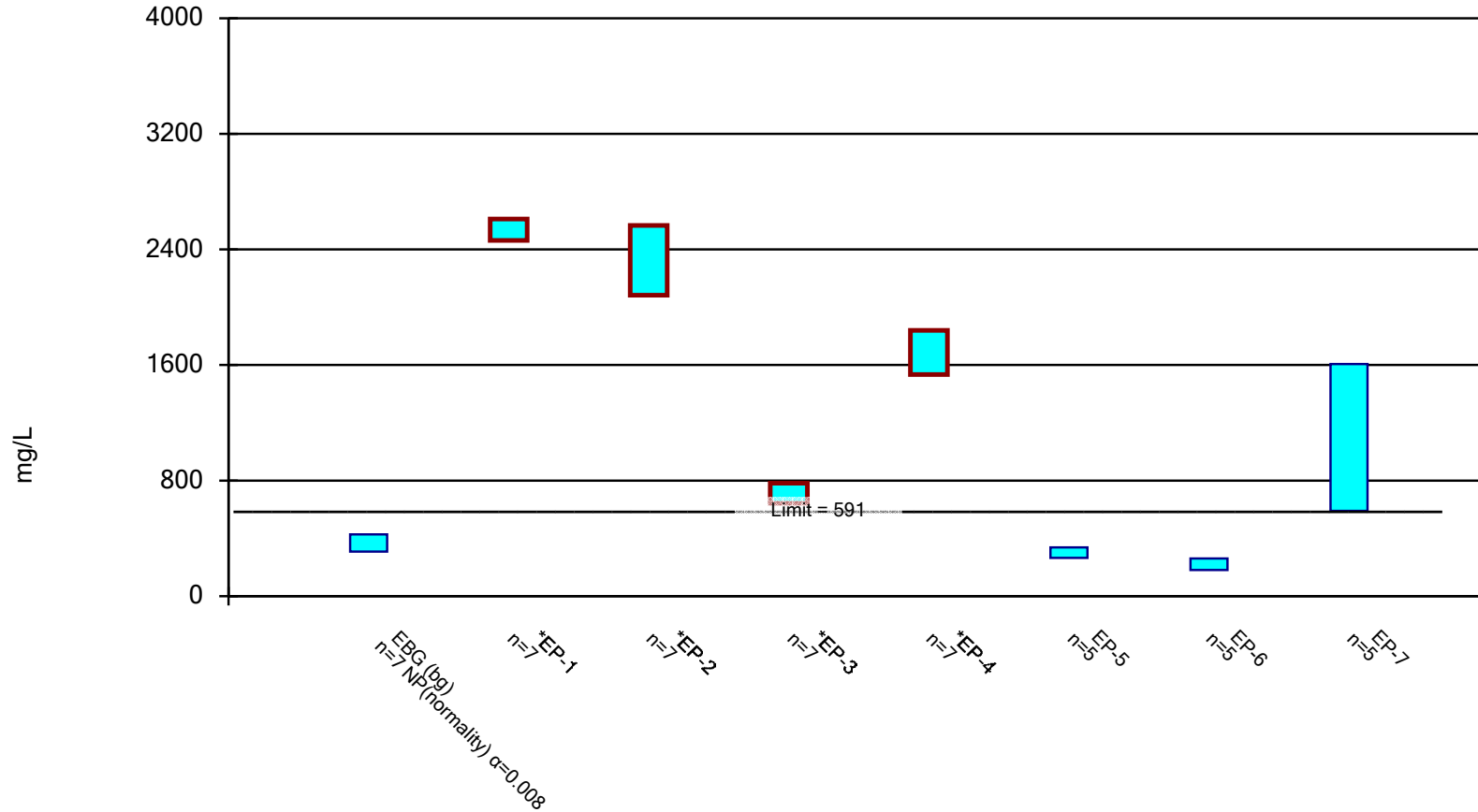


Constituent: Thallium Analysis Run 2/3/2023 2:11 PM View: IEPA Background

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.



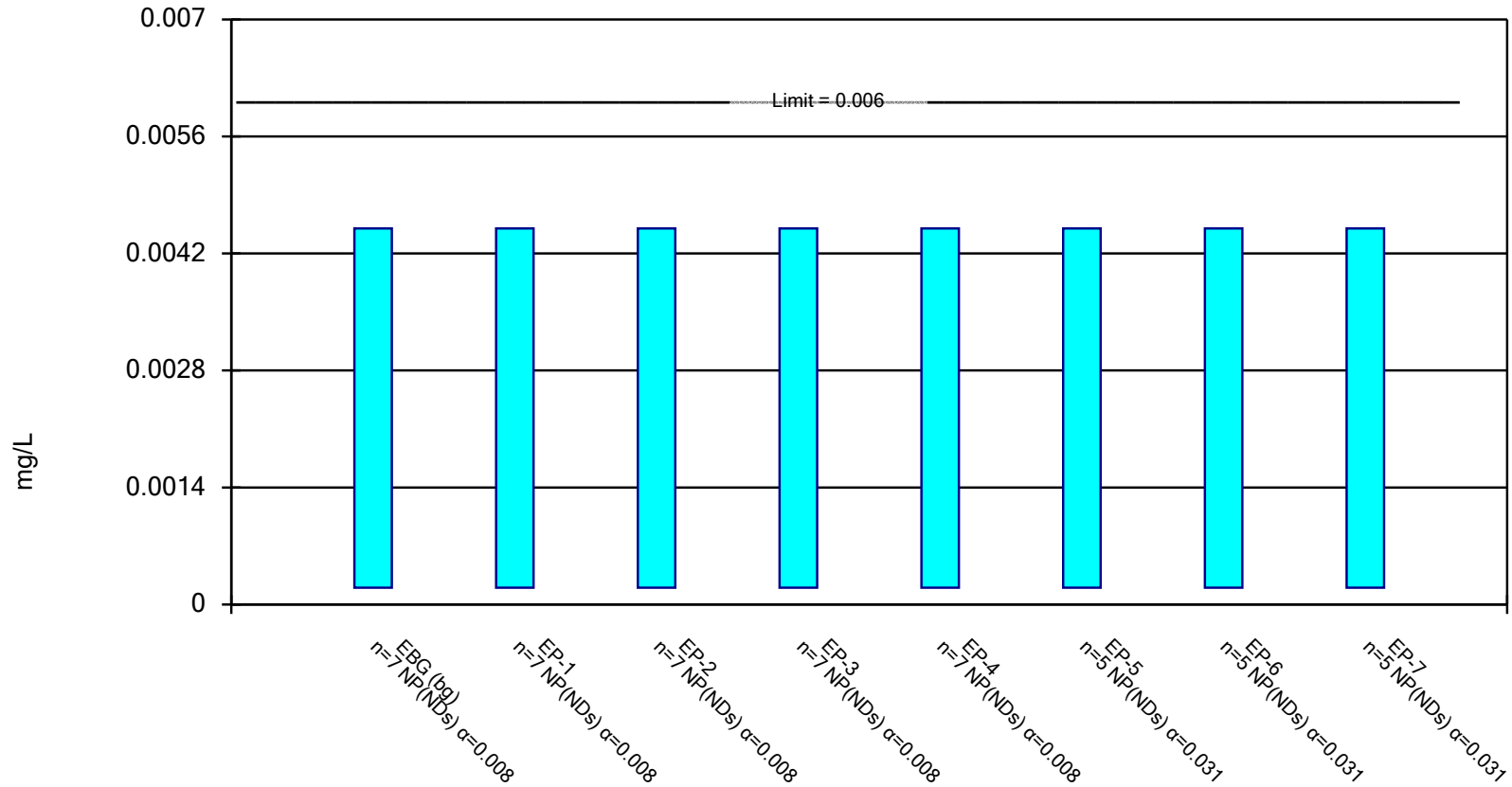
Constituent: Total Dissolved Solids    Analysis Run 2/3/2023 2:11 PM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

**APPENDIX D-2**

**Q4 2022 Groundwater Protection  
Standard Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

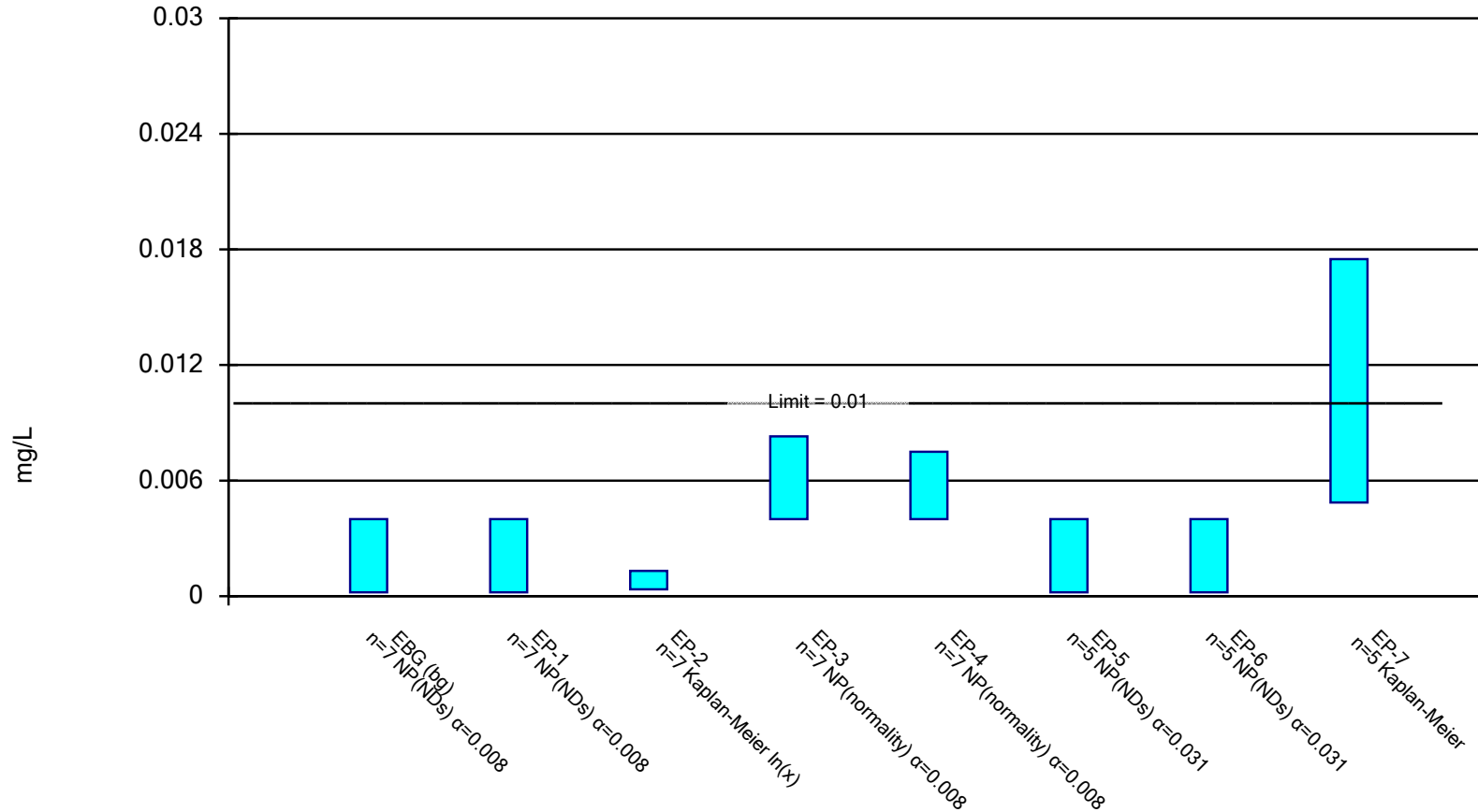


Constituent: Antimony Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

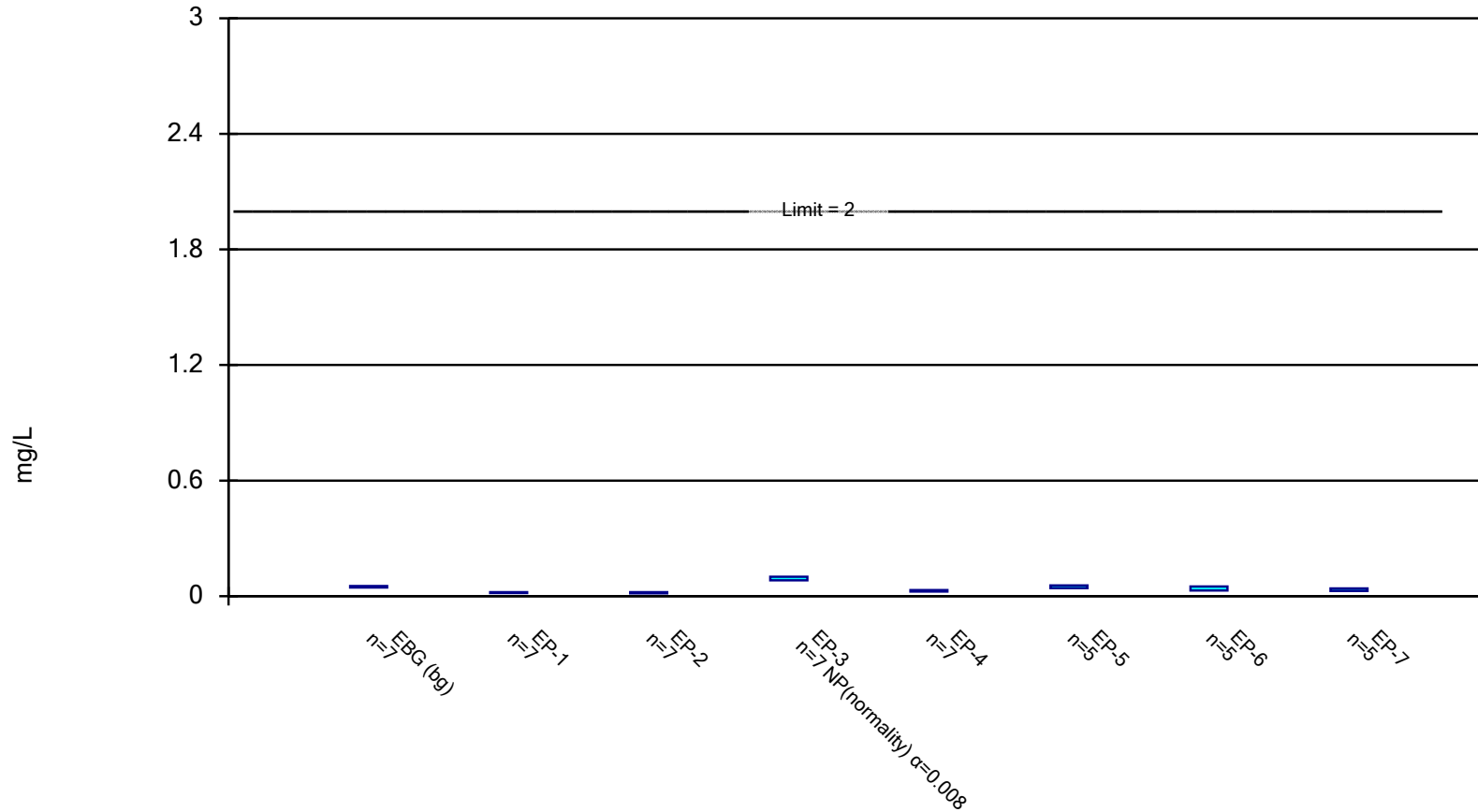


Constituent: Arsenic Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

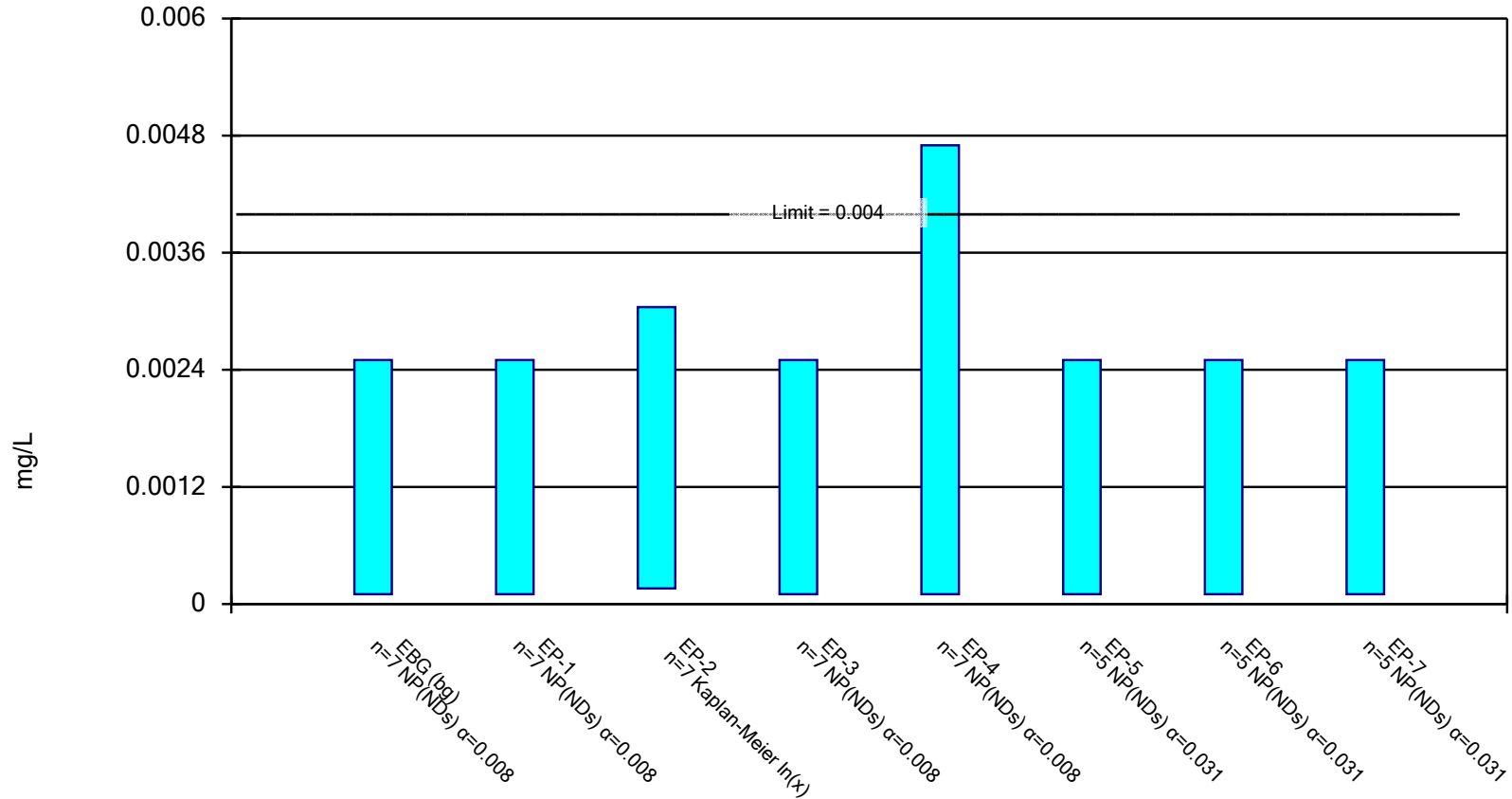


Constituent: Barium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

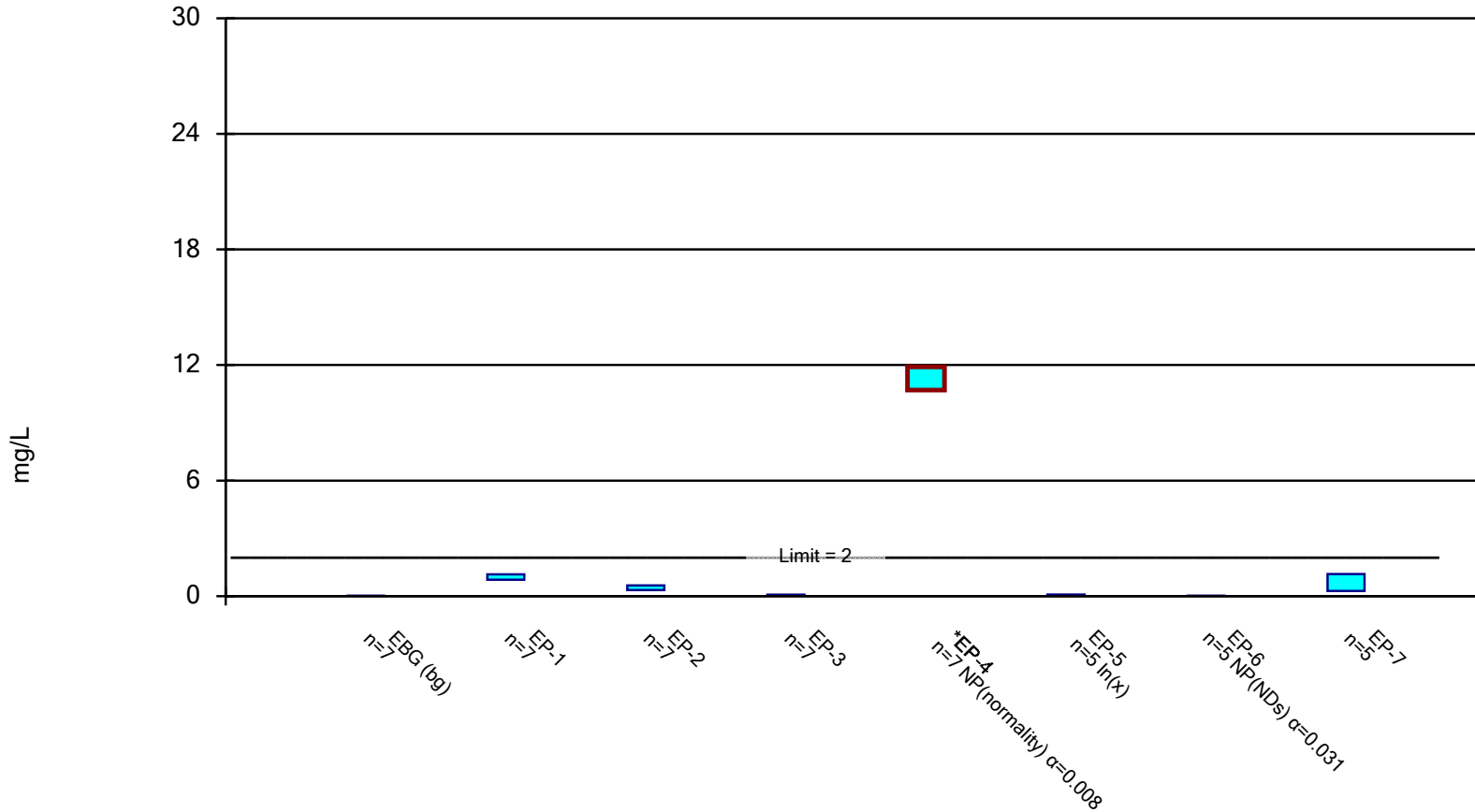


Constituent: Beryllium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



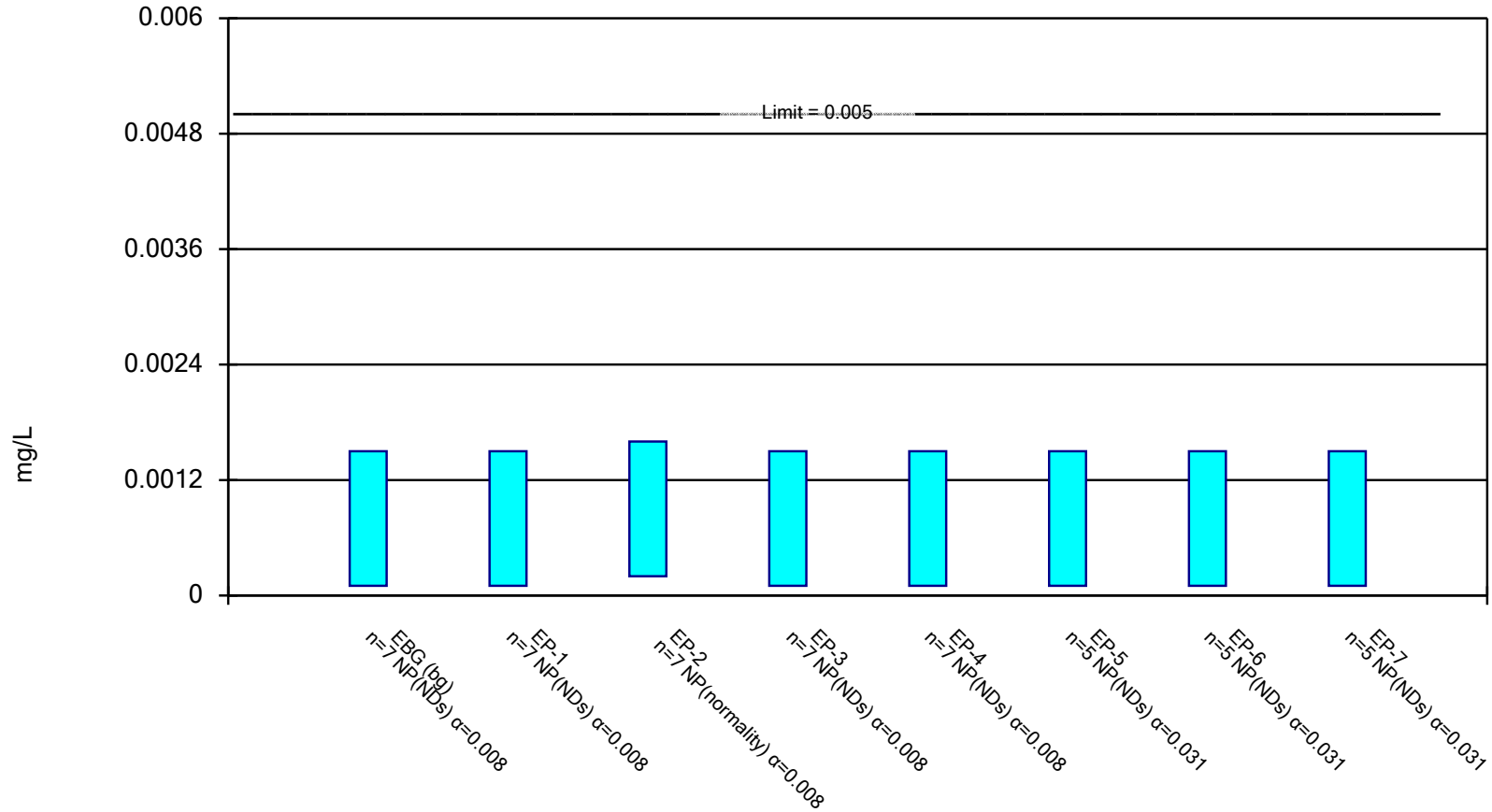
Constituent: Boron Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

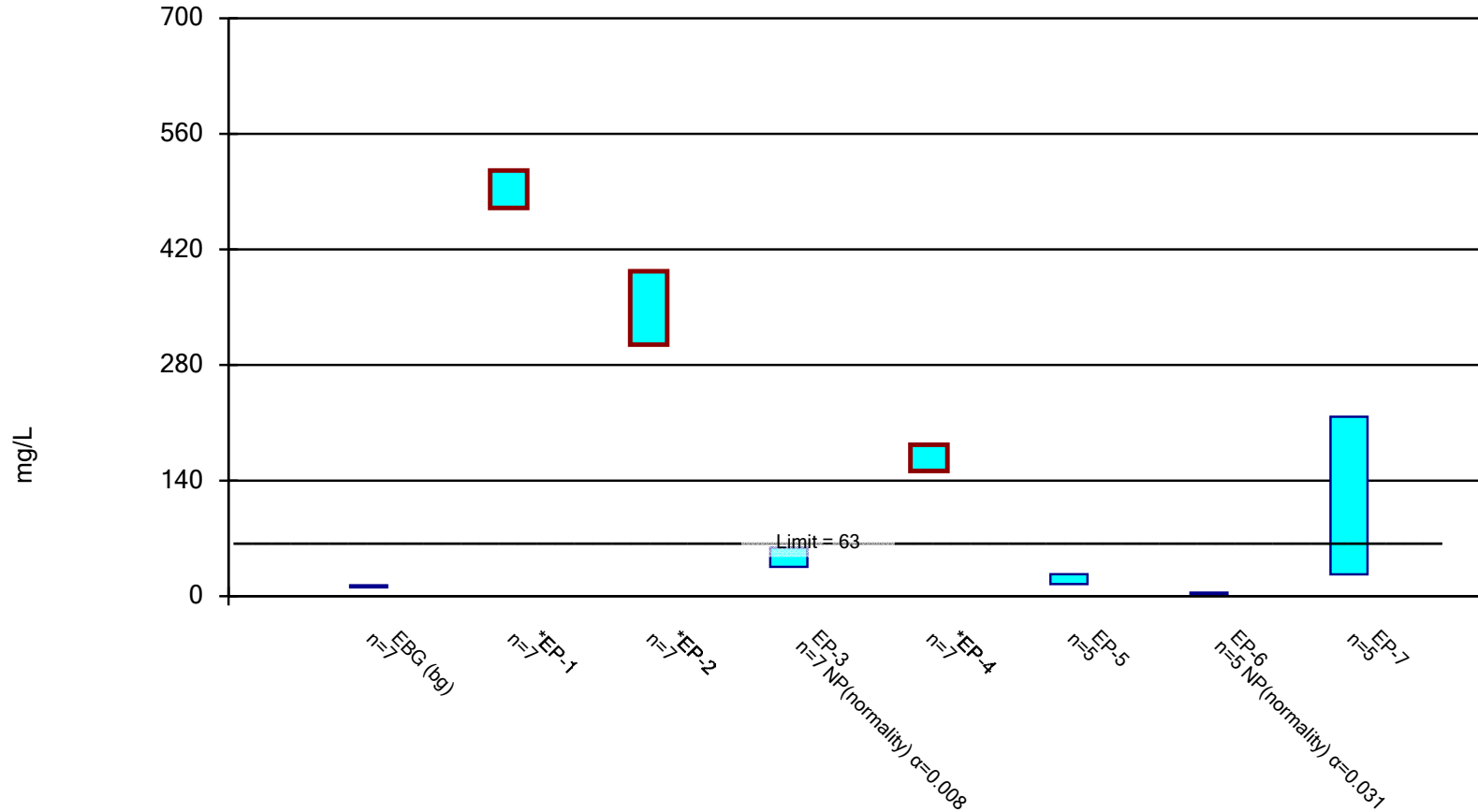


Constituent: Cadmium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

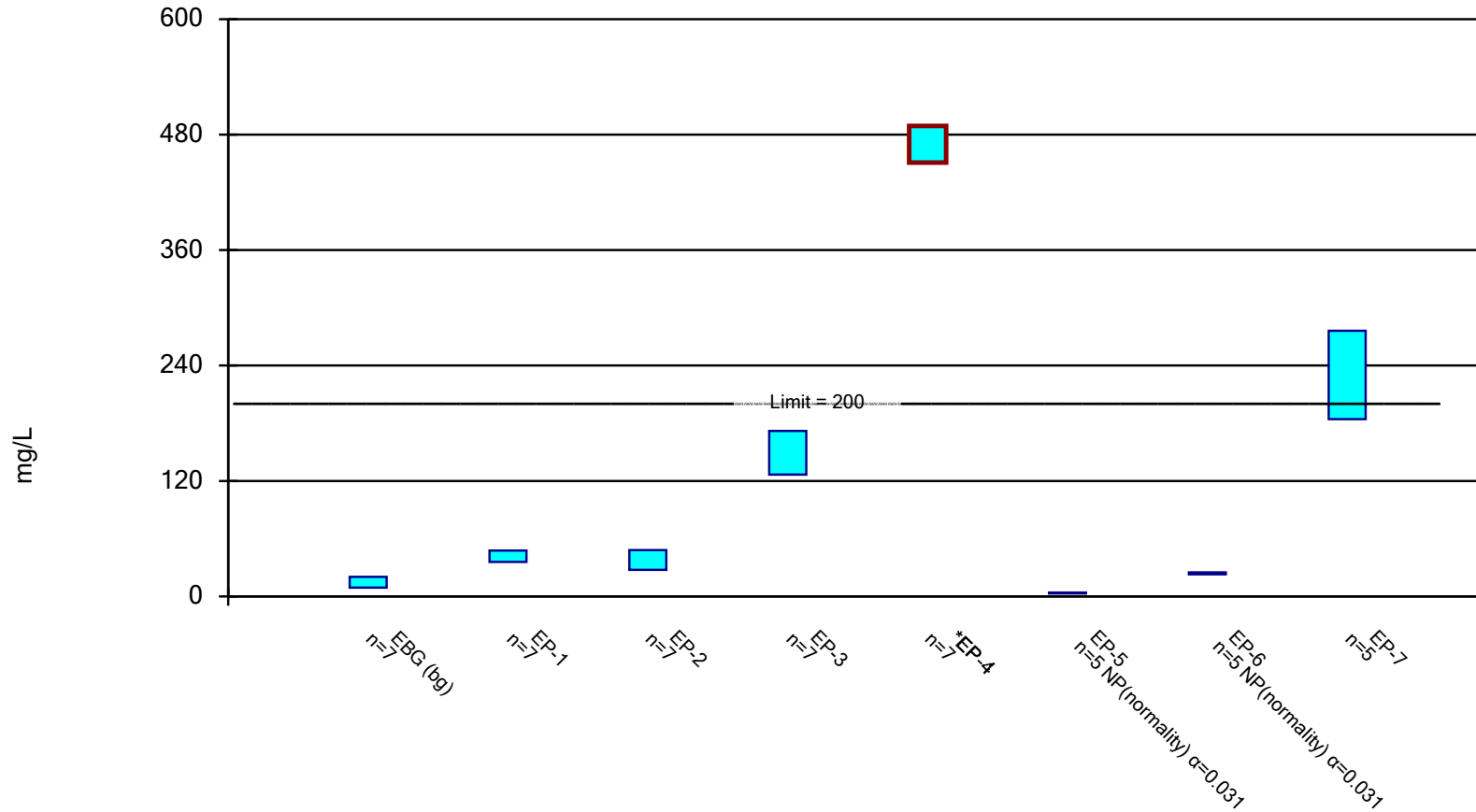


Constituent: Calcium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

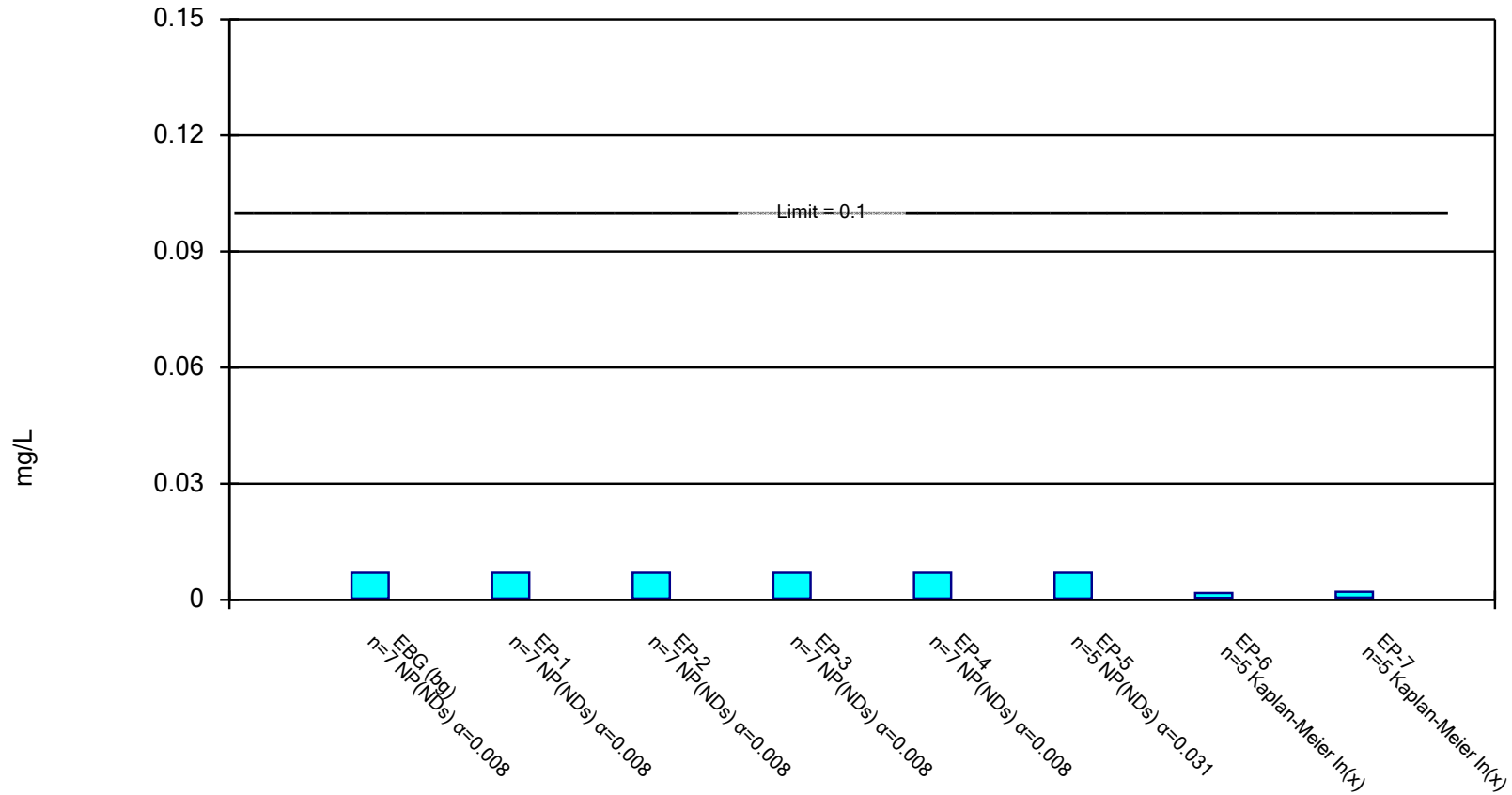


Constituent: Chloride Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

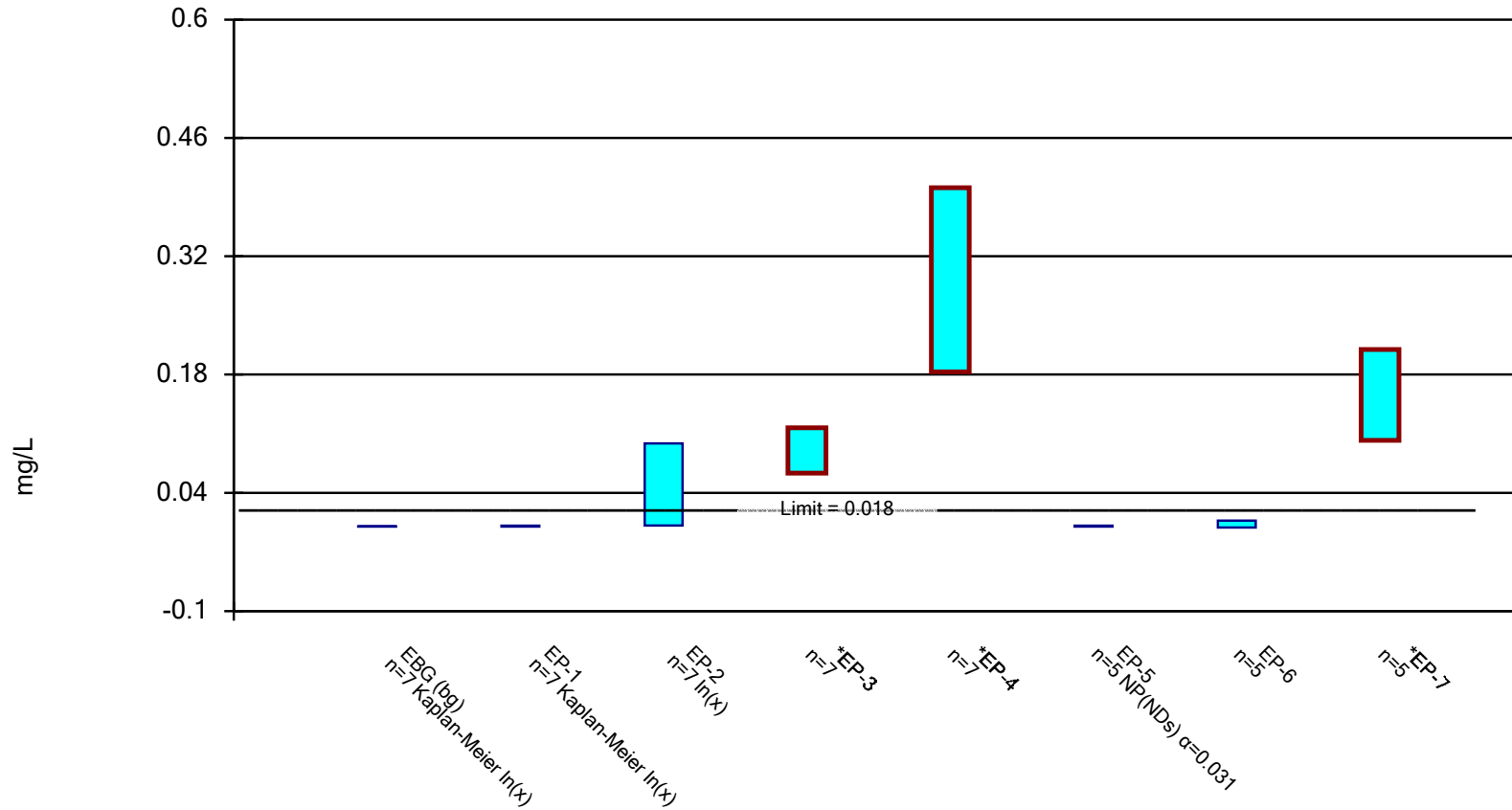


Constituent: Chromium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

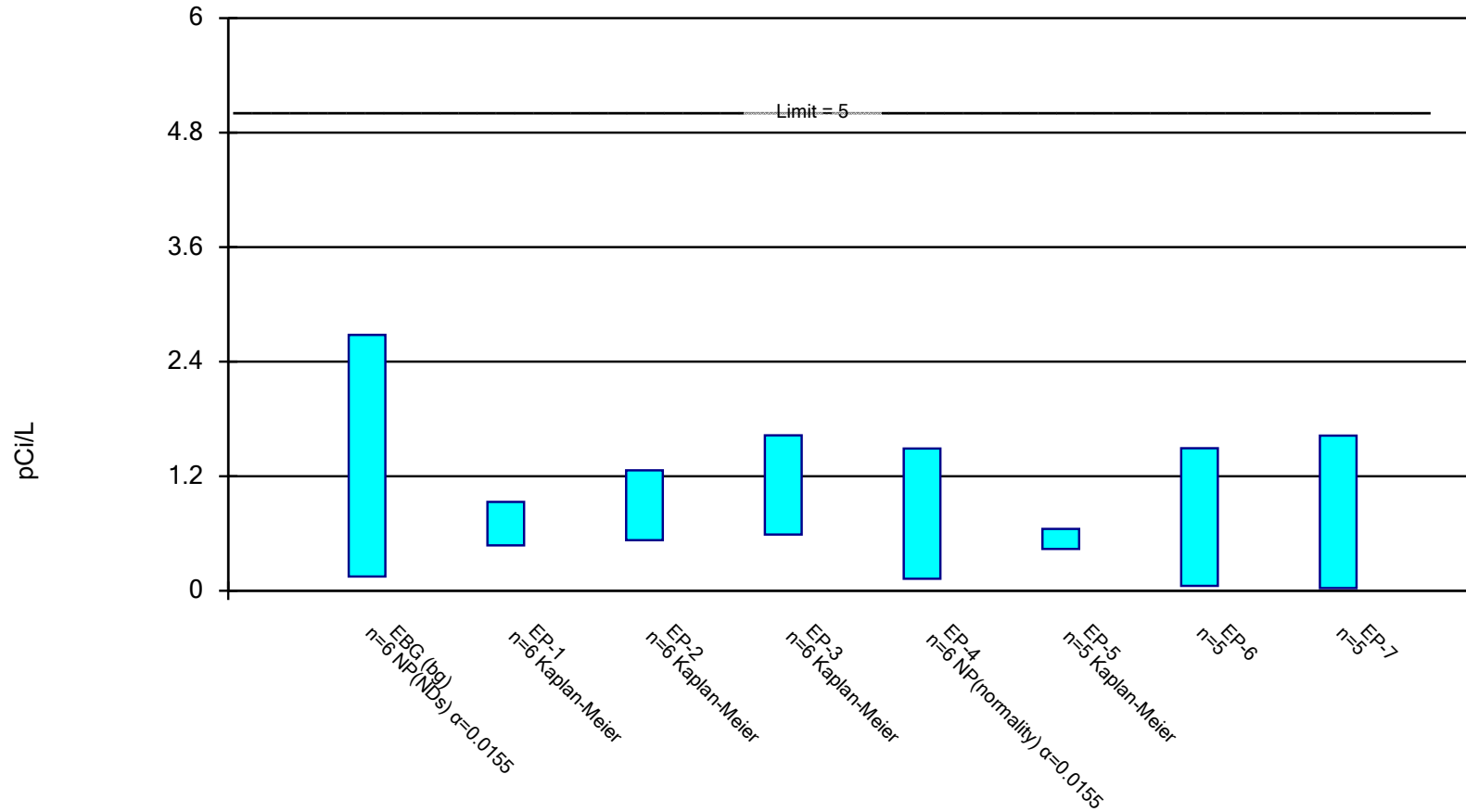


Constituent: Cobalt Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

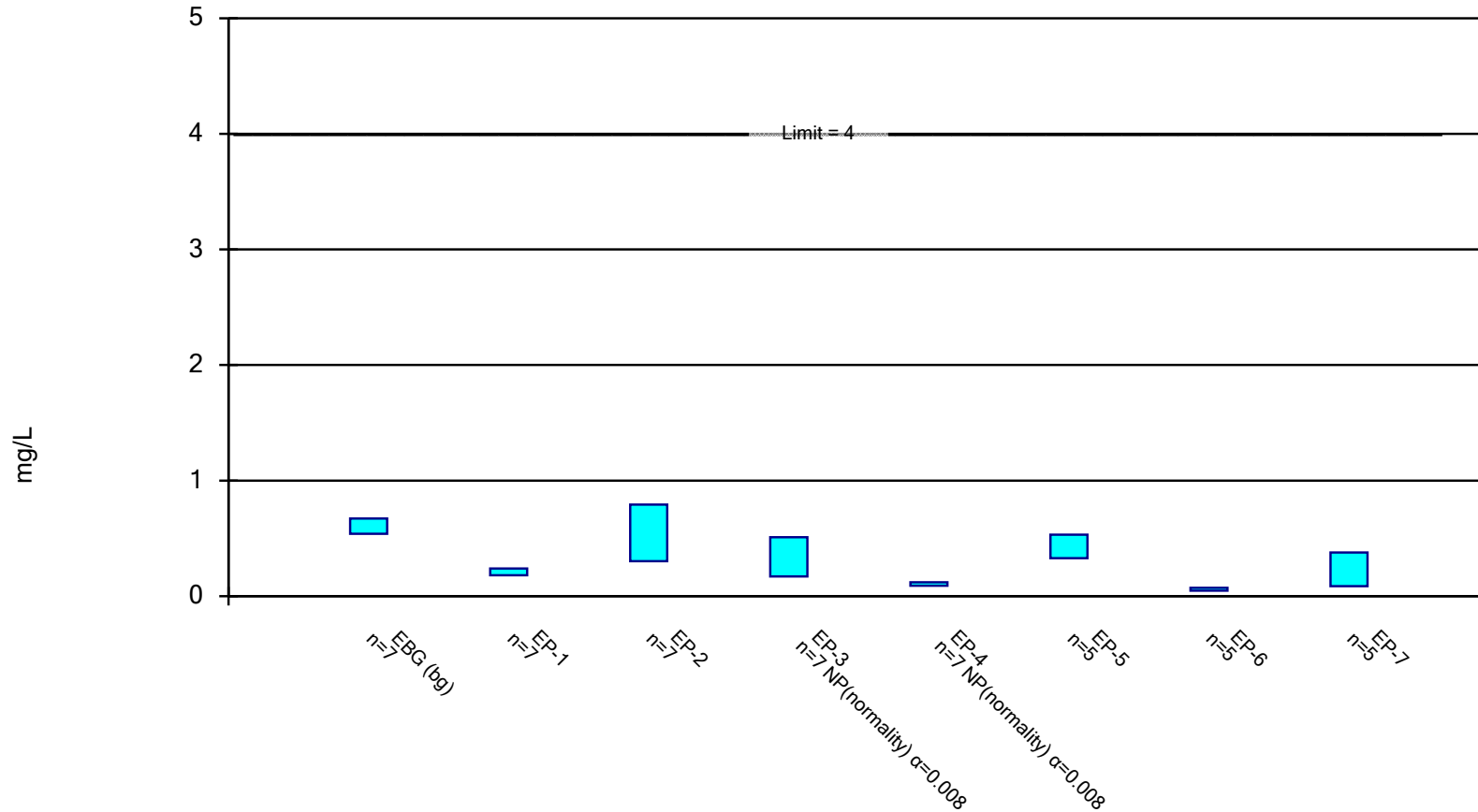


Constituent: Combined Radium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

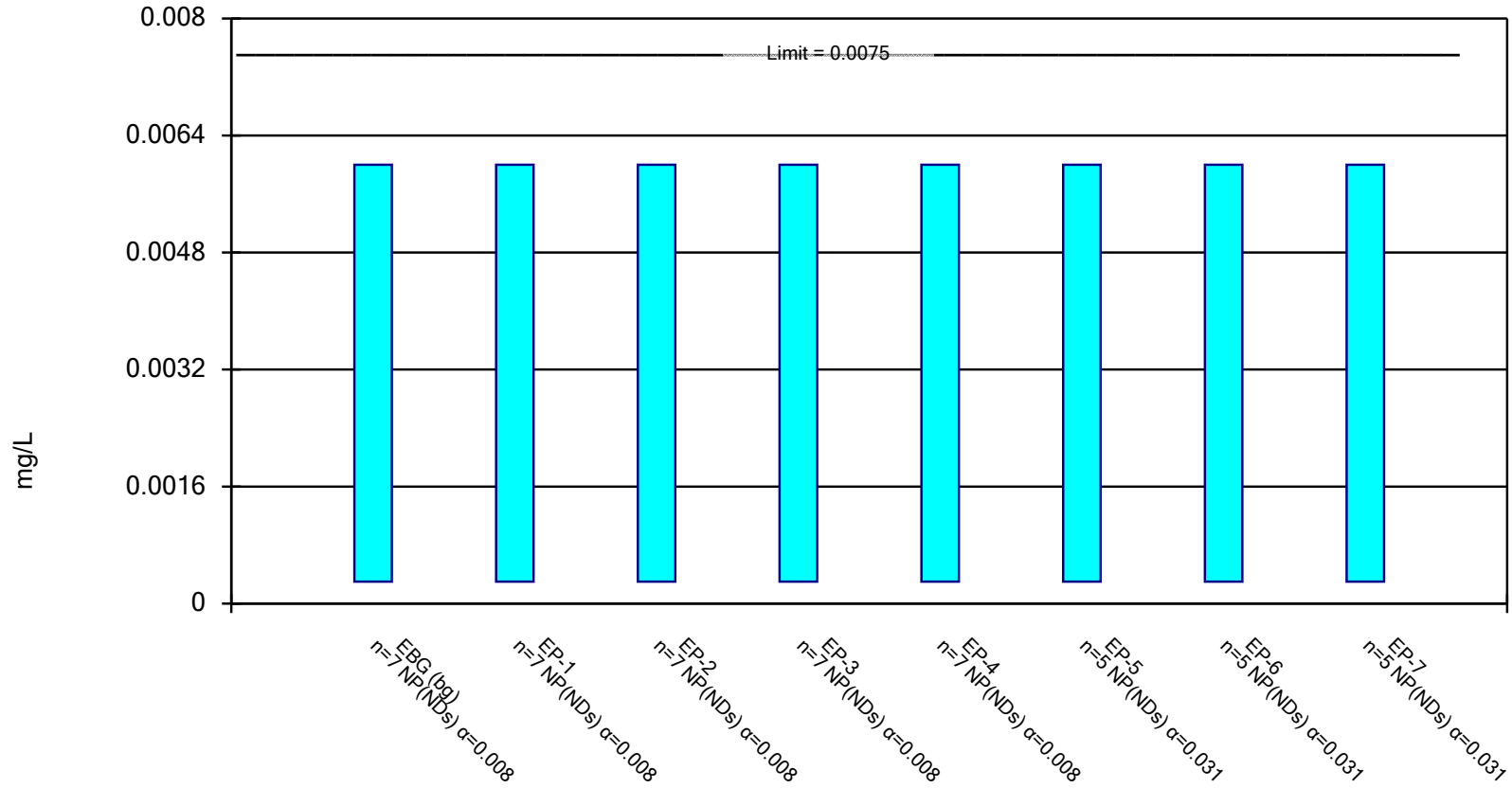


Constituent: Fluoride Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



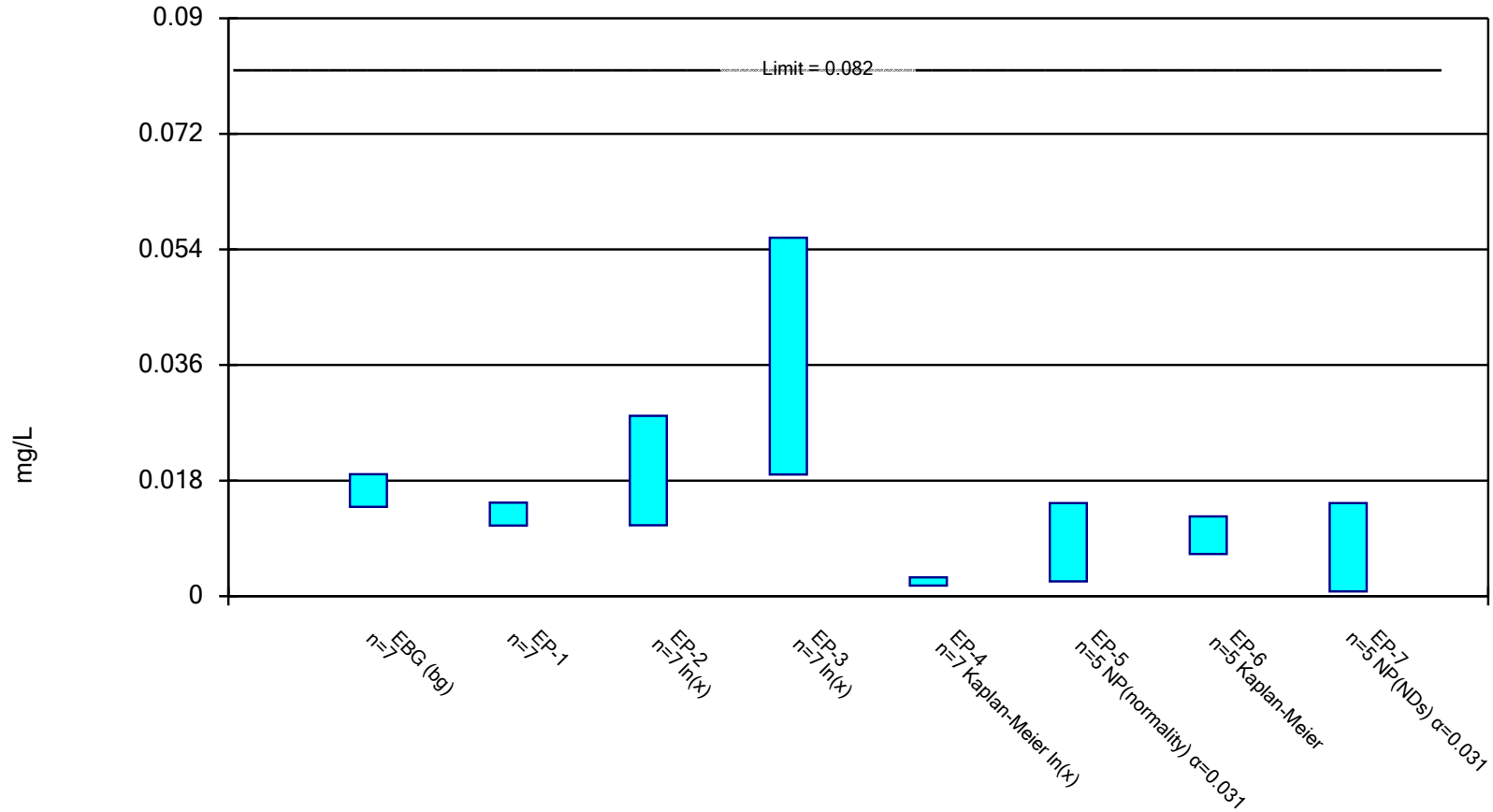
Constituent: Lead Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

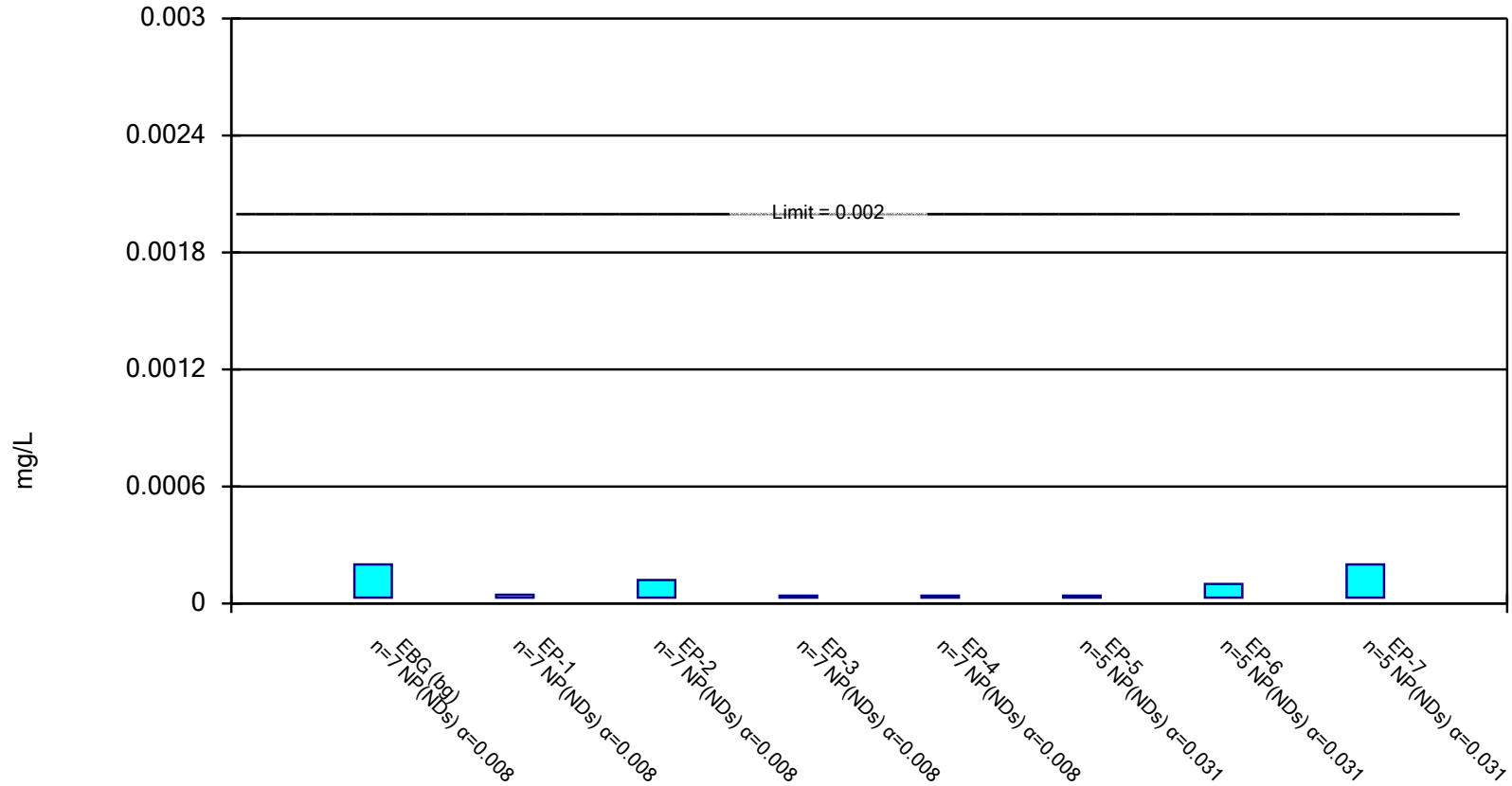


Constituent: Lithium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

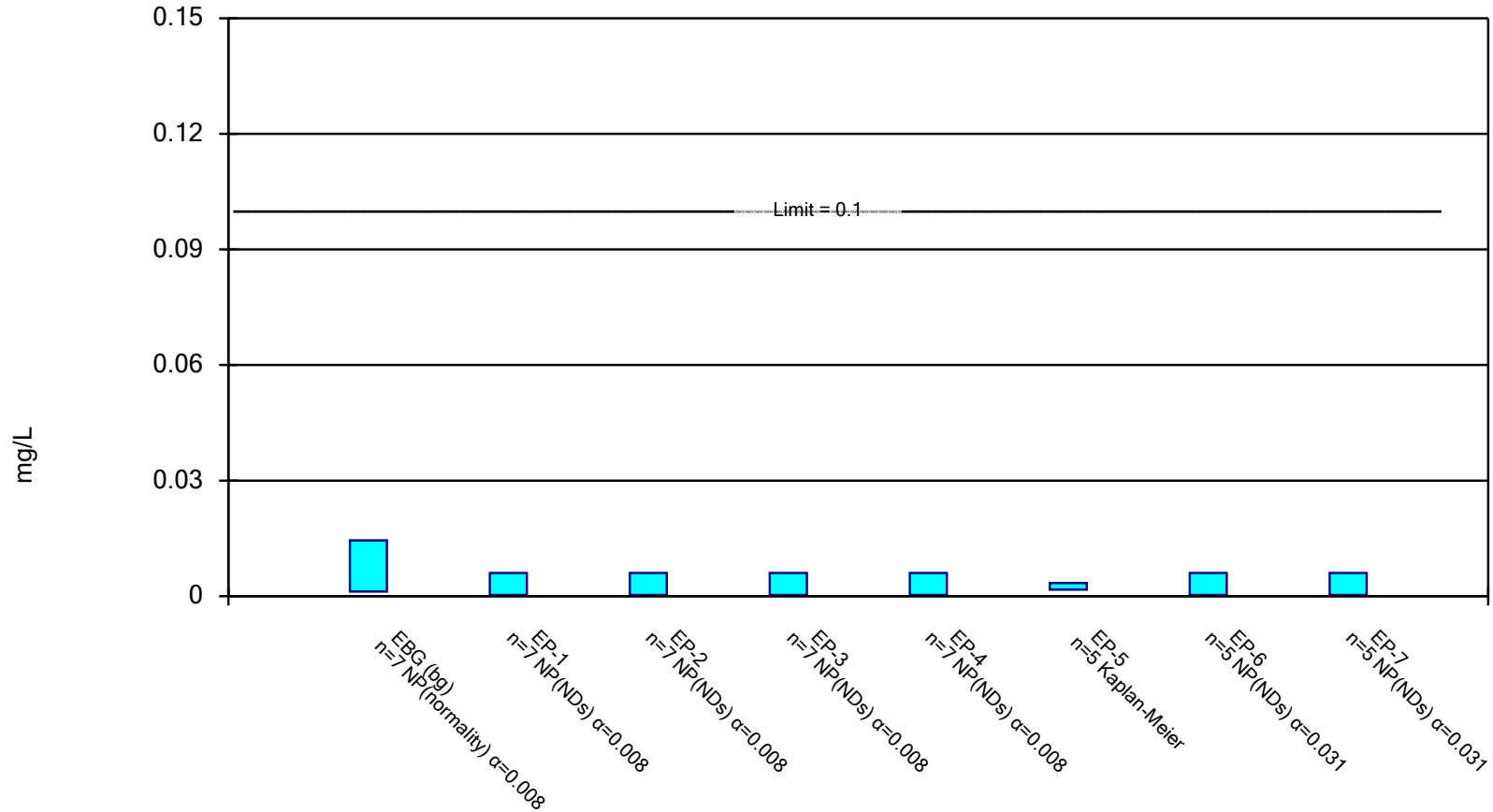


Constituent: Mercury Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

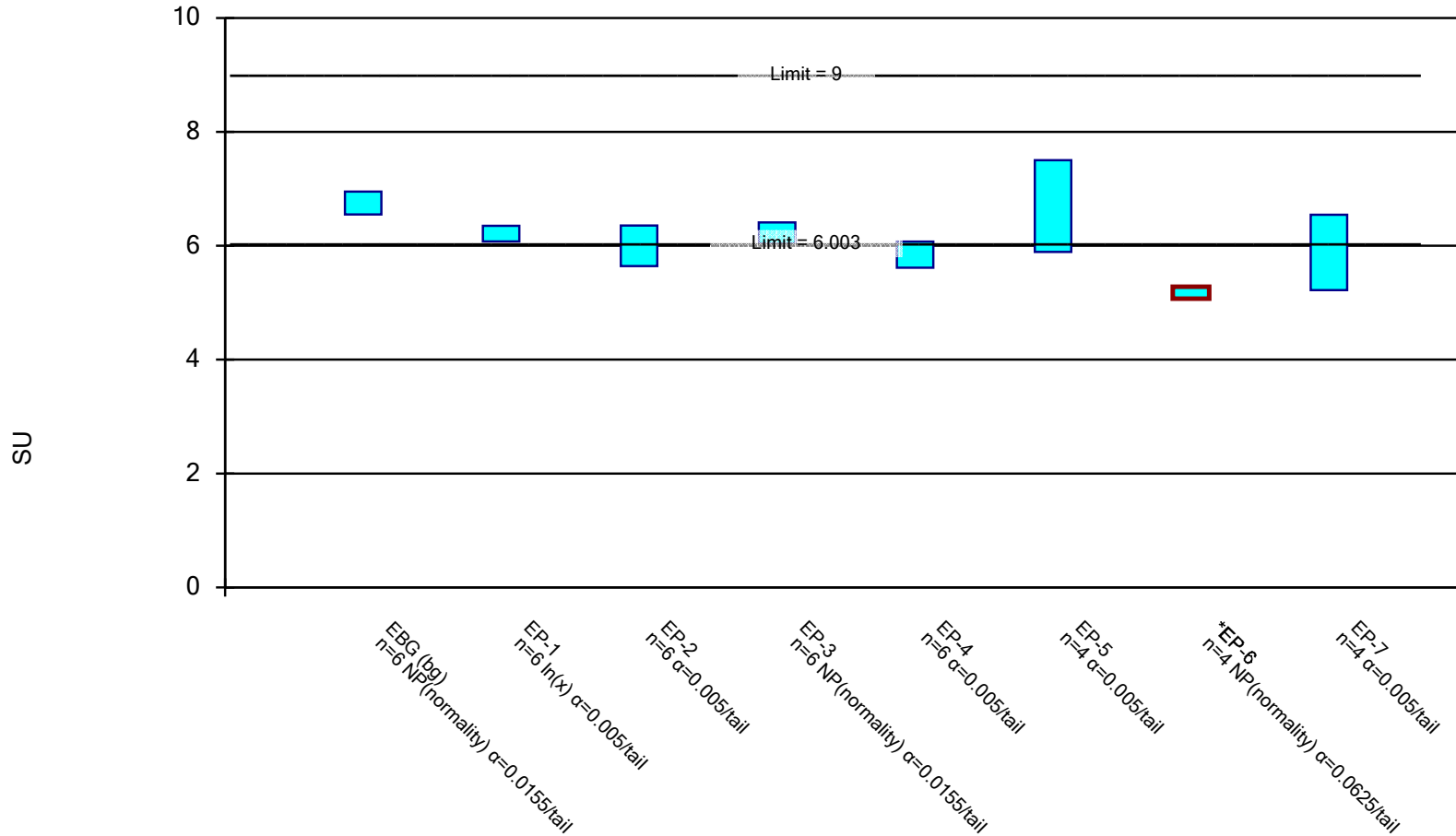


Constituent: Molybdenum Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

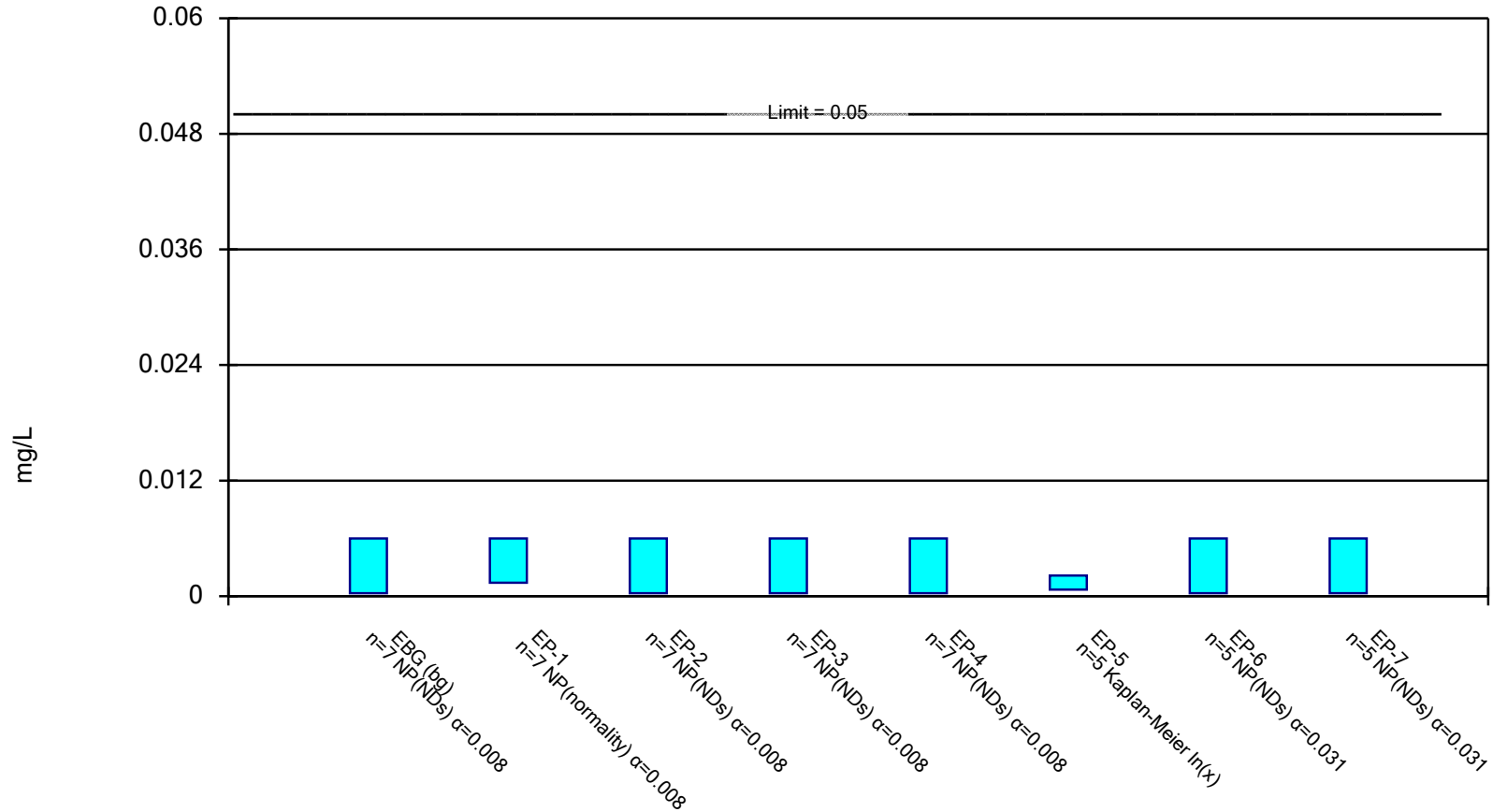
Compliance limit is exceeded.\* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: pH Analysis Run 2/3/2023 2:19 PM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

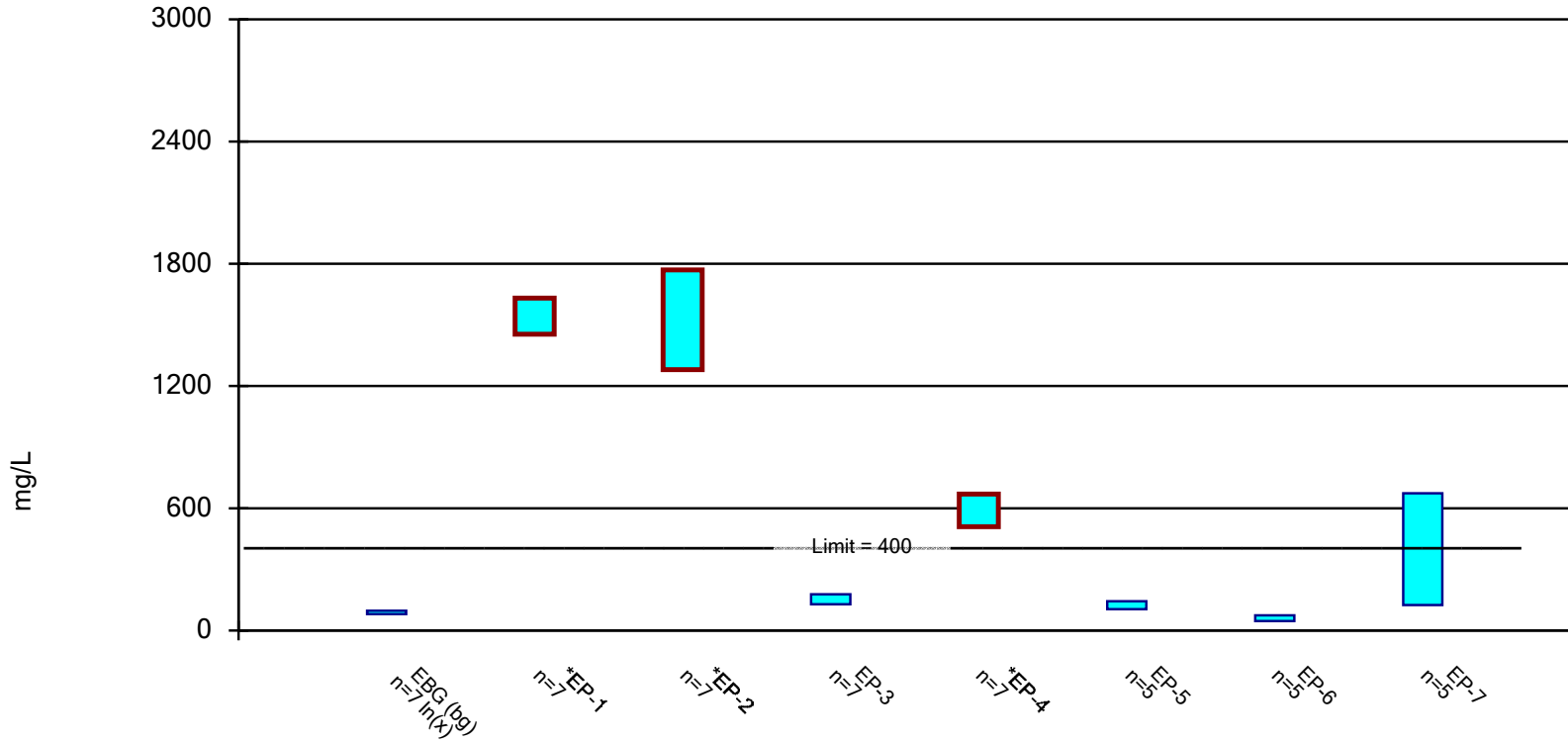


Constituent: Selenium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

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.

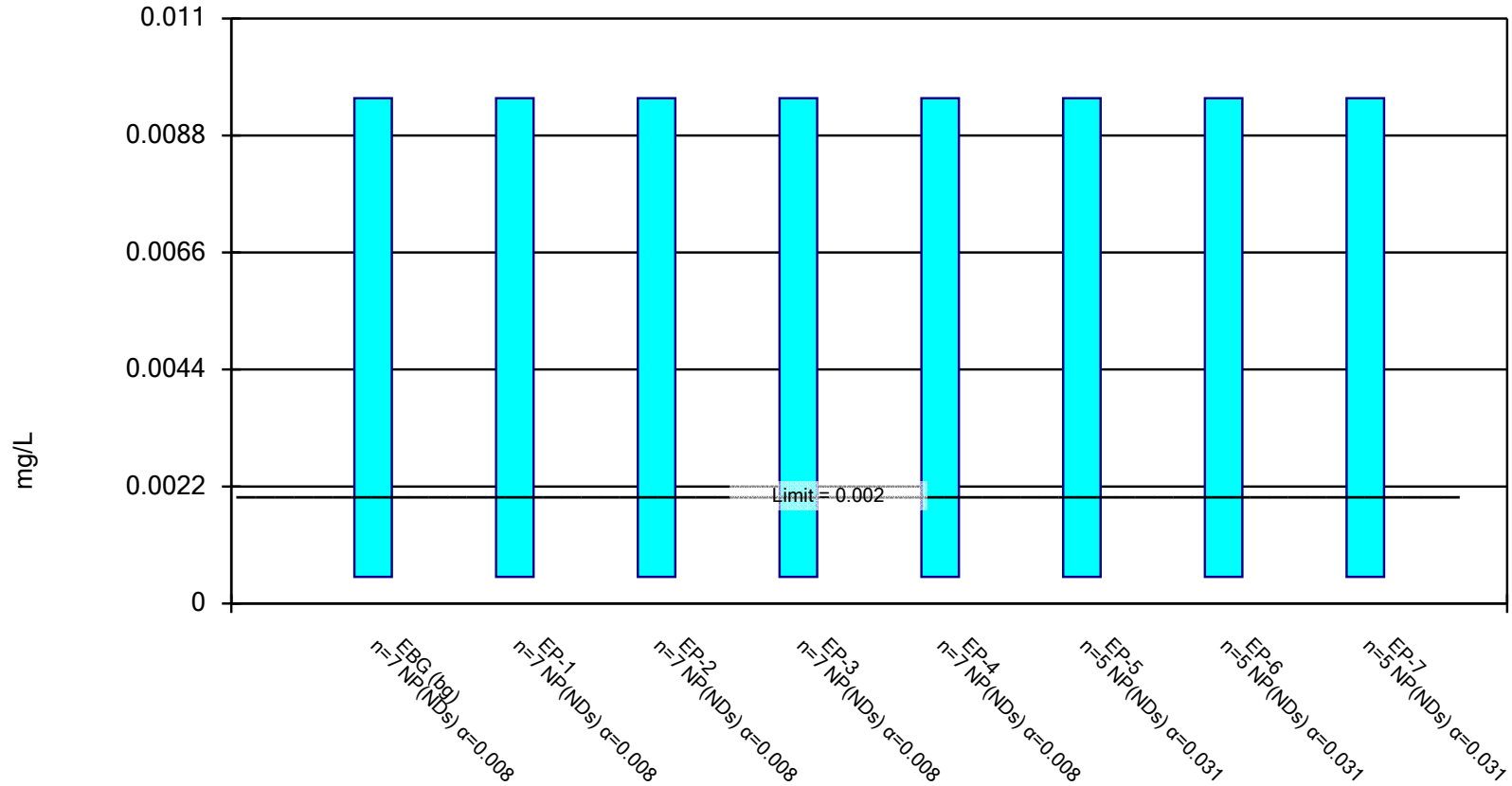


Constituent: Sulfate Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

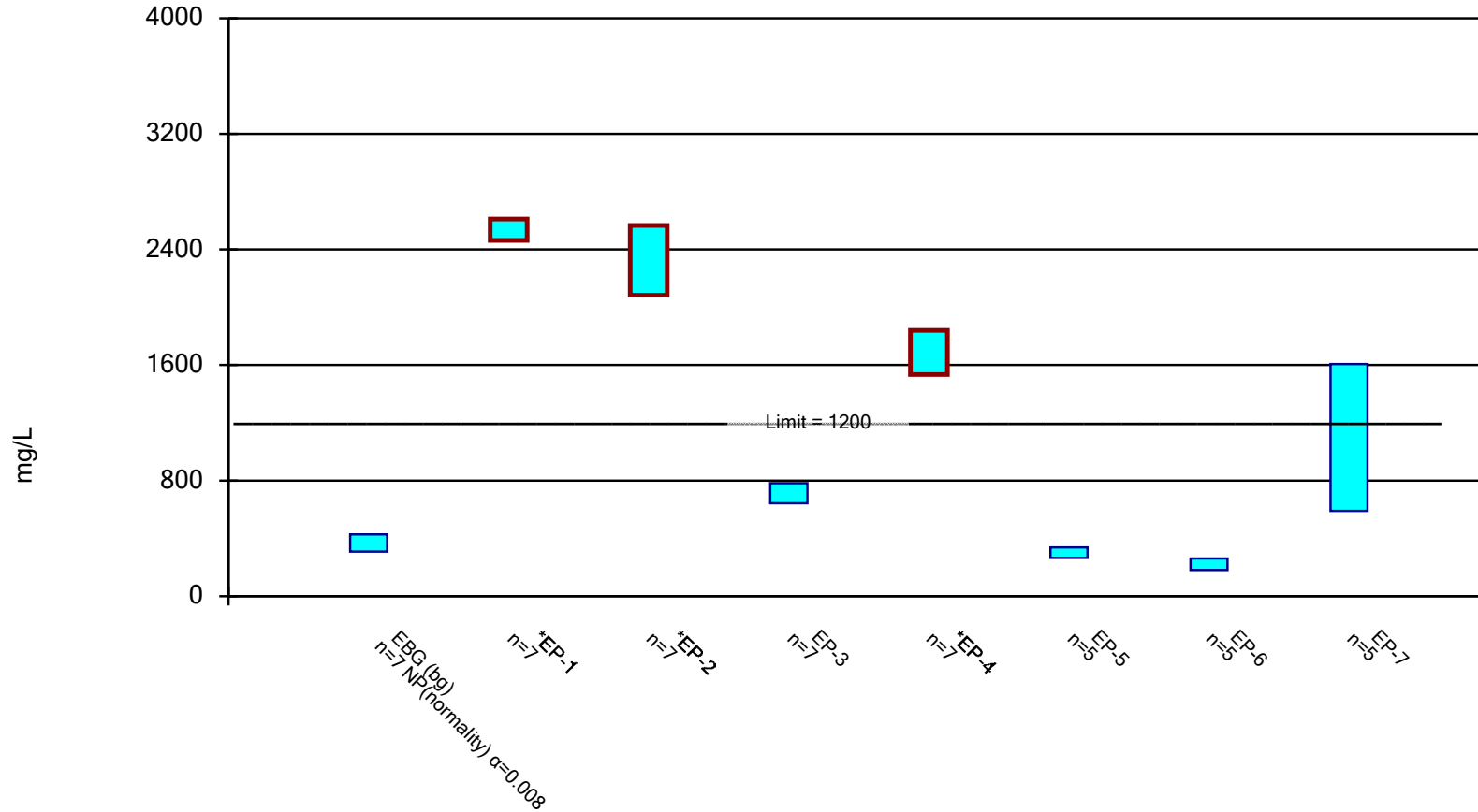


Constituent: Thallium Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 2/3/2023 2:19 PM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

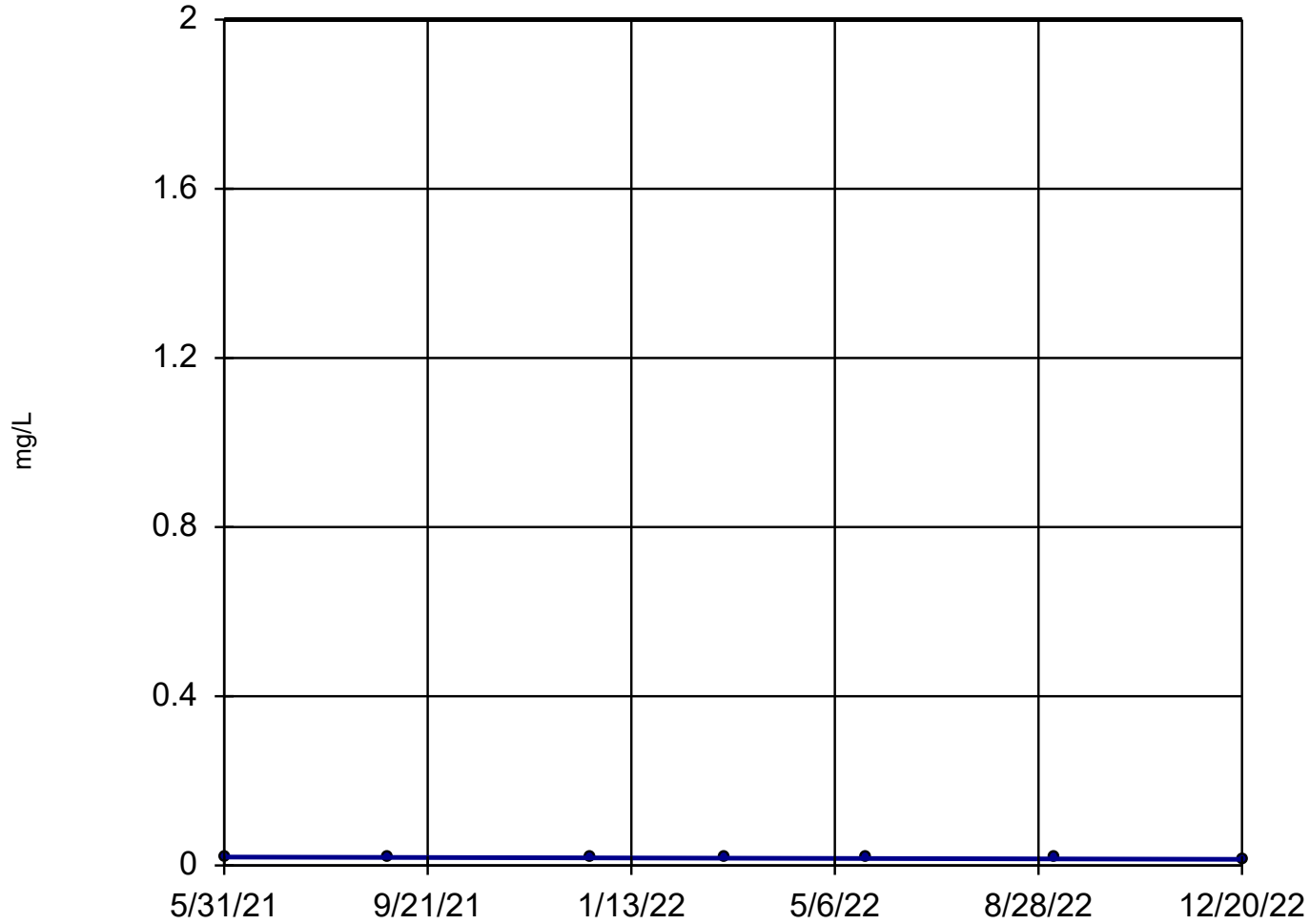


**APPENDIX D-3**

## **Q4 2022 Statistically Significant Trends**

# Sen's Slope Estimator

EP-1

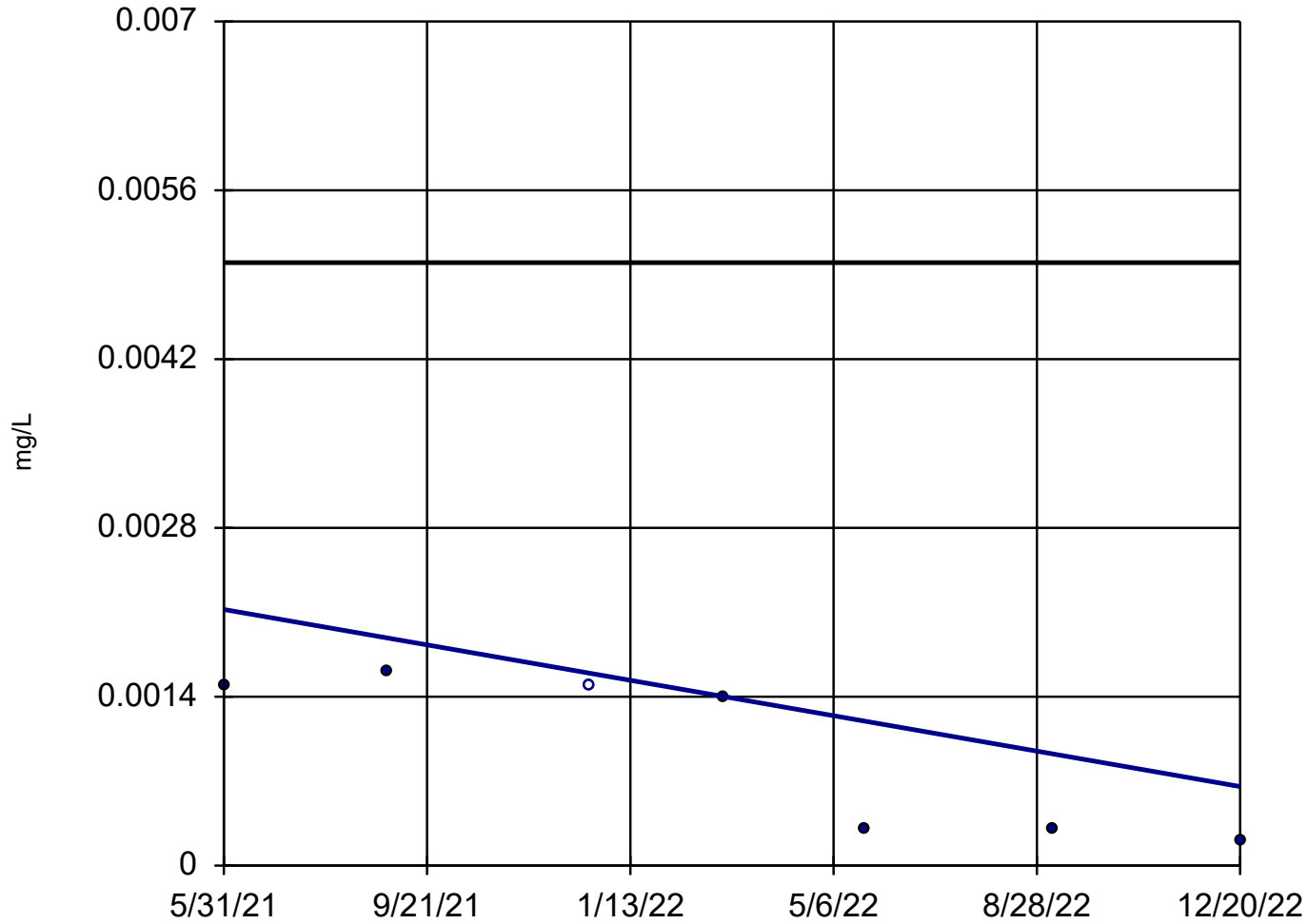


n = 7  
Slope = -0.00351  
units per year.  
Mann-Kendall  
statistic = -17  
critical = -15  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
GPS = 2.

Constituent: Barium    Analysis Run 2/3/2023 1:02 PM    View: IEPA  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-2



n = 7

Slope = -0.000944  
units per year.

Mann-Kendall  
statistic = -17  
critical = -15

Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

GPS = 0.005.

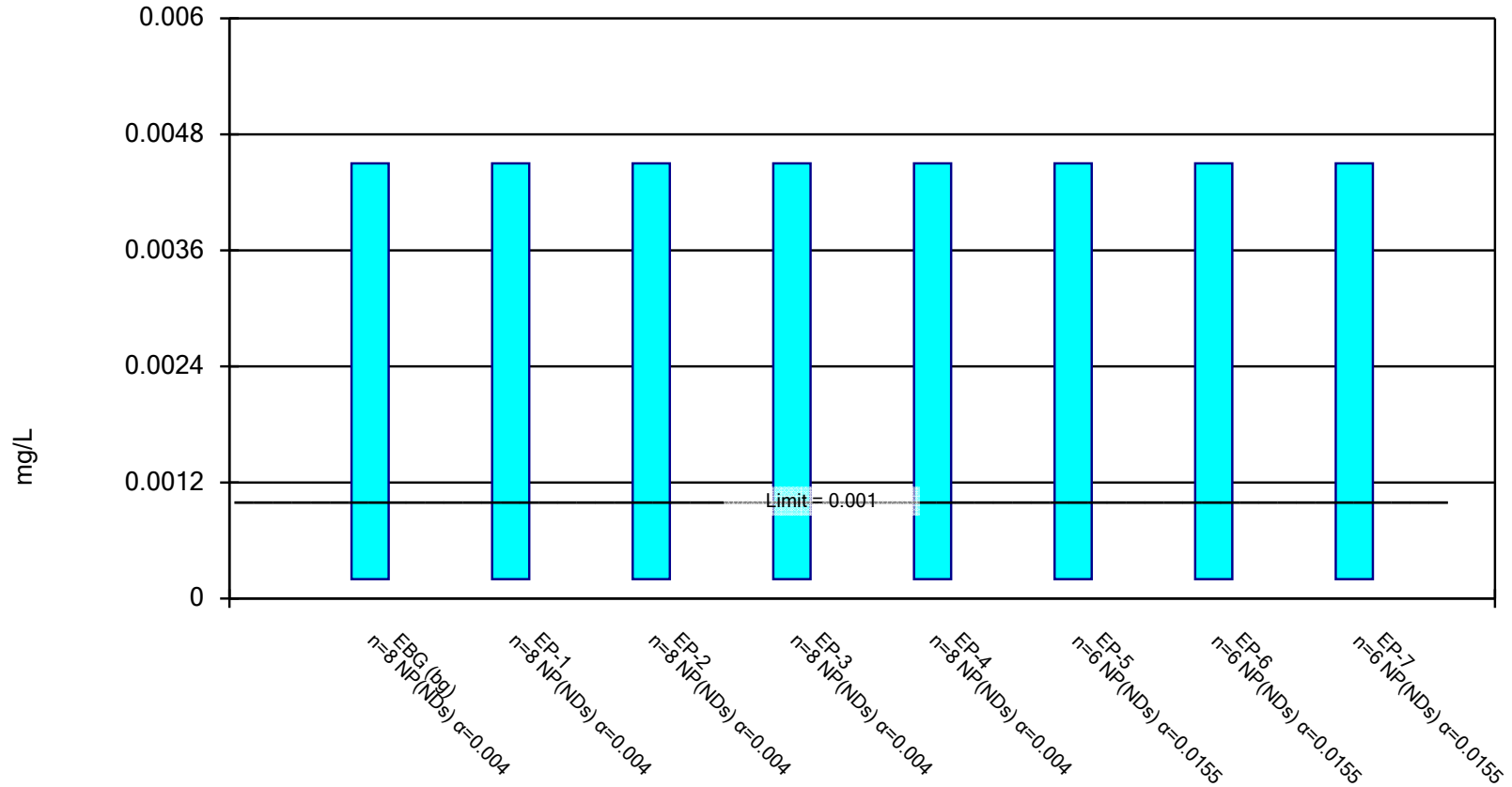
Constituent: Cadmium Analysis Run 2/3/2023 1:03 PM View: IEPA  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-4**

## **Q1 2023 Background Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

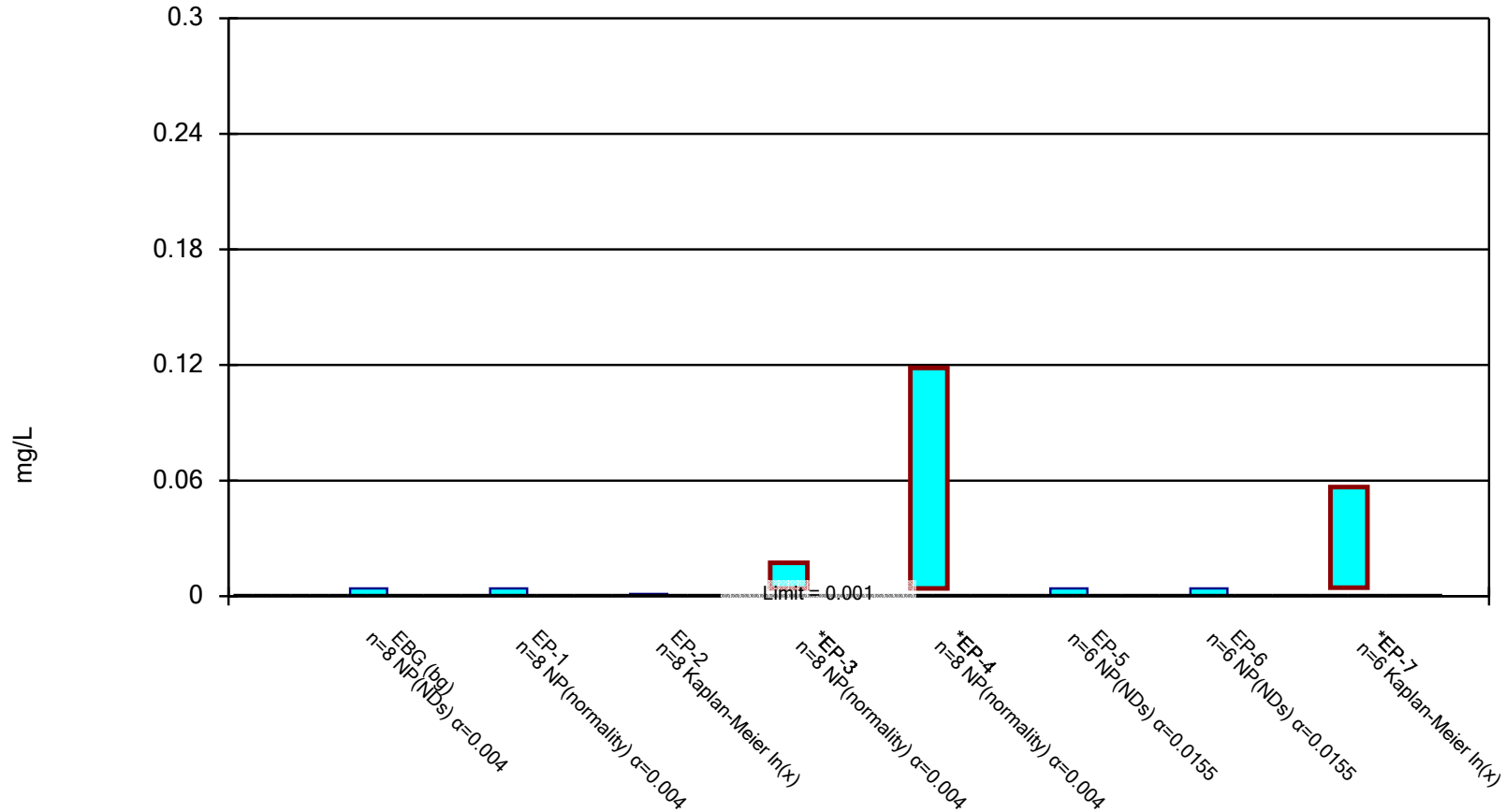


Constituent: Antimony Analysis Run 5/12/2023 10:01 AM View: IEPA Background

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.

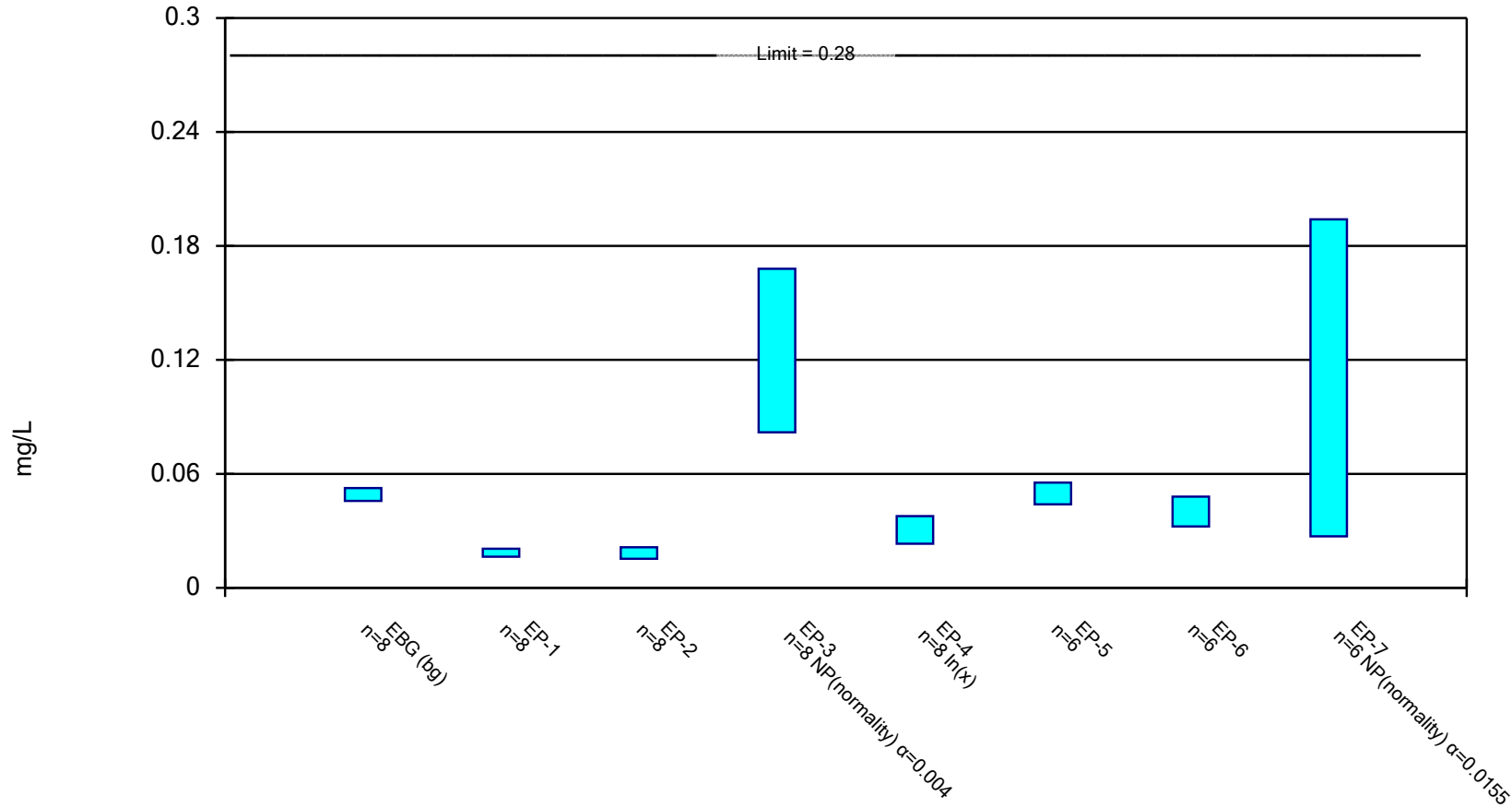


Constituent: Arsenic Analysis Run 5/12/2023 10:01 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

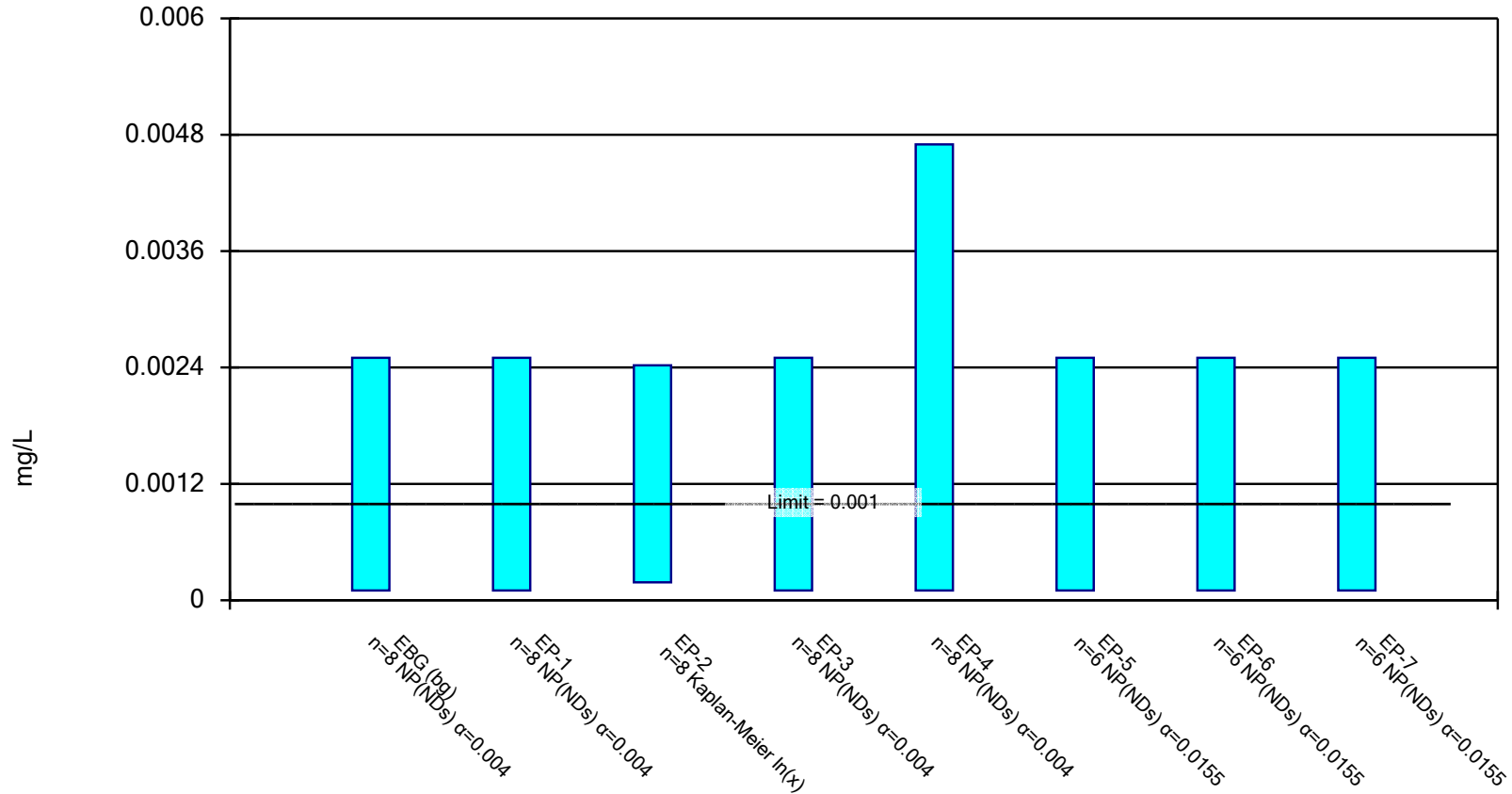


Constituent: Barium Analysis Run 5/12/2023 10:01 AM View: IEPA Background

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.



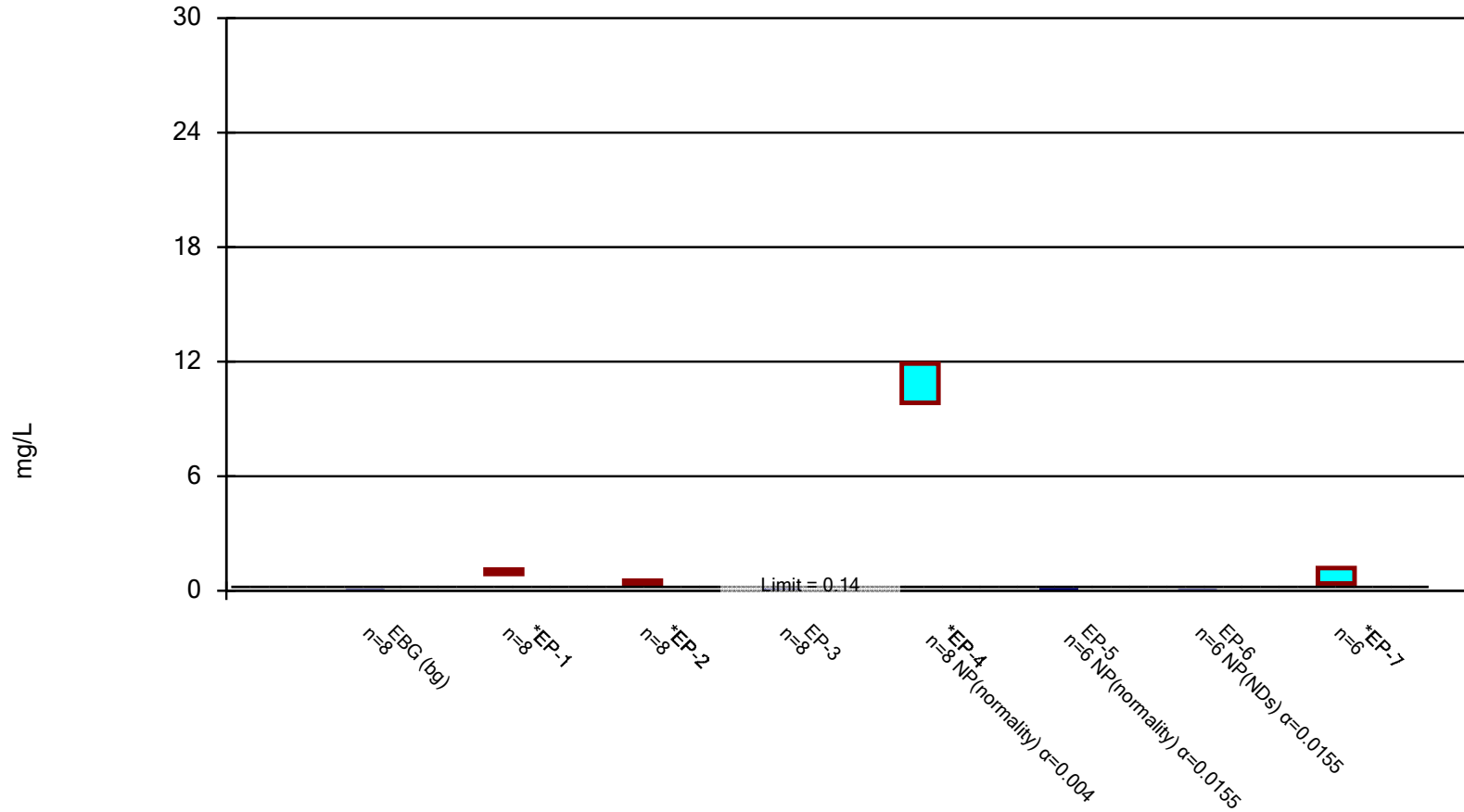
Constituent: Beryllium Analysis Run 5/12/2023 10:01 AM View: IEPA Background

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.

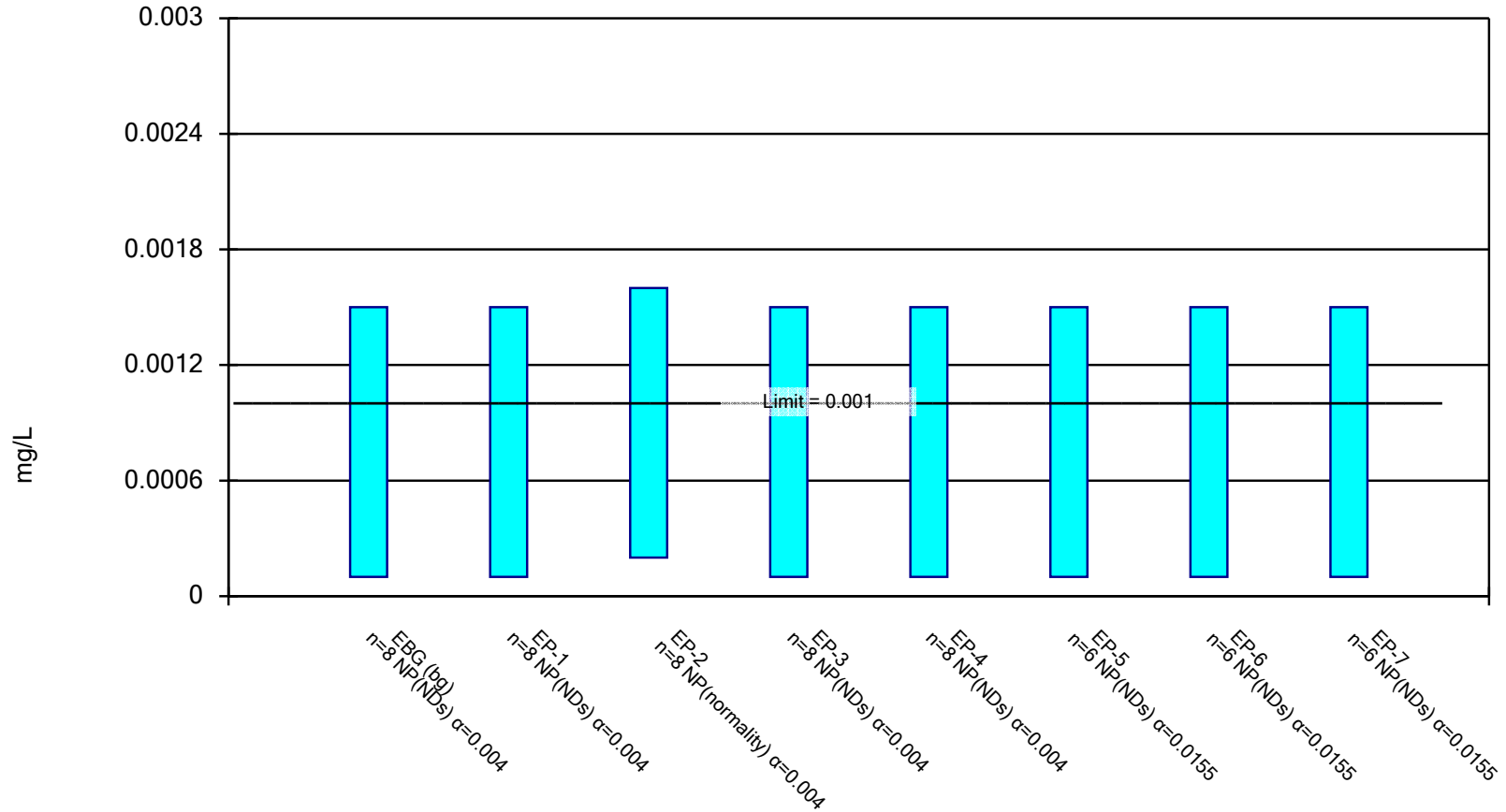


Constituent: Boron Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

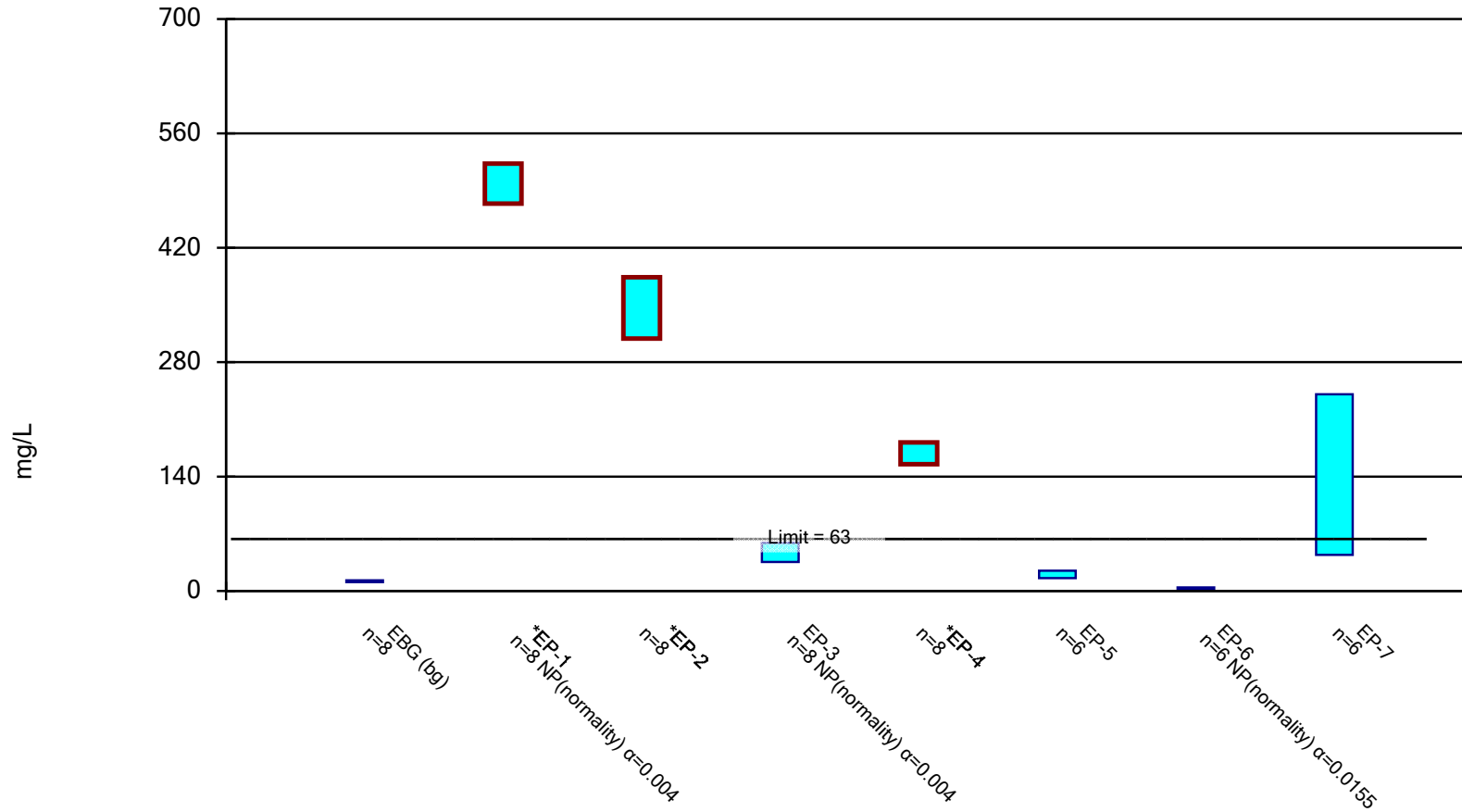


Constituent: Cadmium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

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.

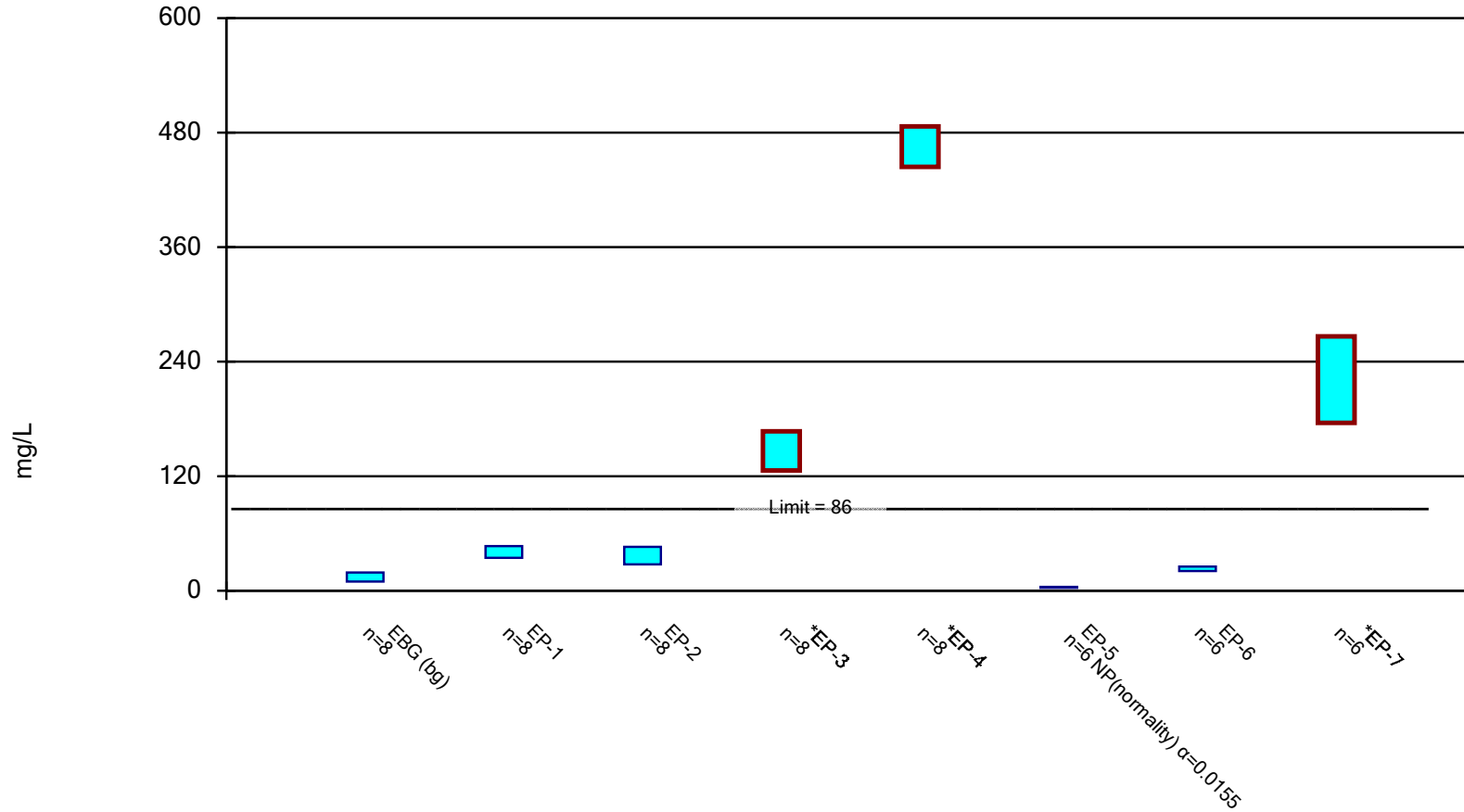


Constituent: Calcium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

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.

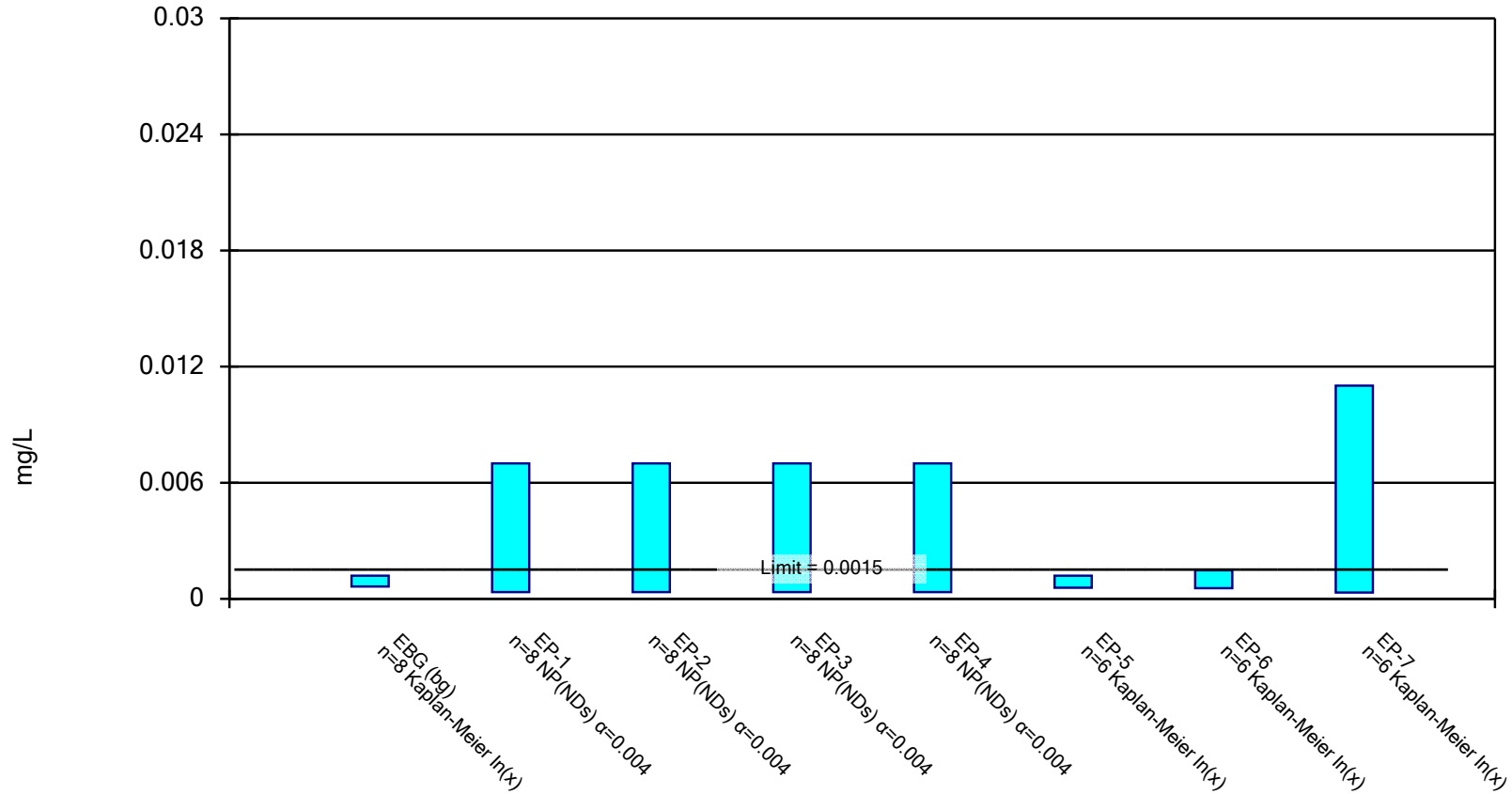


Constituent: Chloride Analysis Run 5/12/2023 10:02 AM View: IEPA Background

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.

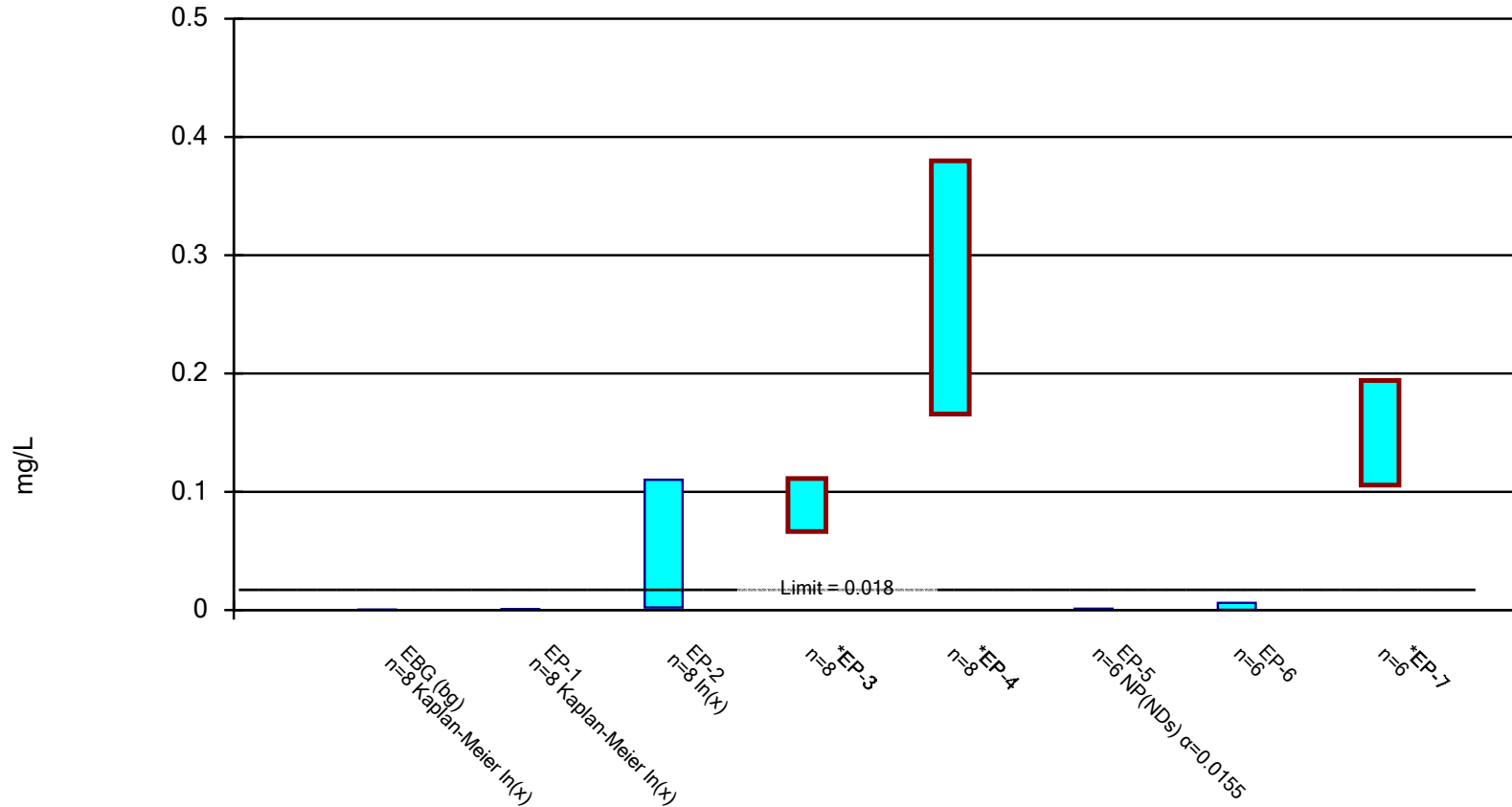


Constituent: Chromium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

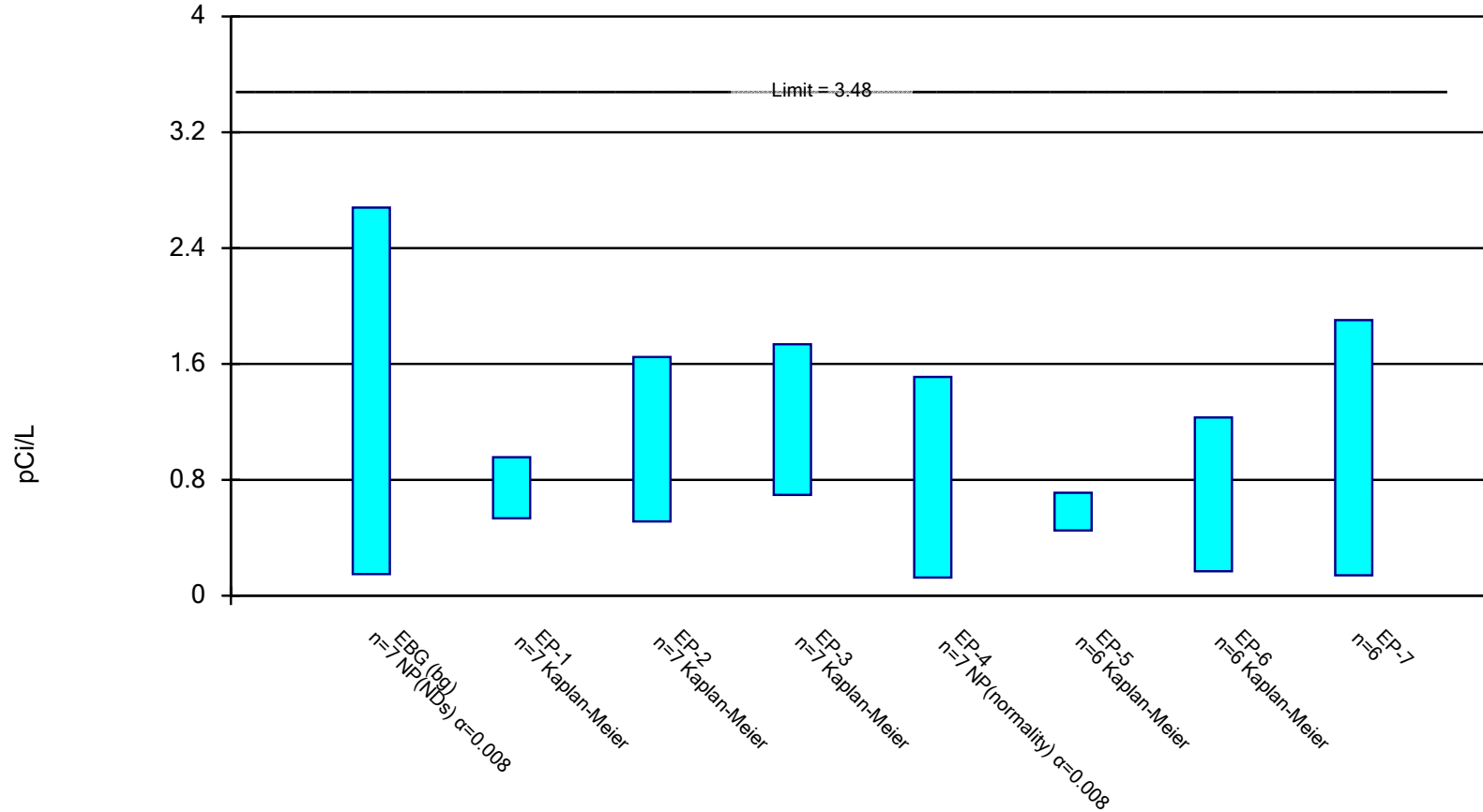


Constituent: Cobalt Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

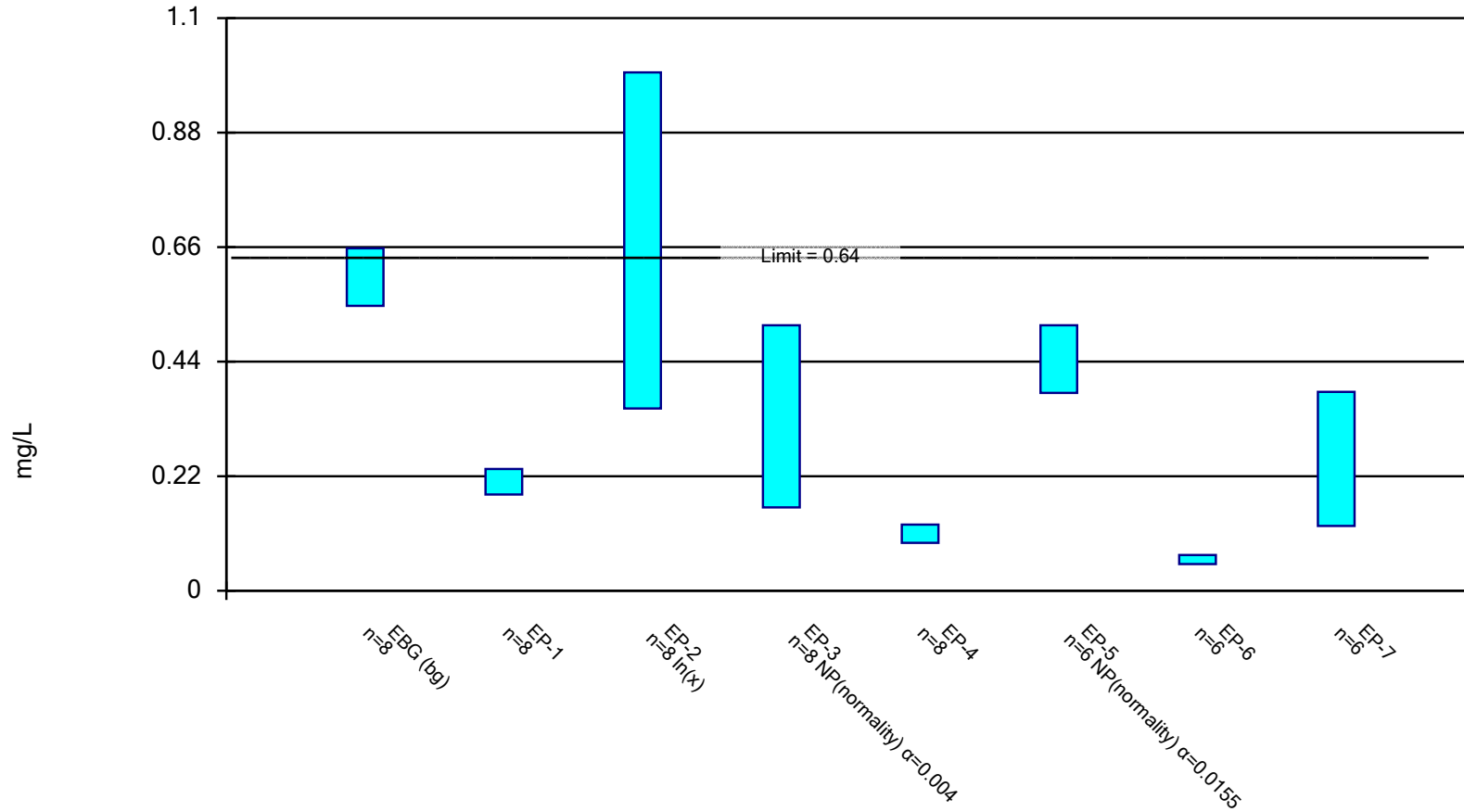
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium    Analysis Run 5/12/2023 10:02 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



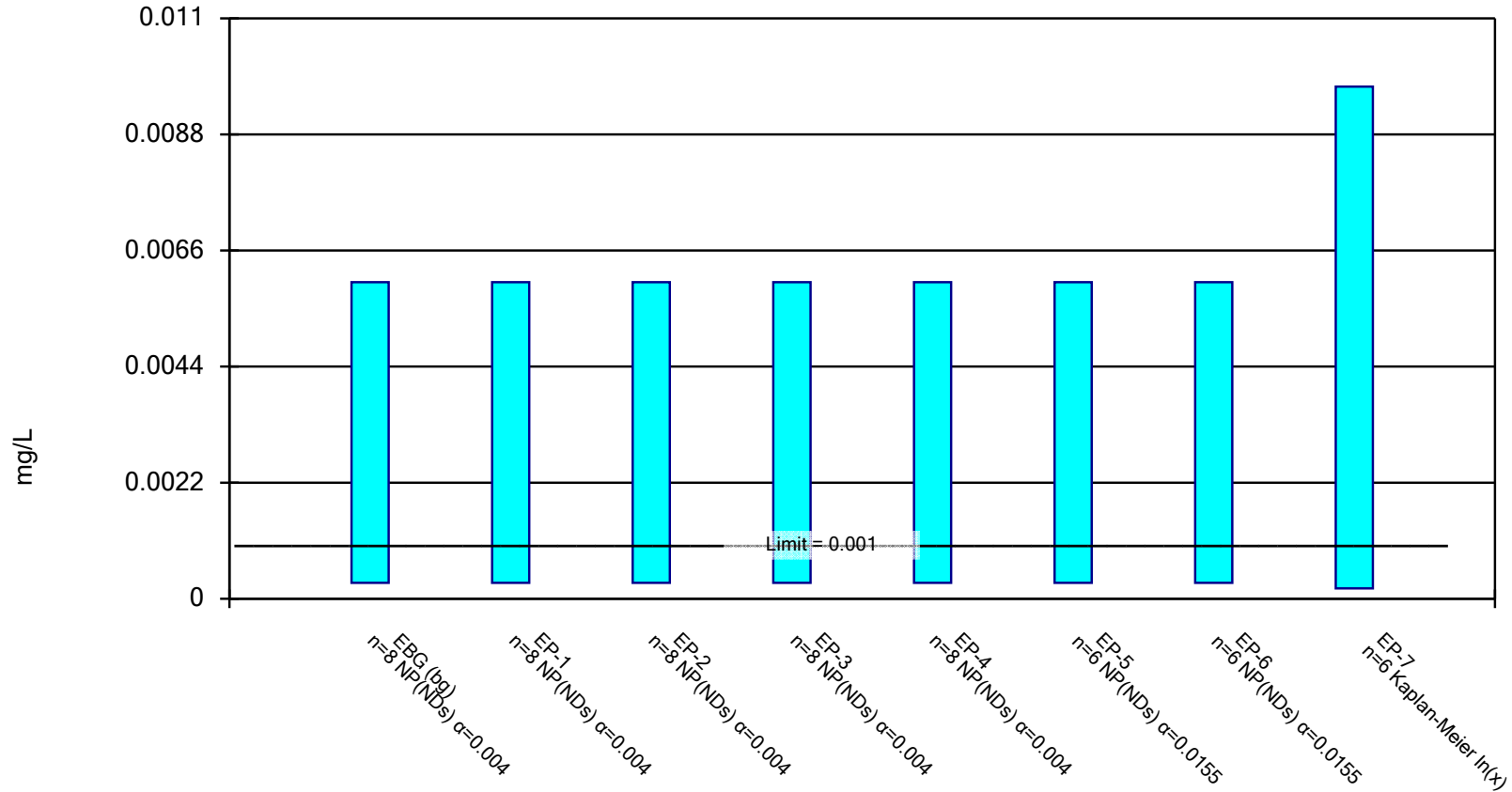
Constituent: Fluoride Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

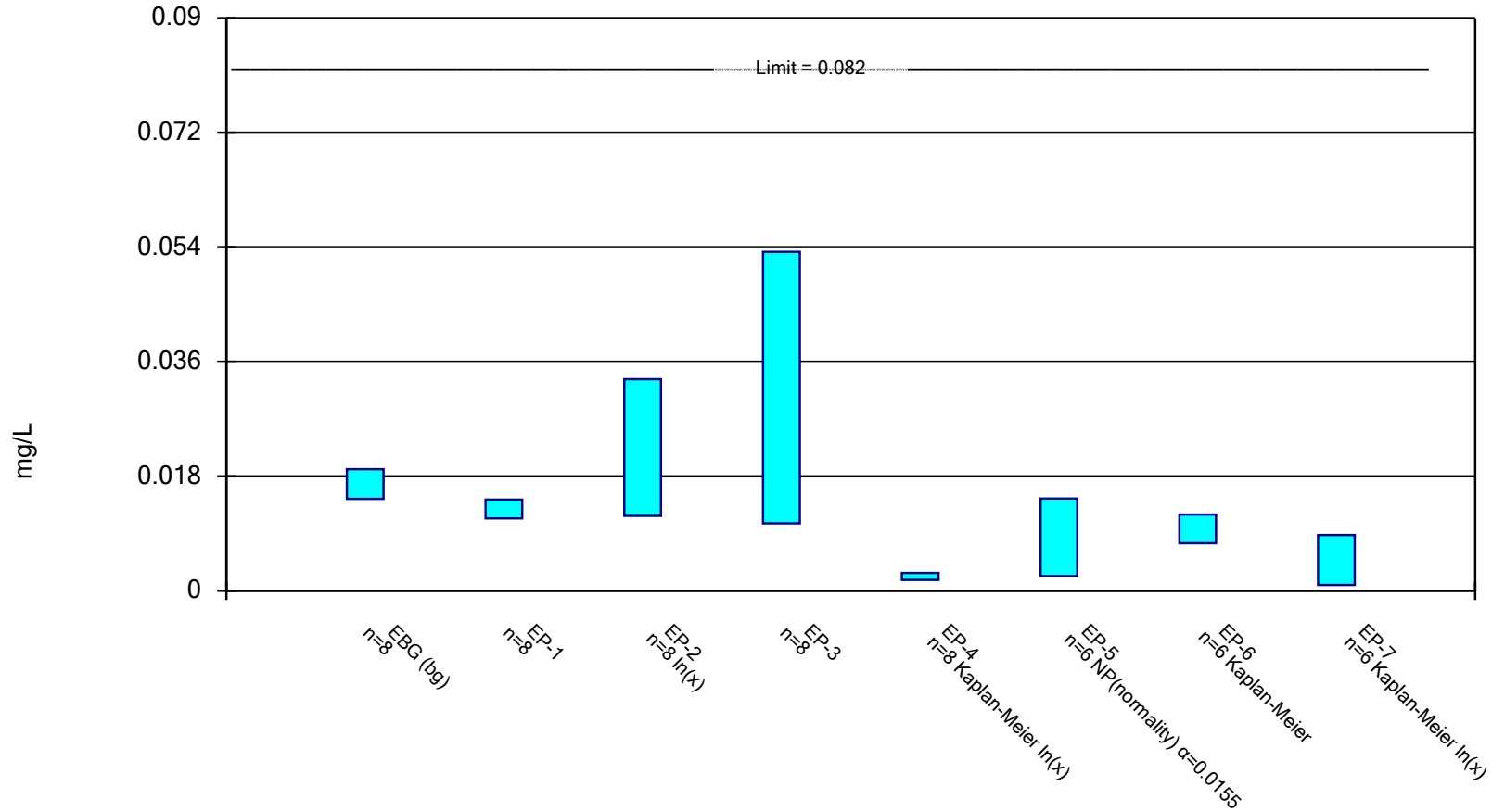


Constituent: Lead Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

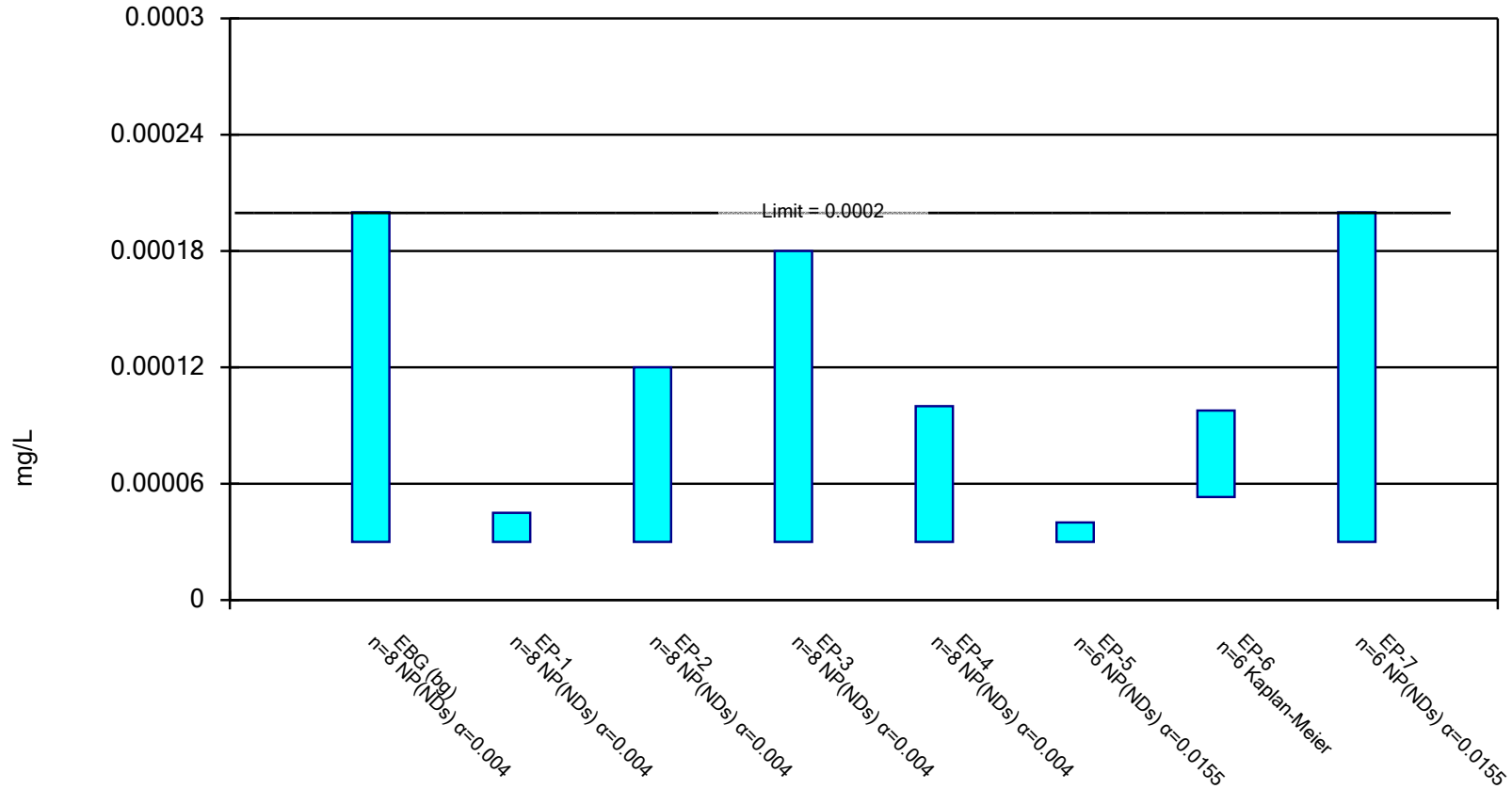


Constituent: Lithium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

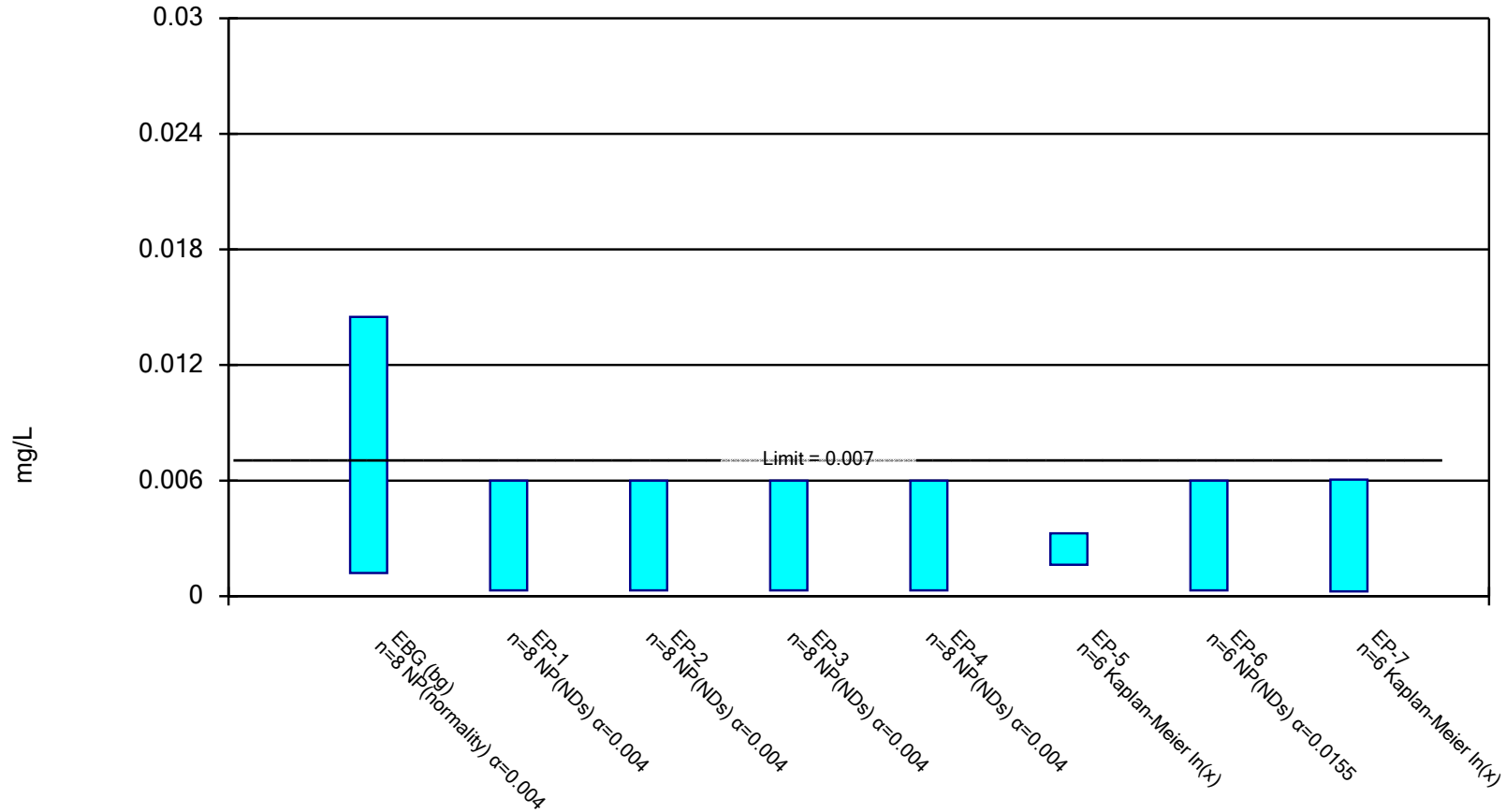


Constituent: Mercury Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

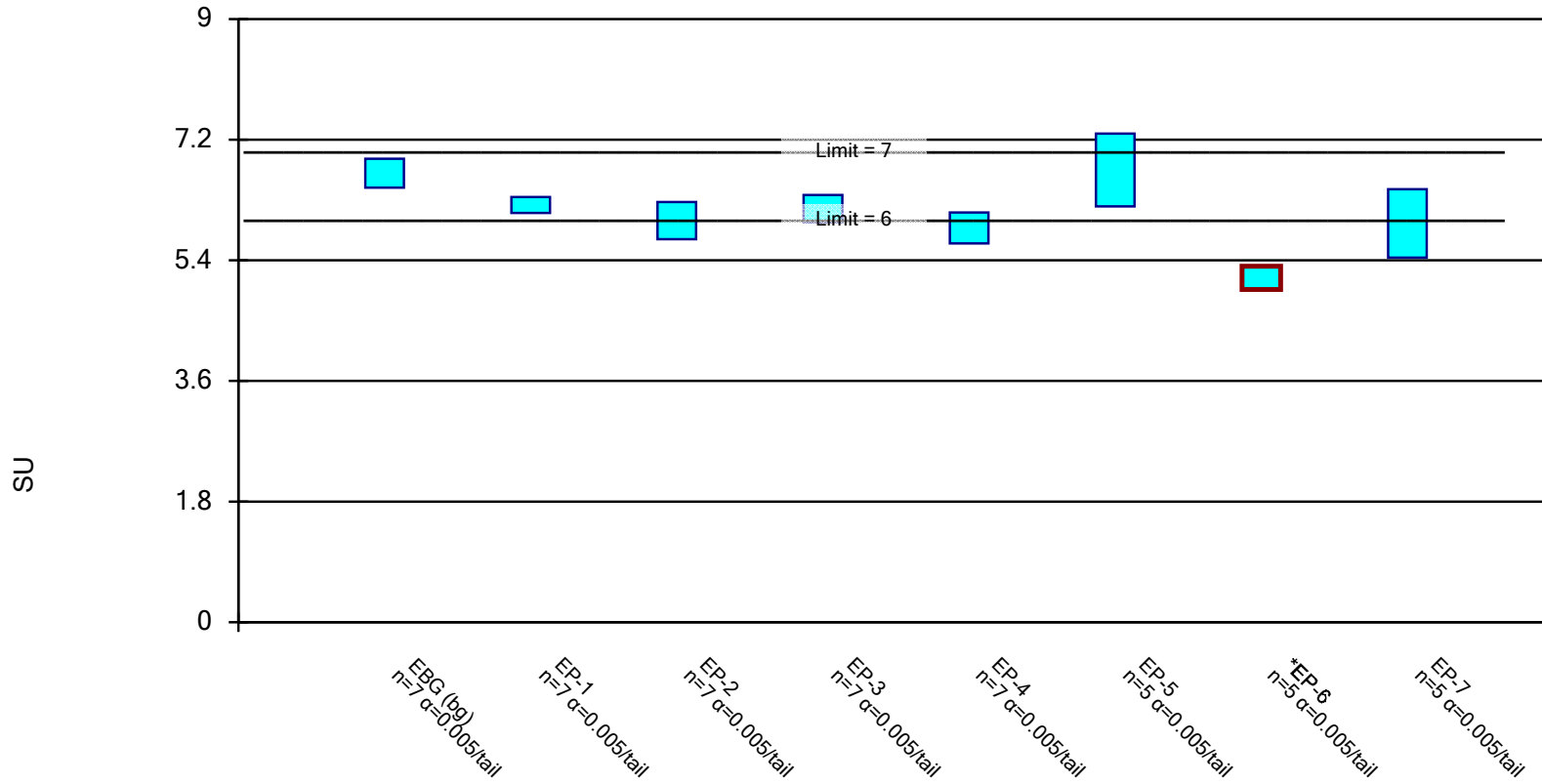


Constituent: Molybdenum Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric Confidence Interval

Compliance limit is exceeded.\* Normality Test: Shapiro Wilk, alpha based on n.

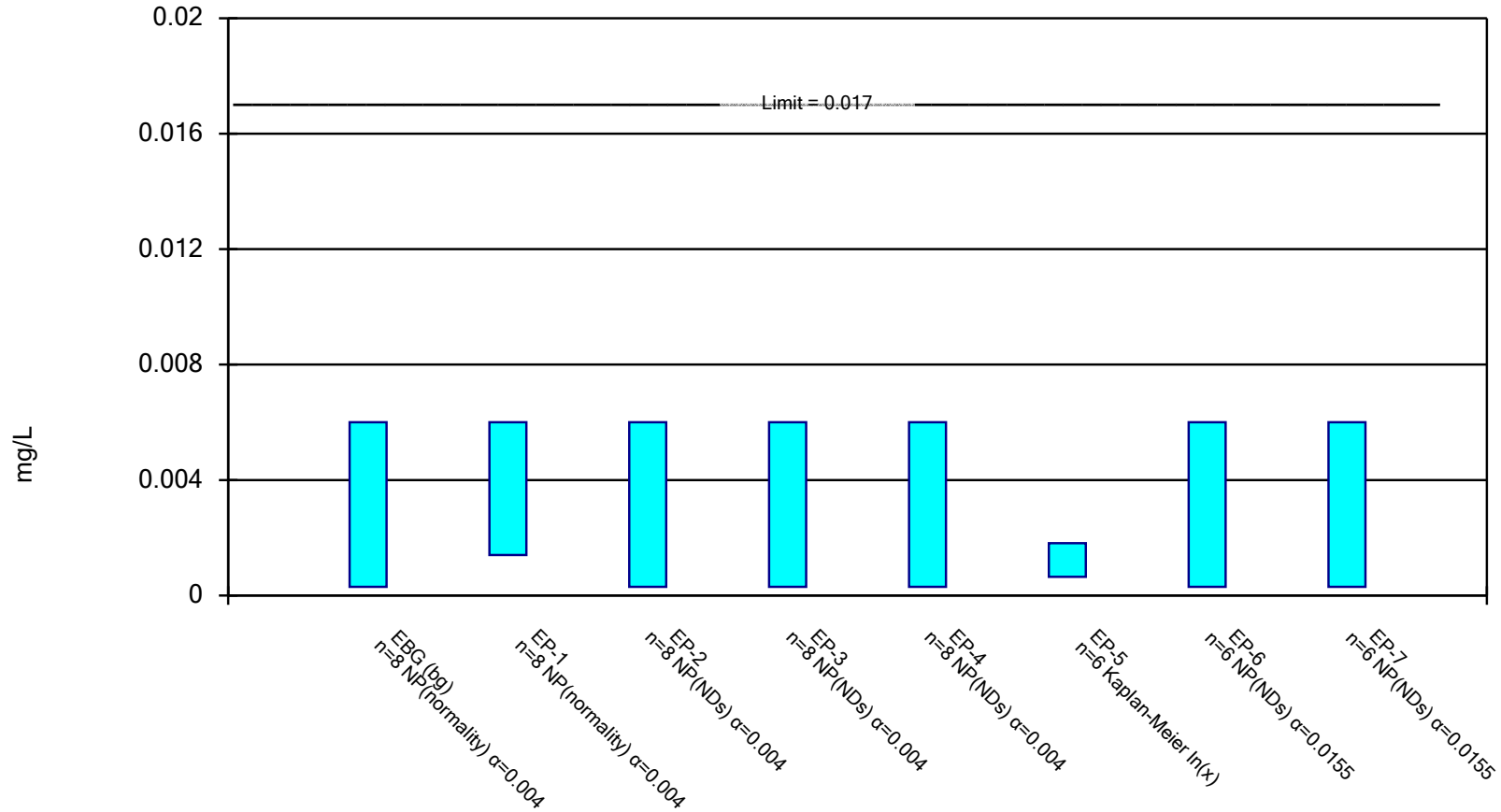


Constituent: pH Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

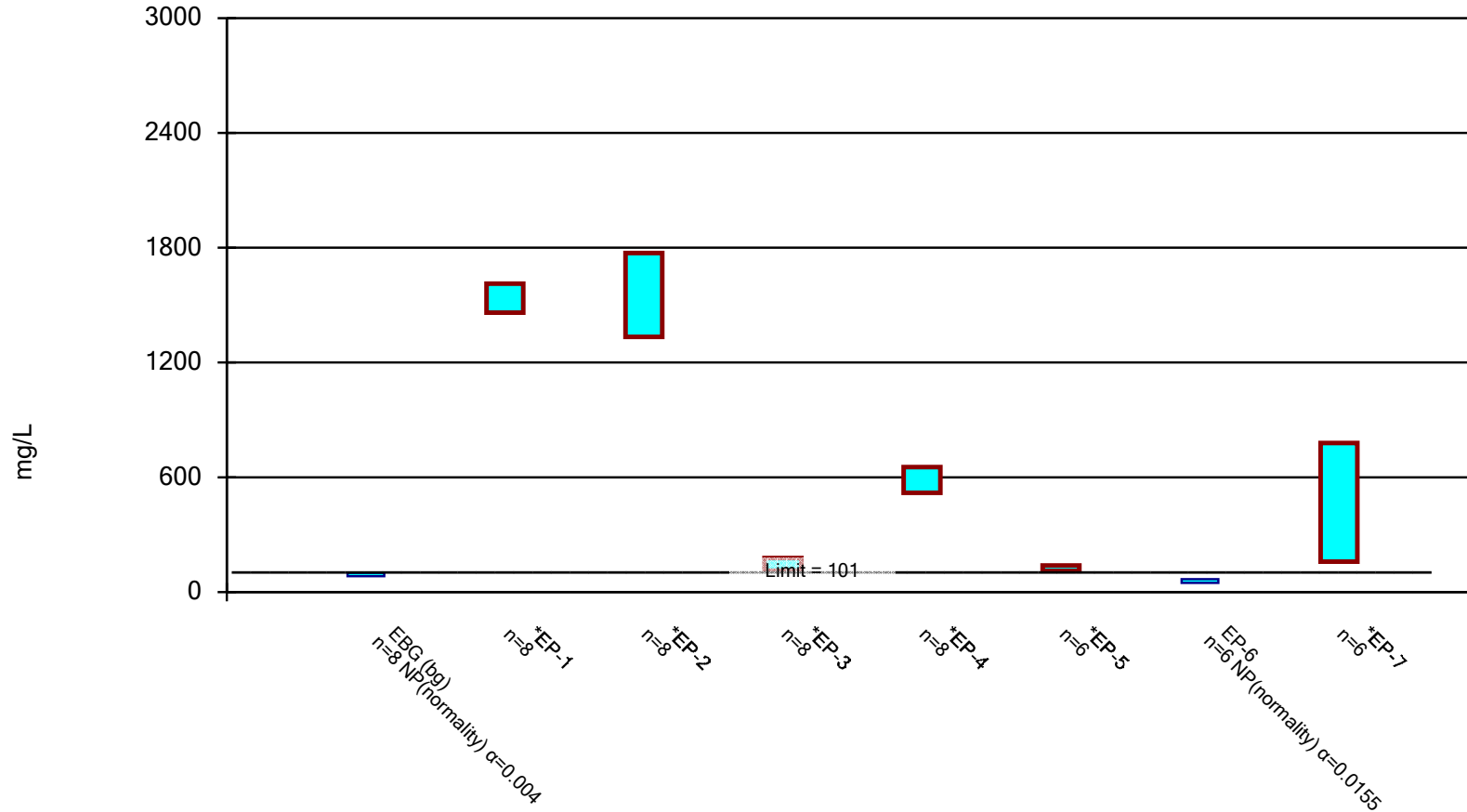


Constituent: Selenium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

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.

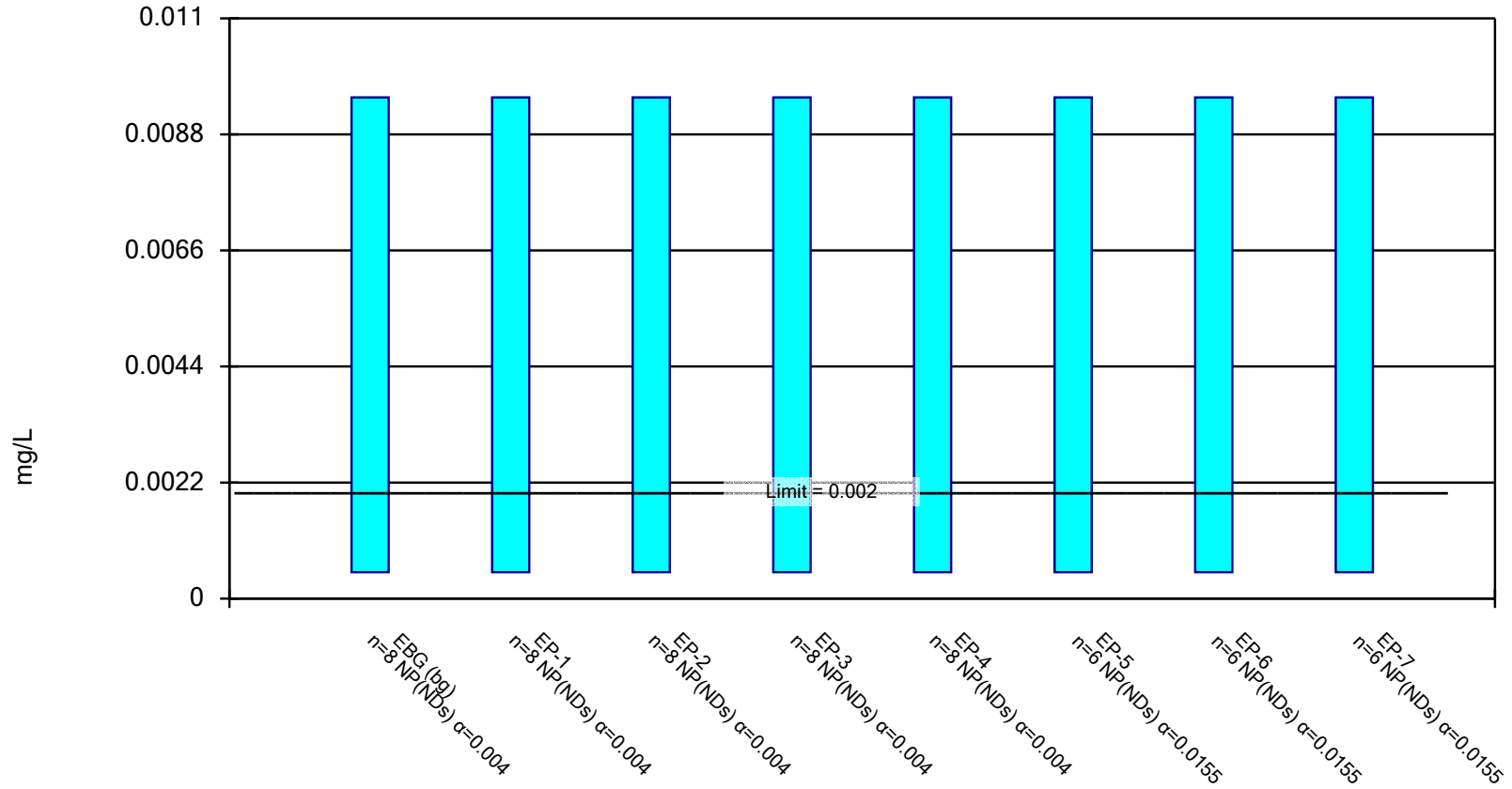


Constituent: Sulfate Analysis Run 5/12/2023 10:02 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



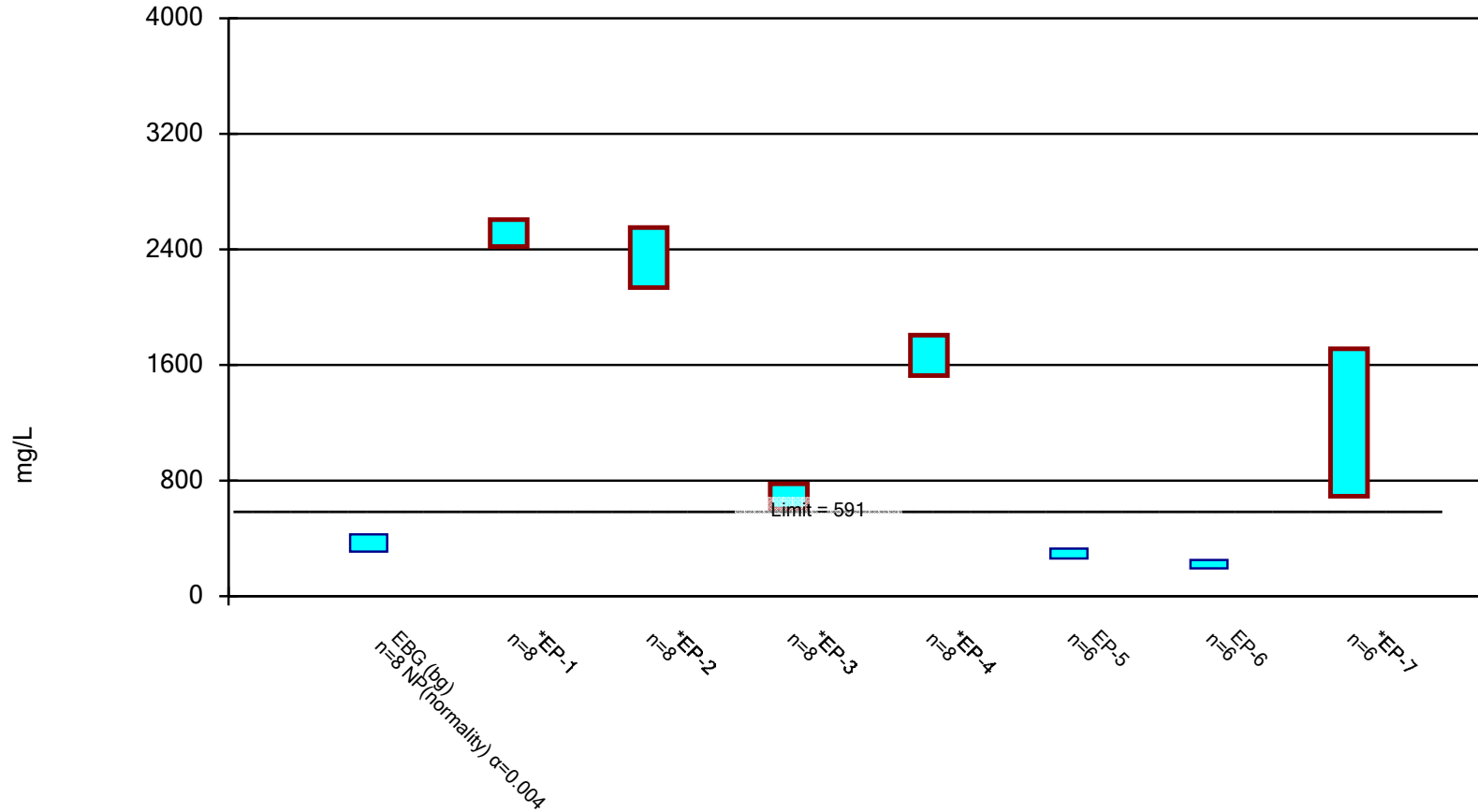
Constituent: Thallium Analysis Run 5/12/2023 10:02 AM View: IEPA Background

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.



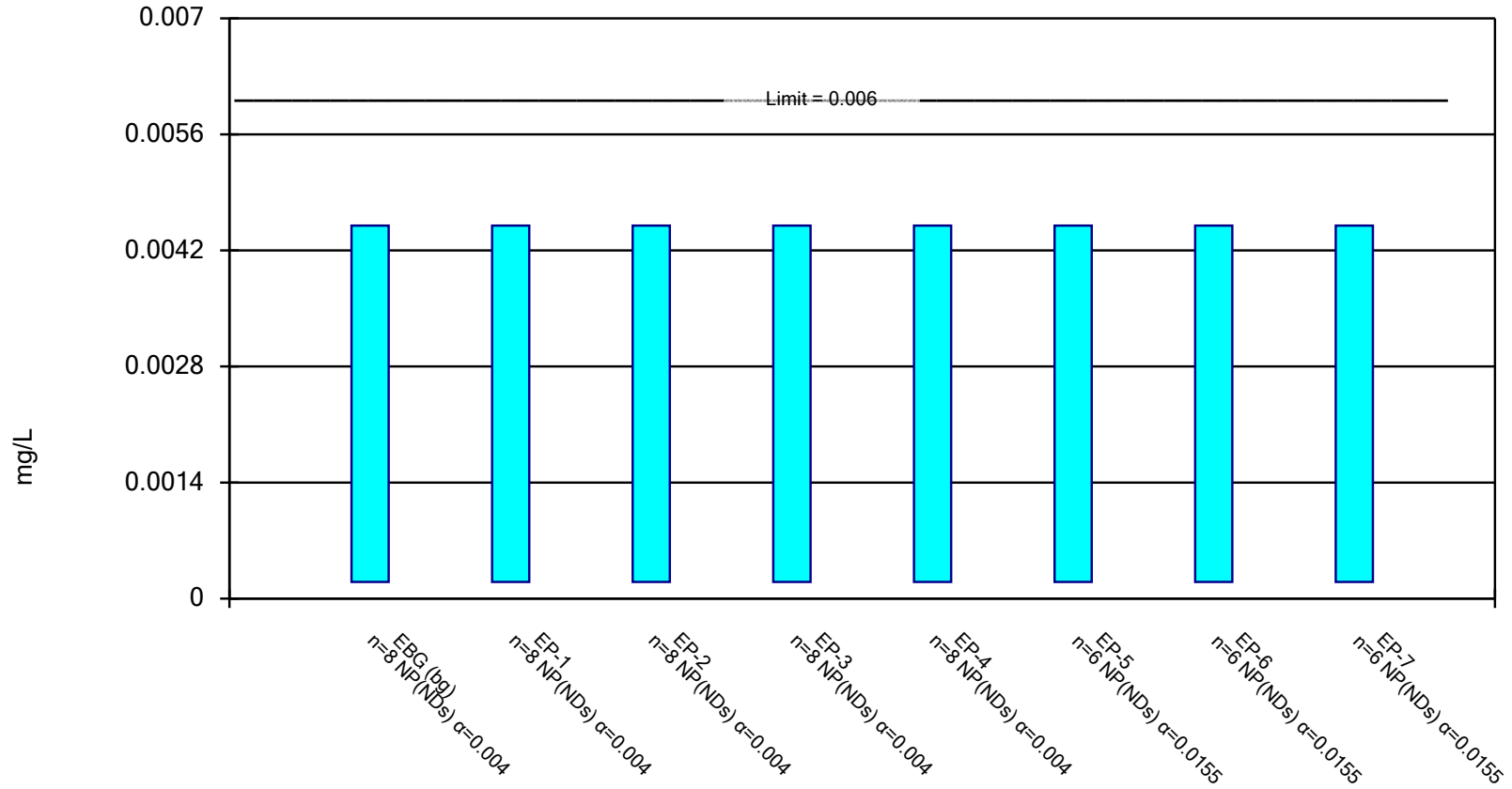
Constituent: Total Dissolved Solids    Analysis Run 5/12/2023 10:02 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

**APPENDIX D-5**

**Q1 2023 Groundwater Protection  
Standard Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

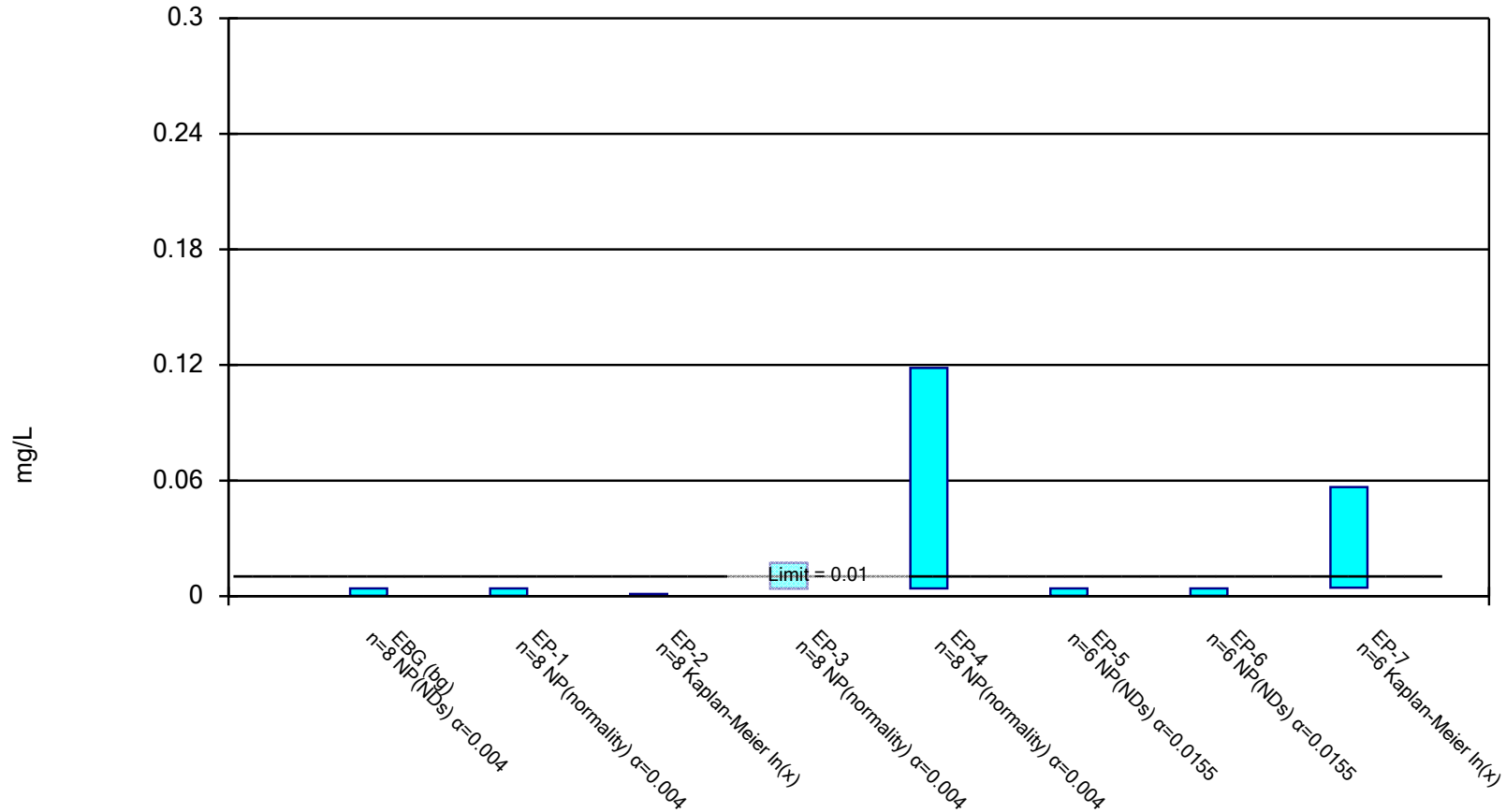


Constituent: Antimony Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

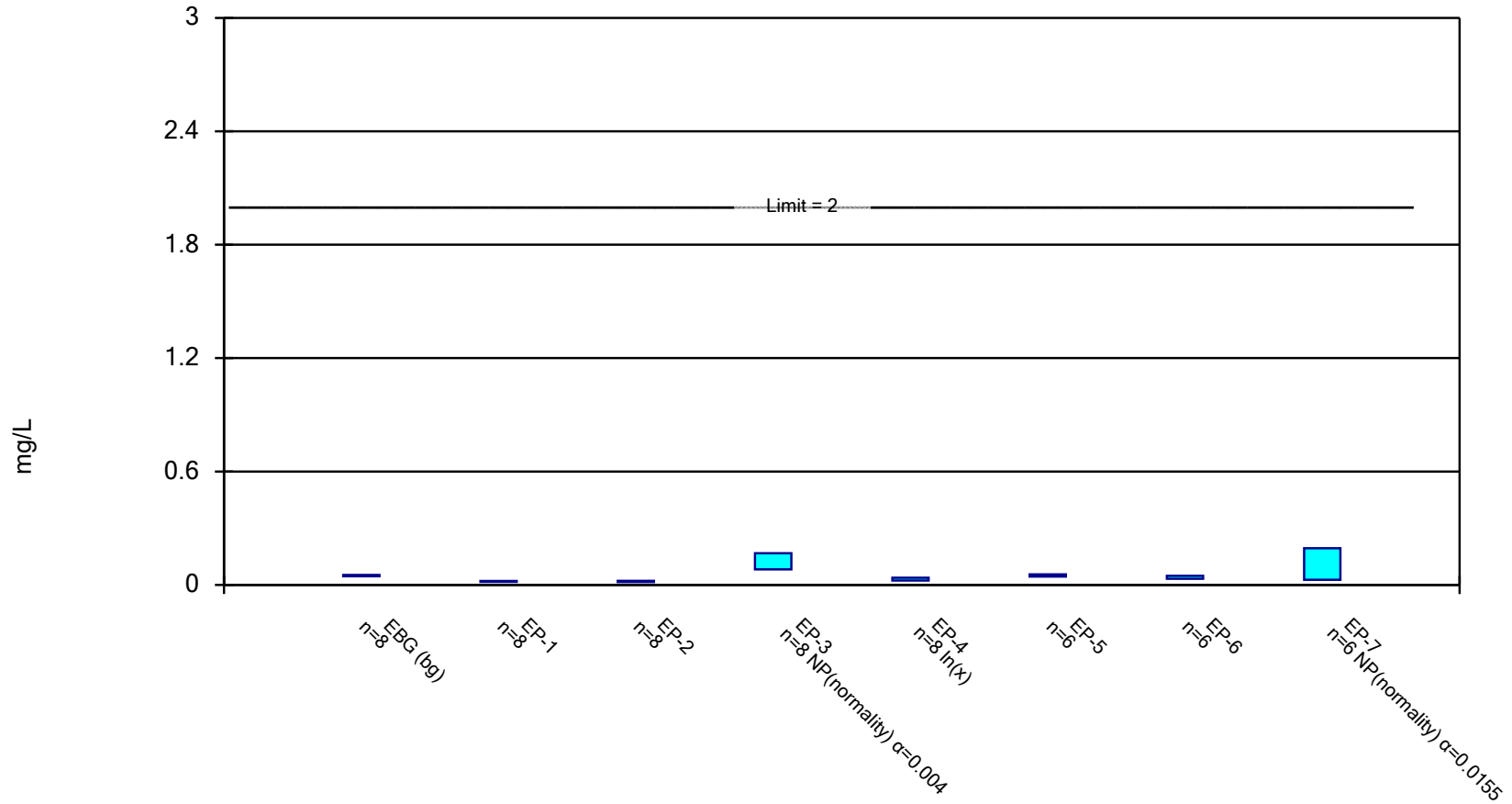


Constituent: Arsenic Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

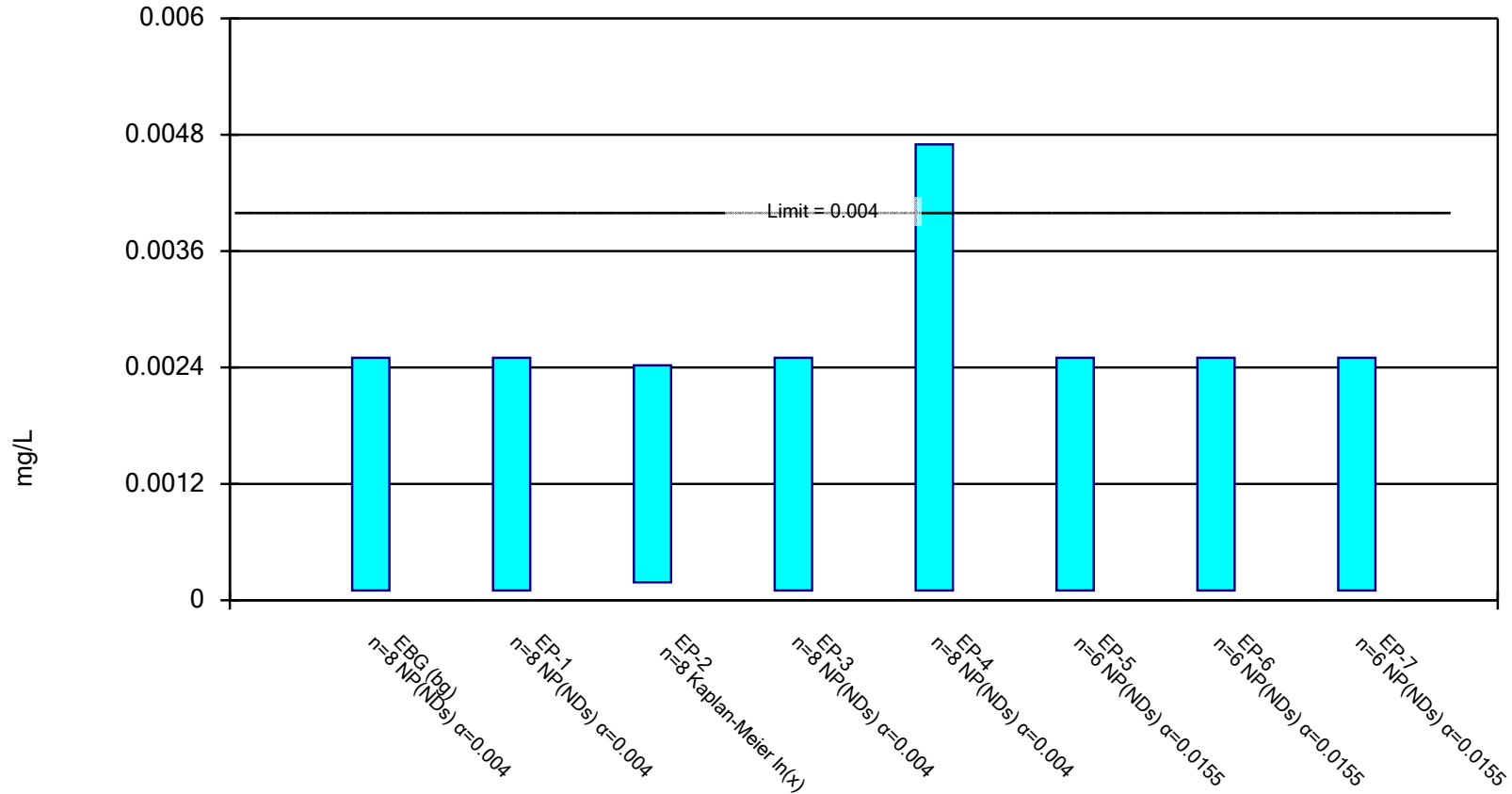


Constituent: Barium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

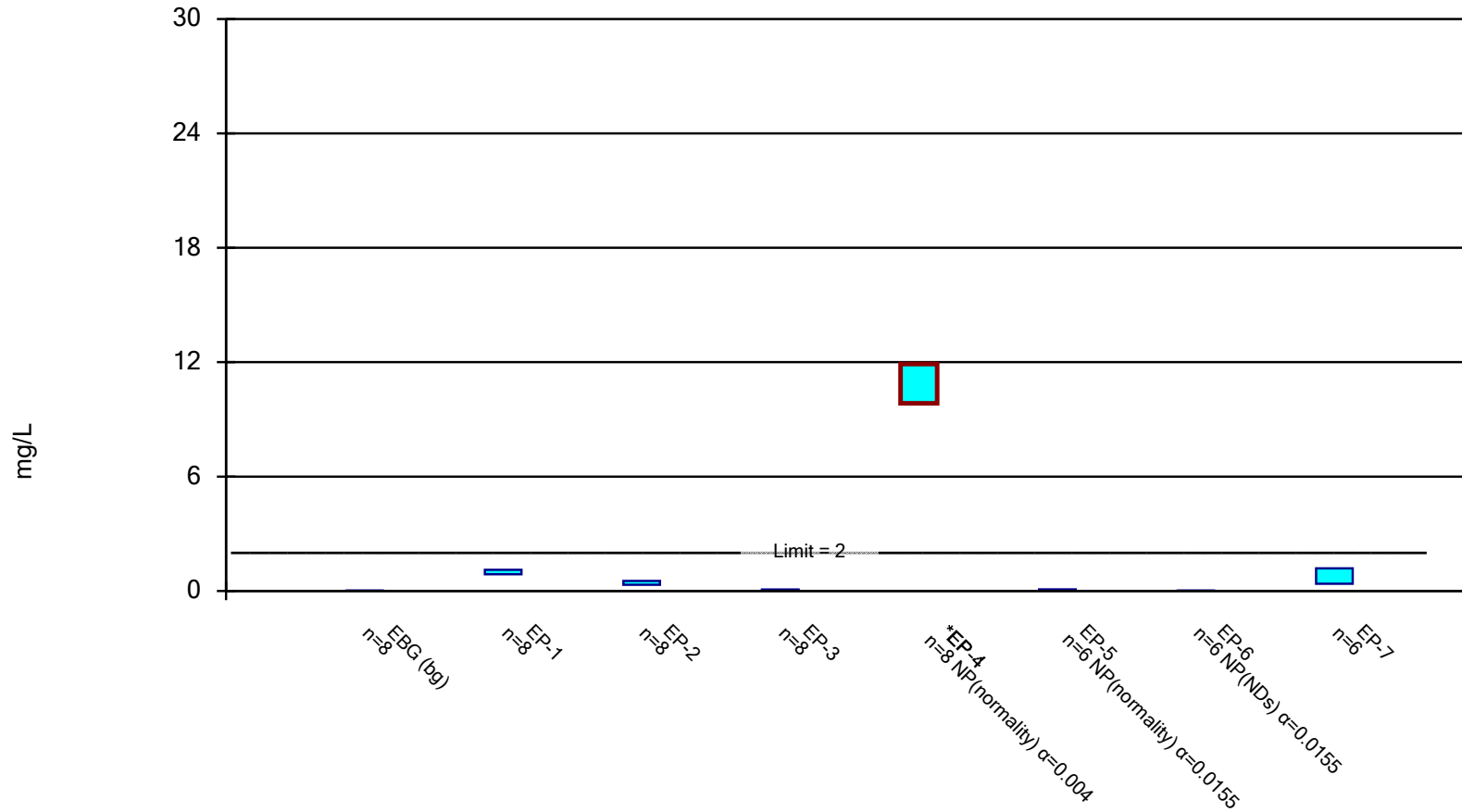


Constituent: Beryllium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

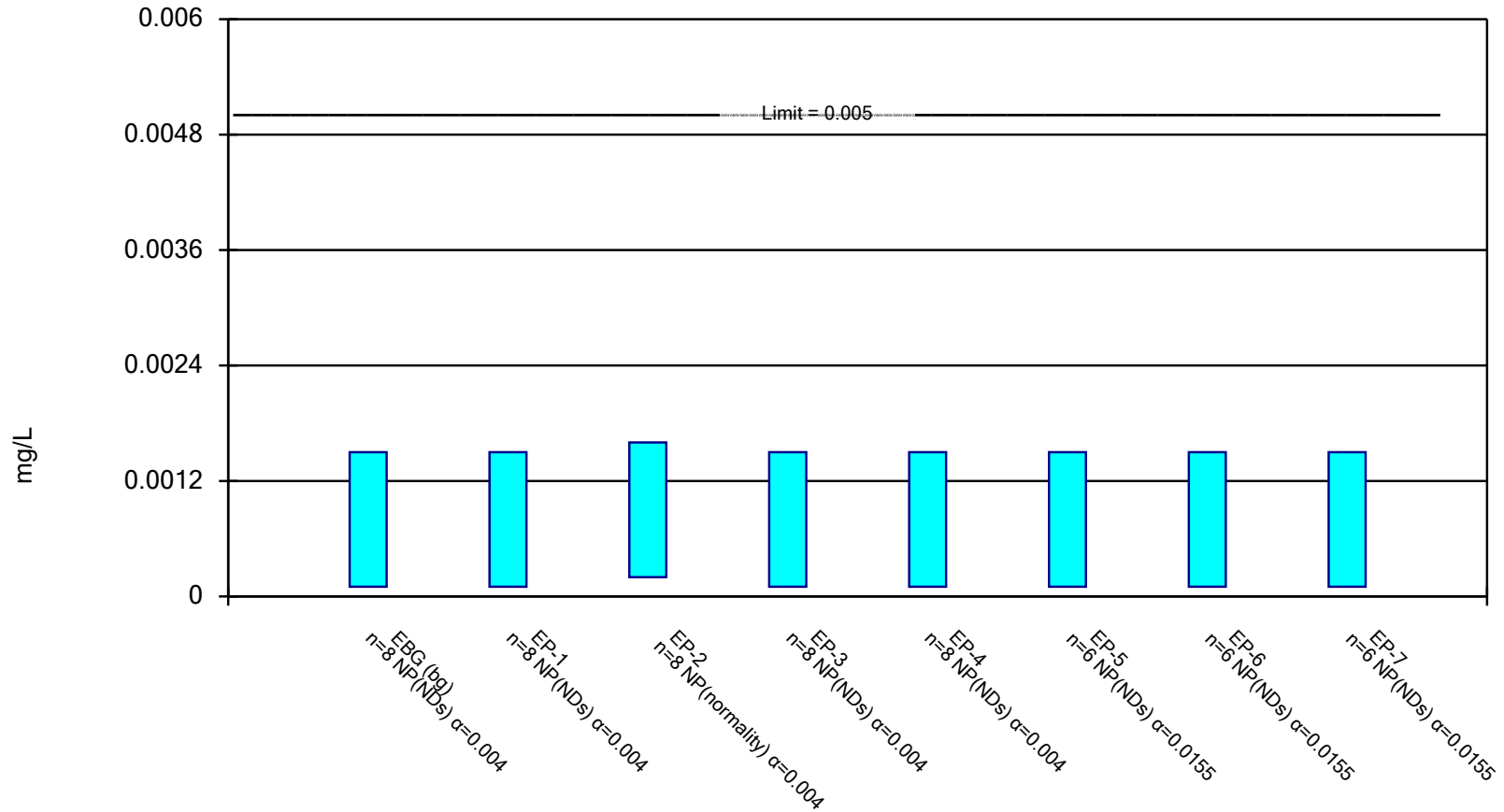


Constituent: Boron Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



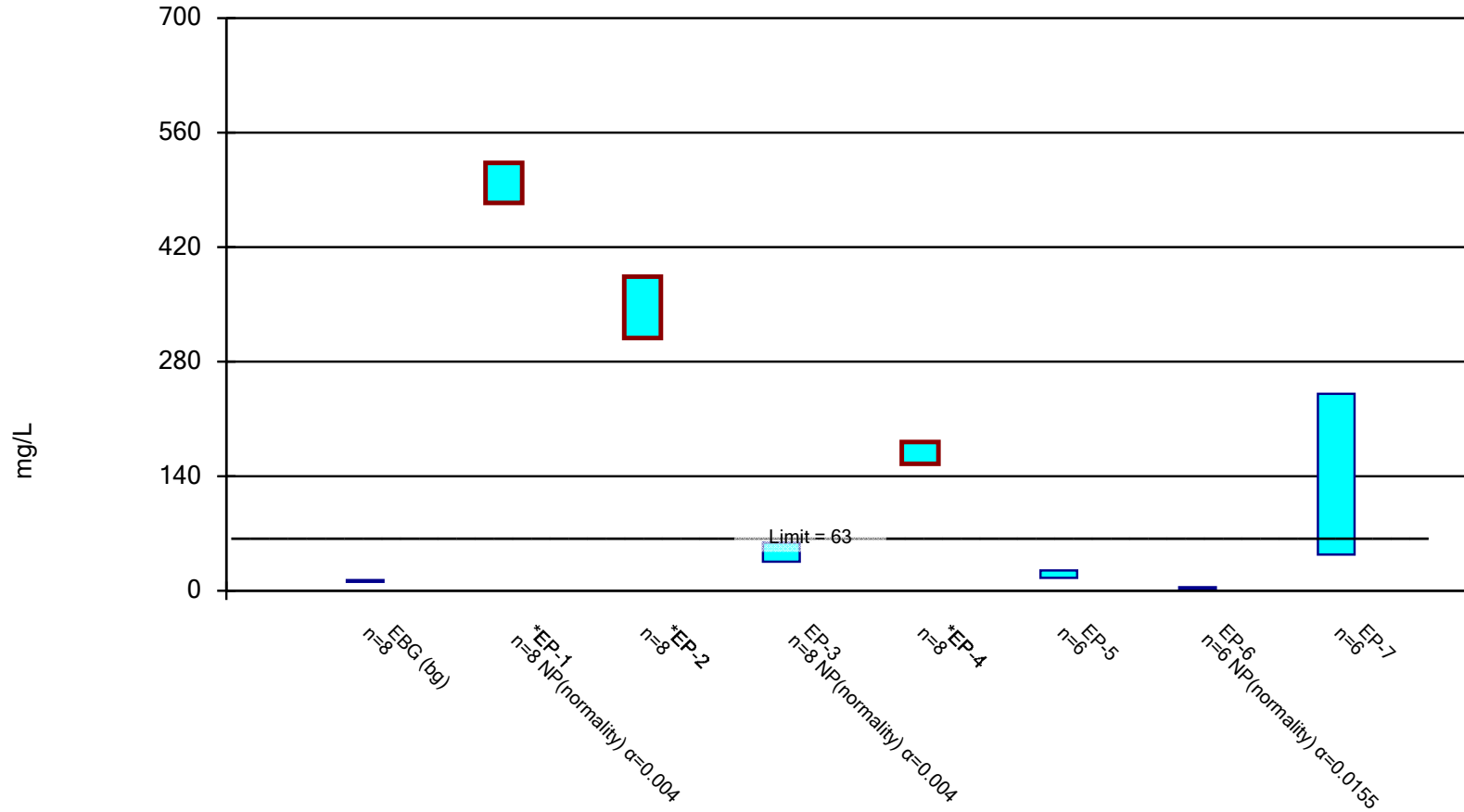
Constituent: Cadmium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

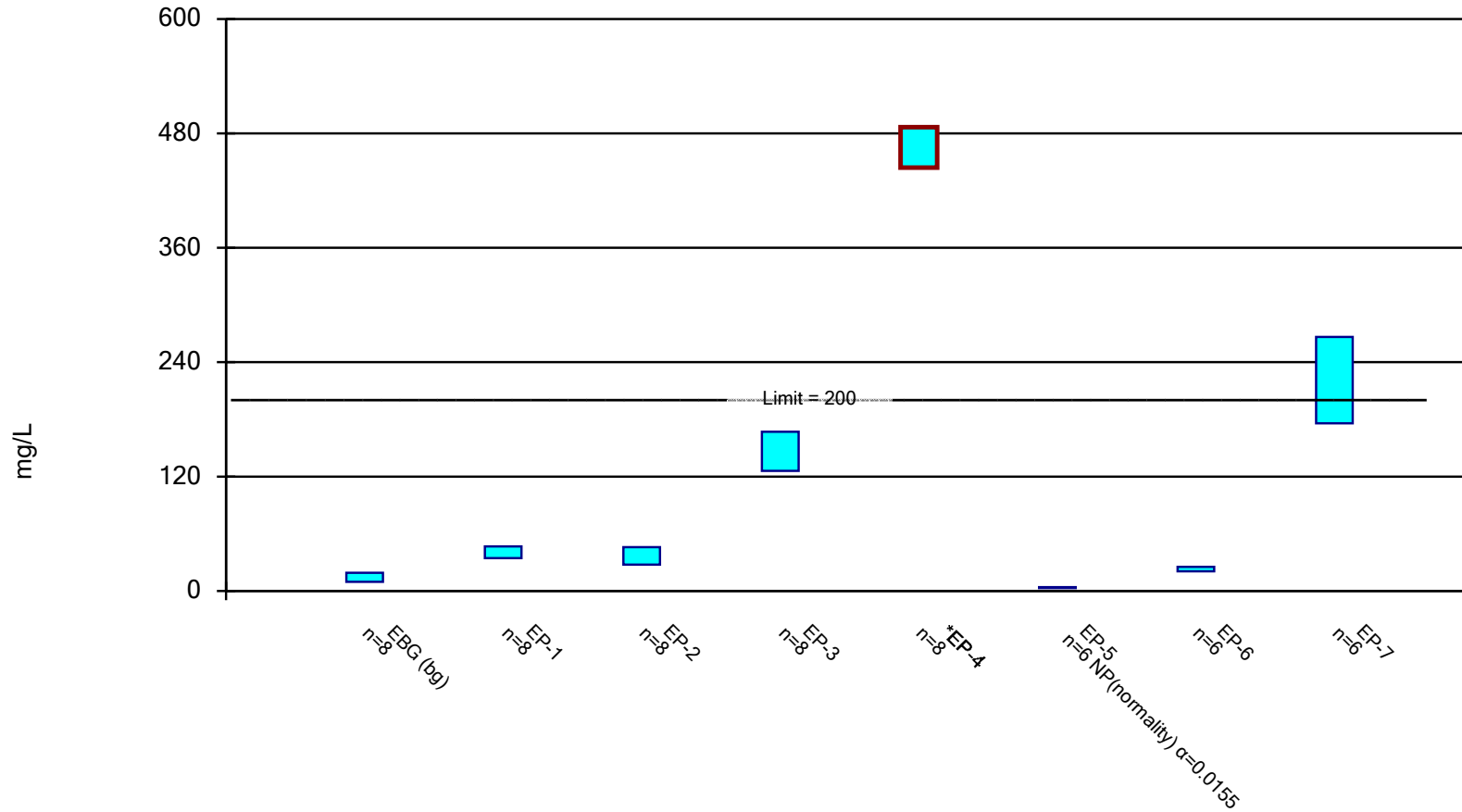


Constituent: Calcium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

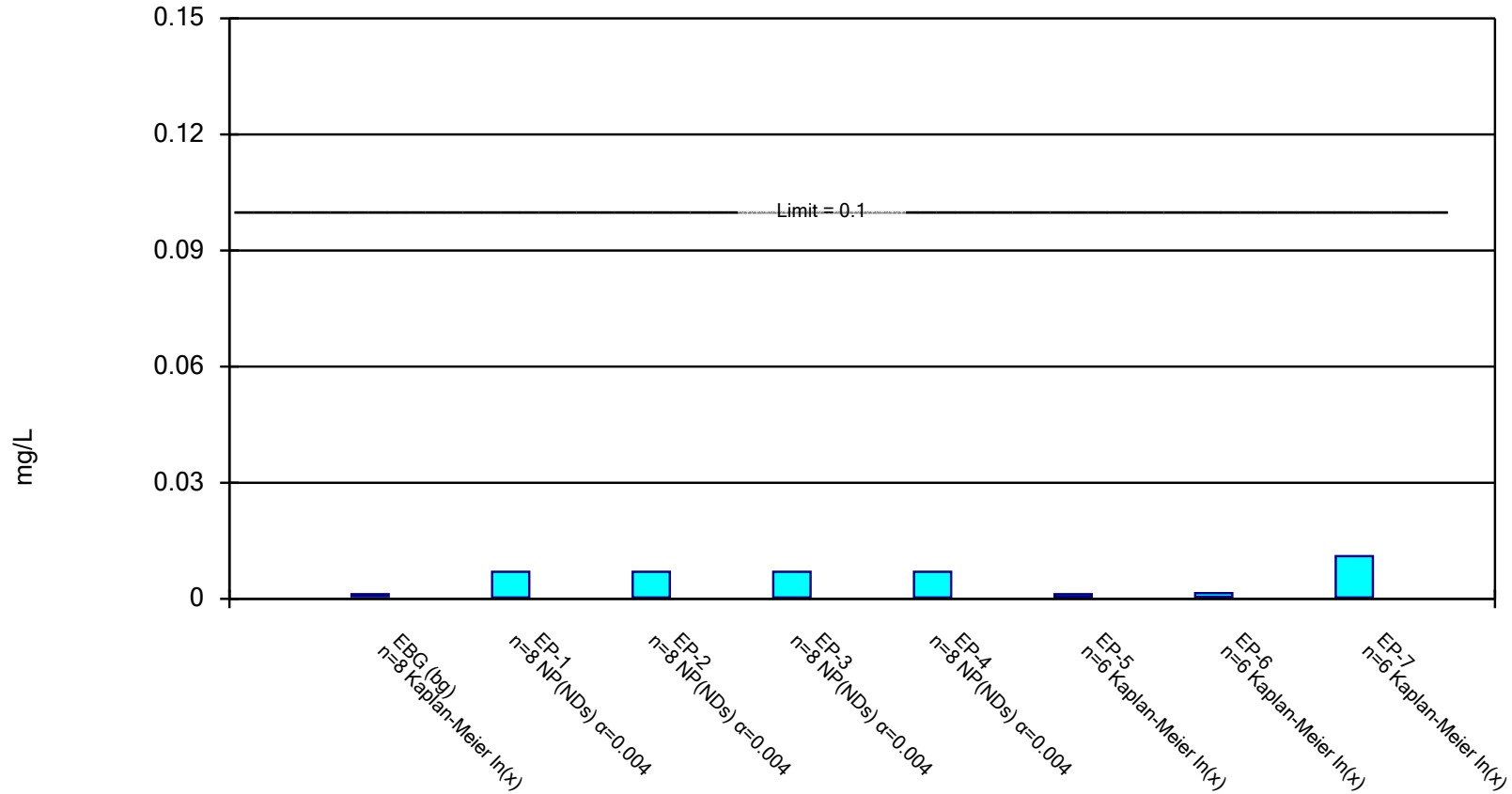


Constituent: Chloride Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

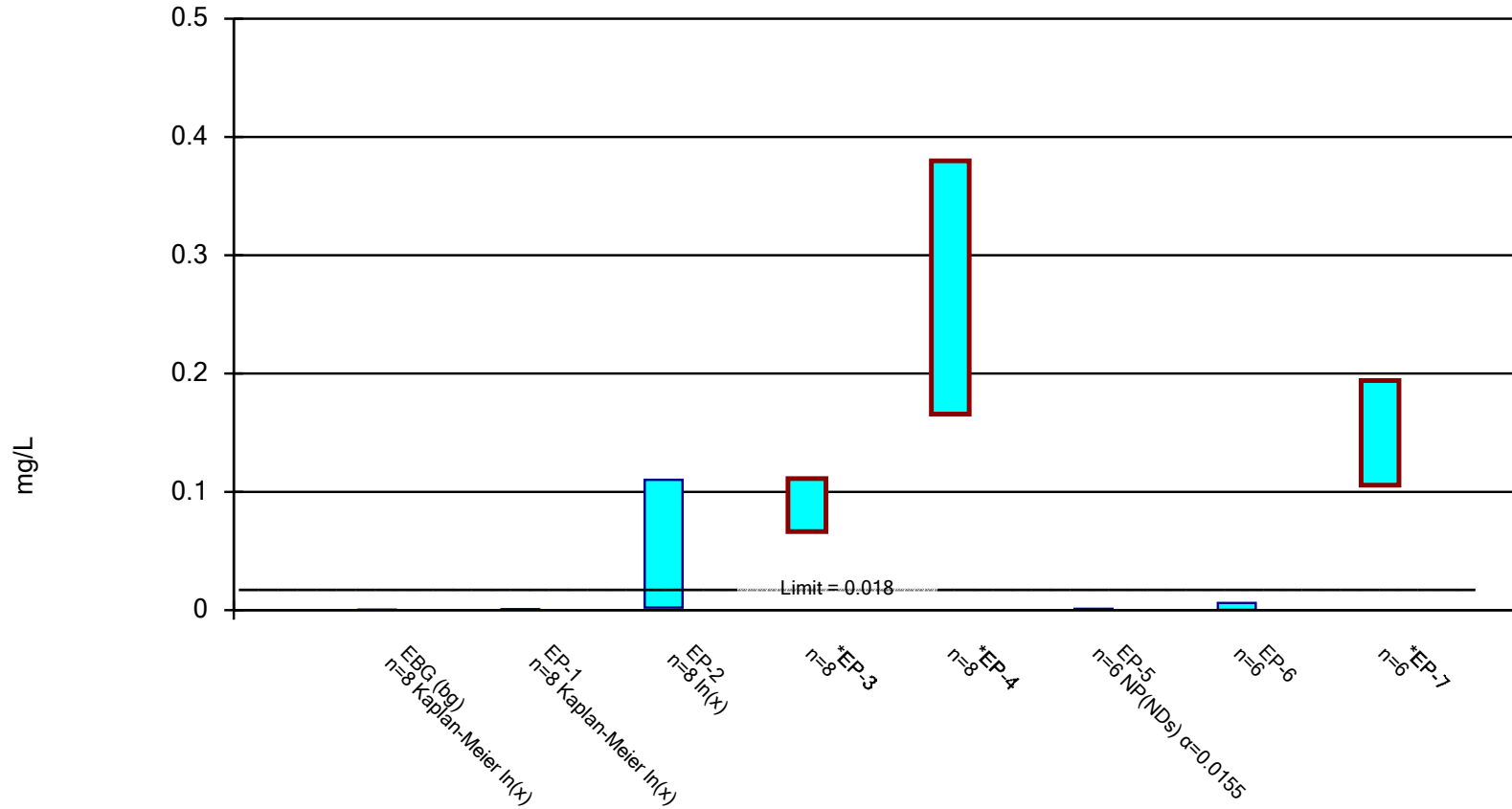


Constituent: Chromium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

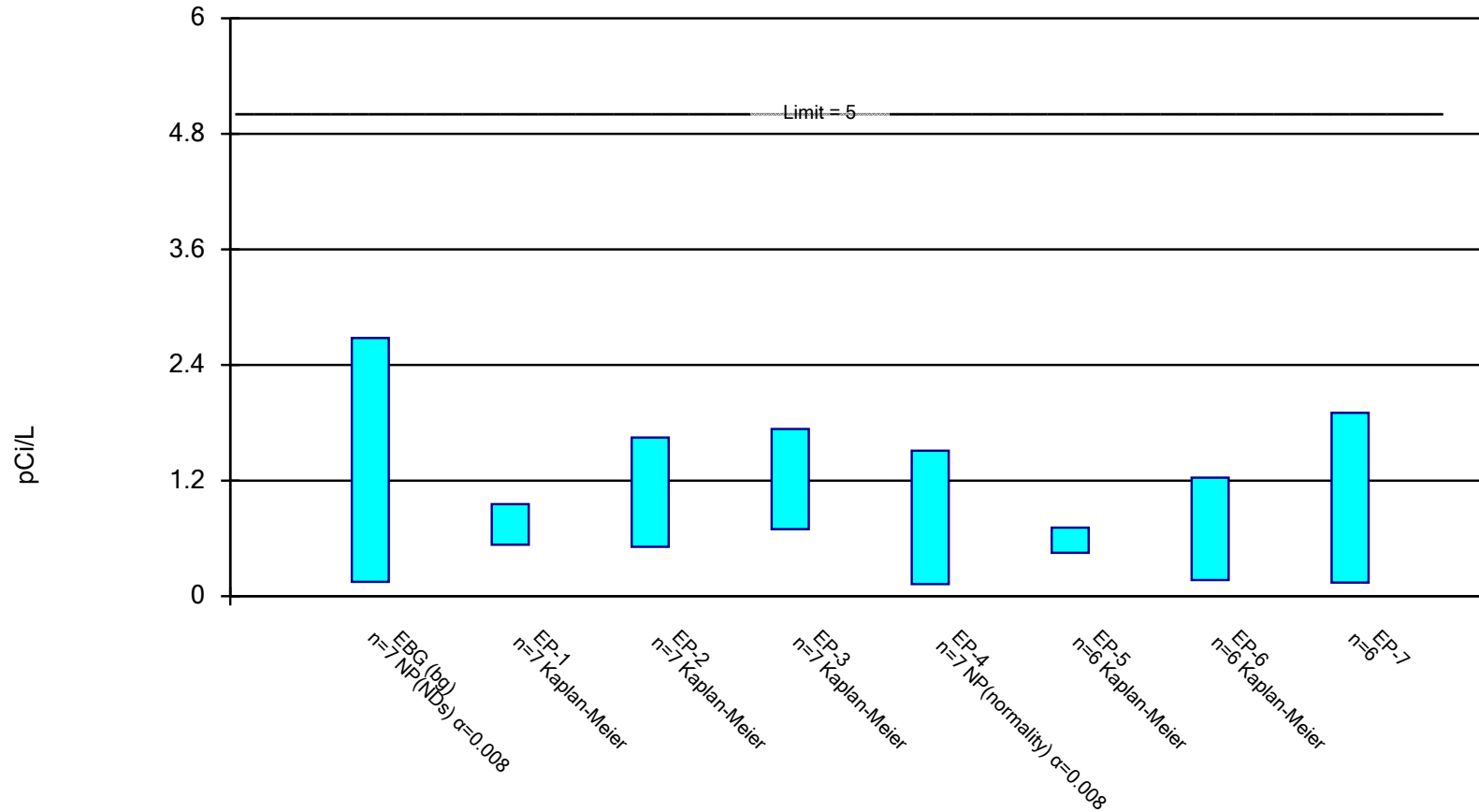


Constituent: Cobalt Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

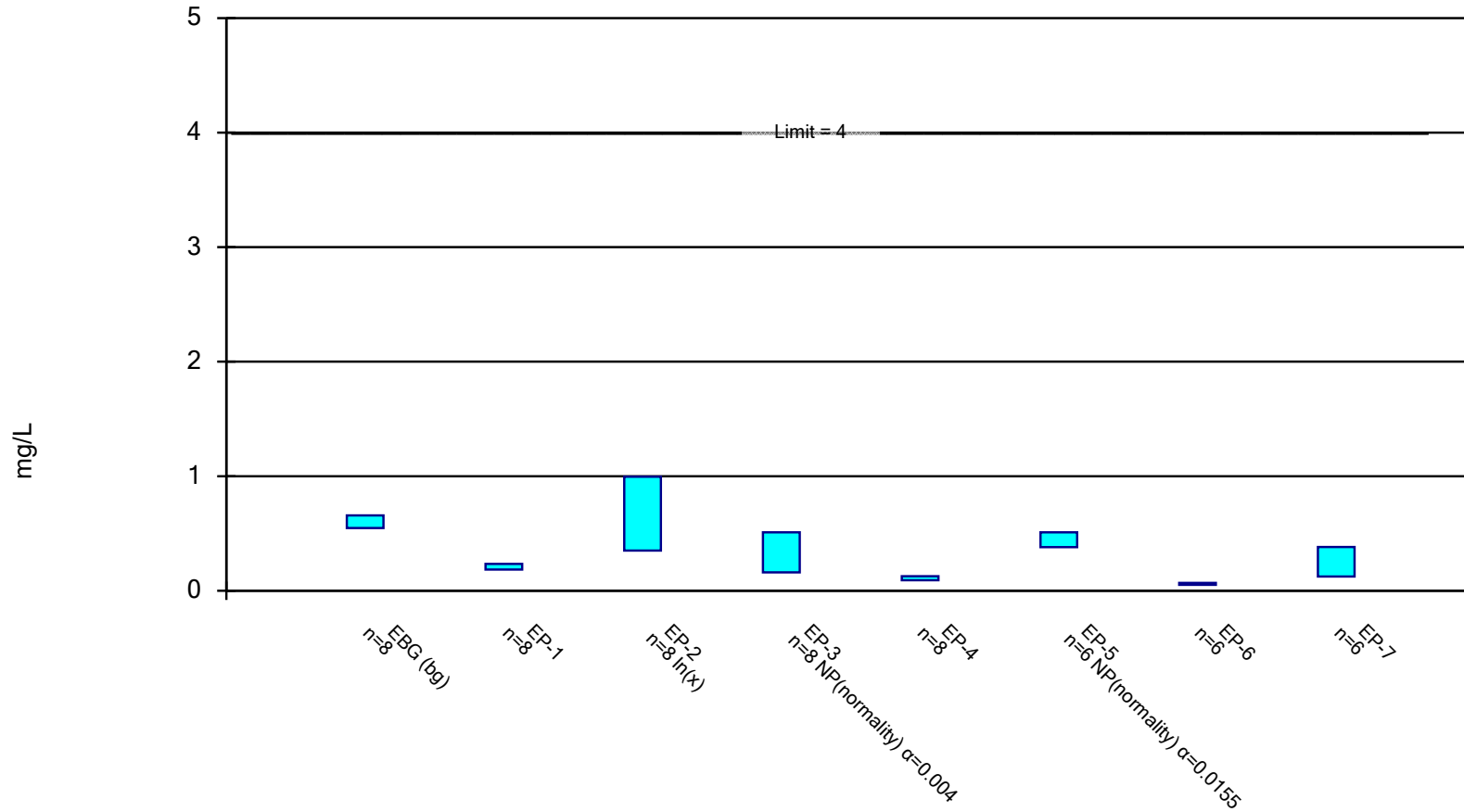


Constituent: Combined Radium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

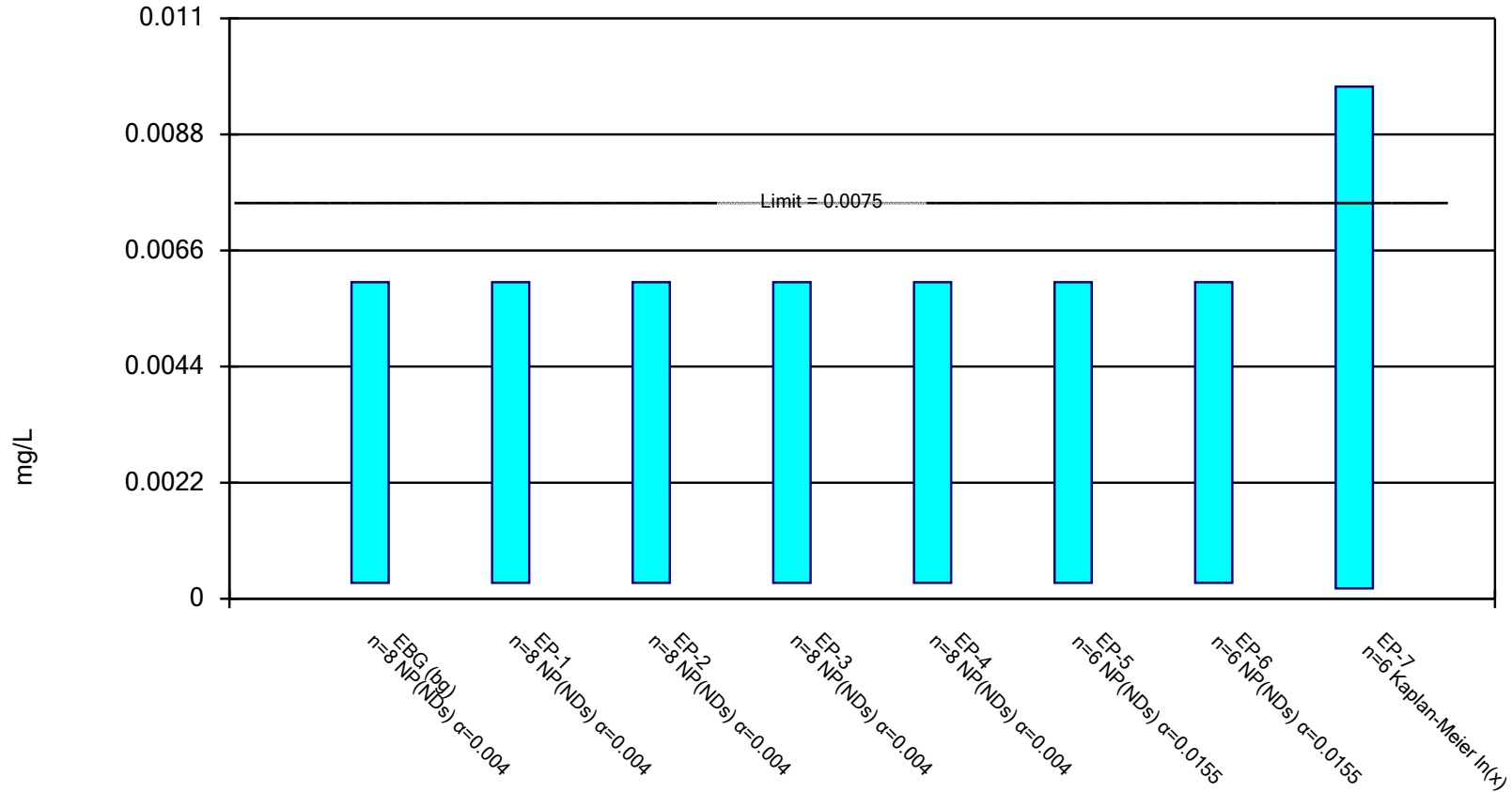


Constituent: Fluoride Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

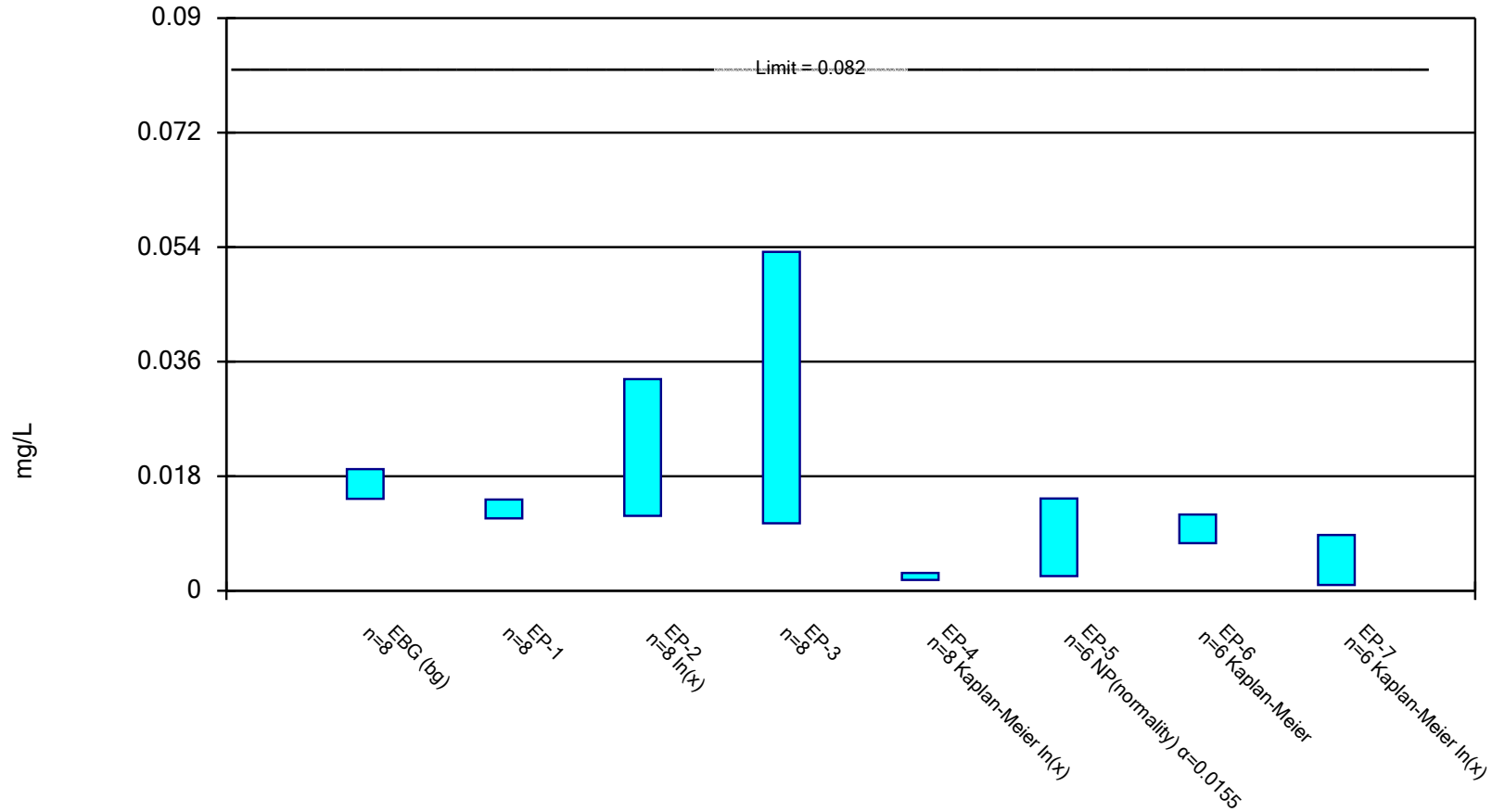


Constituent: Lead Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



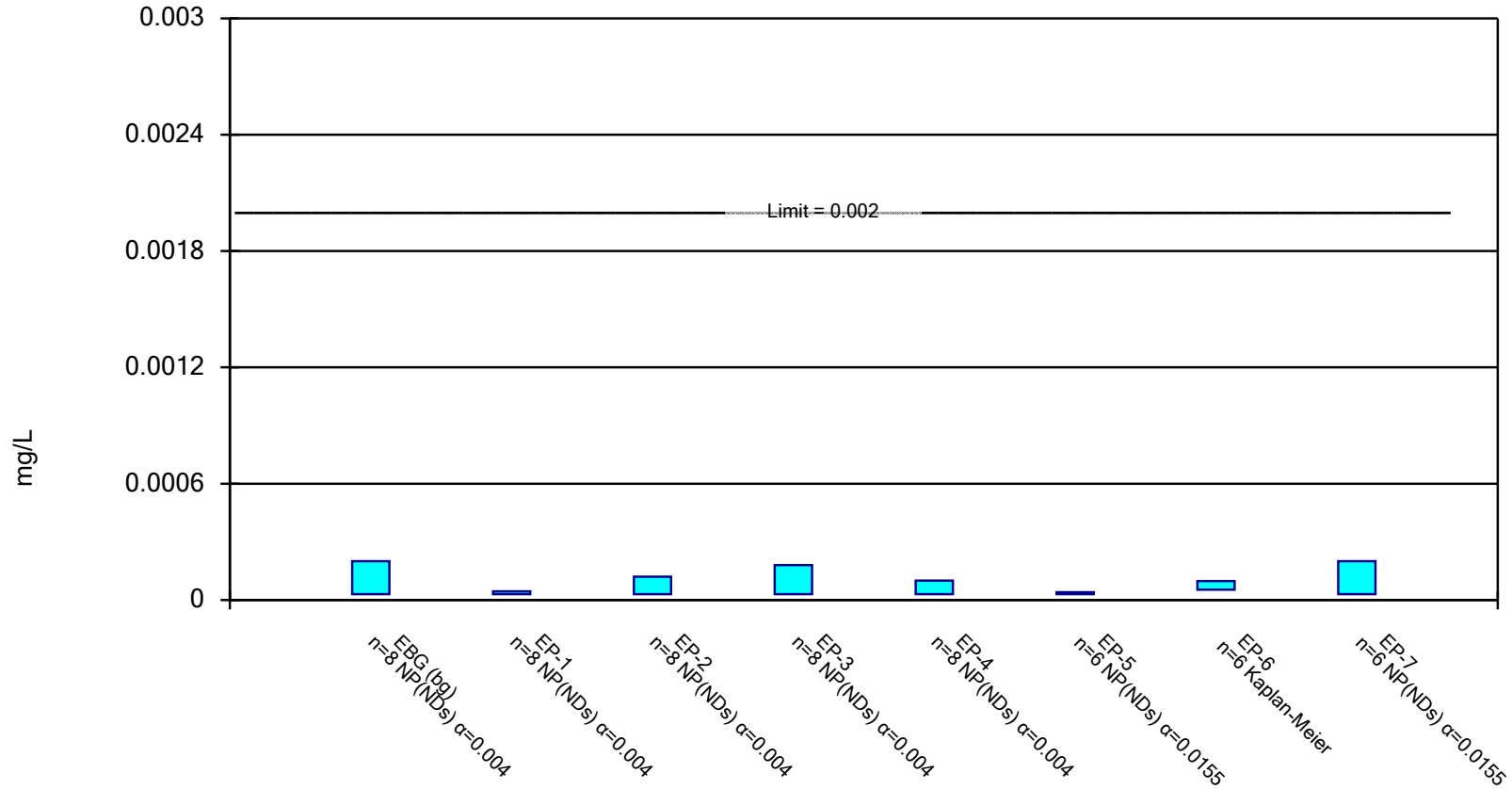
Constituent: Lithium Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

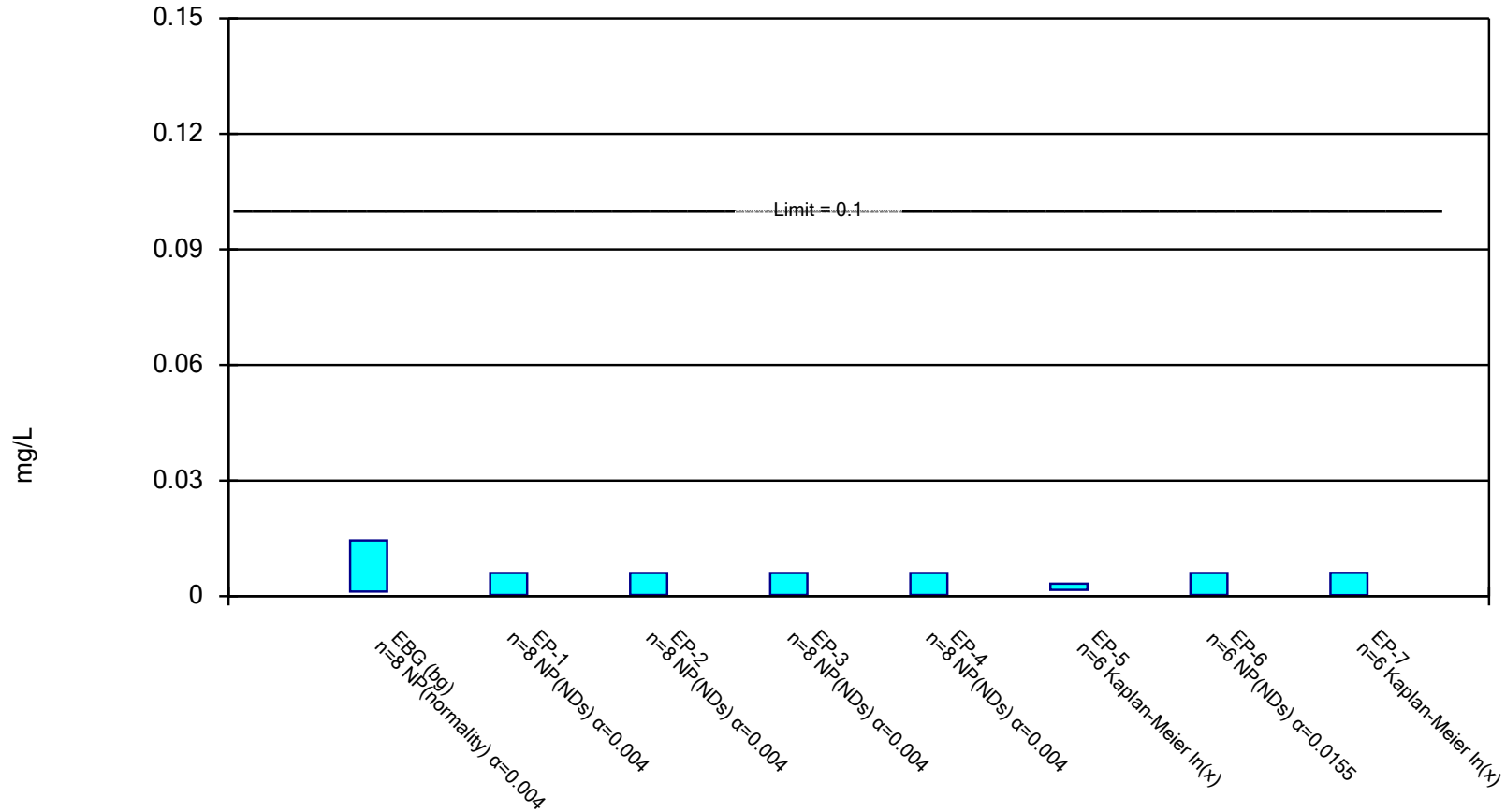


Constituent: Mercury Analysis Run 5/12/2023 10:14 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

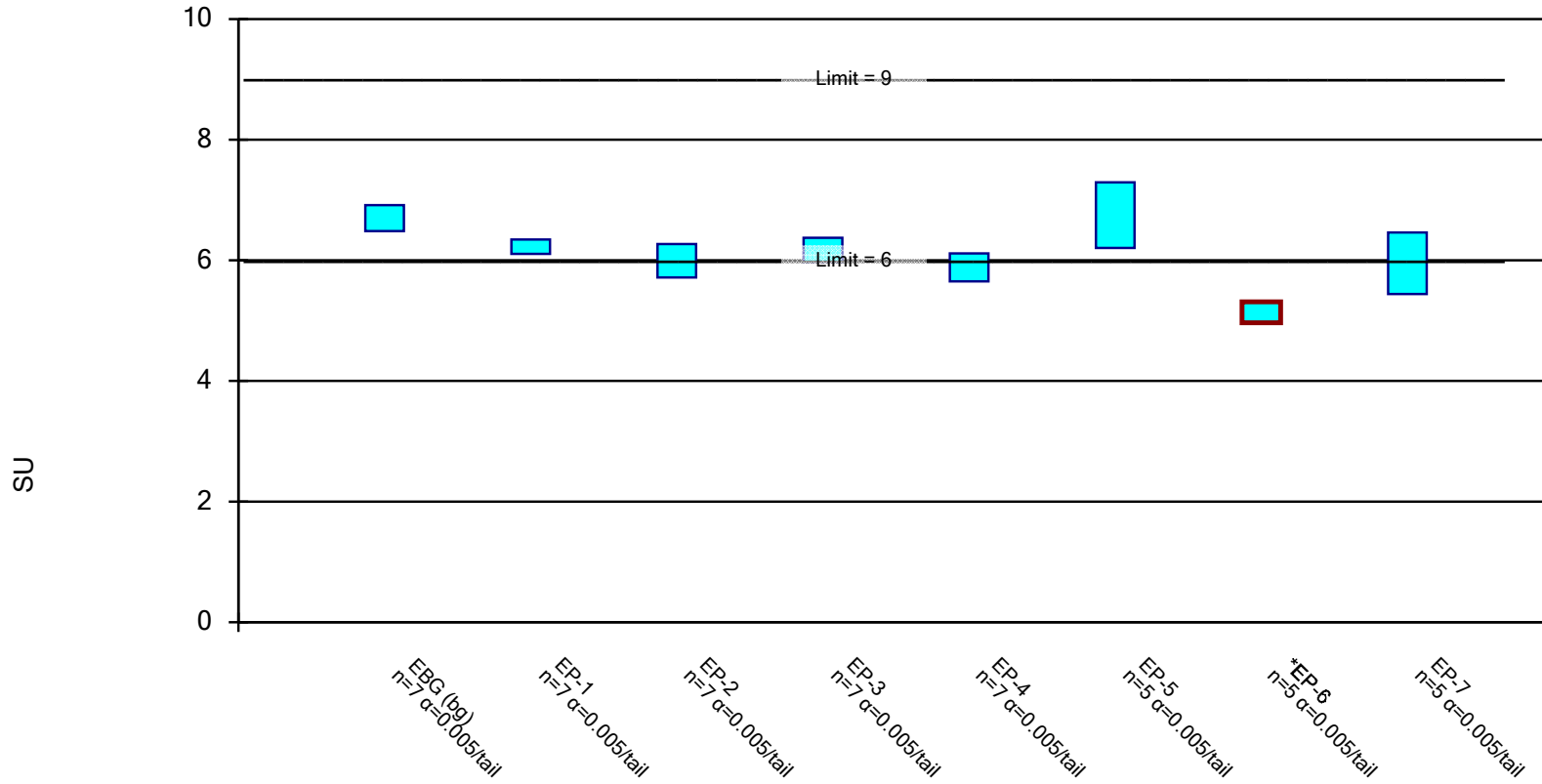


Constituent: Molybdenum    Analysis Run 5/12/2023 10:14 AM    View: IEPA GPS

Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric Confidence Interval

Compliance limit is exceeded.\* Normality Test: Shapiro Wilk, alpha based on n.

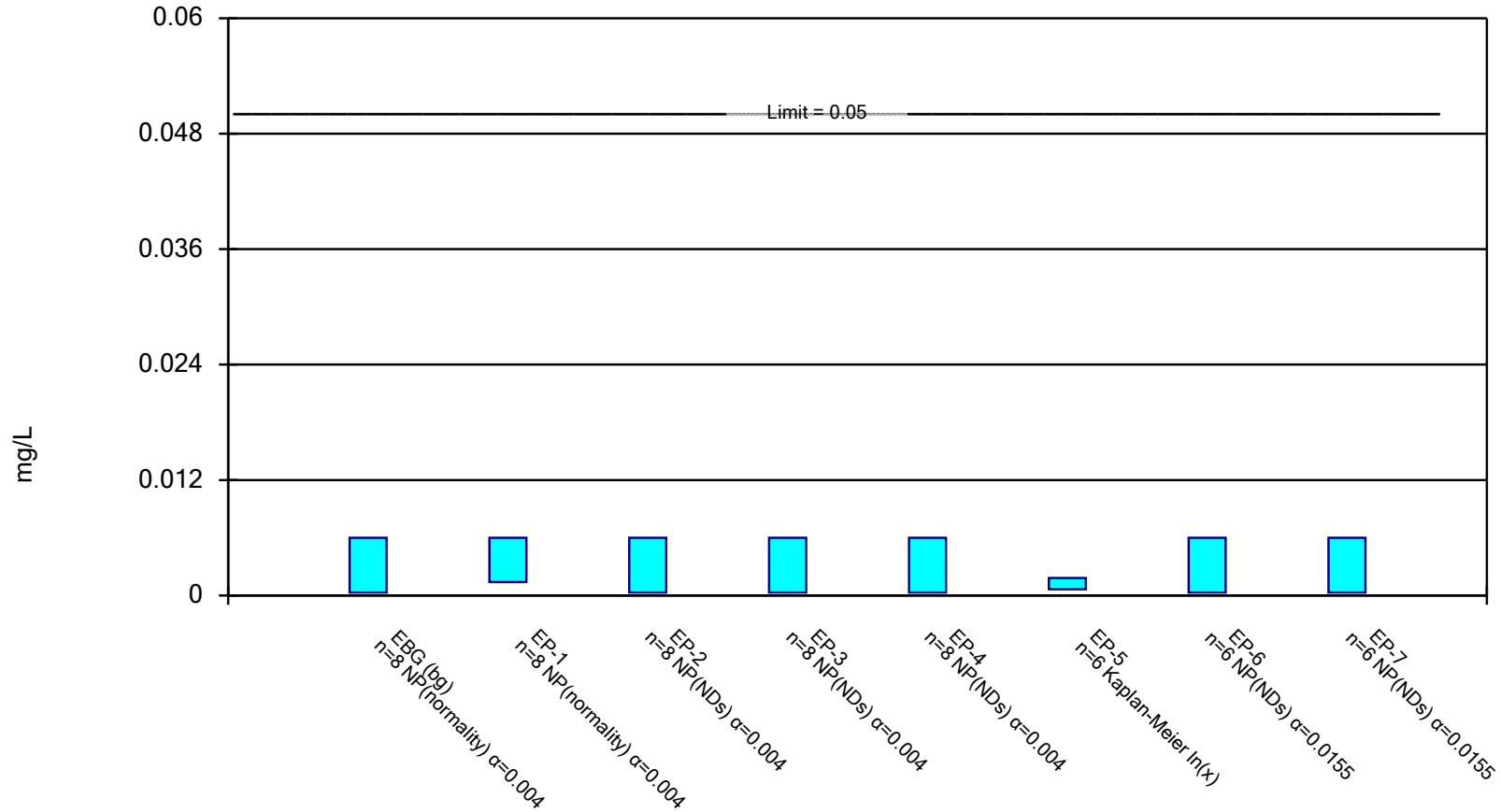


Constituent: pH Analysis Run 5/12/2023 10:15 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

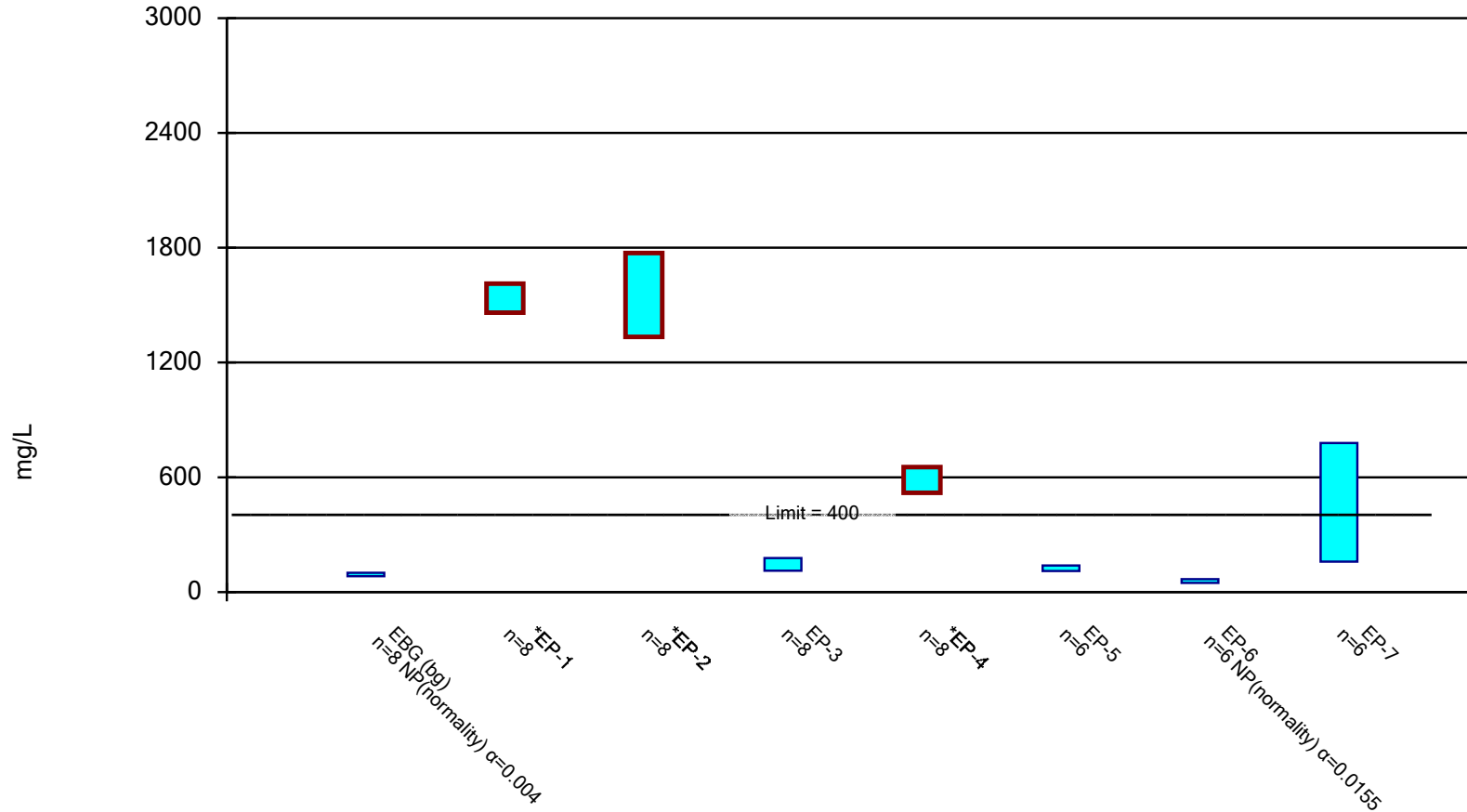


Constituent: Selenium Analysis Run 5/12/2023 10:15 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

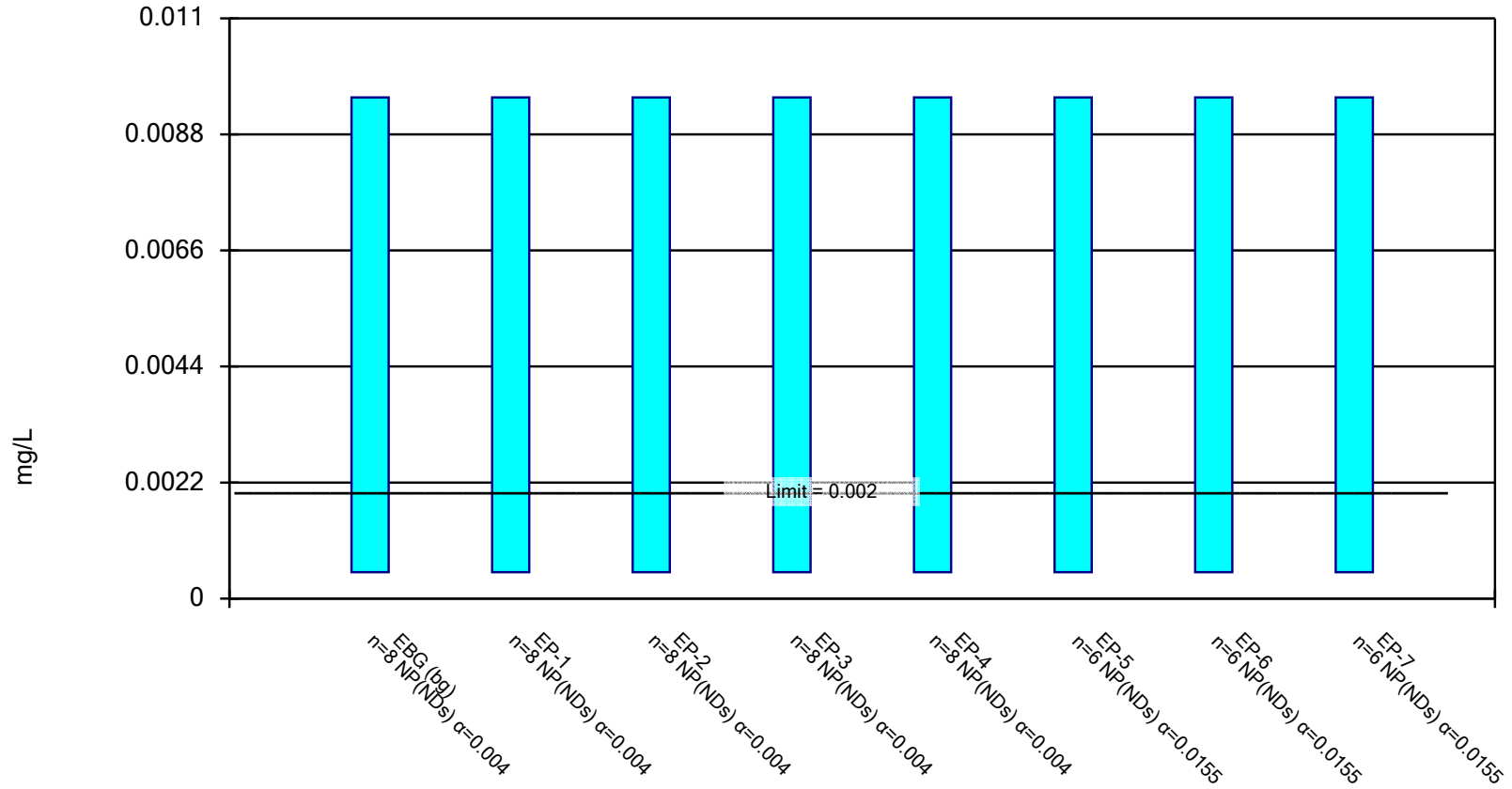


Constituent: Sulfate Analysis Run 5/12/2023 10:15 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

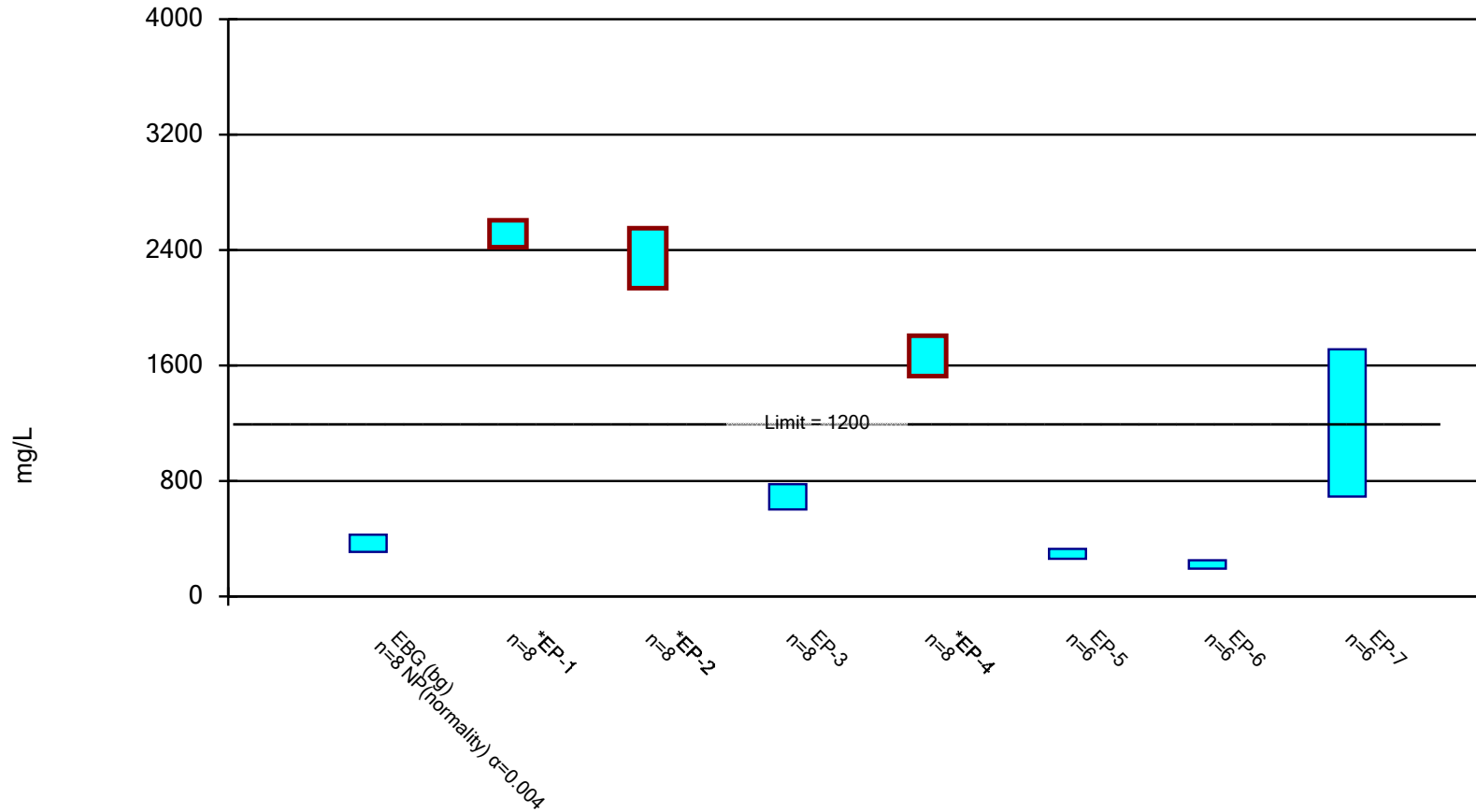


Constituent: Thallium Analysis Run 5/12/2023 10:15 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 5/12/2023 10:15 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

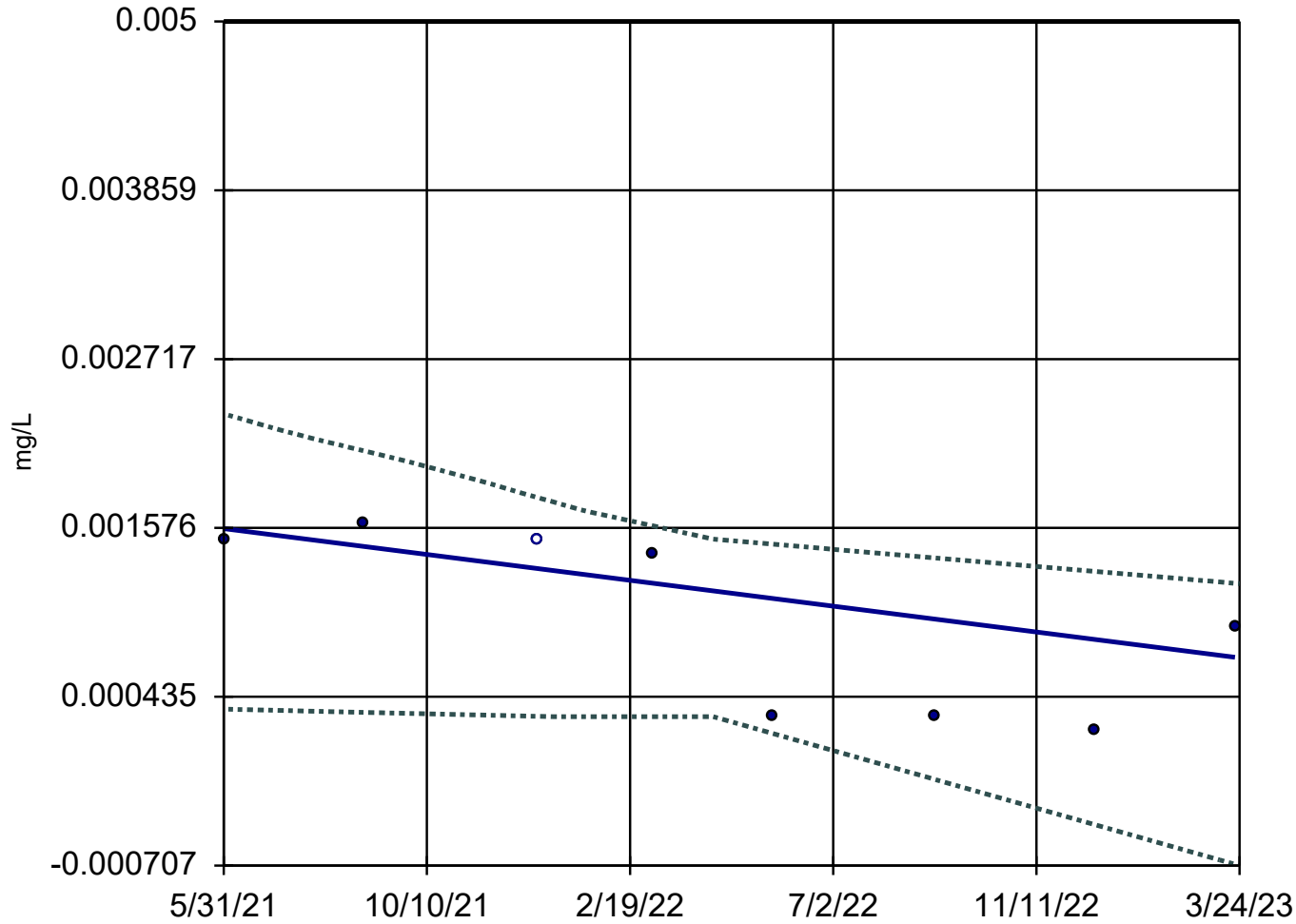
**APPENDIX D-6**

# **Q1 2023 Statistically Significant Trends**



### Sen's Slope and 95% Confidence Band

EP-2



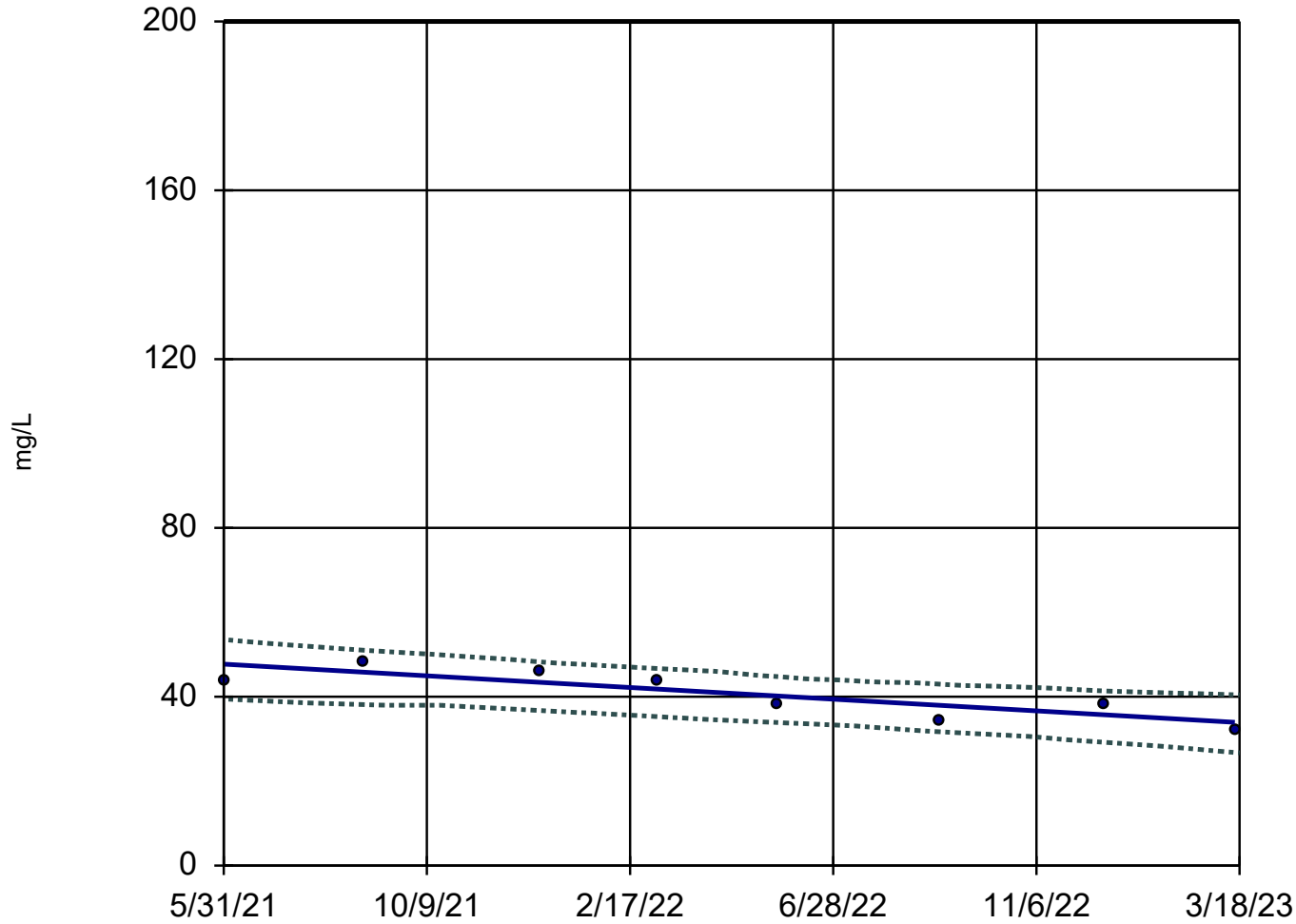
n = 8  
Slope = -0.000482 units per year.  
Mann-Kendall statistic = -18 critical = -17  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
Confidence band is below GPS (0.005).

Constituent: Cadmium Analysis Run 5/11/2023 1:36 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

### Sen's Slope and 95% Confidence Band

EP-1



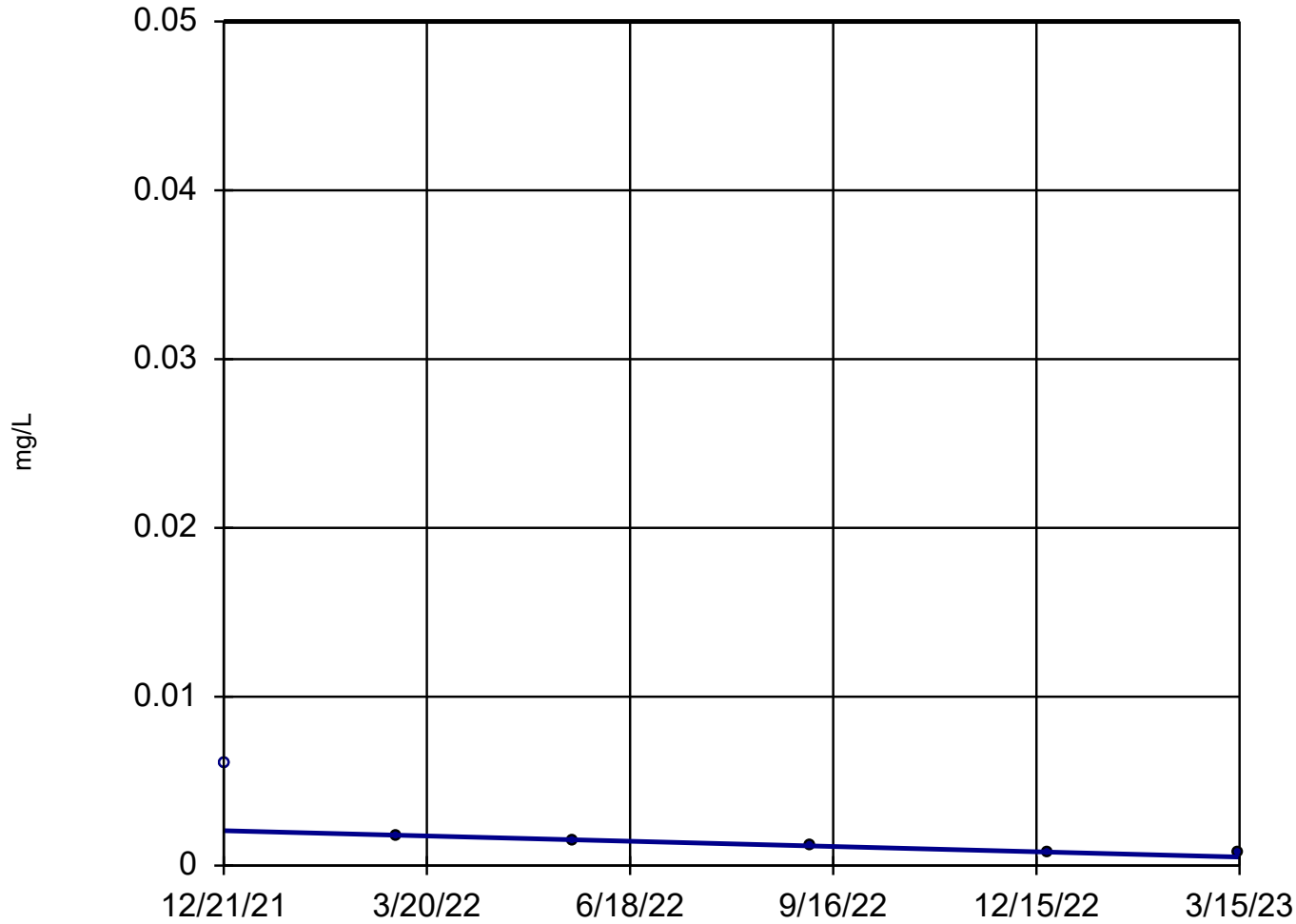
n = 8  
Slope = -7.688 units per year.  
Mann-Kendall statistic = -20  
critical = -17  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
Confidence band is below GPS (200).

Constituent: Chloride Analysis Run 5/11/2023 1:36 PM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 6  
Slope = -0.001267  
units per year.  
Mann-Kendall  
statistic = -14  
critical = -12  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
GPS = 0.05.

Constituent: Selenum Analysis Run 5/11/2023 1:38 PM View: IEPA Background

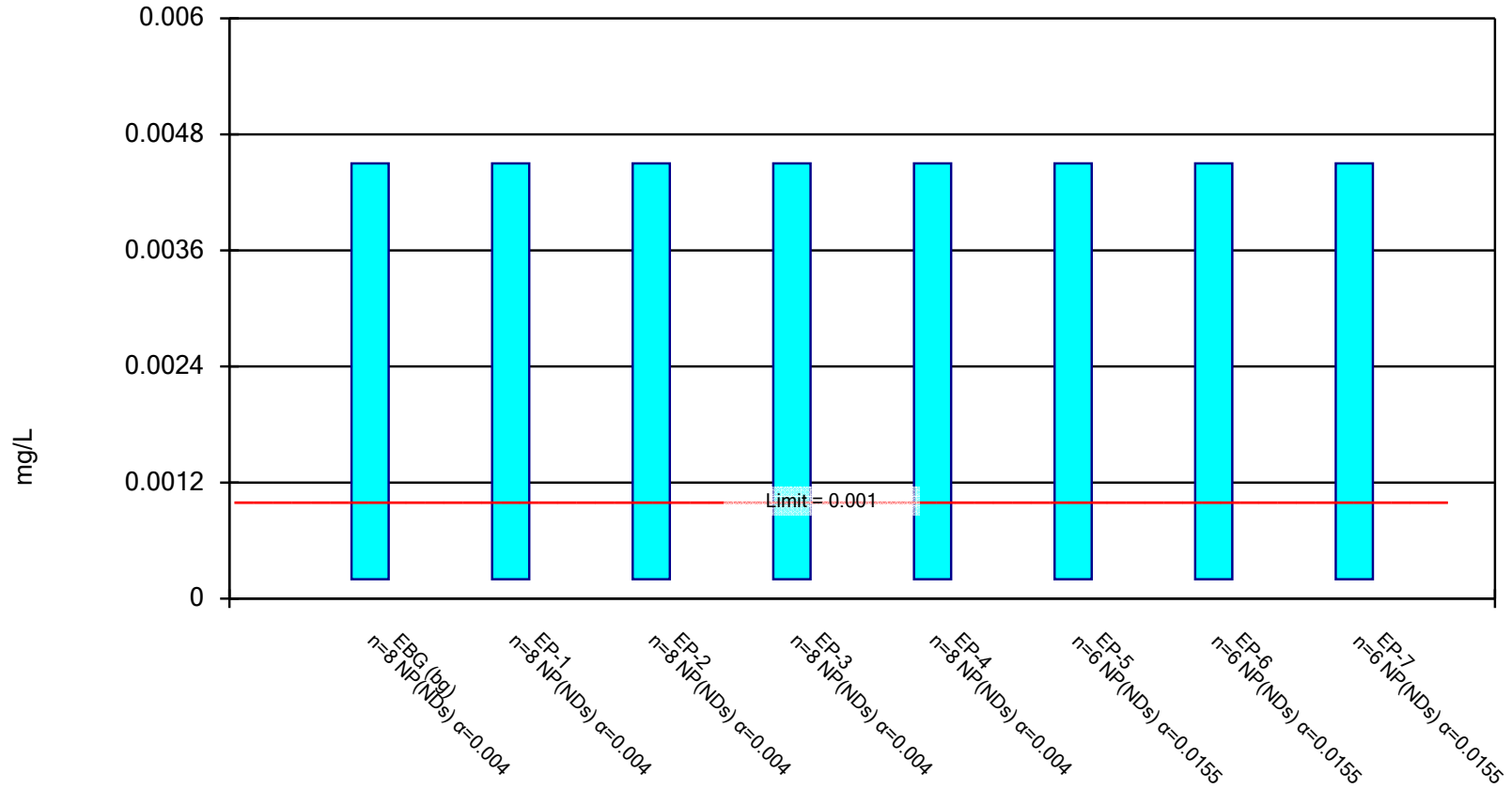
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-7**

# **Q1 2023 Resample Background Exceedances**

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

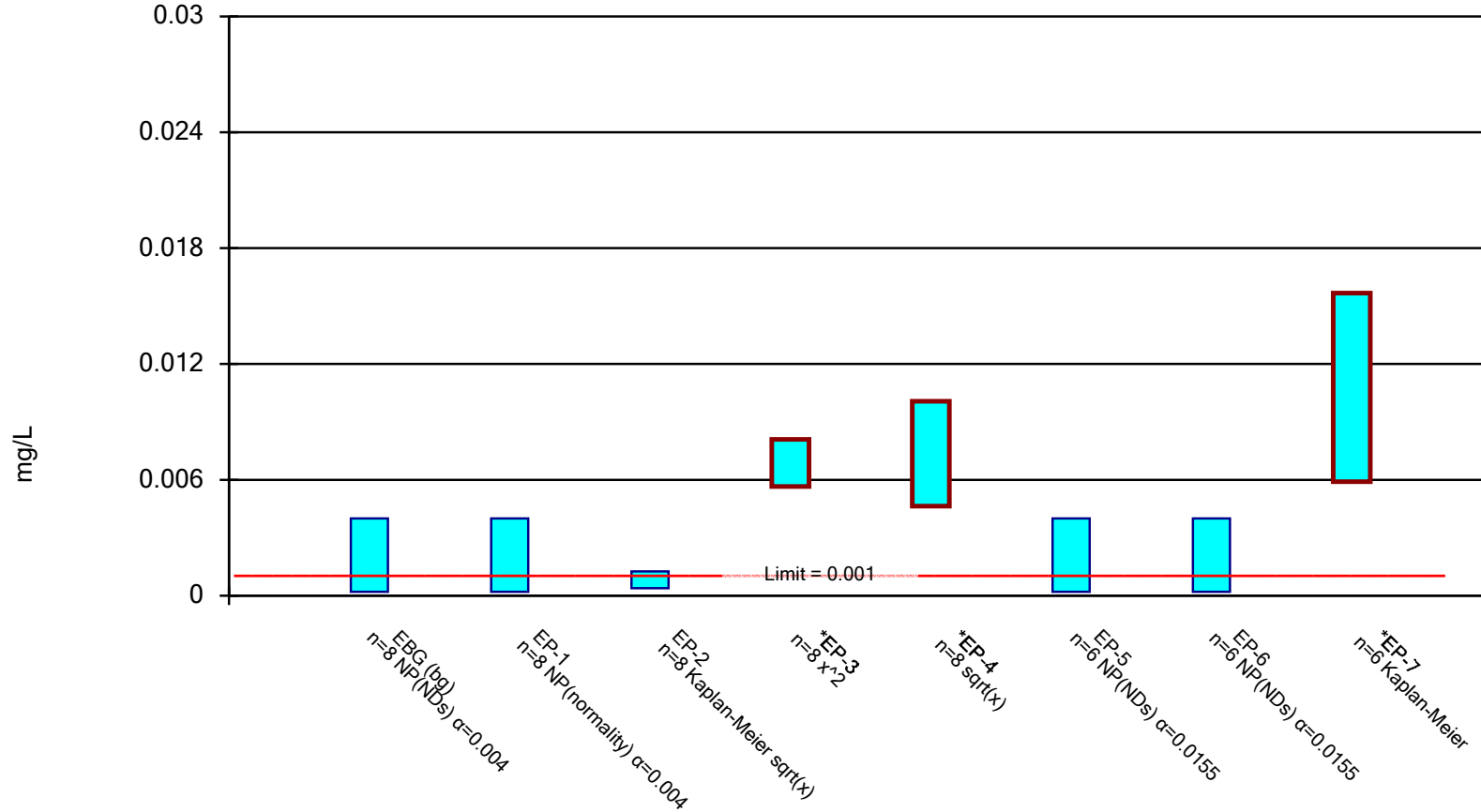


Constituent: Antimony Analysis Run 6/20/2023 12:23 PM

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

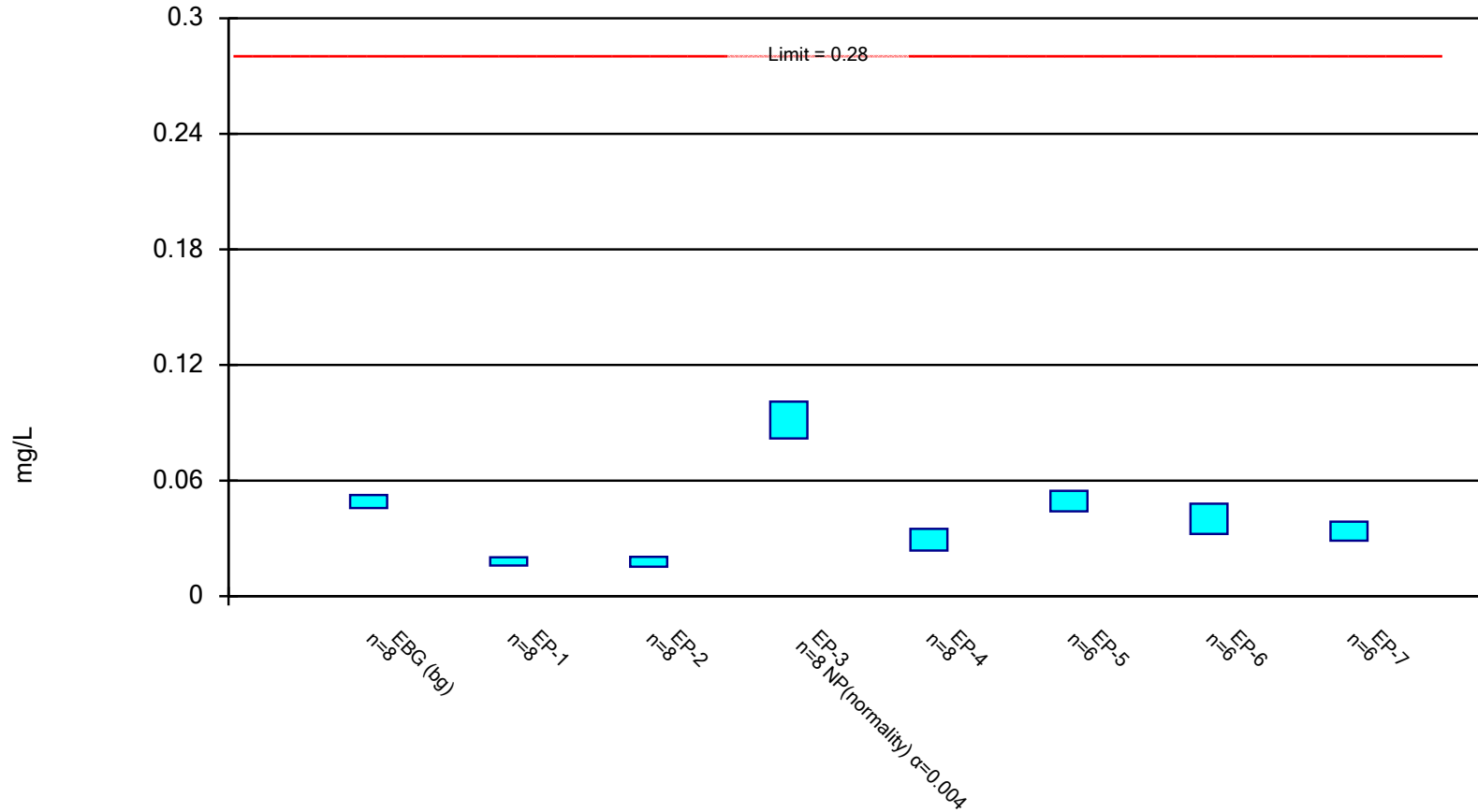


Constituent: Arsenic Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

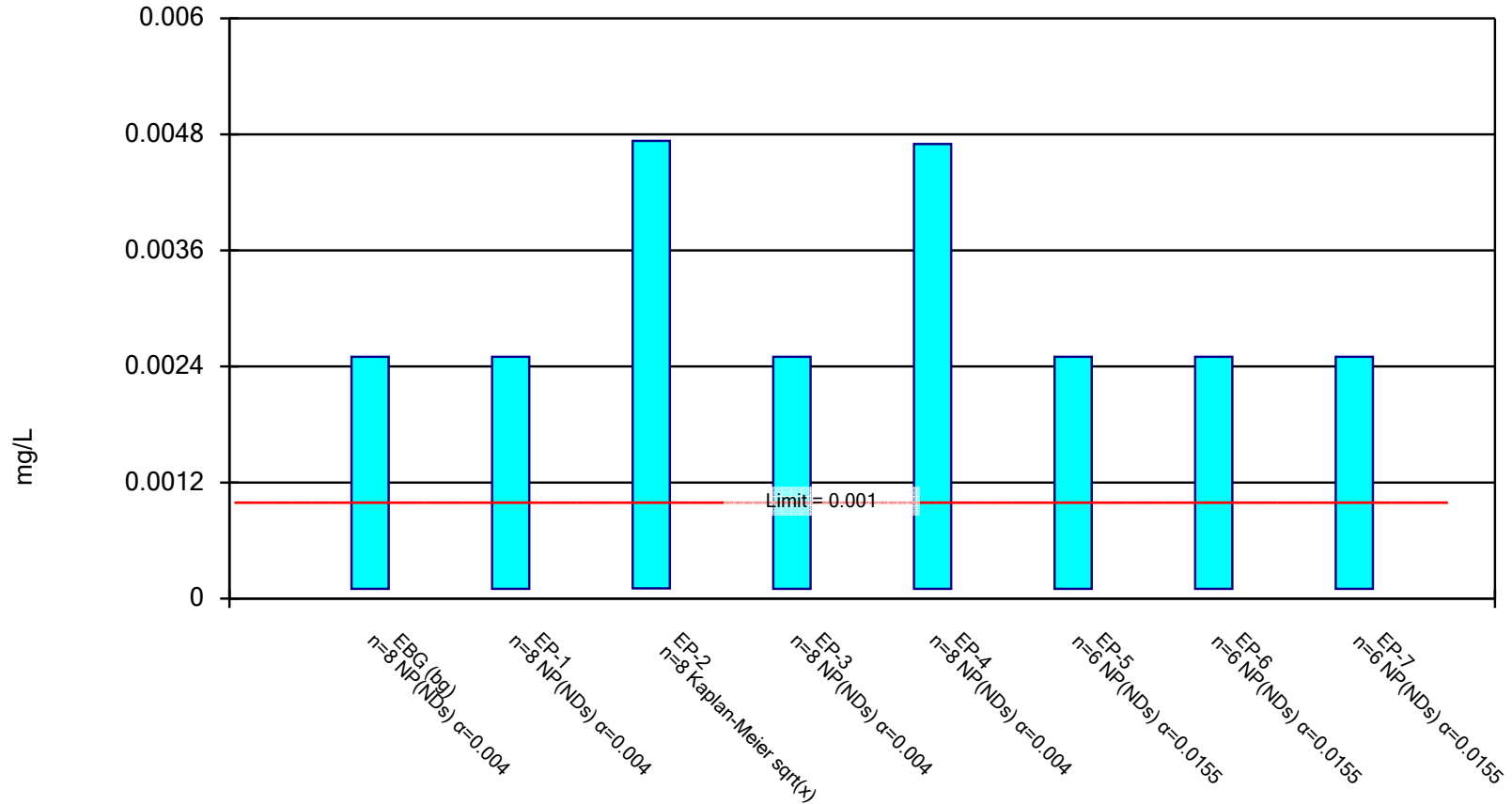


Constituent: Barium Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



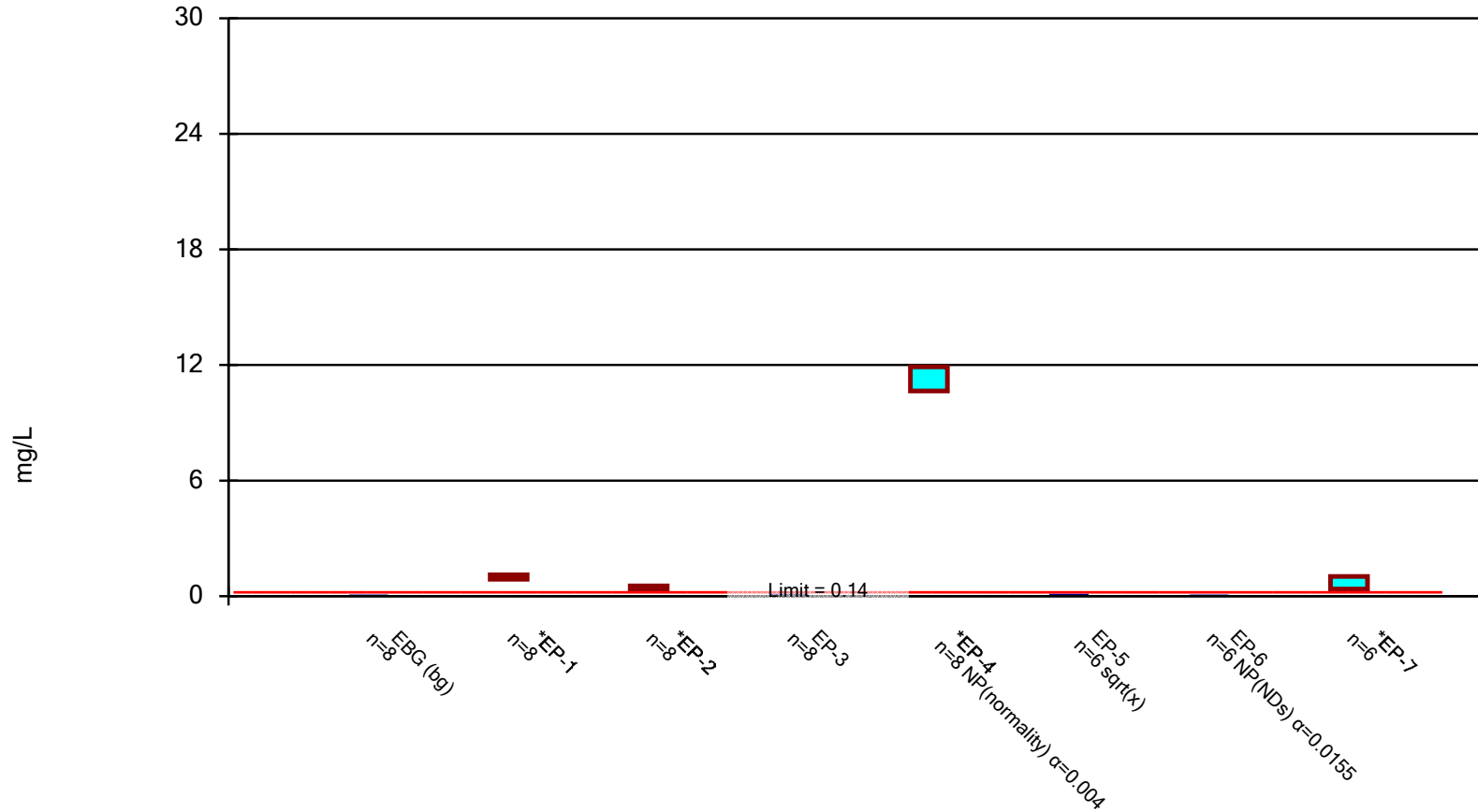
Constituent: Beryllium Analysis Run 6/20/2023 12:23 PM

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

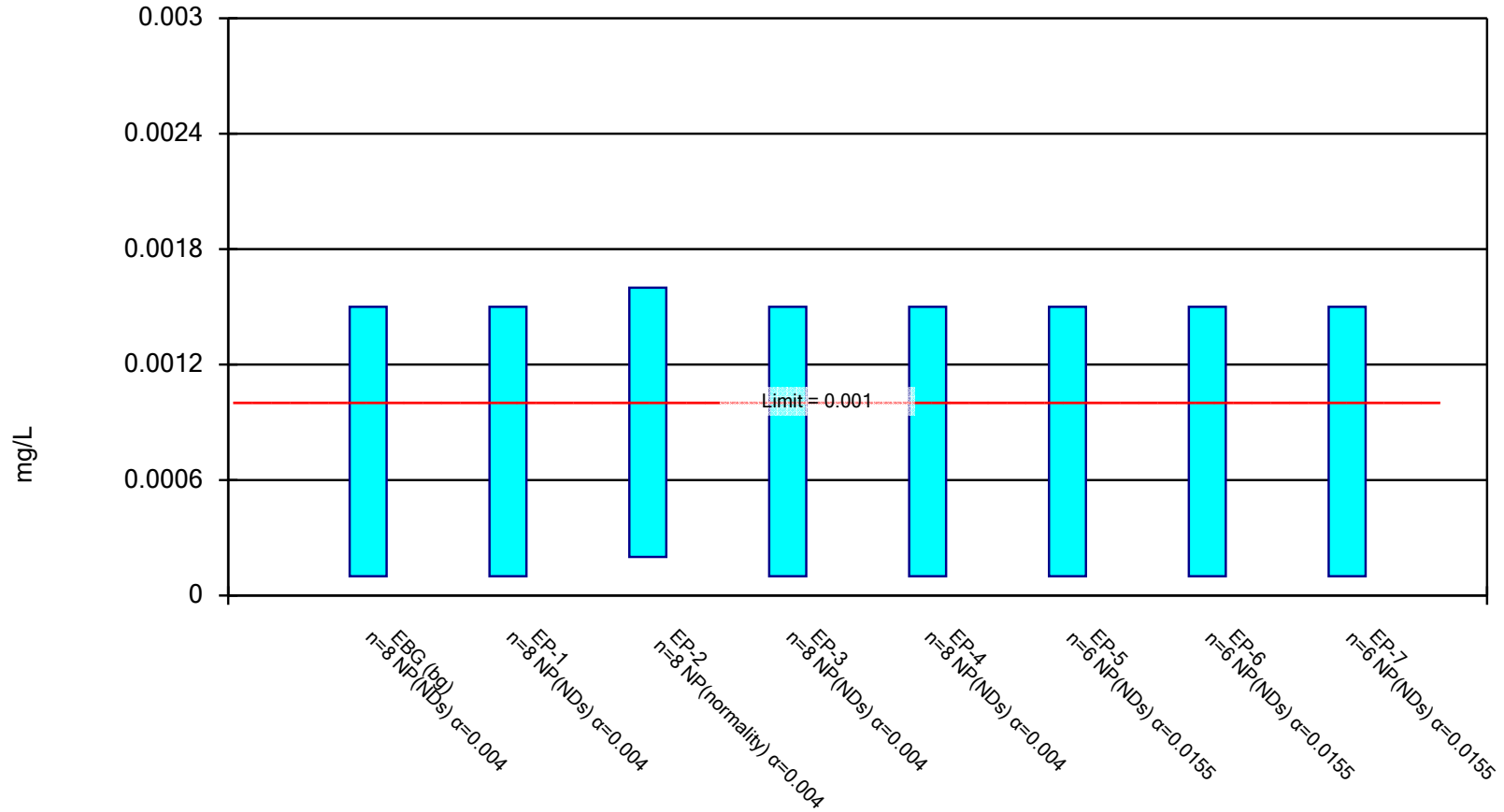


Constituent: Boron Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

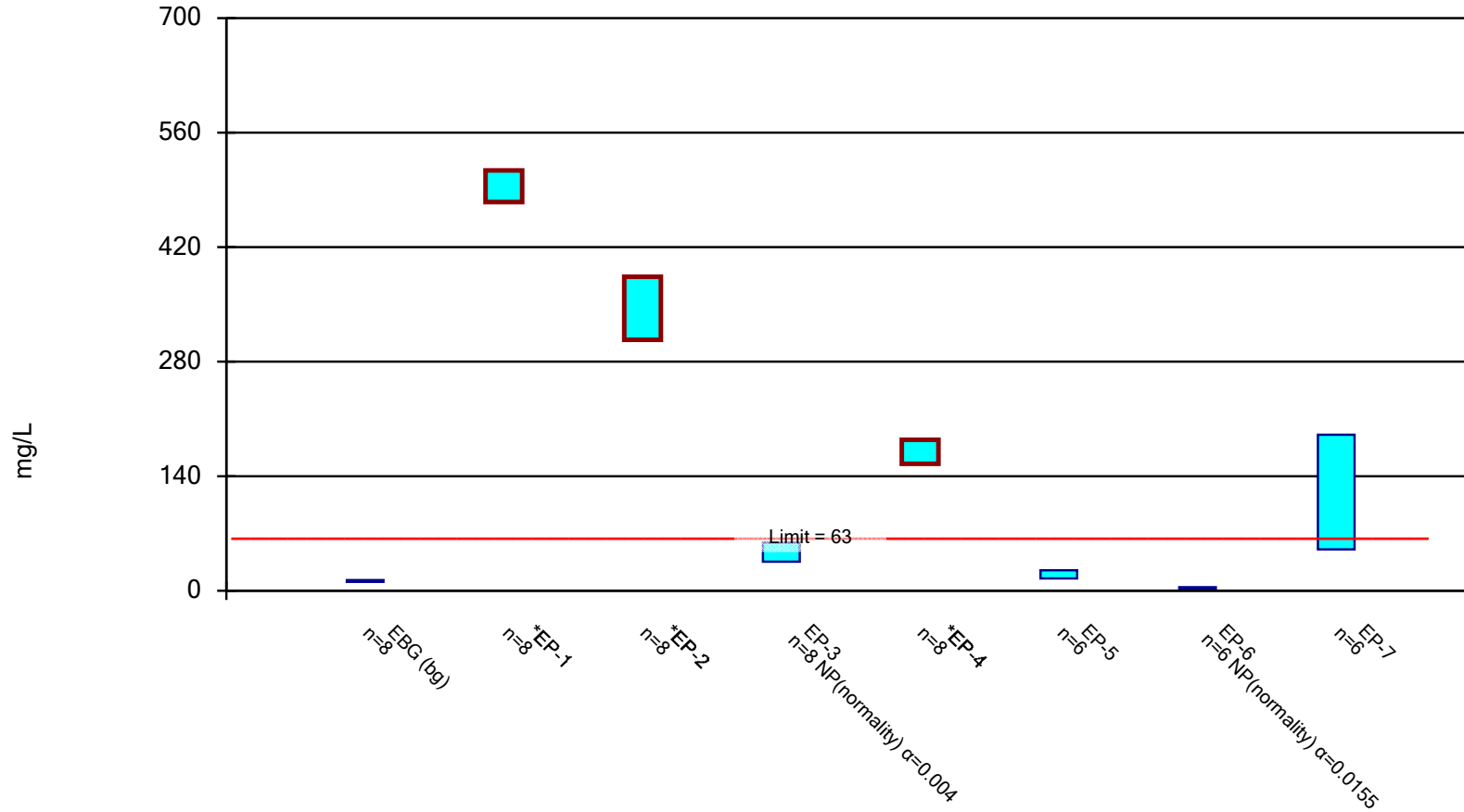


Constituent: Cadmium Analysis Run 6/20/2023 12:23 PM

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

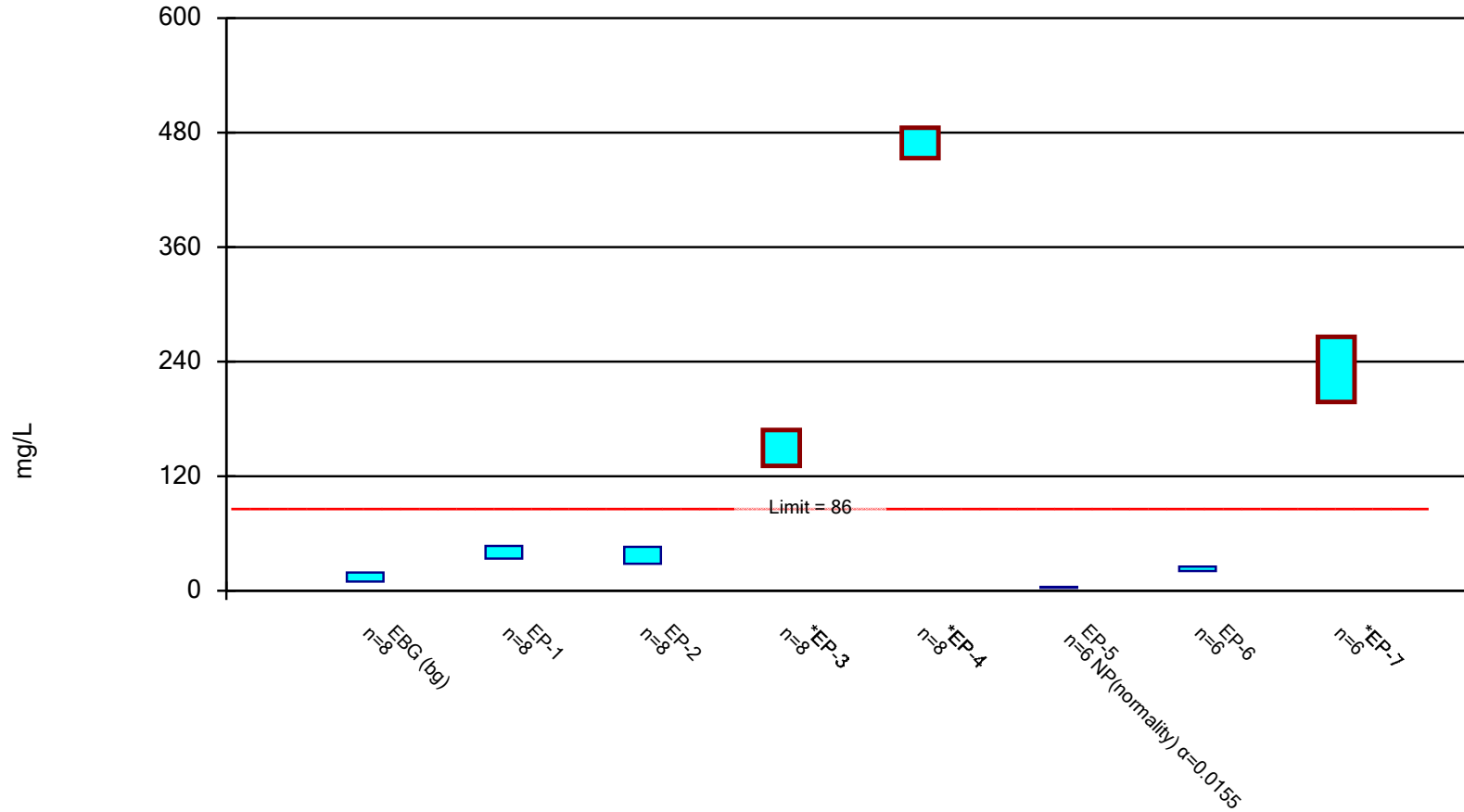


Constituent: Calcium Analysis Run 6/20/2023 12:23 PM

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

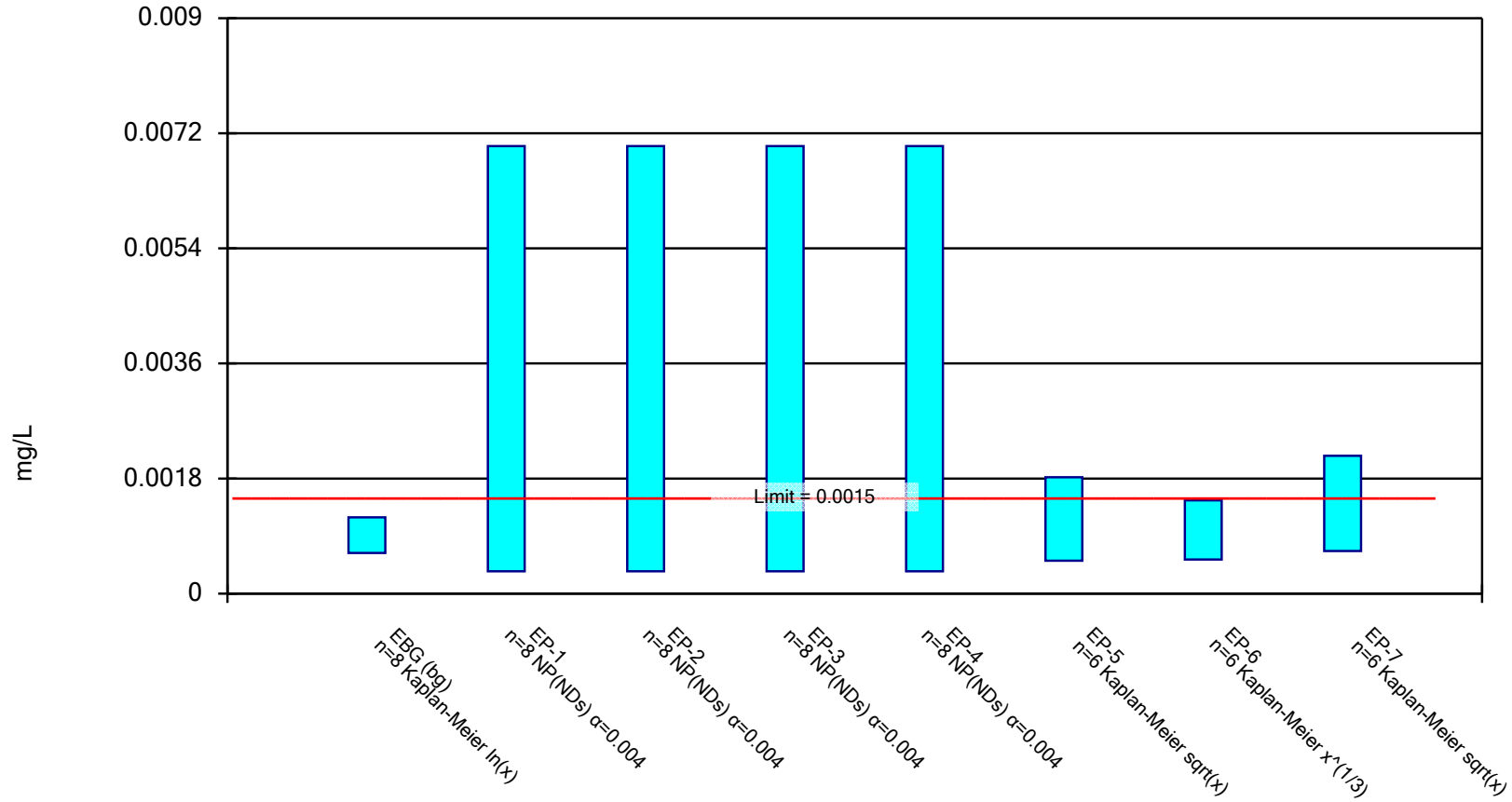


Constituent: Chloride Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

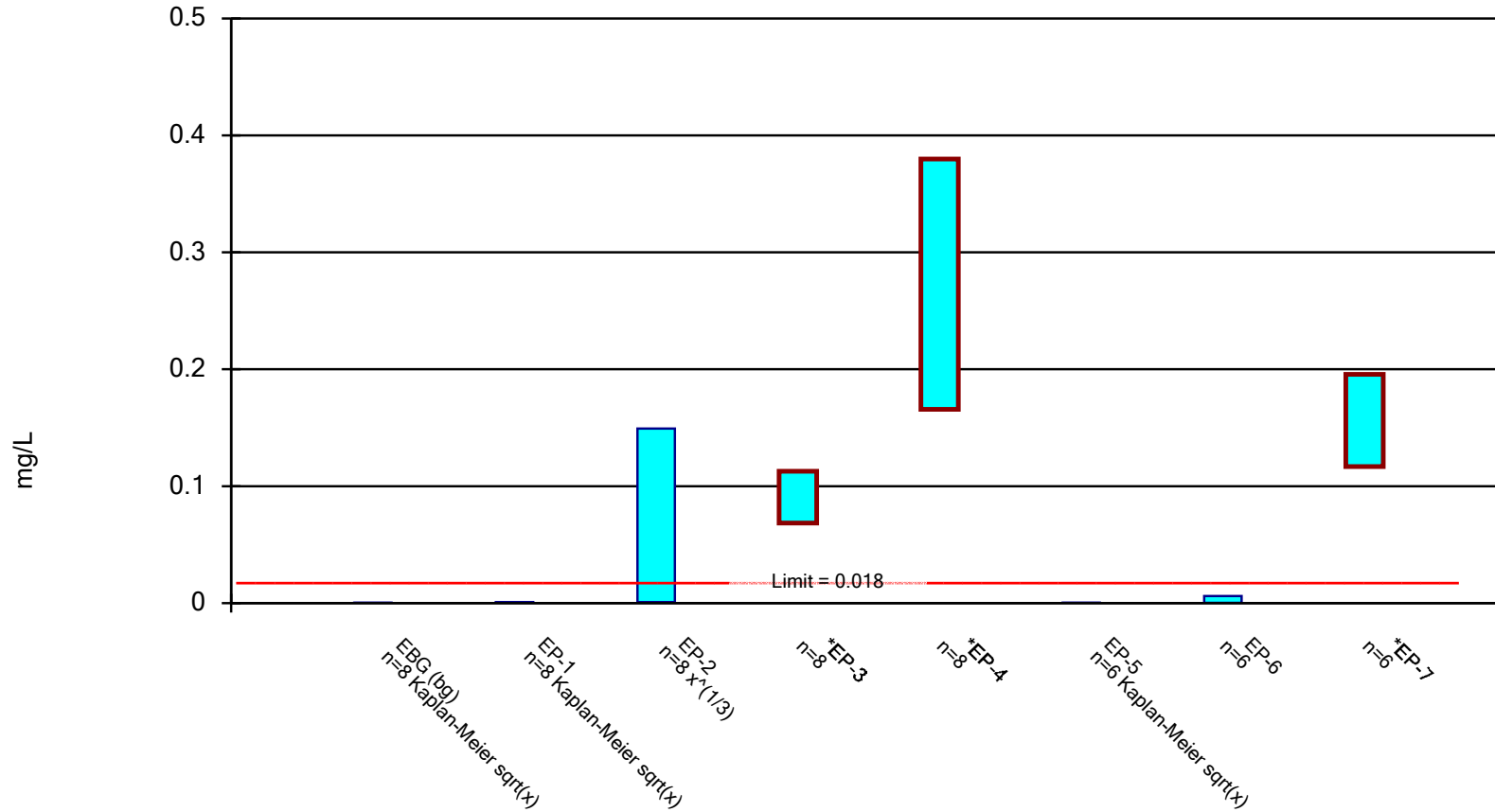


Constituent: Chromium Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

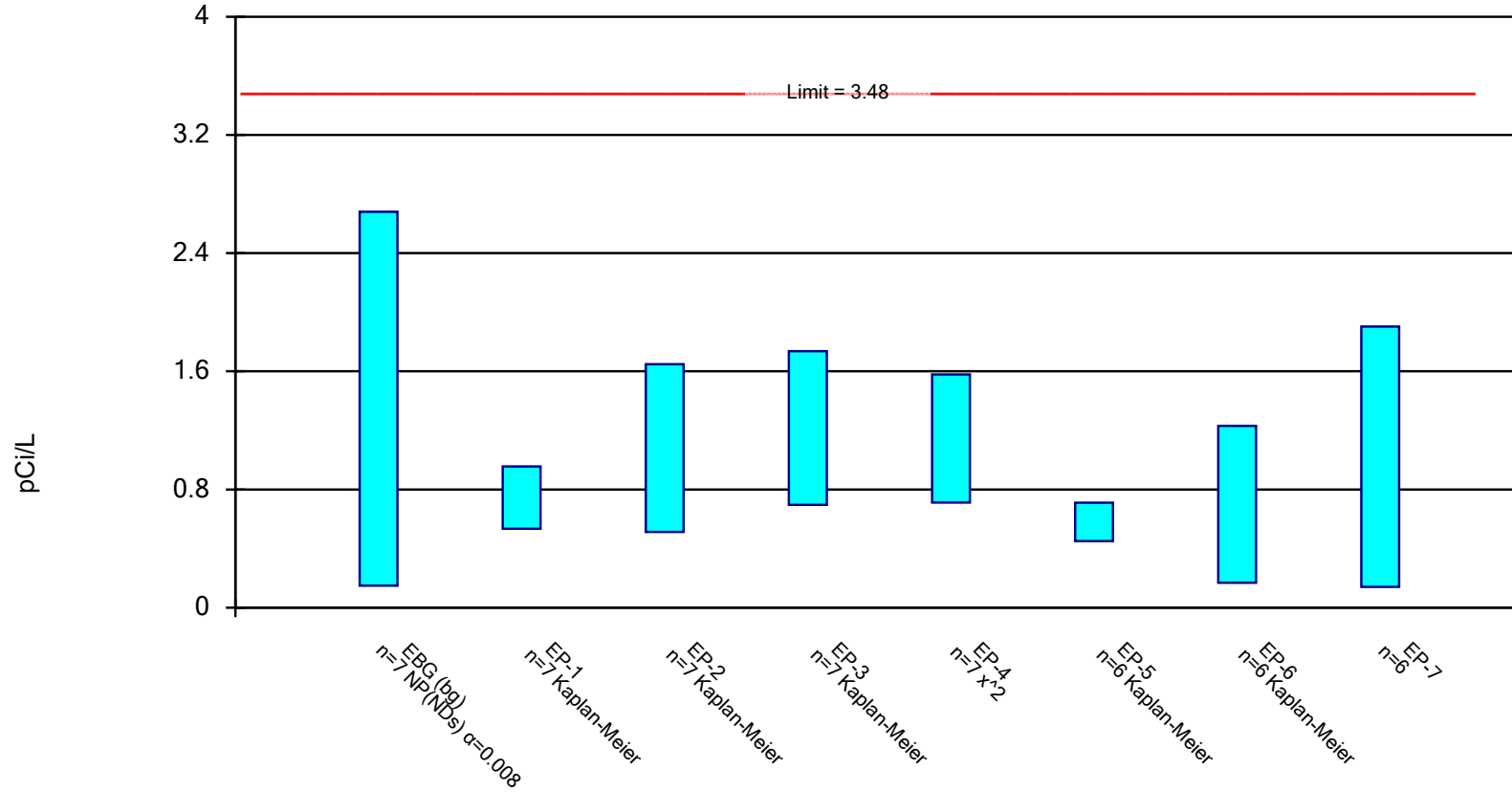


Constituent: Cobalt Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

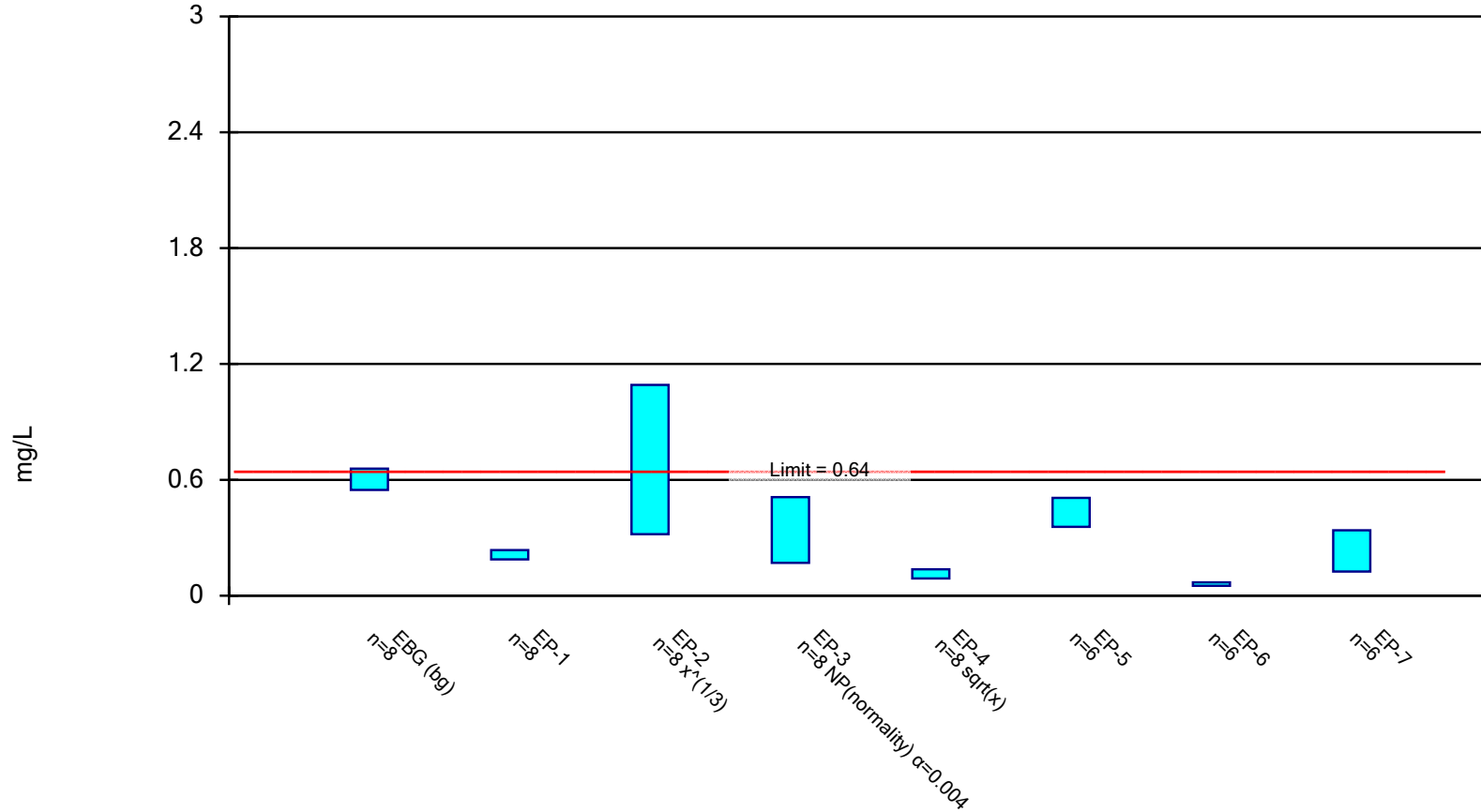


Constituent: Combined Radium Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



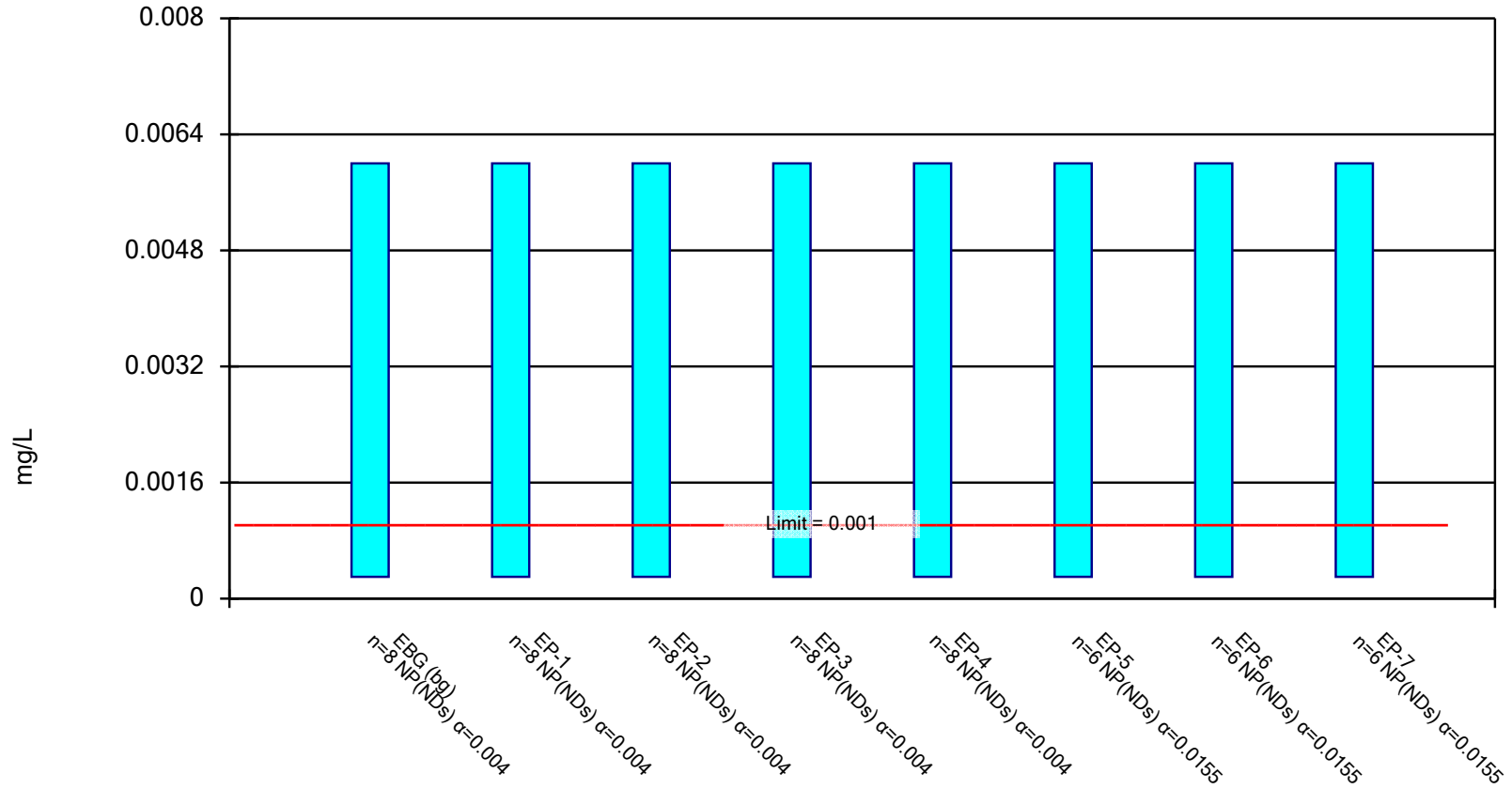
Constituent: Fluoride Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

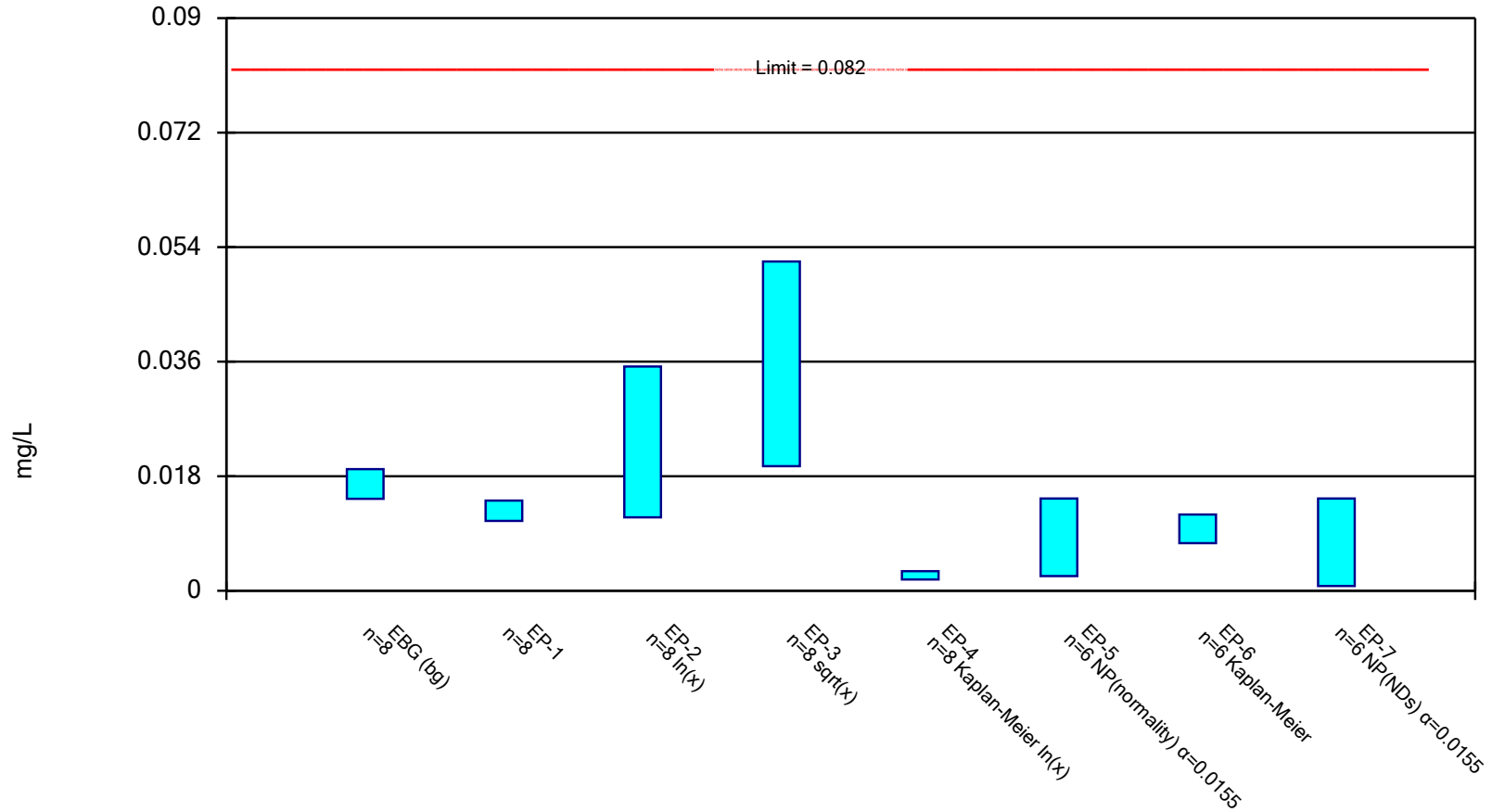


Constituent: Lead Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

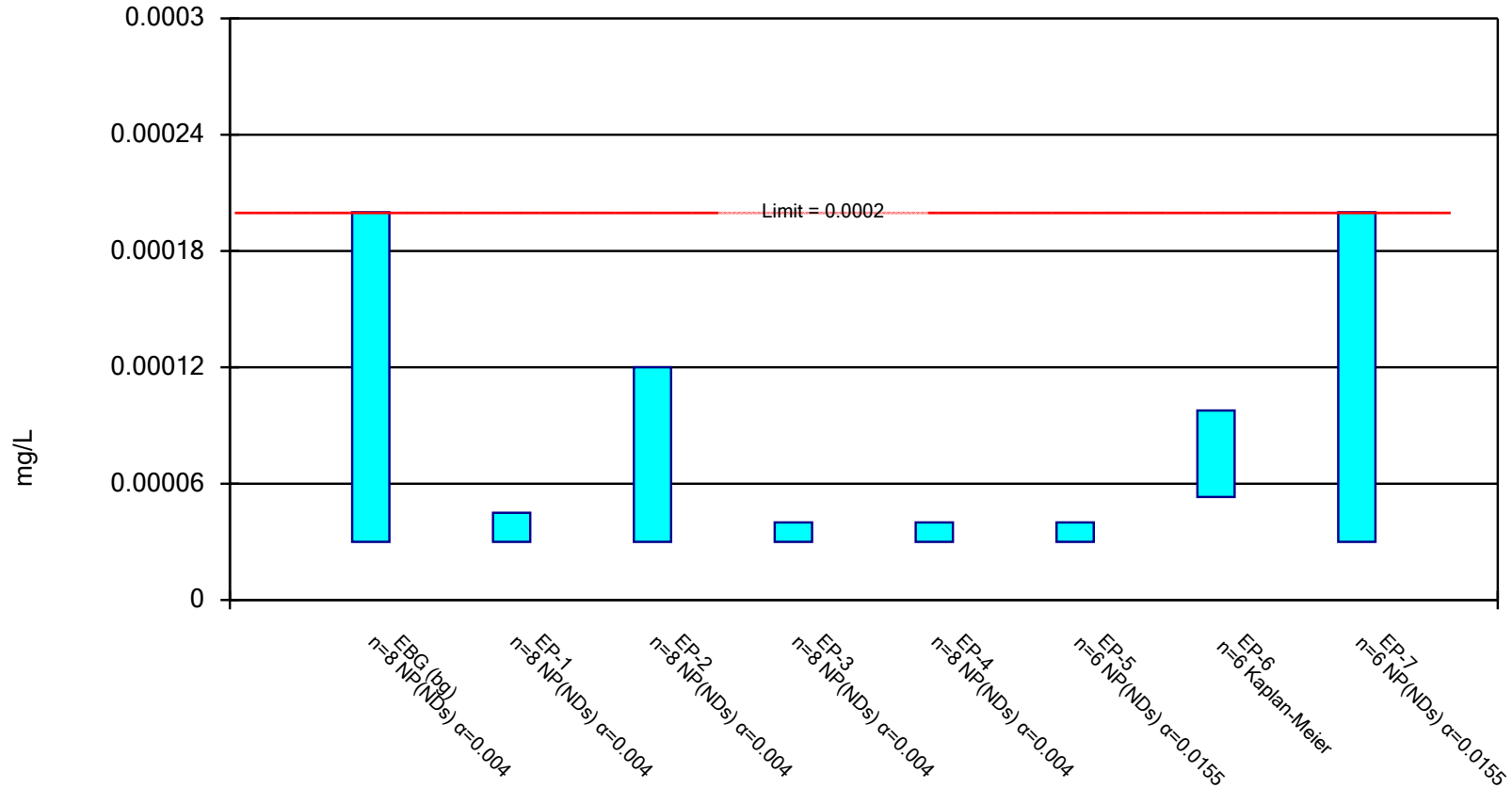


Constituent: Lithium Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

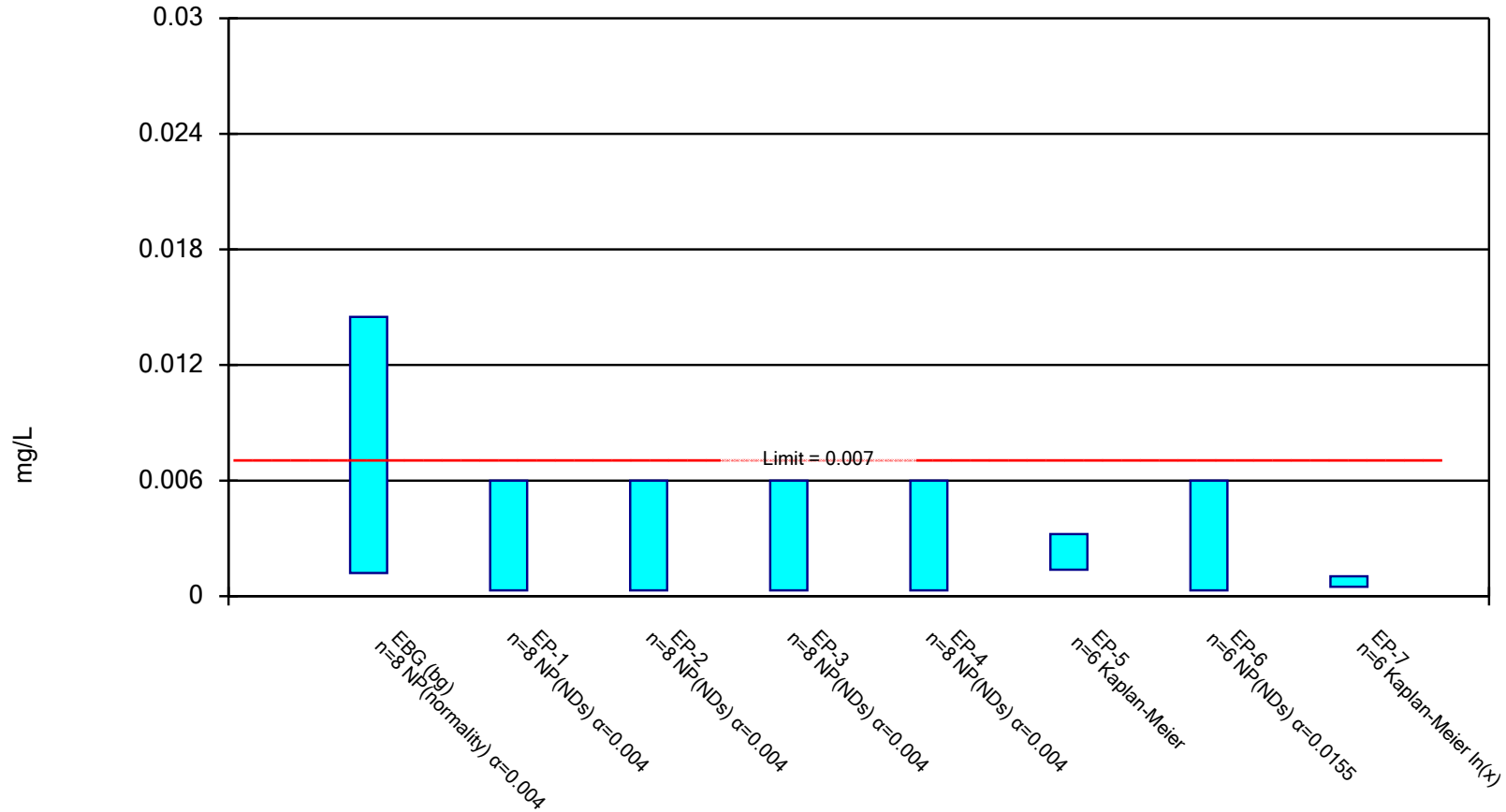


Constituent: Mercury Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

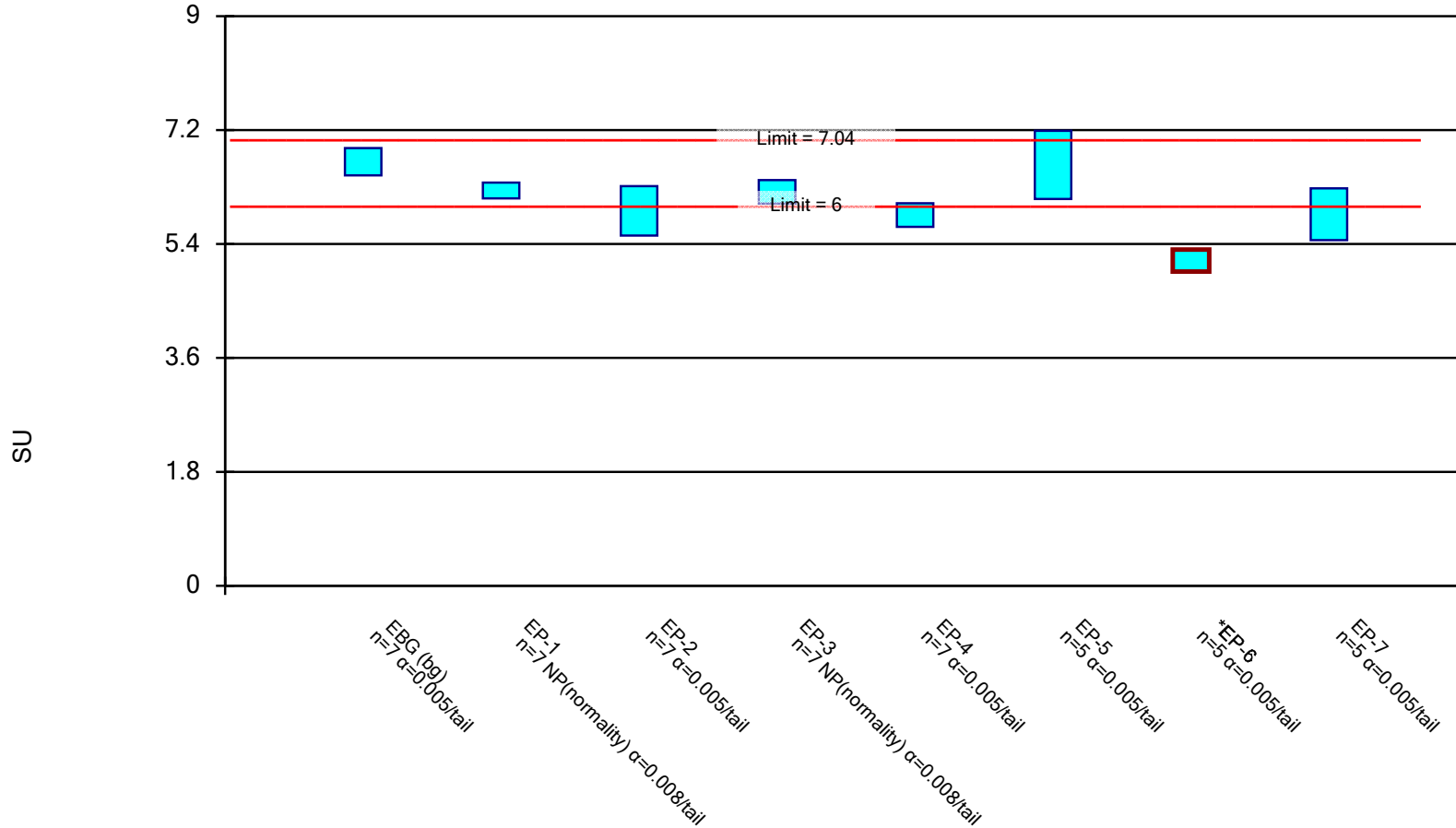


Constituent: Molybdenum Analysis Run 6/20/2023 12:23 PM

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.

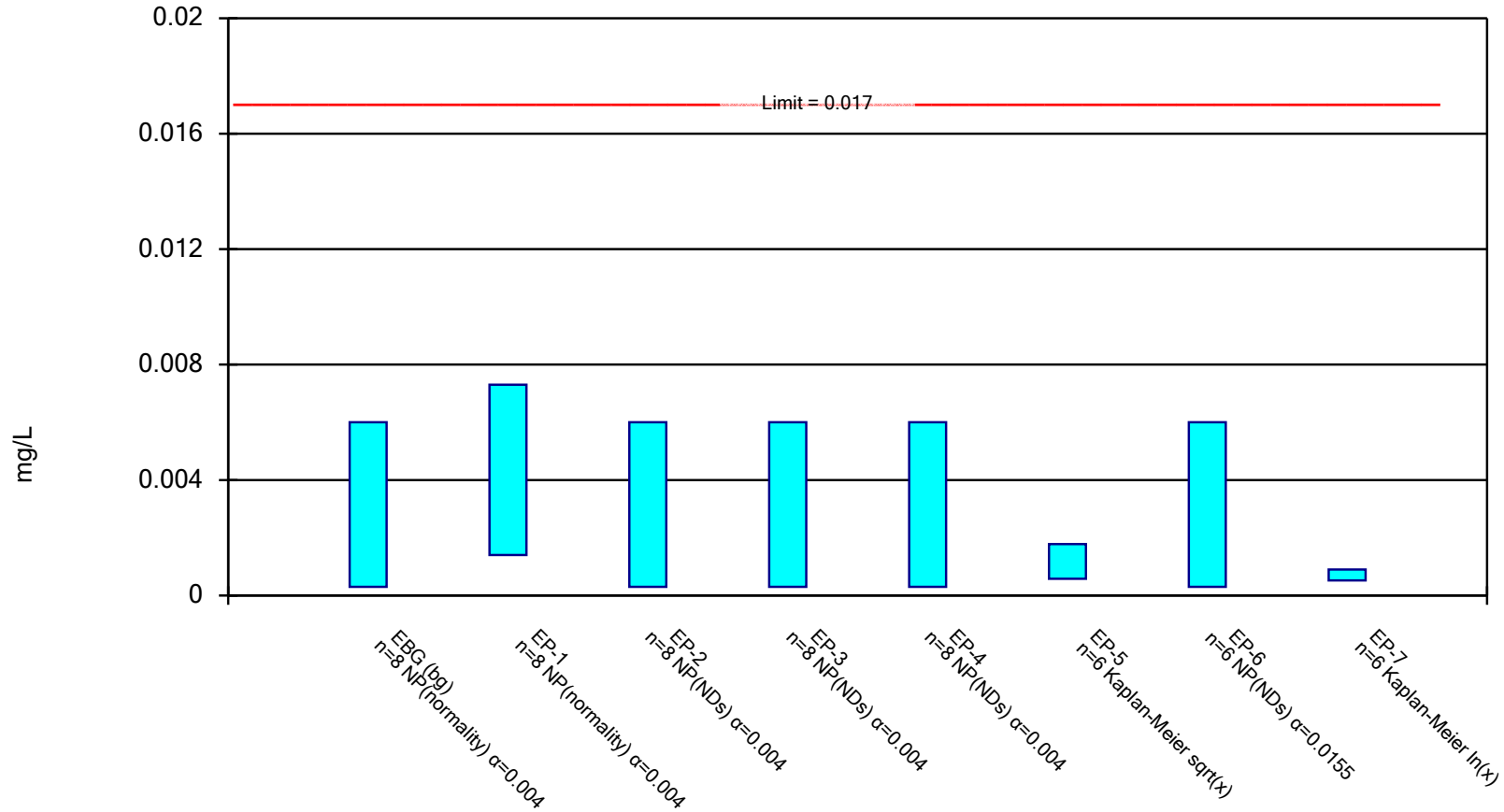


Constituent: pH Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

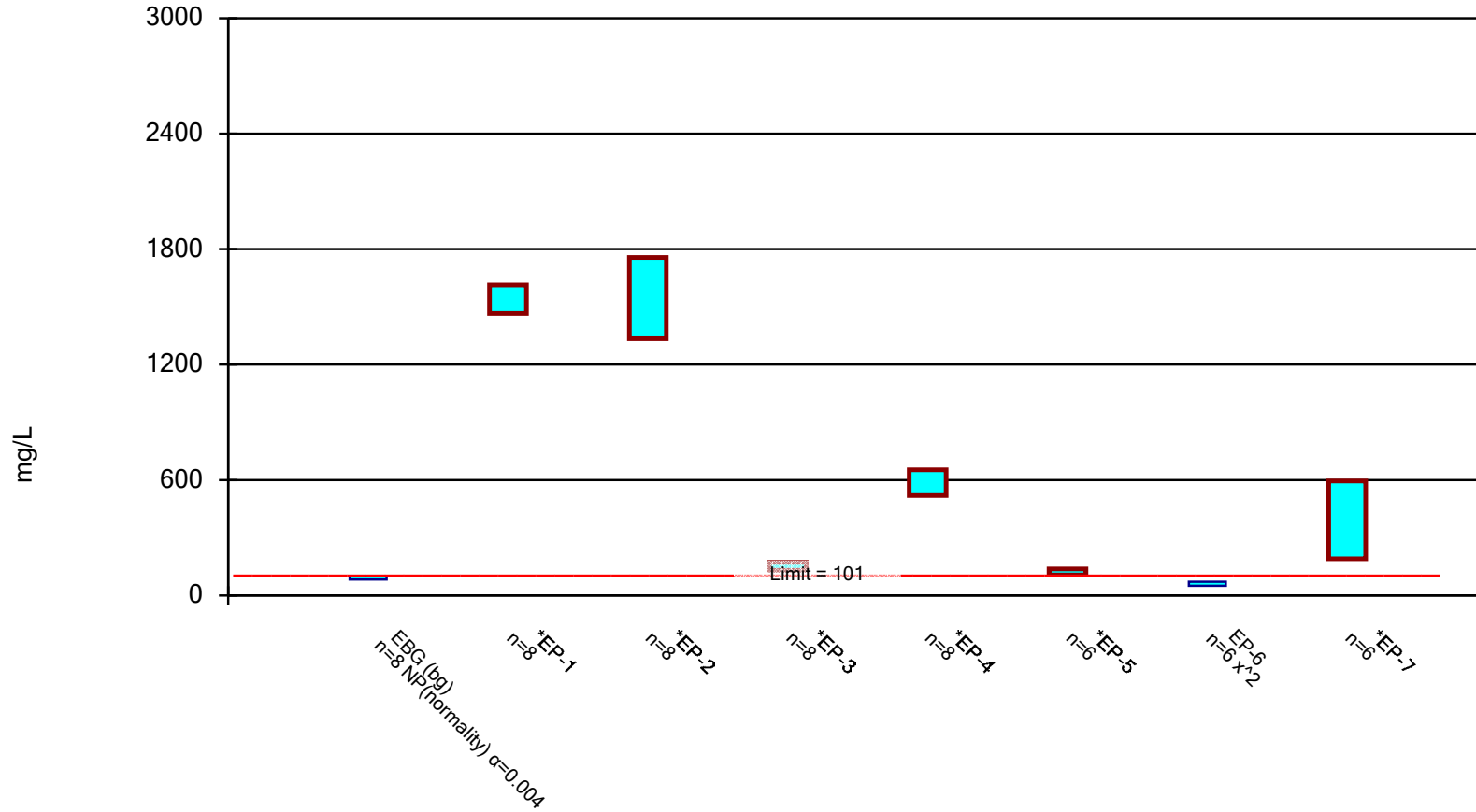


Constituent: Selenium Analysis Run 6/20/2023 12:23 PM

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

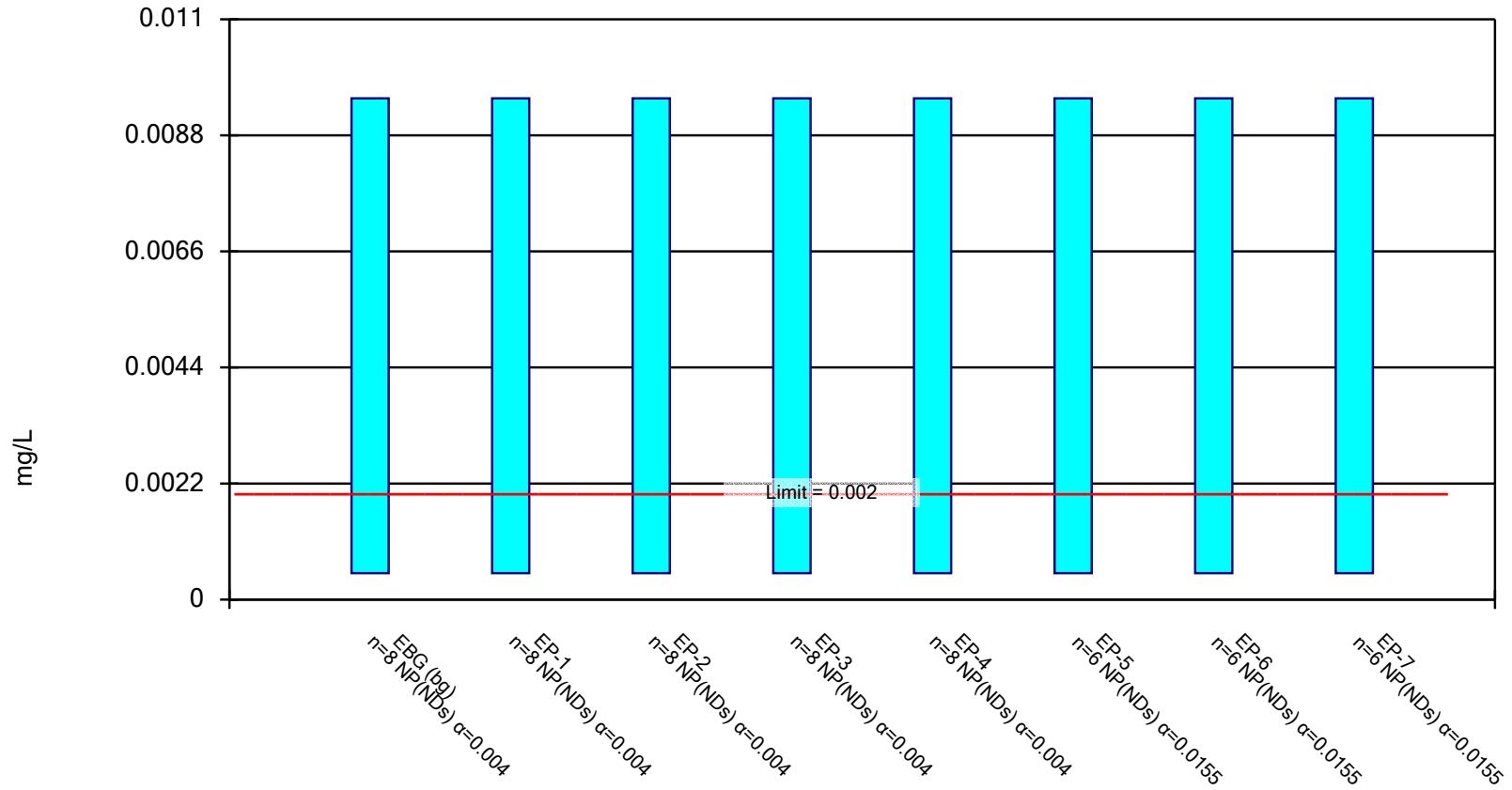


Constituent: Sulfate Analysis Run 6/20/2023 12:23 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



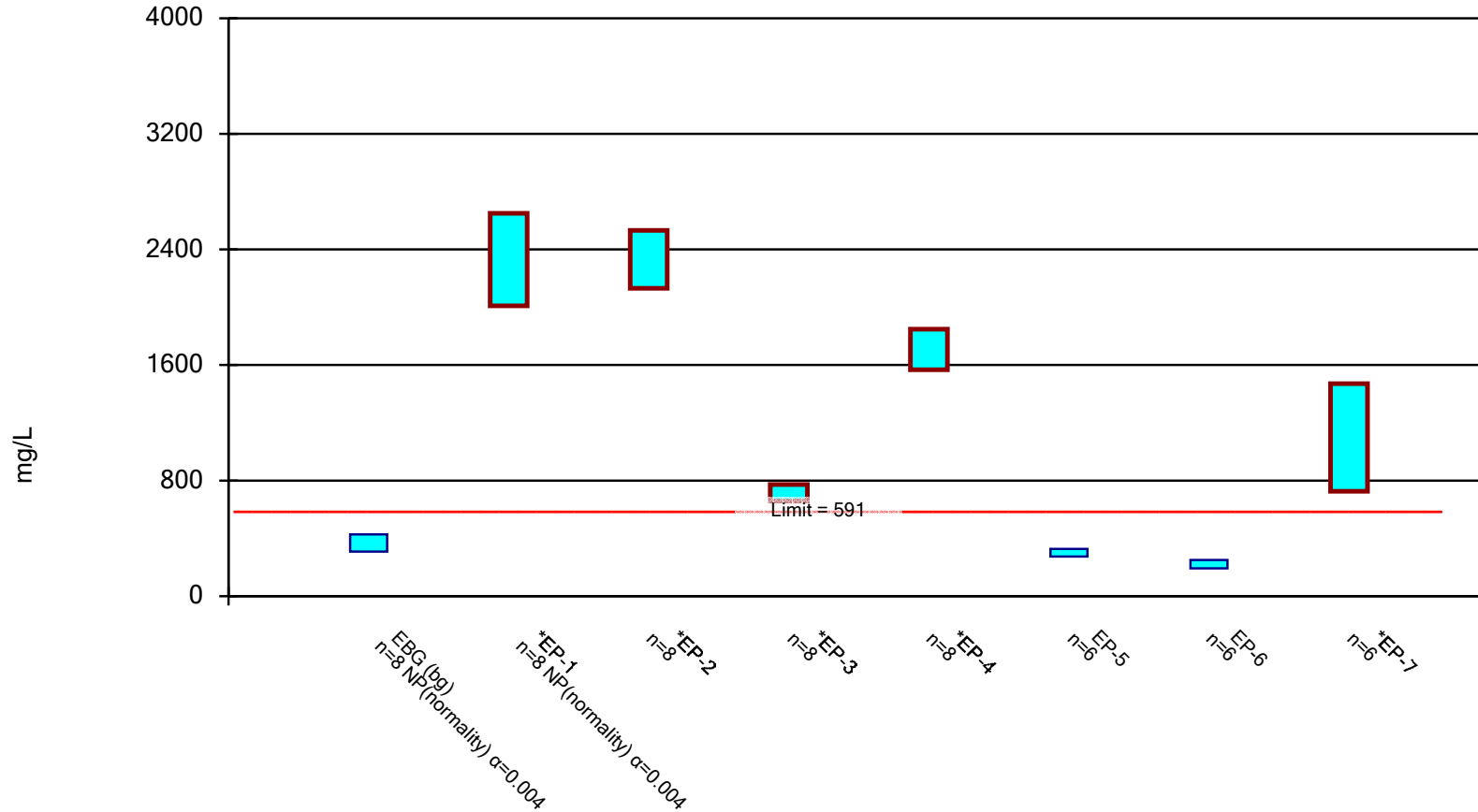
Constituent: Thallium Analysis Run 6/20/2023 12:23 PM

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



Constituent: Total Dissolved Solids Analysis Run 6/20/2023 12:23 PM

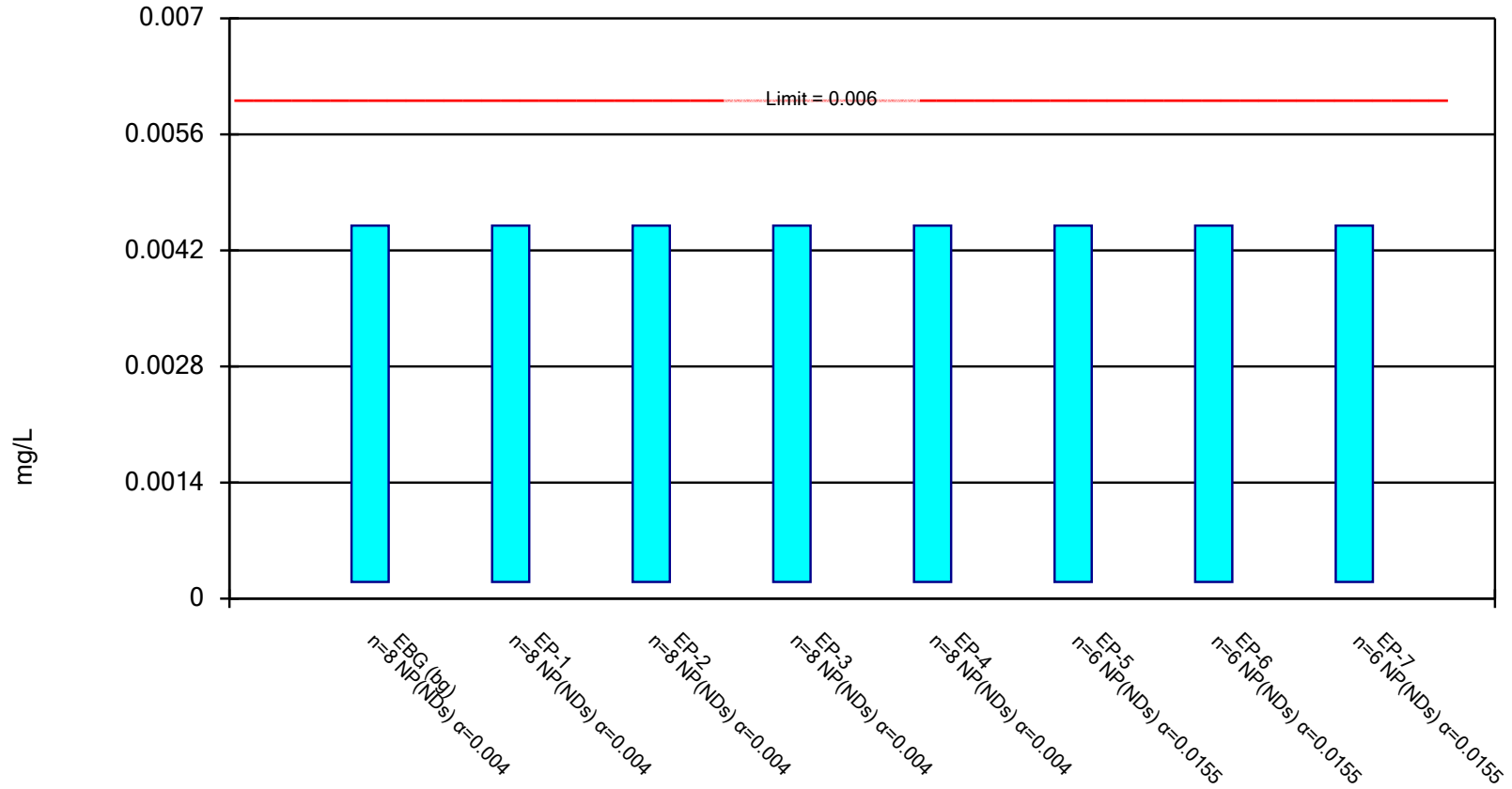
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-8**

## **Q1 2023 Resample Groundwater protection Standard Exceedances**

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

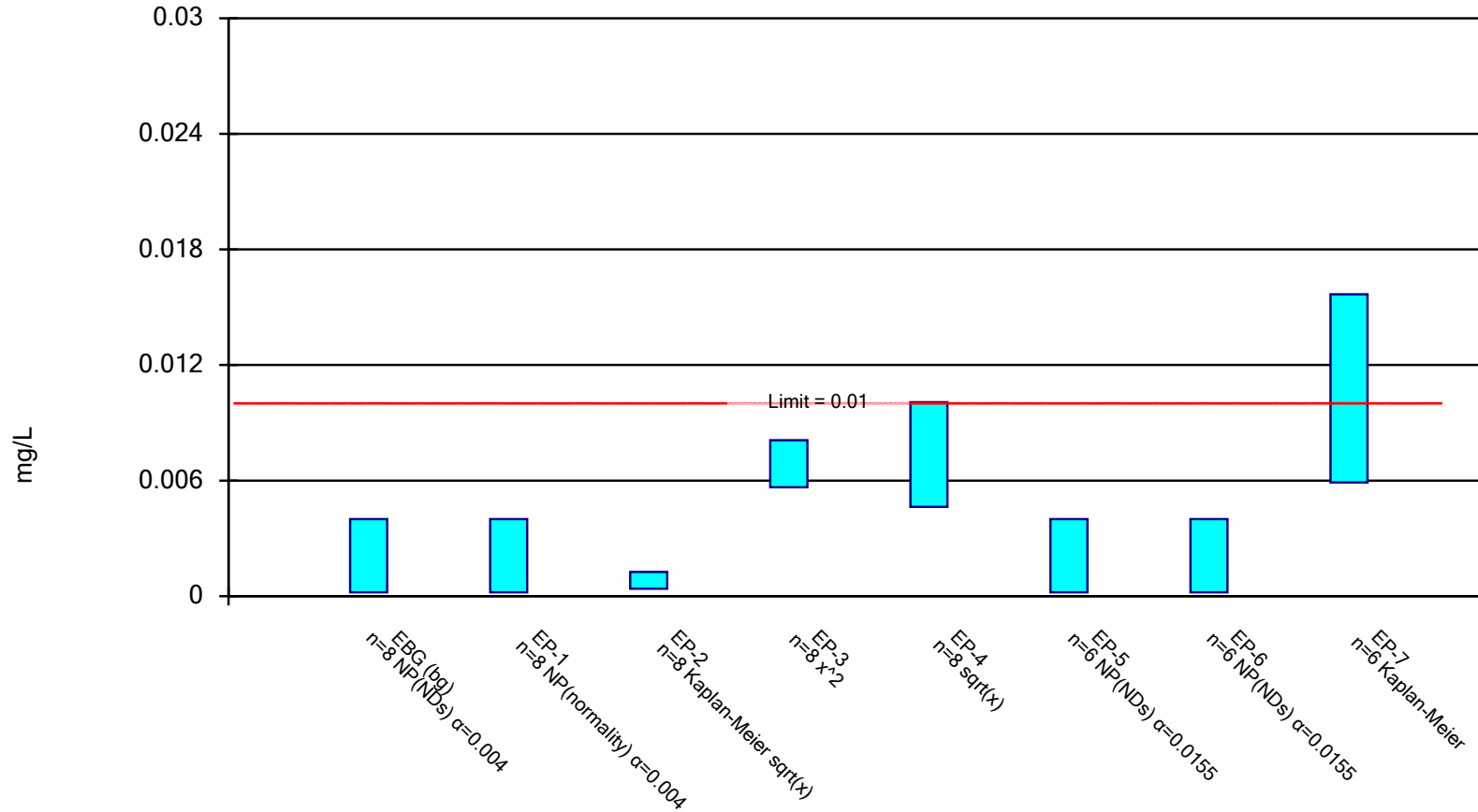


Constituent: Antimony Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

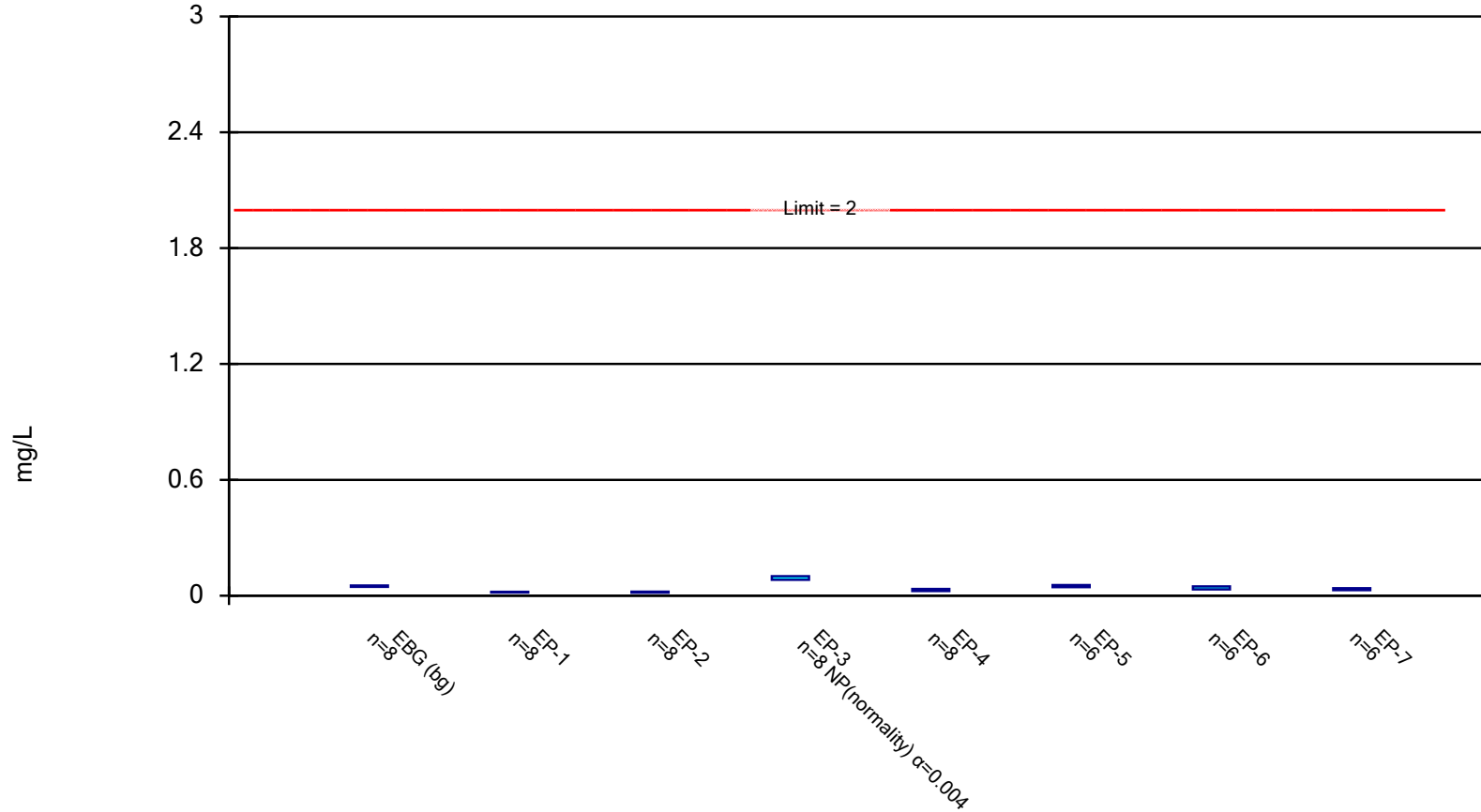


Constituent: Arsenic Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

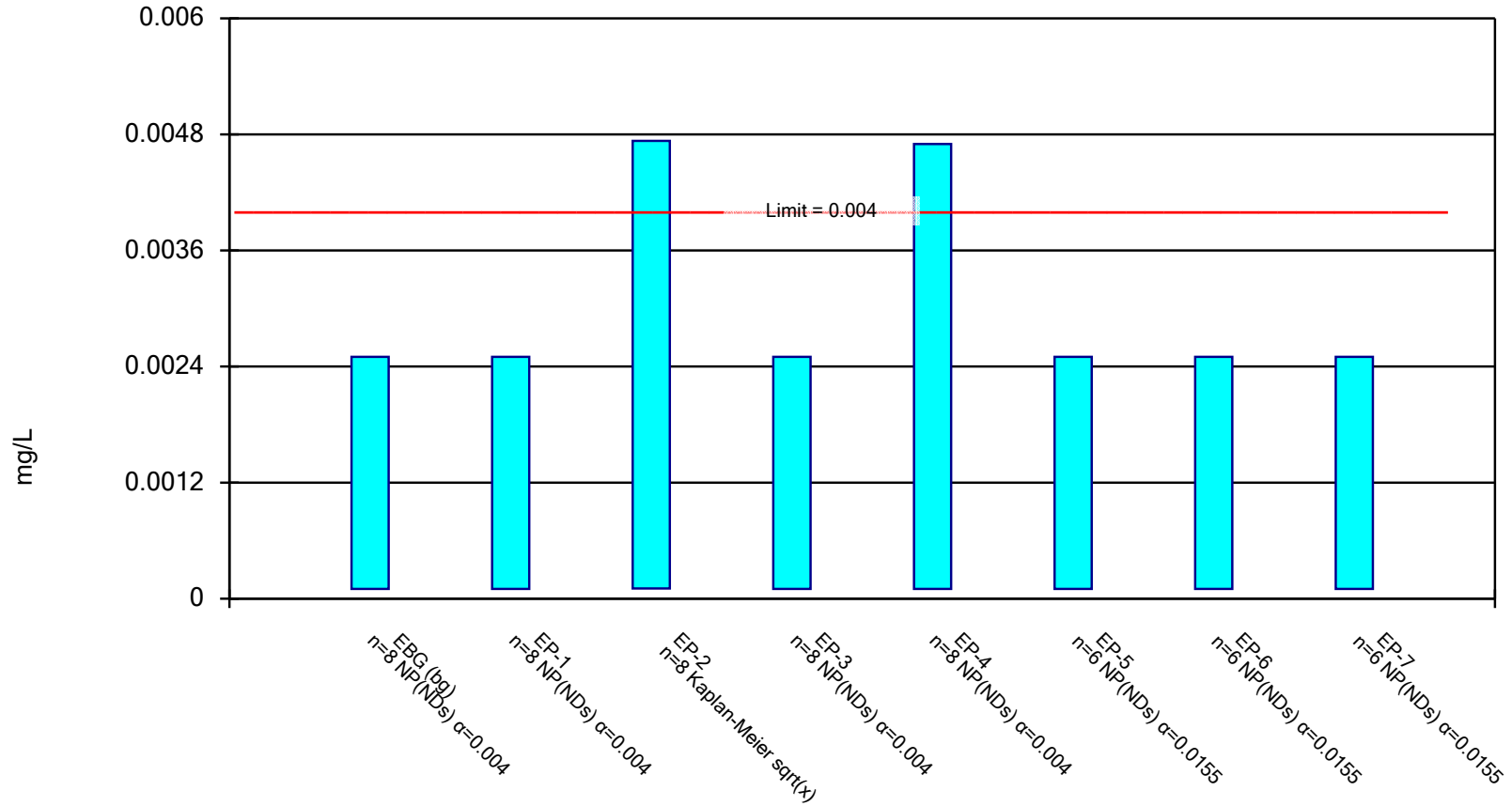


Constituent: Barium Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

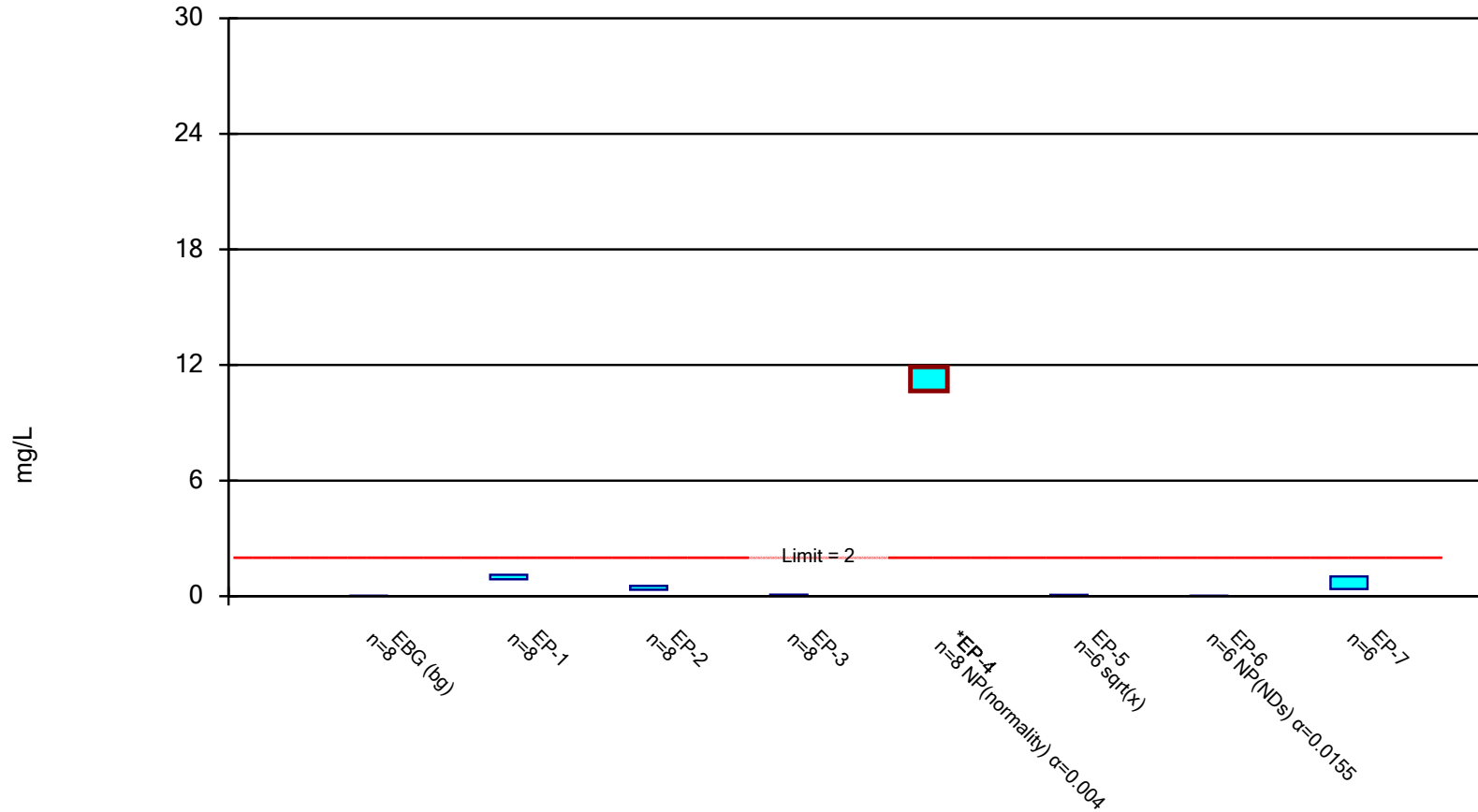


Constituent: Beryllium Analysis Run 6/20/2023 12:19 PM

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

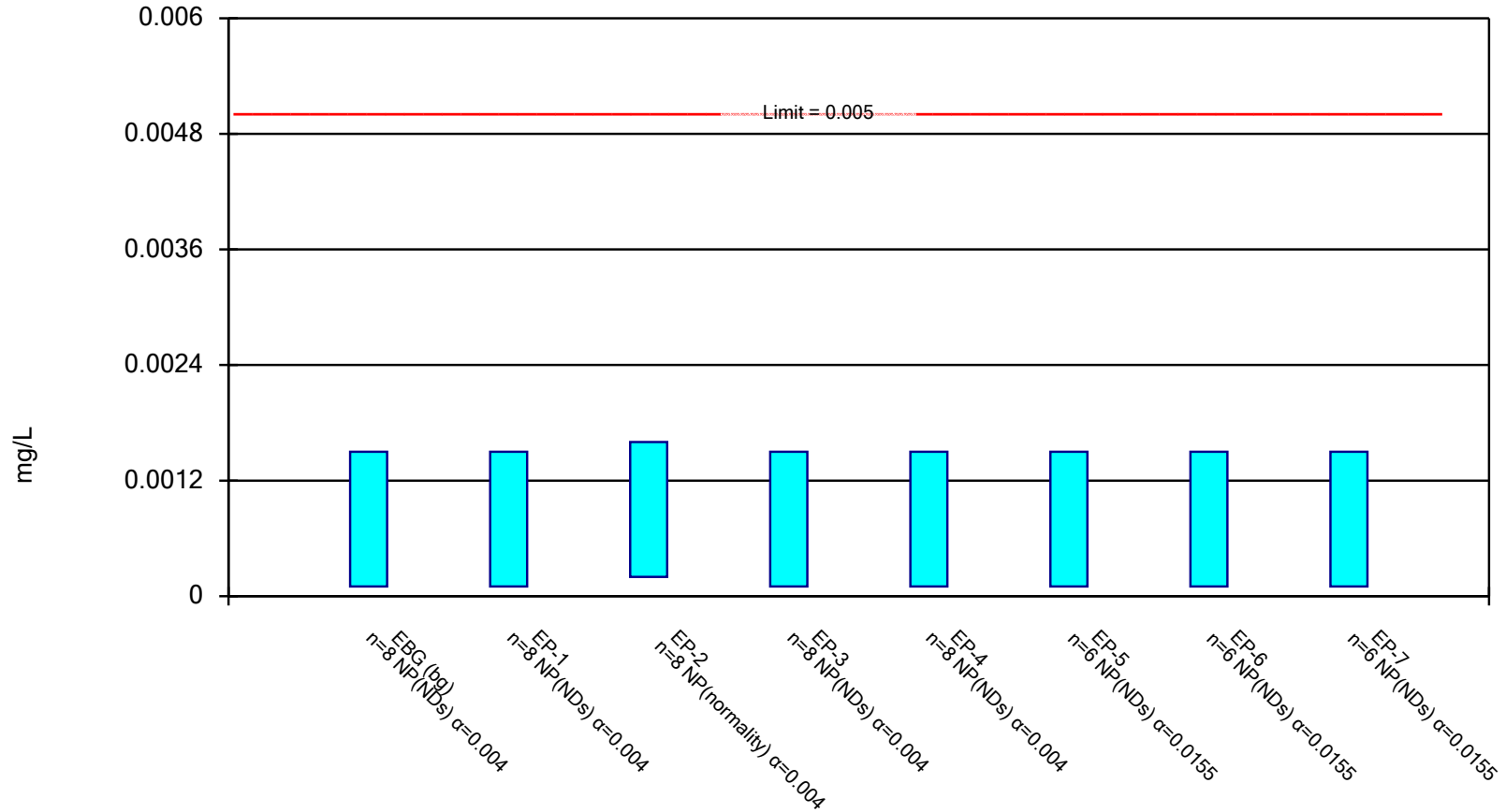


Constituent: Boron Analysis Run 6/20/2023 12:29 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



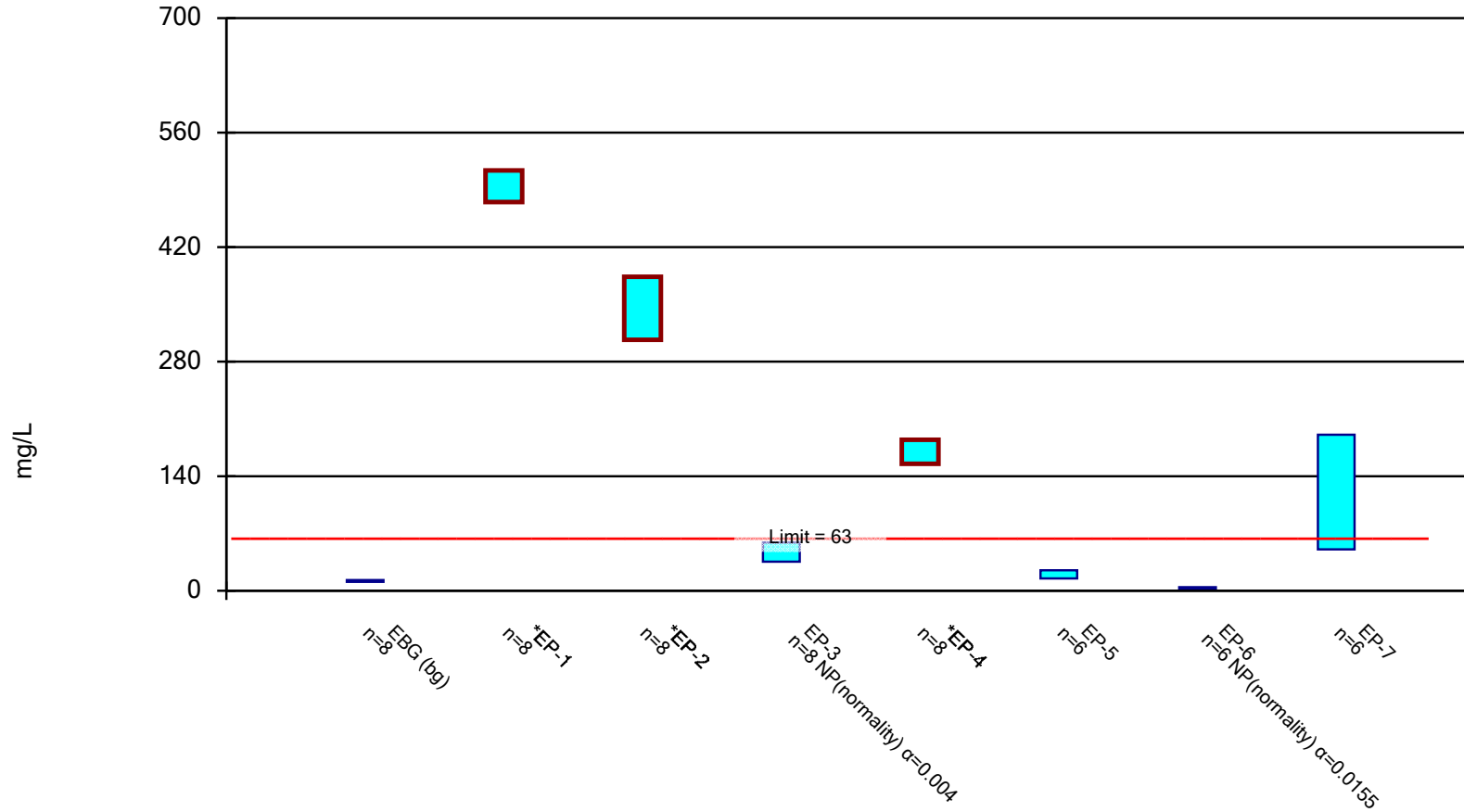
Constituent: Cadmium Analysis Run 6/20/2023 12:19 PM

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

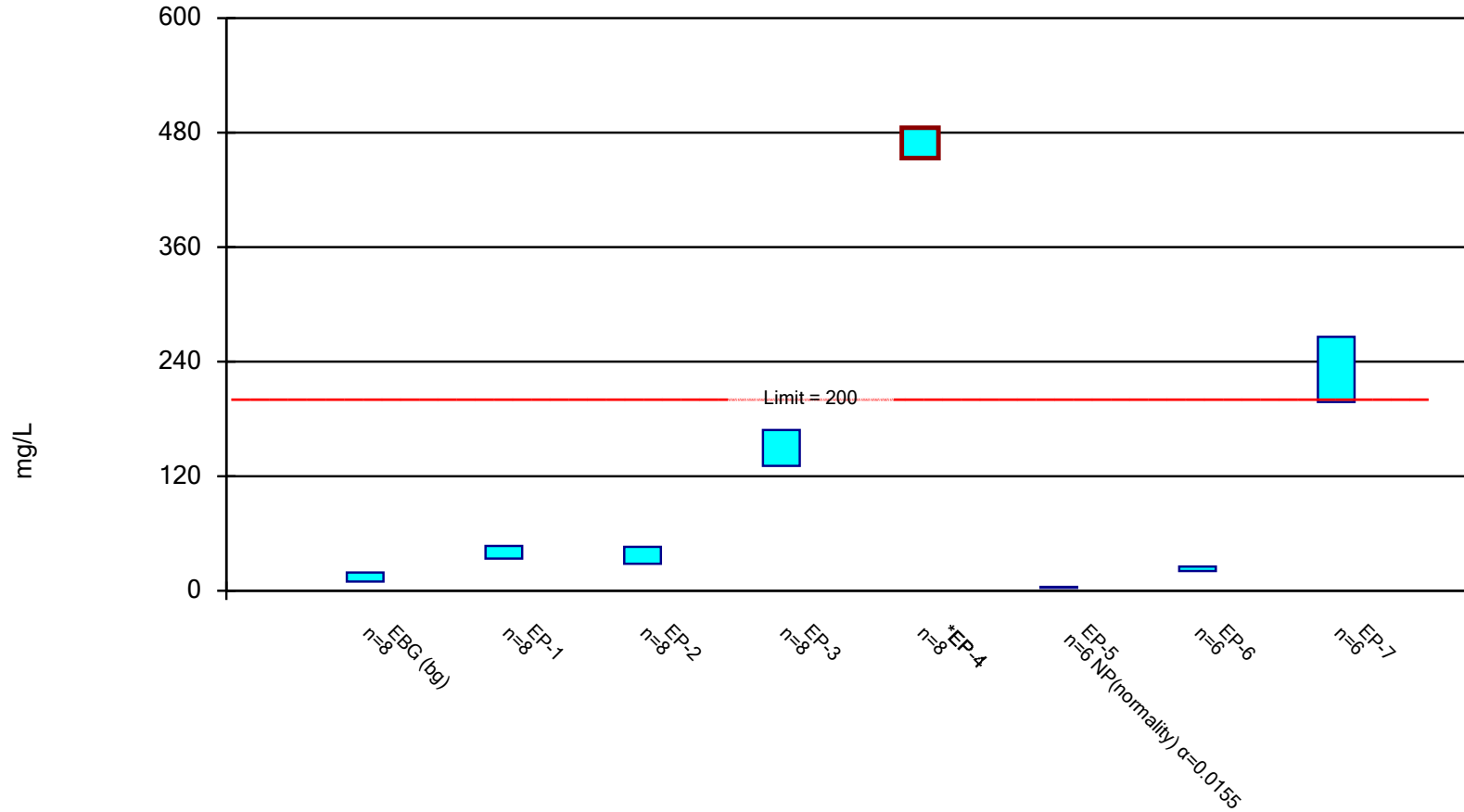


Constituent: Calcium Analysis Run 6/20/2023 12:19 PM

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

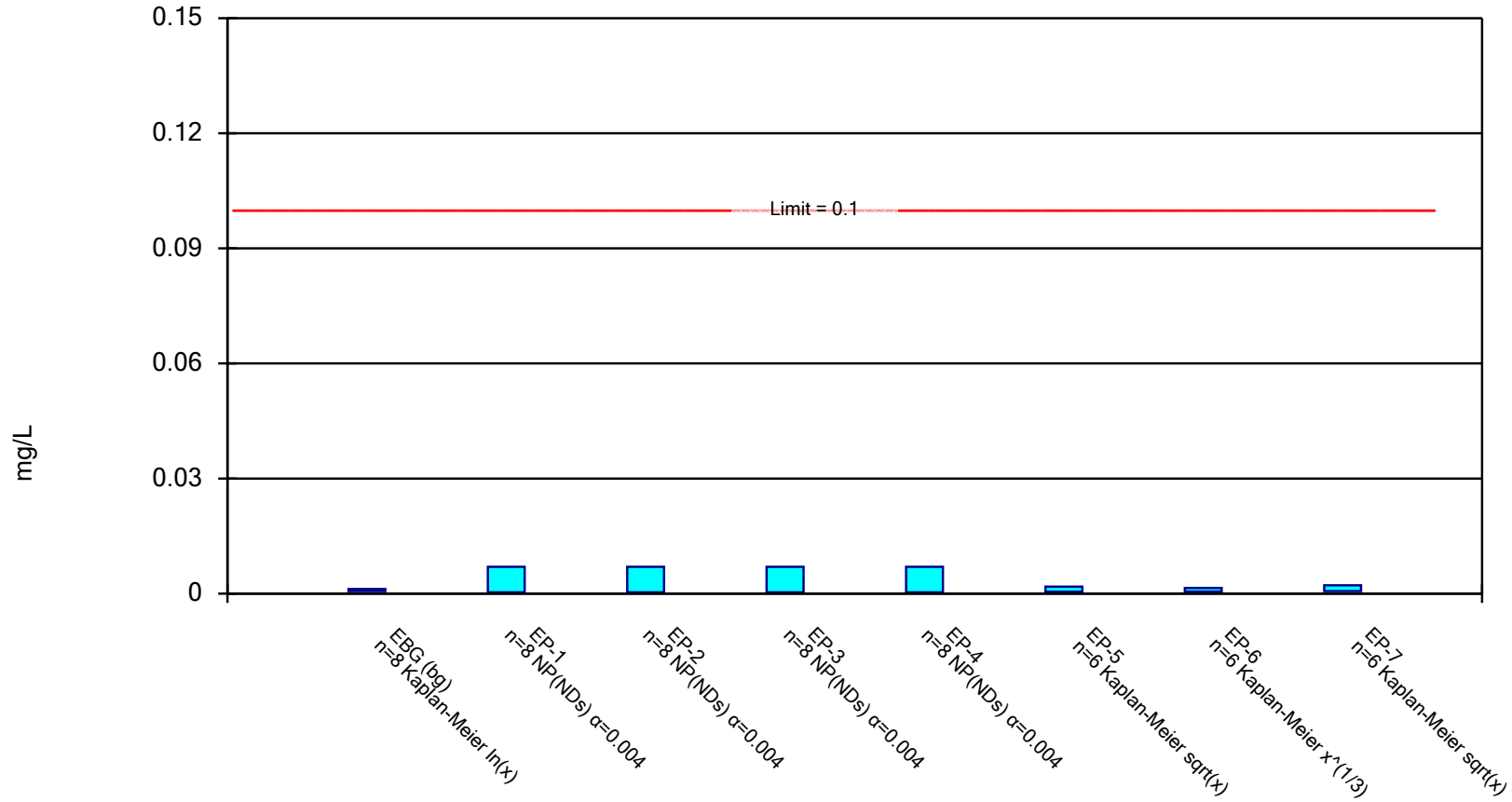


Constituent: Chloride Analysis Run 6/20/2023 12:31 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

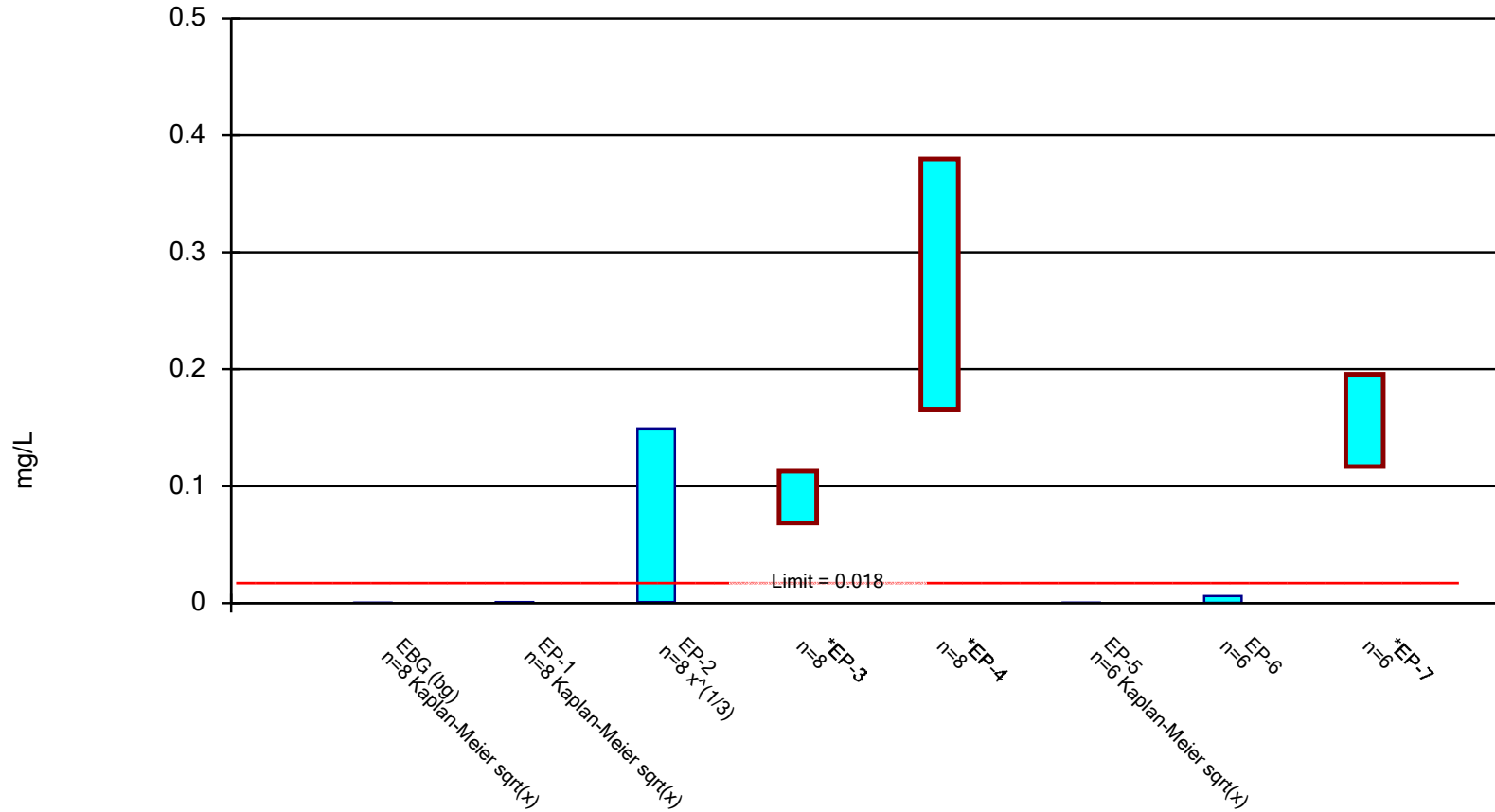


Constituent: Chromium Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

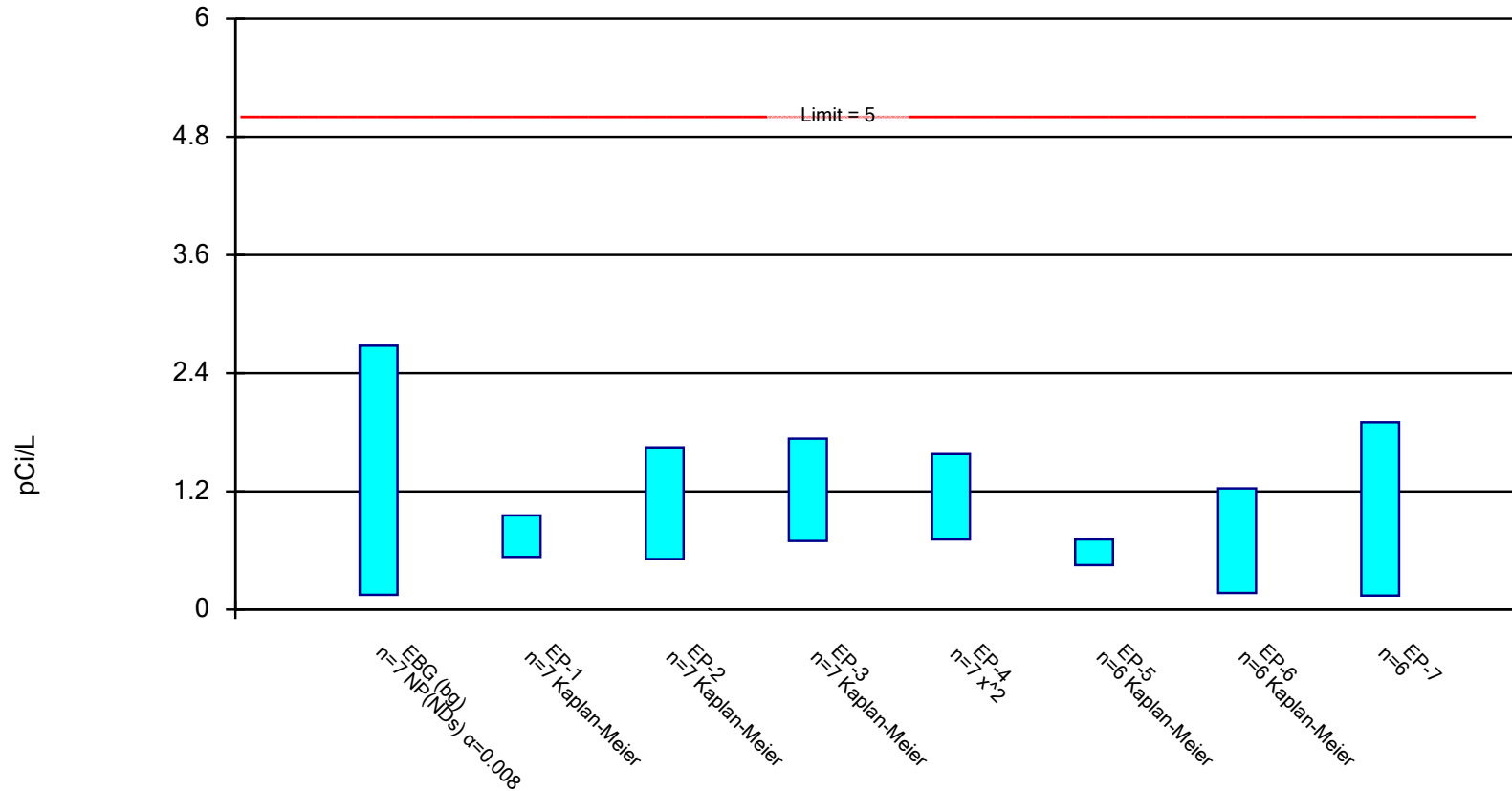


Constituent: Cobalt Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

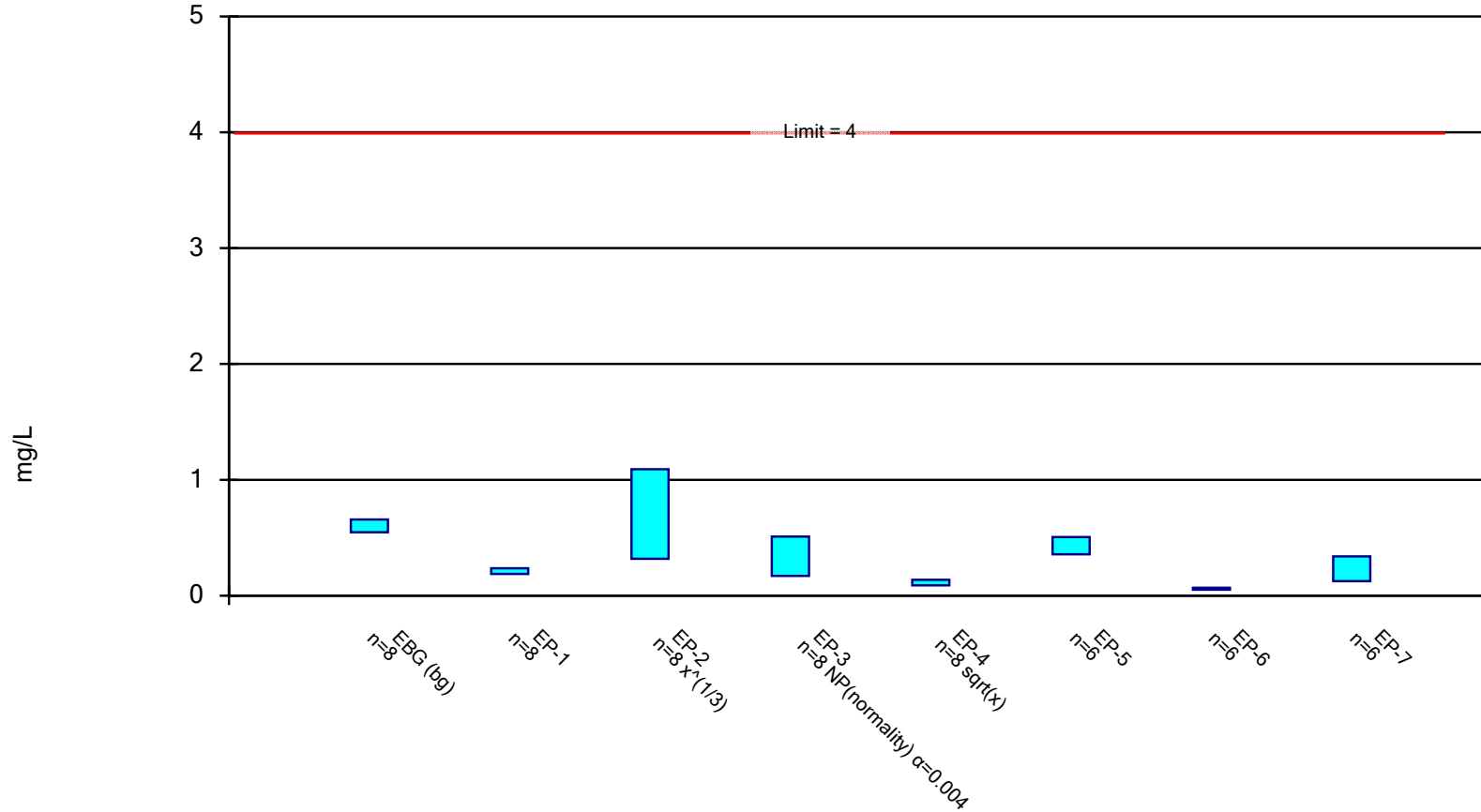


Constituent: Combined Radium Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

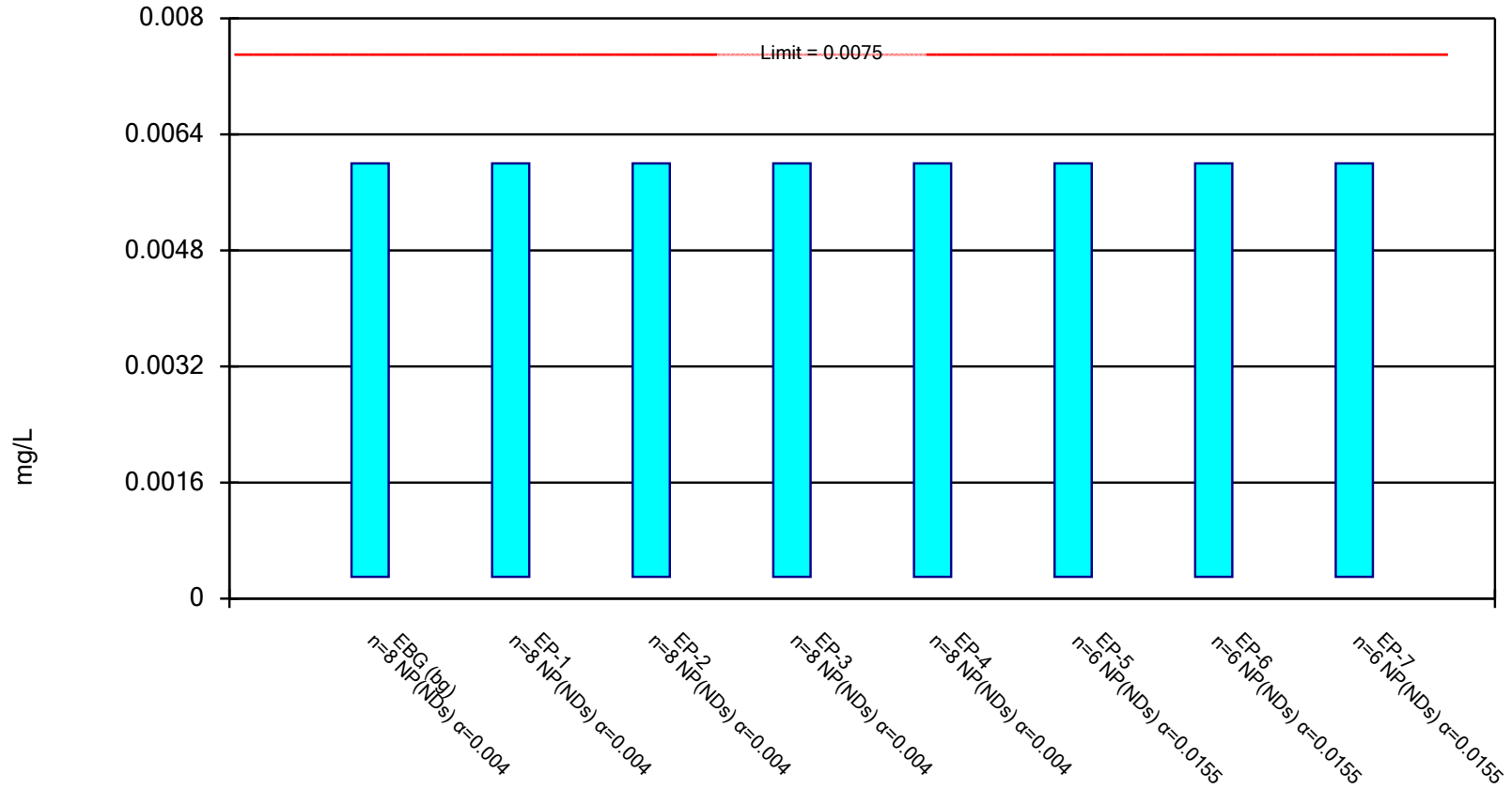


Constituent: Fluoride Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

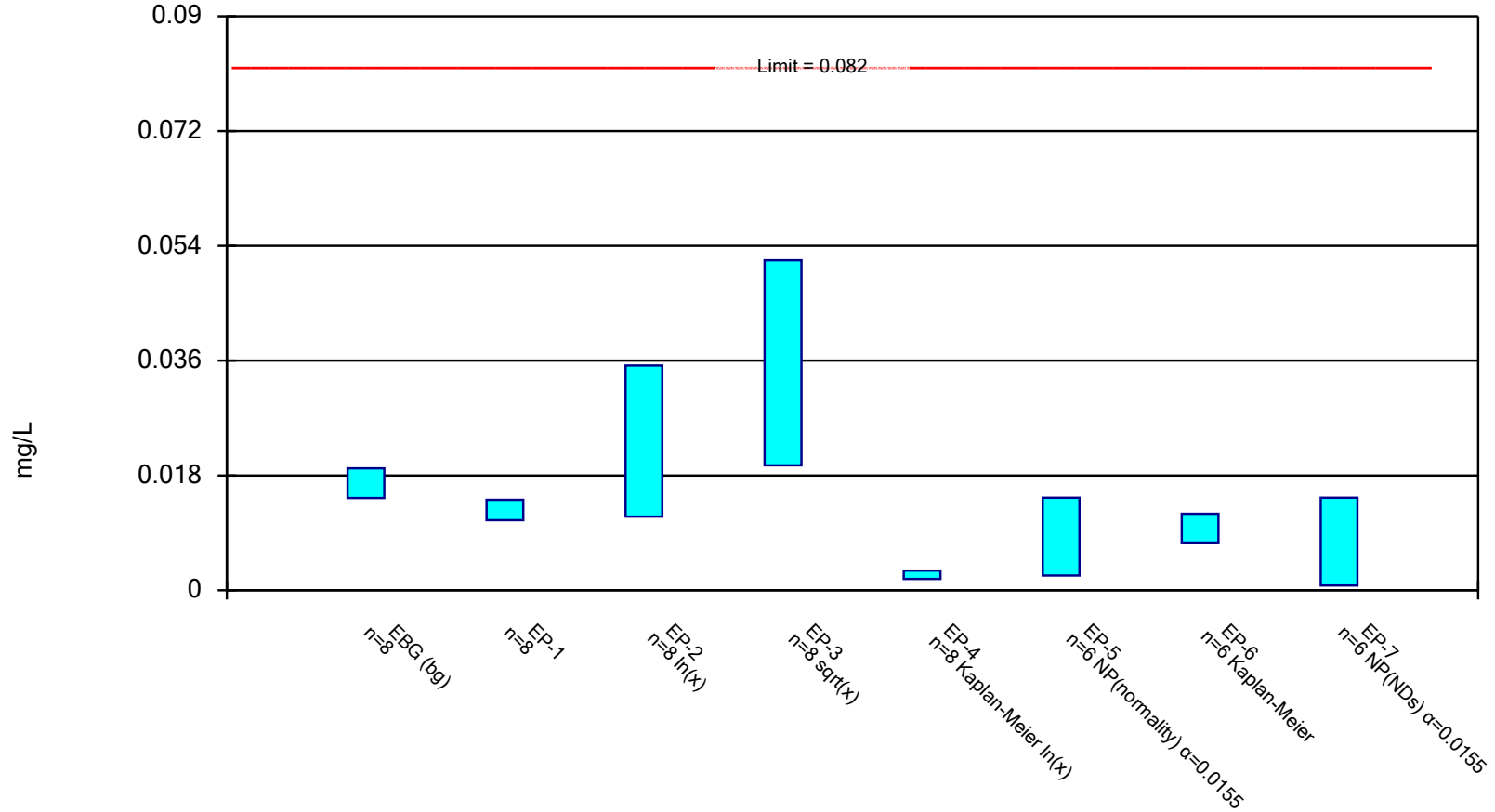


Constituent: Lead Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



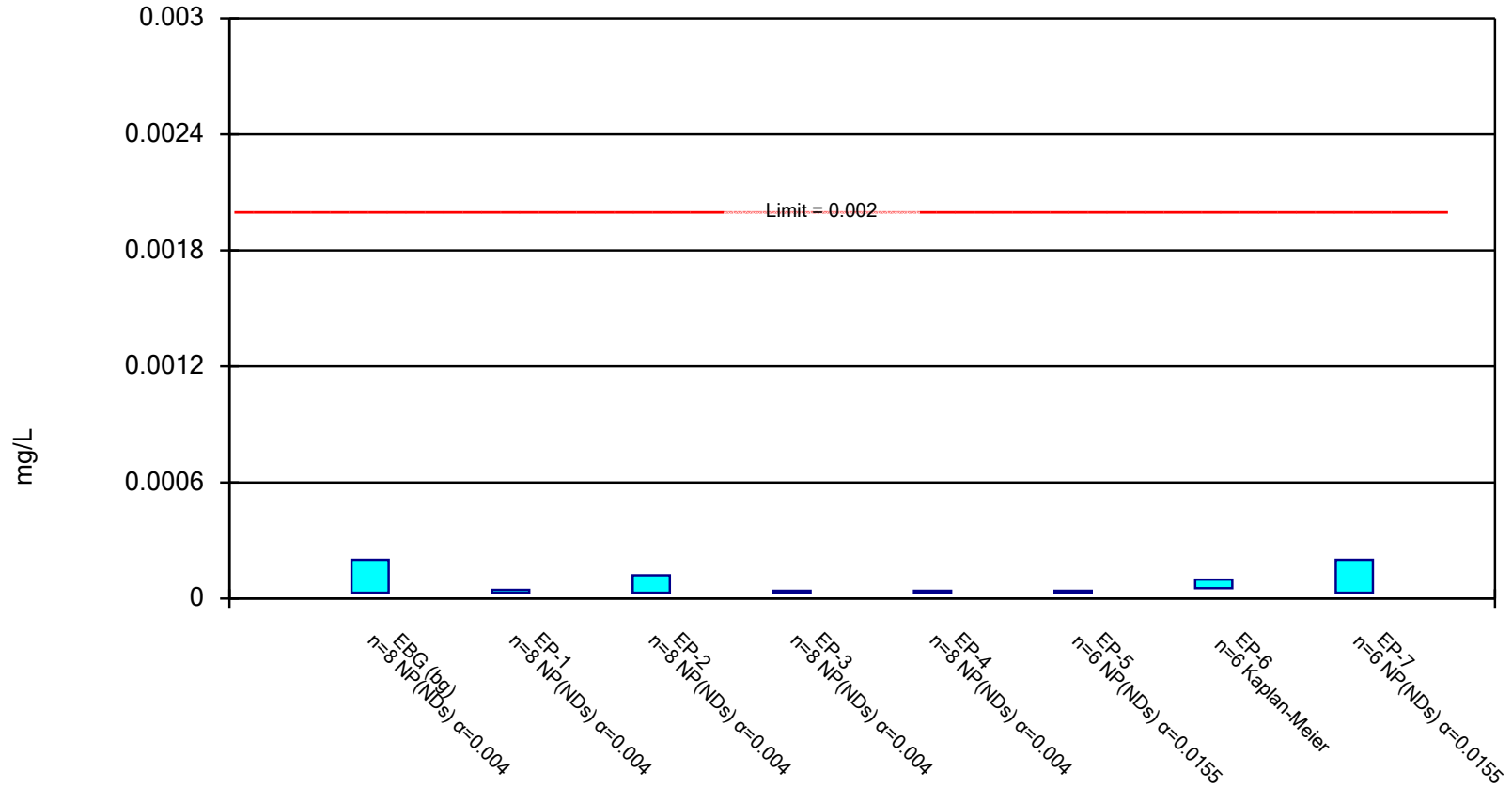
Constituent: Lithium Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

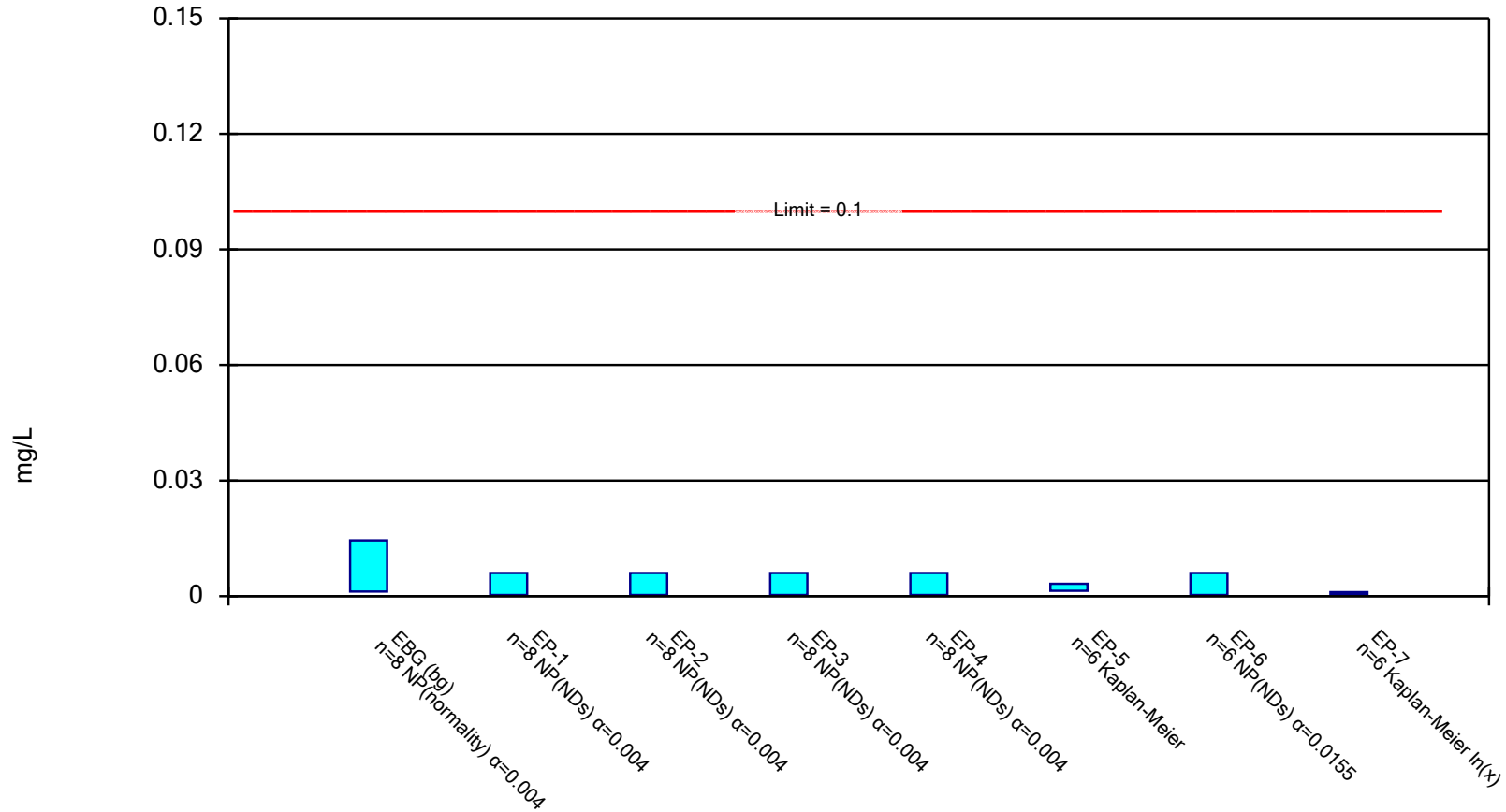


Constituent: Mercury Analysis Run 6/20/2023 12:19 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

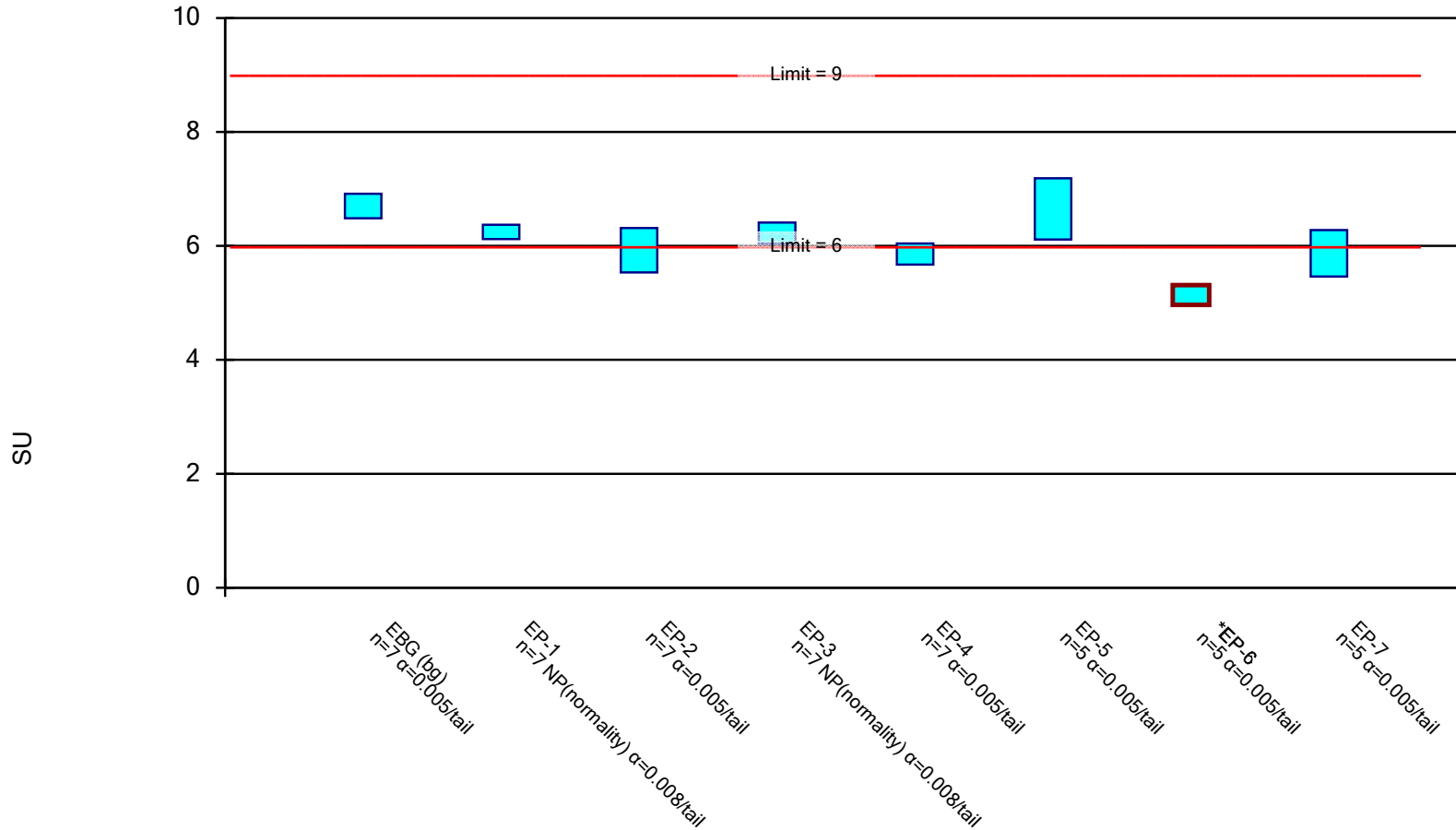


Constituent: Molybdenum Analysis Run 6/20/2023 12:19 PM

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.

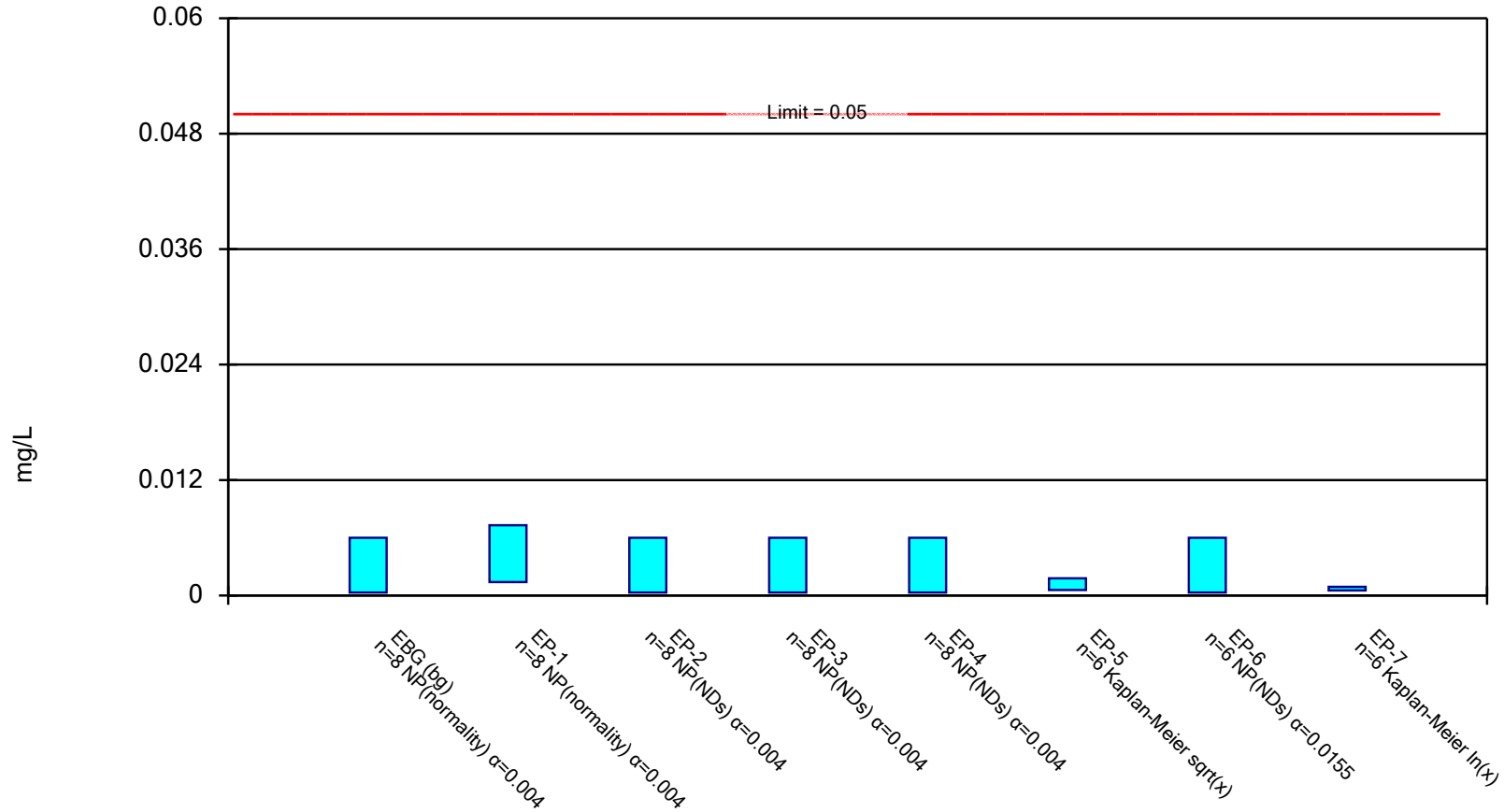


Constituent: pH Analysis Run 6/20/2023 12:24 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

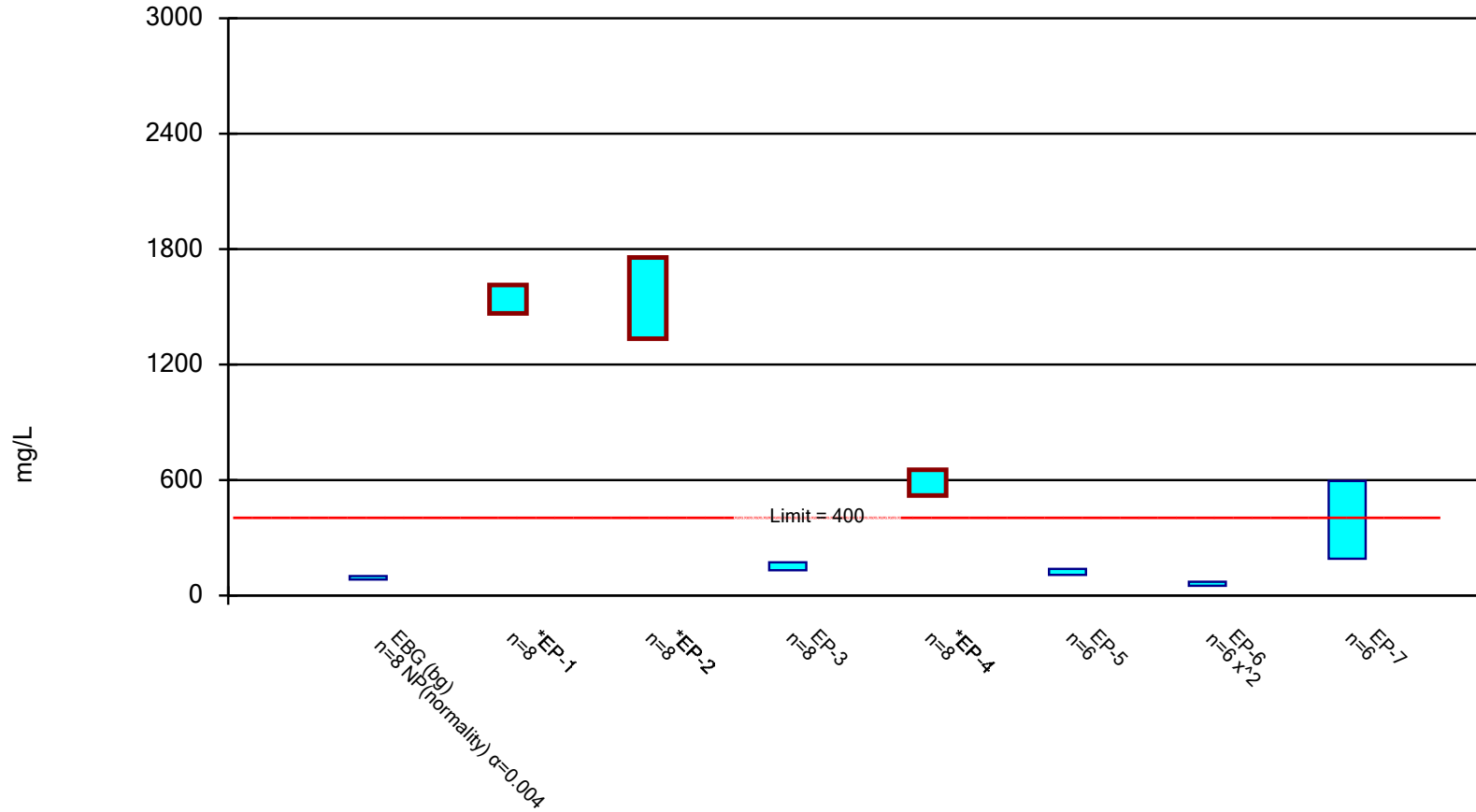


Constituent: Selenium Analysis Run 6/20/2023 12:19 PM

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

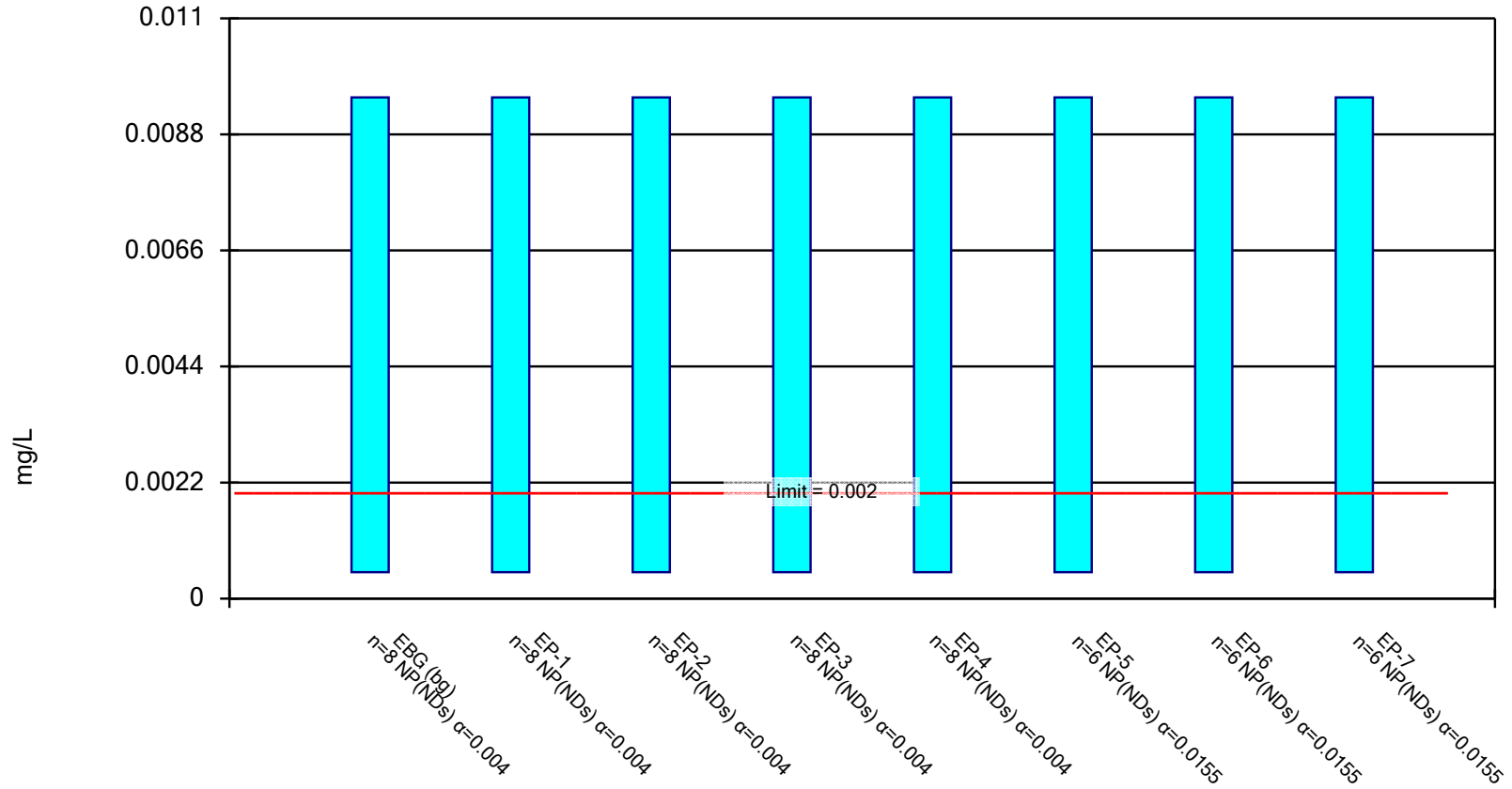


Constituent: Sulfate Analysis Run 6/20/2023 12:35 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

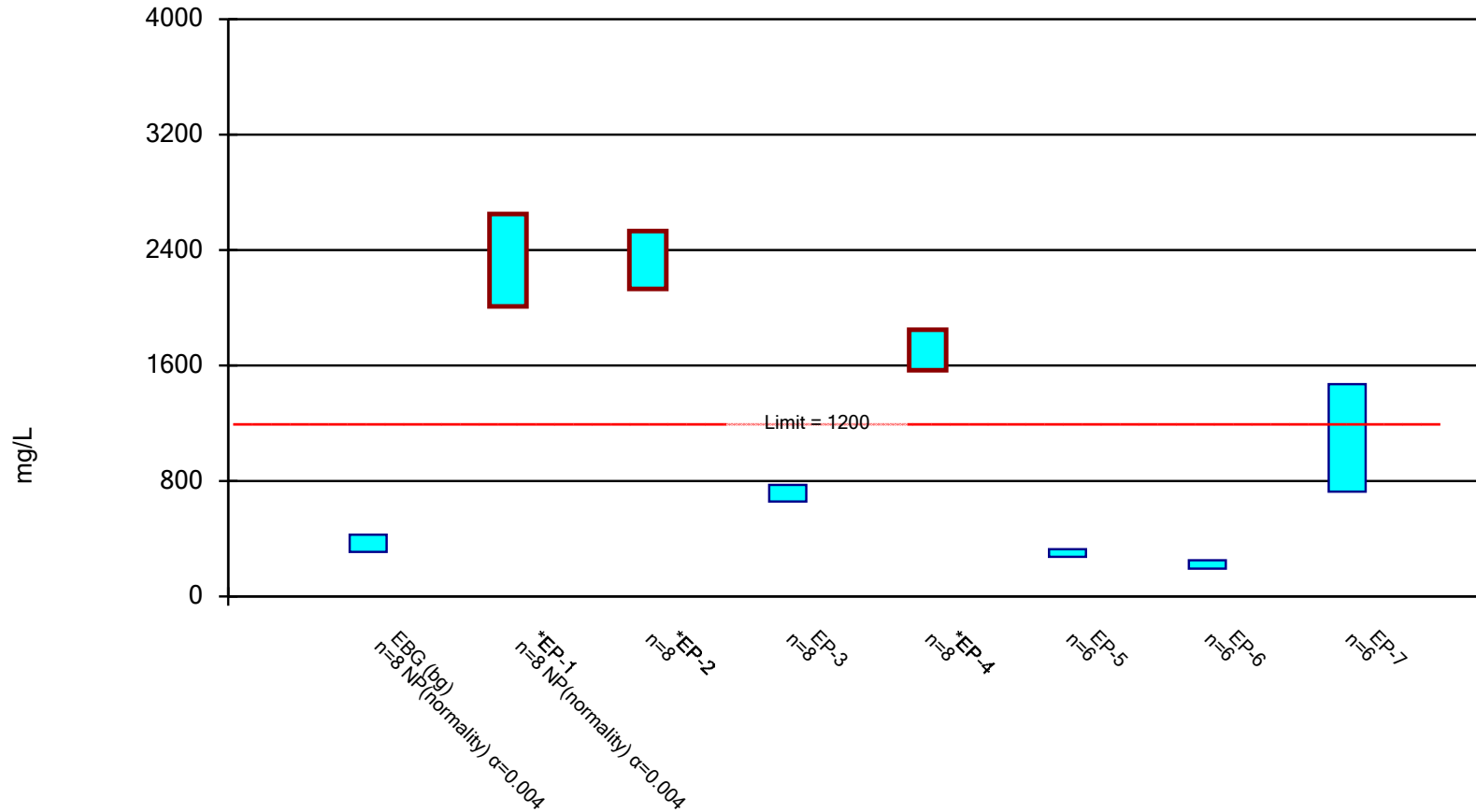


Constituent: Thallium Analysis Run 6/20/2023 12:20 PM

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



Constituent: Total Dissolved Solids Analysis Run 6/20/2023 12:36 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

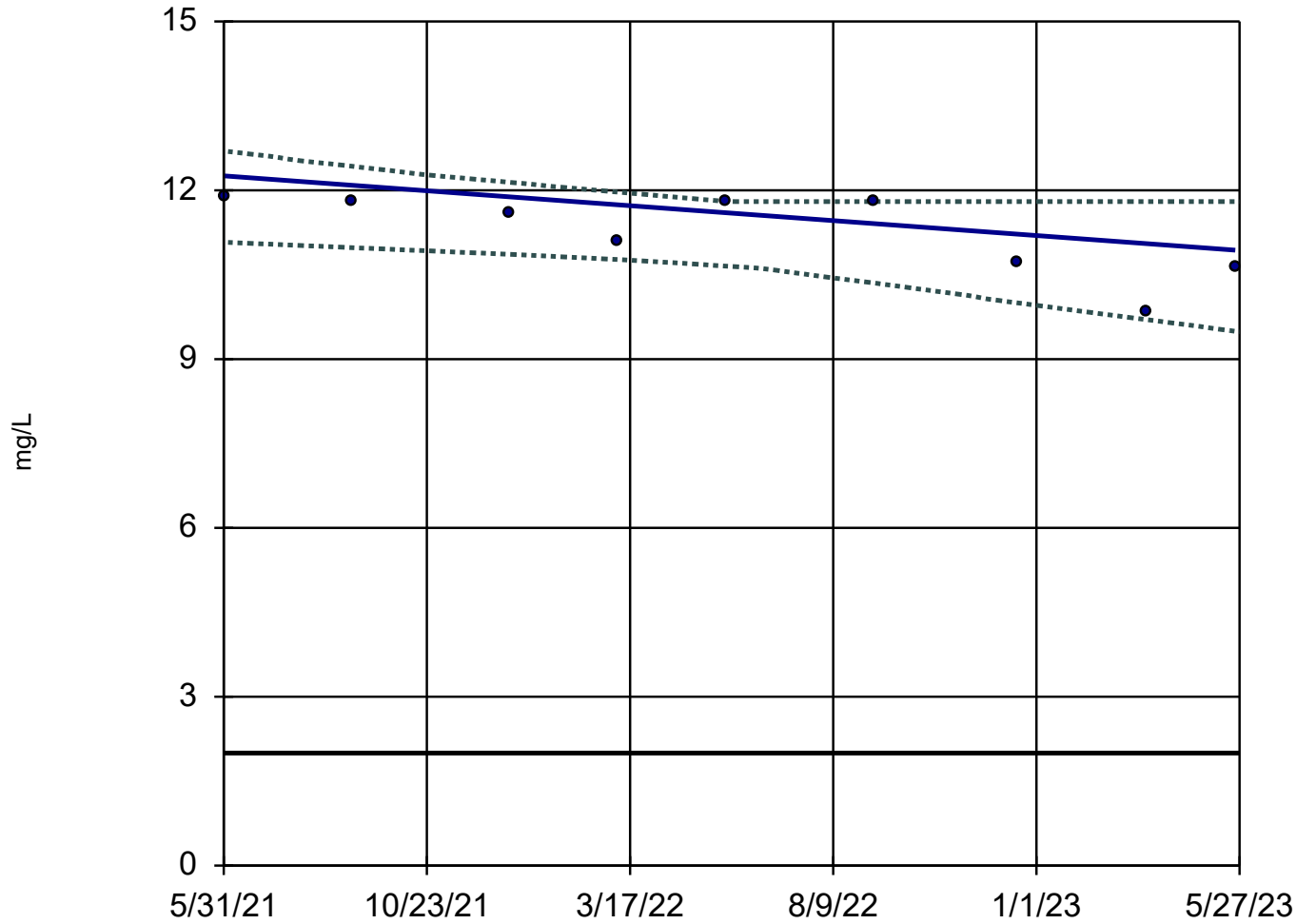
**APPENDIX D-9**

## **Q1 2023 Resample Statistically Significant Trends**



# Sen's Slope and 95% Confidence Band

EP-4

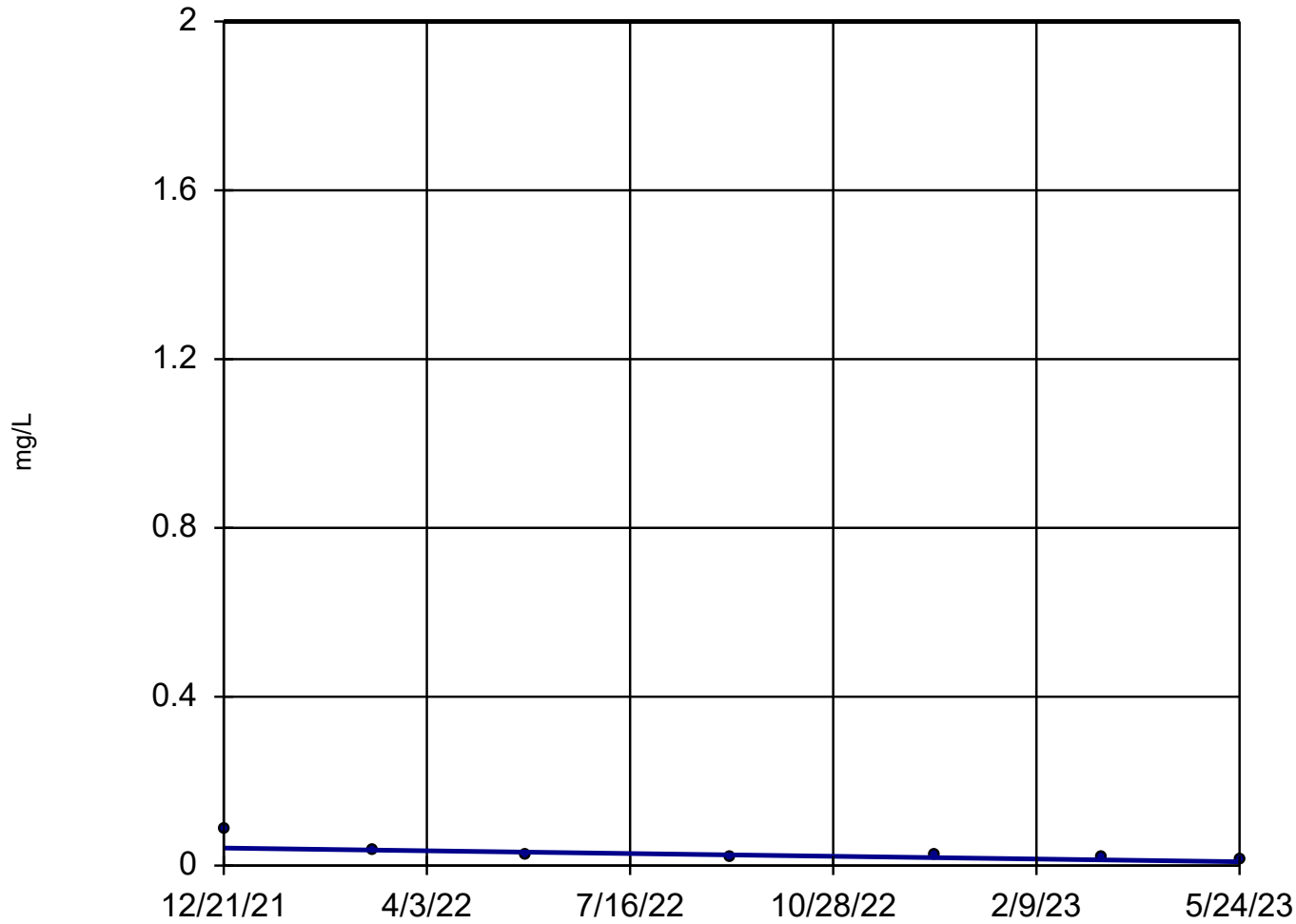


n = 9  
Slope = -0.6668 units per year.  
Mann-Kendall statistic = -23  
critical = -20  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
Confidence band is above GPS (2).

Constituent: Boron Analysis Run 6/12/2023 1:20 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Sen's Slope Estimator

EP-5



n = 7

Slope = -0.02276  
units per year.

Mann-Kendall  
statistic = -17  
critical = -15

Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

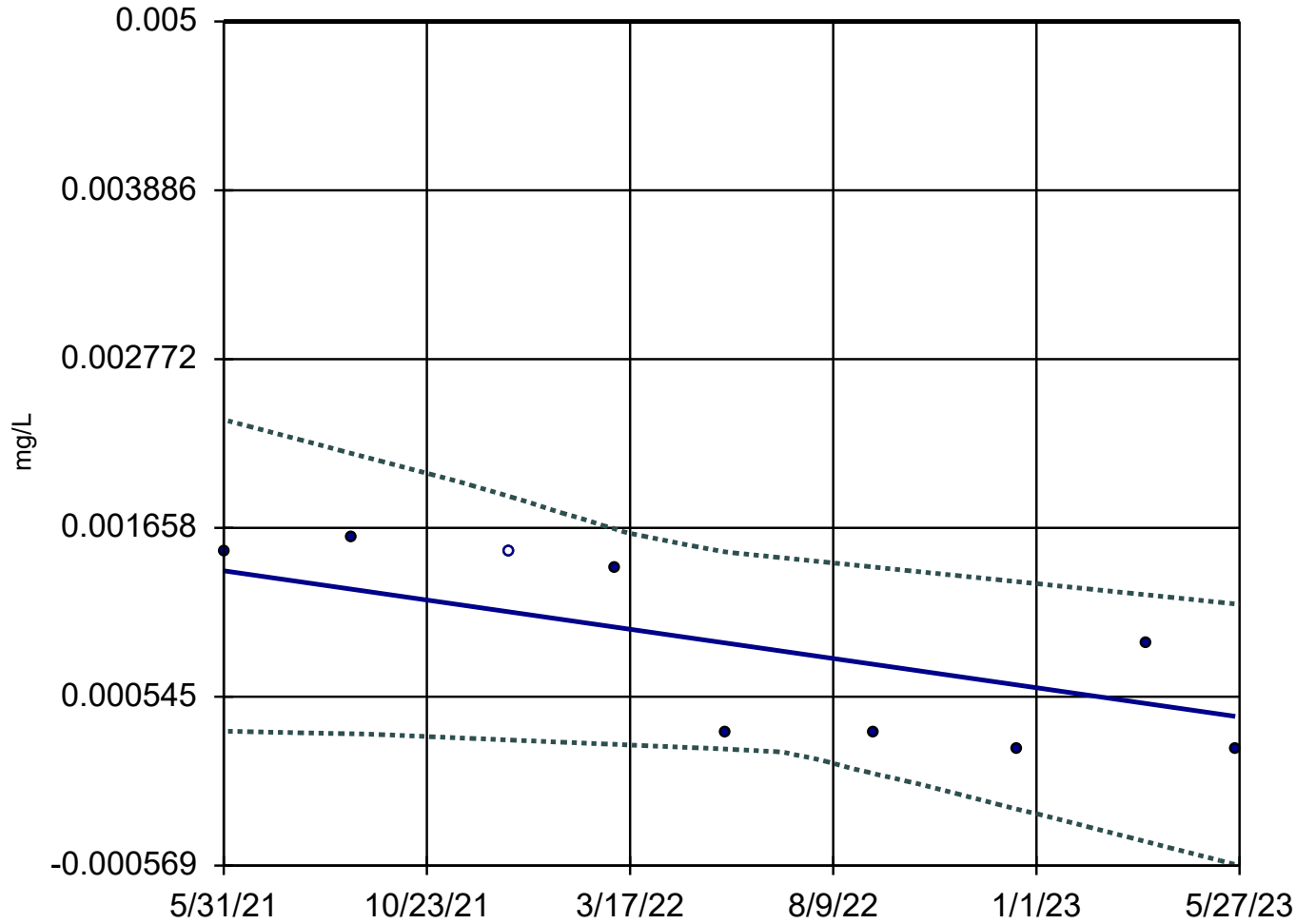
GPS = 2.

Constituent: Boron Analysis Run 6/12/2023 12:29 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope and 95% Confidence Band

EP-2

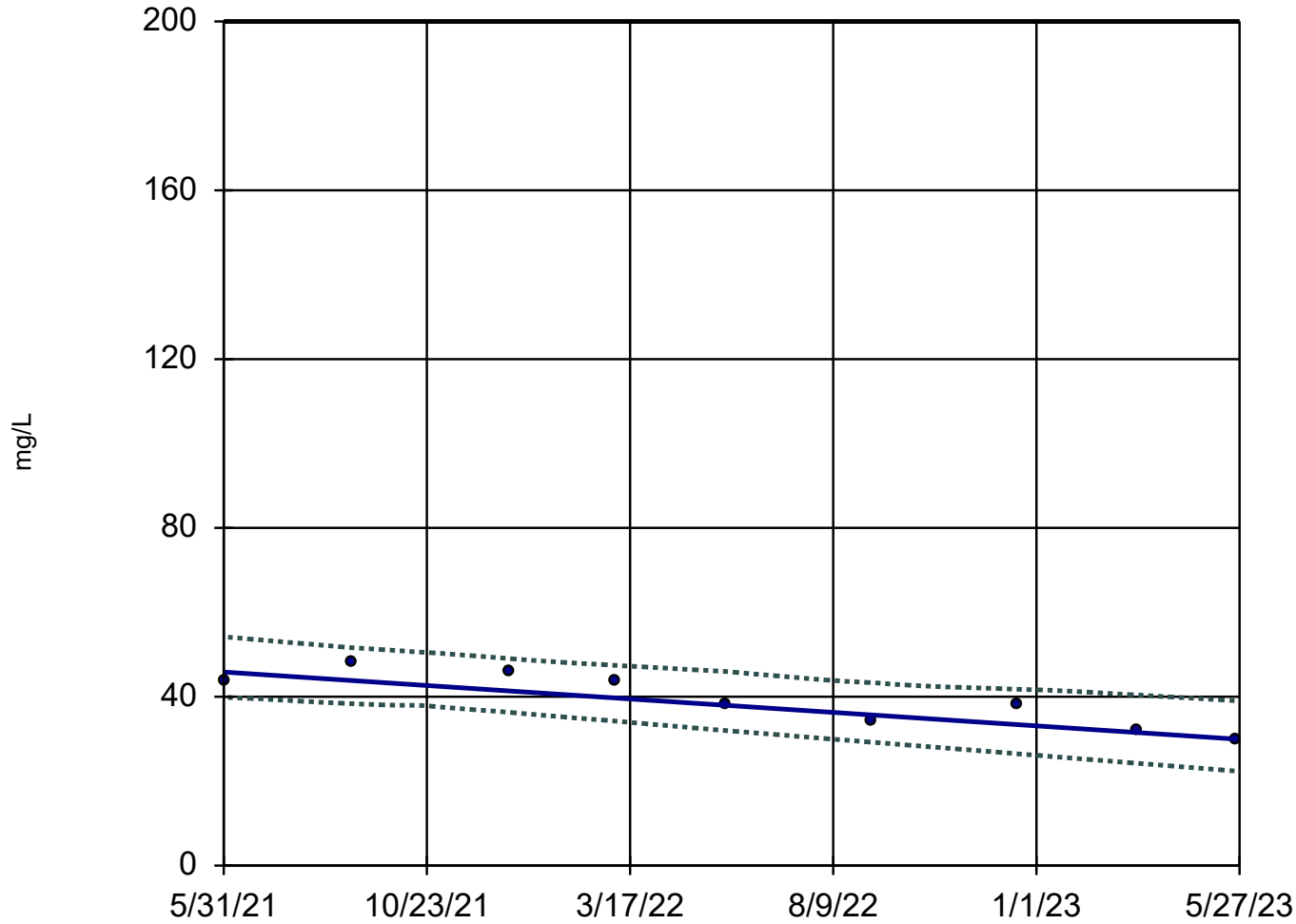


n = 9  
Slope = -0.0004845  
units per year.  
Mann-Kendall  
statistic = -25  
critical = -20  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
Confidence band is  
below GPS (0.005).

Constituent: Cadmium Analysis Run 6/12/2023 12:29 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Sen's Slope and 95% Confidence Band

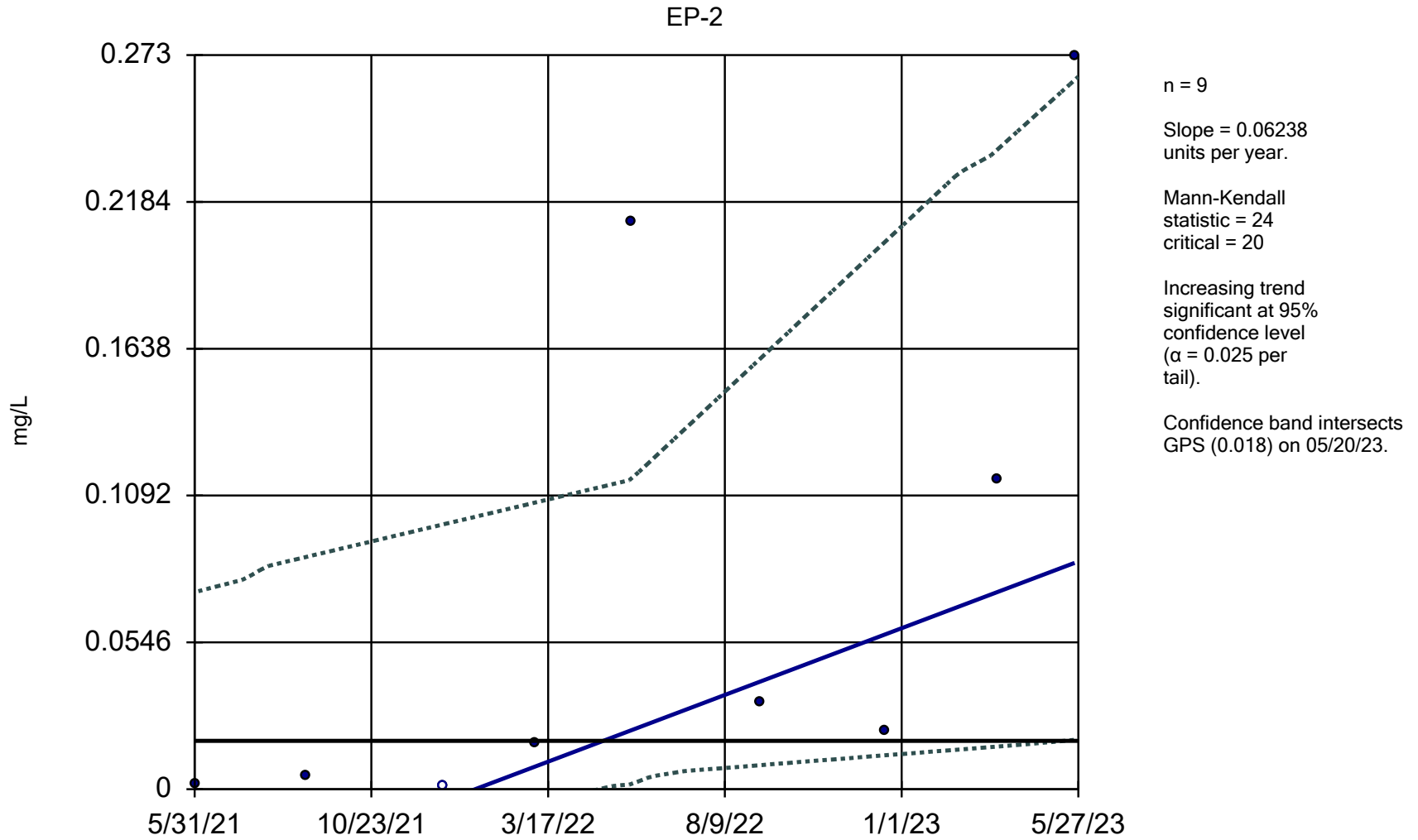
EP-1



n = 9  
Slope = -8.011 units per year.  
Mann-Kendall statistic = -28  
critical = -20  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
Confidence band is below GPS (200).

Constituent: Chloride Analysis Run 6/12/2023 12:29 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

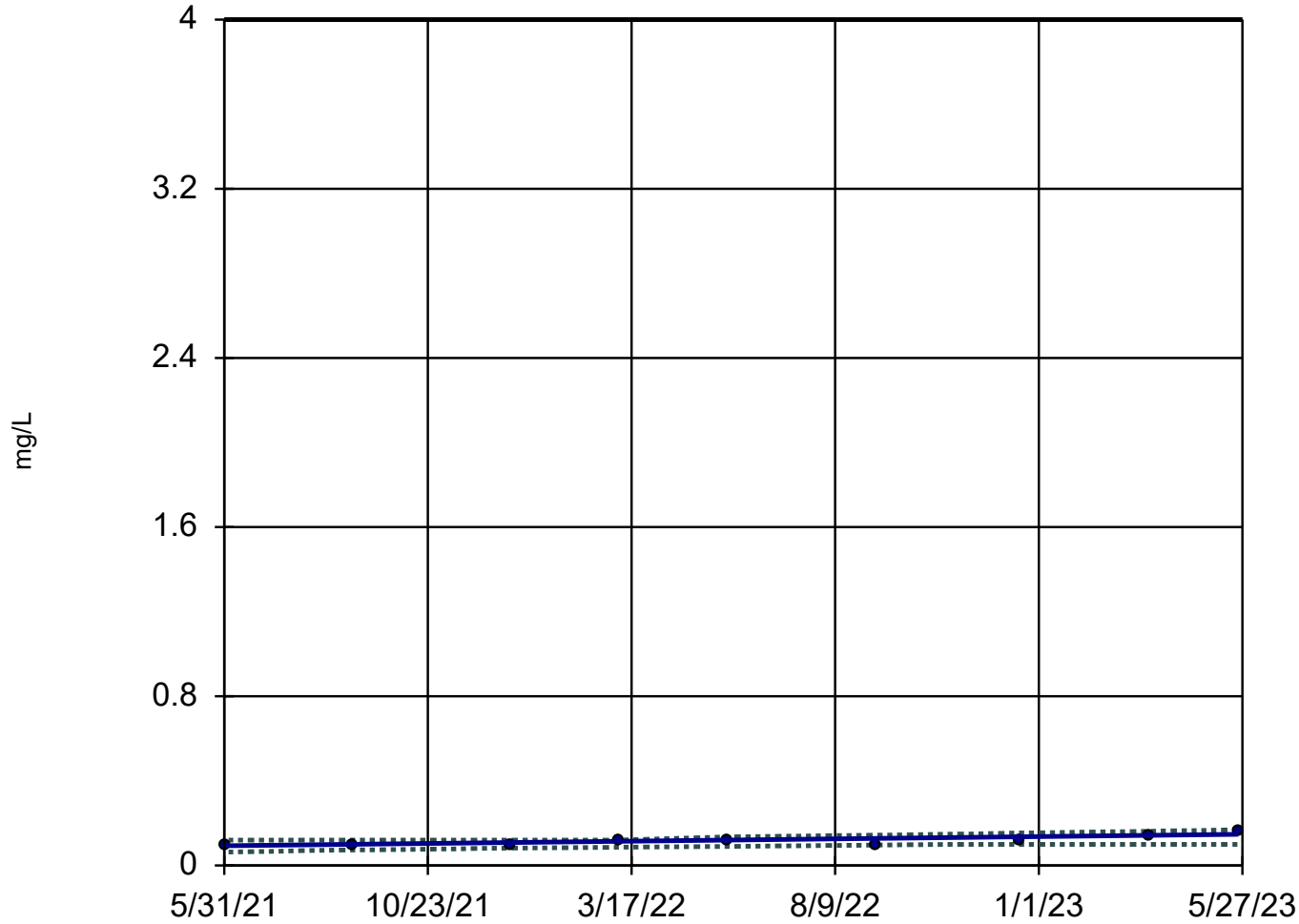
### Sen's Slope and 95% Confidence Band



Constituent: Cobalt Analysis Run 6/12/2023 12:30 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Sen's Slope and 95% Confidence Band

EP-4



n = 9

Slope = 0.02745  
units per year.

Mann-Kendall  
statistic = 23  
critical = 20

Increasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

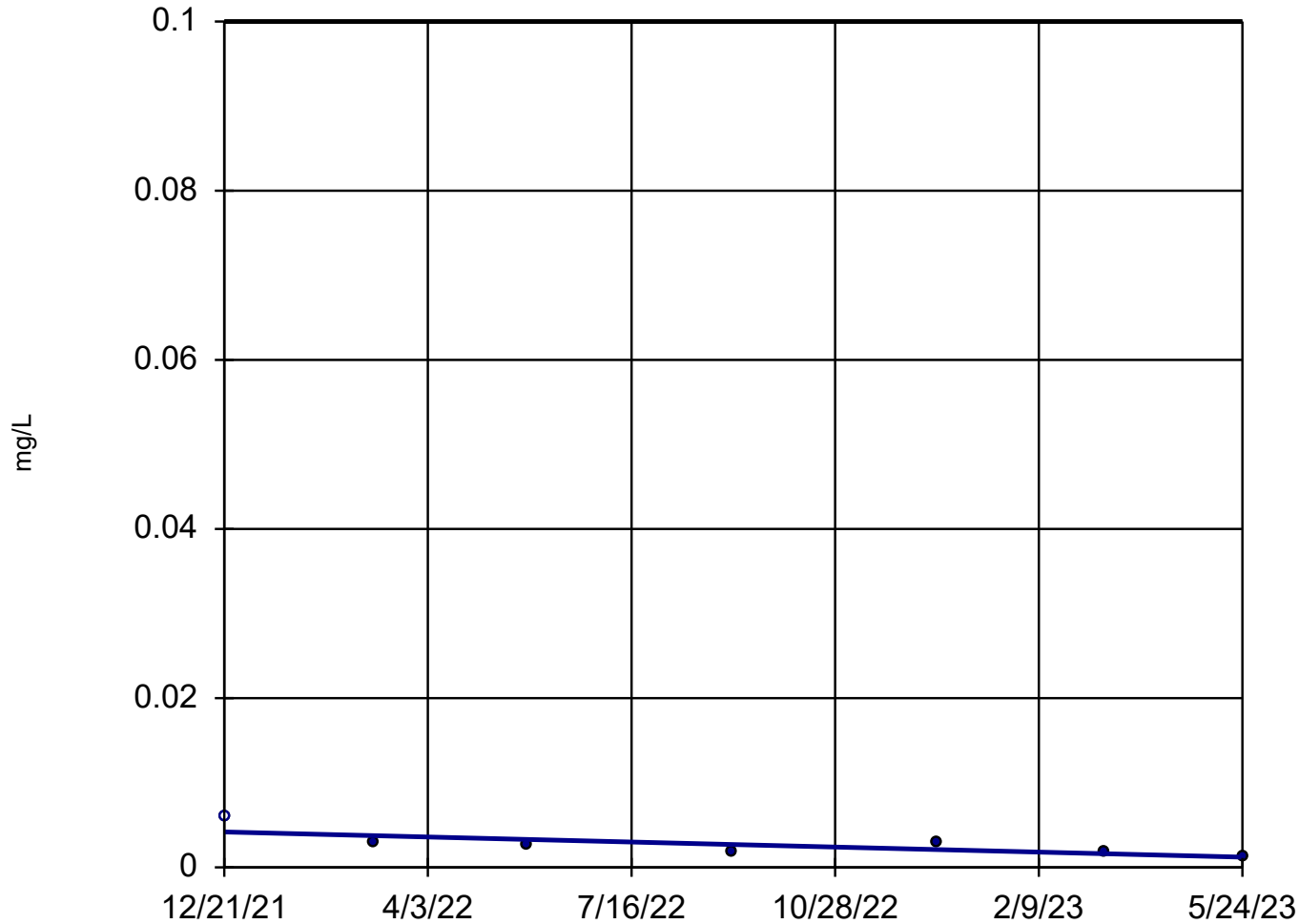
Confidence band is  
below GPS (4).

Constituent: Fluoride Analysis Run 6/12/2023 12:30 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 7

Slope = -0.002086  
units per year.

Mann-Kendall  
statistic = -16  
critical = -15

Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

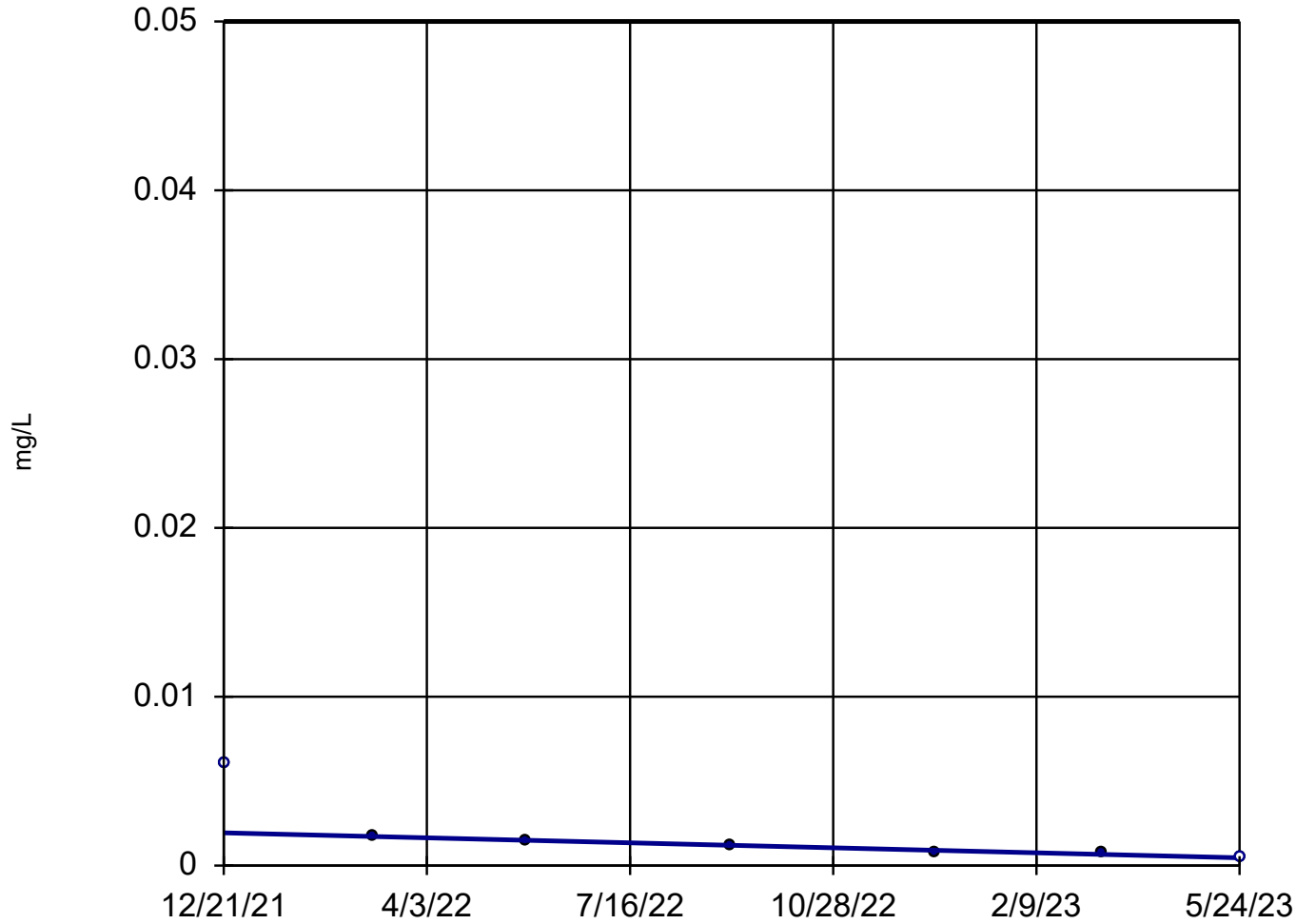
GPS = 0.1.

Constituent: Molybdenum Analysis Run 6/12/2023 12:30 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 7  
Slope = -0.001043  
units per year.  
Mann-Kendall  
statistic = -20  
critical = -15  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
GPS = 0.05.

Constituent: Selenium Analysis Run 6/12/2023 12:30 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

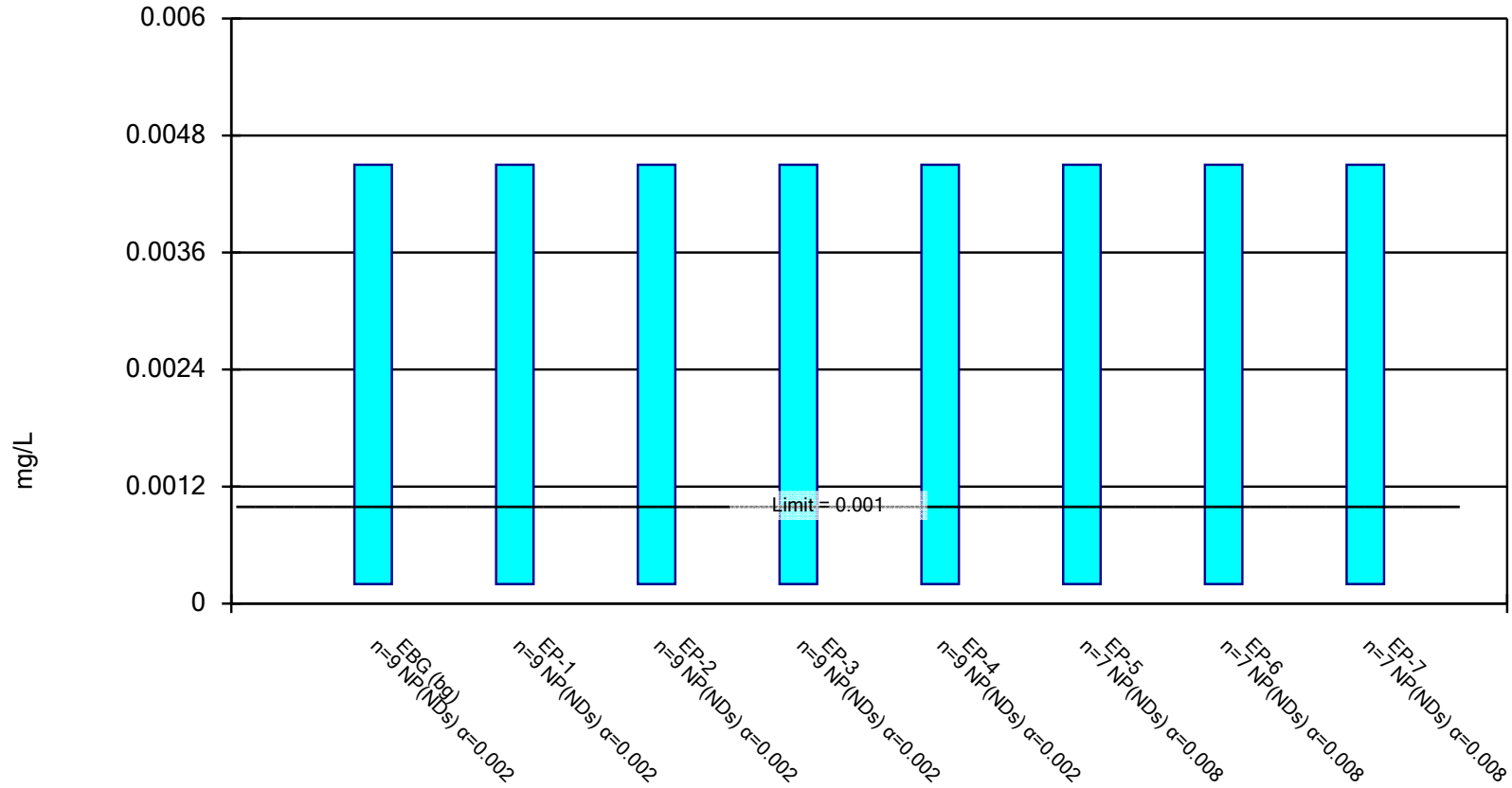


**APPENDIX D-10**

## **Q2 2023 Background Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

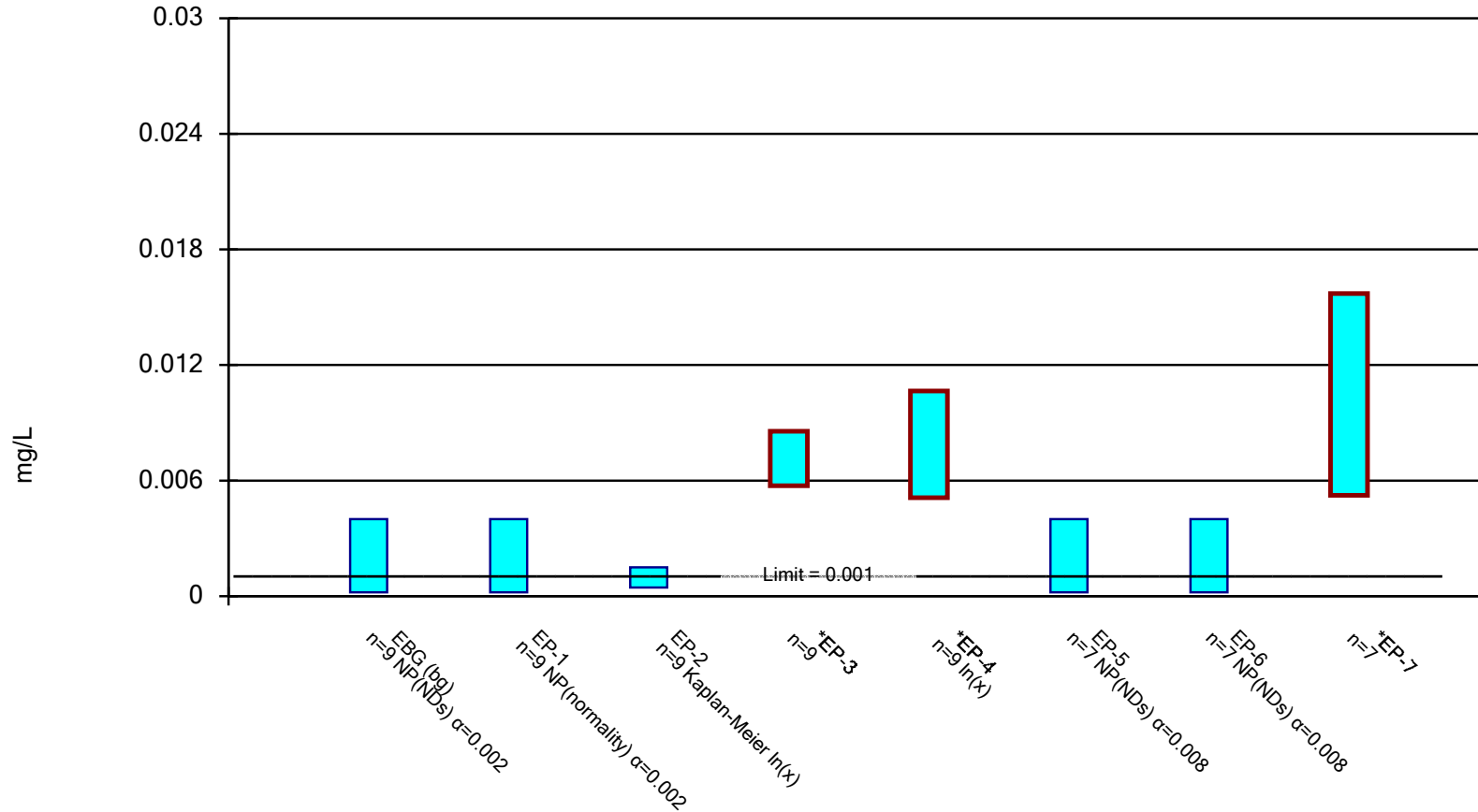


Constituent: Antimony Analysis Run 7/14/2023 11:06 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

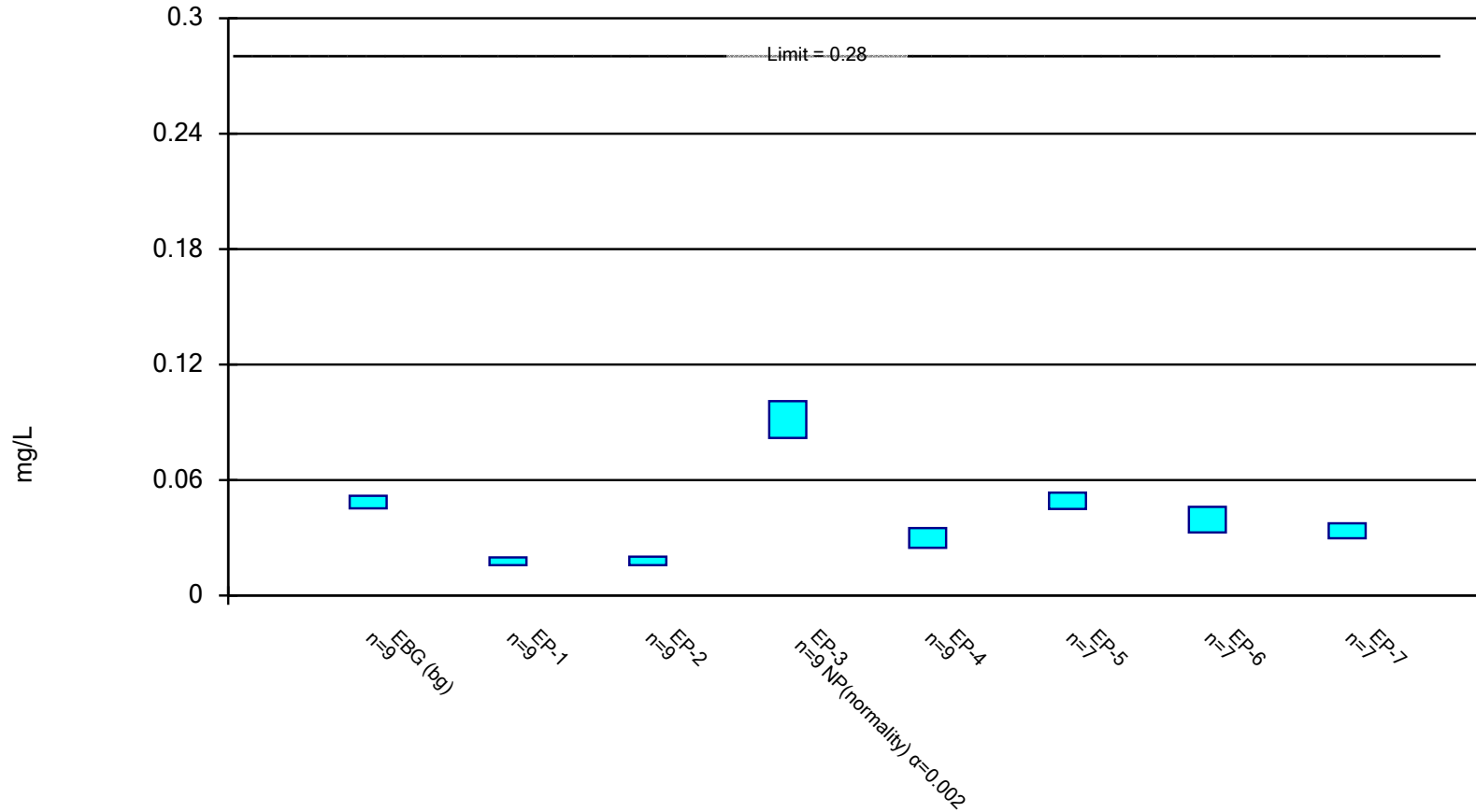
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/14/2023 11:06 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

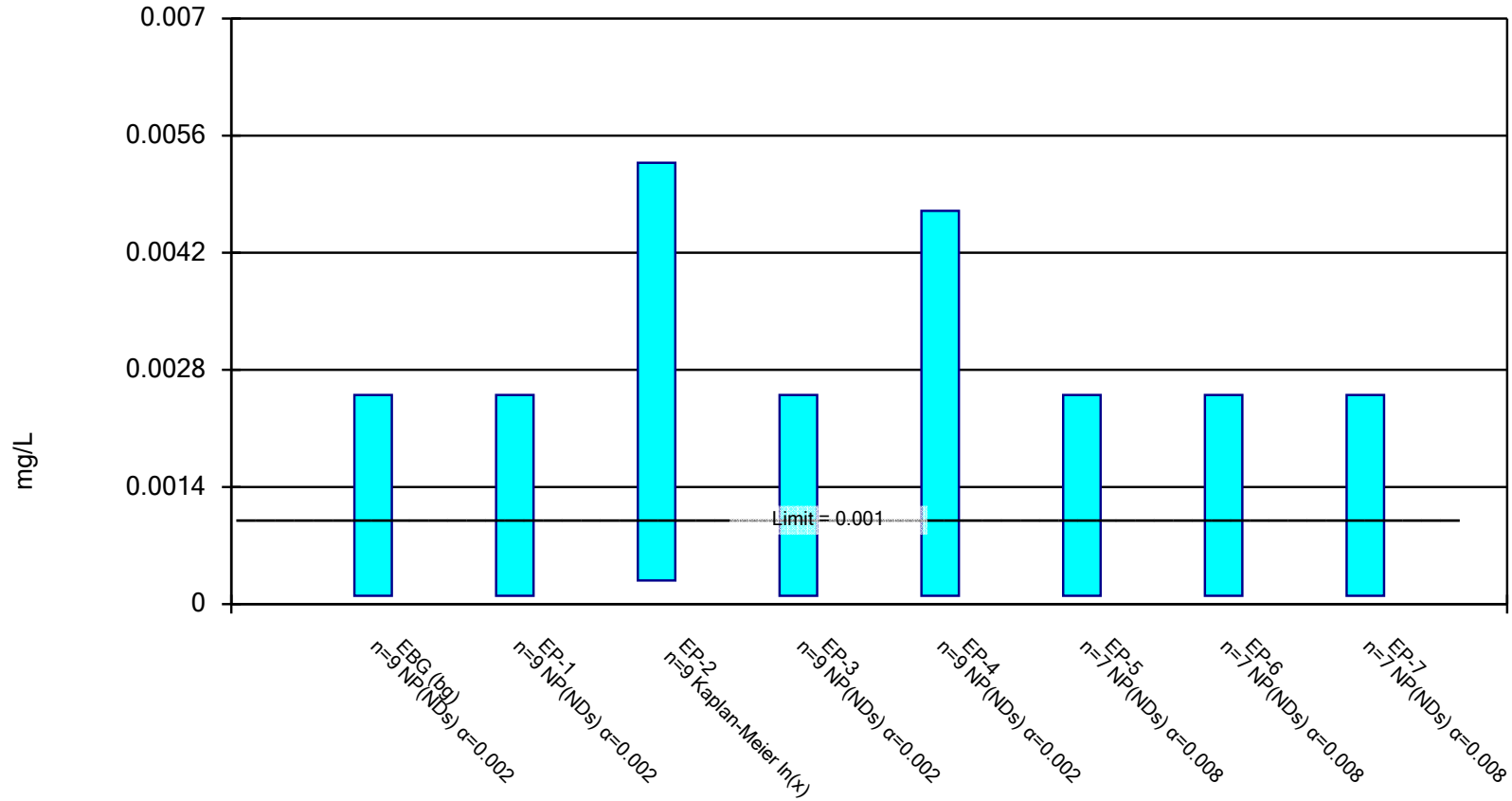
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium    Analysis Run 7/14/2023 11:06 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

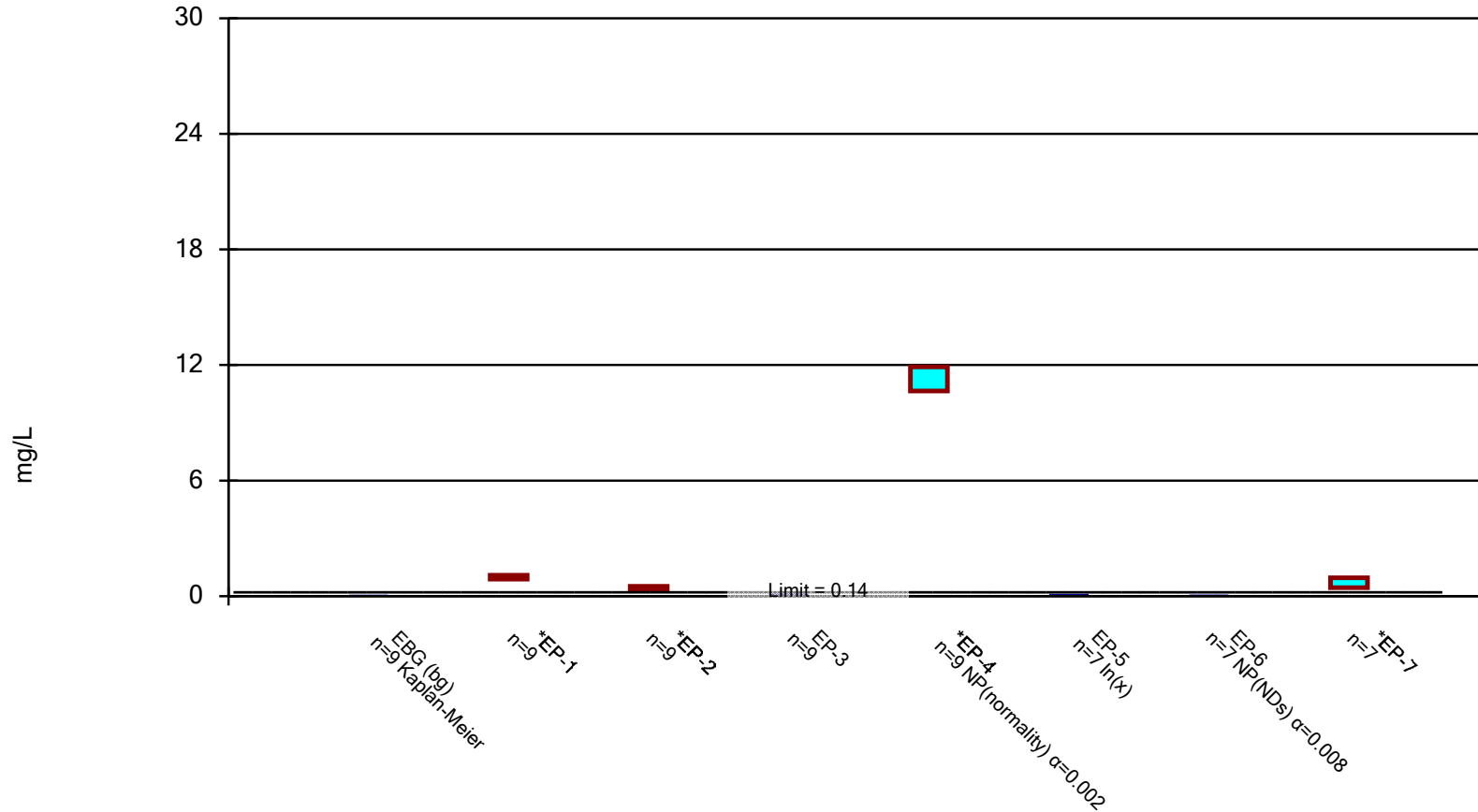
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium    Analysis Run 7/14/2023 11:06 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

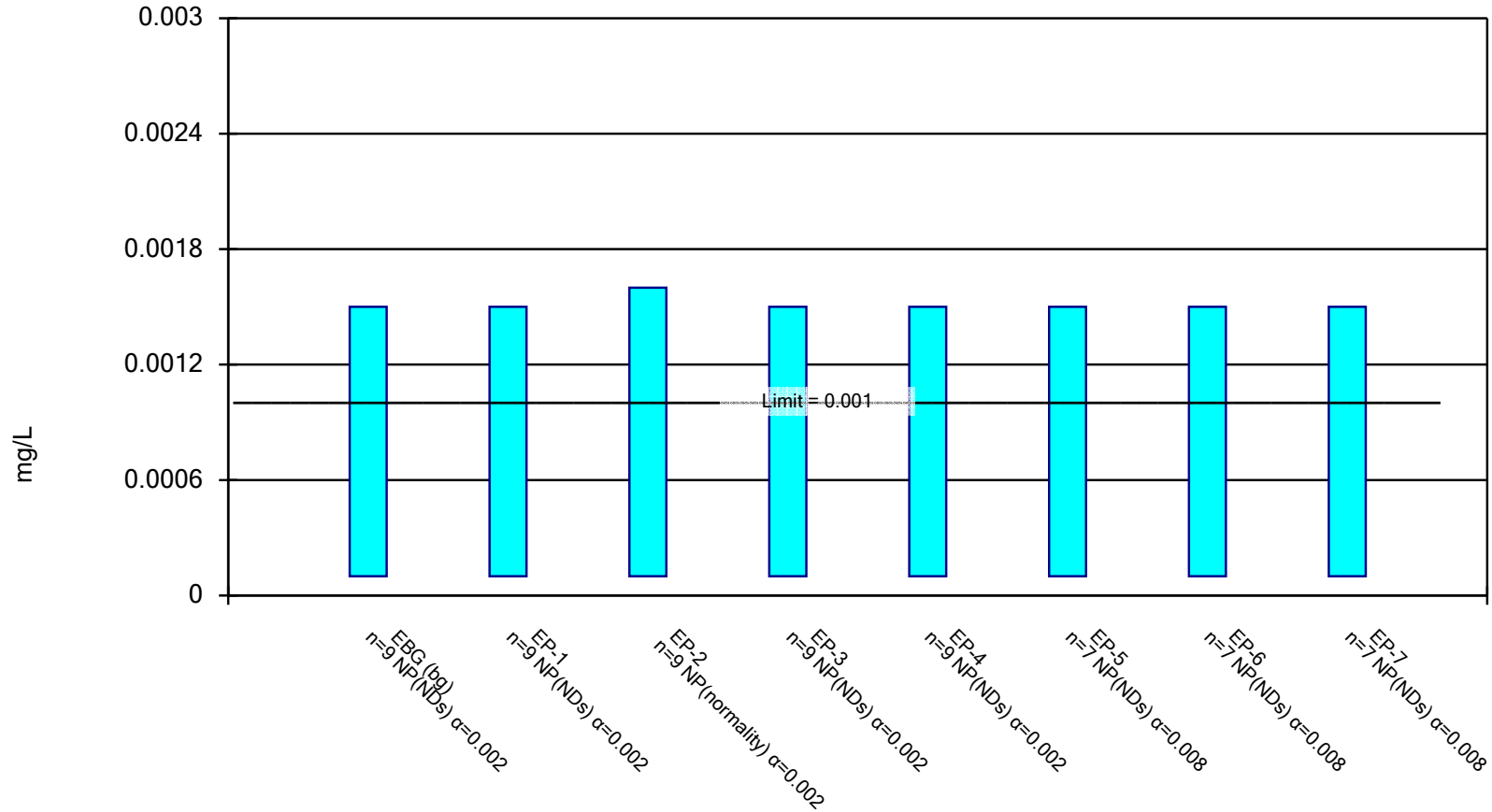
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Boron    Analysis Run 7/14/2023 11:06 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

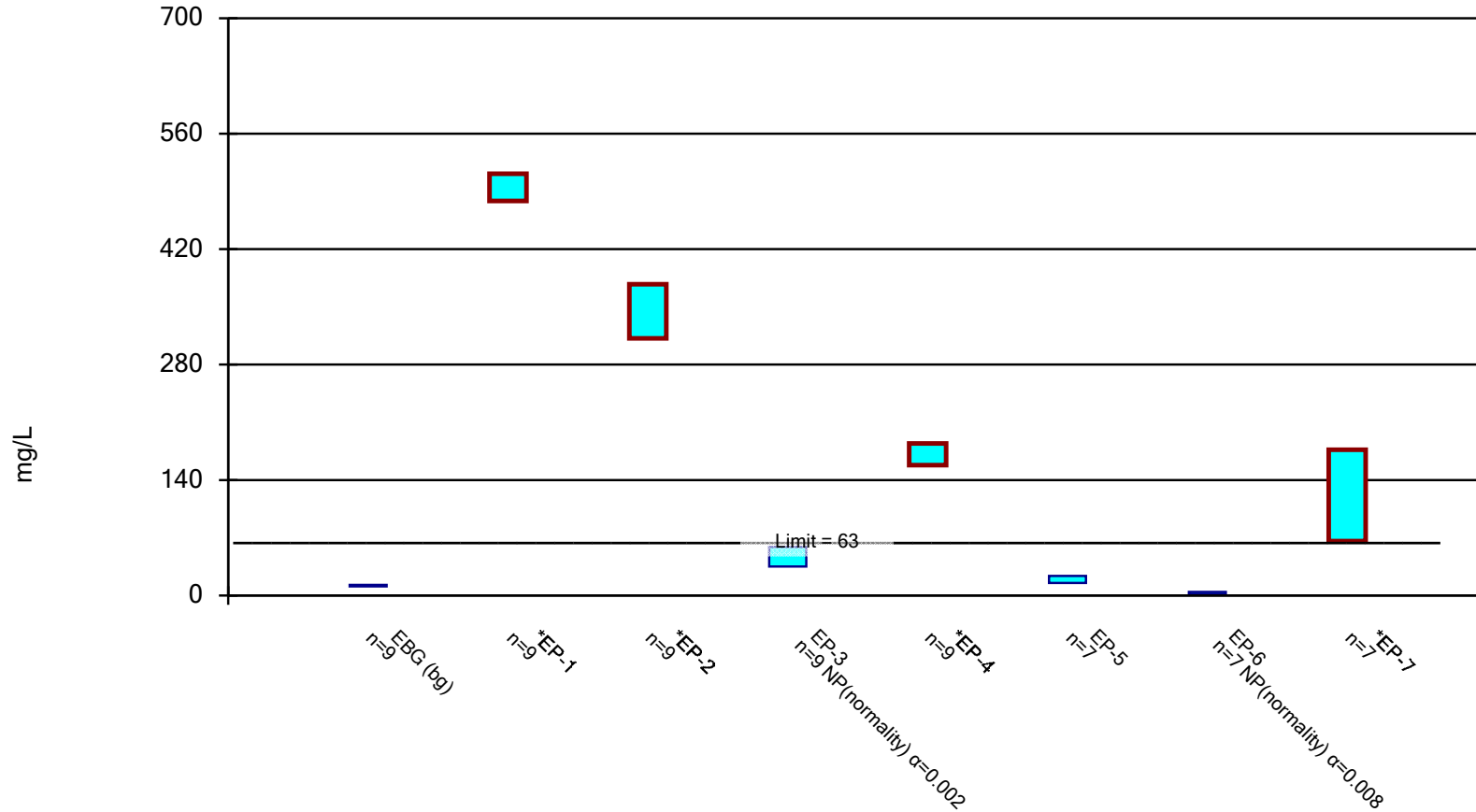


Constituent: Cadmium Analysis Run 7/14/2023 11:06 AM View: IEPA Background

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.

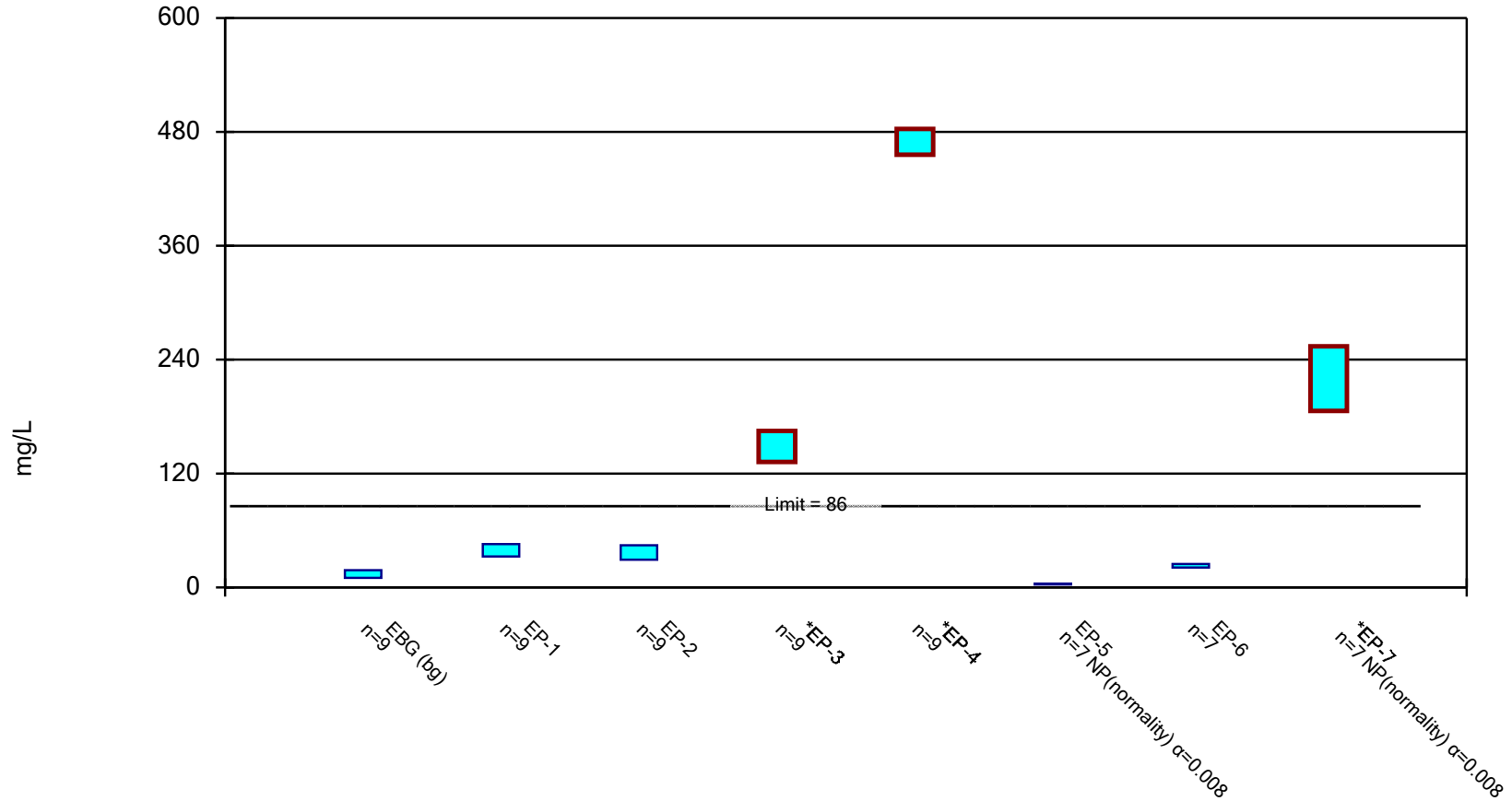


Constituent: Calcium Analysis Run 7/14/2023 11:06 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

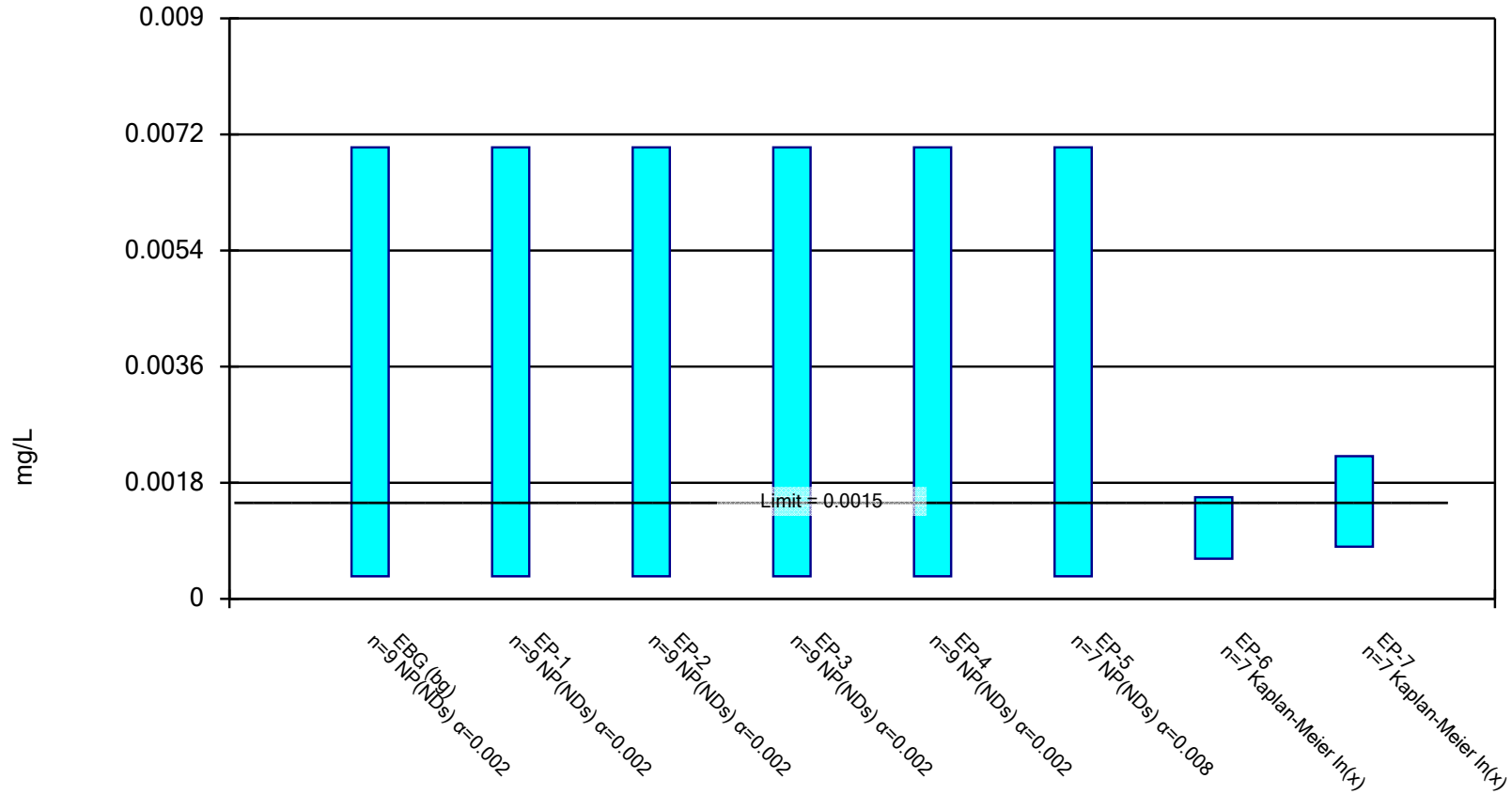
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chloride Analysis Run 7/14/2023 11:07 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

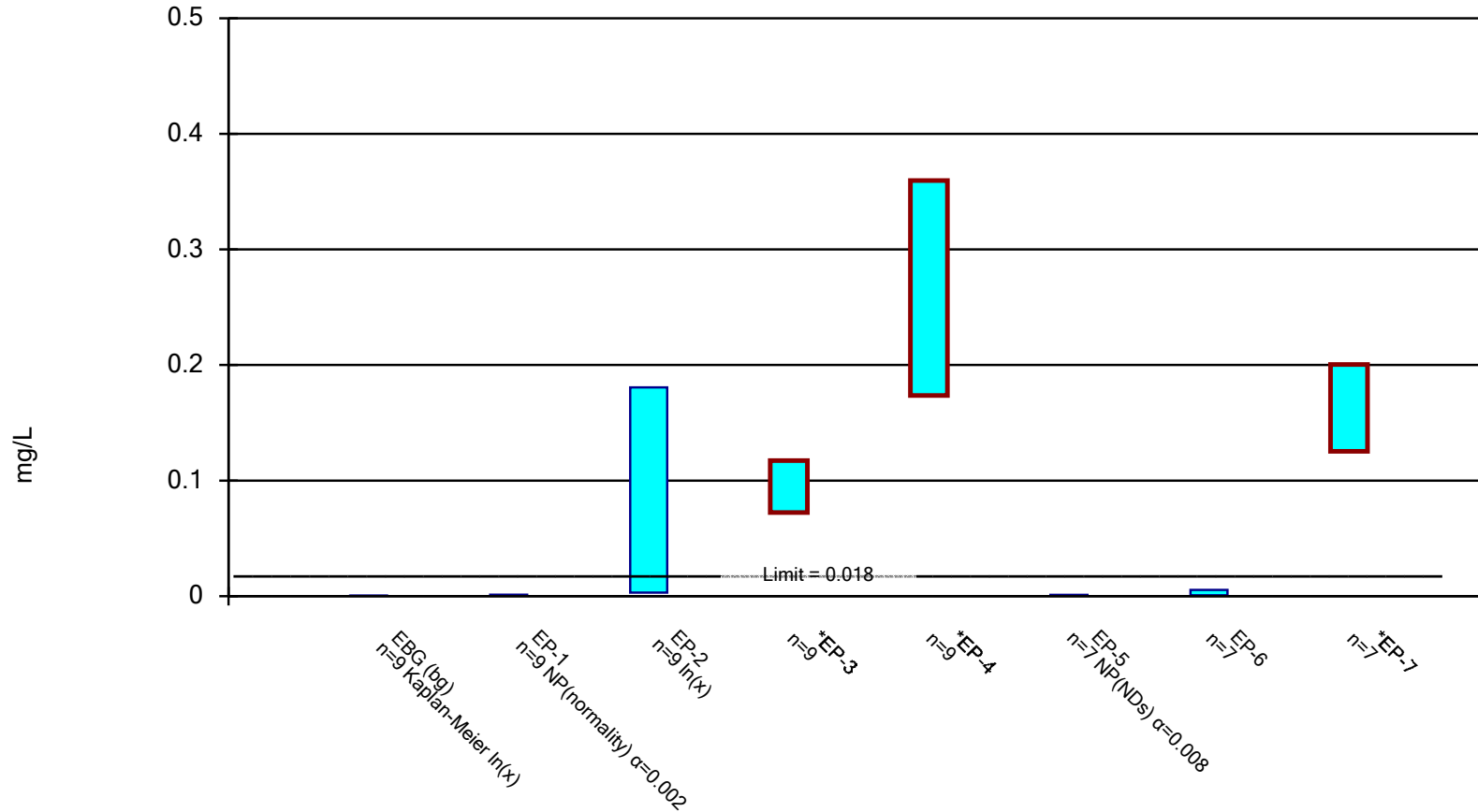


Constituent: Chromium Analysis Run 7/14/2023 11:07 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

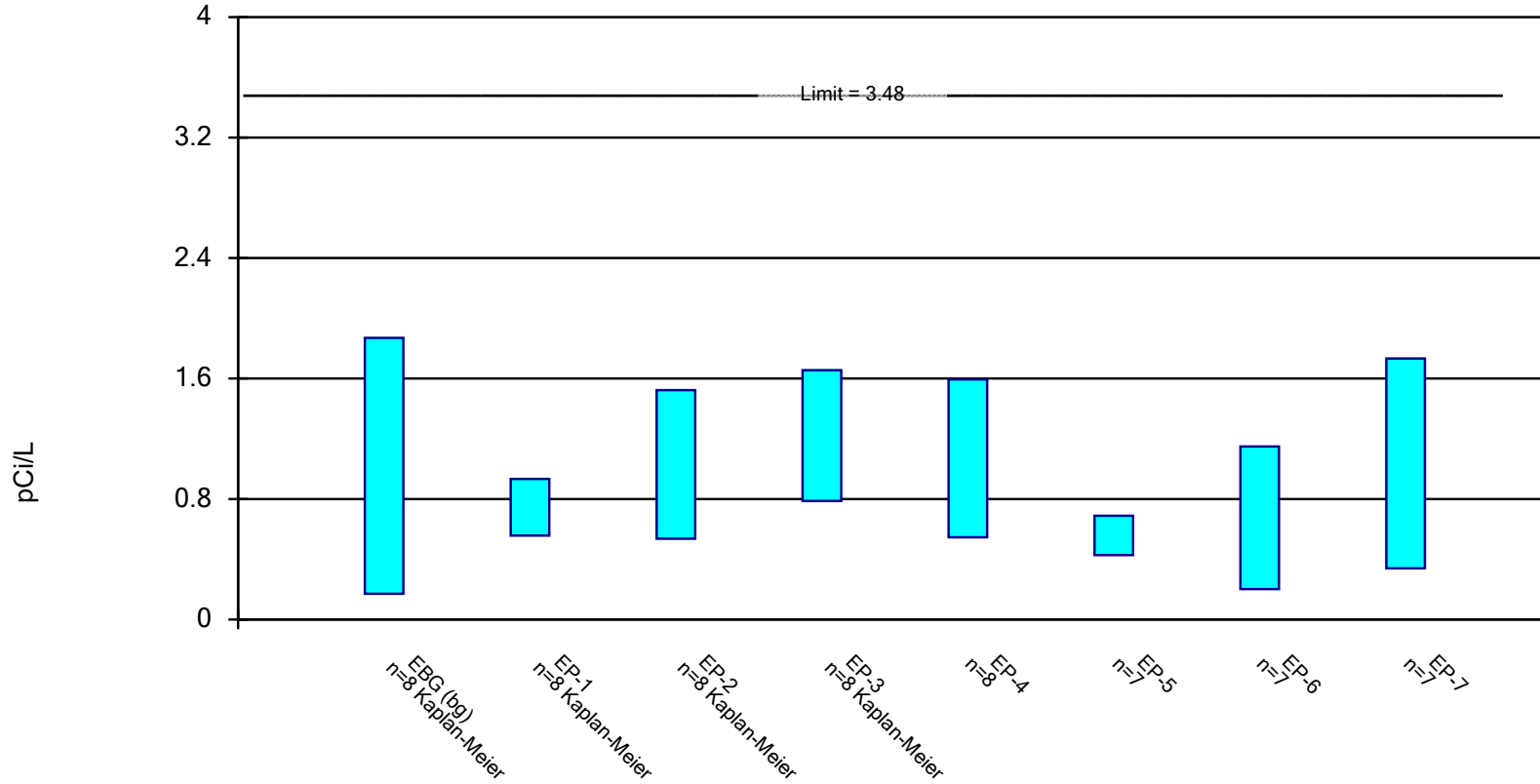
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/14/2023 11:07 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

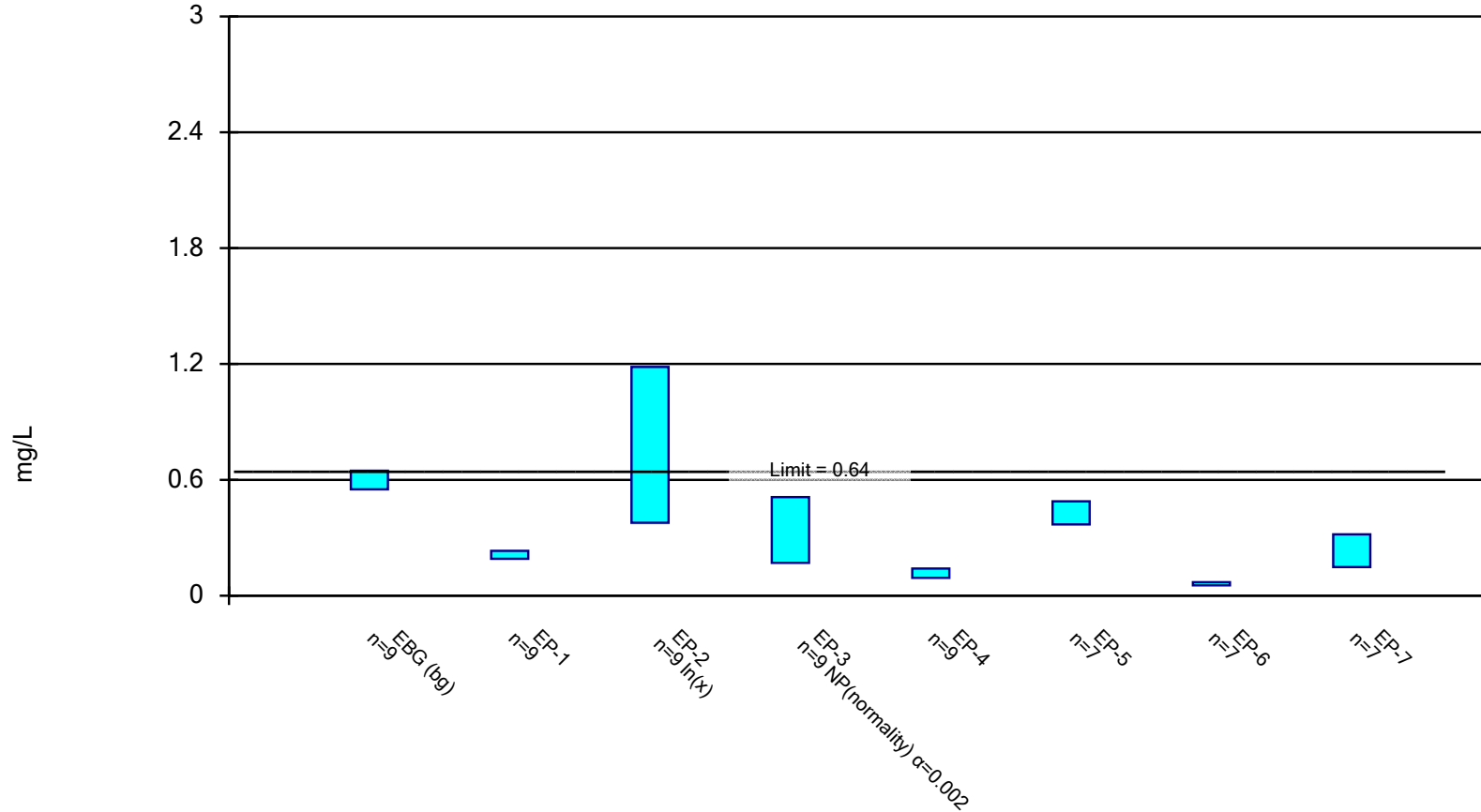


Constituent: Combined Radium Analysis Run 7/14/2023 11:07 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

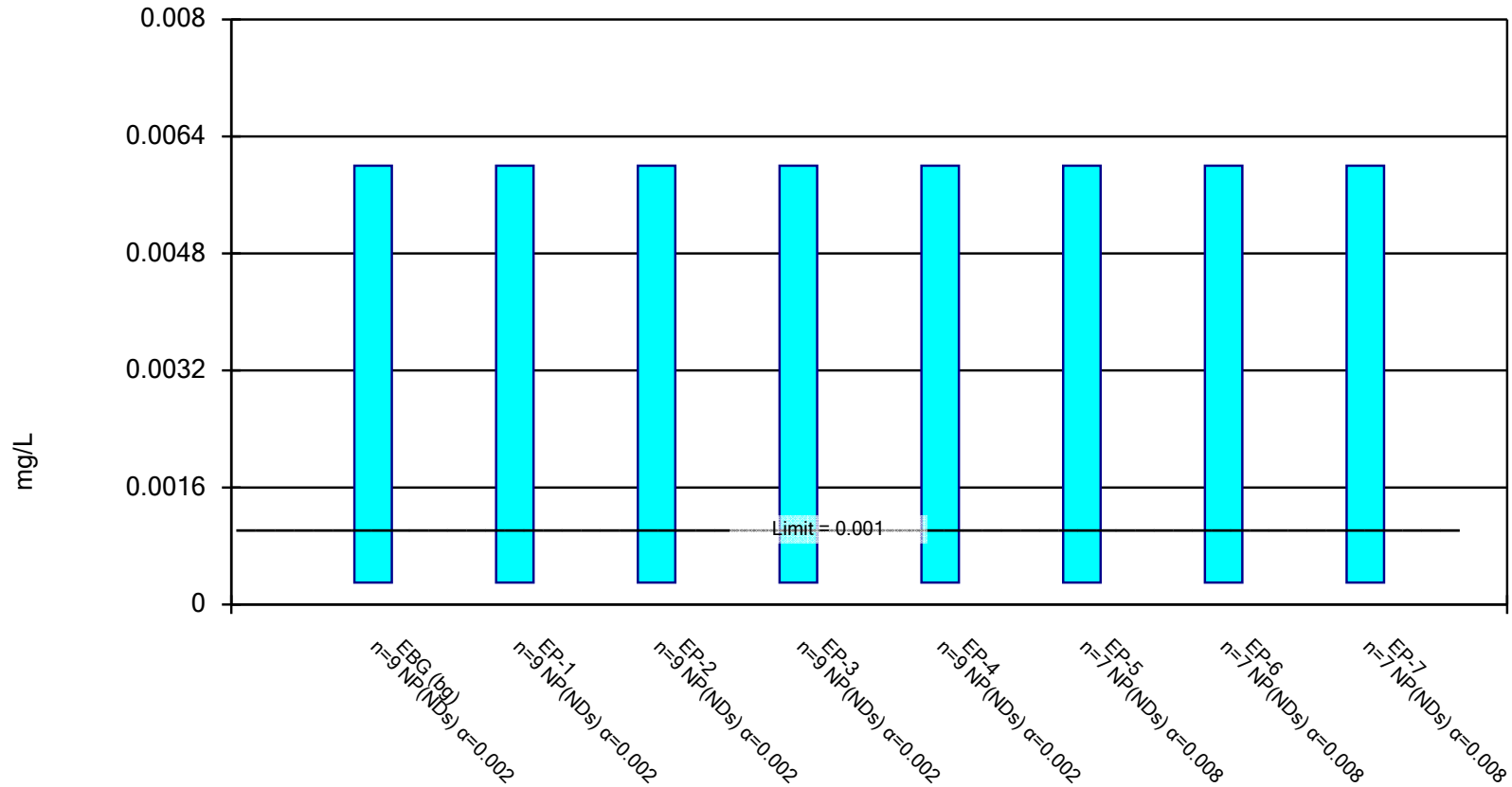
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/14/2023 11:07 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

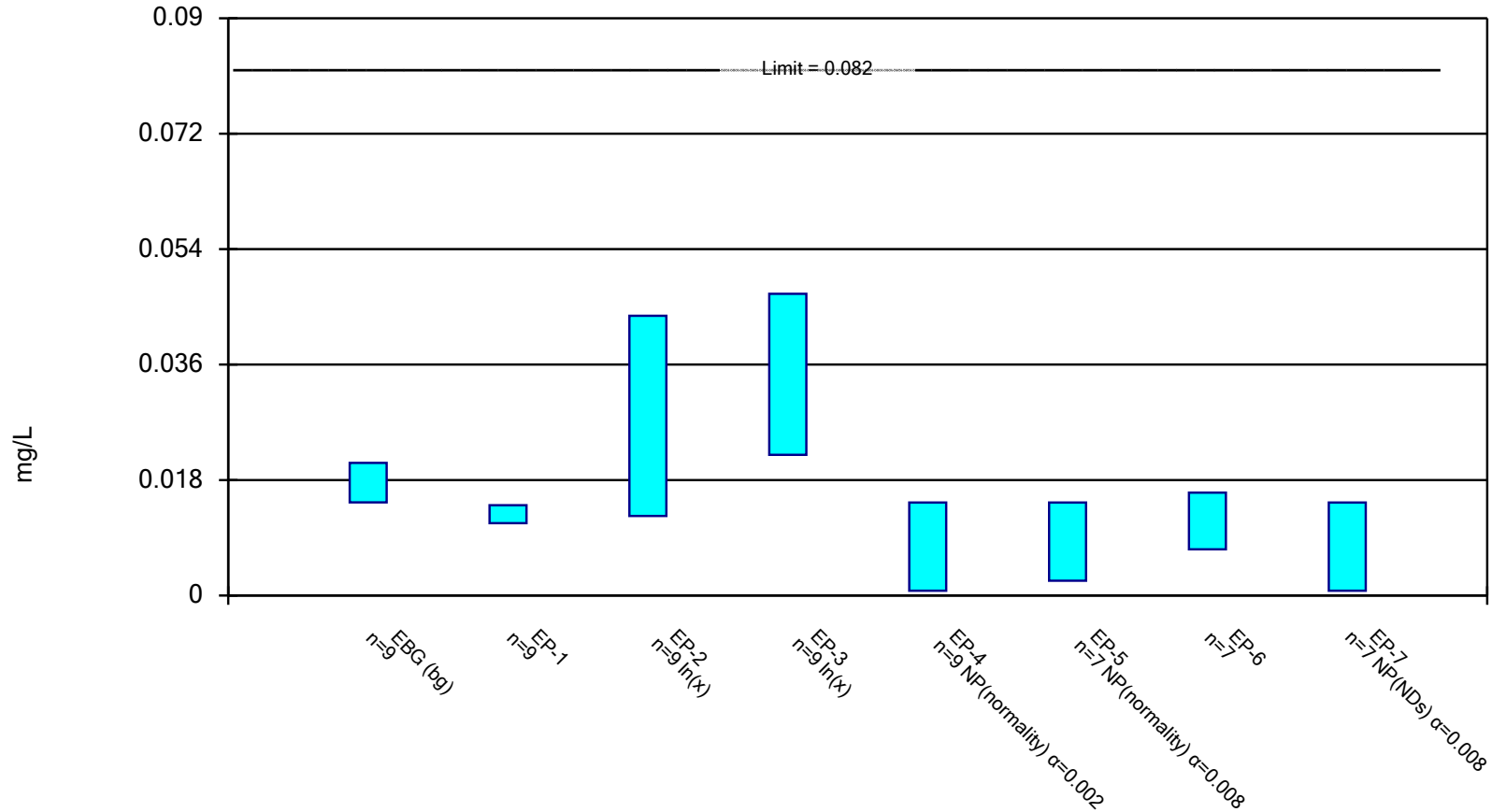
Compliance Limit is not exceeded.



Constituent: Lead    Analysis Run 7/14/2023 11:07 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

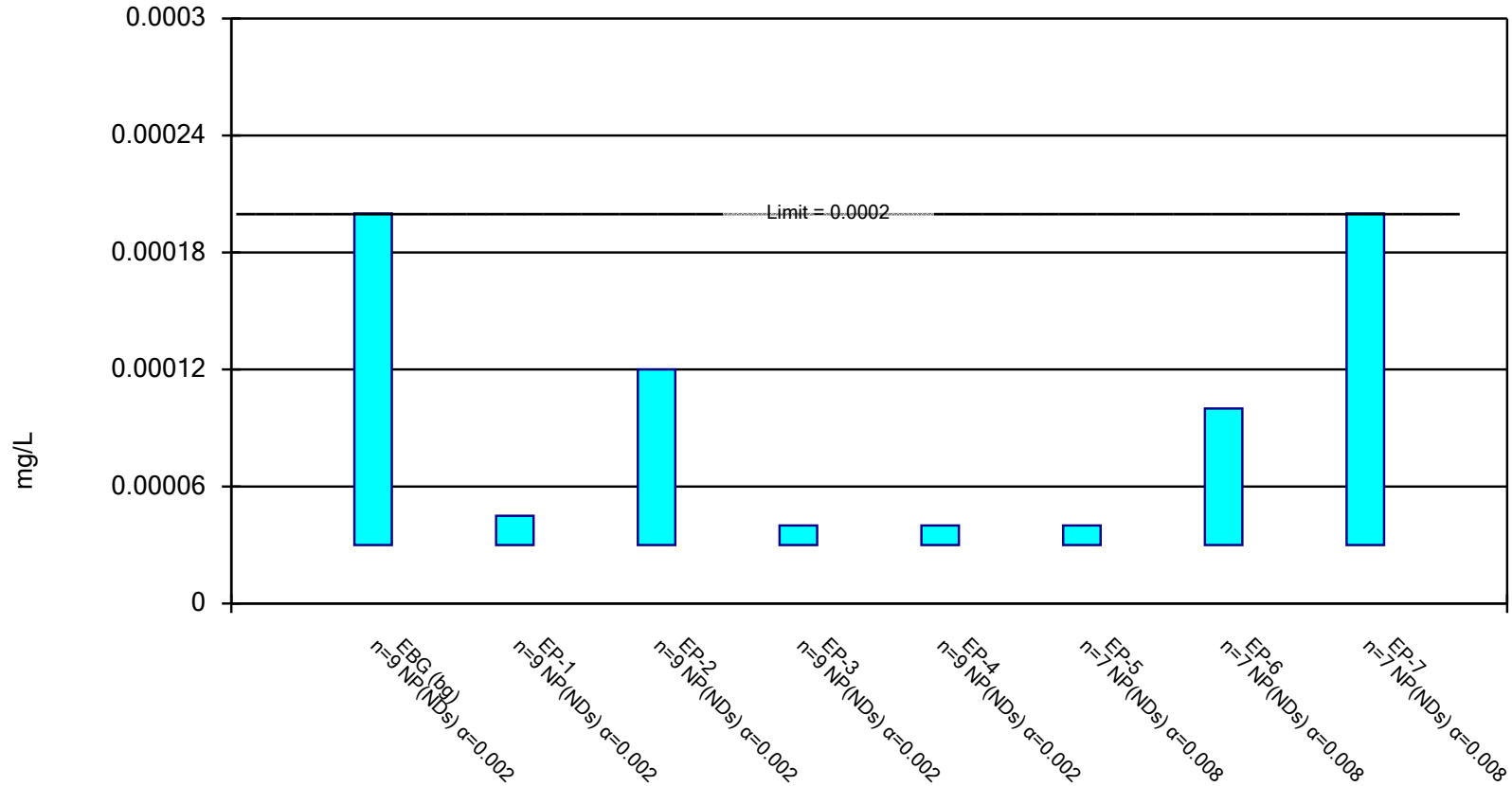
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium    Analysis Run 7/14/2023 11:07 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

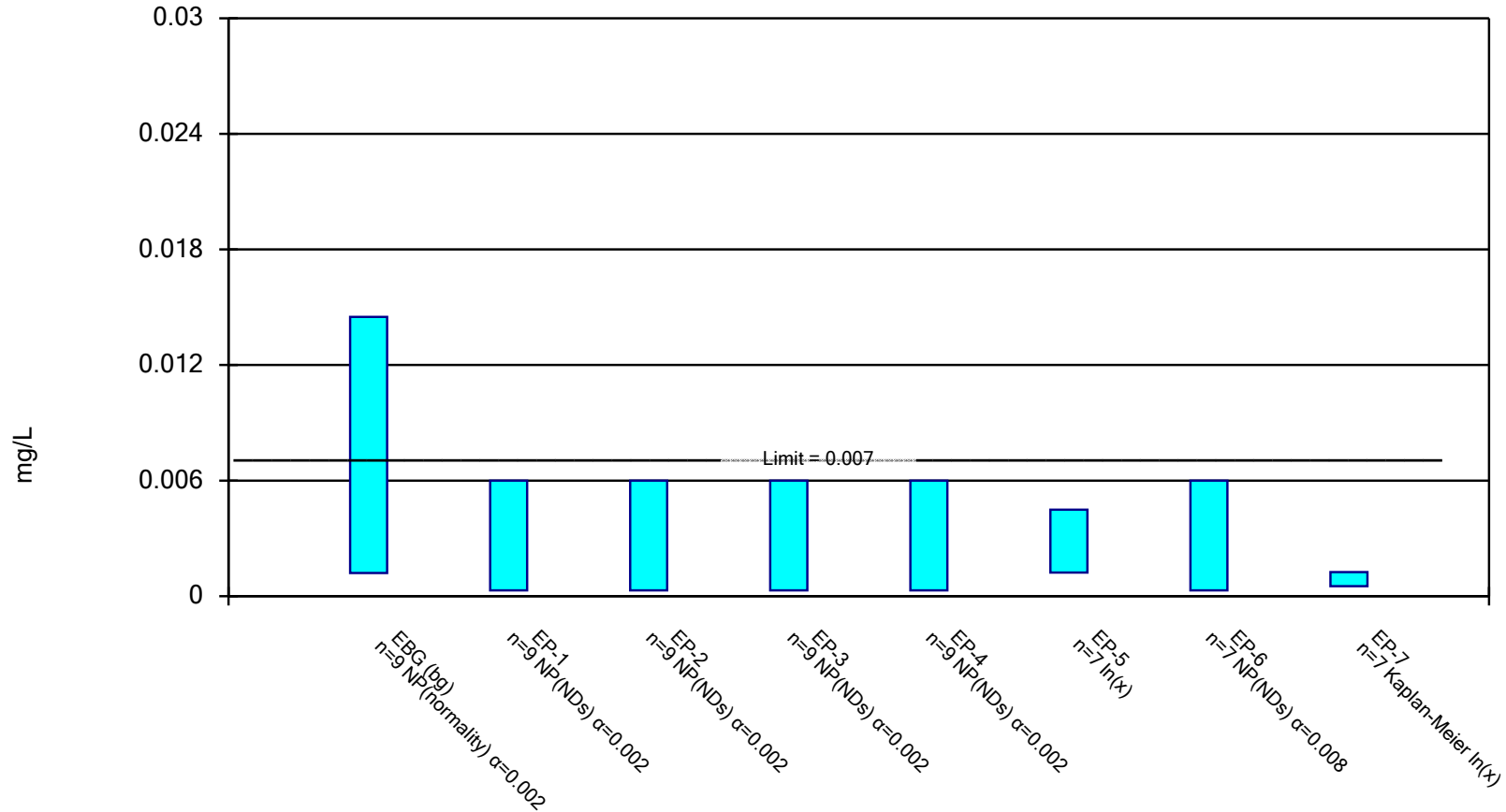


Constituent: Mercury Analysis Run 7/14/2023 11:08 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

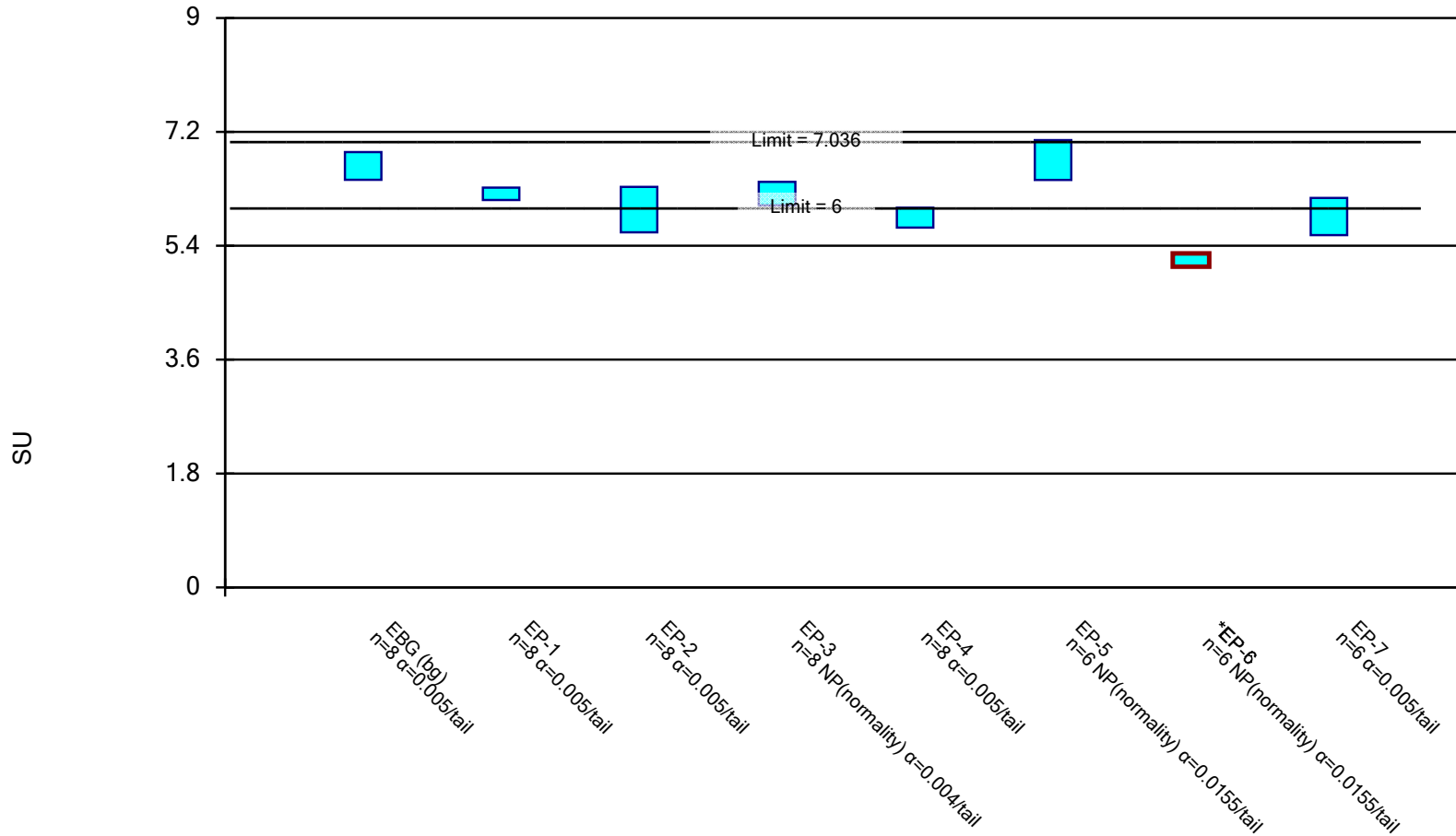


Constituent: Molybdenum Analysis Run 7/14/2023 11:08 AM View: IEPA Background

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

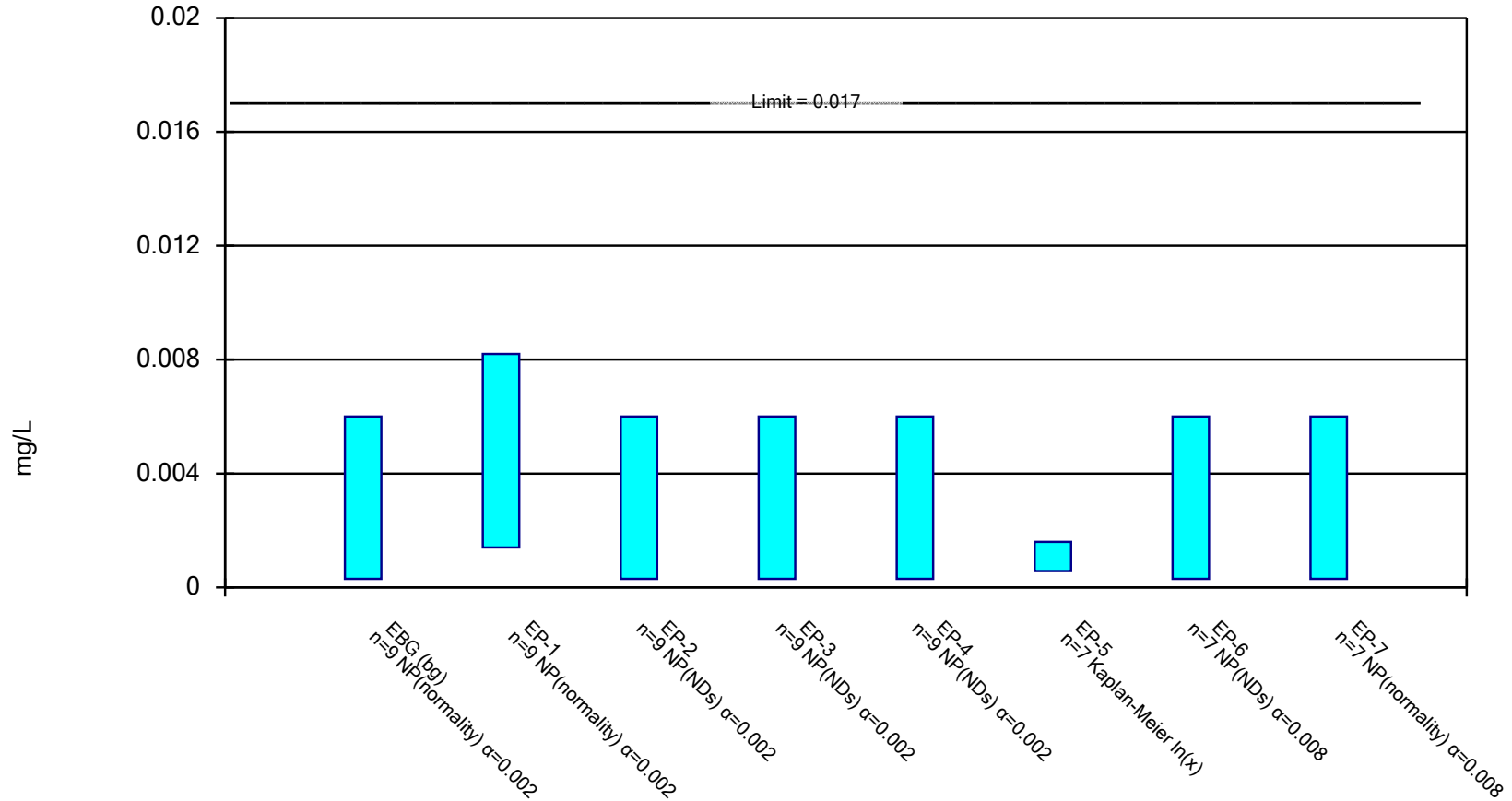
Compliance limit is exceeded.\* Normality Test: Shapiro Wilk, alpha based on n.



Constituent: pH Analysis Run 7/14/2023 11:08 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

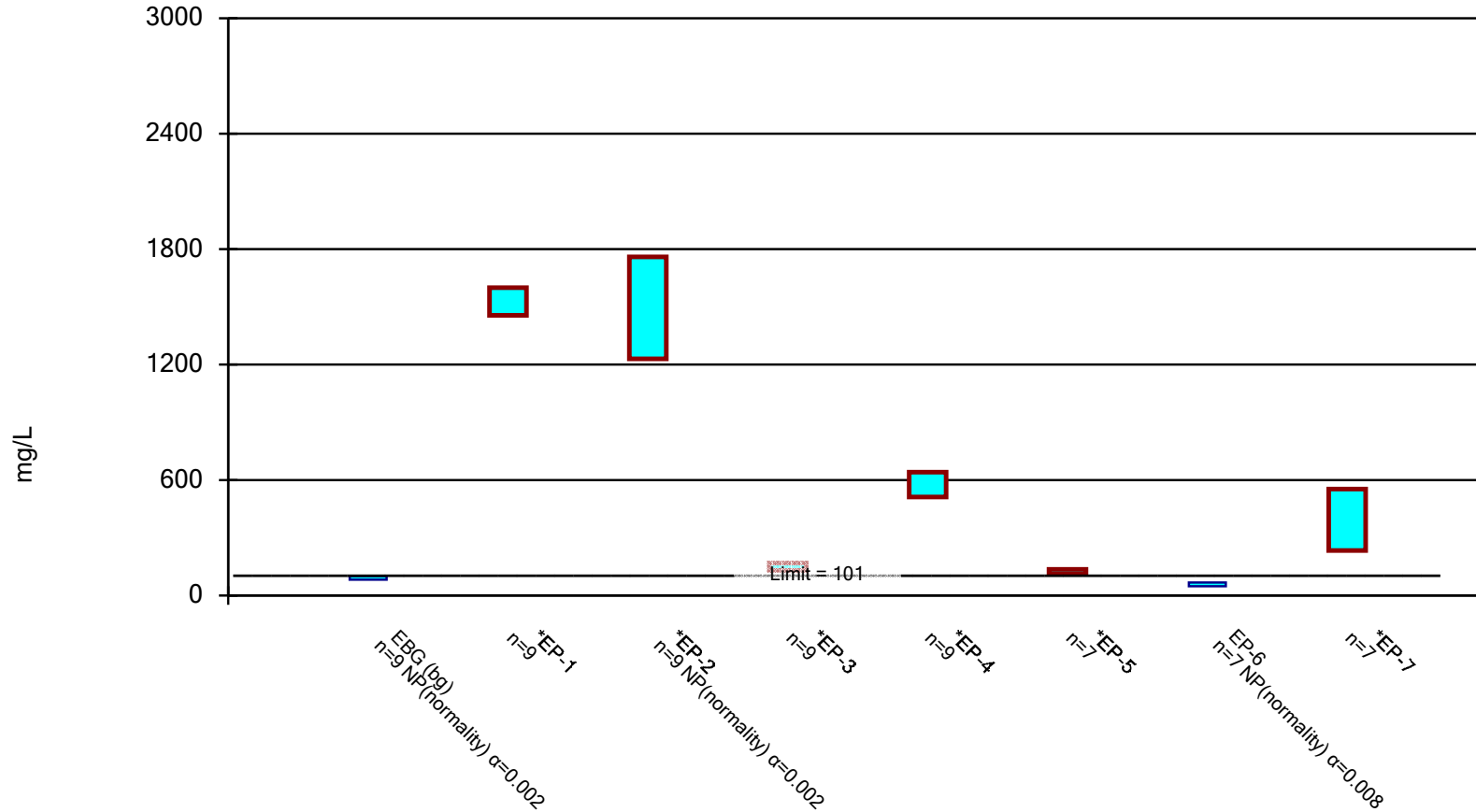
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/14/2023 11:08 AM View: IEPA Background  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

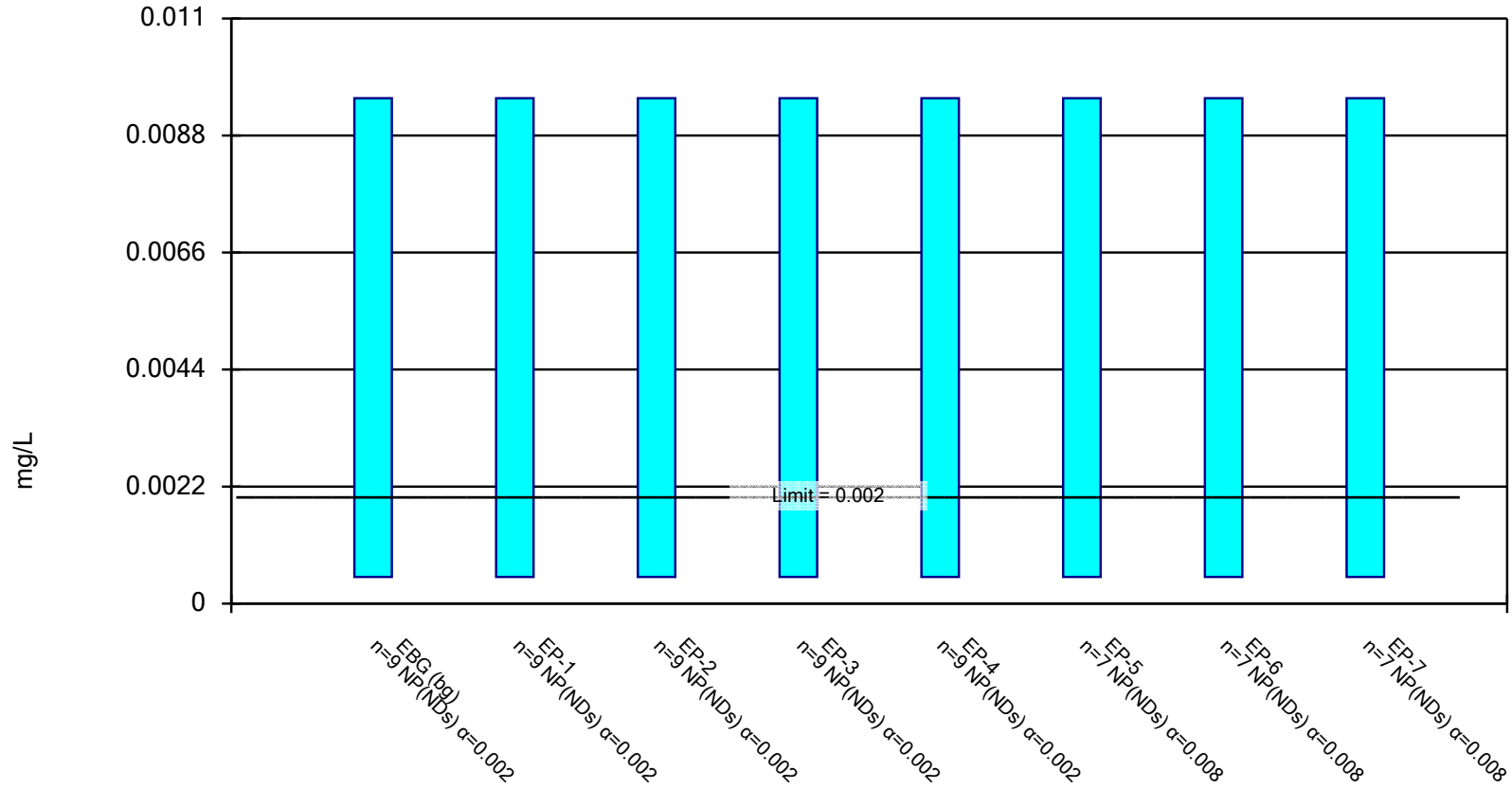
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Sulfate    Analysis Run 7/14/2023 11:08 AM    View: IEPA Background  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

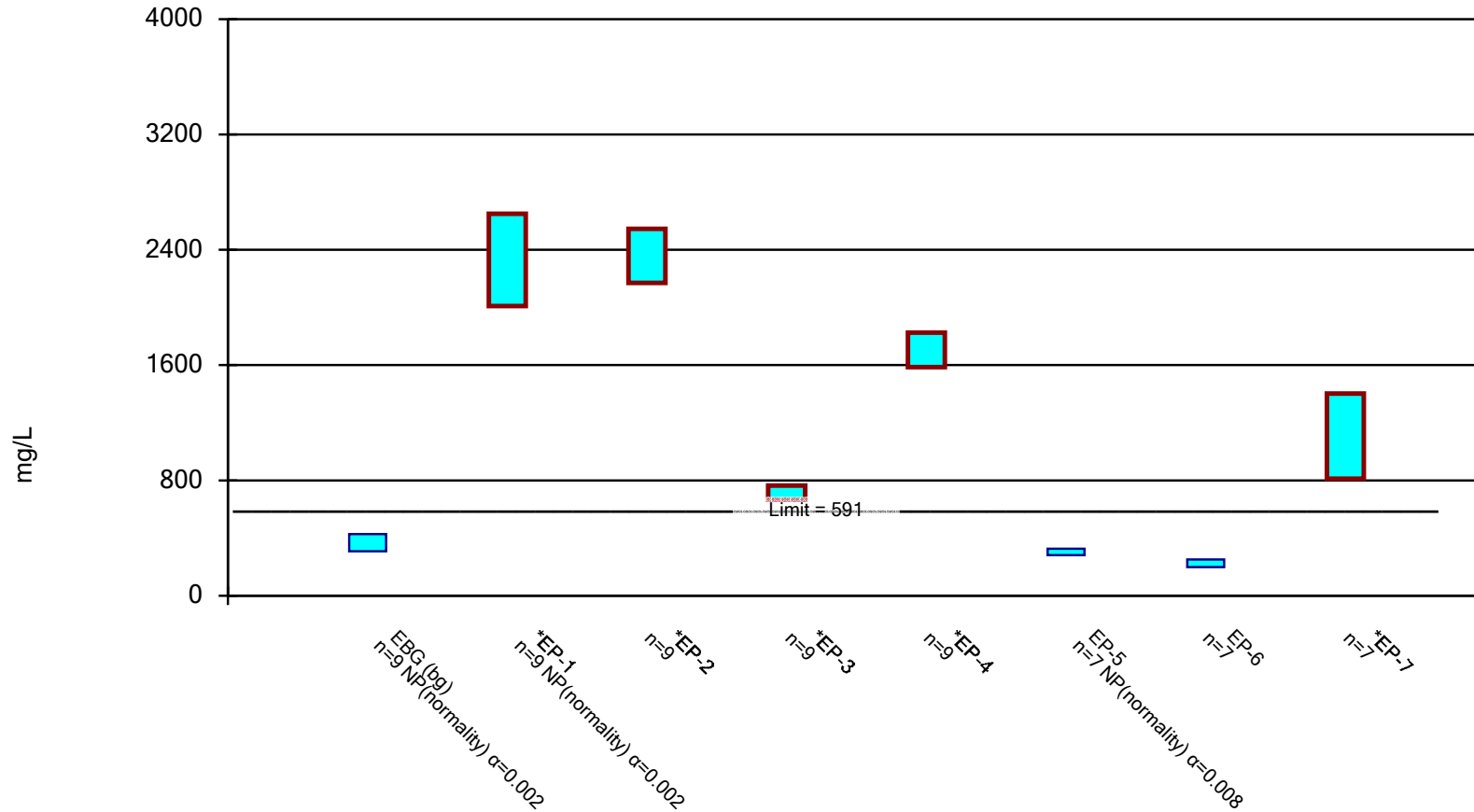
Compliance Limit is not exceeded.



Constituent: Thallium    Analysis Run 7/14/2023 11:08 AM    View: IEPA Background  
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 7/14/2023 11:09 AM View: IEPA Background

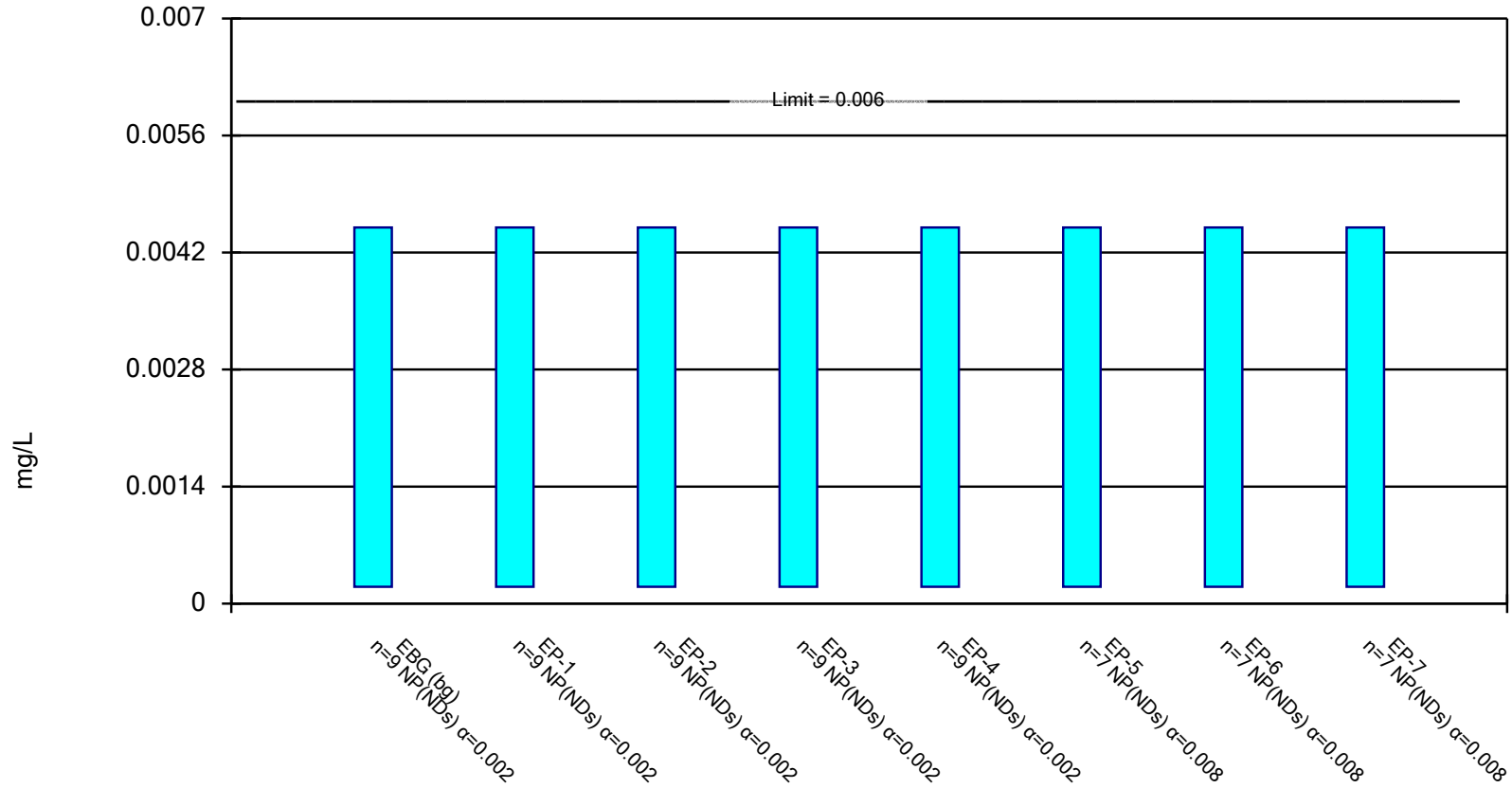
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-11**

**Q2 2023 Groundwater Protection  
Standard Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



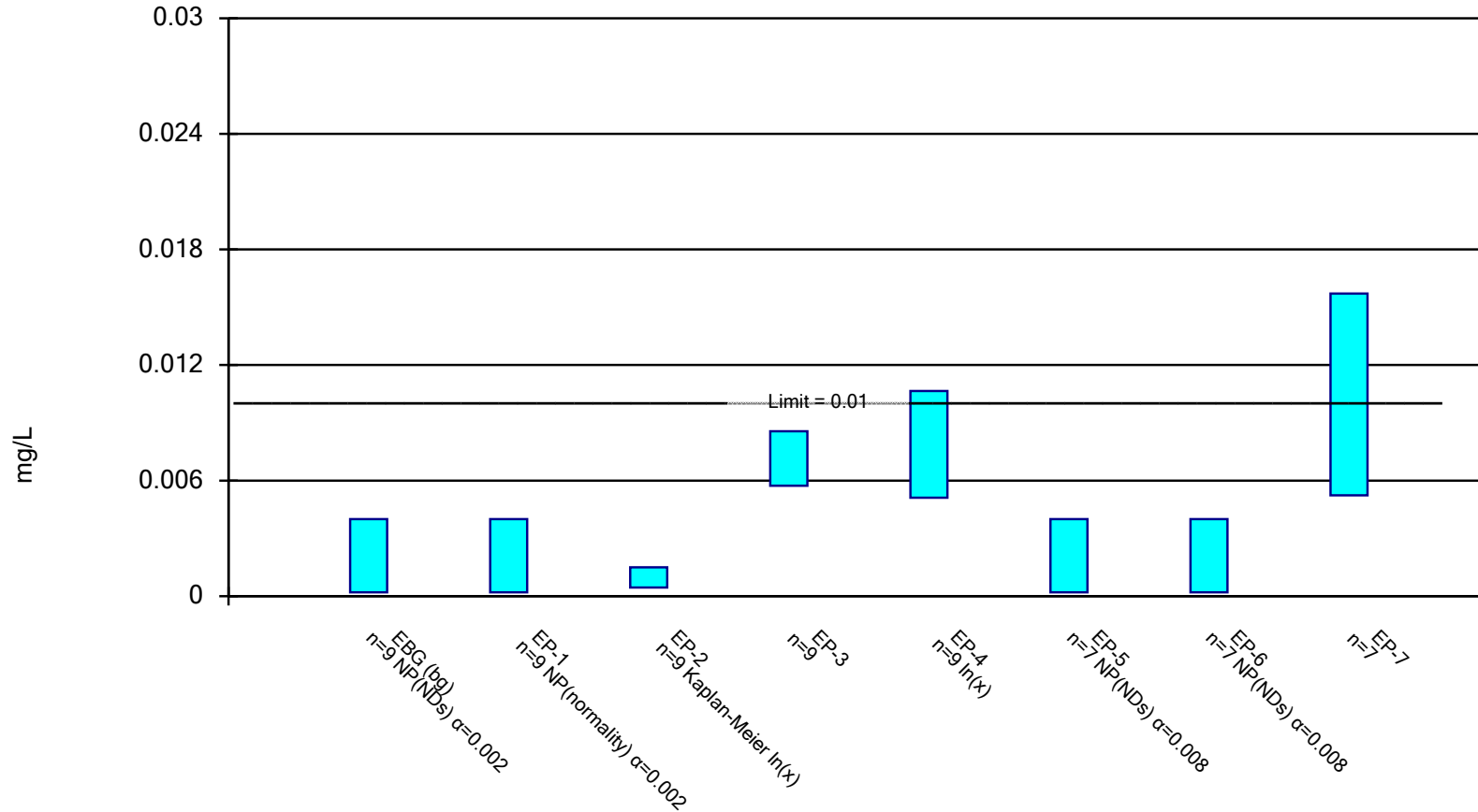
Constituent: Antimony Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

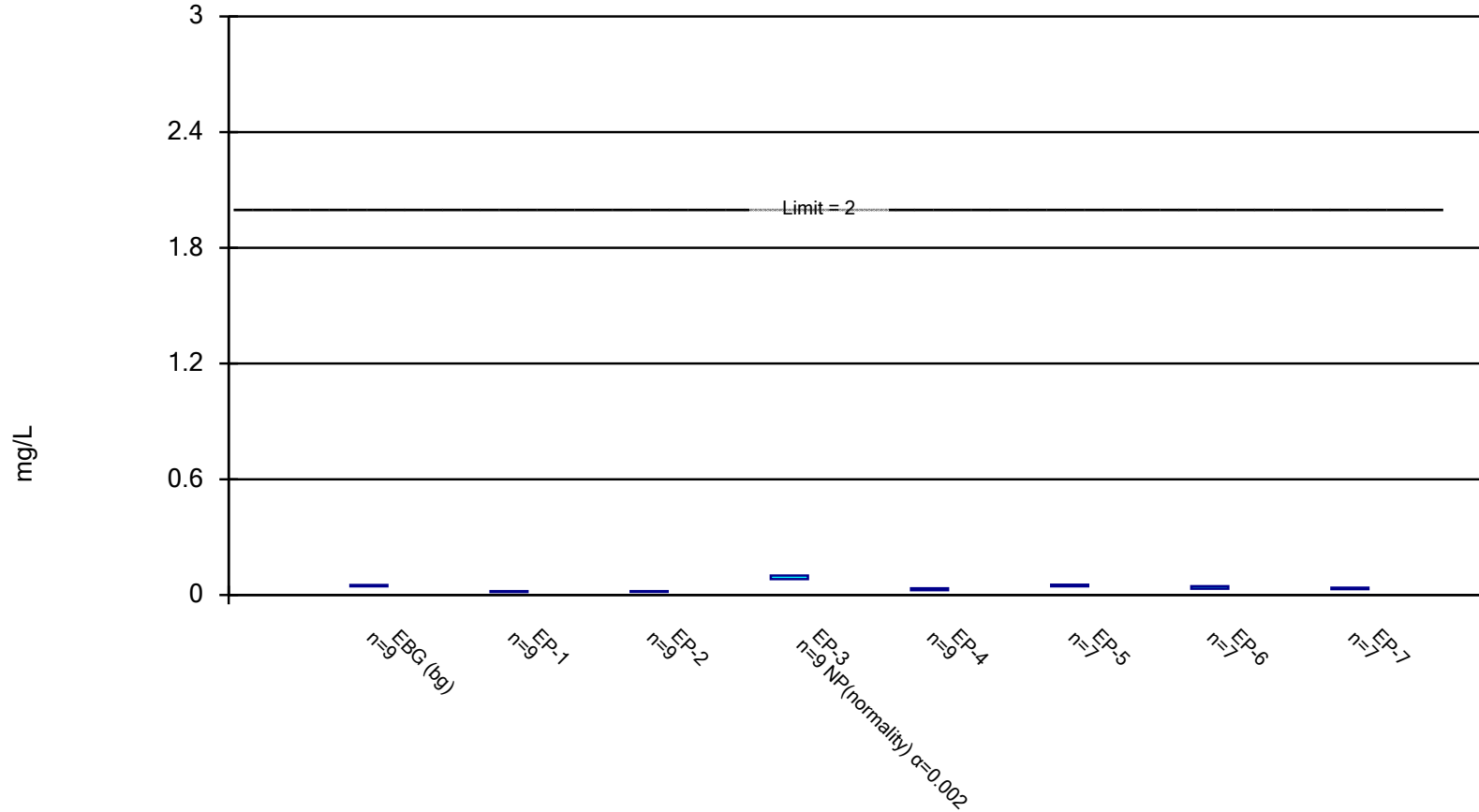


Constituent: Arsenic Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

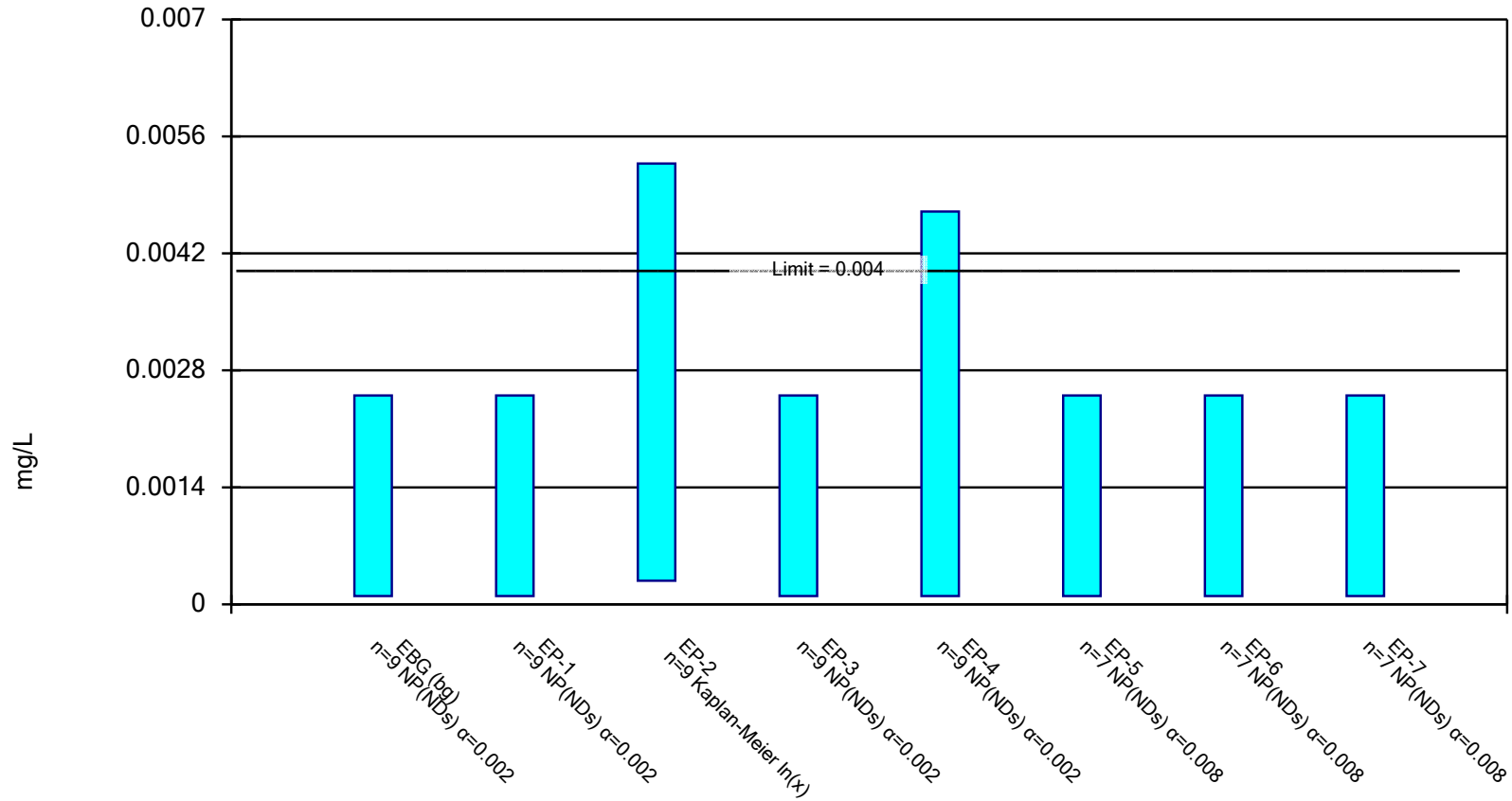
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/14/2023 11:11 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

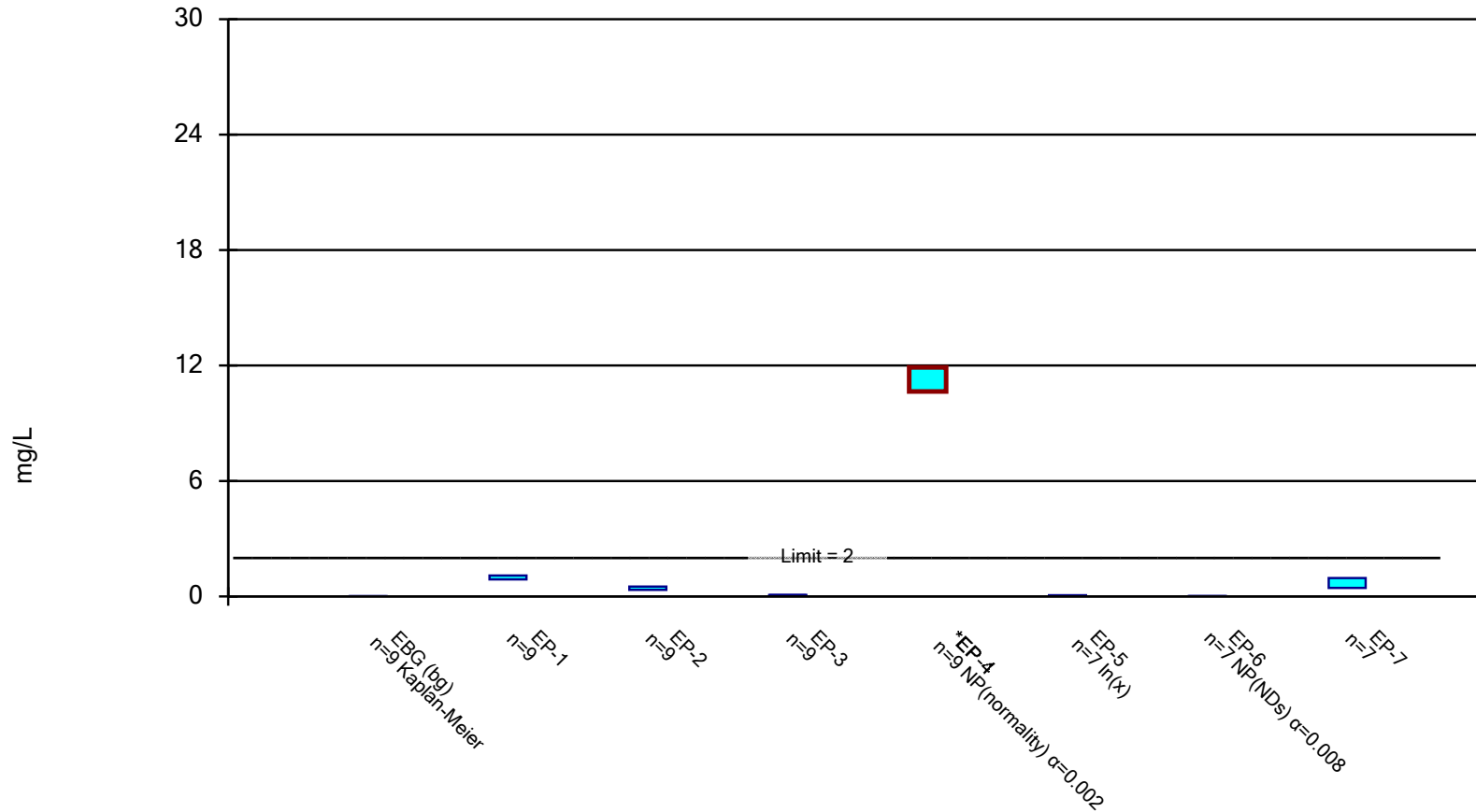


Constituent: Beryllium Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

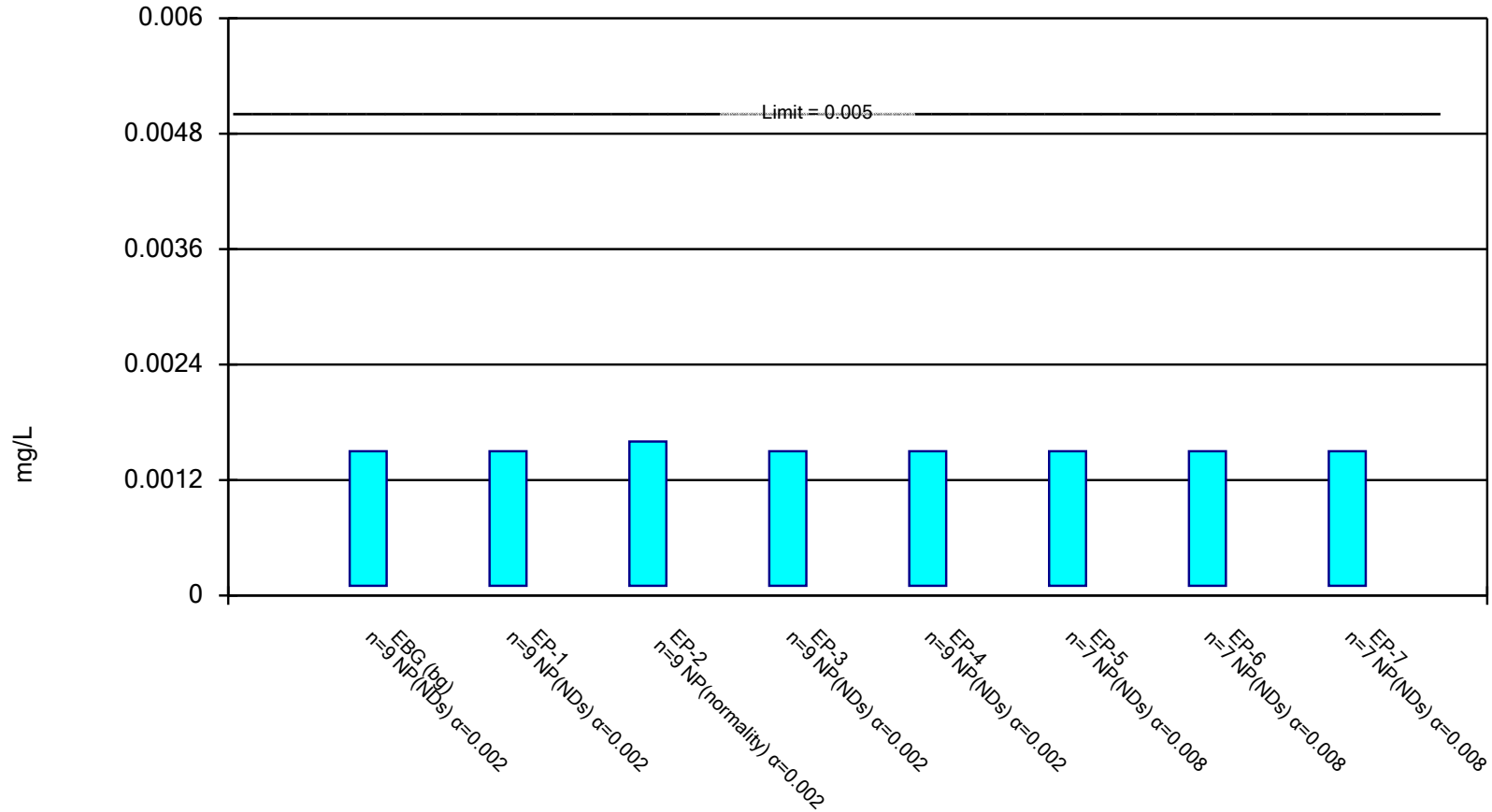


Constituent: Boron Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

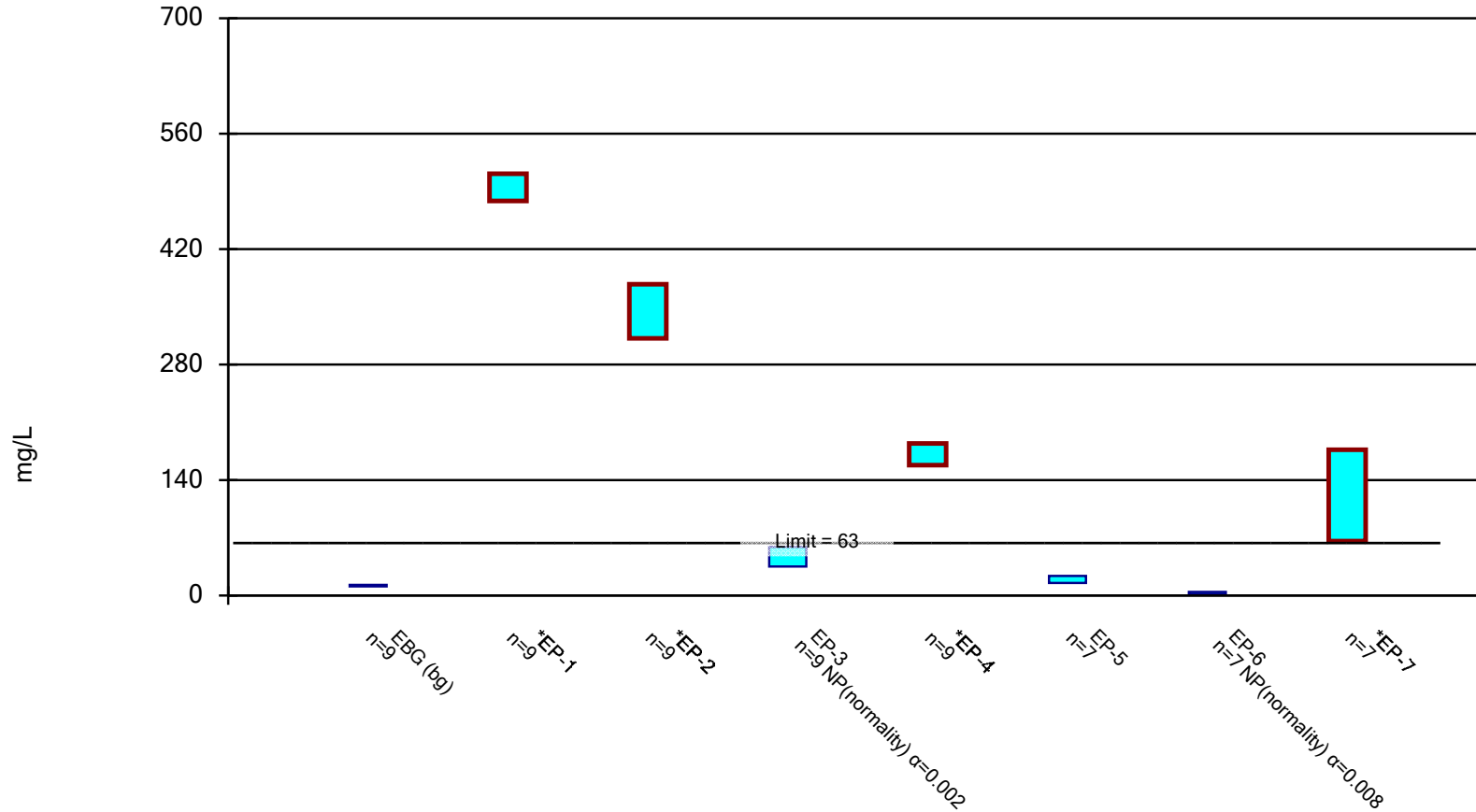


Constituent: Cadmium Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

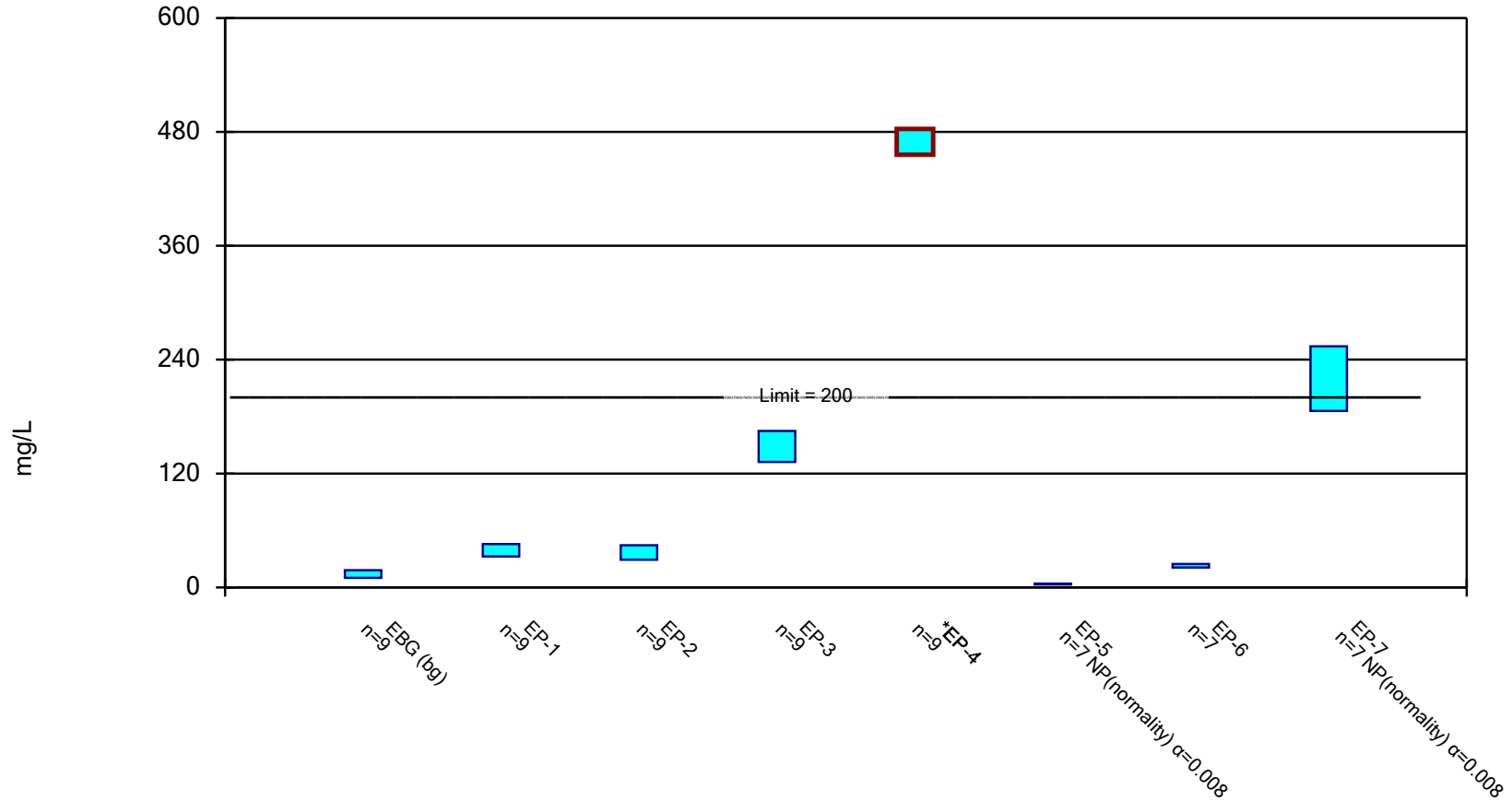


Constituent: Calcium Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

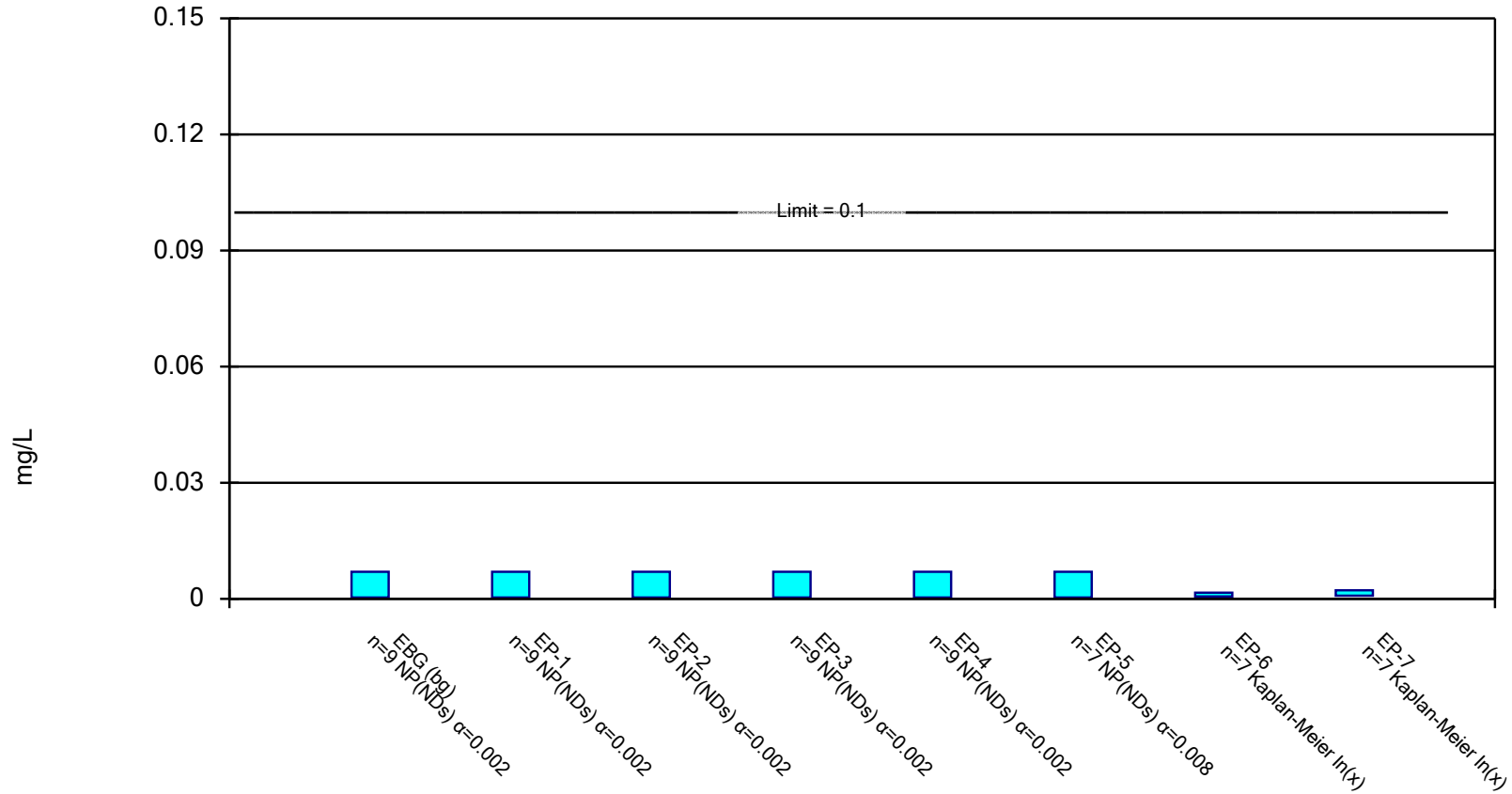
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chloride Analysis Run 7/14/2023 11:11 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

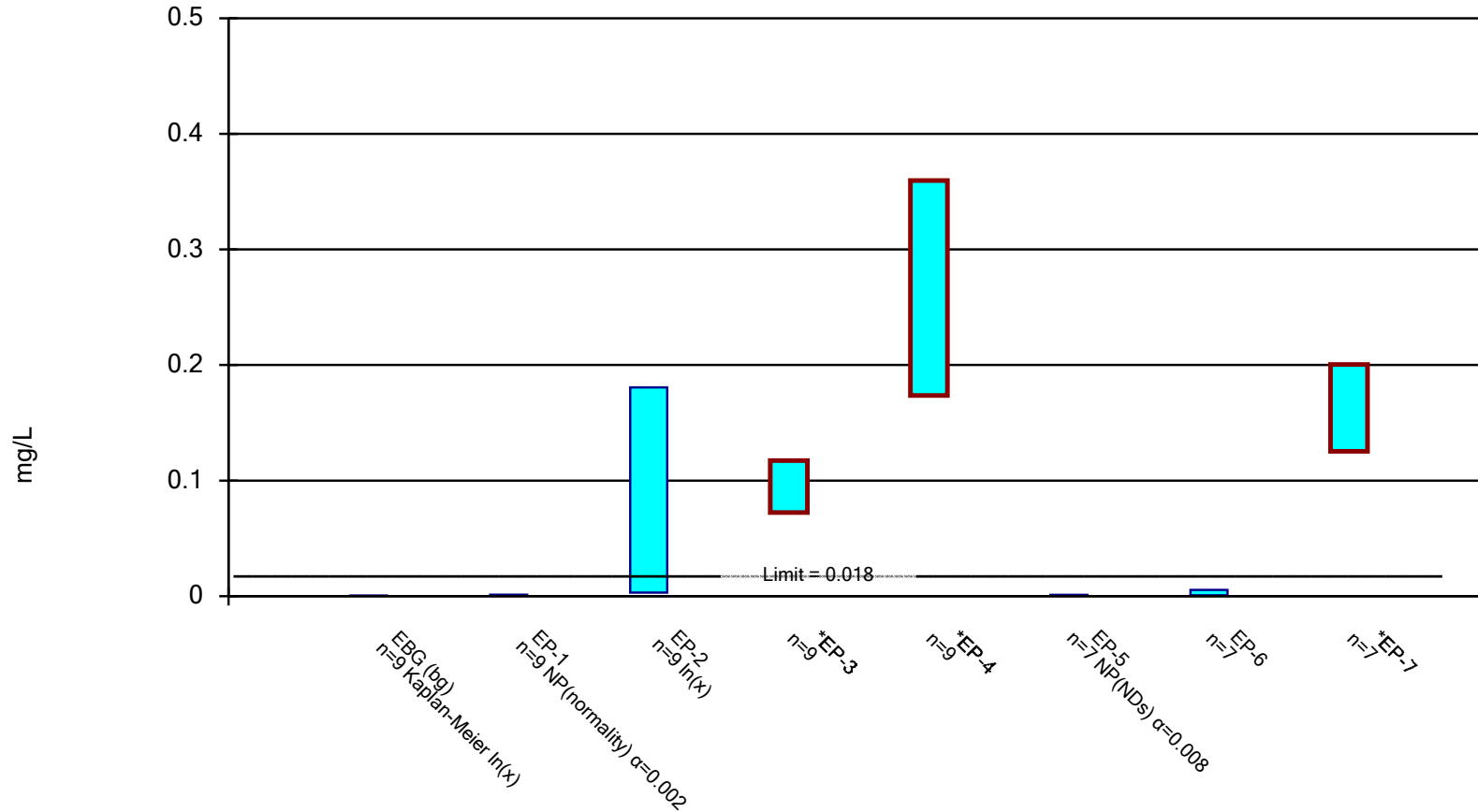


Constituent: Chromium Analysis Run 7/14/2023 11:11 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

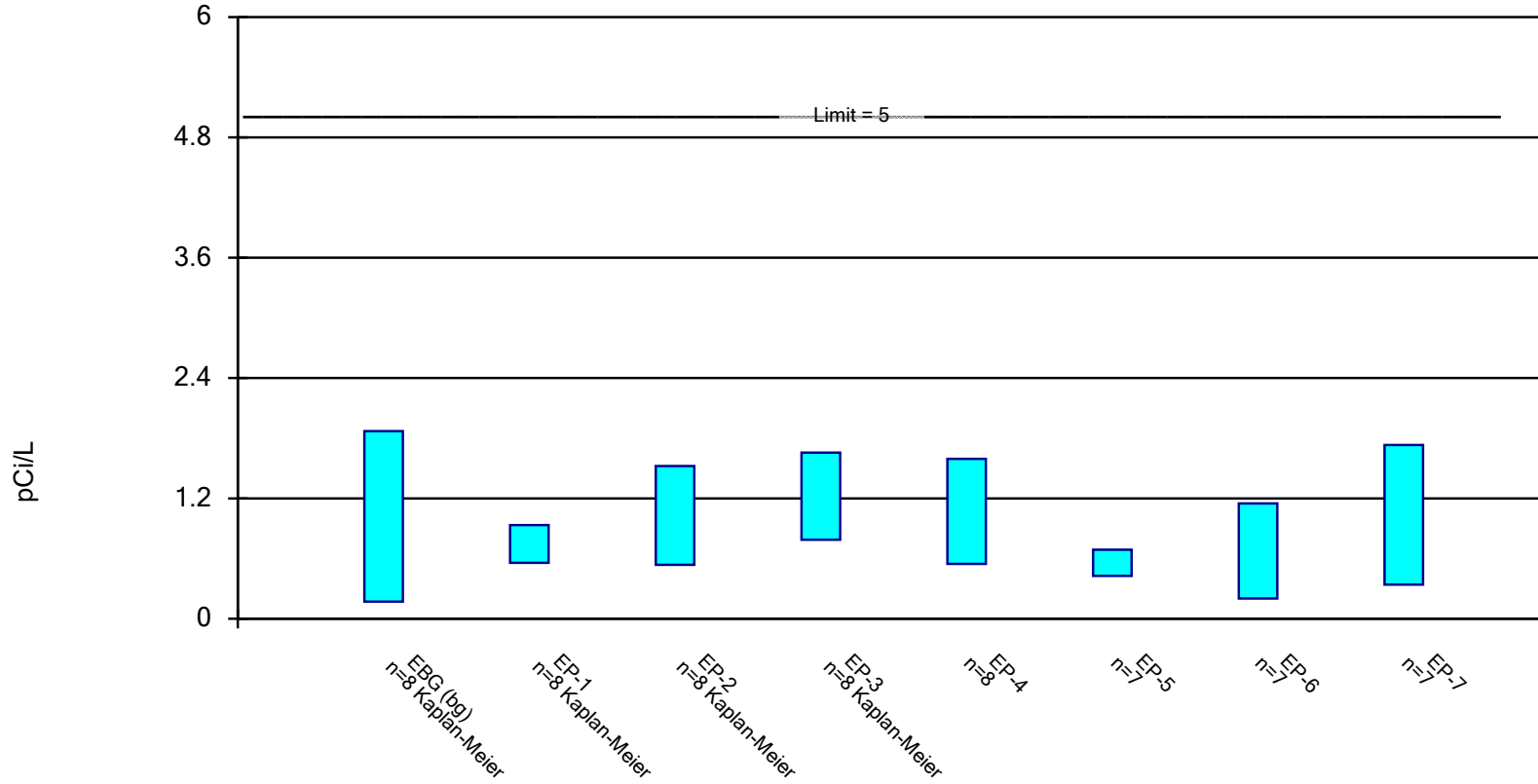


Constituent: Cobalt Analysis Run 7/14/2023 11:11 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric Confidence Interval

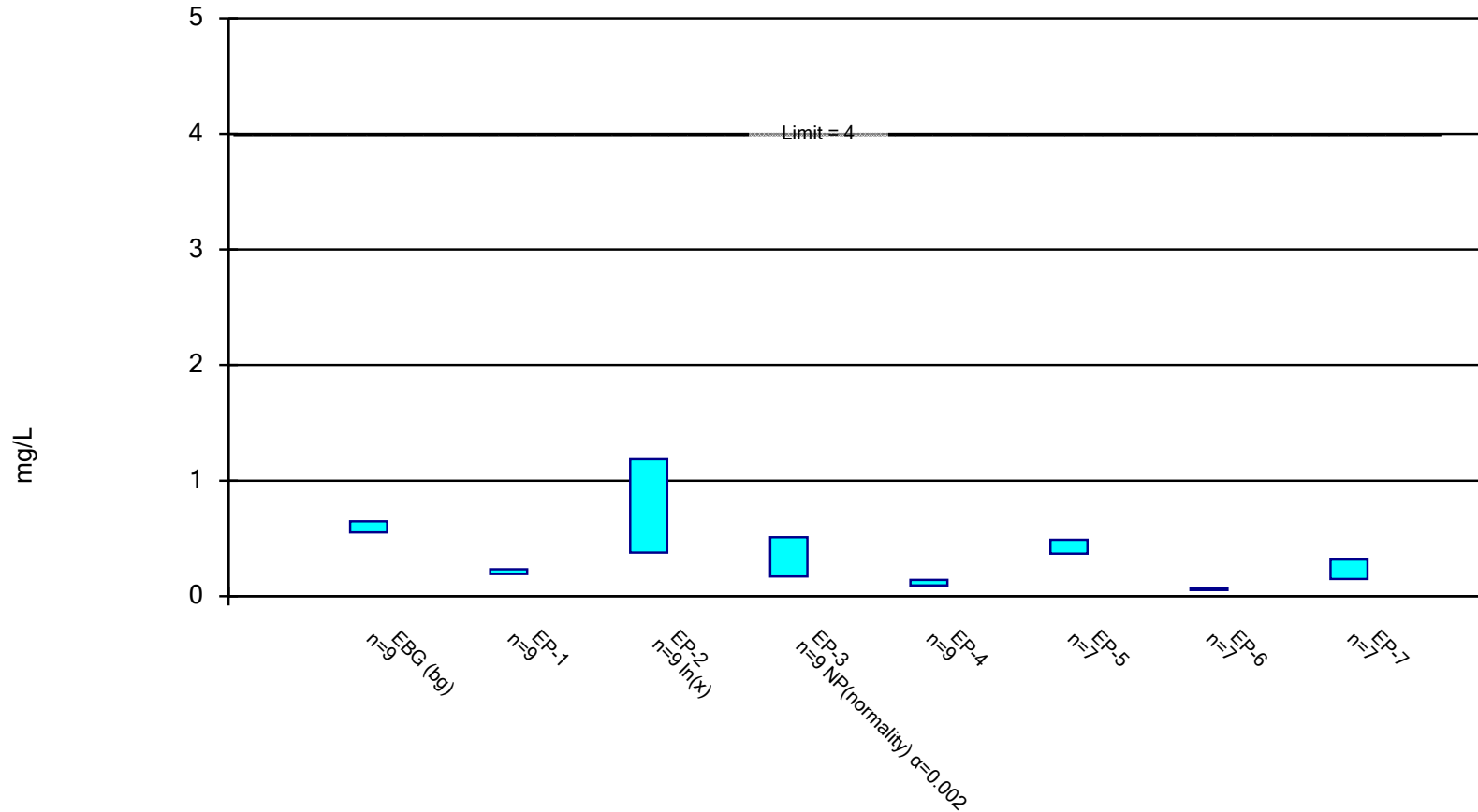
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium Analysis Run 7/14/2023 11:12 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

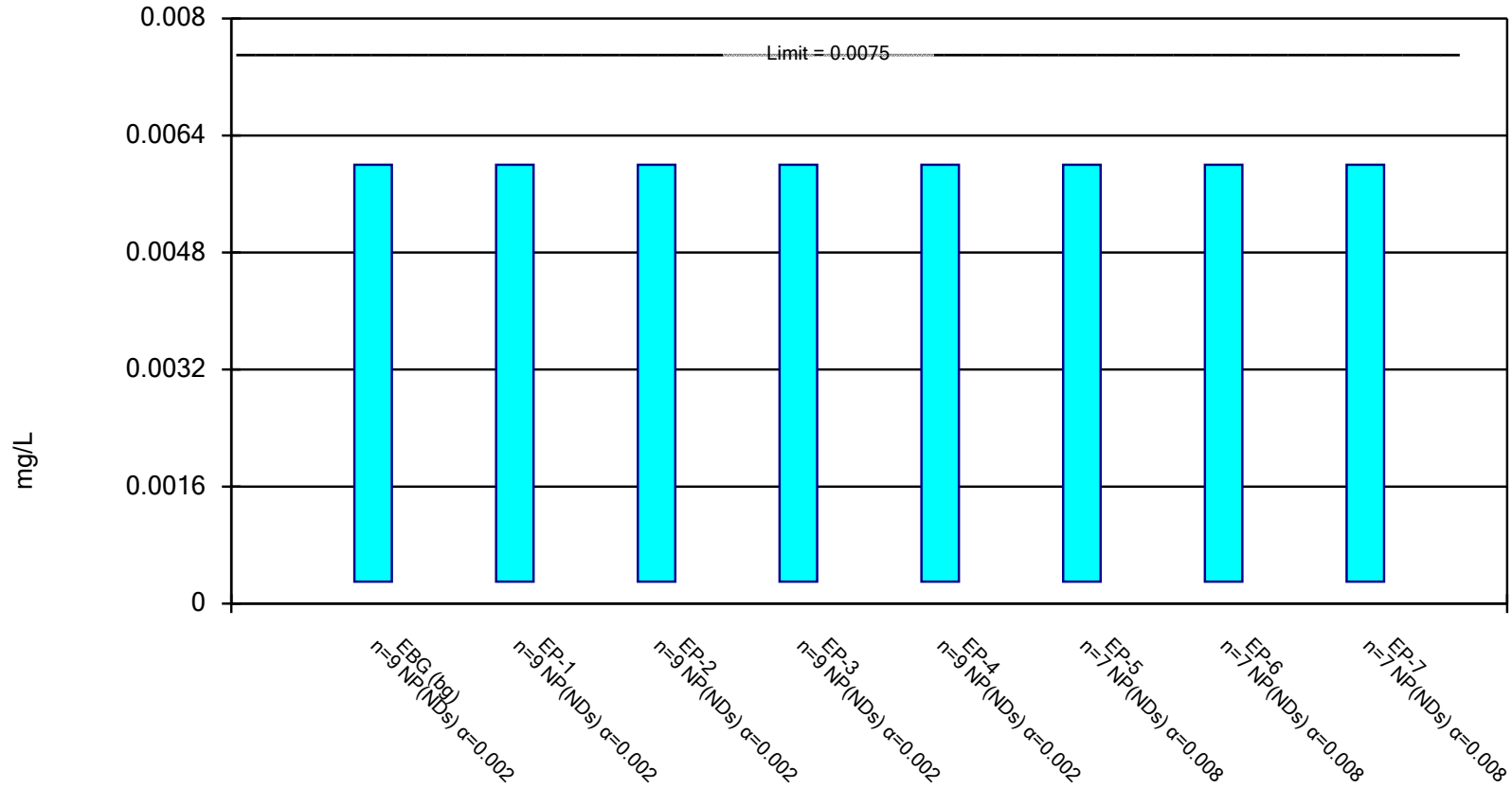
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 7/14/2023 11:12 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

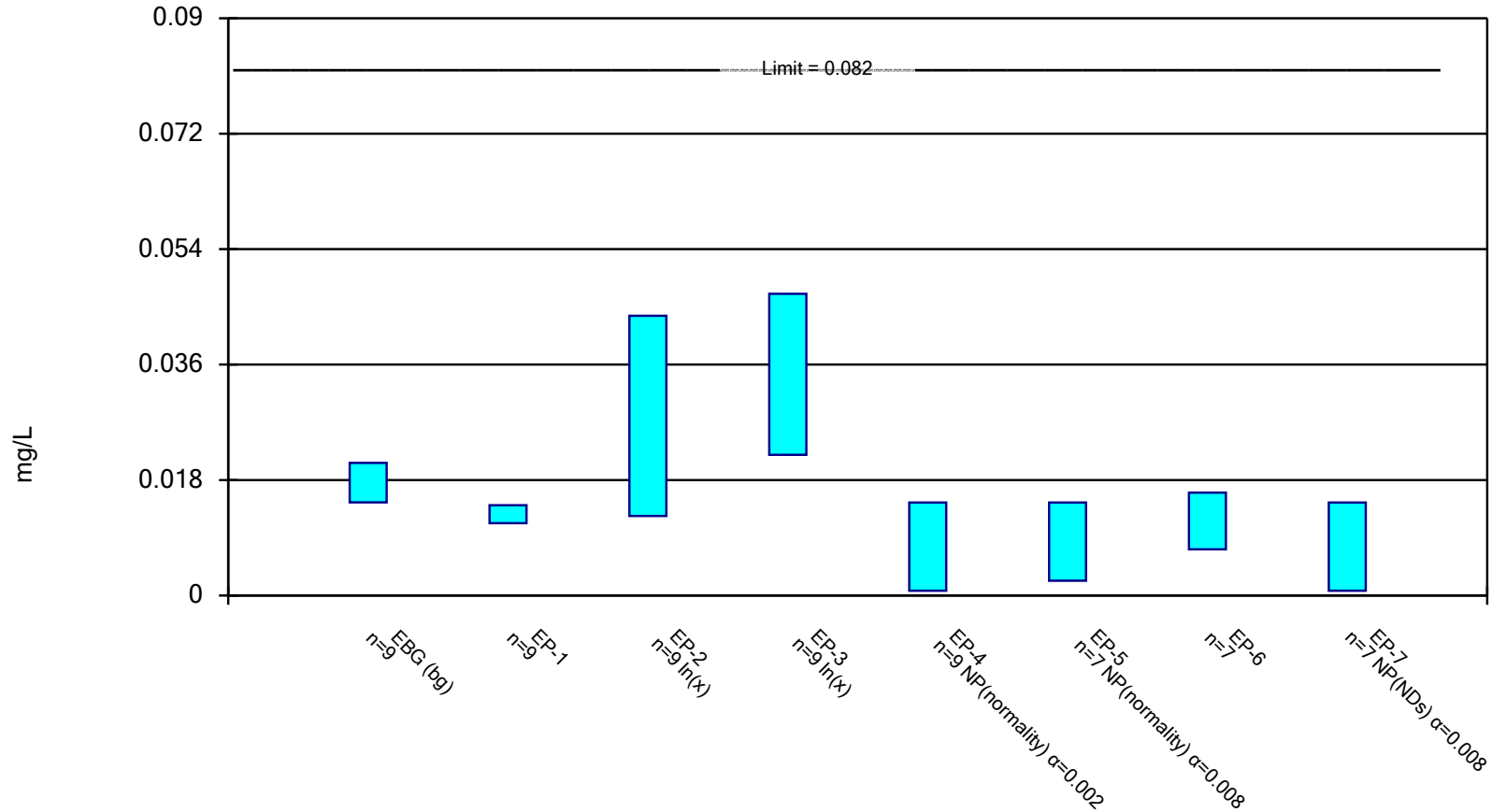


Constituent: Lead Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

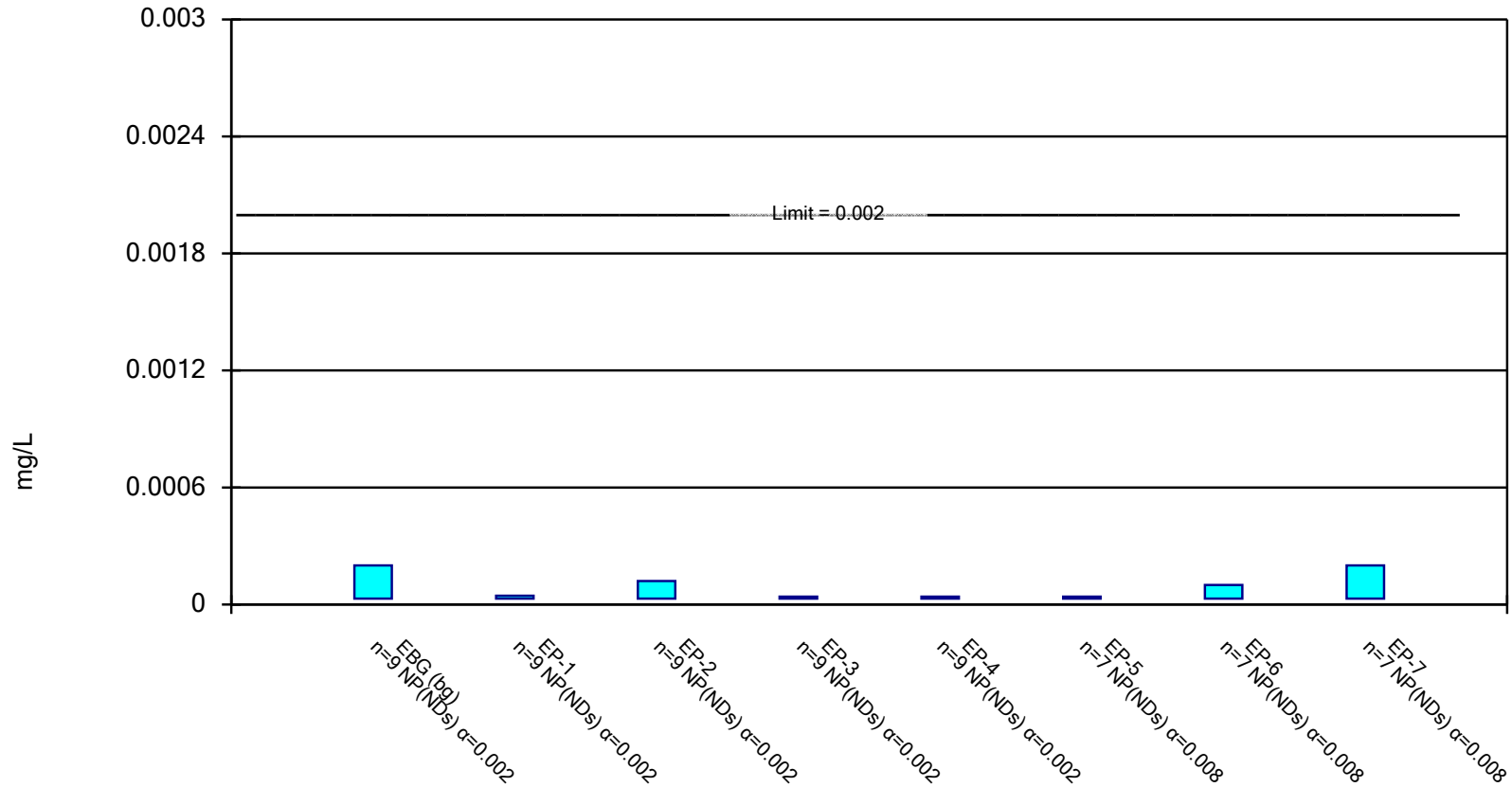


Constituent: Lithium Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

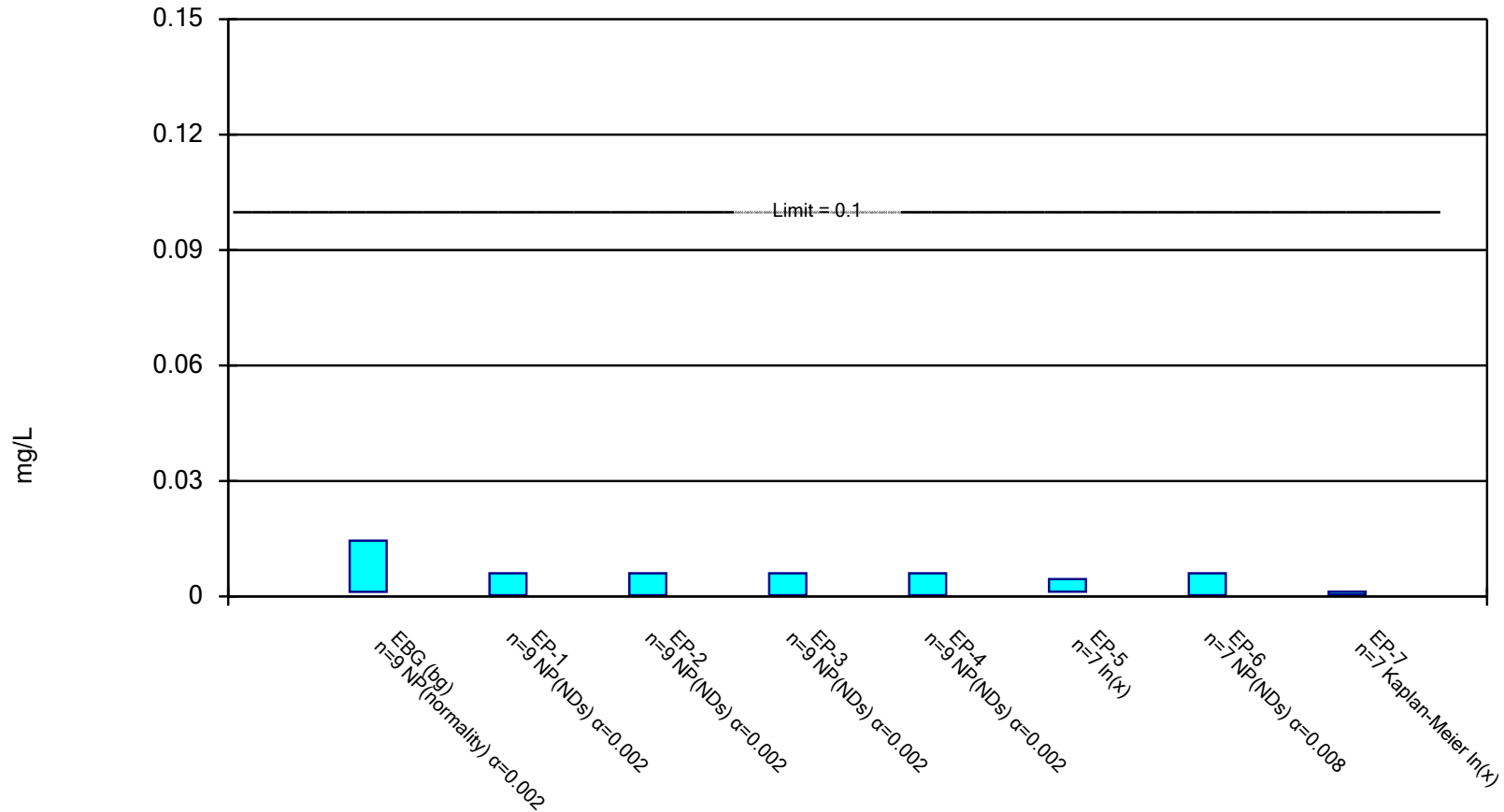


Constituent: Mercury Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

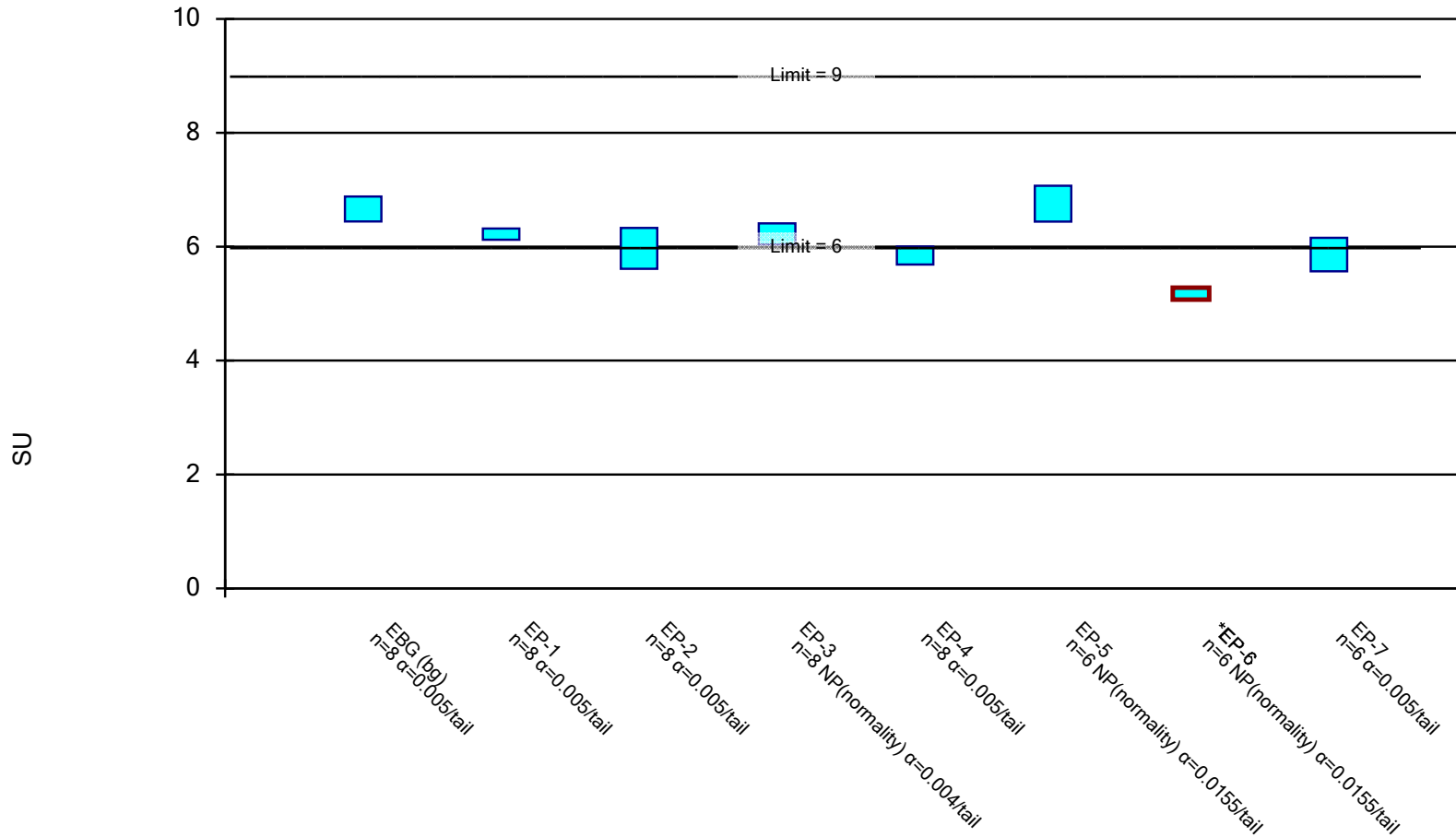
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/14/2023 11:12 AM View: IEPA GPS  
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.



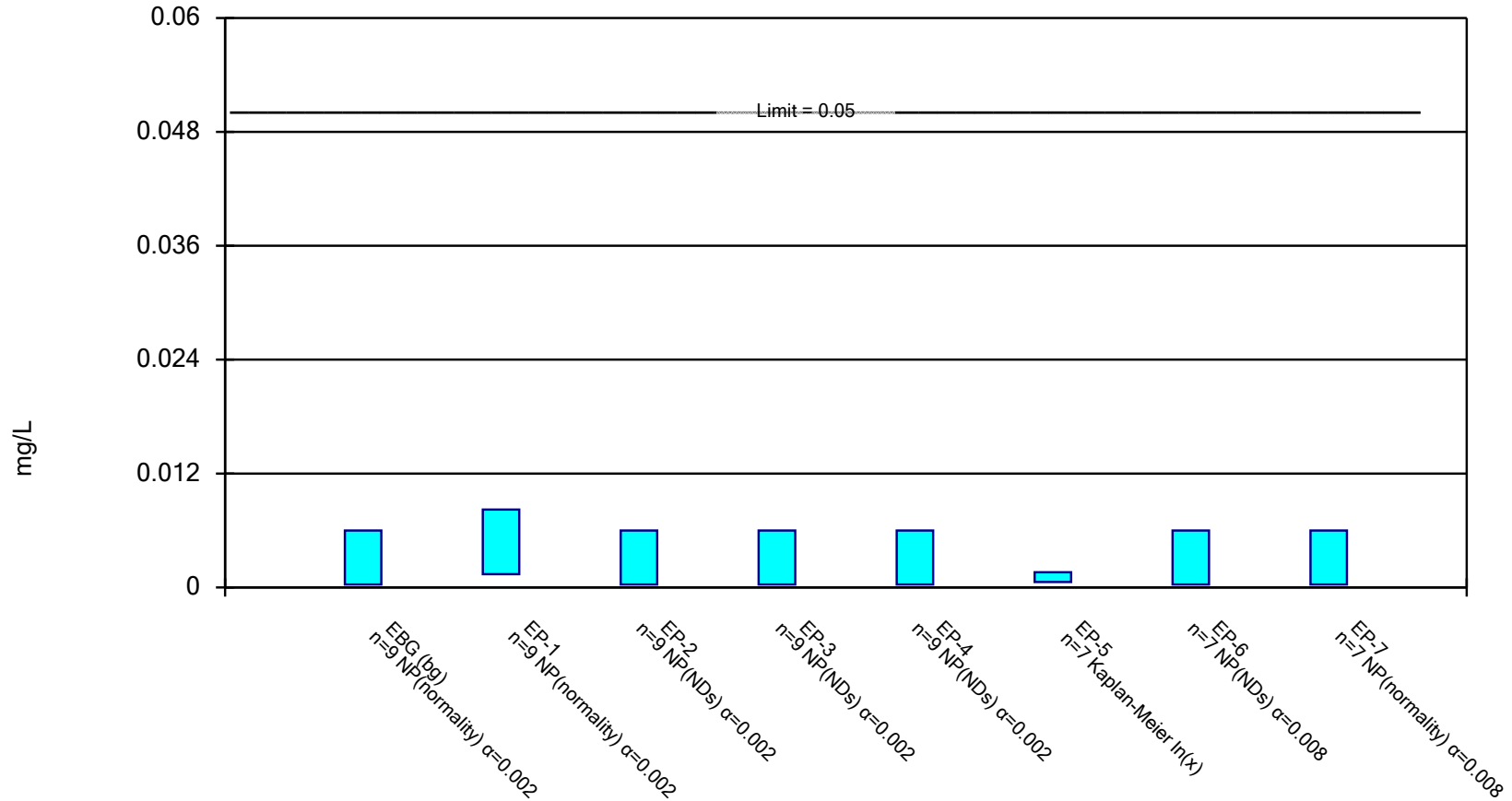
Constituent: pH Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

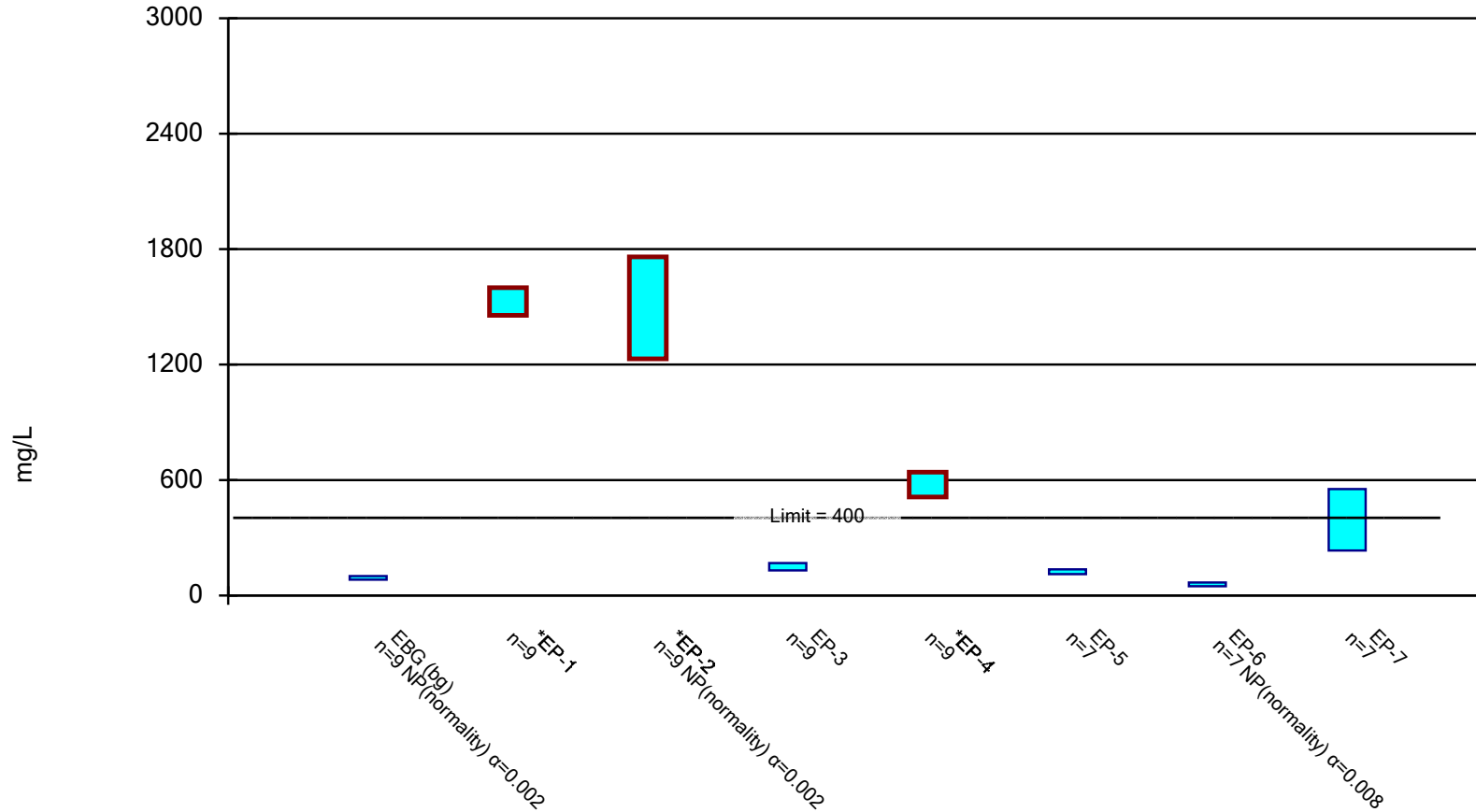
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/14/2023 11:12 AM View: IEPA GPS  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

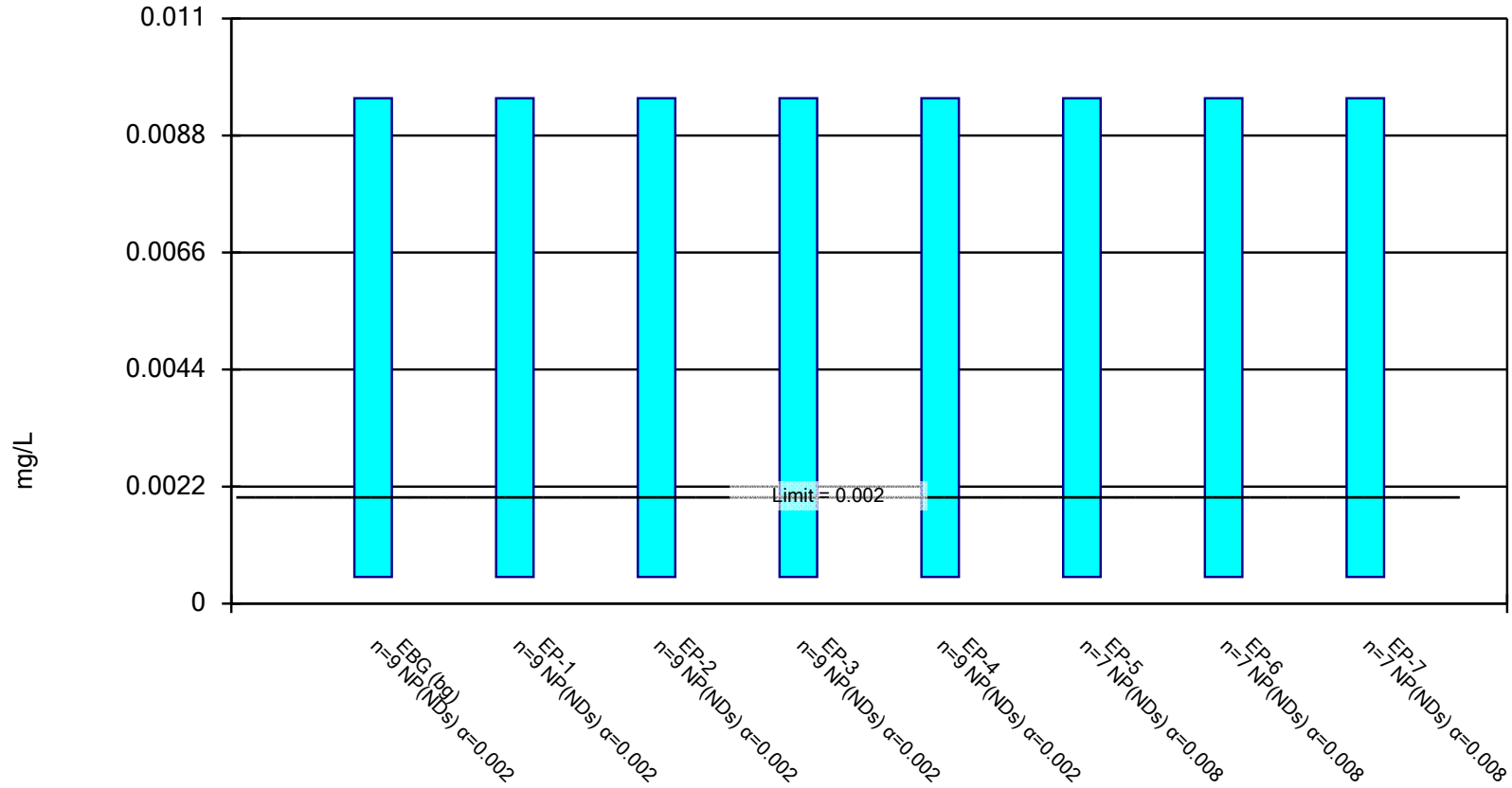


Constituent: Sulfate Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

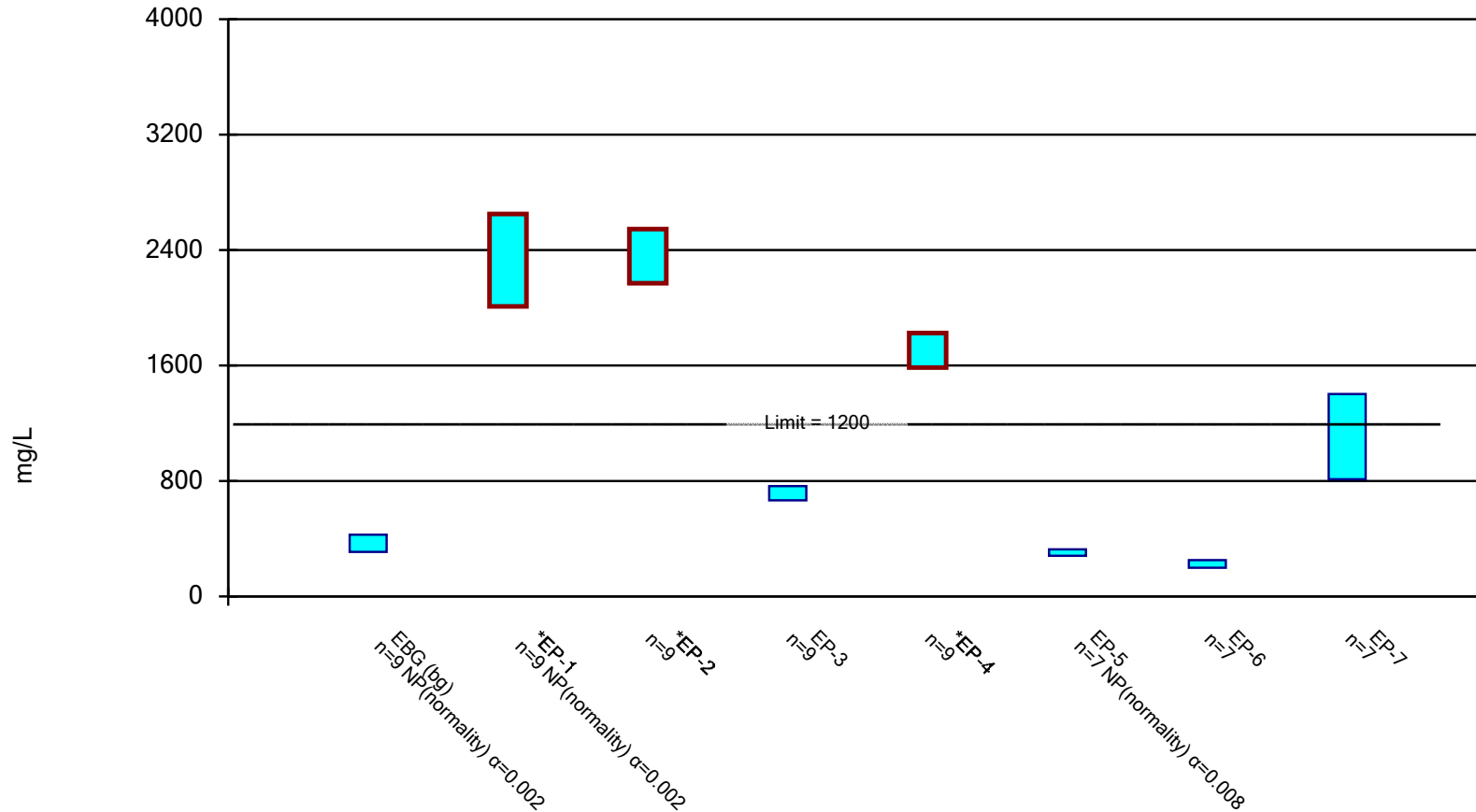
Compliance Limit is not exceeded.



Constituent: Thallium    Analysis Run 7/14/2023 11:12 AM    View: IEPA GPS  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 7/14/2023 11:12 AM View: IEPA GPS

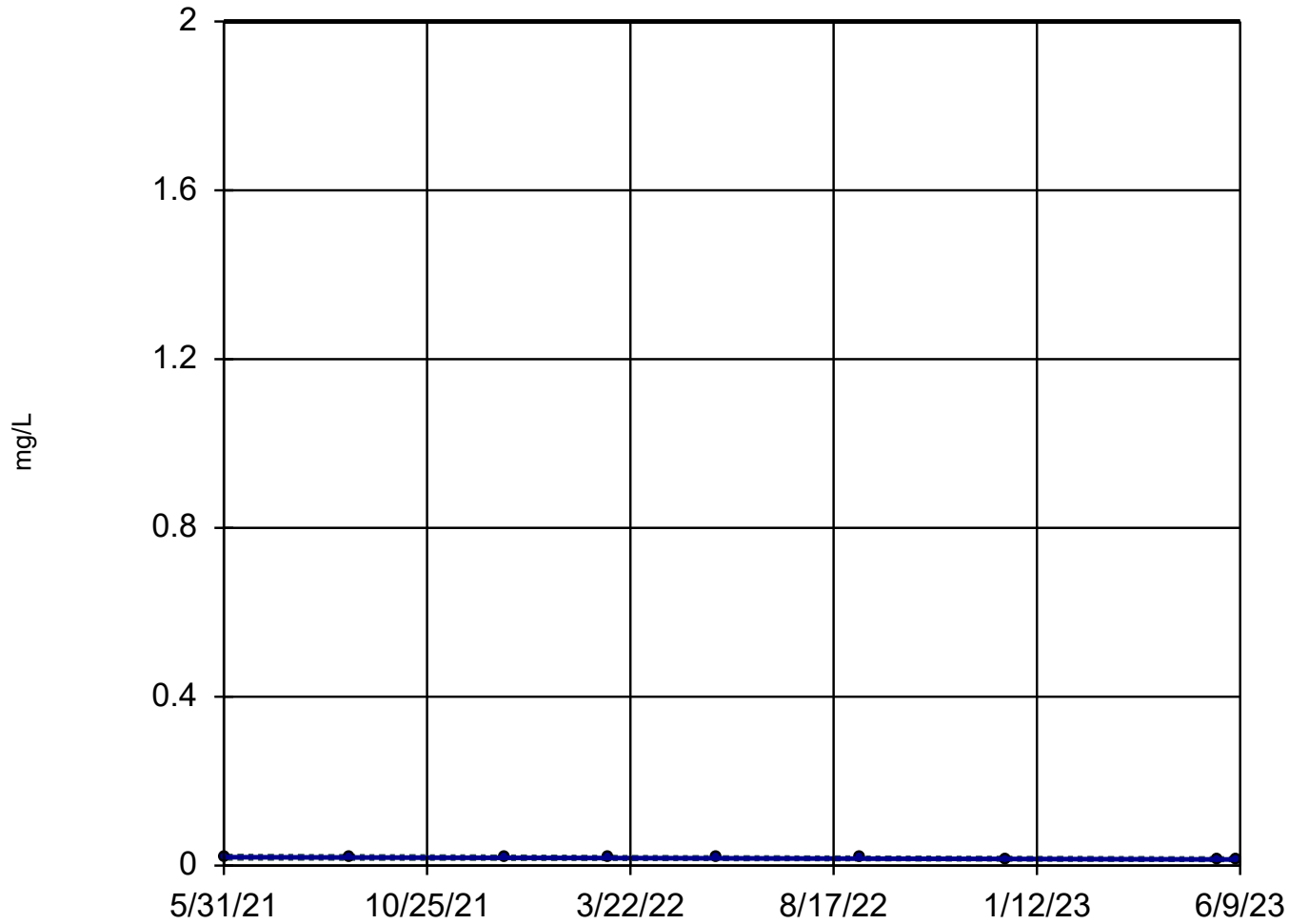
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-12**

## **Q2 2023 Statistically Significant Trends**

## Sen's Slope and 95% Confidence Band

EP-1



n = 9

Slope = -0.002676  
units per year.

Mann-Kendall  
statistic = -30  
critical = -20

Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

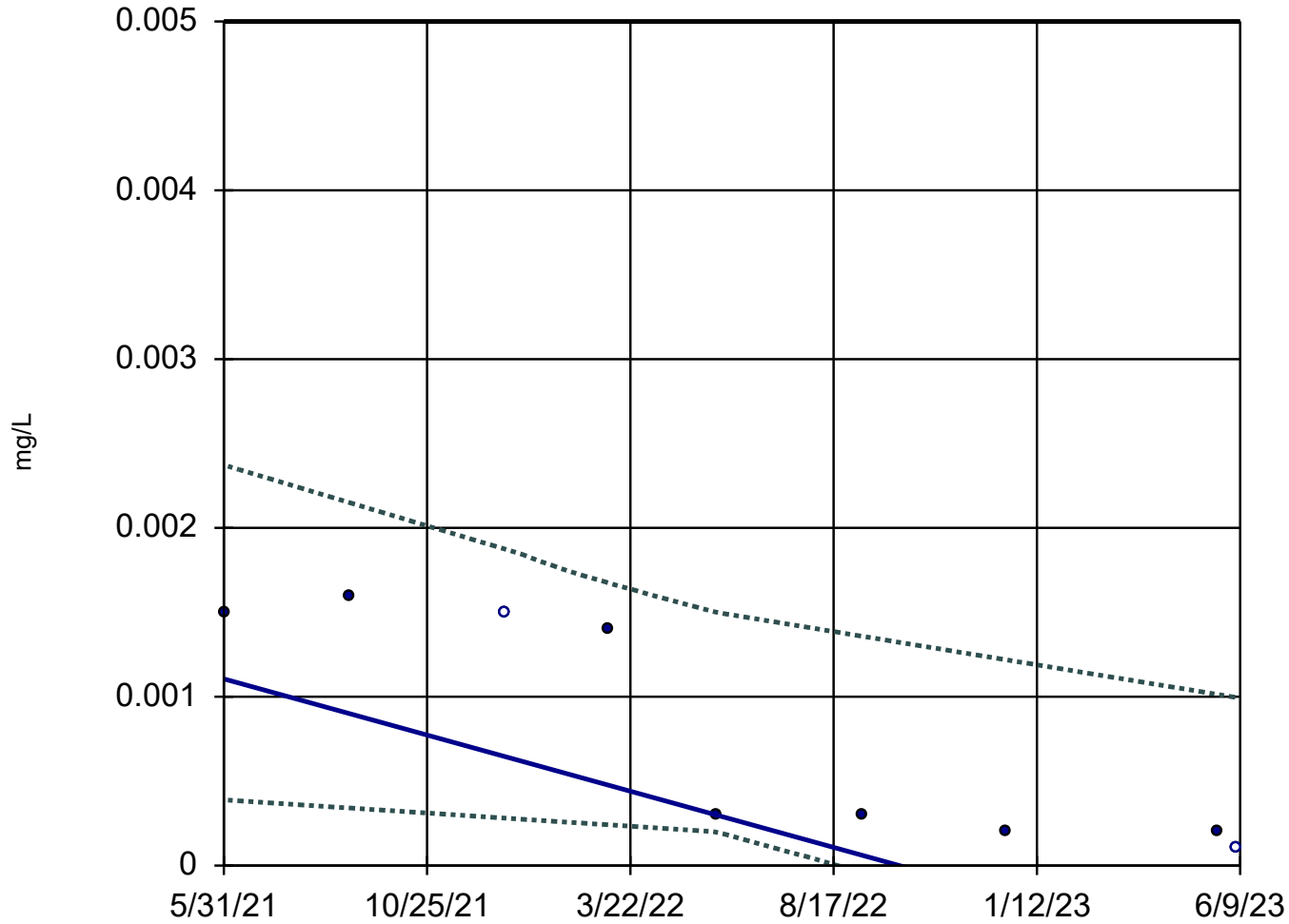
Confidence band is  
below GPS (2).

Constituent: Barium Analysis Run 7/13/2023 1:07 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

### Sen's Slope and 95% Confidence Band

EP-2



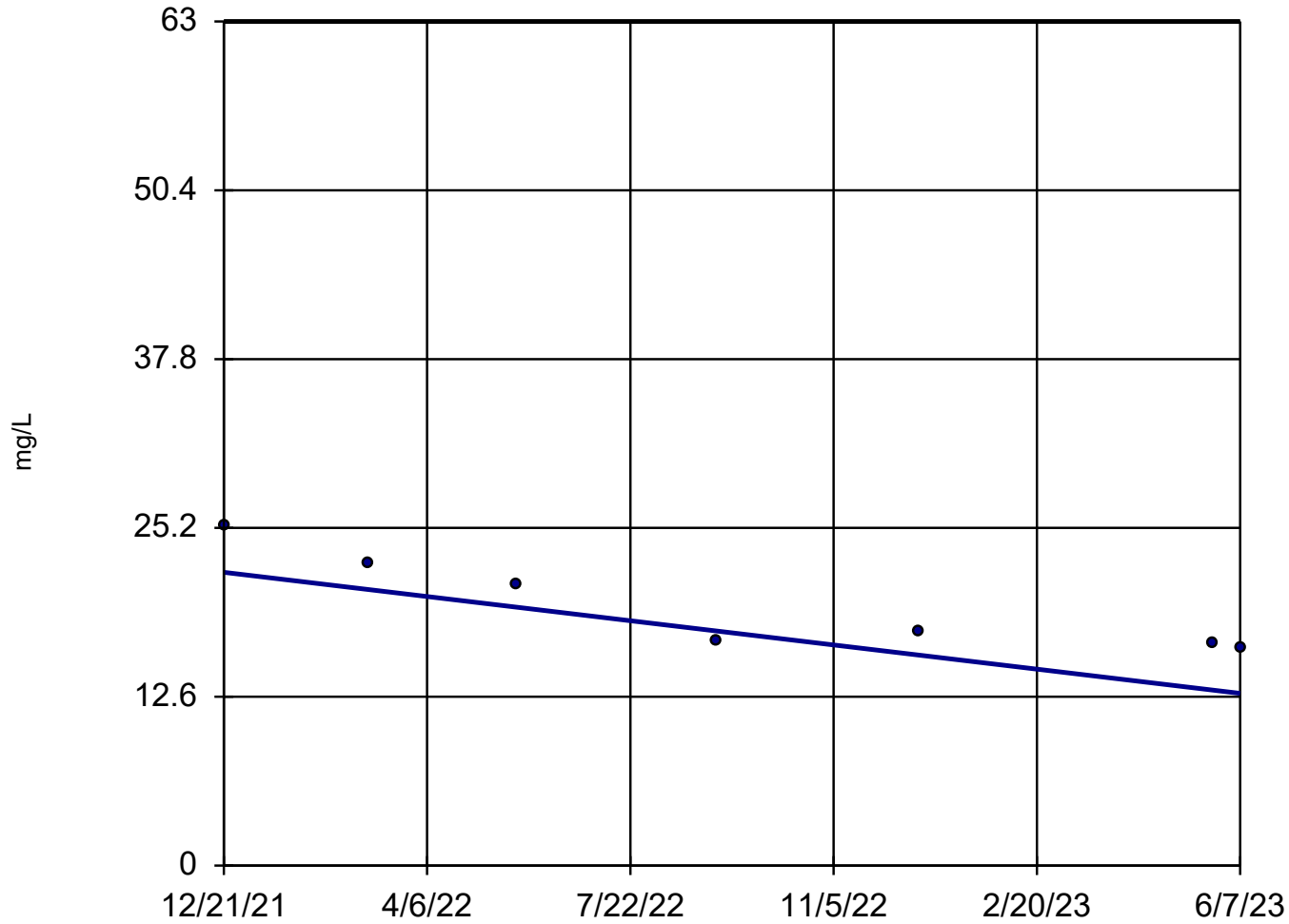
n = 9  
Slope = -0.000822  
units per year.  
Mann-Kendall  
statistic = -31  
critical = -20  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
Confidence band is  
below GPS (0.005).

Constituent: Cadmium Analysis Run 7/13/2023 1:08 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Sen's Slope Estimator

EP-5



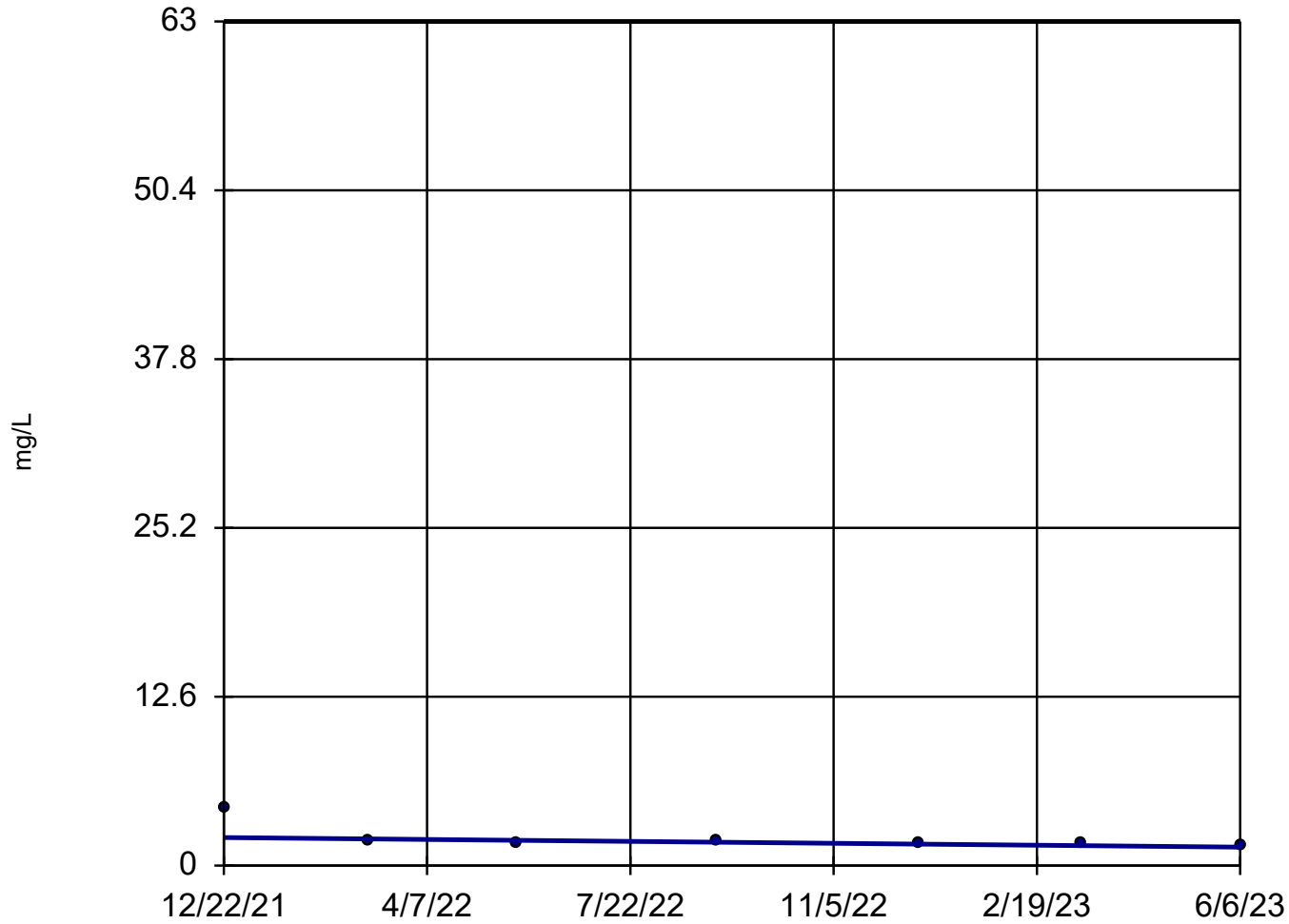
n = 7  
Slope = -6.189 units per year.  
Mann-Kendall statistic = -19  
critical = -15  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
GPS = 63.

Constituent: Calcium    Analysis Run 7/13/2023 1:08 PM  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database



# Sen's Slope Estimator

EP-6

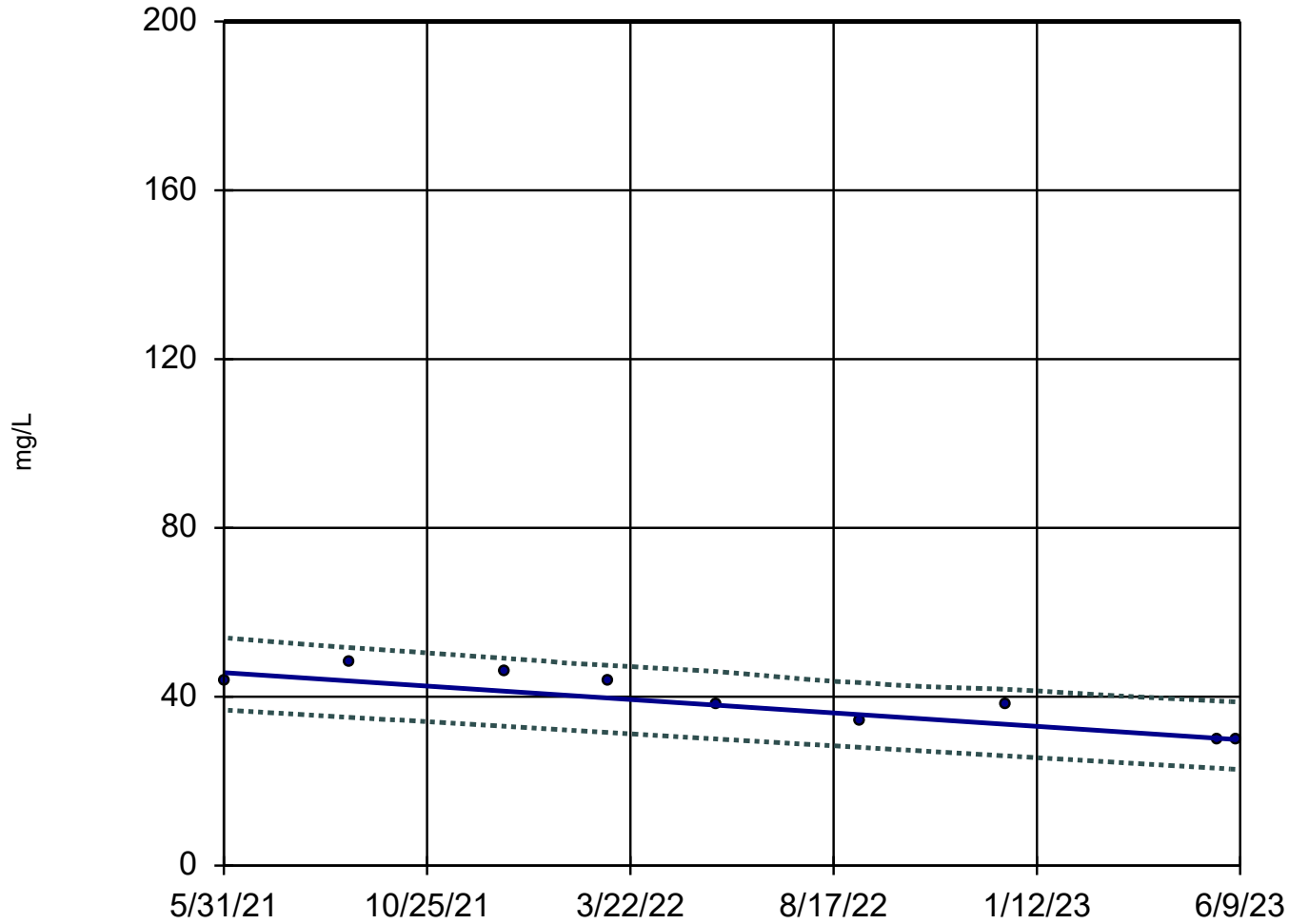


n = 7  
Slope = -0.4947  
units per year.  
Mann-Kendall  
statistic = -17  
critical = -15  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
GPS = 63.

Constituent: Calcium Analysis Run 7/13/2023 1:08 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

### Sen's Slope and 95% Confidence Band

EP-1

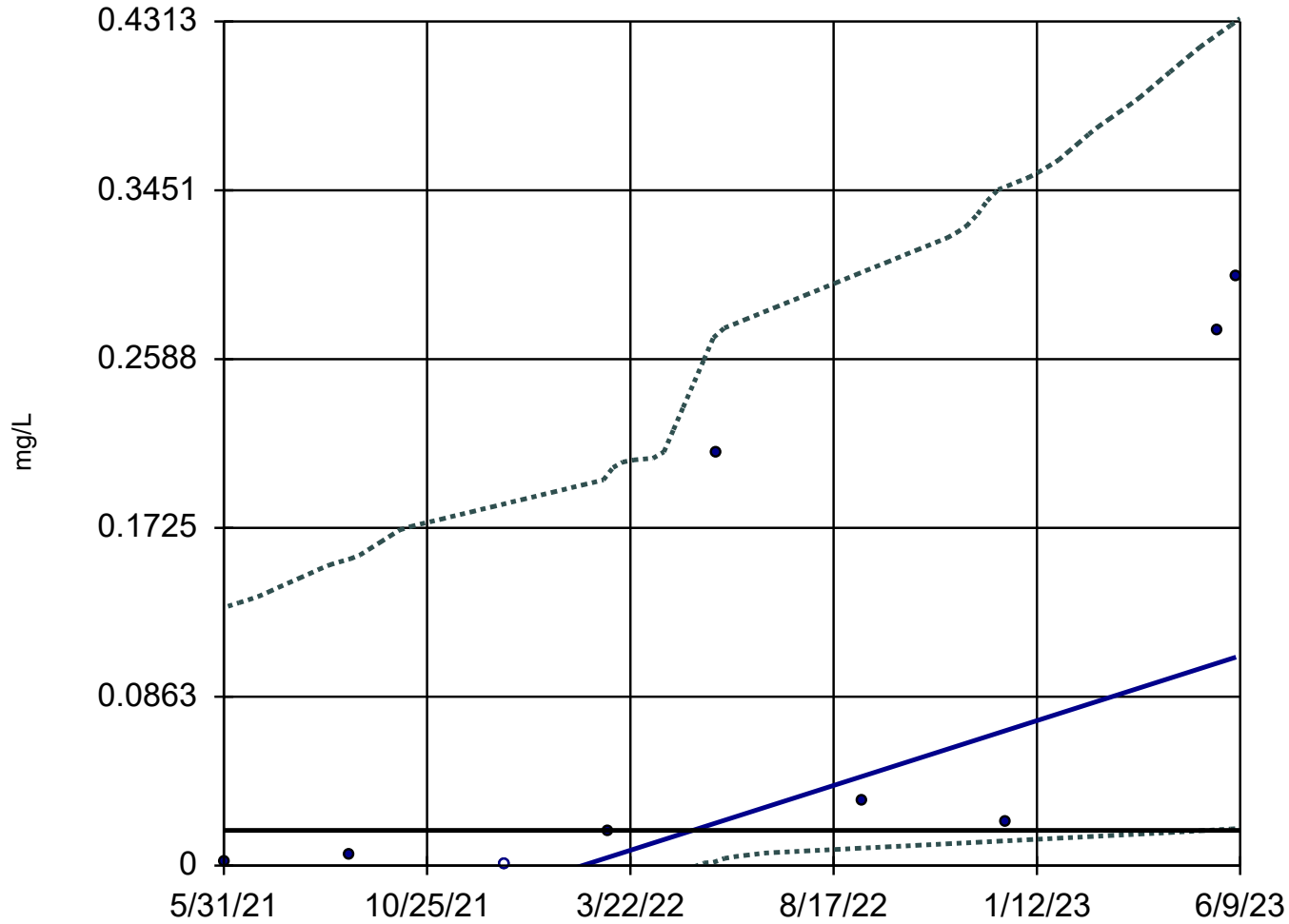


n = 9  
Slope = -7.862 units per year.  
Mann-Kendall statistic = -27  
critical = -20  
Decreasing trend significant at 95% confidence level ( $\alpha = 0.025$  per tail).  
Confidence band is below GPS (200).

Constituent: Chloride    Analysis Run 7/13/2023 1:08 PM  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Sen's Slope and 95% Confidence Band

EP-2



n = 9

Slope = 0.08178  
units per year.

Mann-Kendall  
statistic = 26  
critical = 20

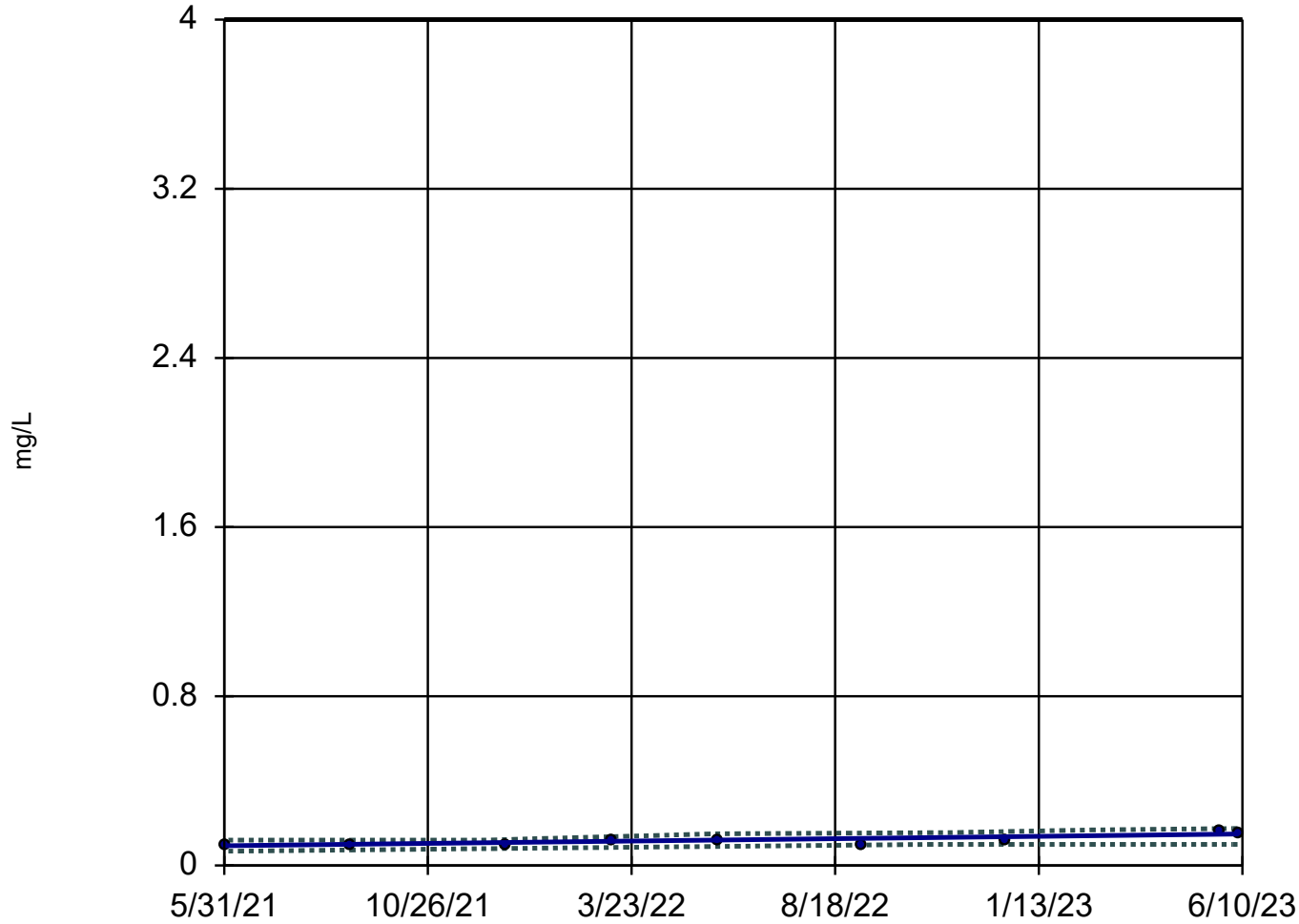
Increasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

Confidence band intersects  
GPS (0.018) on 05/18/23.

Constituent: Cobalt    Analysis Run 7/13/2023 1:08 PM  
Marion Power Plant    Client: SIPC    Data: SIPC Statistical Database

## Sen's Slope and 95% Confidence Band

EP-4



n = 9

Slope = 0.02747  
units per year.

Mann-Kendall  
statistic = 21  
critical = 20

Increasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

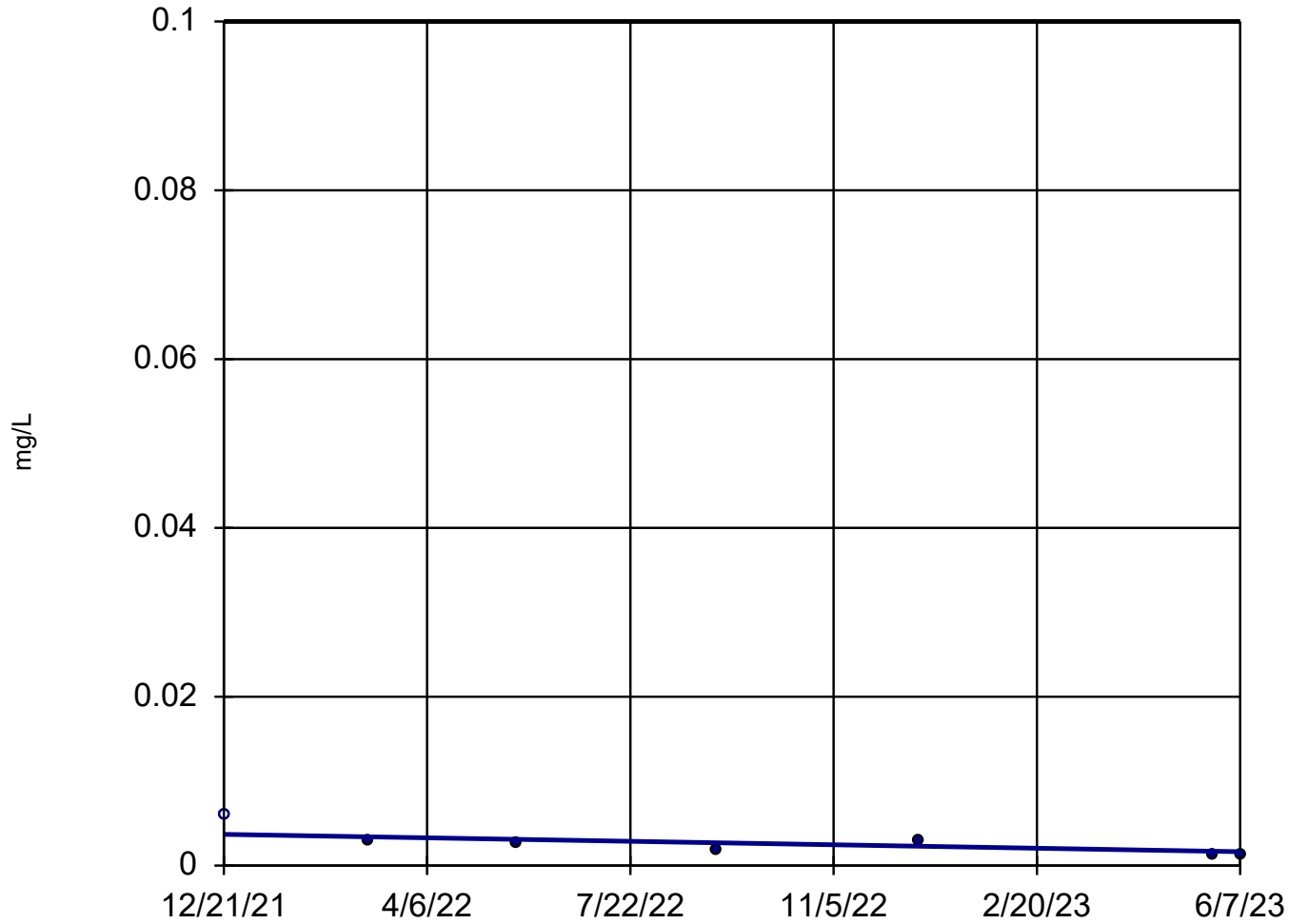
Confidence band is  
below GPS (4).

Constituent: Fluoride Analysis Run 7/13/2023 1:08 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 7

Slope = -0.001404  
units per year.

Mann-Kendall  
statistic = -16  
critical = -15

Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).

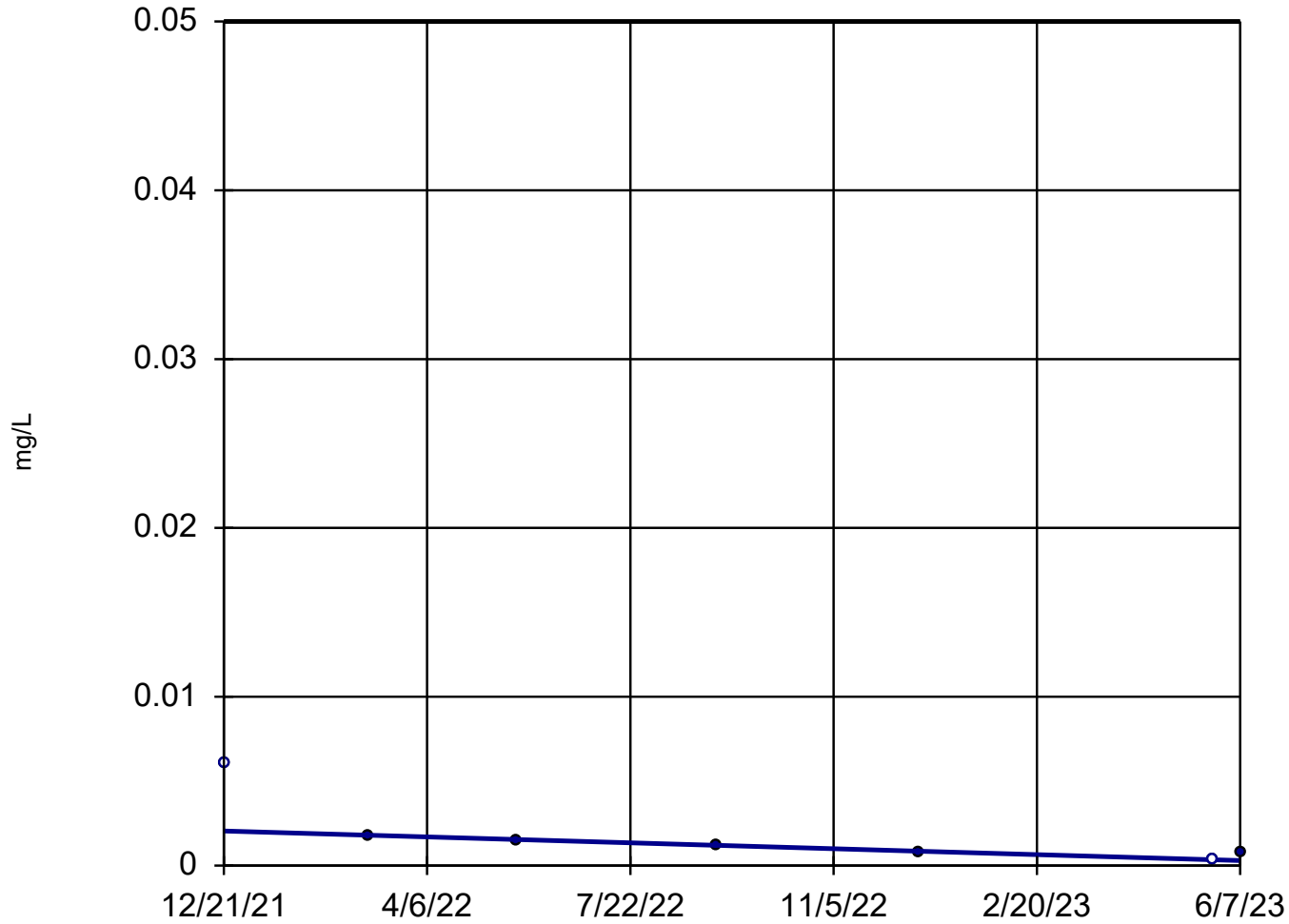
GPS = 0.1.

Constituent: Molybdenum Analysis Run 7/13/2023 1:09 PM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 7  
Slope = -0.0012  
units per year.  
Mann-Kendall  
statistic = -18  
critical = -15  
Decreasing trend  
significant at 95%  
confidence level  
( $\alpha = 0.025$  per  
tail).  
GPS = 0.05.

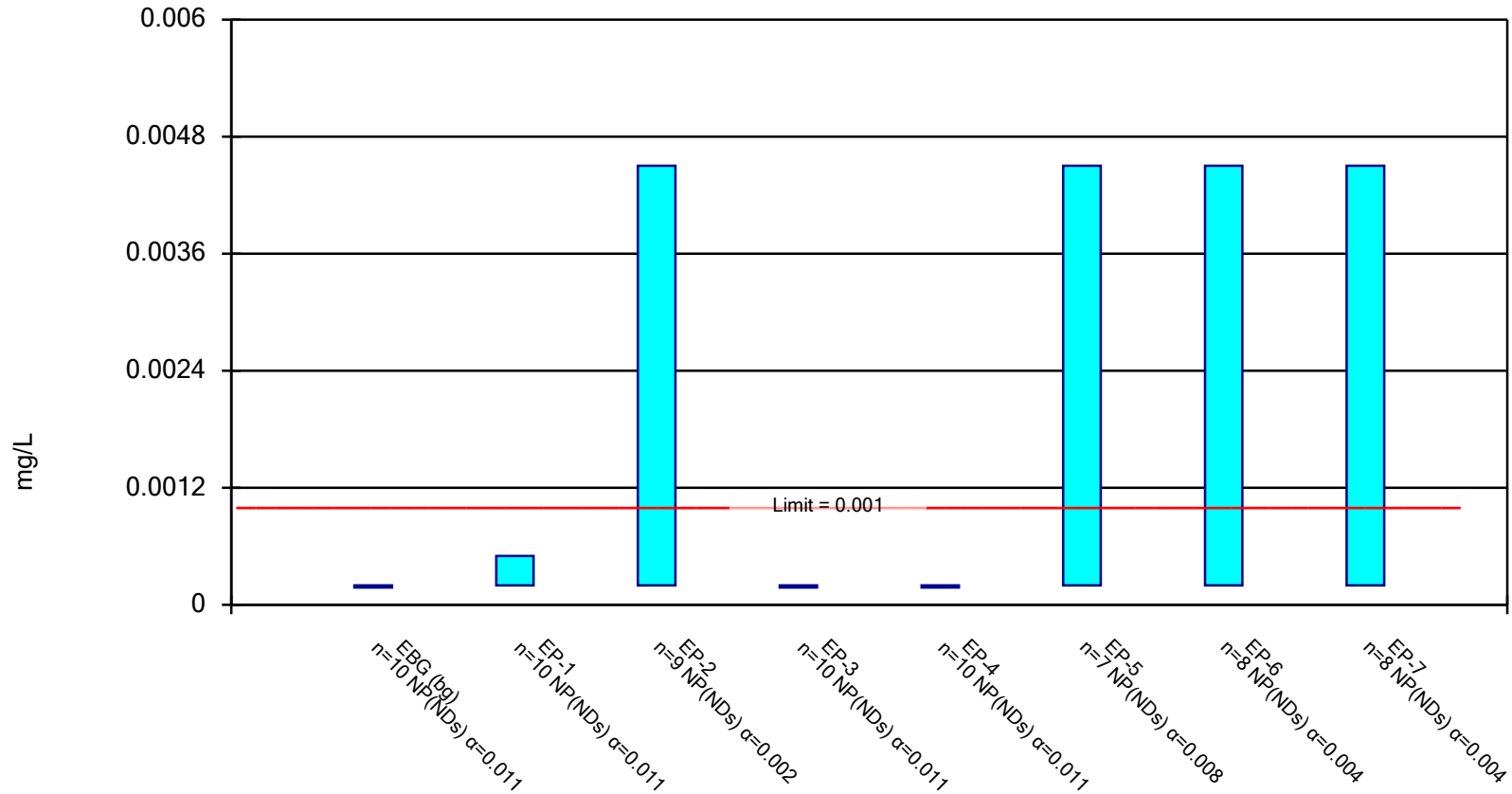
Constituent: Selenium Analysis Run 7/13/2023 1:10 PM  
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-13**

## **Q3 2023 Background Exceedances**

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



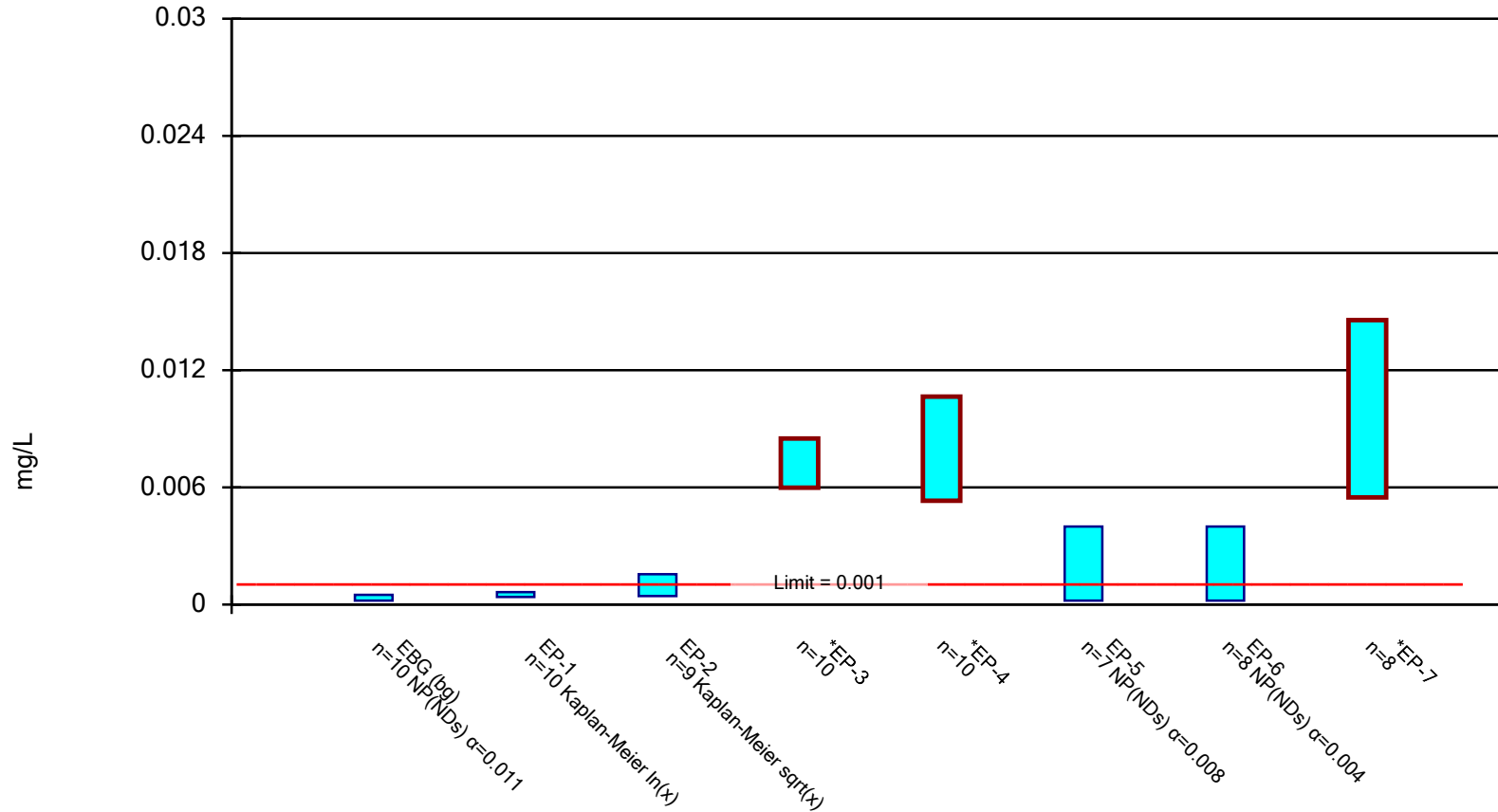
Constituent: Antimony Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

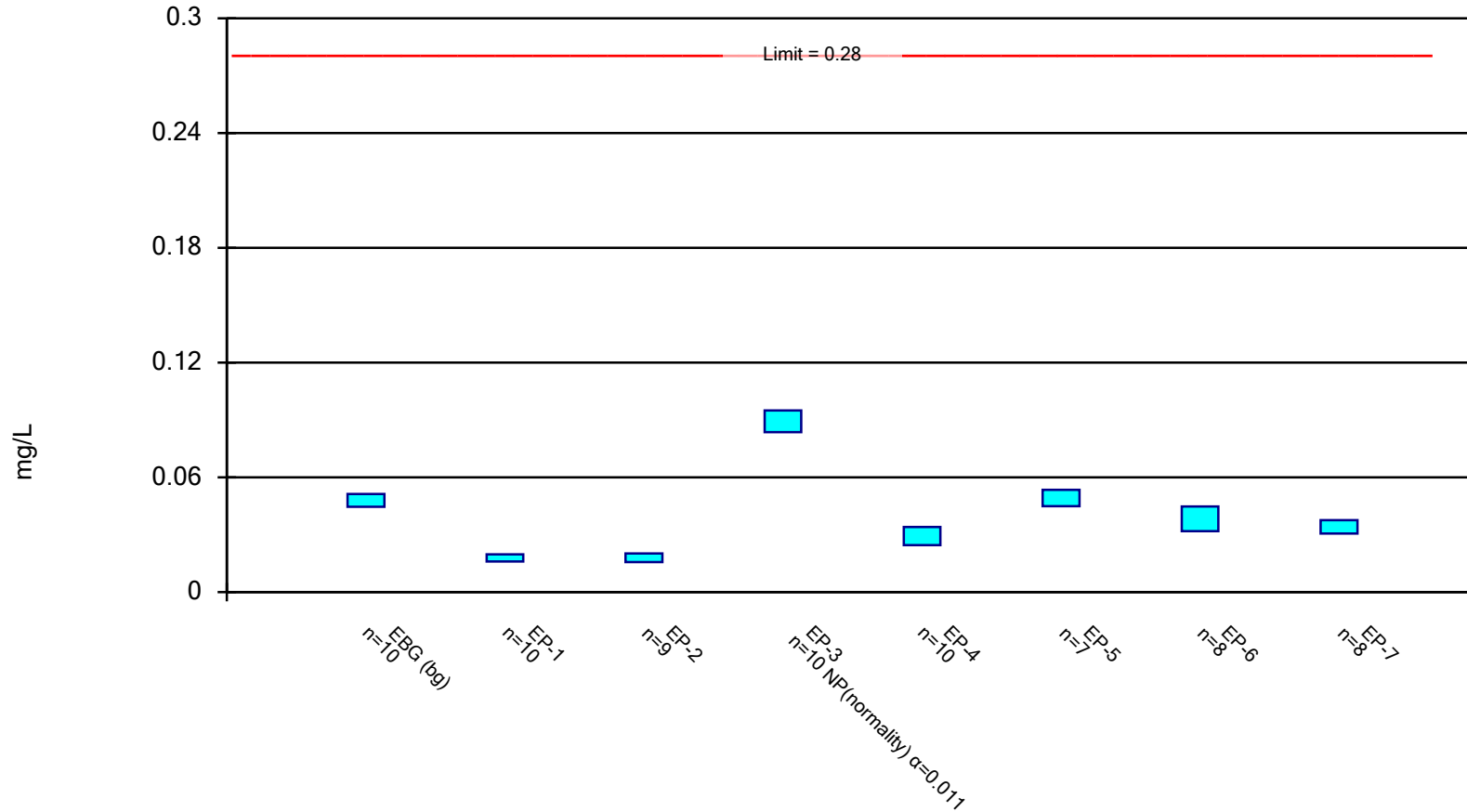


Constituent: Arsenic Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

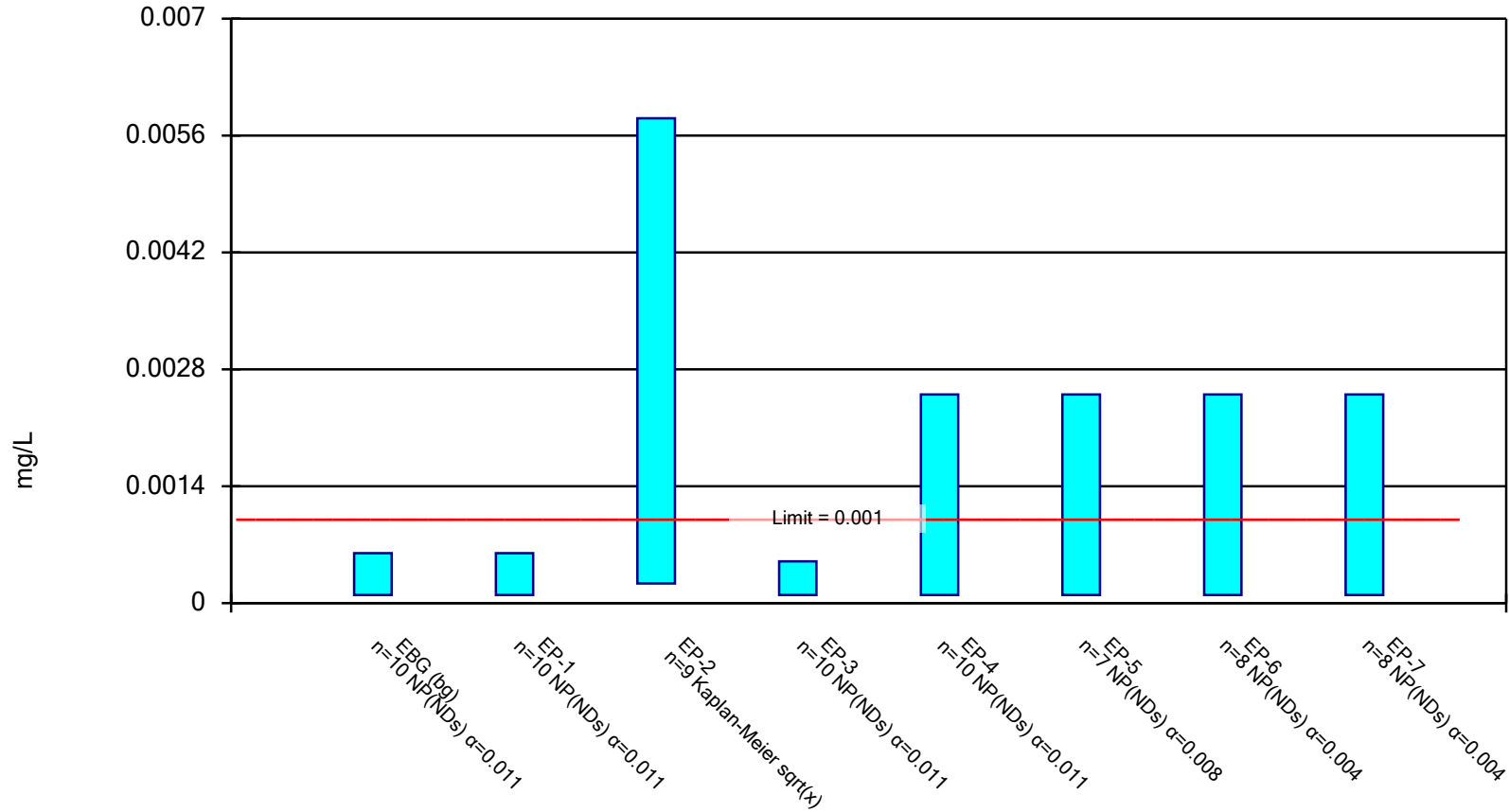


Constituent: Barium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

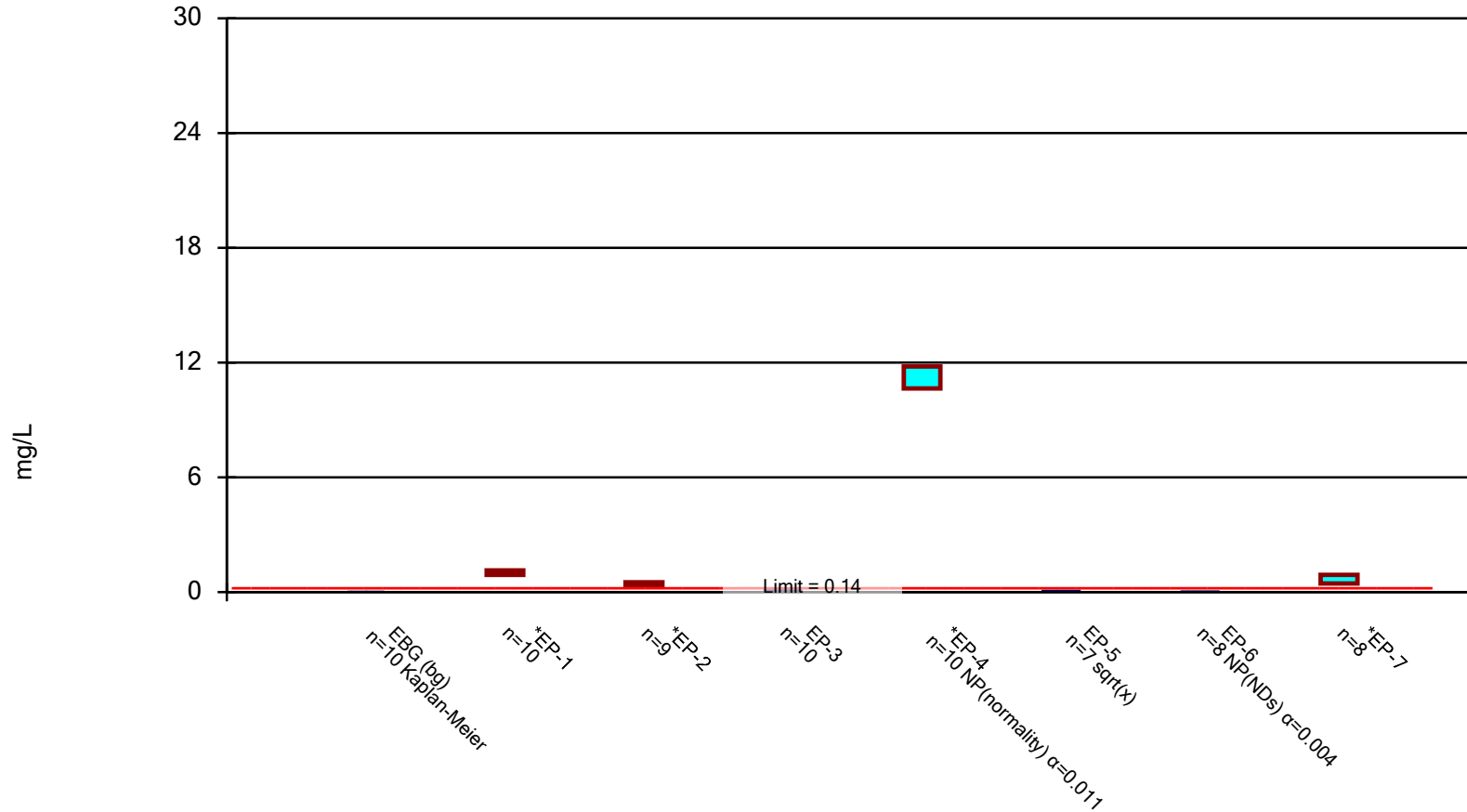


Constituent: Beryllium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

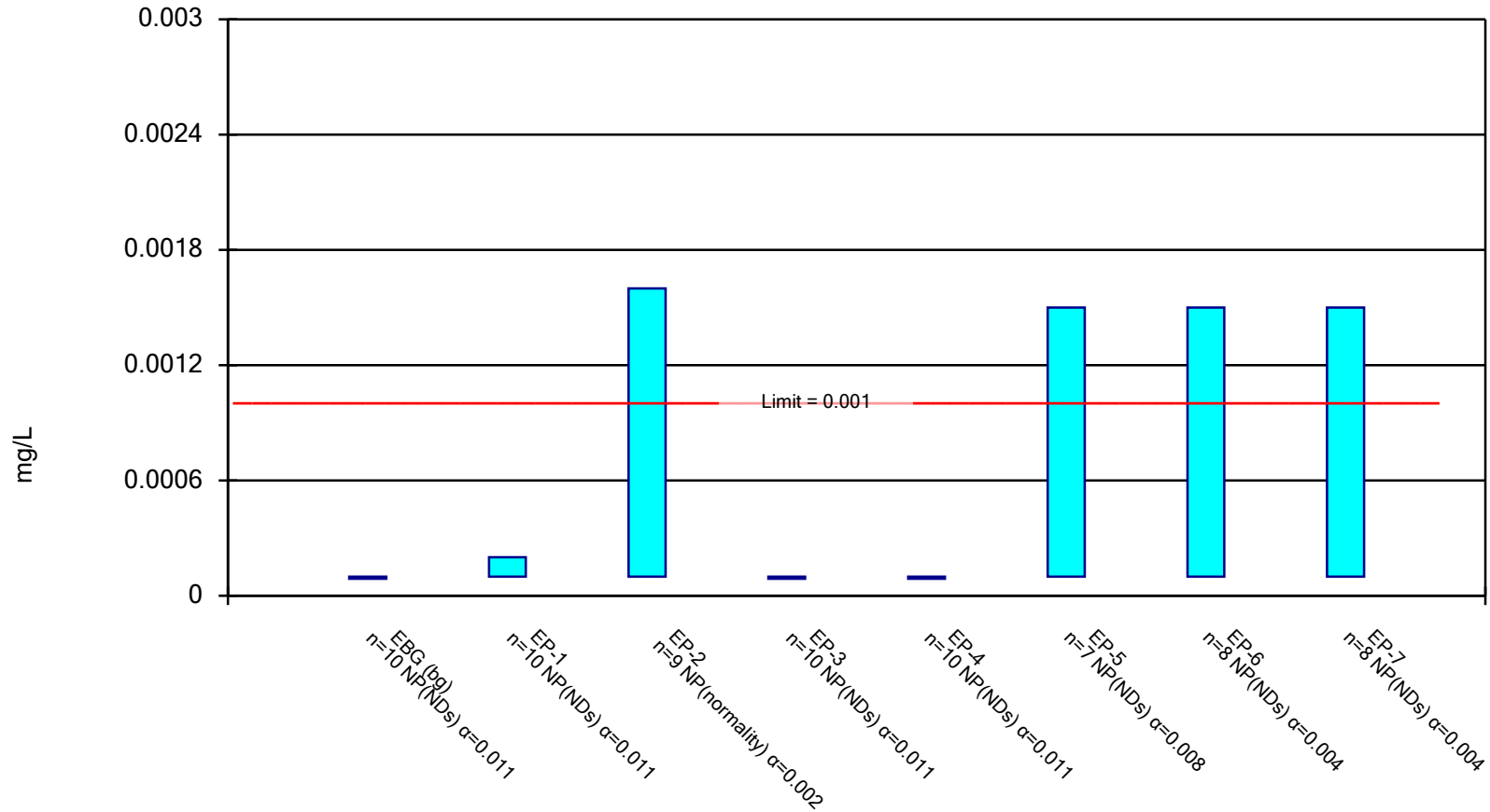


Constituent: Boron Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

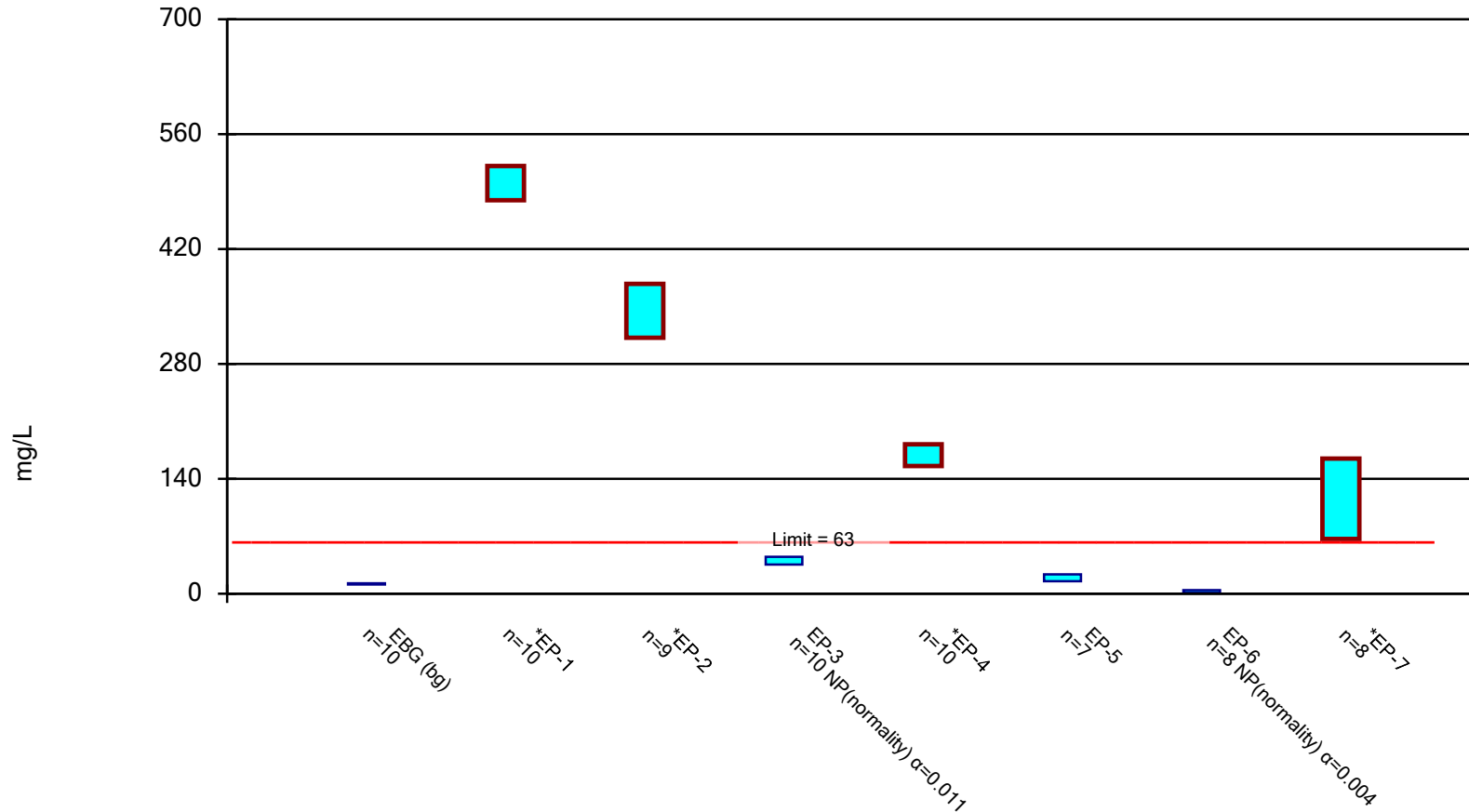


Constituent: Cadmium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

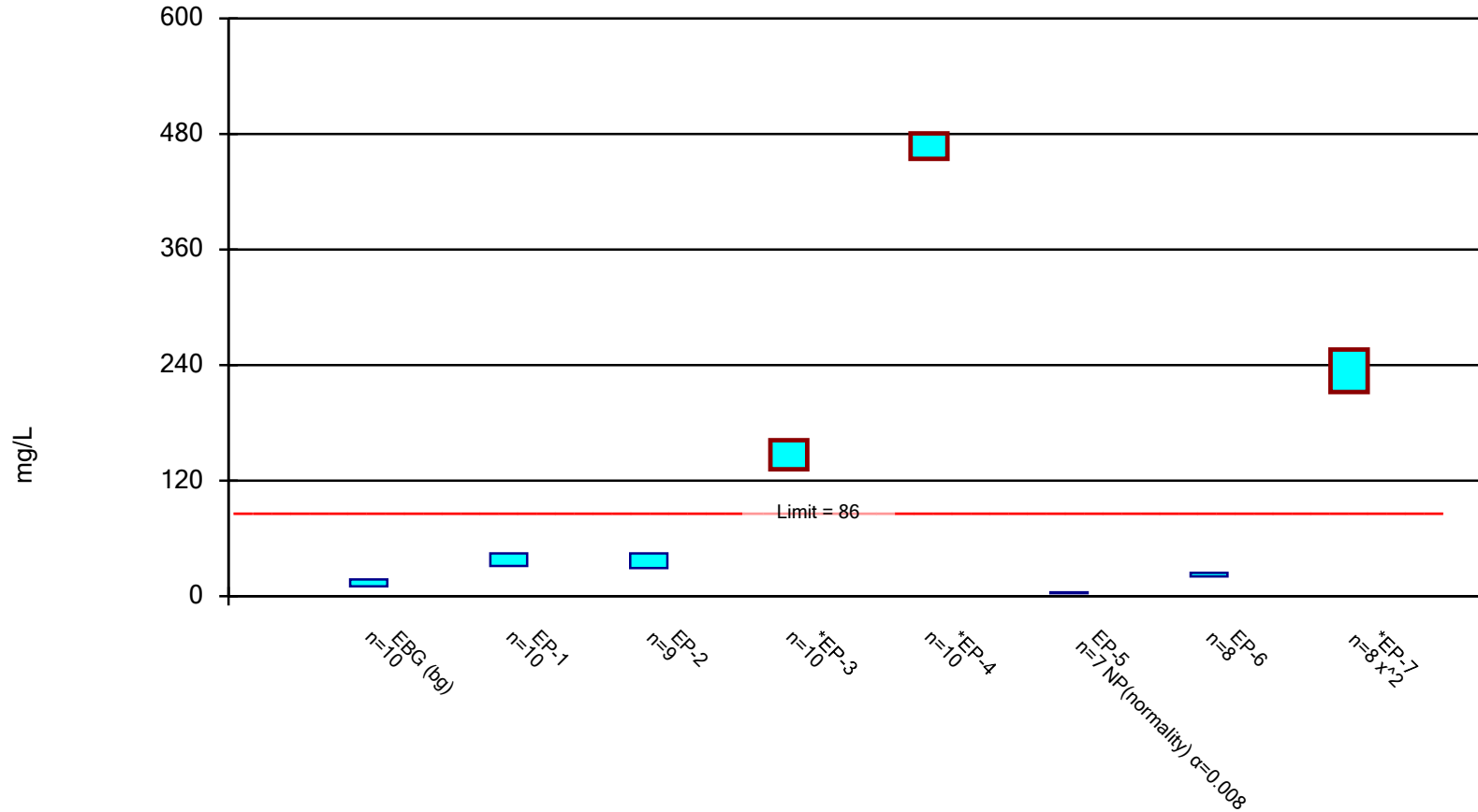


Constituent: Calcium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

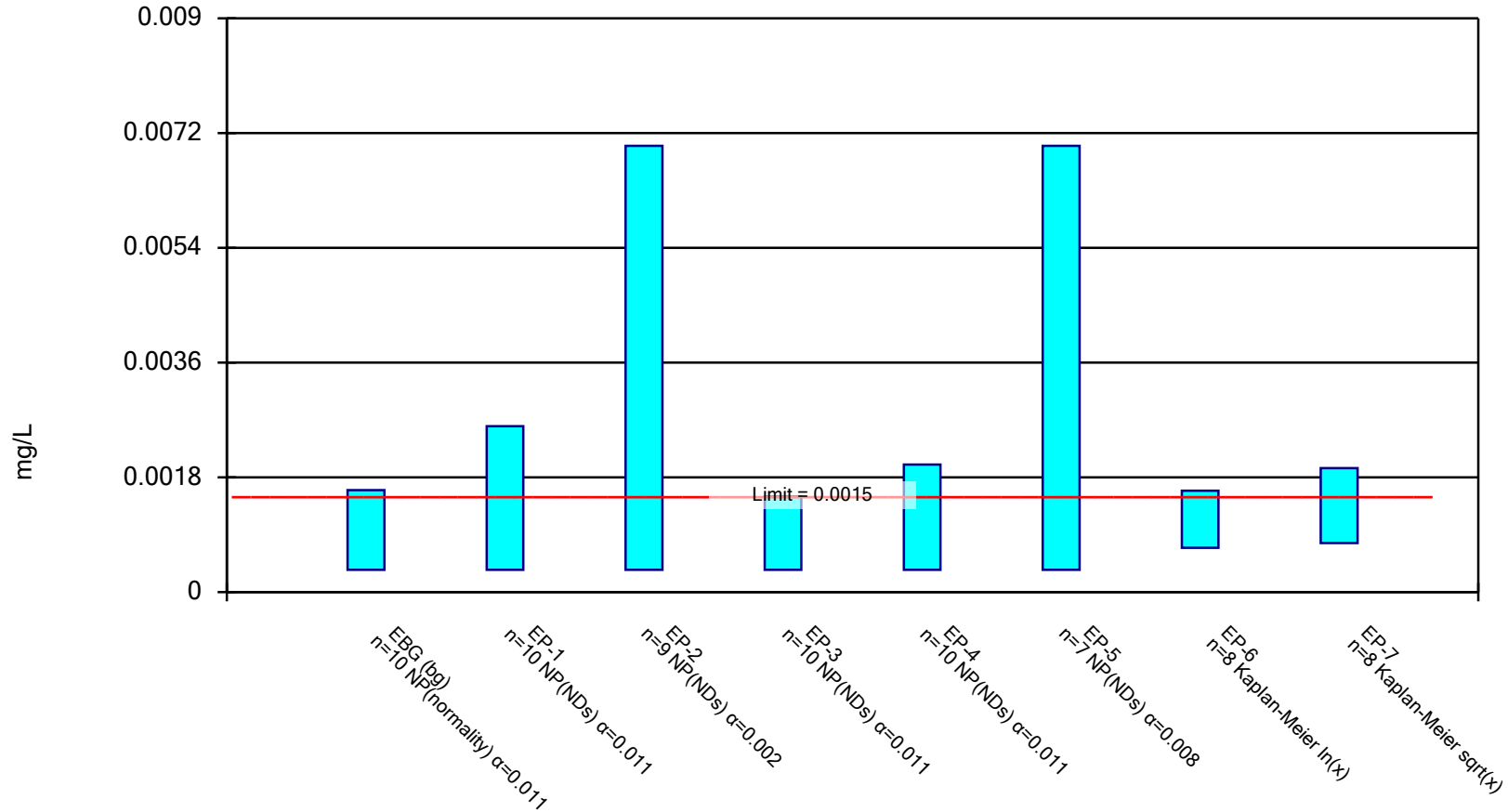


Constituent: Chloride Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



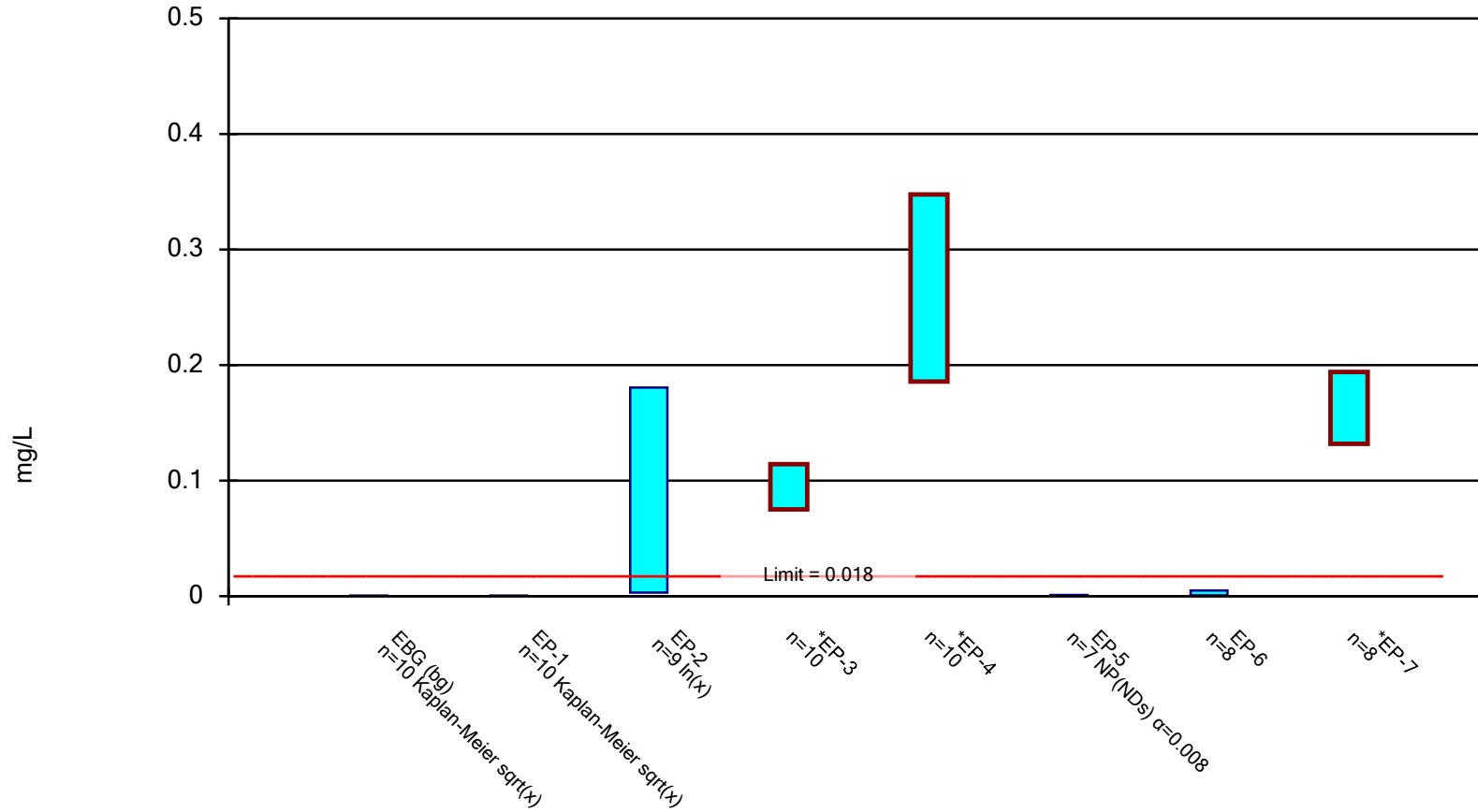
Constituent: Chromium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

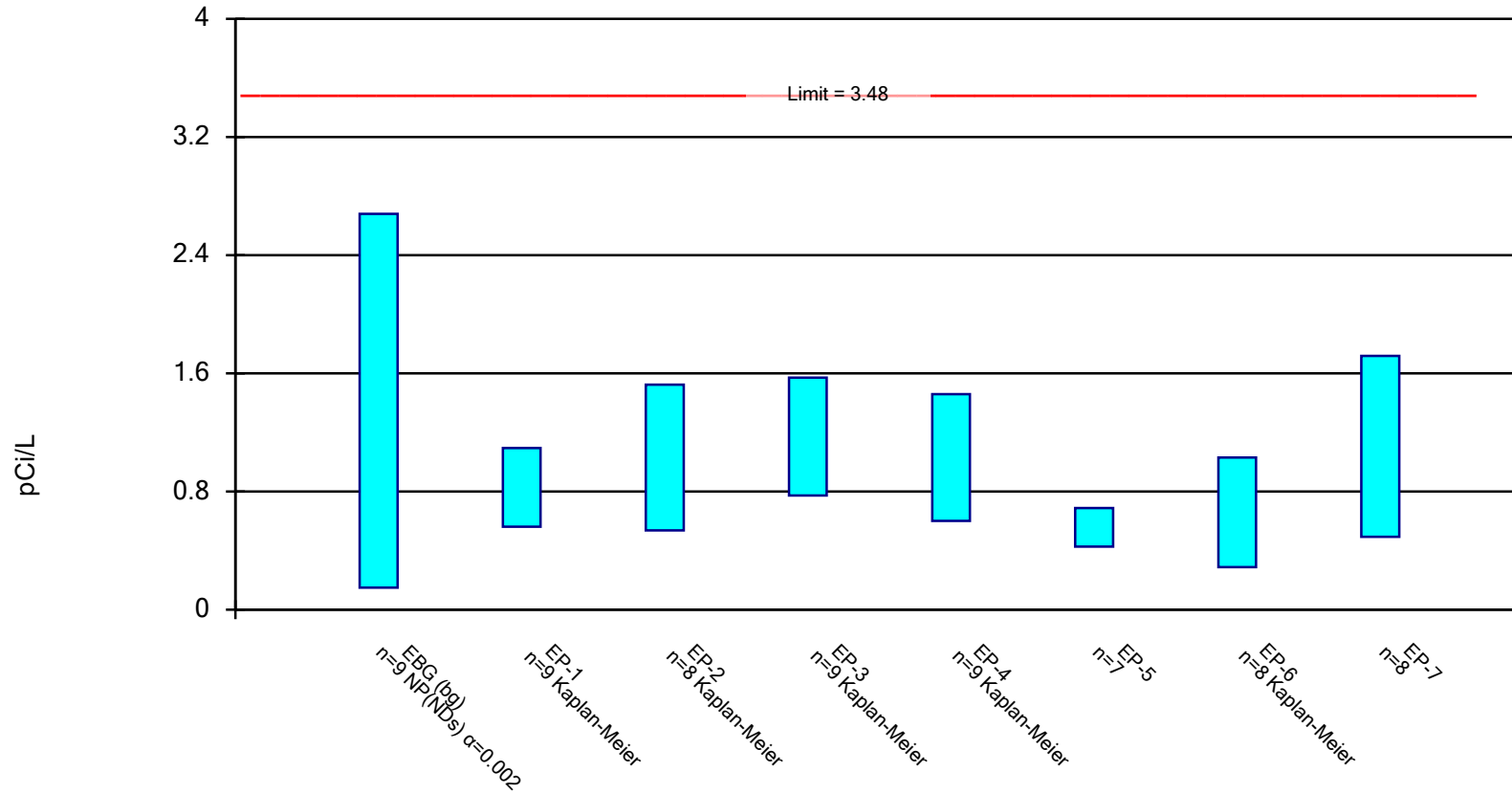


Constituent: Cobalt Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

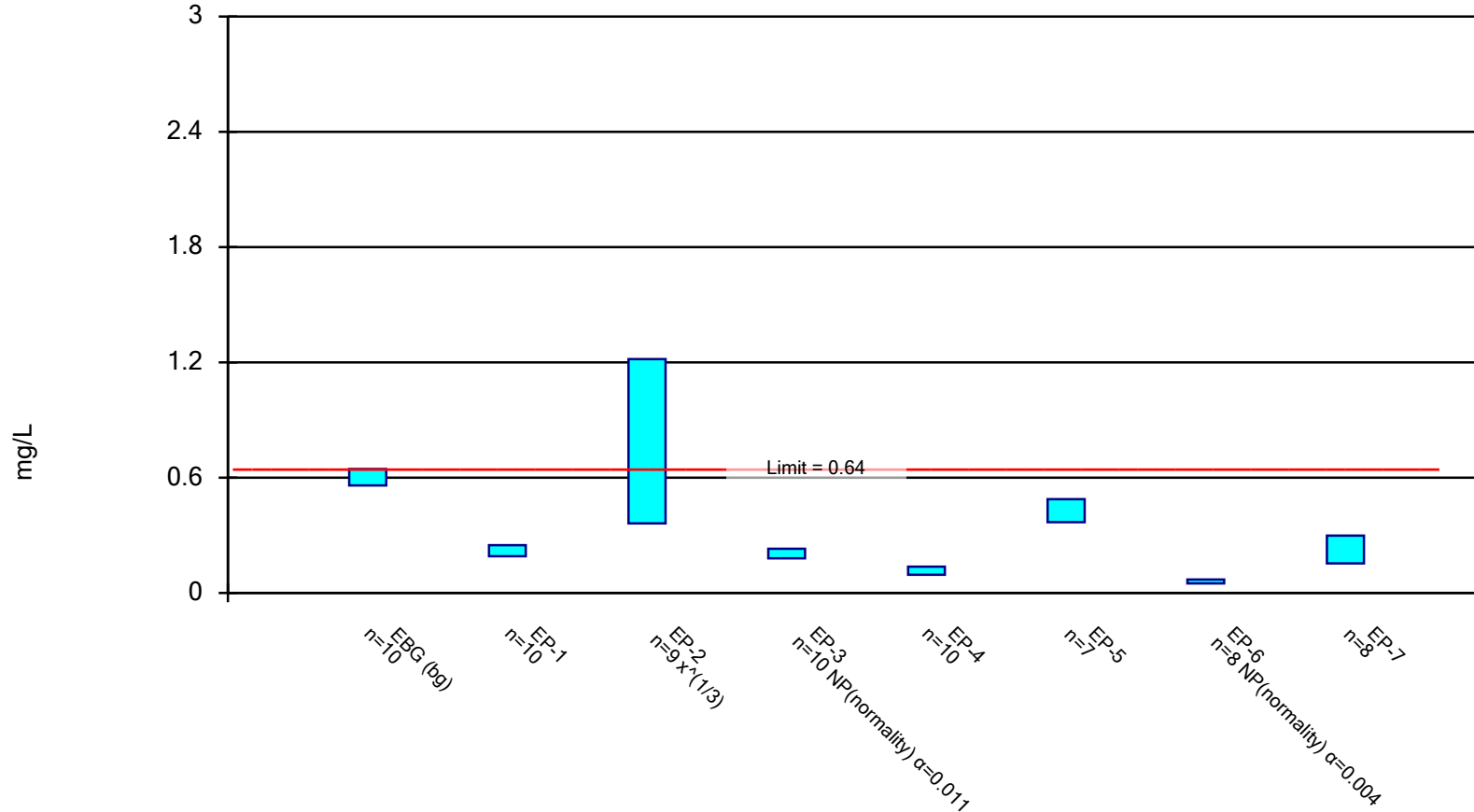


Constituent: Combined Radium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

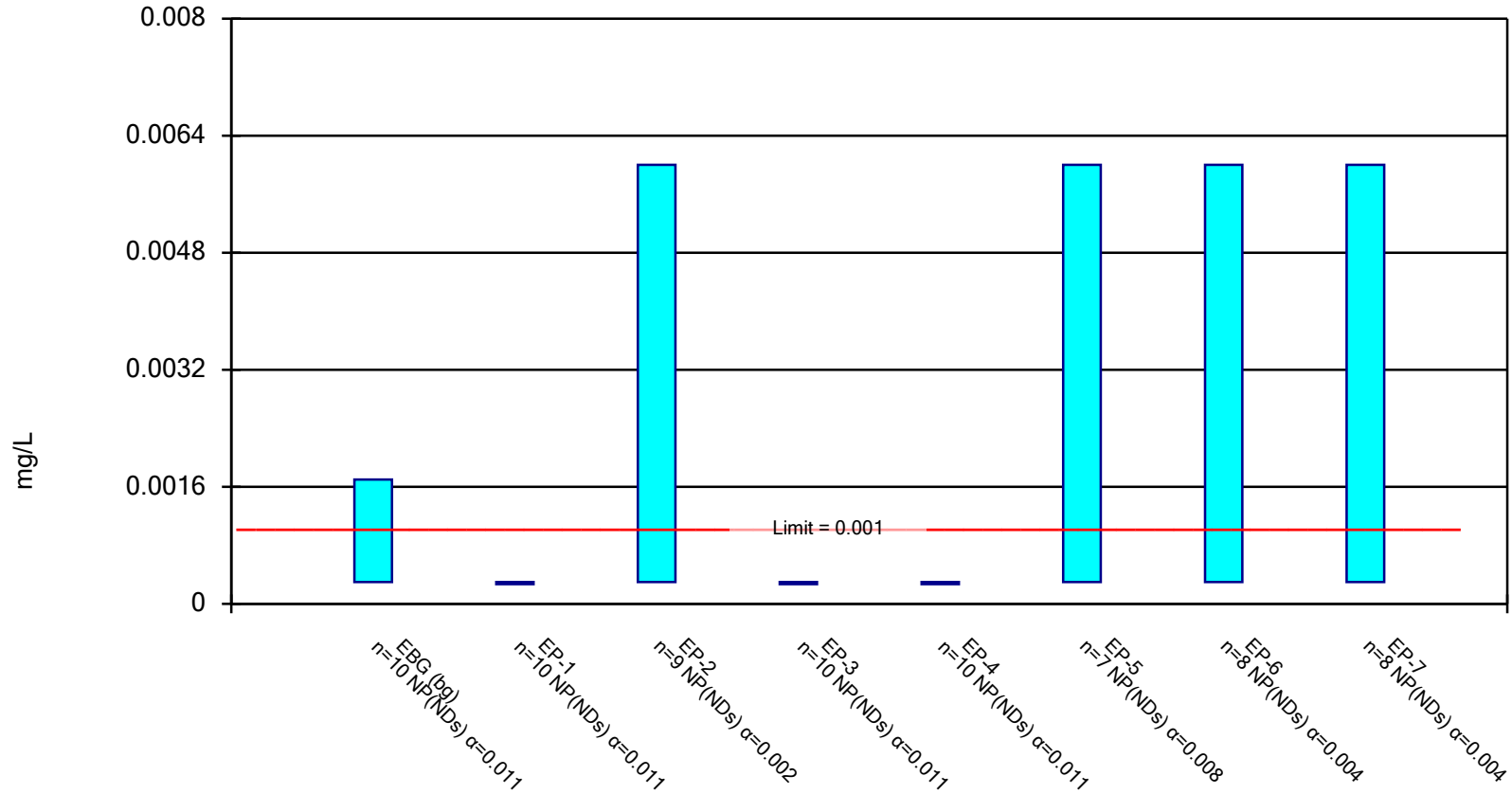


Constituent: Fluoride Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

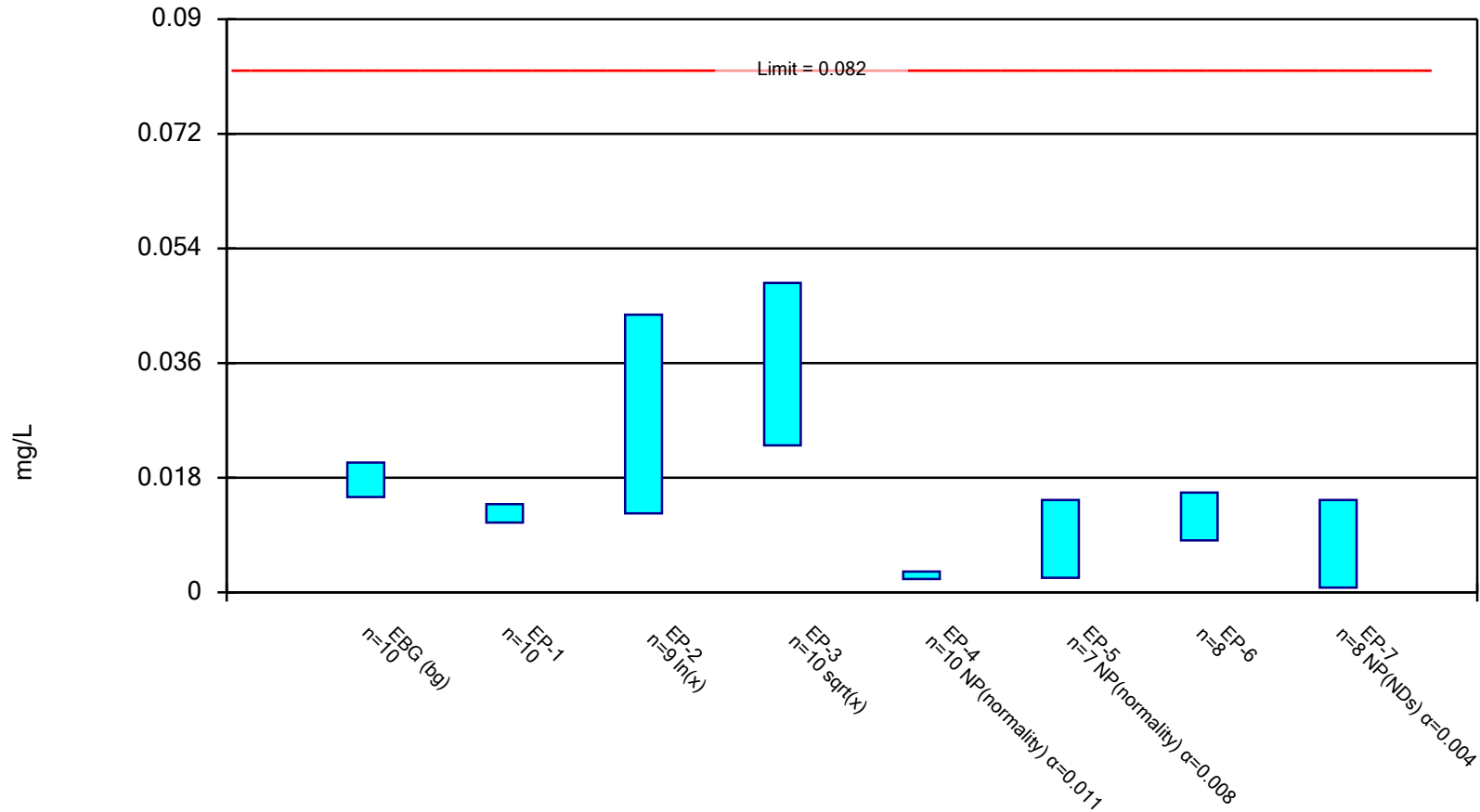


Constituent: Lead Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

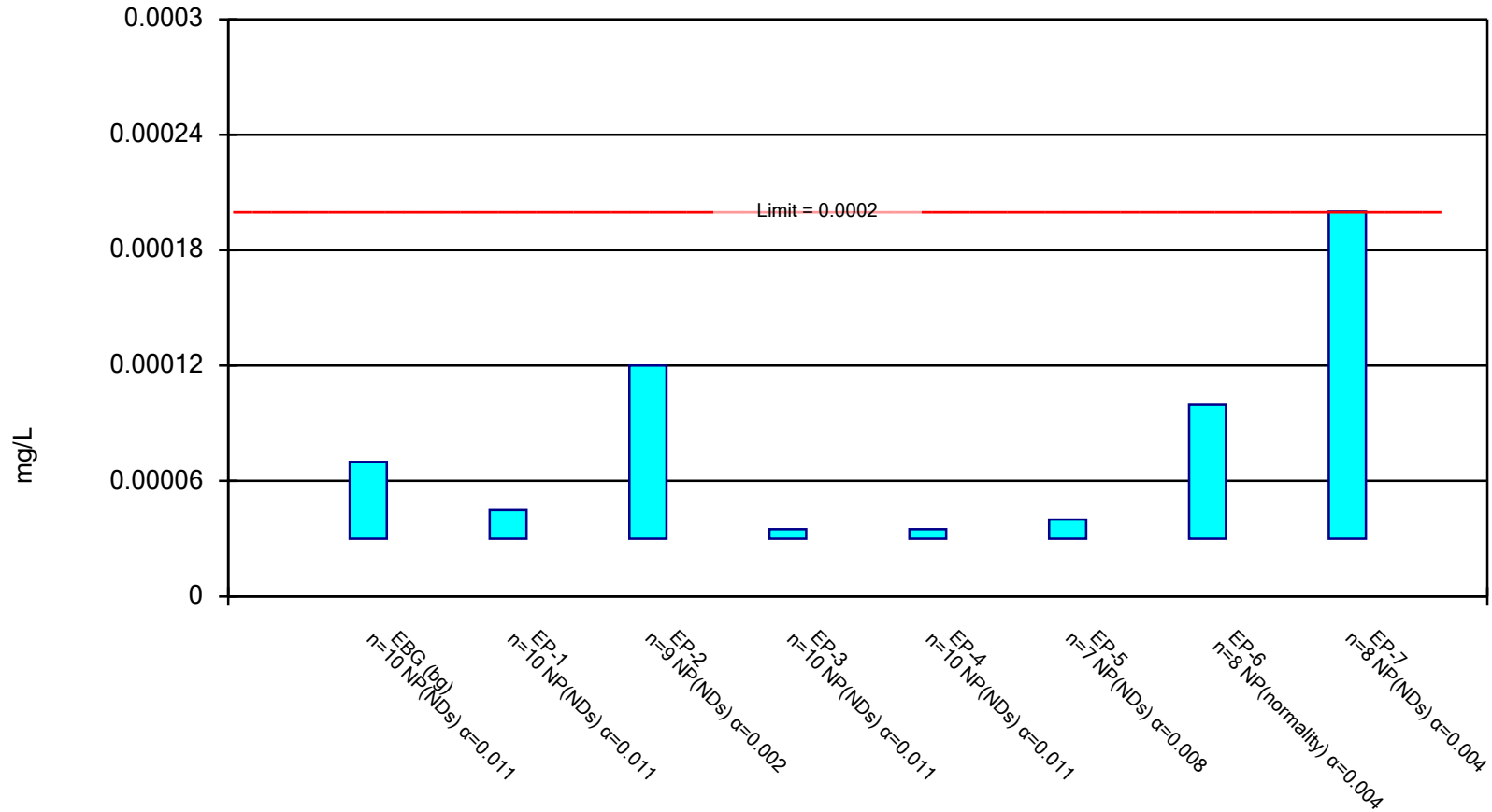


Constituent: Lithium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

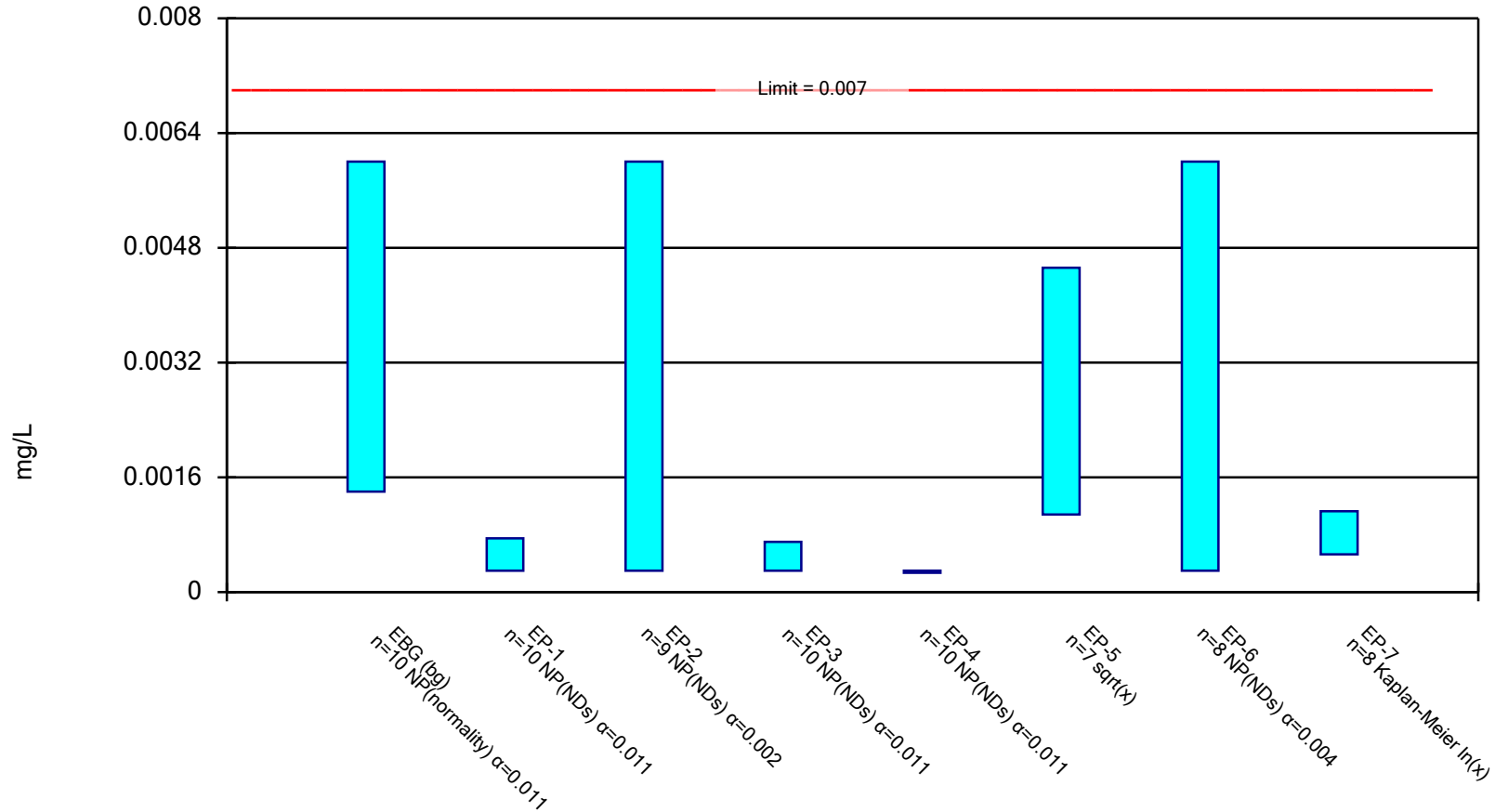


Constituent: Mercury Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

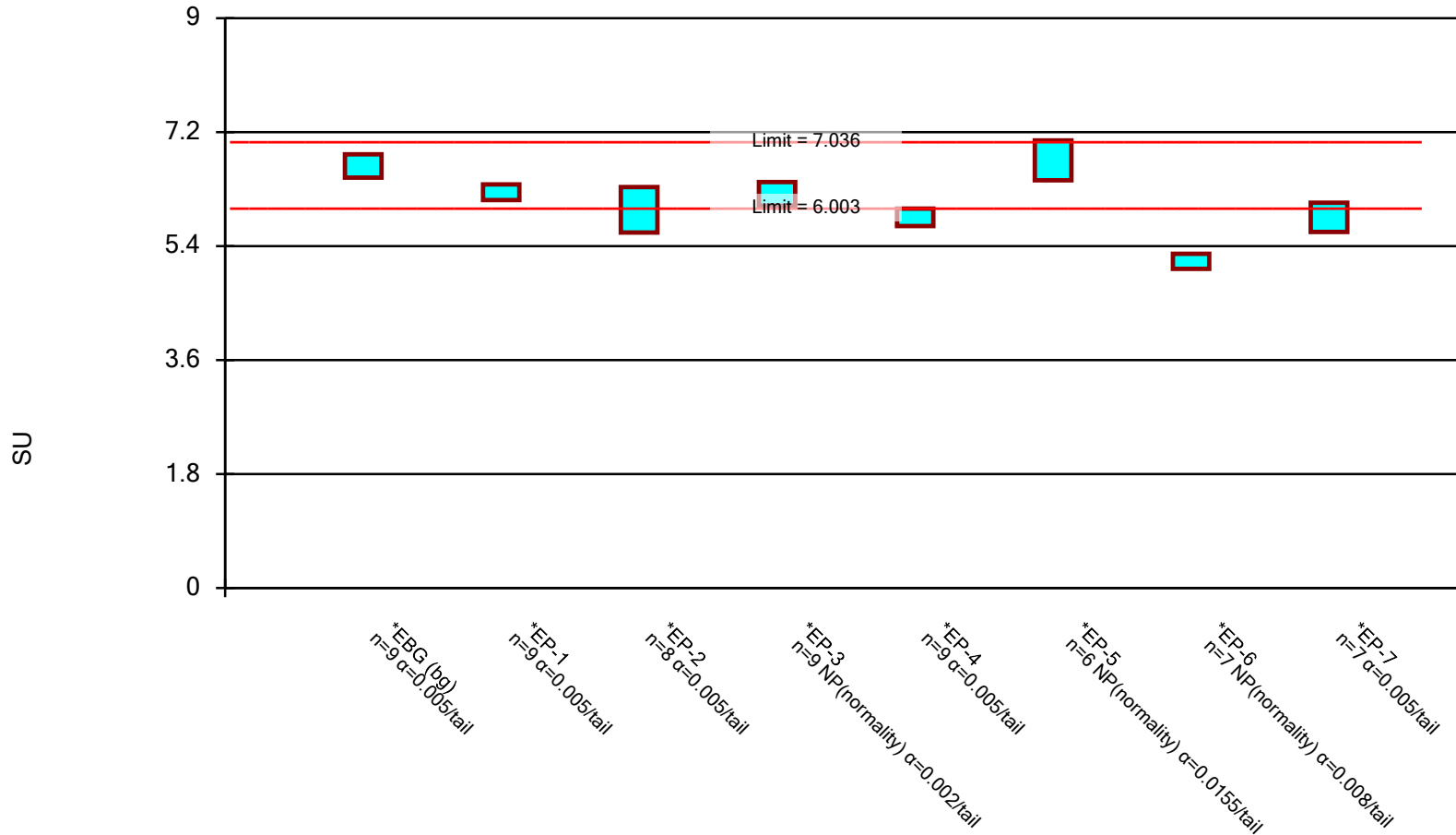


Constituent: Molybdenum Analysis Run 11/15/2023 9:22 AM

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.



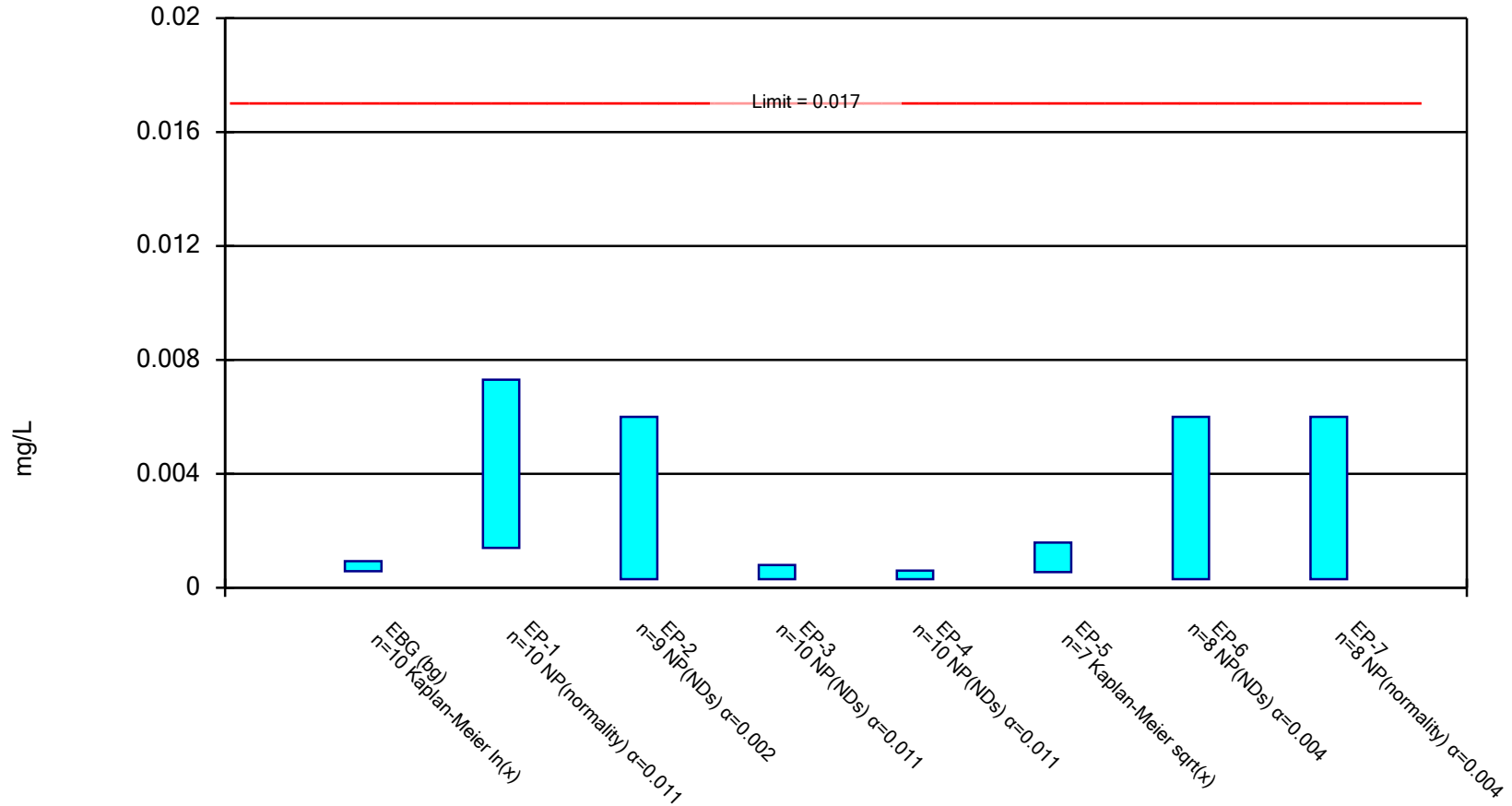
Constituent: pH Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

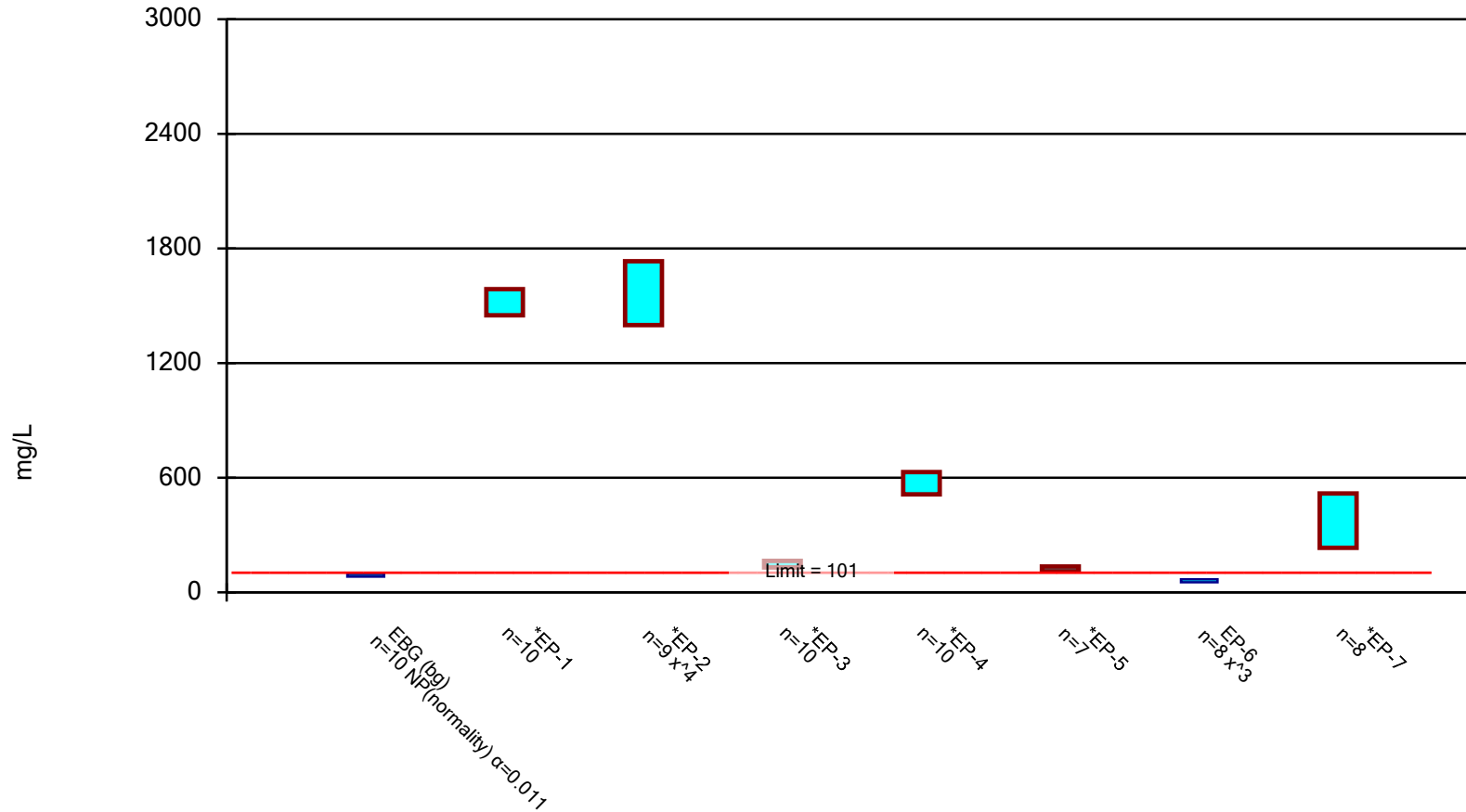


Constituent: Selenium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

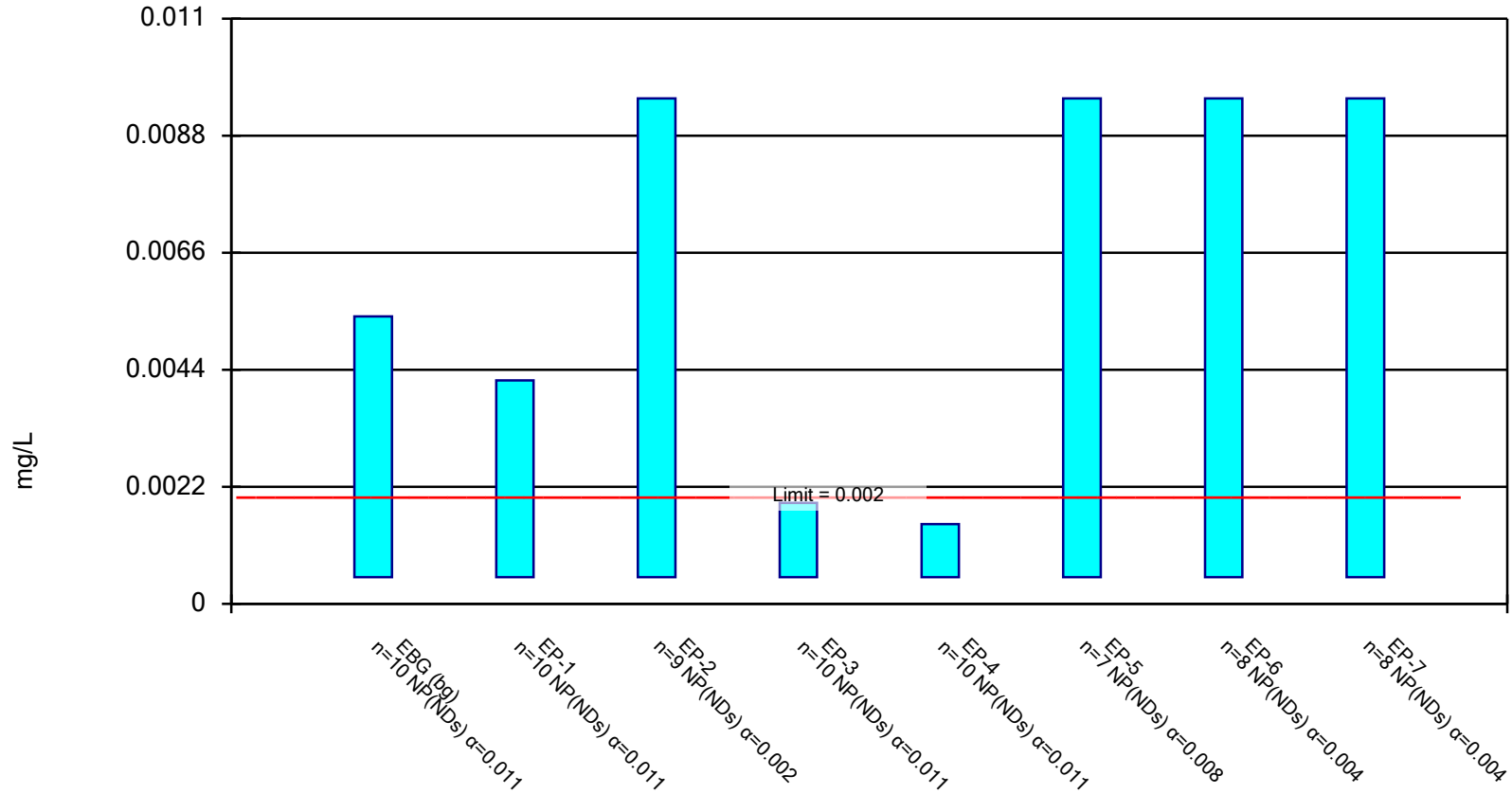


Constituent: Sulfate Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

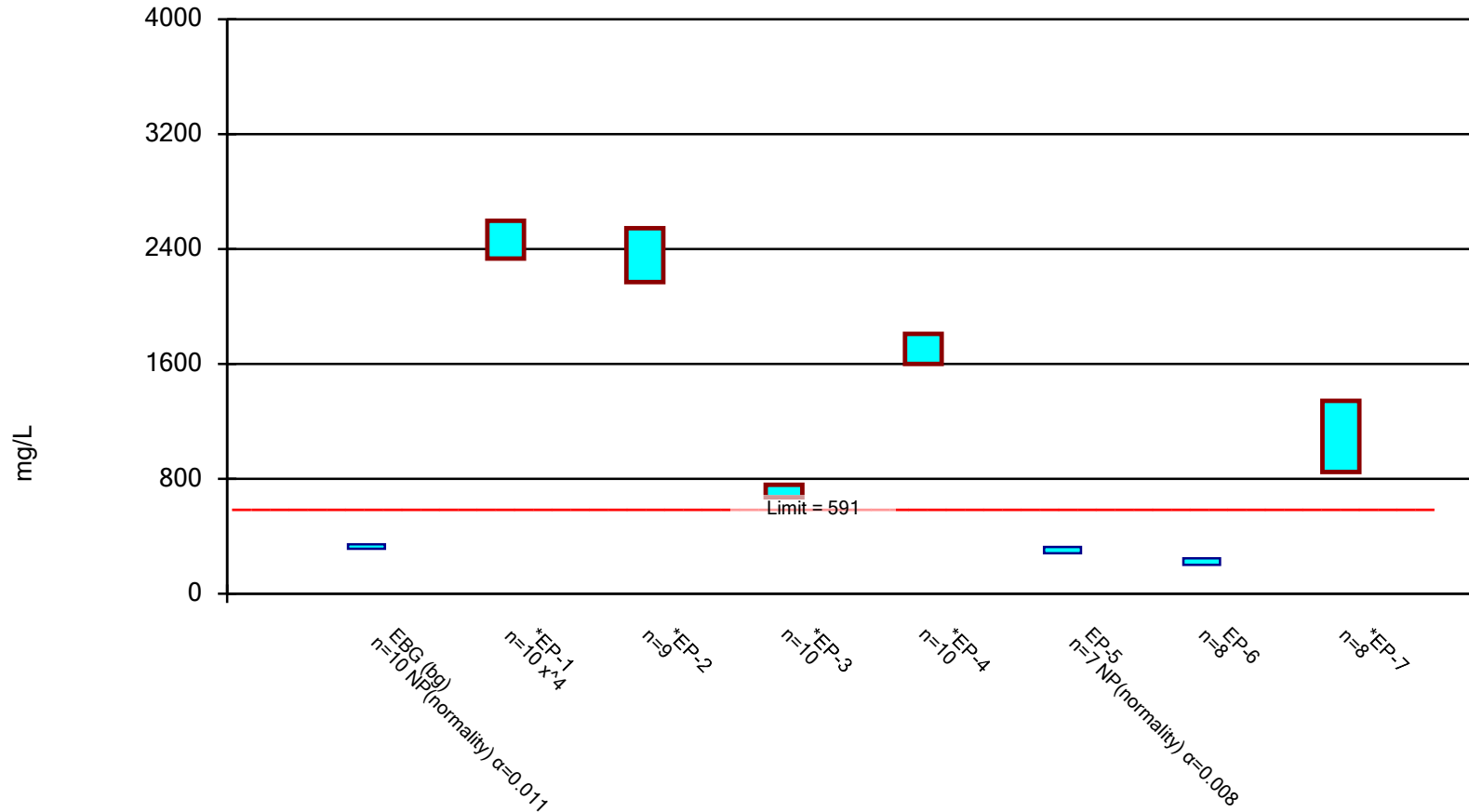


Constituent: Thallium Analysis Run 11/15/2023 9:22 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Total Dissolved Solids Analysis Run 11/15/2023 9:22 AM

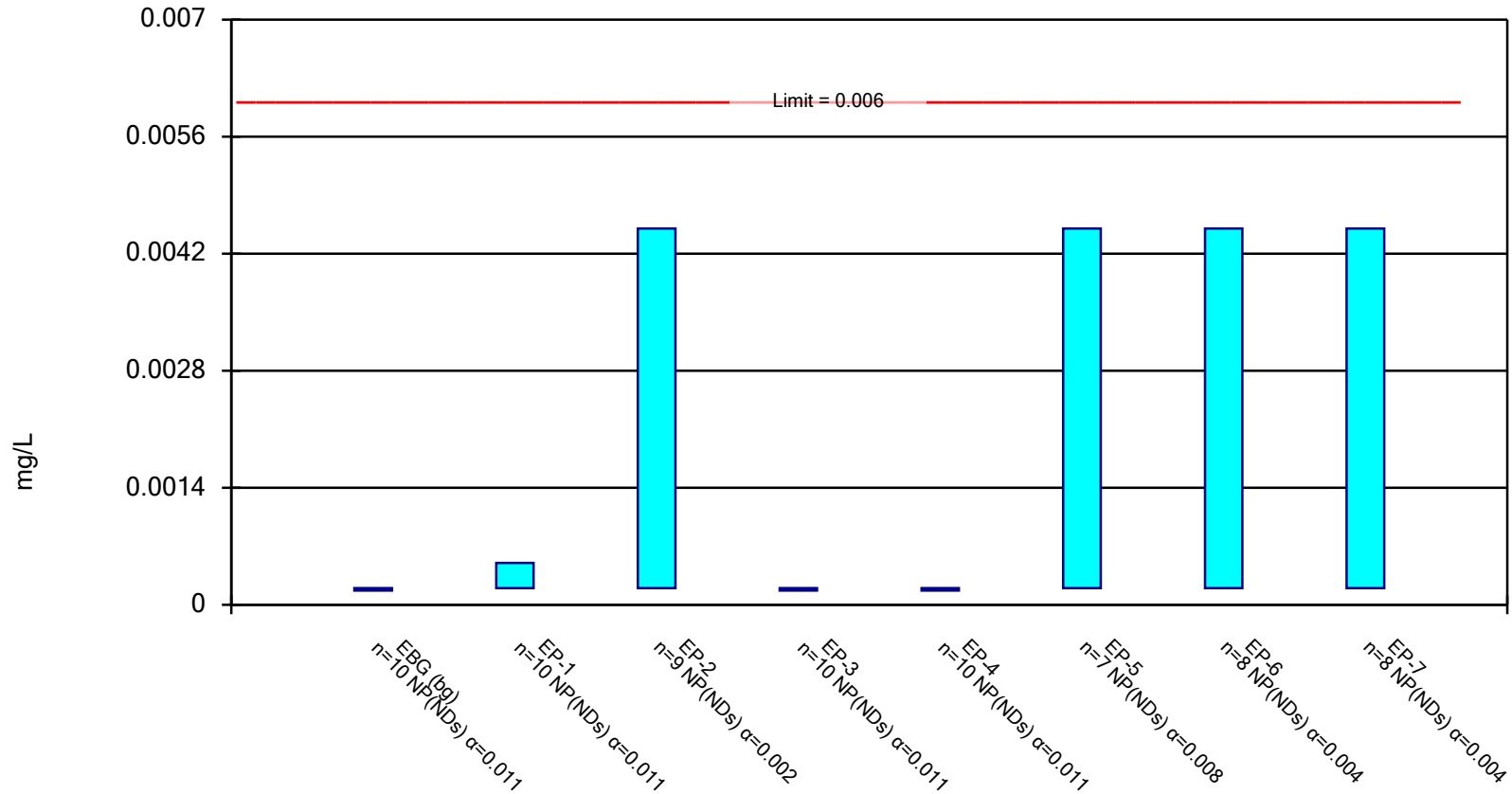
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-14**

## **Q3 2023 Groundwater Protection Standard Exceedances**

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

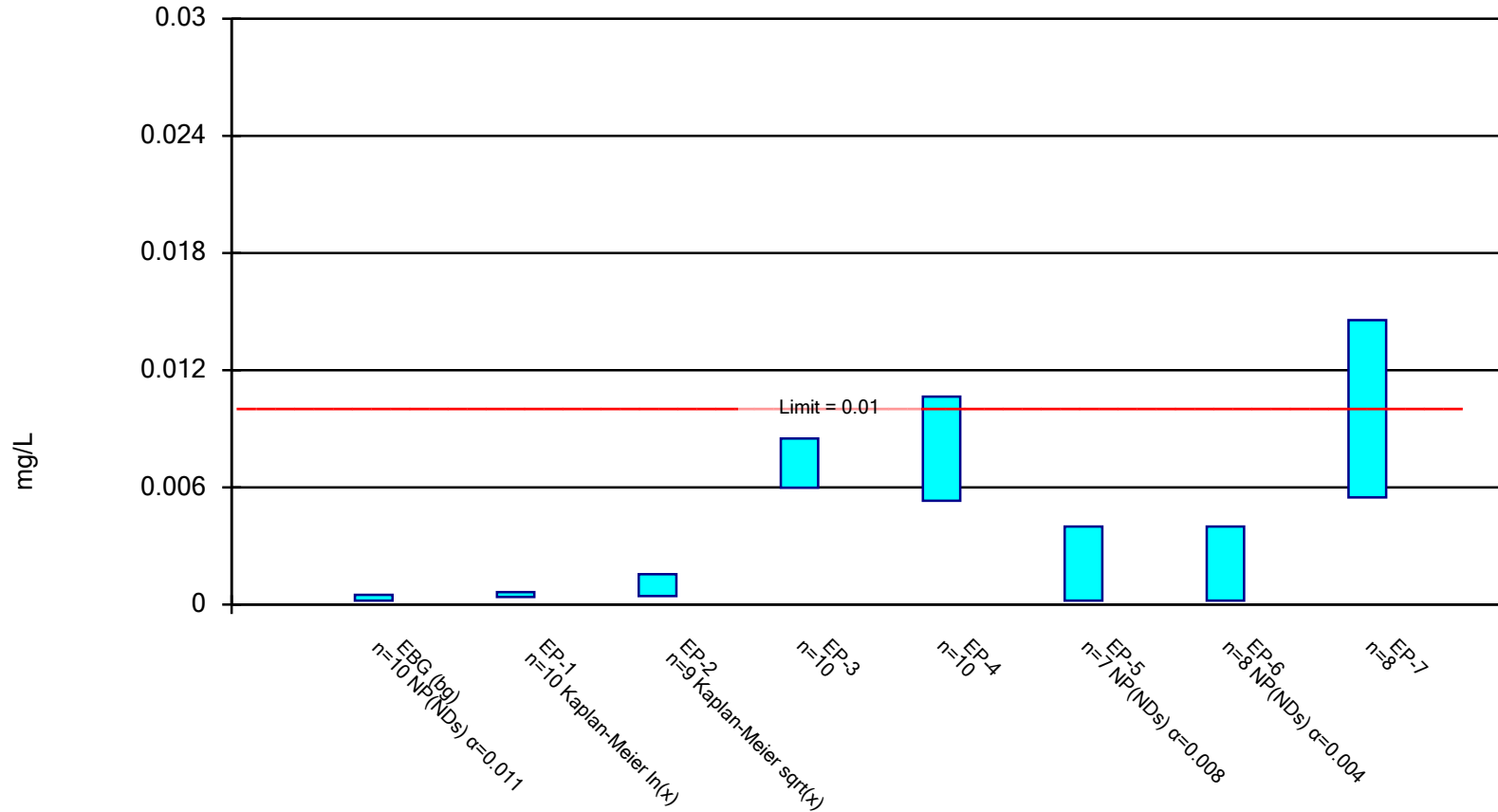


Constituent: Antimony Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

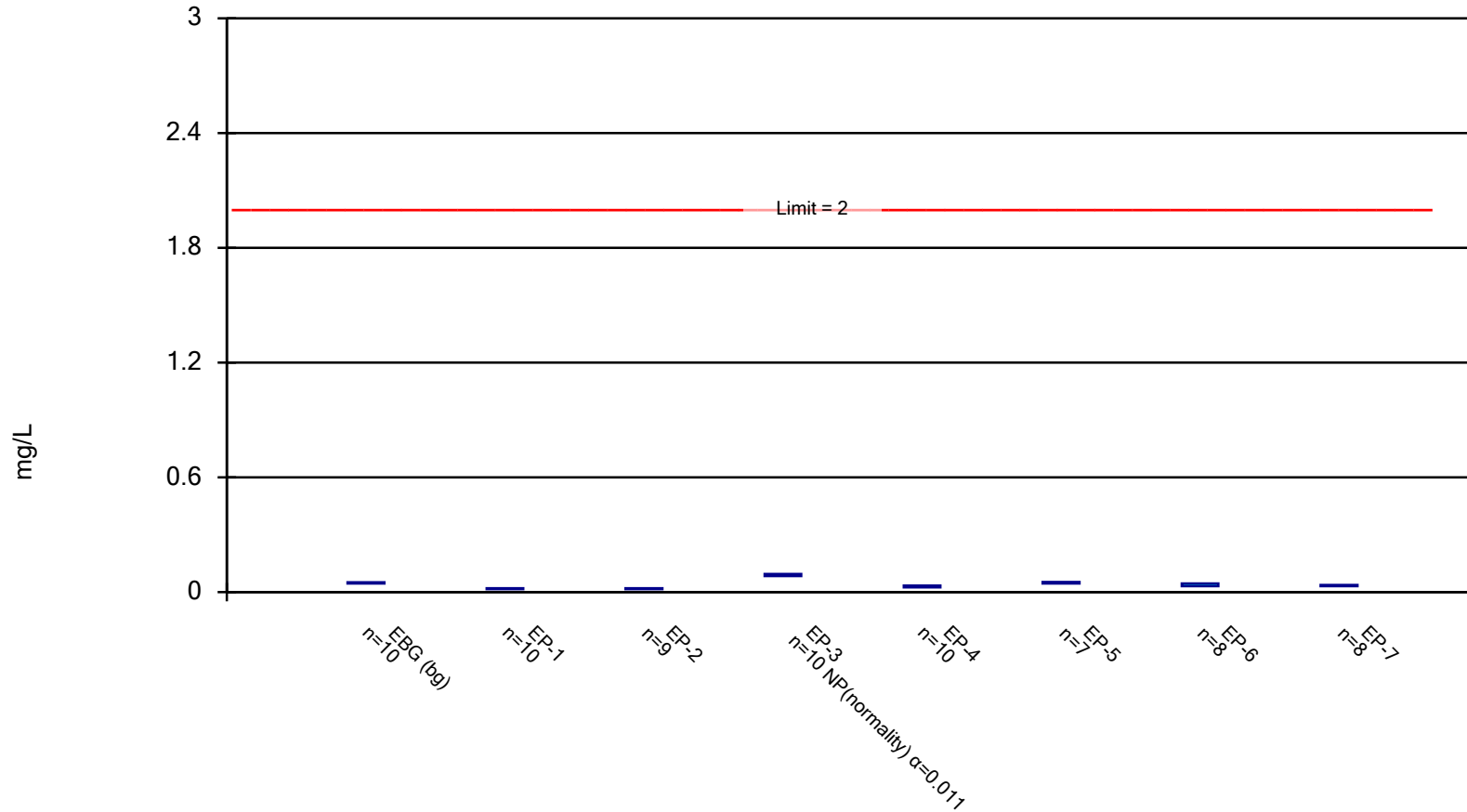


Constituent: Arsenic Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



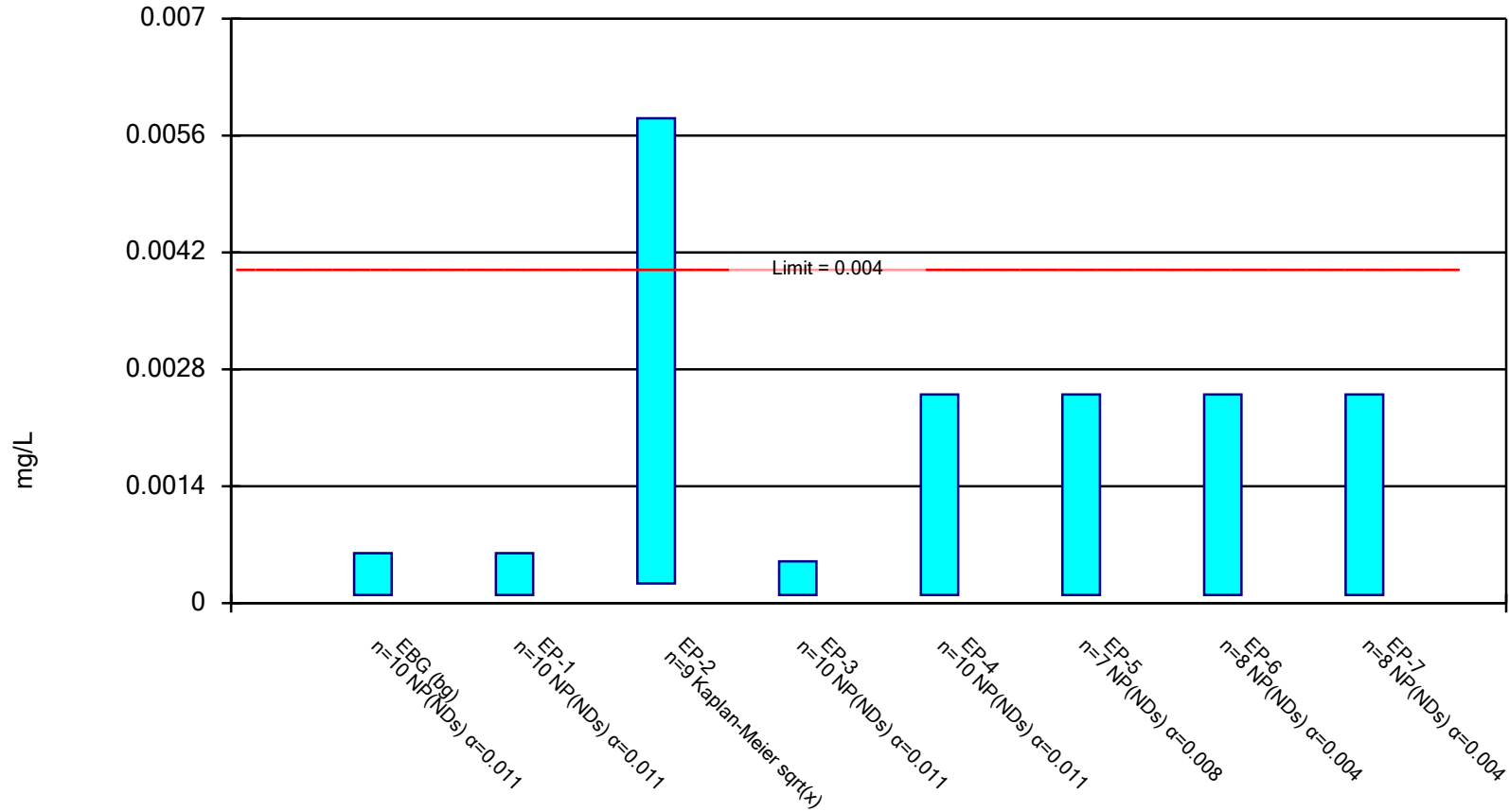
Constituent: Barium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

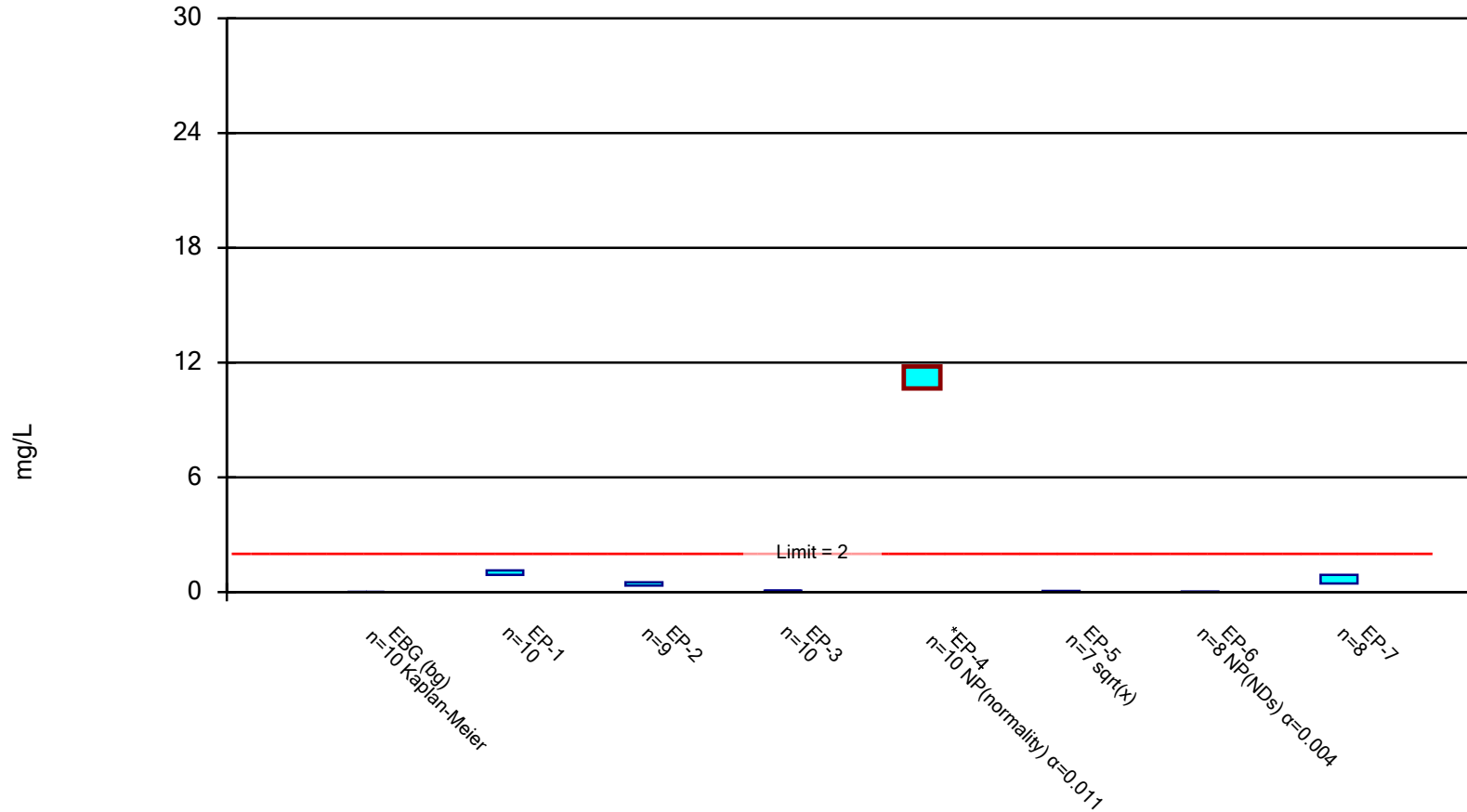


Constituent: Beryllium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

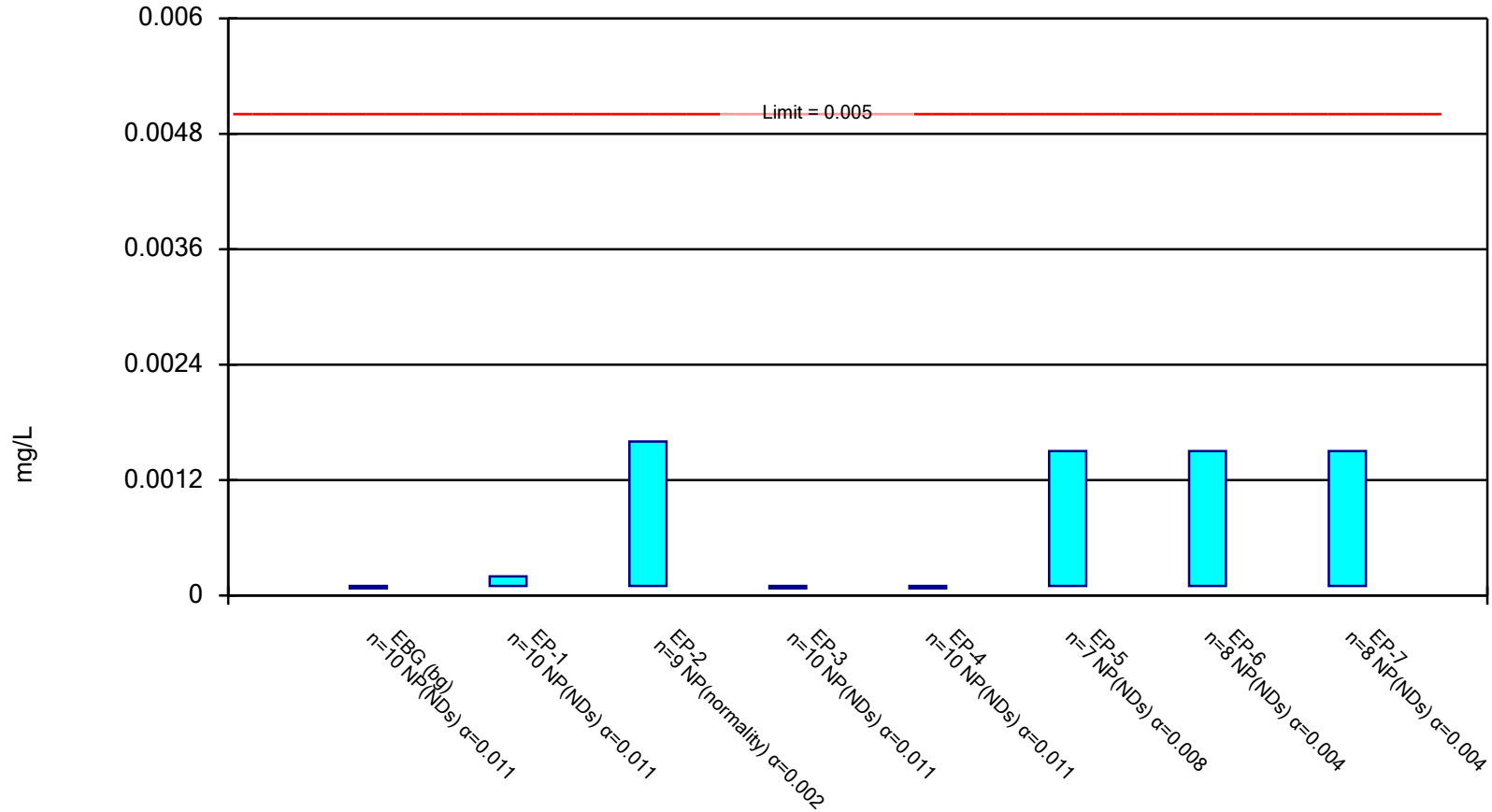


Constituent: Boron Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

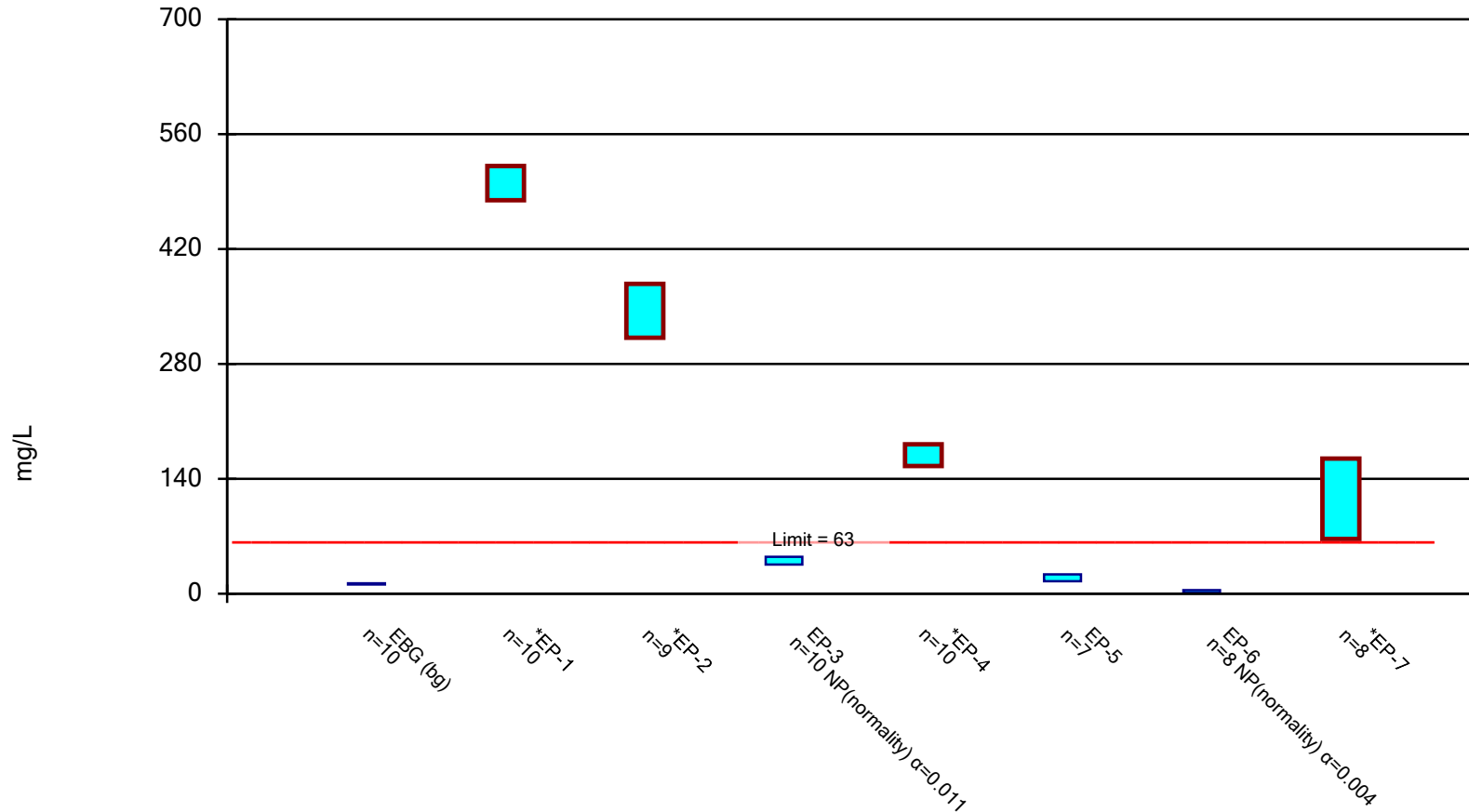


Constituent: Cadmium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

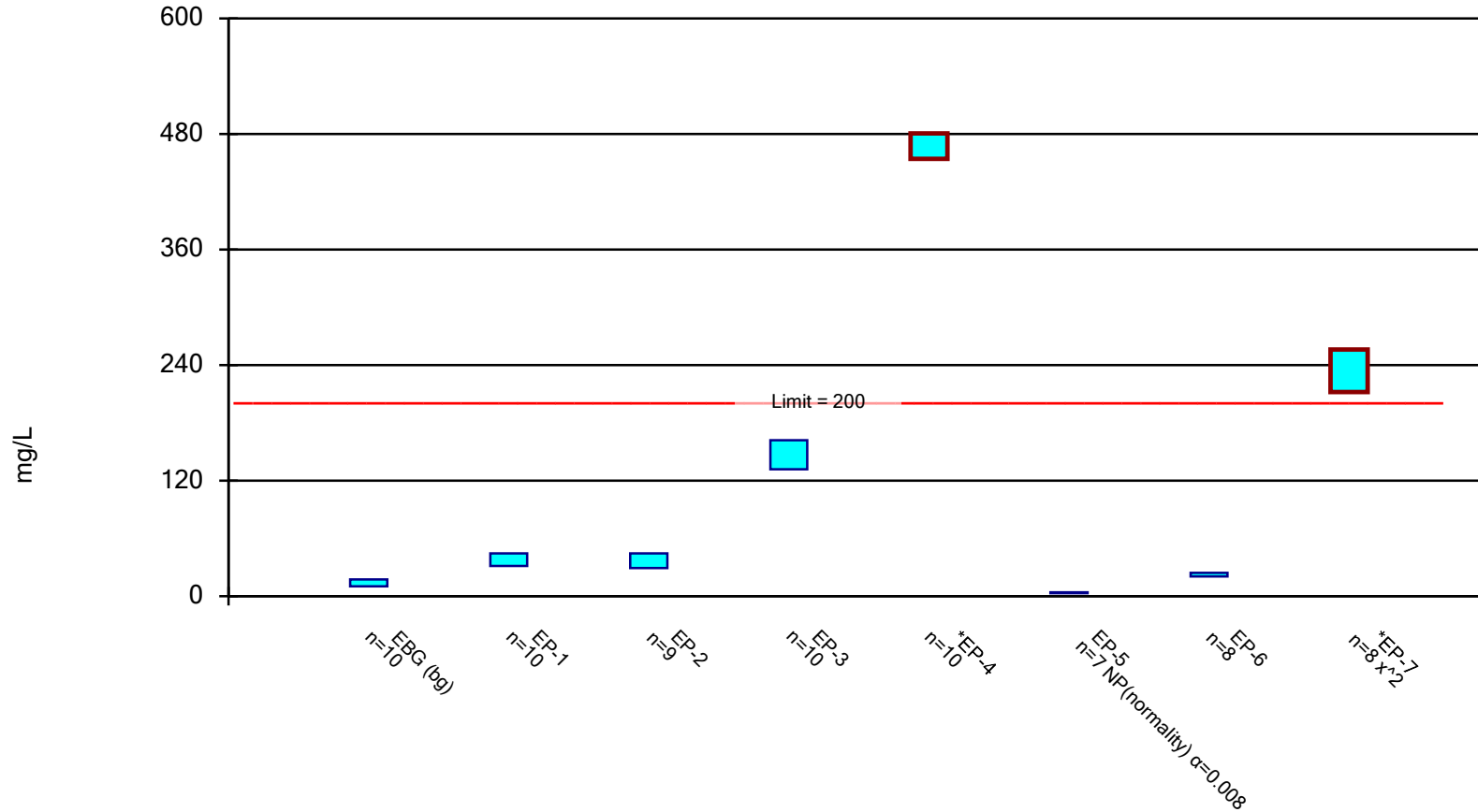


Constituent: Calcium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

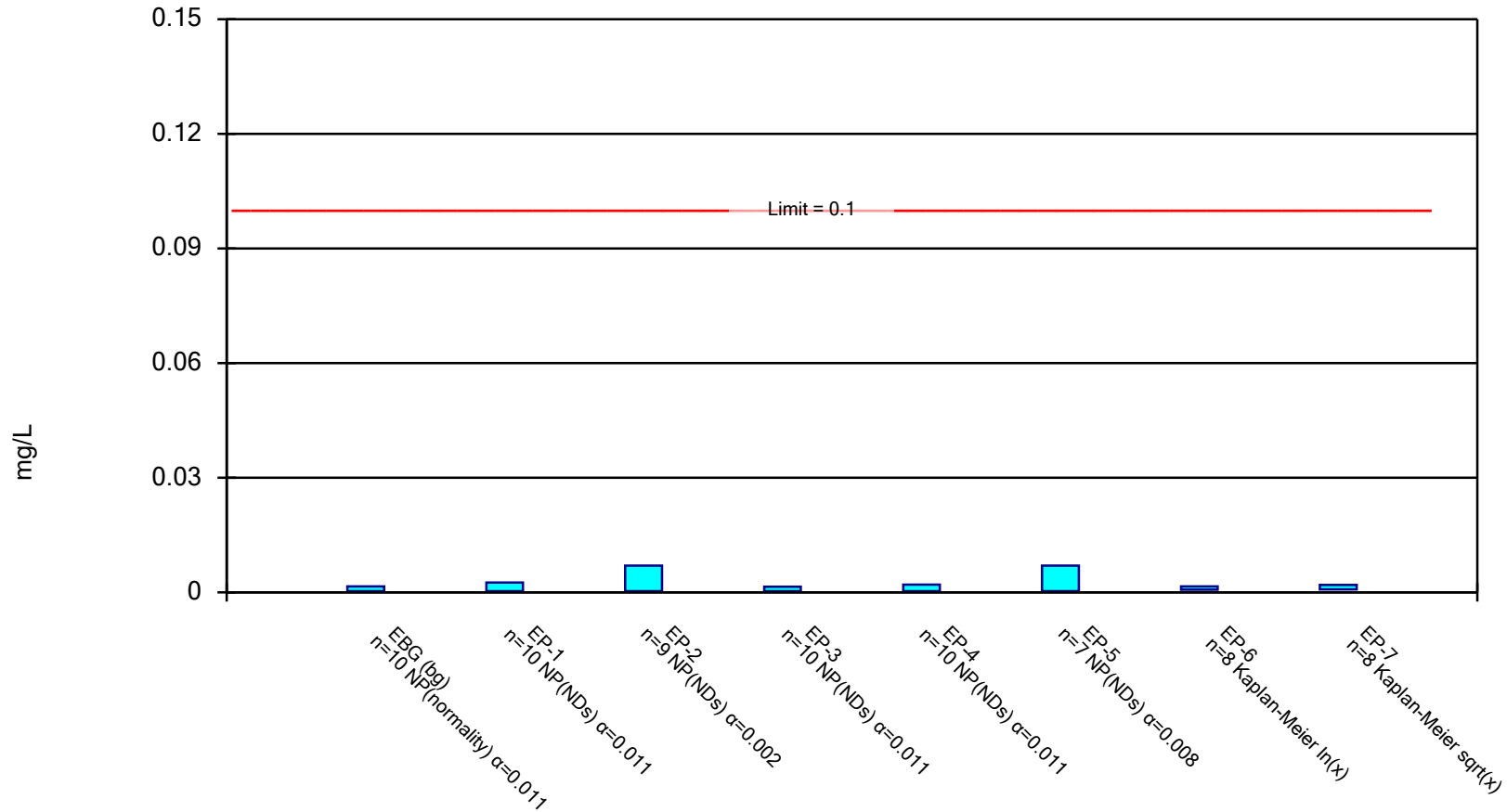


Constituent: Chloride Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

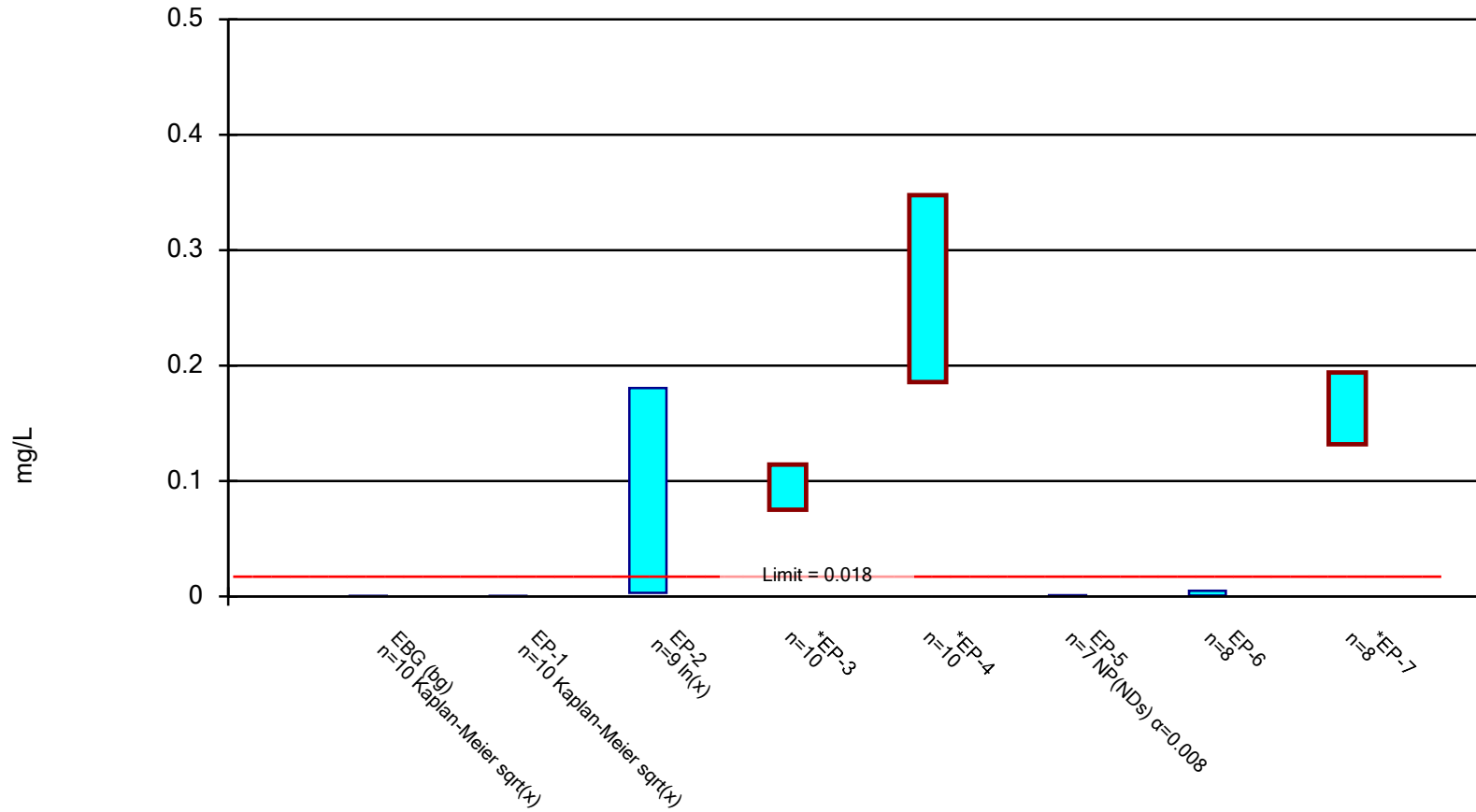


Constituent: Chromium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

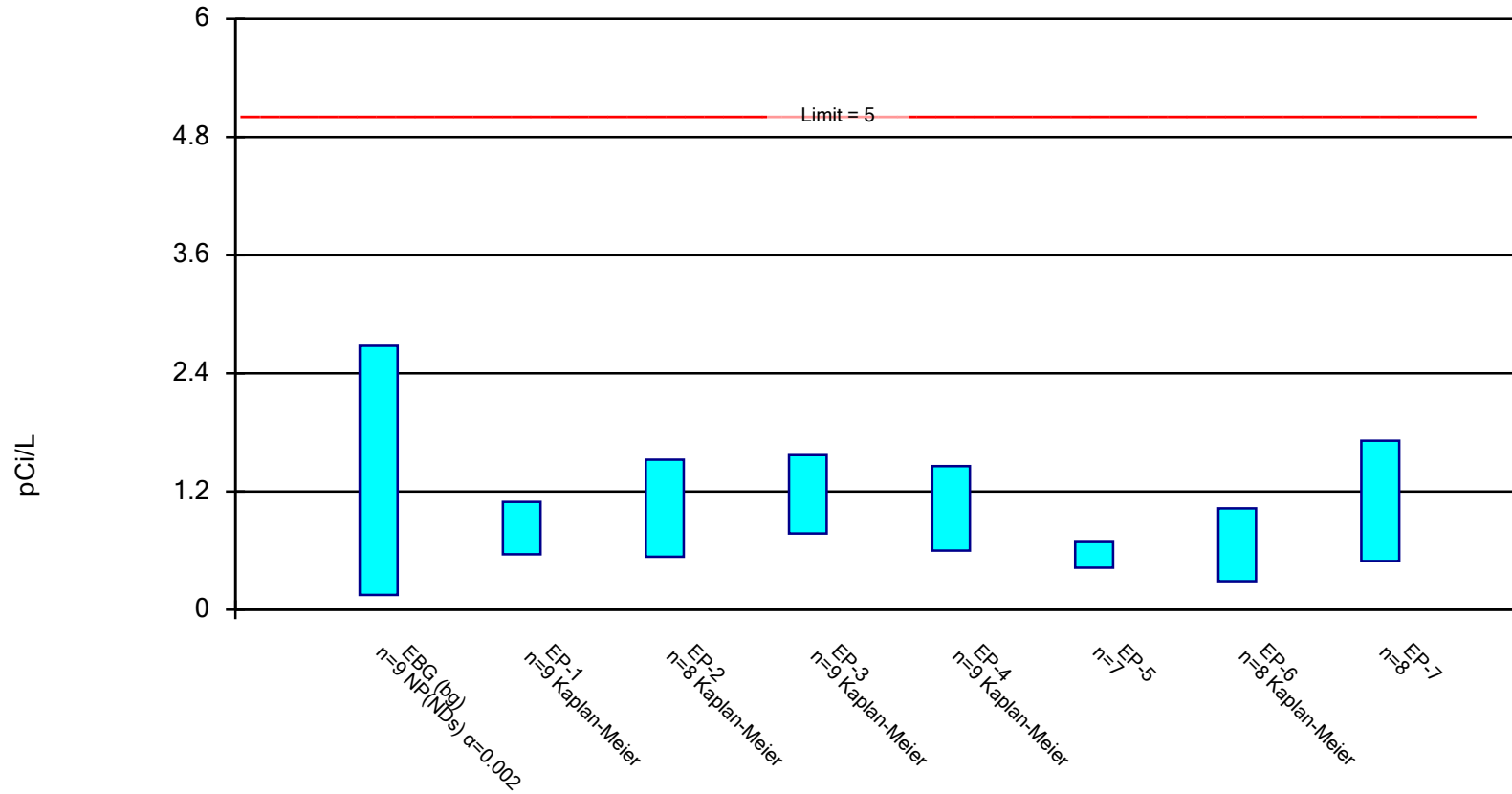


Constituent: Cobalt Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



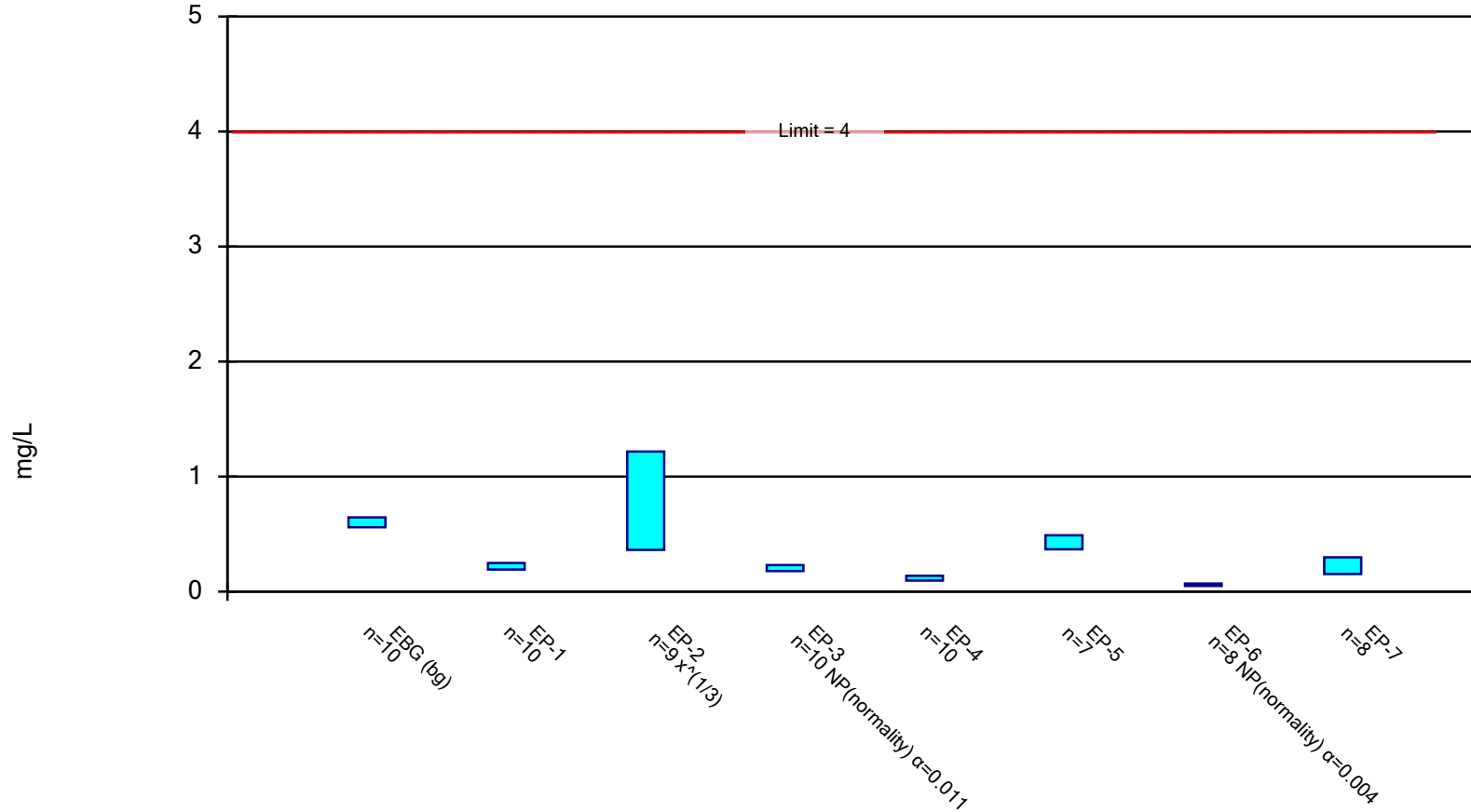
Constituent: Combined Radium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

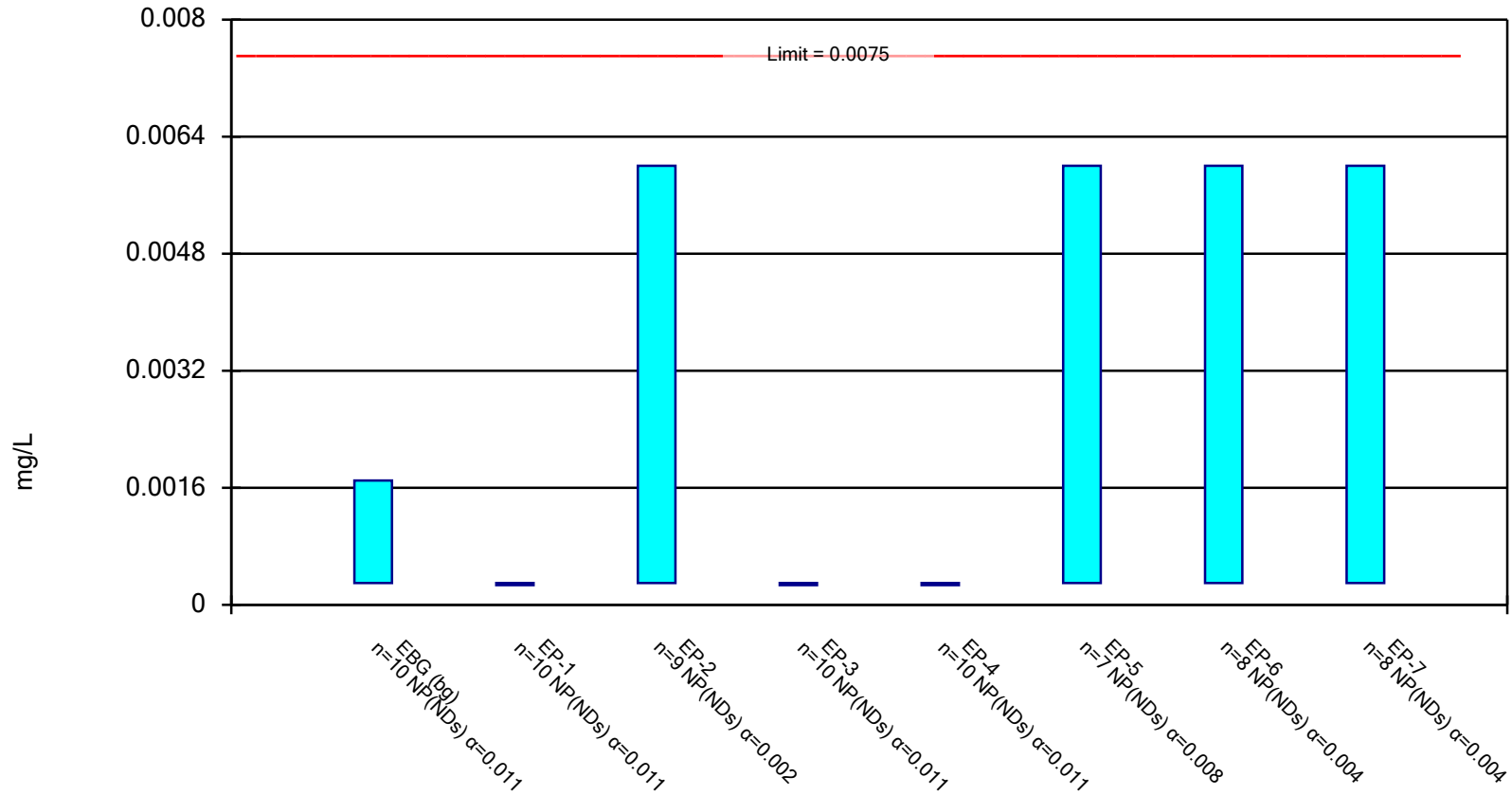


Constituent: Fluoride Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

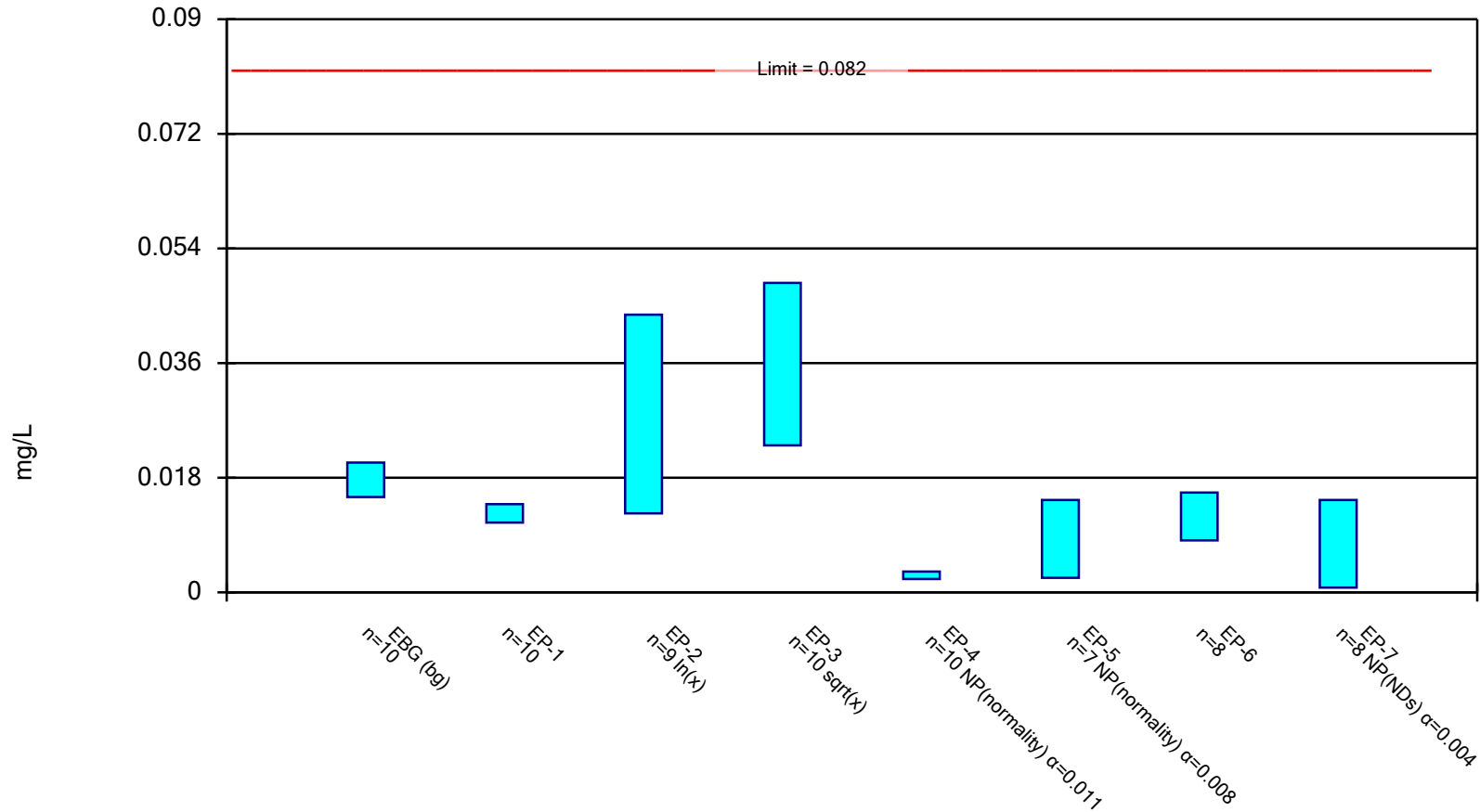


Constituent: Lead Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

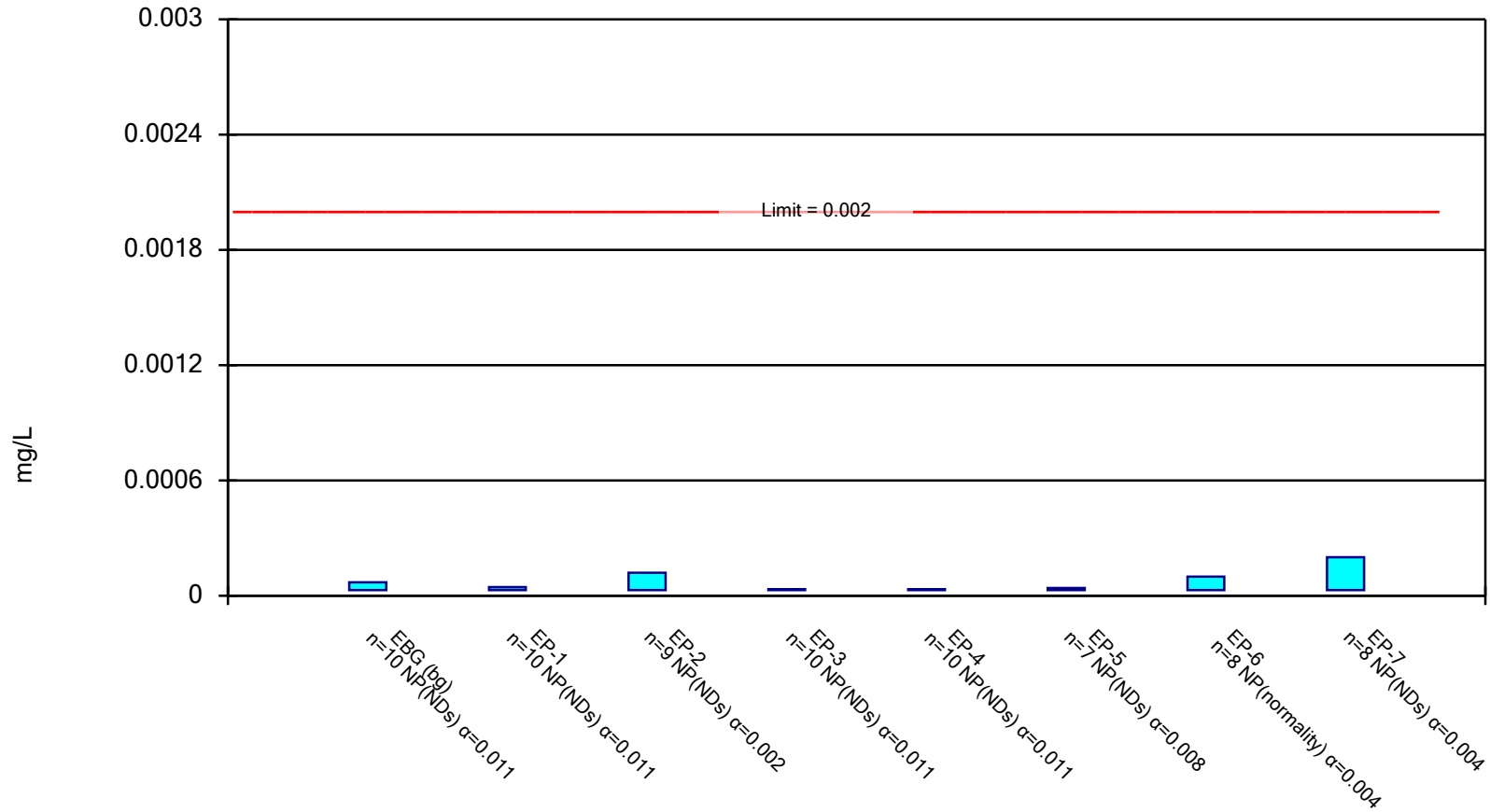


Constituent: Lithium Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

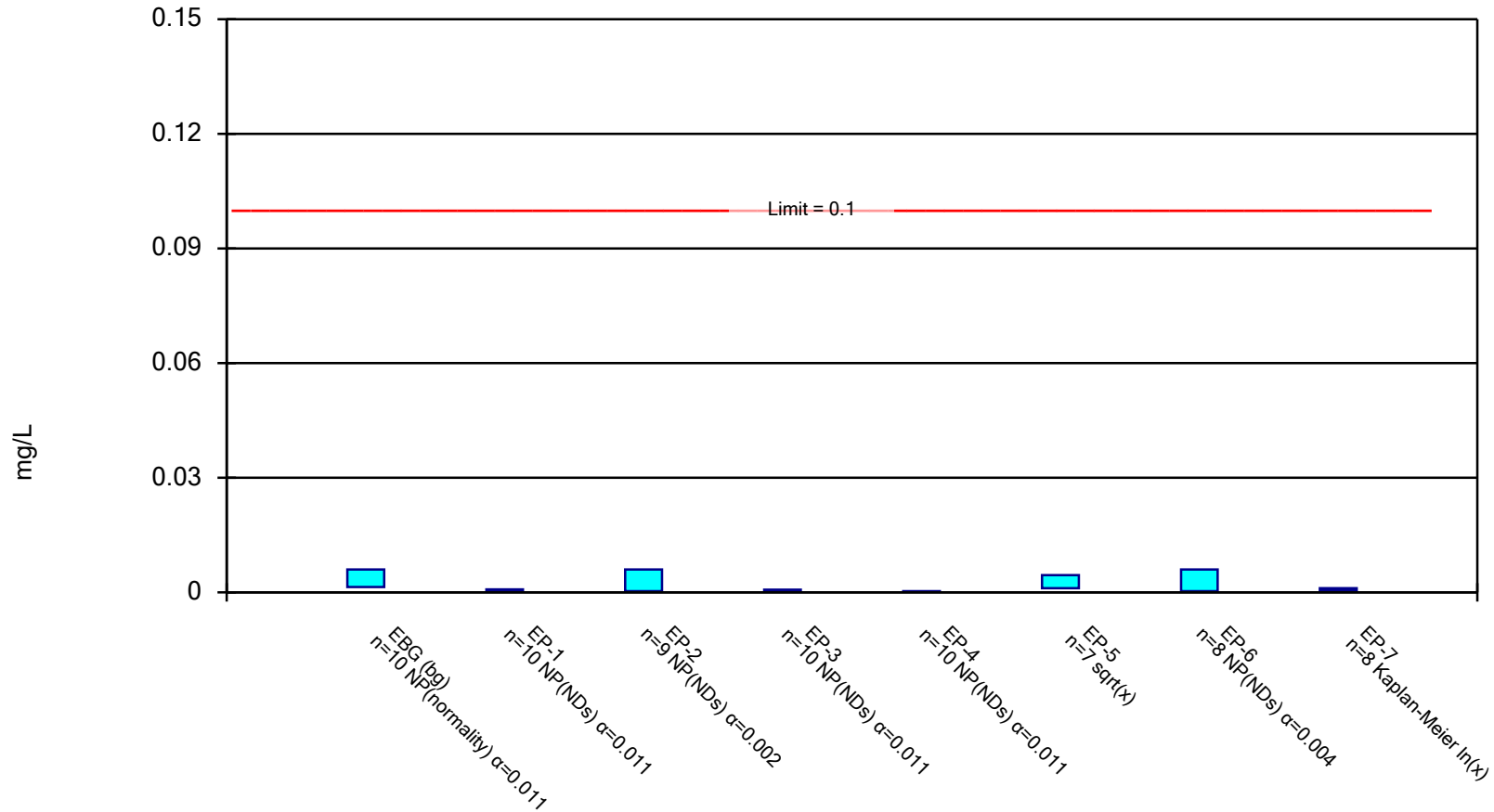


Constituent: Mercury Analysis Run 11/15/2023 8:55 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

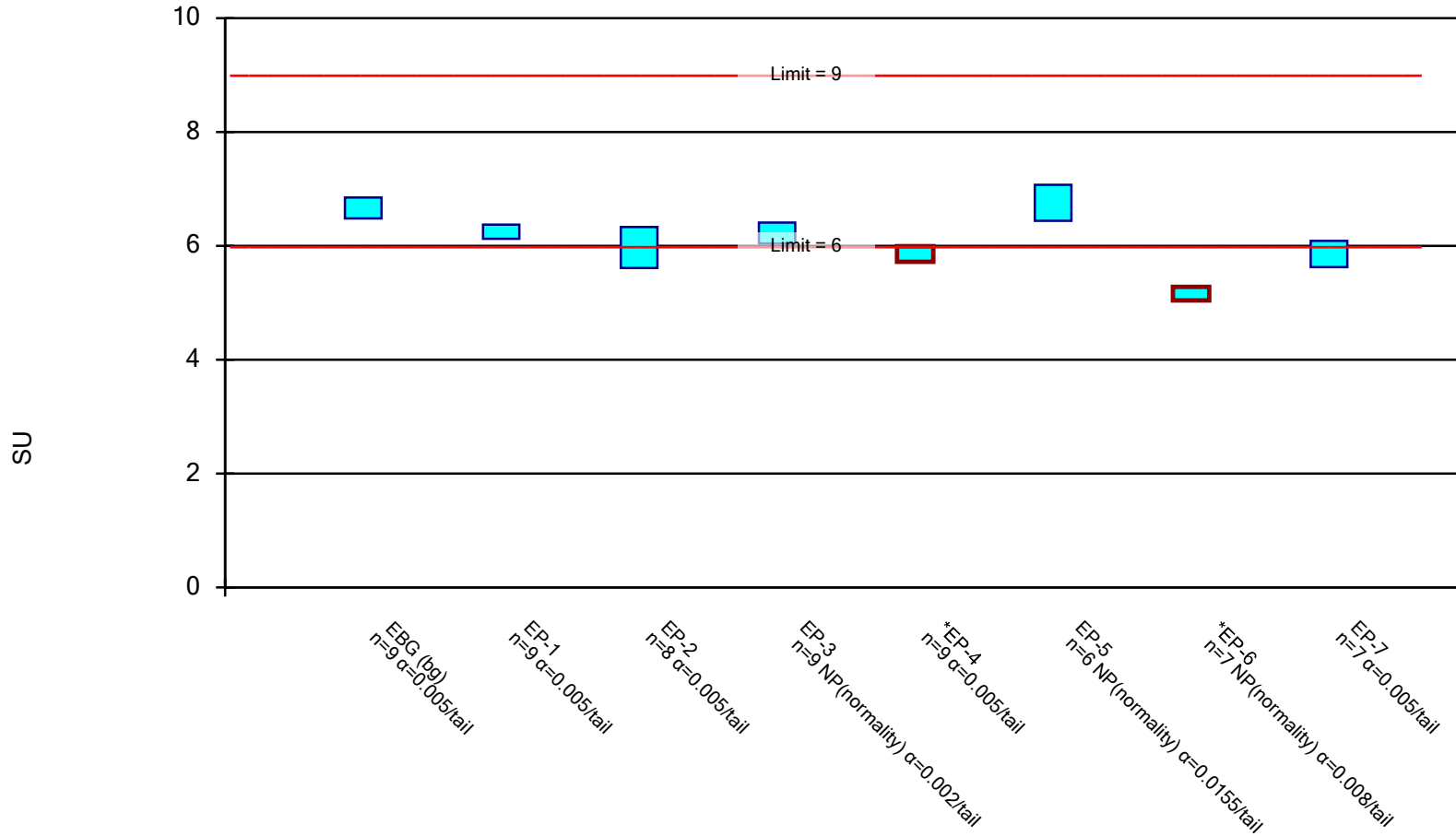


Constituent: Molybdenum Analysis Run 11/15/2023 8:56 AM

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.

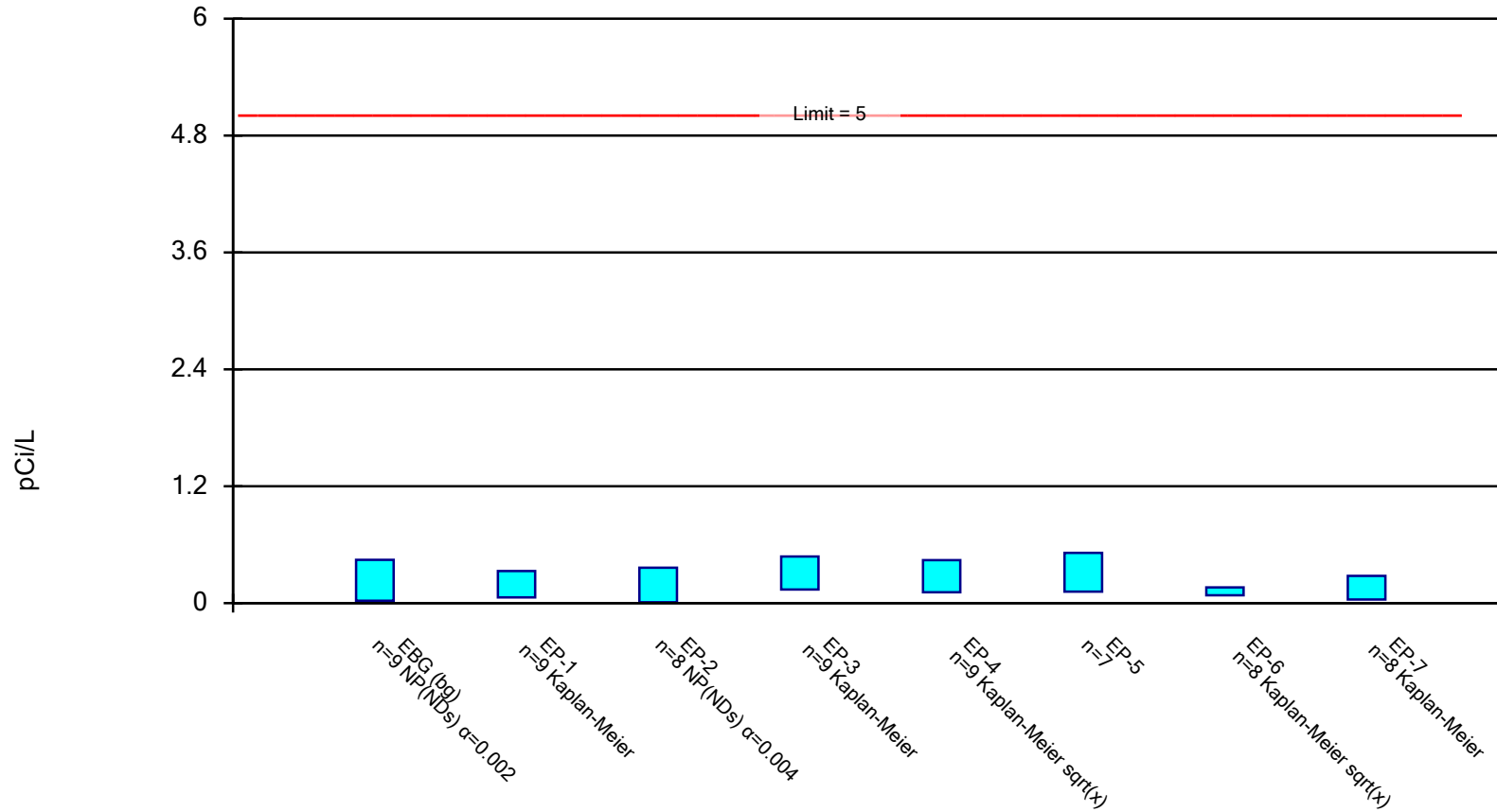


Constituent: pH Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

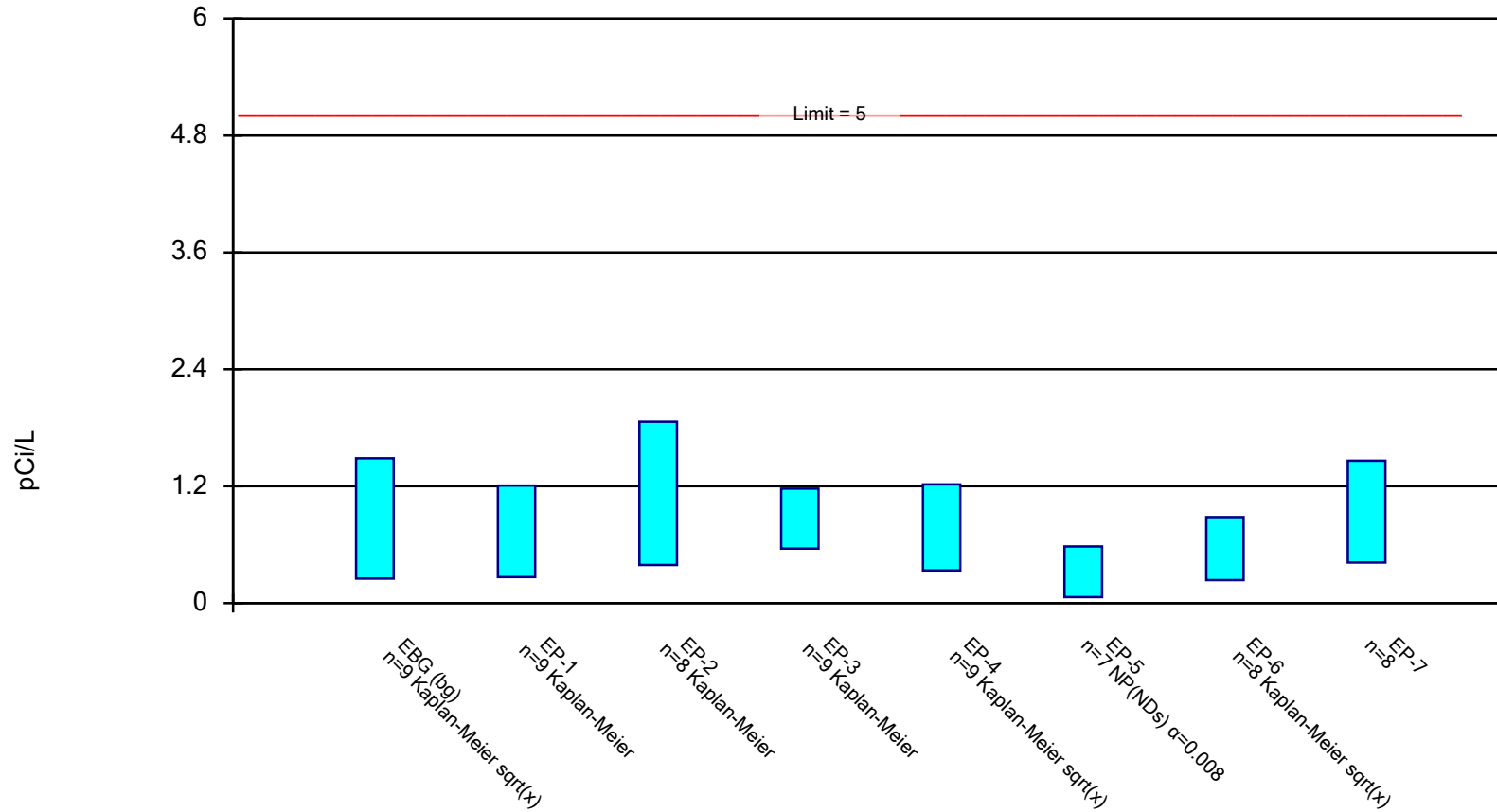


Constituent: Radium 226 Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



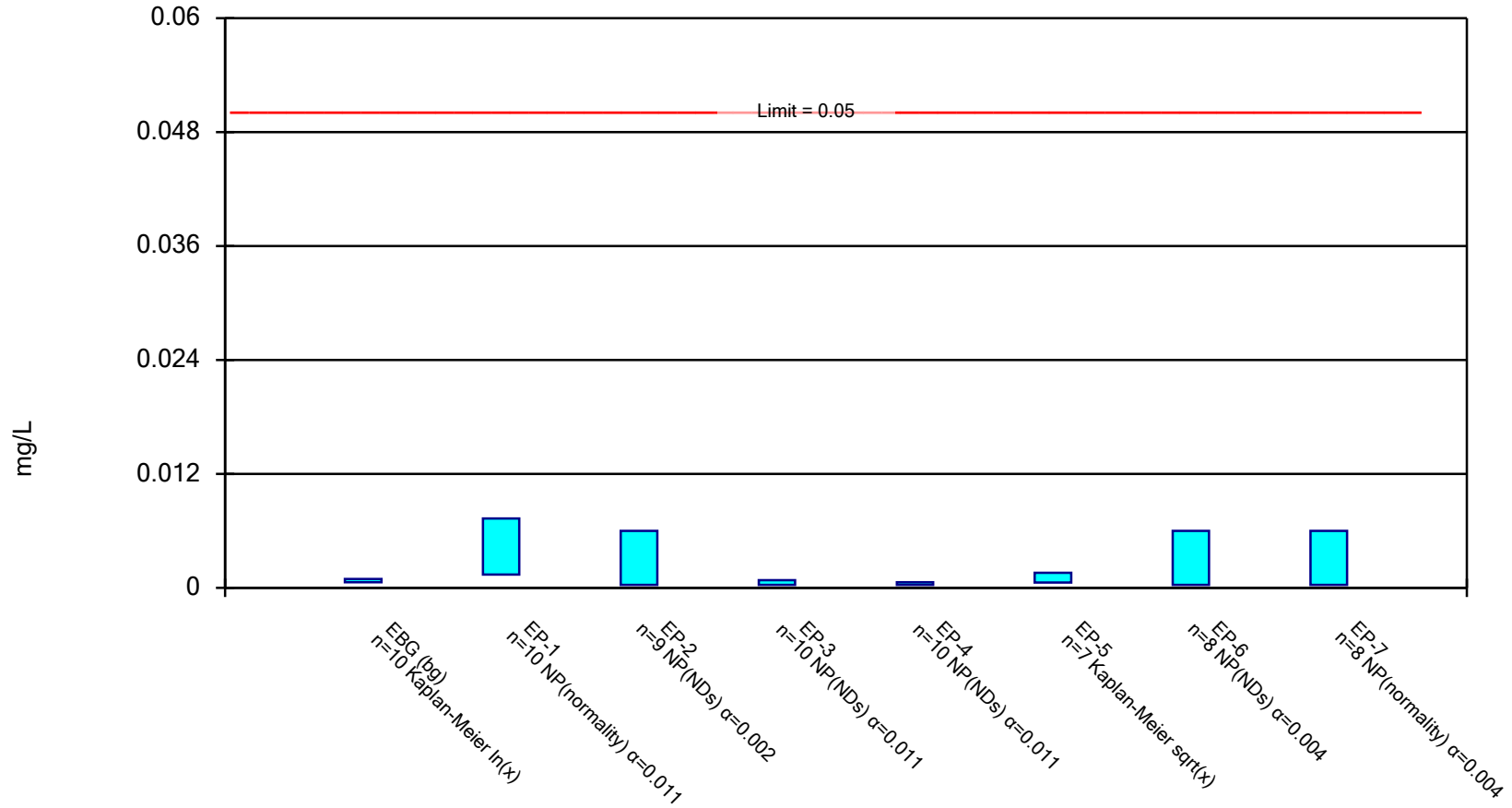
Constituent: Radium 228 Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

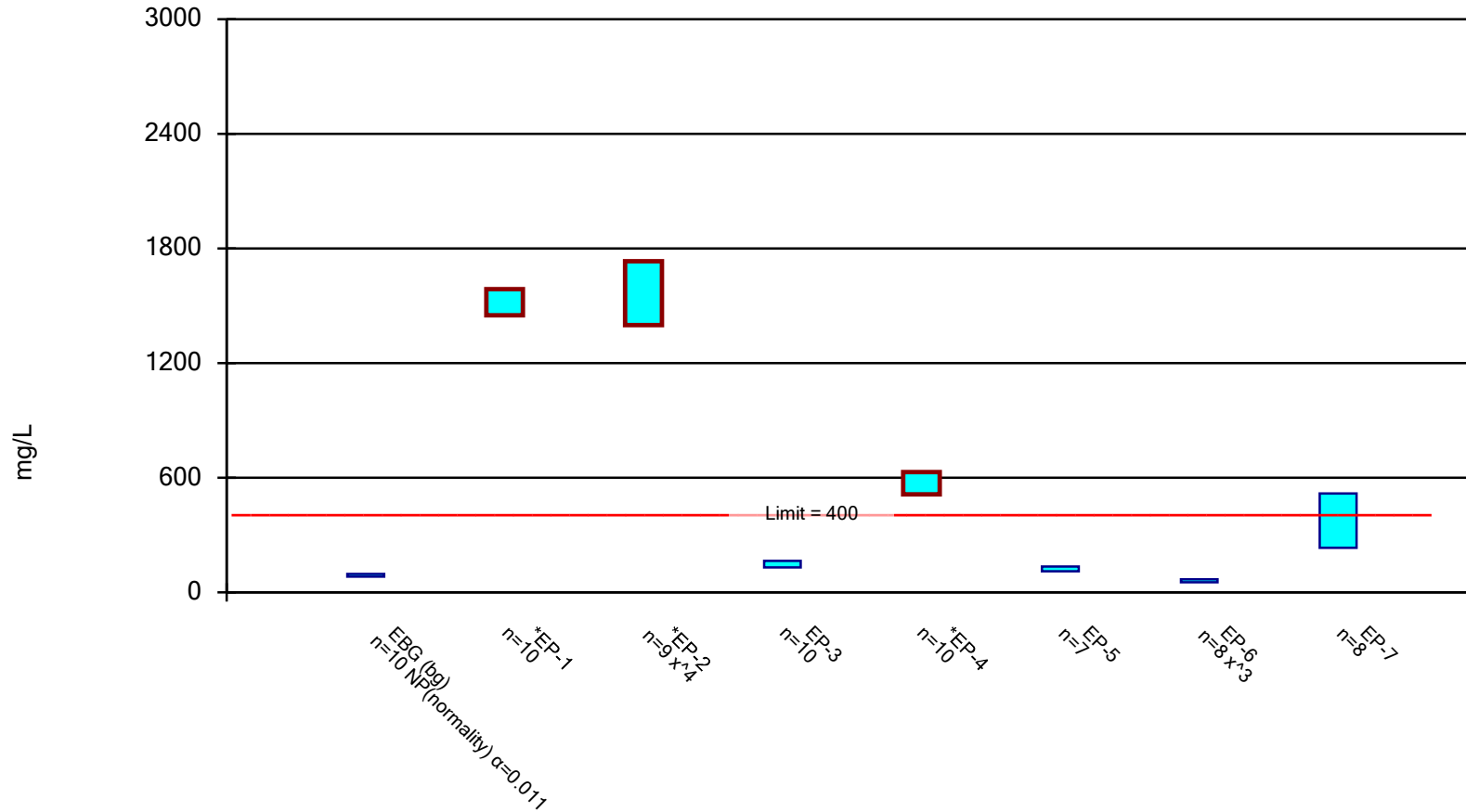


Constituent: Selenium Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

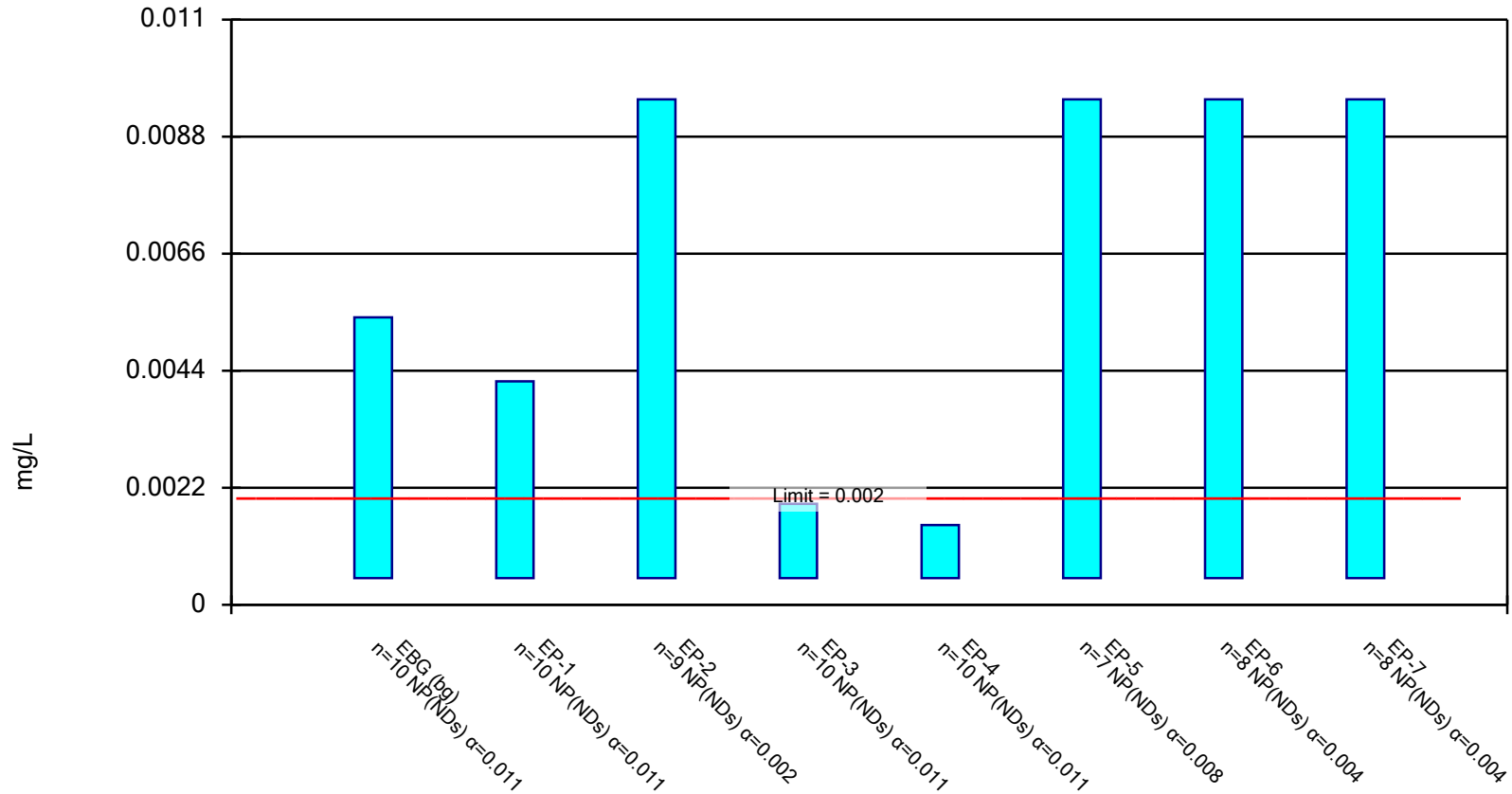


Constituent: Sulfate Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

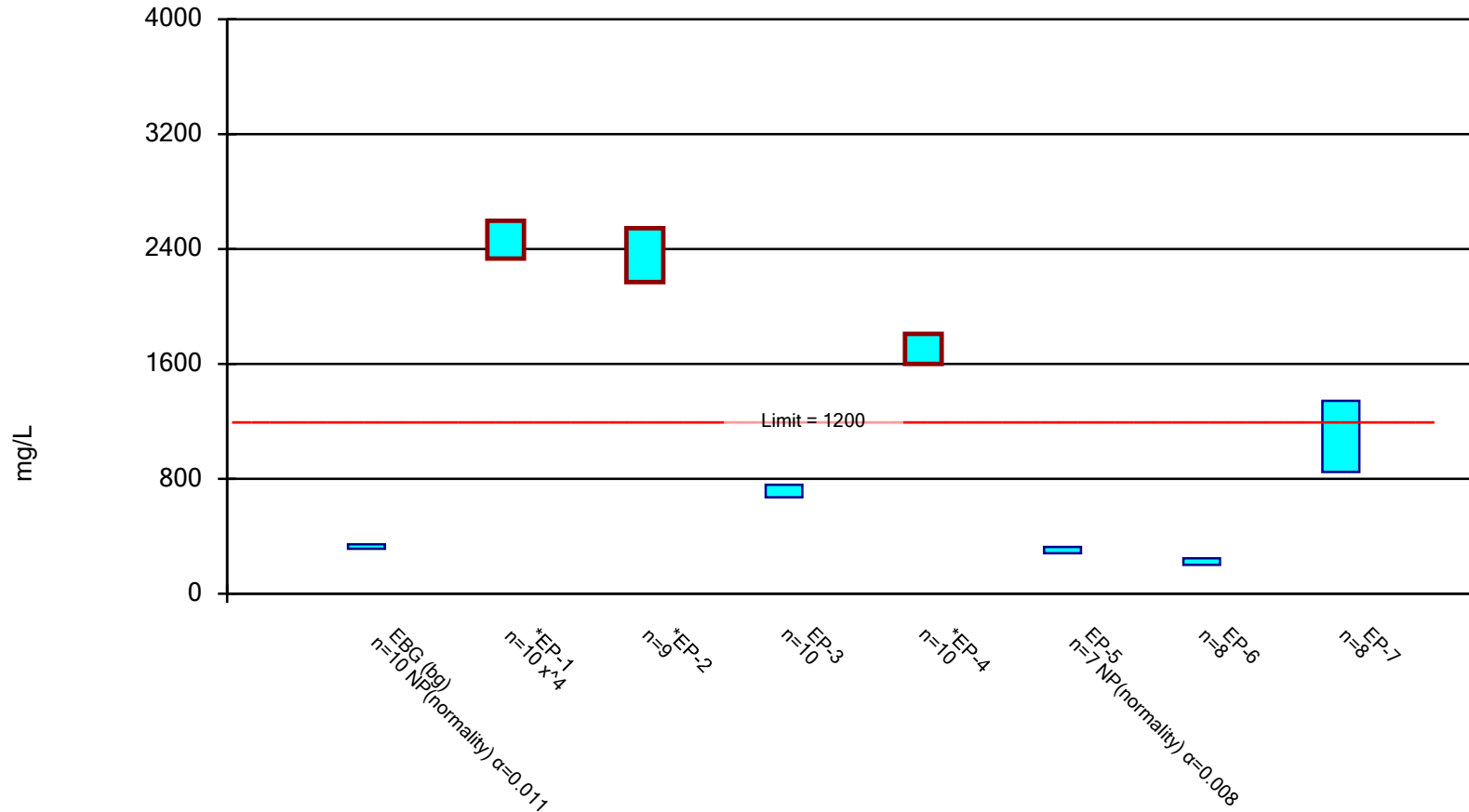


Constituent: Thallium Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

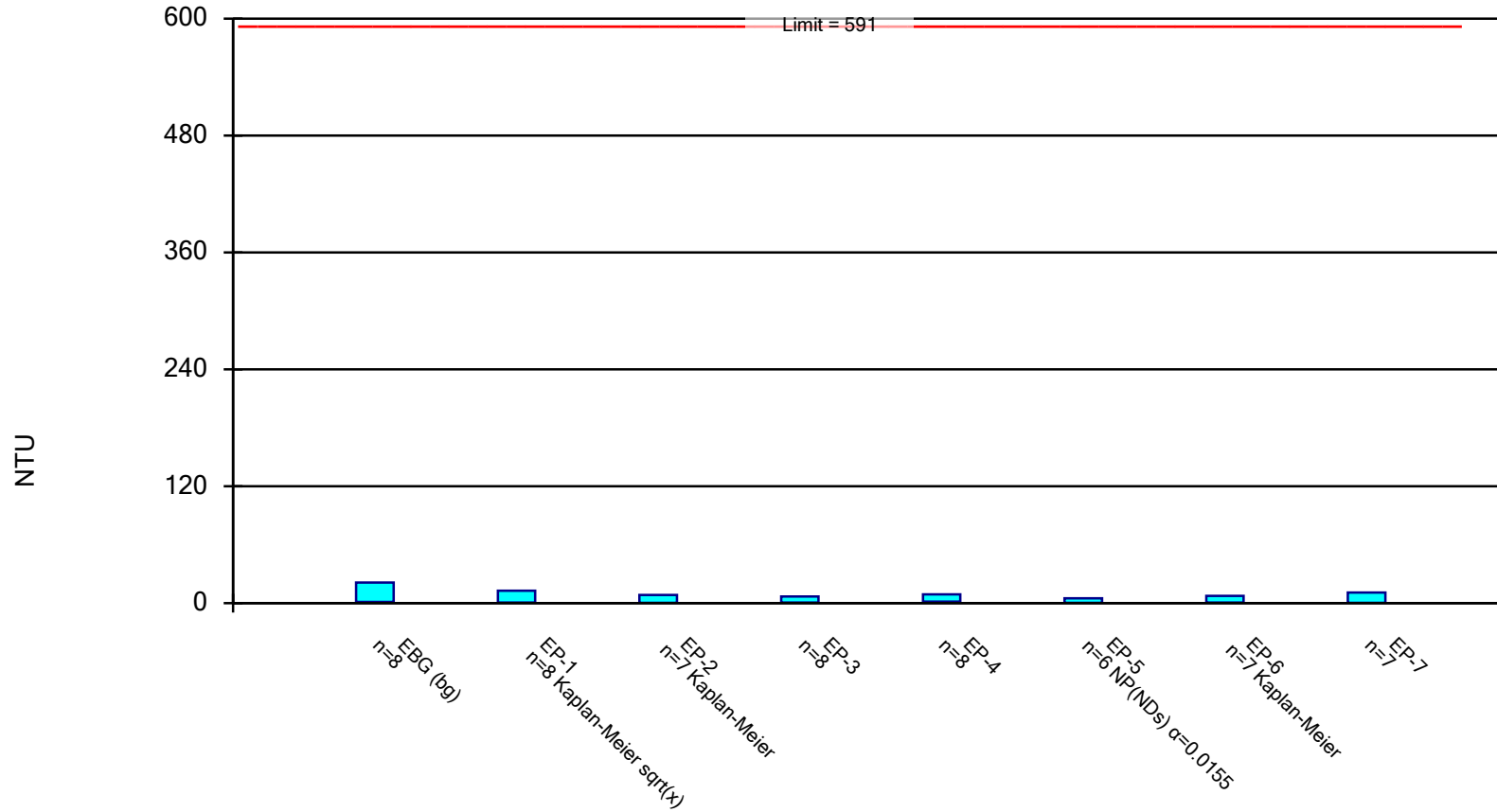


Constituent: Total Dissolved Solids Analysis Run 11/15/2023 8:56 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Turbidity Analysis Run 11/15/2023 8:56 AM

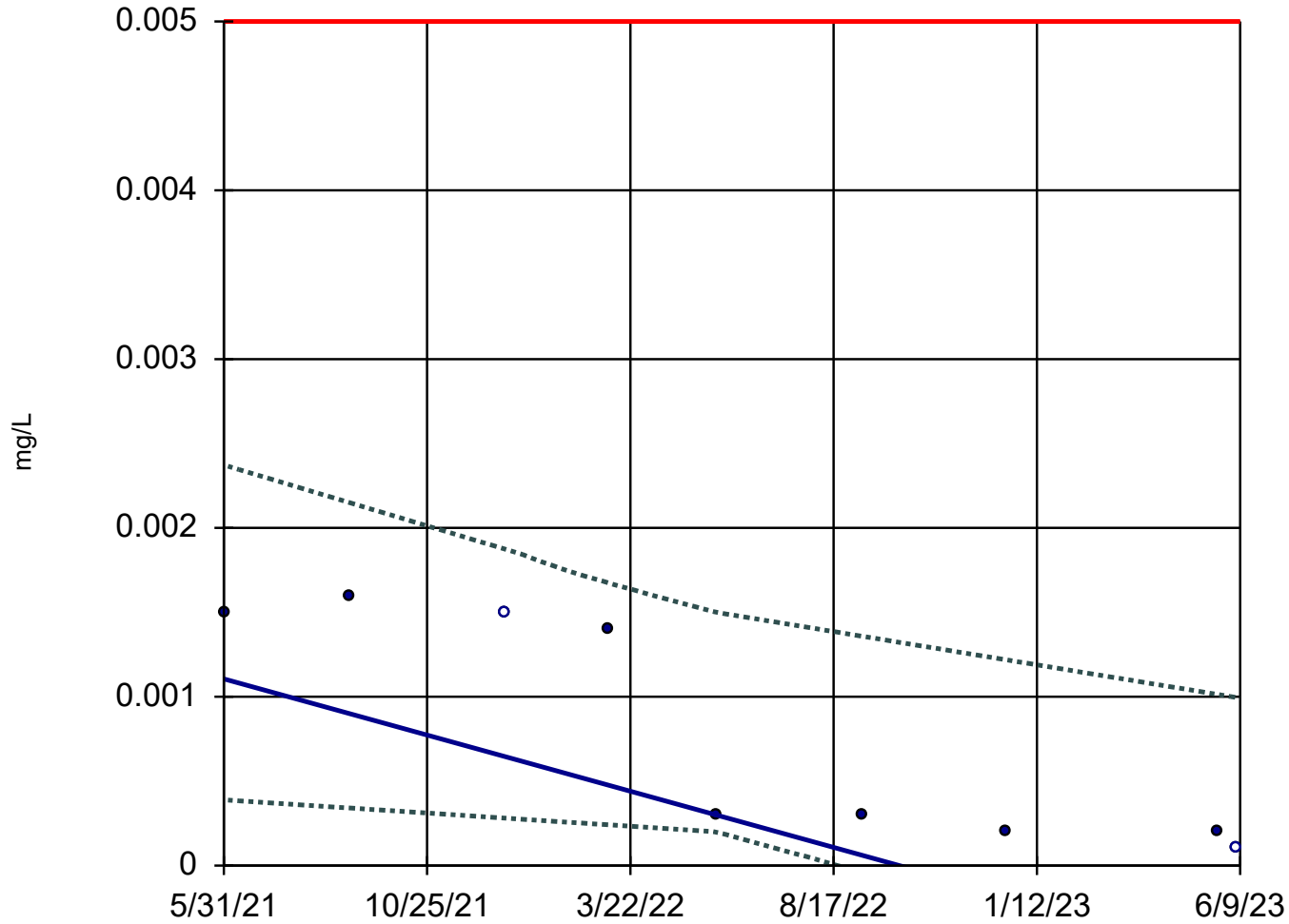
Marion Power Plant Client: SIPC Data: SIPC Statistical Database

**APPENDIX D-15**

## **Q3 2023 Statistically Significant Trends**

## Sen's Slope and 95% Confidence Band

EP-2



n = 9

Slope = -0.000822  
units per year.

Mann-Kendall  
statistic = -31  
critical = -23

Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

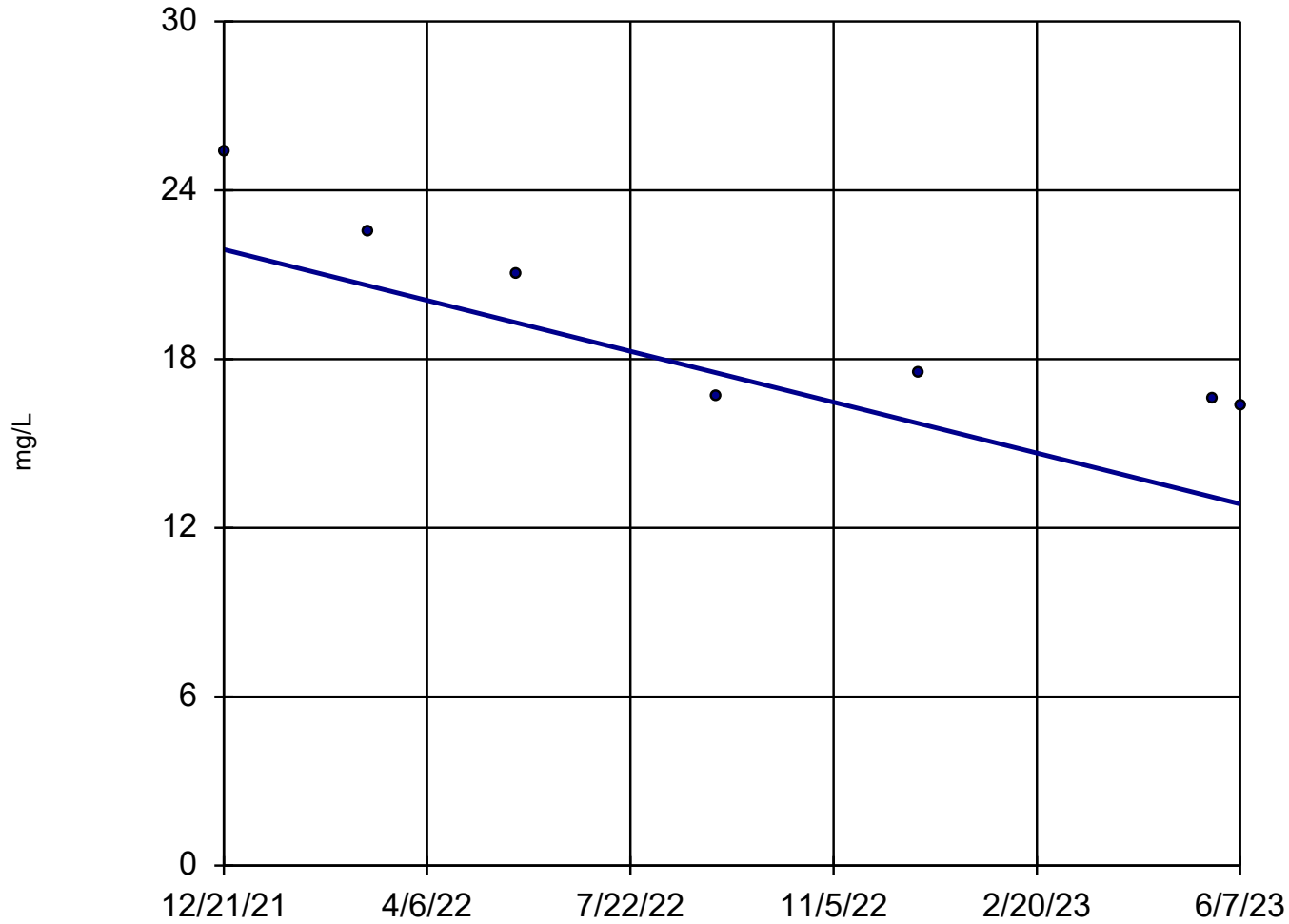
Confidence band is  
below GPS (0.005).

Constituent: Cadmium Analysis Run 11/10/2023 8:40 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

# Sen's Slope Estimator

EP-5



n = 7

Slope = -6.189  
units per year.

Mann-Kendall  
statistic = -19  
critical = -17

Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

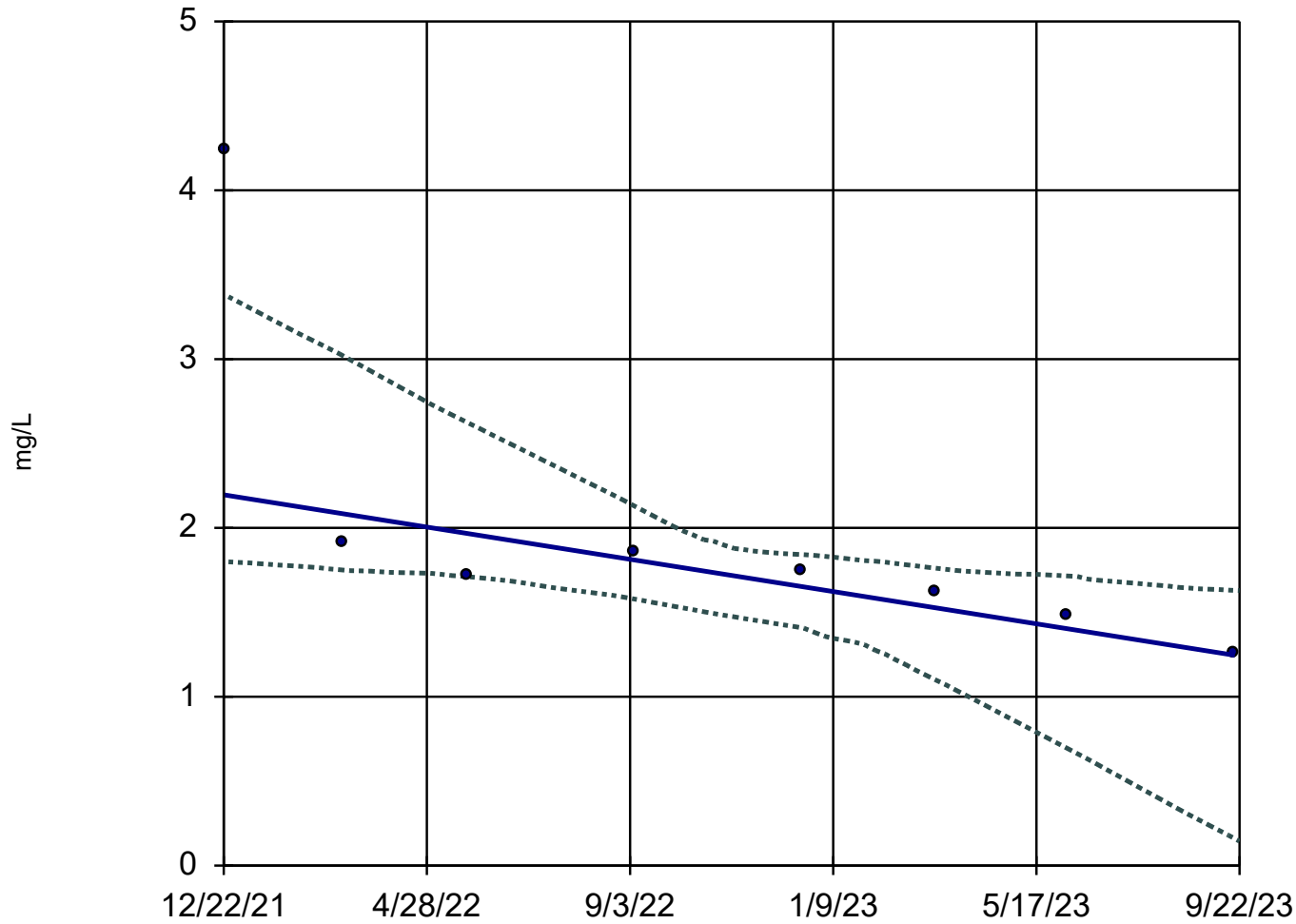
Constituent: Calcium Analysis Run 11/10/2023 8:40 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database



## Sen's Slope and 95% Confidence Band

EP-6



n = 8

Slope = -0.5454  
units per year.

Mann-Kendall  
statistic = -24  
critical = -20

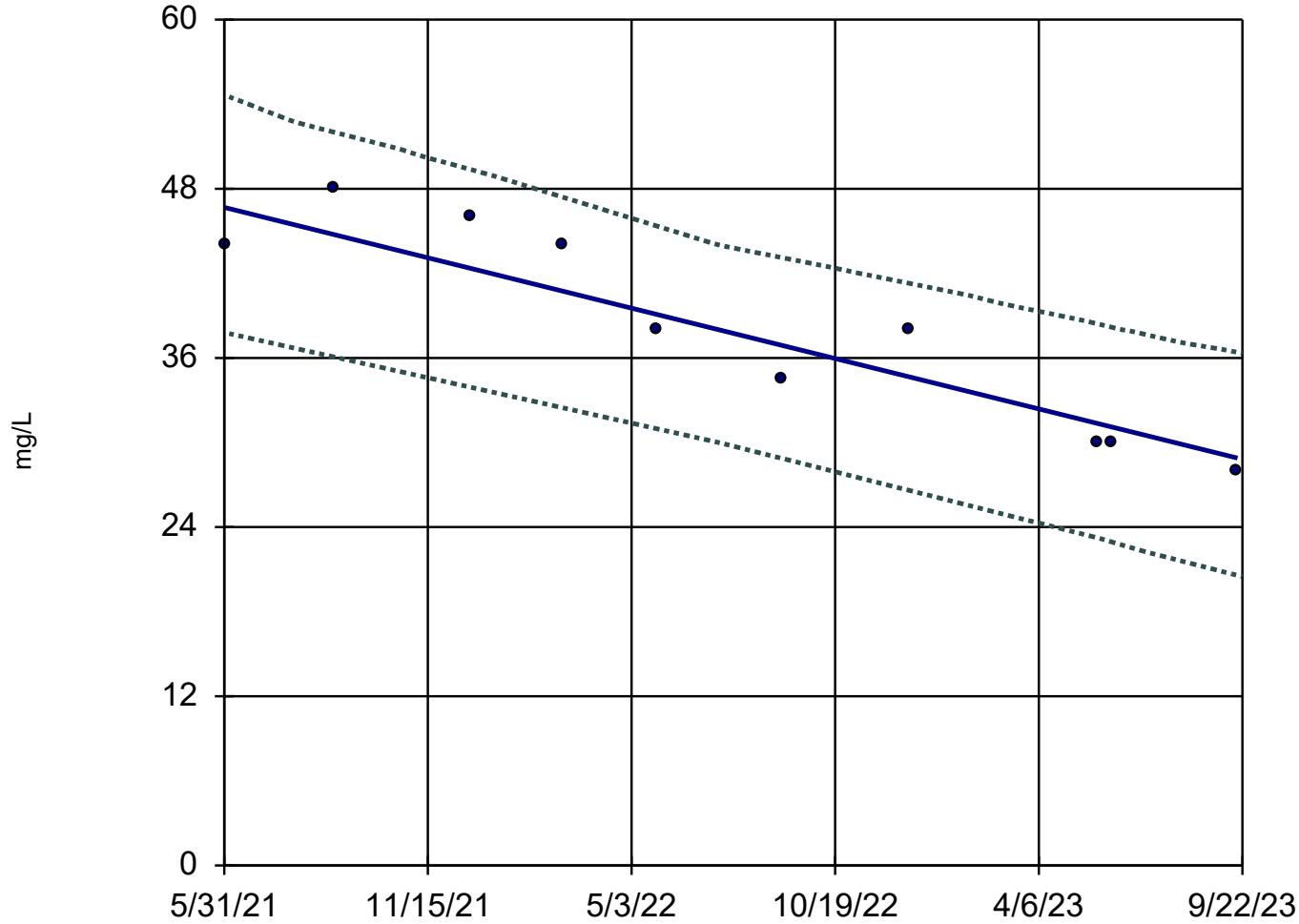
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Calcium Analysis Run 11/10/2023 8:40 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

### Sen's Slope and 95% Confidence Band

EP-1



n = 10

Slope = -7.725  
units per year.

Mann-Kendall  
statistic = -36  
critical = -27

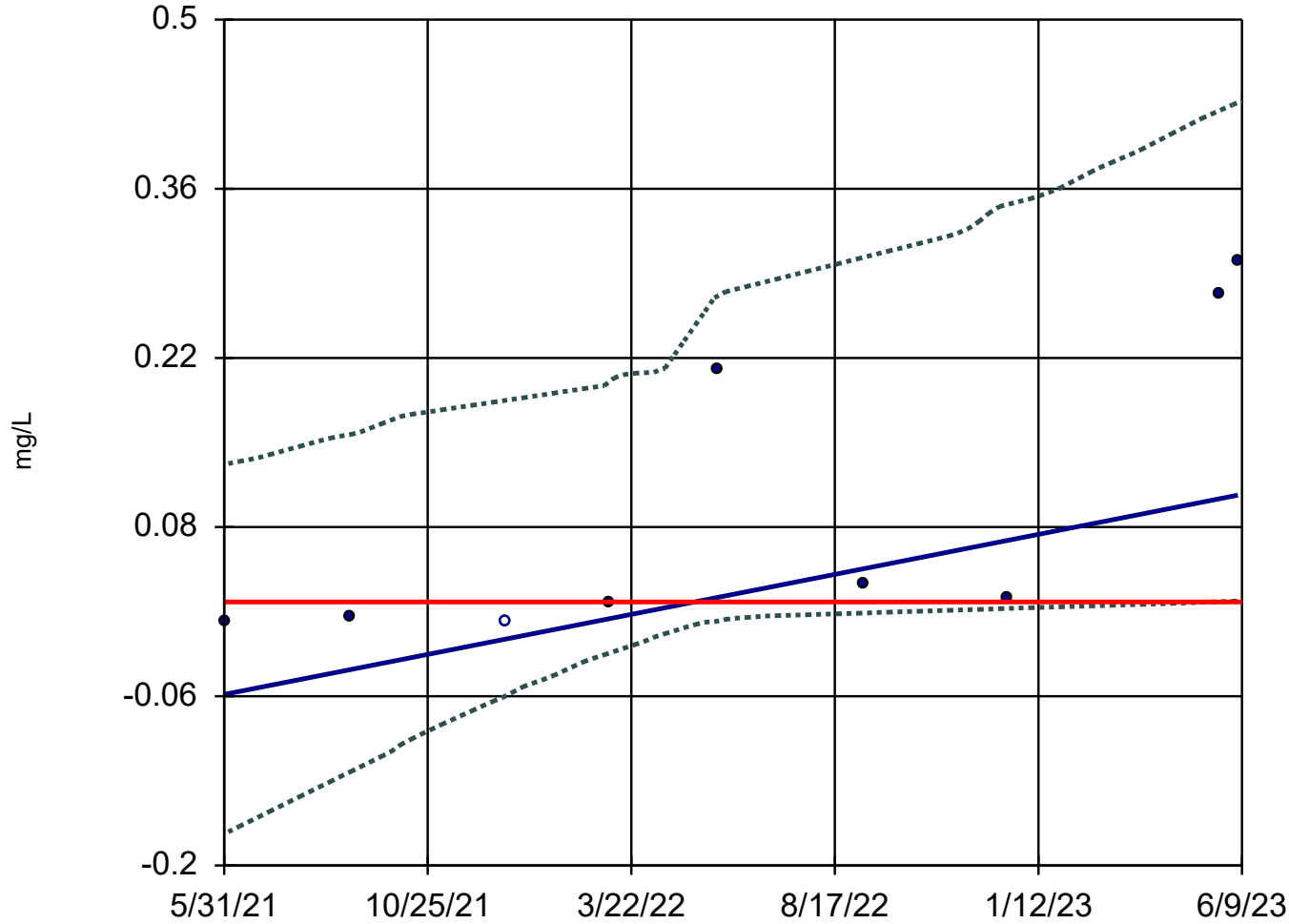
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 11/10/2023 8:40 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope and 95% Confidence Band

EP-2



n = 9

Slope = 0.08178  
units per year.

Mann-Kendall  
statistic = 26  
critical = 23

Increasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

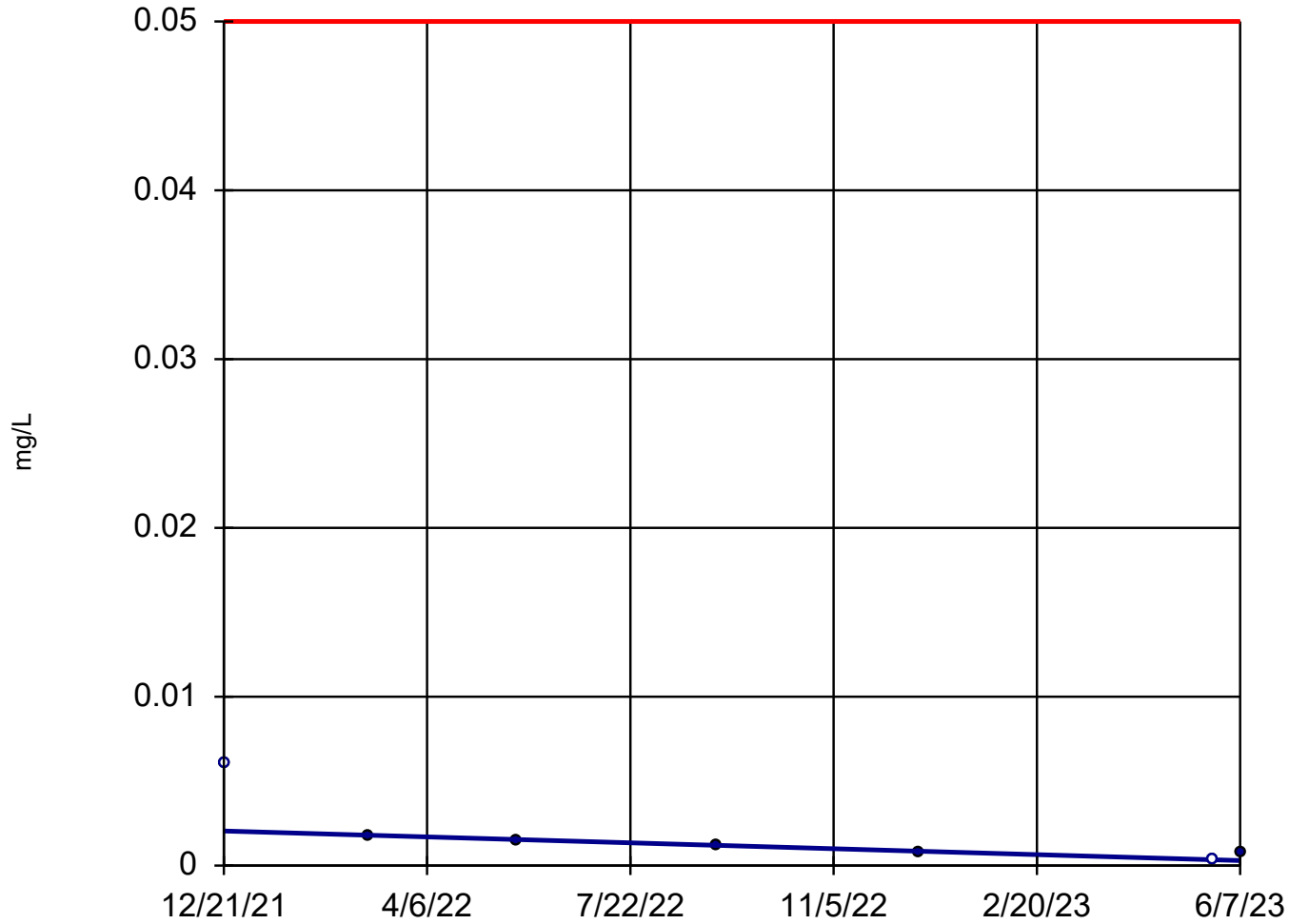
Confidence band intersects  
GPS (0.018) on 05/18/23.

Constituent: Cobalt Analysis Run 11/10/2023 8:40 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database

## Sen's Slope Estimator

EP-5



n = 7

Slope = -0.0012  
units per year.

Mann-Kendall  
statistic = -18  
critical = -17

Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

GPS = 0.05.

Constituent: Selenium Analysis Run 11/10/2023 8:42 AM

Marion Power Plant Client: SIPC Data: SIPC Statistical Database