GREDELL
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Sikeston Power Station
2025 Annual Groundwater Monitoring Report
For Fly Ash Pond
Compliance with USEPA 40 CFR 257.90(e)

Prepared for:

BMU Sikeston
Board of Municipal Utilities

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July 2025

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Table of Contents

1.0 EXECUTIVE SUMMARY i

2.0 INTRODUCTION 1

3.0 GROUNDWATER MONITORING SYSTEM 3
- 3.1 Installation or Decommissioning of Monitoring Wells 3

4.0 DETECTION AND ASSESSMENT SAMPLING SUMMARY 4
- 4.1 Field Quality Assurance/Quality Control 4

5.0 ANALYTICAL SUMMARY 6
- 5.1 Laboratory Quality Control 6
- 5.2 Precision and Accuracy 6
- 5.3 Representativeness 7
- 5.4 Comparability 8
- 5.5 Completeness 8

6.0 STATISTICAL ANALYSIS 9
- 6.1 Detection Monitoring Statistical Procedures 9
- 6.2 Exploratory Data Analysis and Detection Data Screening 10
  - 6.2.1 Detection Data Outlier Screening 10
  - 6.2.2 Detection Data Trend Screening 10
- 6.3 Detection Monitoring Statistical Results 11
- 6.4 Assessment Monitoring Statistical Results 11

7.0 RECOMMENDATIONS 13

8.0 SUMMARY 14

9.0 LIMITATIONS 15

10.0 REFERENCES 16

List of Figures

Figure 1 –Groundwater Contour Map –September 25, 2024

Figure 2 –Groundwater Contour Map – April 16, 2025

Figure 3 –Groundwater Contour Map – May 6, 2025

List of Tables

Table 1 – Fly Ash Pond Groundwater Sampling Event Summary, and Statistical Evaluations for Detection and Assessment Monitoring

Table 2 – Groundwater Monitoring Constituents

Table 3 – Groundwater Monitoring Well Summary

Table 4 – Historical Groundwater Level Summary

Table 5 – Water Levels and Field Parameter Summaries (September 25, 2024, April 16, 2024, and May 6, 2025)

Table 6 – Relative Percent Difference Summaries (September 25, 2024, and May 6, 2025)

Table 7 – Alternate Data Sets

Table 8 – Intra-Well Prediction Limit Summaries

Table 9 – Groundwater Protection Standards for Assessment Monitoring Constituents

List of Appendices

Appendix 1 – Field Sampling Notes

Appendix 2 – Laboratory Analytical Results

Appendix 3 – Laboratory Quality Assurance/Quality Control Data

Appendix 4 – Fly Ash Pond Groundwater Quality Data Base

Appendix 5 – Statistical Power Curves

Appendix 6 – Time Series Plots

Appendix 7 – Box and Whiskers Plots

Appendix 8 – Prediction Limit Charts – Detection Constituents

Appendix 9 – Assessment Monitoring Statistical Evaluation Summary

Appendix 10 – Monitoring Well NE-3 Installation Records

1.0 EXECUTIVE SUMMARY

This report has been developed to fulfill the requirements of the United States Environmental Protection Agency (USEPA) 40 CFR 257 Subpart A – Classification of Solid Waste Disposal Facilities and Practices (CCR Rule), which requires owners or operators to provide an Annual Groundwater Monitoring Report. Sikeston Board of Municipal Utilities (SBMU) provides this report of groundwater sampling activities completed between September 2024 and June 2025 for the Fly Ash Pond (FAP) at the Sikeston Power Station (SPS).

At the start of the current reporting period the FAP was in assessment monitoring status, which also includes detection monitoring. Detection monitoring statistical evaluations are completed after each sampling event to determine if SSIs relative to the baseline data are apparent. Results from the 12th semiannual Compliance/Detection Monitoring (5th Assessment Monitoring) event for CCR rule groundwater sampling compliance suggested six apparent SSIs of pH (MW-1R, MW-3, MW-9, and MW-10); TDS (MW-1R); and Boron (MW-10). The results from the 13th Compliance/Detection (6th Assessment) event confirmed SSIs pH (MW-1R, and MW-9); and TDS (MW-1R), and suggested apparent (unconfirmed) SSIs (Boron, Calcium and Sulfate at MW-1R; Boron, Sulfate, and TDS at MW-7). As a result, the FAP will remain in assessment monitoring when the 14th semiannual Compliance/Detection Monitoring (7th Assessment Monitoring) event, which is conducted for both detection and assessment monitoring constituents (§257 Appendix III & IV).

Since assessment monitoring was established for the FAP and verification sampling was completed in accordance with §257.95(d)(1), statistical evaluations are completed to determine if assessment monitoring constituents are present at Statistically Significant Levels (SSLs) relative to the Groundwater Protection Standards (GWPS). Following the assessment monitoring conducted during the 12th and 13th CCR compliance groundwater sampling events initiated on September 25, 2024 and April 16, 2025, SSLs of Molybdenum (in MW-1R, MW-7, and MW-9) and Cobalt (MW-1R) were confirmed.

Table 1. Fly Ash Pond Groundwater Sampling Event Summary and Statistical Evaluations for Detection and Assessment Monitoring

Event Name and Purpose	Event Start	Final Data Received from Laboratory	Constituents Sampled	Apparent SSIs Detection Monitoring Constituents	Confirmed SSIs Detection Monitoring Constituents	Verified SSLs Assessment Constituents over GWPS*	Statistical Analysis Results Completed
12th CCR Compliance Sampling Event (2nd 2024 Semi-annual Detection and Assessment Monitoring Event)	9/25/2024	10/21/2024	Appendix III & IV Constituents	pH (MW-1R, MW-3, MW-9, MW-10) TDS (MW-1R) & Boron (MW-10)	pH (MW-1R, MW-3, MW-9)	Molybdenum: MW-1R, MW-7, MW-9 Cobalt: MW-1R	10/31/2024
13th CCR Compliance Sampling Event (1st 2025 Semi-annual Detection and Assessment Monitoring Event)	4/16/2025 & 5/6/2025	5/20/2025	Appendix III & detected IV Constituents (Appendix III & As, Ba, Co, Fl, Li, Mo, & Se)	MW-1R (Boron, Calcium. Sulfate) MW-7 (Boron, Sulfate TDS)	pH (MW-1R, MW-9) & TDS (MW-1R)	Molybdenum: MW-1R, MW-7, MW-9 Cobalt: MW-1R	5/30/25

*GWPS = Groundwater Protection Standards

Following confirmation of Cobalt and Molybdenum SSLs above Groundwater Protection Standards (GWPS), a Nature and Extent Characterization for Molybdenum and Cobalt and an Assessment of Corrective Measures were completed. In May 2025, SPS selected the most appropriate corrective measure based on the ACM and public comments (GER, 2025b & c), and will initiate corrective action monitoring in 2025.

2.0 INTRODUCTION

The Sikeston Power Station (SPS), owned and operated by the Sikeston Board of Municipal Utilities (SBMU), is an electric power producer and distributor located within the western city limits of Sikeston, in southern Scott County, Missouri. The SBMU-SPS began operation in 1981 and produces approximately 235 megawatts of electricity. The facility's two coal ash surface impoundments are located immediately east of the power station and are on properties owned and controlled by SBMU. The Fly Ash Pond (FAP) measures approximately 30 acres in size and borders the north edge of the Bottom Ash Pond (BAP), which measures approximately 61 acres. The FAP is subject to the alternate compliance schedule specified by the United States Environmental Protection Agency (USEPA) under 40 CFR Part 257.100(e)(5)(ii) ((§257.100(e)(5)(ii)) due to its initial inactive status and the Response to Partial Vacatur (the Direct Final Rule). This report, prepared by GREDELL Engineering Resources, Inc. (GER), pertains specifically to the FAP.

Pursuant to USEPA's §257 Federal Criteria for Classification of Solid Waste Disposal Facilities and Practices, Subpart D – Standards for Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments (ponds), the establishment of a groundwater monitoring system and routine detection sampling and reporting is required at all coal ash surface impoundments. The purpose of a monitoring well system is to evaluate the quality of groundwater as it passes beneath the waste mass within an impoundment. Groundwater samples are collected and analyzed on a semi-annual basis in accordance with §257.93, or as otherwise detailed in a site-specific Groundwater Monitoring and Sampling Plan (GMSAP) (GER, 2018; & 2025a). Analytical data also are subjected to statistical analysis in accordance with §257.93(f), with the results included in this Annual Groundwater Monitoring Report in accordance with §257.90(e).

If detection monitoring results suggest that a statistically significant increase (SSI) in one or more constituents for detection monitoring listed in §257 Appendix III (Table 2) has occurred, a written demonstration is required to determine if the SSI is attributable to alternate causative factors. If a successful demonstration is not made, an assessment monitoring program must be initiated as required under §257.95. If assessment monitoring is required, and results suggest that one or more concentrations of the assessment monitoring constituents listed in §257 Appendix IV (Table 2) are present at a statistically significant level (SSL) above GWPS, a written demonstration is required to determine if the SSL(s) is/are attributable to alternate causative factors. If a successful demonstration is not made, nature and extent of the release must be characterized in accordance with §257.95(g)(1), to support an Assessment of Corrective Measures as required by §257.96. Following confirmation of Cobalt and Molybdenum SSLs above Groundwater Protection Standards (GWPS), a Nature and Extent Characterization (GER, 2023b) of Molybdenum and Cobalt and an Assessment of Corrective Measures (GER, 2025b) were completed. In May 2025, SPS selected the most appropriate corrective measure based on the ACM and public comments (GER, 2025c)

This report describes the results of the following semi-annual events:

- 12th Compliance Sampling Event (2nd 2024 Detection and Assessment Event) and
- 13th Compliance Sampling Event (1st 2025 Detection and Assessment Event).

As summarized on Table 1, these events were initiated in September 2024 (12th event) and April 16 and May 6, 2025 (13th event). Included is a description of the sampling events, groundwater elevations, water table maps, field activity summaries, final analytical data, and statistical analysis results.

3.0 GROUNDWATER MONITORING SYSTEM

The groundwater monitoring system for the FAP consists of six wells following the addition of MW-10 in early 2023. Well locations are depicted on Figures 1, 2 and 3. The wells are identified as MW-1R, MW-2, MW-3, MW-7, MW-9, and MW-10. Monitoring wells MW-2 and MW-3 are located hydraulically upgradient of the FAP, whereas MW-1R, MW-7, MW-9, and MW-10 are located hydraulically downgradient of the FAP. Monitoring wells MW-2 and MW-3 were installed on April 26 and 27, 2016 by Smith & Company of Poplar Bluff, Missouri during hydrogeologic characterization of the site (GER, 2017). Monitoring wells MW-7 and MW-9 were installed on April 18, 2017, and November 13, 2017, respectively, by Bulldog Drilling, Inc. of Dupo, Illinois to serve as additional downgradient monitoring wells. Monitoring well MW-1R was installed on September 3, 2021, by Bulldog Drilling, Inc. to replace MW-1. Monitoring well MW-10 was installed on February 9, 2023, by Bulldog Drilling, Inc. to serve as a downgradient compliance well at the facility boundary.

Table 3 presents a construction summary of the wells comprising the FAP groundwater monitoring system. Figures 1, 2 and 3 depict groundwater contour maps of the uppermost aquifer for the 12th (Figure 1) and 13th (Figures 2 and 3) semi-annual CCR compliance groundwater sampling events. Groundwater elevations have been monitored regularly in each well since installation and these historical water levels are summarized on Table 4. Figures 1, 2 and 3 confirm that groundwater in the uppermost aquifer continues to move in a west-southwesterly direction, consistent with the conclusions of the Site Characterization Report (GER, 2017) and the historical data in Table 4. All groundwater wells are equipped with dedicated tubing for use with a peristaltic pump. The FAP groundwater monitoring system is described in more detail in the revised site-specific GMSAP for this facility (GER, 2018; & 2025a).

3.1 Installation or Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned for the FAP detection and/or assessment groundwater monitoring systems since the previous Annual Groundwater Monitoring Report (GER, 2024). However, monitoring well NW-3, installed during the Nature and Extent Characterization (GER, 2023b), and MW-4, previously used for BAP detection monitoring will be added to the monitoring system for the FAP beginning the third quarter of 2025. The groundwater monitoring system wells are identified as MW-1R, MW-2, MW-3, MW-4, MW-7, MW-9, MW-10, and NE-3. MW-2 and MW-3 are located hydraulically upgradient of the Fly Ash Pond whereas MW-1R, MW-4, MW-7, MW-9, MW-10, and NE-3 are located hydraulically downgradient of the Fly Ash Pond.

4.0 DETECTION AND ASSESSMENT SAMPLING SUMMARY

The 12th and 13th CCR compliance groundwater sampling events for the FAP were completed by SPS environmental staff. The 12th CCR compliance groundwater sampling event (2nd 2024 semi-annual event) was initiated in September 2024 and the 13th event (1st 2025 semi-annual event) was initiated in April 2025. Following the April 2025 event, the samples were damaged in transit necessitating collection of replacement samples for 13th event on May 6, 2025.

Assessment Monitoring was established for the SBMU-SPS FAP in November 2022 in accordance with §257.94(e). Following receipt of final data for the seventh CCR compliance groundwater sampling event, statistical analysis confirmed SSIs of pH at MW-1R and MW-3, and Boron at MW-7 on September 2, 2022. In accordance with §257.95(b), assessment monitoring was initiated on November 2, 2022, concurrently with detection monitoring. While in assessment monitoring status, semi-annual sampling events for the FAP will generally be conducted simultaneously for both assessment and detection monitoring.

In accordance with §257.95(d)(2), GWPS were established as specified in §257.95(h) for all detected §257 Appendix IV constituents. Statistical results for the 12th and 13th detection groundwater sampling events are discussed in detail in Section 6.0. Assessment monitoring statistical results for the 12th and 13th compliance events (5th and 6th assessment monitoring events) are presented in Appendix 9.

Field procedures for the groundwater compliance sampling events were conducted in accordance with the GMSAP for this facility (GER, 2018; & 2025a). Field notes documenting the groundwater sampling events are presented in Appendix 1. The field sampling notes are summarized in Table 5, including initial and final water level measurements, purge volumes, and pH. Laboratory analytical reports for each sampling event, including field blank, and sample duplicate results, are included in Appendix 2. Quality Assurance/Quality Control (QA/QC) documentation is presented in Appendix 3. A summary of baseline (data set used as the basis for comparison to compliance samples), detection, and assessment monitoring analytical data for each well, including field parameters, is presented in Appendix 4.

4.1 Field Quality Assurance/Quality Control

Field QA/QC during each sampling event included the collection of one field blank and one field duplicate sample. The duplicates during the 12th and 13th events were collected at MW-1R. The samples and their duplicates collected during the sampling events were analyzed for detection and assessment monitoring constituents. Duplicate results and Relative Percent Differences (RPDs) calculated to assess laboratory reproducibility are summarized in Table 6. Rinsate blanks were not collected because dedicated sampling equipment was used. Samples were shipped to Teklab, Inc. Environmental Laboratory facility located in Collinsville, Illinois using standard chain-of-custody documentation/procedures. Teklab subcontracted the Radium analysis to Summit Environmental Technologies, Inc.

Samples collected during the 12th event were received by the primary facility on September 27, 2024, and subsequently analyzed for six (pH is field measured) detection monitoring and fourteen assessment monitoring constituents listed in §257 Appendix III and IV (Table 2) and required under §257.94(b). Final analytical results were received on October 21, 2024.

Samples collected during the 13th event were received by the primary facility on April 17, 2024, but the shipment was damaged, and the samples were not within thermal preservation requirements. Therefore, samples for the 13th event were re-collected on May 6, 2025, and samples were received by the primary facility on May 8, 2025, and subsequently analyzed for detection monitoring and the seven previously detected assessment monitoring constituents (arsenic, barium, cobalt, lithium, molybdenum, selenium and fluoride; Table 9-1 in Appendix 9). Final analytical results were received May 20, 2025.

5.0 ANALYTICAL SUMMARY

Analytical data reports for each monitoring well sampled during the 12th and 13th compliance groundwater sampling events are provided in Appendix 2. The data pertain to groundwater quality results from the uppermost aquifer in the area bordering the FAP, along with sample duplicate and field blank results.

5.1 Laboratory Quality Control

Laboratory analyses of the groundwater samples collected during the 12th and 13th events were completed by Teklab, Inc. Environmental Laboratories. The results were accompanied by appropriate QA/QC documentation. That documentation is presented in Appendix 3.

5.2 Precision and Accuracy

Precision is a measure of the reproducibility of analytical results, generally expressed as an RPD. Laboratory quality control procedures to measure precision consist of laboratory control sample (LCS) analysis and analysis of matrix spike/matrix spike duplicates (MS/MSD). These analyses are used to define analytical variability. Accuracy is defined as the degree of agreement between the measured amount of a species and the amount actually present, expressed as a percentage. It is generally determined by calculating the percent recoveries for analyses of surrogate compounds, laboratory control samples, continuing calibration check standards and matrix spike samples. Acceptable percent recoveries are established for SW-846 and USEPA methods. Field and laboratory blank analyses are also used to address measurement bias.

The analyses were performed within appropriate hold times except as noted below, and both initial and continuing calibrations met acceptance criteria for all analyses. Similarly, method blanks and LCS analyses met acceptance criteria. The case narratives for the 12th and 13th event analytical reports indicate that quality controls met acceptance criteria with the following exceptions:

12th Compliance Sampling Event (2nd 2024 Detection and Assessment Monitoring Event):

- The MW-3 result for Chloride is flagged “J” because the analyte detected was below quantitation limits.
- The Combined Radium results (all samples) are flagged “U” because results were not detected above the MDL.

13th Compliance Sampling Event (1st 2025 Detection and Assessment Monitoring Event (May 2025)):

- The MW-1R, MW-2, MW-3, and MW-10 results for Fluoride are flagged "J" because the analyte detected was below quantitation limits.
- The MW-3 result for Chloride is flagged "J" because the analyte detected was below quantitation limits.
- The MW-1R result for Calcium is flagged "S" because the Spike Recovery was outside recovery limits.
- All quality controls met for verification sampling event.

Additional QA/QC comments include the following:

- *Field Duplicates:* Analyses of duplicate samples are used to define the total variability of the sampling/analytical system as a whole. One field duplicate was collected during each monitoring event. The RPD was calculated for all detected chemical parameters. A summary table showing the results of the RPD calculations is included as Table 6. Using a tolerance level of ±20 percent, all calculated RPDs are within acceptable ranges for each detected parameter reported during the 12th and 13th events.
- *Field Blank:* One field blank was incorporated into the data set for each sampling event. Results for the field blanks (Appendix 2) documented no reportable concentrations during the 12th and 13th events.
- *Trip Blank:* One trip blank was incorporated into the data set for each sampling event. These laboratory-prepared trip blanks also accompanied the sample containers from the time they were shipped from the lab to SPS and until the samples arrived back at Teklab, Inc. (Teklab) for analysis. Results for the trip blanks (Appendix 2) documented no reportable concentrations during the 12th and 13th events.
- *Laboratory Blanks:* Method blanks, artificial, and matrix-less samples are analyzed to monitor the laboratory system for interferences and contamination from glassware, reagents, etc. Method blanks are taken throughout the entire sample preparation process. They are included with each batch of extractions or digestions prepared, or with each 20 samples, whichever was more frequent. Reference to Appendix 3 should be made for comments related to these and other laboratory control samples.

5.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely reflect site conditions. Representativeness of the data is determined by comparing actual sampling procedures to those delineated in the field sampling plan, comparing results from field duplicate samples, and reviewing the results of field blanks.

Approved sampling procedures are described in the GMSAP (GER, 2018; 2021; & 2025a), and were followed. Approved sampling procedures should be reviewed annually. Review of field blank data, duplicate analysis results, and RPDs do not suggest representativeness issues (Table 6 and Appendix 2). Groundwater sampling data are evaluated using appropriate statistical analysis methodologies and is conducted separately for each constituent in each monitoring well in accordance with §257.93(f) and the performance standards in §257.93(g).

5.4 Comparability

Comparability expresses the confidence with which one data set can be compared to another data set measuring the same property. Comparability is ensured by using established and approved sample collection techniques and analytical methods, consistent basis of analysis, consistent reporting units, and analyzing standard reference materials.

5.5 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected under controlled laboratory conditions. Completeness is defined as the valid data percentage of the total tests requested. Valid data are defined as those where the sample arrived at the laboratory intact, properly preserved, in sufficient quantity to perform the requested analyses, and accompanied by a completed chain-of-custody form (Appendix 3). Furthermore, the sample must have been analyzed within the specified holding time and in such a manner that analytical QC acceptance criteria are met.

6.0 STATISTICAL ANALYSIS

As discussed in Section 3.0, the FAP is in assessment monitoring status at the time of this report, and sampling activities for detection and assessment monitoring were conducted concurrently during the 12th and 13th compliance groundwater monitoring events.

The statistical analysis method used to evaluate detection monitoring data within the uppermost aquifer for the FAP monitoring system at SBMU-SPS consists of intra-well analysis using prediction limits to ascertain if detection monitoring constituent concentrations have increased (or pH changed) significantly.

The statistical analysis methods for the FAP assessment monitoring data consists of intra-well analysis using confidence interval comparison of assessment monitoring constituent concentrations to GWPS (Appendix 9). It is noted that confidence intervals are the recommended general statistical strategy in compliance/assessment monitoring or corrective action monitoring according to Unified Guidance (USEPA, 2009).

Groundwater sampling data are evaluated using appropriate statistical analysis methodologies and is conducted separately for each constituent in each monitoring well in accordance with §257.93(f) and the performance standards in §257.93(g).

6.1 Detection Monitoring Statistical Procedures

A complete background data set has been obtained for groundwater, representing the uppermost aquifer, moving below the FAP at the SPS. Data from the groundwater compliance sampling events is periodically added to the background data set to create the baseline data set that is the basis for comparison to compliance (detection) data. The baseline data is presented in Appendix 2. The baseline data was used to evaluate detection monitoring compliance results during the 12th and 13th groundwater compliance sampling events initiated at the SPS FAP in September 2024 and April 2025, respectively. Data from each event is compared to a comprehensive baseline data set resulting from previous sampling events. The baseline data set for MW-1R is based on eight rounds of background data collected from October 2021 to March 2022, and the baseline data set for MW-10 is based on eight rounds of background data collected from February 2023 to November 2023. The baseline data sets for MW-2, MW-3, MW-7, and MW-9 are generally based on thirteen rounds of background data collected from March 2018 to April 2021. Updates to the baseline data set are permitted every two years, but SSIs will not be included in baseline unless they are unconfirmed in accordance with Unified Guidance (USEPA, 2009). The next baseline update may be conducted following the 13th groundwater compliance sampling event or later in accordance with Unified Guidance.

Statistical analysis was performed in accordance with §257.93 using Sanitas© for Ground Water. The groundwater analytical results from the 12th and 13th detection monitoring events were

compared to the respective intra-well prediction limits at the 99 percent confidence level (Table 8) to determine if SSIs over baseline were apparent in the data sets.

6.2 Exploratory Data Analysis and Detection Data Screening

Exploratory Data Analysis (EDA) of the data refers to a collection of descriptive and graphical statistical tools used to explore and understand a data set (ITRC, 2013). Generally, EDA includes a numerical summary and graphical displays such as Time Series Plots, Box and Whisker Plots, Histograms and Probability Plots. EDA methods were supplemented with outlier and trend analysis tools included with Sanitas© software.

6.2.1 Detection Data Outlier Screening

The detection monitoring data were initially evaluated for possible outliers using the EDA outputs, which included Time Series Plots, Box and Whisker Plots, Histograms and Probability Plots. Procedures have been developed and provide the basis for the 'statistical' evaluation of possible outliers. The procedures have been documented in previous annual reports for the FAP (GER, 2023). Using these outlier analysis procedures, three outliers were confirmed in the detection monitoring baseline database (two associated with Fluoride, and one with TDS, all in MW-2). In total, the three confirmed outliers represent less than one percent of the 476 data points, which include 364 data points for MW-2, MW-3, MW-7, and MW-9 (7 constituents x 4 wells x 13 sampling events), and 112 individual data points for MW-1R and MW-10 (7 constituents x 2 wells x 8 sampling events). It is noted that Sanitas© also identified two outliers associated with MW-1R (pH and Fluoride) and one outlier with MW-10 (Fluoride). These data were not removed because these baseline data sets contain only eight observations, and they were collected over a period of less than one year. Because the range of natural annual/seasonal variation is almost certainly greater than the variance in these data sets, it is premature to remove any data until more than eight samples are collected over a period greater than one year. Therefore, all baseline data for MW-1R and MW-10 were retained as recommended by Unified Guidance (USEPA, 2009) when no basis for likely error or discrepancy can be identified. Following future updates to the baseline data set, the identification of potential outliers will be re-evaluated.

By contrast, the baseline data set used to evaluate the data from MW-2, MW-3, MW-7, and MW-9 are based on 13 rounds of data. Thirteen data points results in a more robust data set that includes some natural annual/seasonal variation and allows for removal of potential outliers while maintaining a sample population of n = eight or more. Accordingly, EDA performed with Sanitas© to conduct outlier analysis allowed for identification and screening of three outliers (two Fluoride values and one TDS value in MW-2) from the baseline data sets for these four wells.

6.2.2 Detection Data Trend Screening

The confirmed outliers were removed from the baseline data sets, as appropriate, prior to trend testing. The Sen's Slope/Mann-Kendall (non-parametric) trend test within Sanitas© was selected

to identify statistically significant downward or upward trends in the detection monitoring baseline data for each of the FAP groundwater monitoring system wells. Trend testing identified several trends in the data, however, significant increasing trends in constituent concentrations, and both decreasing and increasing significant trends in pH are of primary interest for detection monitoring at this site. During the baseline database update in 2023, an increasing trend in TDS at upgradient well MW-2 was determined to be significant at the 98% confidence level by Sanitas©.

Following Trend analysis, trend correction was performed for TDS in MW-2. Trend elimination is accomplished by iteratively removing early data from the set and re-checking for trends. Removed values are indicated in Appendix 4, and the data range for the resulting alternate data set is summarized in Table 7. The resulting alternate data set was tested using Sanitas© to verify successful trend elimination.

6.3 Detection Monitoring Statistical Results

The results of the statistical analysis for the detection monitoring data from the 12th and 13th sampling events are described below. A complete database summarizing the sample results, screened data, dates of sampling, and the purpose of sampling event, as per §257.90(e)(3), is provided in Appendix 4. A statistical power curve, based on the updated baseline data for detection monitoring, is provided in Appendix 5. Time-series plots of baseline data for all detection and assessment monitoring constituents are presented in Appendix 6. Box and whiskers plots for all detection and assessment monitoring data are presented in Appendix 7. Prediction limit charts for detection monitoring data are provided in Appendix 8.

The statistical analysis for the 12th FAP groundwater sampling event suggested six apparent (unconfirmed) detection constituent SSIs (pH at MW-1R, MW-3, MW-9, & MW-10; TDS at MW-1R; and Boron at MW-10), but only three SSIs were confirmed. The confirmed SSIs are associated with pH (MW-1R, MW-3, and MW-9) as summarized in Table 1.

The statistical analysis for the 13th FAP groundwater sampling event suggests six apparent (unconfirmed) detection constituent SSIs (Boron and Sulfate at MW-1R and MW-7; Calcium at MW-1R; and TDS at MW-7), but only three SSIs were confirmed. The confirmed SSIs are associated with pH (MW-1R, & MW-9), and TDS (MW-1R) as summarized in Table 1. The associated prediction limits for these and all other well constituent pairs are summarized in Table 8.

6.4 Assessment Monitoring Statistical Results

The §257 Appendix IV - Constituents for Assessment Monitoring were not compared to baseline values because at least one concentration was greater than the GWPS (Table 9). These comparisons would be performed in accordance with §257.95(e) and (f), if the possibility of returning to Detection Monitoring status appeared probable, by using Sanitas© to calculate

prediction intervals based on the established baseline data for Appendix III and IV constituents to determine if concentrations are below baseline values.

The analytical results for §257 Appendix IV - Constituents for Assessment Monitoring were evaluated to determine if SSLs over GWPS (Table 9) are apparent. Sanitas© was used to calculate confidence intervals based on the monitoring data following traditional data review, quality control, and outlier testing (Appendix 9). Sanitas© identified three outliers in the Appendix IV database, all associated with Arsenic (one value at MW-1R) and Selenium (two values at MW-2), which were subsequently removed from the Appendix IV database prior to calculating confidence intervals.

Confidence Intervals were calculated for each well constituent pair as summarized in Appendix 9. If the lower confidence interval is greater than the GWPS, an SSL is apparent. Four SSLs were identified in the data sets. The SSLs reported for are:

- Cobalt (MW-1R) and
- Molybdenum (MW-1R, MW-7, and MW-9).

Trend analysis was also conducted to determine if the SSLs are symptomatic of increasing concentrations of these constituents with time. Results of the trend analysis are provided in Appendix 9, and they demonstrate the following about the constituent well pairs with apparent SSLs over GWPS:

- Barium concentrations at MW-7 and MW-9 are increasing with statistically significant trends,
- Fluoride concentrations at MW-7 and MW-9 are decreasing with a statistically significant trend,
- Lithium concentrations at MW-7 and MW-9 are increasing with a statistically significant trend,
- Molybdenum concentrations at MW-7, and MW-9 are decreasing with statistically significant trends,
- Molybdenum and Cobalt concentrations at MW-1R do not have statistically significant trends, and
- Selenium concentrations at MW-7 are decreasing with a statistically significant trend.

7.0 RECOMMENDATIONS

Based on the results of the data evaluations, concentrations of several detection and assessment monitoring constituents have increased relative to the baseline database. Therefore, assessment monitoring must continue in accordance with §257.95. Additionally, Cobalt and Molybdenum were detected at SSLs above GWPS necessitating corrective measures to address the following:

- Prevent release of constituents of concern above their GWPS from the FAP;
- Remediate the constituents identified by groundwater monitoring to be above their GWPS, and;
- Restore groundwater in the affected area to conditions that do not exceed GWPS for those constituents.

In summary, GER recommends:

1. Continue Assessment and Detection Monitoring for the FAP in accordance with the CCR Rule §257.98 with the monitoring well system established in accordance with §257.91;
2. Continue construction and implementation of the selected remedy (GER, 2025b & c) in accordance with §257.98; and
3. Initiate Corrective Action Sampling in August 2025 in accordance with §257.98.
    a. The Corrective Action Sampling System consists of MW-1R, MW-2, MW-3, MW-4, MW-7, MW-9, MW-10, and NE-3.

8.0 SUMMARY

The 12th and 13th semi-annual sampling events for the FAP were initiated by SPS environmental staff for detection and assessment monitoring on September 25, 2024, and April 16, 2025, respectively. Three detection constituent SSIs (pH in MW-1R, MW-3, and MW-9)) were confirmed with the 12th event results, and three detection constituent SSIs (pH in MW-1R, MW-3, and MW-9 and Calcium in MW-1R) were apparent with the 13th event results as summarized in Table 1.

The 12th and 13th semi-annual sampling event results both confirmed the presence of four assessment monitoring constituent SSLs above GWPS (Molybdenum in MW-1R, MW-7, and MW-9, and Cobalt in MW-1R) as summarized in Table 1. As a result of the SSLs, SPS continues assessment monitoring for the FAP, and has selected corrective measures to prevent release of constituents of concern above their GWPS from the FAP, remediate the constituents identified by groundwater monitoring to be above their GWPS, and restore groundwater in the affected area to conditions that do not exceed GWPS for those constituents.

The Remedy Selection Report (GER, 2025c) was completed in May 2025, in accordance with §257.95(g)(3). SPS will continue detection and assessment monitoring of the FAP in accordance with §257.94 & 95 and establish corrective action monitoring in accordance with §257.98 during the next Assessment Sampling event (scheduled for late 2025).

9.0 LIMITATIONS

This report has been prepared for the exclusive use of the client and GREDELL Engineering Resources, Inc. for the specific project discussed in accordance with generally accepted environmental practices common to this locale at this time. No other warranties, expressed or implied, are provided.

Interpretations of data and recommendations made in this report are based on observations of data that were available and referred to in this report unless otherwise noted. The report is applicable only to this specific project and known site conditions as they existed at the time of report preparation.

This report is not a guarantee of subsurface conditions. Variations in subsurface conditions may be present that were not identified during this or previous investigations. The use of this report and interpretations of data or conclusions developed by others are the sole responsibility of those firms or individuals.

10.0 REFERENCES

GER, 2017, *Sikeston Power Station Site Characterization for Compliance with Missouri State Operating Permit #MO-0095575*, dated May 2017.

GER, 2018, *Sikeston Power Station Groundwater Monitoring and Sampling Plan for Compliance with Missouri State Operating Permit #MO-0095575*, dated September 2018.

GER, 2019, *Sikeston Power Station 2019 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated August 1, 2019.

GER, 2020, *Sikeston Power Station 2020 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated August 2020.

GER, 2021, *Sikeston Power Station Groundwater Monitoring and Sampling Plan for Compliance with Missouri State Operating Permit #MO-0095575*, revised November 1, 2021.

GER, 2021, *Sikeston Power Station 2021 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated August 2021.

GER, 2022, *Sikeston Power Station 2022 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated August 2022.

GER, 2023a, *Sikeston Power Station 2023 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated July 2023.

GER, 2023b, *Technical Memorandum Regarding Nature and Extent Characterization (NEC), Sikeston Power Station, Scott County, Missouri,* dated November 2023.

GER, 2024, *Sikeston Power Station 2024 Annual Groundwater Monitoring Report for Fly Ash Pond Compliance with USEPA §257.90(e),* dated July 2024.

GER, 2025a, *Sikeston Power Station Groundwater Monitoring and Sampling Plan for Compliance with Missouri State Operating Permit #MO-0095575*, revised June 2025.

GER, 2025b, *Sikeston Power Station Fly Ash Pond Assessment of Corrective Measures,* dated March 2025.

GER, 2025c, *Sikeston Power Station Fly Ash ACM Remedy Selection Report,* dated May 2025.

ITRC, 2013, Interstate Technology Regulatory Council – Groundwater Statistics for Monitoring and Compliance – Statistical Tools for the Project Life Cycle (ITRC GSMC-1 - Welcome: Using this Online Guidance (itrcweb.org)). Published December 2013.Sanitas© for Ground Waters Statistical Software, © 1992-2023 SANITAS TECHNOLOGIES, Alamosa Colorado 81101-0012.

U.S. Environmental Protection Agency, March 2009, Statistical Analysis of Groundwater Monitoring *Data at RCRA Facilities Unified Guidance*: USEPA 530/R-09-007, Office of Resource Conservation and Recovery, Program Implementation and Information Division, Washington, D.C.

FIGURES

FILE PATH: O:\CADDFiles\SIKESTON\GROUNDWATER MAP\FAP\2024-2025\Site-GW-Map-9-25-24.dwg

LEGEND

PROPERTY LINE — PL

GROUNDWATER CONTOUR (DASHED WHERE INFERRED) — CI = 0.5 FT

MONITORING WELL — MW-10

PEIZOMETER — P NE-3

HIGH-CAPACITY WELL — W "D"

UP GRADIENT MONITORING LOCATION — UG

DOWN GRADIENT MONITORING LOCATION — DG

GROUNDWATER FLOW

NOTES:

1. IMAGE PROVIDED BY BING MAPS.
2. MONITORING WELL LOCATIONS, CASING ELEVATIONS & GROUNDWATER ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
3. GROUNDWATER ELEVATIONS MEASURED BY SIKESTON POWER STATION STAFF ON THE DATE INDICATED.
4. MAP DEVELOPMENT BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
5. RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.0003 FT./FT. TO 0.001 FT./FT.

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1R	294.69	314.34	382926.45	1078801.61
MW-2	295.61	308.01	383207.42	1079751.30
MW-3	295.10	308.55	384130.00	1079946.62
MW-7	294.13	315.03	381584.50	1078847.00
MW-9	294.53	314.68	382429.94	1078825.60
MW-10	291.93	304.28	381324.39	1076261.22

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SIKESTON POWER STATION
FLY ASH POND
2025 ANNUAL GROUNDWATER MONITORING & REPORT

FIGURE 1
GROUNDWATER CONTOUR MAP
SEPTEMBER 25, 2024

SURVEYED	DESIGNED	DRAWN	CHECKED	APPROVED	DATE	SCALE	PROJECT NAME	FILE NAME	SHEET #
N/A	KE	BM	KE	MCC	05/25	1" = 300'	SIKESTON/GWMAP/FAP	Site-GW-Map-9-25-24	1 OF 3

FILE PATH: O:\CADDFiles\SIKESTON\GROUNDWATER MAP\FAP\2024-2025\Site-GW-Map-4-16-25.dwg

LEGEND

- PROPERTY LINE — PL —
- GROUNDWATER CONTOUR (DASHED WHERE INFERRED) — 295.5 —
  CI = 0.5 FT
- MONITORING WELL MW MW-10
- PIEZOMETER P NE-3
- HIGH-CAPACITY WELL W "D"
- UP GRADIENT MONITORING LOCATION UG
- DOWN GRADIENT MONITORING LOCATION DG
- GROUNDWATER FLOW

NOTES:

1. IMAGE PROVIDED BY BING MAPS.
2. MONITORING WELL LOCATIONS, CASING ELEVATIONS & GROUNDWATER ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
3. GROUNDWATER ELEVATIONS MEASURED BY SIKESTON POWER STATION STAFF ON THE INDICATED DATE.
4. MAP DEVELOPMENT BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
5. RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.00003 FT./FT. TO 0.001 FT./FT.

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1R	298.57	314.34	382926.45	1078801.61
MW-2	299.61	308.01	383207.42	1079751.30
MW-3	299.22	308.55	381130.00	1079946.62
MW-7	297.95	315.03	381584.50	1078847.00
MW-9	298.40	314.68	382429.94	1078825.60
MW-10	295.18	304.28	381324.39	1076261.22

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SIKESTON POWER STATION
FLY ASH POND
2025 ANNUAL GROUNDWATER MONITORING & REPORT

FIGURE 2
GROUNDWATER CONTOUR MAP
APRIL 16, 2025

SURVEYED	DESIGNED	DRAWN	CHECKED	APPROVED	DATE	SCALE	PROJECT NAME	FILE NAME	SHEET #
N/A	KE	BM	KE	MCC	05/25	1" = 300'	SIKESTON/GWMAP/FAP	Site-GW-Map-4-16-25	2 OF 3

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT ASSUMES RESPONSIBILITY ONLY FOR GEOLOGIC INTERPRETATIONS OF DATA APPEARING ON THE PAGE AND DISCLAIMS PURSUANT TO SECTION 256.456 RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT PREPARED UNDER THE SUPERVISION OF THE GEOLOGIST RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS FIGURE REFERS.

FILE PATH: O:\CADDFiles\SIKESTON\GROUNDWATER MAP\FAP\2024-2025\Site-GW-Map-5-6-25.dwg

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1R	298.57	314.34	382926.45	1078801.61
MW-2	299.61	308.01	383207.42	1079751.30
MW-3	299.22	308.55	384130.00	1079946.62
MW-7	297.95	315.03	381584.50	1078847.00
MW-9	298.40	314.68	382429.94	1078825.60
MW-10	295.18	304.28	381324.39	1076261.22

NOTES:
1. IMAGE PROVIDED BY BING MAPS.
2. MONITORING WELL LOCATIONS, CASING ELEVATIONS & GROUNDWATER ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
3. GROUNDWATER ELEVATIONS MEASURED BY SIKESTON POWER STATION STAFF ON THE DATE INDICATED.
4. MAP DEVELOPMENT BASED ON CONTOURS GENERATED BY SURFER® SOFTWARE.
5. RANGE OF GROUNDWATER FLOW GRADIENT AS DETERMINED BY SURFER® SOFTWARE 0.00003 FT./FT. TO 0.001 FT./FT.

LEGEND
- PROPERTY LINE — PL
- GROUNDWATER CONTOUR (DASHED WHERE INFERRED) Ci = 0.5 FT
- MONITORING WELL — MW-10
- PIEZOMETER — P NE-3
- HIGH-CAPACITY WELL — W "D"
- UP GRADIENT — UG
- MONITORING LOCATION
- DOWN GRADIENT — DG
- GROUNDWATER FLOW

SCALE: 1" = 600'
0 300 600
N

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SIKESTON POWER STATION
FLY ASH POND
2025 ANNUAL GROUNDWATER MONITORING & REPORT

FIGURE 3
GROUNDWATER CONTOUR MAP
MAY 6, 2025

SURVEYED	DESIGNED	DRAWN	CHECKED	APPROVED	DATE	SCALE	PROJECT NAME	FILE NAME	SHEET #
N/A	KE	BM	KE	MCC	05/25	1" = 300'	SIKESTON/GWMAP/FAP	Site-GW-Map-5-6-25	3 OF 3

TABLES

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 2
Groundwater Monitoring Constituents

USEPA 40 CFR 257			
Appendix III - Constituents for Detection Monitoring		**Appendix IV - Constituents for Assessment Monitoring**	
Chemical Constituent	**Method**	**Chemical Constituent**	**Method**
pH (S.U.)	Field	Antimony (µg/L)	SW 6020 A
Boron (µg/L)	SW 6020 A	Arsenic (µg/L)	SW 6020 A
Calcium (mg/L)	SW 6020 A	Barium (µg/L)	SW 6020 A
Chloride (mg/L)	EPA 300.0 REV 2.1	Beryllium (µg/L)	SW 6020 A
Fluoride (mg/L)	EPA 300.0 REV 2.1	Cadmium (µg/L)	SW 6020 A
Sulfate (mg/L)	EPA 300.0 REV 2.1	Chromium (µg/L)	SW 6020 A
Total Dissolved Solids (mg/L)	SM 2540C	Cobalt (µg/L)	SW 6020 A
		Fluoride (mg/L)	EPA 300 REV 2.1
		Lead (µg/L)	SW 6020 A
		Lithium (µg/L)	SW 6010 A
		Mercury (µg/L)	SW 6020 A
		Molybdenum (µg/L)	SW 6020 A
		Selenium (µg/L)	SW 6020 A
		Thallium (µg/L)	SW 6020 A
		Radium 226 and 228 combined (pCi/L)	EPA 903.1 & 904.0

NOTES:
1. S.U. = Standard Unit.
2. µg/L = micrograms per liter.
3. mg/L = milligrams per liter.
4. pCi/L = picocurie per liter.

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 3
Groundwater Monitoring Well Summary

Monitoring Well ID[1,2]	Northing Location[3,4]	Easting Location[3,4]	Ground Surface Elevation[3,4] (feet)	Top of Riser Elevation[3,4] (feet)	Well Depth[5] (feet)	Base of Well Elevation[6] (feet)	Screen Length[7] (feet)	Top of Screen Elevation (feet)
MW-1*	383119.51	1078467.90	310.41	312.77	37.84	274.93	10	285.1
MW-2	383207.42	1079751.30	305.53	308.01	37.42	270.59	10	280.8
MW-3	381130.00	1079946.62	306.11	308.55	37.21	271.34	10	281.5
MW-7	381584.50	1078847.00	312.70	315.03	37.37	277.66	10	287.9
MW-9	382429.94	1078825.60	311.85	314.68	37.28	277.40	10	287.6
MW-1R	382926.45	1078801.61	311.41	314.34	38.16	276.10	10	286.4
MW-10	381324.39	1076261.22	300.70	304.28	33.58	270.70	10	280.7

NOTES:

1. Refer to Figure 1 for monitoring well locations.
2. Refer to Sikeston Power Station On-Site Operating Record for well construction diagrams.
3. Monitoring well survey data provided by Bowen Engineering & Surveying, Inc.
4. Horizontal Datum: Missouri State Plane Coordinates - NAD 83 (Feet), Vertical Datum: NAVD 88 (Feet).
5. Depth measurements relative to surveyed point on top of well casing.
6. Sump installed at base of screen (0.2 feet length).
7. Actual screen length (9.7 feet) is the machine-slotted section of the 10-foot length of Schedule 40 PVC pipe.
8. * = MW-1 removed from Fly Ash Pond Monitoring System following installation and completion of background sampling of MW-1R on March 2, 2022.
9. MW-10 added to Fly Ash Pond Monitoring System following installation and completion of Background sampling on November 3, 2023.

Prepared by: KAE
Checked by: MCC
Approved by: KAE

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 4
Historical Groundwater Level Summary

Well ID	MW-1*	MW-2	MW-3	MW-7	MW-9	MW-1R	MW-10
Date	Groundwater Elevation (feet MSL)						
05/12/16	297.50	298.66	298.13	NM	NM	NI	NI
06/28/16	296.60	298.01	297.58	NM	NM	NI	NI
07/15/16	296.57	297.86	297.37	NM	NM	NI	NI
08/08/16	295.62	297.06	297.05	NM	NM	NI	NI
09/08/16	296.06	297.27	296.76	NM	NM	NI	NI
10/05/16	295.86	296.96	296.40	NM	NM	NI	NI
11/01/16	295.47	296.66	296.10	NM	NM	NI	NI
11/30/16	295.45	296.60	296.03	NM	NM	NI	NI
01/24/17	NM	NM	296.35	NM	NM	NI	NI
01/26/17	295.77	296.76	296.35	NM	NM	NI	NI
02/22/17	NM	NM	296.00	NM	NM	NI	NI
02/24/17	295.47	296.40	296.00	NM	NM	NI	NI
03/20/17	296.11	296.96	296.45	NM	NM	NI	NI
04/19/17	296.04	296.86	296.35	NM	NM	NI	NI
04/27/17	NM	NM	296.72	NM	NM	NI	NI
05/17/17	NM	NM	297.81	NM	NM	NI	NI
06/08/17	NM	NM	297.81	NM	NM	NI	NI
07/13/17	NM	NM	296.98	NM	NM	NI	NI
10/31/17	NM	NM	295.22	NM	NM	NI	NI
03/21/18	295.92	296.96	296.65	295.83	296.13	NI	NI
04/15/18	297.07	297.86	297.60	296.95	297.18	NI	NI
05/23/18	296.78	298.01	297.62	296.66	296.98	NI	NI
06/13/18	NM	NM	297.33	NM	NM	NI	NI
06/27/18	296.37	297.61	297.21	296.26	296.56	NI	NI
08/01/18	295.22	296.60	296.15	295.08	295.48	NI	NI
09/05/18	294.79	296.11	295.68	294.71	295.01	NI	NI
11/06/18	295.01	296.21	295.74	294.85	295.17	NI	NI
11/26/18	NM	NM	295.63	NM	NM	NI	NI
12/12/18	295.12	296.21	295.79	295.06	295.36	NI	NI
01/08/19	295.66	296.72	296.38	295.53	295.80	NI	NI
02/05/19	NM	NM	296.73	NM	NM	NI	NI
02/22/19	297.70	298.67	298.35	297.59	297.84	NI	NI
03/27/19	297.69	298.93	298.51	297.58	297.93	NI	NI
04/16/19	298.15	299.29	298.93	298.01	298.38	NI	NI
05/14/19	298.27	299.66	299.25	298.15	298.52	NI	NI
05/28/19	NM	NM	298.95	NM	NM	NI	NI
06/12/19	297.82	299.24	298.82	297.76	298.10	NI	NI
07/17/19	297.32	298.77	298.38	297.25	297.55	NI	NI
07/24/19	297.40	298.80	298.41	297.33	297.65	NI	NI
08/14/19	296.61	298.15	297.80	296.65	296.96	NI	NI
08/28/19	NM	NM	297.55	NM	NM	NI	NI
09/16/19	296.24	297.70	297.22	296.14	296.50	NI	NI
09/24/19	296.09	297.53	297.05	295.98	296.33	NI	NI
10/10/19	295.92	297.29	296.84	295.80	296.13	NI	NI
10/22/19	295.92	297.24	296.80	295.74	296.12	NI	NI
11/04/19	NM	NM	297.34	NM	NM	NI	NI
01/28/20	297.61	298.73	298.34	297.42	297.80	NI	NI
02/18/20	NM	NM	299.00	NM	NM	NI	NI
03/30/20	NM	NM	300.09	NM	NM	NI	NI
04/06/20	299.16	300.40	300.00	298.99	299.41	NI	NI
05/21/20	298.50	300.02	299.55	NM	298.71	NI	NI
09/22/20	296.53	297.97	297.47	296.33	296.78	NI	NI
12/08/20	296.63	298.00	NM	NM	NM	NI	NI
01/26/21	NM	NM	NM	296.51	296.82	NI	NI
04/17/21	297.32	298.49	298.05	297.08	297.48	NI	NI
10/20/21	295.36	296.55	296.04	295.08	295.53	295.69	NI
04/09/22	NM	298.06	297.60	296.78	297.18	297.29	NI
08/02/22	NM	297.01	296.55	295.38	295.85	296.04	NI
11/02/22	NM	295.79	295.24	294.33	294.78	294.96	NI
03/12/23	NM	297.21	296.75	295.80	296.27	296.45	NM
12/11/23	NM	296.31	295.81	294.86	295.28	295.44	292.83
04/23/24	NM	296.71	296.20	295.38	295.83	296.30	293.18
09/25/24	NM	295.61	295.10	294.13	294.53	294.69	291.93
04/16/25	NM	299.61	299.22	297.95	298.40	298.57	295.18
05/06/25	NM	299.09	298.61	297.33	297.78	297.94	294.33

NOTES:

1. Refer to Figure 1 for monitoring well locations.
2. Refer to Sikeston Power Station On-Site Operating Record for well construction diagrams.
3. NM - Not Measured.
4. NI - Not Installed.
5. Maximum and minimum groundwater elevations are shaded.
6. * = MW-1 removed from Fly Ash Pond Monitoring System following completion of background sampling of MW-1R on March 2, 2022.
7. MW-10 added to Fly Ash Pond Monitoring System following completion of background sampling on November 3, 2023.

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: CMH
Checked by: KAE
Approved by: KAE

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 5
Water Levels and Field Parameter Summary

12th Compliance Sampling Event initiated September 25, 2024

Monitoring Well I.D.	Hydraulic Position	Initial Water Level (ft, BTOC[2])	Final Water Level (ft, BTOC[2])	Minimum[3] Purge Vol. (ml[4])	Actual Purge Vol. (ml[4])	pH (S.U.[5])
MW-2	Upgradient	12.40	12.40	300	4,200	6.24
MW-3	Upgradient	13.45	13.45	300	6,660	6.82
MW-7	Downgradient	20.90	20.90	300	2,460	7.40
MW-9	Downgradient	20.15	20.15	300	3,040	7.06
MW-1R	Downgradient	19.65	19.65	300	6,040	6.46
MW-10	Downgradient	12.35	12.35	300	4,040	7.21

NOTES:

1. Sequence of sampling is MW-1R, MW-9, MW-7, MW-2, MW-10 then MW-3.
2. BTOC: Below Top of Casing
3. Purge calculations based on 1/4" ID tubing and complete evacuation of single tubing volume.
4. ml: milliliter
5. S.U.: Standard Unit.

Event initiated April 16, 2025

Monitoring Well I.D.	Hydraulic Position	Initial Water Level (ft, BTOC[2])	Final Water Level (ft, BTOC[2])	Minimum[3] Purge Vol. (ml[4])	Actual Purge Vol. (ml[4])	pH (S.U.[5])
MW-2	Upgradient	8.40	8.40	300	4,000	6.36
MW-3	Upgradient	9.33	9.33	300	4,120	6.33
MW-7	Downgradient	17.08	17.08	300	5,740	7.25
MW-9	Downgradient	16.28	16.28	300	4,080	6.87
MW-1R	Downgradient	15.77	15.77	300	4,520	6.32
MW-10	Downgradient	9.10	9.10	300	10,980	7.09

NOTES:

1. Sequence of sampling is MW-1R, MW-9, MW-7, MW-3, MW-2 then MW-10.
2. BTOC: Below Top of Casing
3. Purge calculations based on 1/4" ID tubing and complete evacuation of single tubing volume.
4. ml: milliliter
5. S.U.: Standard Unit.

13th Compliance Sampling Event initiated May 6, 2025

Monitoring Well I.D.	Hydraulic Position	Initial Water Level (ft, BTOC[2])	Final Water Level (ft, BTOC[2])	Minimum[3] Purge Vol. (ml[4])	Actual Purge Vol. (ml[4])	pH (S.U.[5])
MW-2	Upgradient	8.92	8.92	300	4,460	6.33
MW-3	Upgradient	9.94	9.94	300	4,460	6.61
MW-7	Downgradient	17.70	17.70	300	4,240	7.27
MW-9	Downgradient	16.90	16.90	300	4,500	7.00
MW-1R	Downgradient	16.40	16.40	300	5,120	6.38
MW-10	Downgradient	9.95	9.95	300	7,400	7.08

NOTES:

1. Sequence of sampling is MW-1R, MW-9, MW-7, MW-3, MW-10, then MW-2.
2. BTOC: Below Top of Casing
3. Purge calculations based on 1/4" ID tubing and complete evacuation of single tubing volume.
4. ml: milliliter
5. S.U.: Standard Unit.

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 6
Relative Percent Differences Summary

12th Compliance Sampling Event

Chemical Parameter	Units	MW-1R	DUP	Relative Percent Difference
Total Dissolved Solids	mg/L	520	502	3.5
Sulfate	mg/L	242	249	2.9
Fluoride	mg/L	< 0.25	< 0.25	NA
Chloride	mg/L	16.6	17.3	4.1
Barium	µg/L	26.6	29.3	9.7
Boron	µg/L	3,700	3,770	1.9
Calcium	mg/L	103.0	106.0	2.9
Cobalt	µg/L	13.6	14.4	5.7
Lithium	µg/L	10.2	10.9	6.6
Molybdenum	µg/L	166	165	0.6

13th Compliance Sampling Event

Chemical Parameter	Units	MW-1R	DUP	Relative Percent Difference
Total Dissolved Solids	mg/L	576	596	3.4
Sulfate	mg/L	289	302	4.4
Fluoride	mg/L	J 0.10	J 0.11	9.5
Chloride	mg/L	18.3	19.0	3.8
Barium	mg/L	48.4	49.4	2.0
Boron	µg/L	4,690	4,850	3.4
Calcium	mg/L	S 116.0	121.0	4.2
Cobalt	ug/L	15.0	16.8	11.3
Lithium	µg/L	11.2	12.4	10.2
Molybdenum	µg/L	208	233	11.3

NOTES:

1. S.U. = Standard Unit.
2. µg/L = micrograms per liter.
3. mg/L = milligrams per liter.
4. pCi/L = picoCuries per liter.
5. Relative Percent Difference tolerance = 20%. Not calculated if sample or Dup is below Reporting Limit.
6. Qualifiers:
   a. "J" - Analyte detected below quantitation limits
   b. "S" - Analyte spike recovery outside recovery limits

Prepared by: CMH
Checked by: KAE
Approved by: KAE

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 7
Alternate Data Sets

12th and 13th Compliance Sampling Events

Constituent-Well Pair[1]		Proposed Background Data Base (to eliminate trending data)[2]	Background set size (n)
Well ID	Constituent		
MW-2	TDS	August 2018 through September 2020	8

Notes:

1. Constituent-well pairs identified based on Mann-Kendall Sen's Slope Trend Analysis of data set summarized in Appendix 4.

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: KAE
Checked by: JTF
Approved by: KAE

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 8
Intra-Well Prediction Limit Summaries

12th and 13th Compliance Sampling Events

Chemical Parameter	Units	MW-1R	MW-2	MW-3	MW-7	MW-9	MW-10
40 CFR 257 Appendix III Constituents for Detection Monitoring							
pH Upper	S.U.	6.58	6.405	6.626	7.420	7.477	7.143
pH Lower	S.U.	6.48	6.013	6.359	7.148	7.237	6.684
Chloride	mg/L	21.7	7.525	1.641	14.94	22.51	24.59
Fluoride	mg/L	0.366	0.272	0.386	0.831	1.101	0.42
Sulfate	mg/L	249.2	21.42	21.29	259	279.2	215.5
Total Dissolved Solids	mg/L	512.1	171.5	166.7	584.1	653	530.8
Boron	µg/L	3,875	59.94	33.39	2,352	6,408	383.1
Calcium	mg/L	112.4	24.21	19.08	144	97.23	94.97

NOTES:

1. MW-1R prediction limits based on eight rounds of background data spanning October 2021 to Mach 2022.
2. MW-10 prediction limits based on eight rounds of background data spanning February 2023 to November 2023.
2. Prediction limits for MW-2, MW-3, MW-7, and MW-9 based on 13 rounds of background data spanning March 2018 to April 2021, except where detrending or outlier removal was necessary (Appendix 4).
3. Prediction limits summarized from Sanitas outputs provided in Appendix 8.

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: KAE
Checked by: JTF
Approved by: KAE

Annual Groundwater Monitoring Report for Fly Ash Pond
USEPA 40 CFR 257.90(e)
SBMU - Sikeston Power Station
Scott County, Missouri

Table 9
Groundwater Protection Standards for Assessment Monitoring Constituents

Constituent	Units	MCL or Health-Based GWPS
Antimony	ug/L	6
Arsenic	ug/L	10
Barium	ug/L	2000
Beryllium	ug/L	4
Cadmium	ug/L	5
Chromium	ug/L	100
Cobalt	ug/L	6
Fluoride	mg/L	4
Lead	ug/L	15
Lithium	ug/L	40
Mercury	ug/L	2
Molybdenum	ug/L	100
Selenium	ug/L	50
Thallium	ug/L	2
Radium 226/228 (Combined)	pCi/L	5

NOTES:
1. ug/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.
4. MCL - Maximum Contaminant Level per CFR 40 Subchapter D Part 141 subpart G Section 141.62 & 141.66, or Part 257 subpart D Section 257.95(h)(2).

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: JMC
Checked by: KAE
Checked by: KAE

APPENDICES

Appendix 1

Field Sampling Notes

Field Instrumentation Calibration Log

Facility: Ameren RIEC Ash Ponds - Groundwater Monitoring

Calibrated by: AD/SL

Field Instruments: In-Situ SmarTROLL MP or In-Situ AquaTROLL 400 | HF scientific, inc. Micro TPI Field Portable Turbidimeter

S/N #: 893508

	Date	Time	pH Standards (S.U.)		pH Measurements (S.U./mV)	Specific Conductance Standard (µS/cm)		Specific Conductance Measurement (µS/cm)	Oxidation Reduction Potential Standard (mV)		Oxidation Reduction Potential Measurement (mV)	Dissolved Oxygen (%)			Turbidity Standards (NTU)		Turbidity Measurements (NTU)
Beginning of Day Calibration	9/25/24	0635	4.00 @ 25.00°C	=	4.01	1413 @25.00°C	=	1413.3 @ 20.54	220 mV at 25.00°C	=	229.7 @ 20.71	Temperature (°C)	=	20.35	0.02	=	.02
			Standard is 4 @ 25 °C									Tap Water Source	=	SBMU			
			7.00 @25.00°C	=	7.00	1413 @ 25.00			Standard is 229 mV @ 25 °C						10.0	=	9.97
			Standard is 7 @ 25 °C		-25.7							Barometric Pressure (mm/Hg)	=	751.13			
			10.00 @25.00°C	=	10.04										1000	=	1000
			Standard is 10 @ 25 °C		-201.3							Measurement	=	100.02			
End of Day Check	9/25/24	1430	4.00 @ 25.00°C	=	4.02	1413 @25.00°C	=	1423.5 @ 20.61°C	220 mV at 25.00°C	=	229 @ 20.77°C	Temperature (°C)	=	26.89	0.02	=	0.11
			Standard is 4 @ 25 °C									Tap Water Source	=	SBMU			
			7.00 @25.00°C	=	7.00	1413 @ 25°C			Standard is 229 mV @ 25°C						10.0	=	10.10
			Standard is 7 @ 25 °C		-34.2							Barometric Pressure (mm/Hg)	=	751.03			
			10.00 @25.00°C	=	10.04										1000	=	1024
			Standard is 10 @ 25 °C		210.5							Measurement	=	101.01			

Notes: The In-Situ SmarTROLL MP Field Meter and In-Situ AquaTROLL 400 measure Temperature, Specific Conductance, Dissolved Oxygen, pH, and Oxidation Reduction Potential.
The HF scientific, inc. Micro TPI Field Portable Turbidimeter measures Turbidity.
Dissolved oxygen is calibrated via % saturation method; however, field measurements are recorded as mg/L.

I certify that the aforementioned meters were calibrated within the manufacturers specifications.

Date: 9/25/24 By:

CHAIN OF CUSTODY

pg. 1 of 1 Work order # _____

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

Client:	Sikeston Board of Municipal Utilities
Address:	107 E Malone Ave
City / State / Zip	Sikeston, MO 63801
Contact:	Luke St. Mary
Phone:	(573) 475-3119
E-Mail:	lstmary@sbmu.net
Fax:	

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

Preserved in: ☒ LAB ☒ FIELD

FOR LAB USE ONLY

Lab Notes:

Client Comments
Total Metals = Ba Be B Cd Ca Cr (ICP), Sb As Co Pb Li Mo Se Tl (ICP/MS) and Hg

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

Project Name/Number	Sample Collector's Name
Fly Ash Pond (FAP)	

Results Requested
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNP	HNO3	MATRIX: Aqueous	Groundwater	Trip Blank	INDICATE ANALYSIS REQUESTED: Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals
	MW-1R	9/25/24 8:40	1	3		X		X	X	X	X	X	X	X
	MW-2	9/25/24 1101	1	3		X		X	X	X	X	X	X	X
	MW-3	9/25/24 1347	1	3		X		X	X	X	X	X	X	X
	MW-7	9/25/24 1014	1	3		X		X	X	X	X	X	X	X
	MW-9	9/25/24 0936	1	3		X		X	X	X	X	X	X	X
	MW-10	9/25/24 1247	1	3		X		X	X	X	X	X	X	X
	Duplicate	9/25/24	1	3		X		X	X	X	X	X	X	X
	Trip Blank		1	3			X	X		X	X	X	X	X
	Field Blank	9/25/24 1014	1	3	X			X		X	X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time

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

BottleOrder: 90414

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-1R
Name (Field Staff): AD/JL/AP
Date: 9-25-24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech. (Title) 9-25-24 (Date)

Field Sampling Log

Monitoring Well ID: MW-1R Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 19.65 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): AD/JL/AP

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 8:20 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 19.65 Total Volume Purged (mL): 6040

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 38.25 Water Level after Sampling (feet btoc): 19.65 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 9:16

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
8:22		500	18.30	704.51	1.61	6.46	1199.8	11.24	19.65	white flakes
8:24	250	1000	17.69	712.67	1.26	6.46	1195.6	7.93	19.65	white flakes
8:26	250	1500	17.60	686.69	0.99	6.47	1193.9	8.41	19.65	white flakes
8:28	250	2000	17.41	722.98	0.81	6.47	1134.8	12.59	19.65	white flakes
8:30	260	2520	17.42	733.27	0.66	6.47	1126.4	12.72	19.65	white flakes
8:32	250	3020	17.45	726.11	0.69	6.46	1123.9	12.94	19.65	white flakes
8:34	250	3520	17.51	708.0	0.67	6.47	1119.7	3.86	19.65	white flakes
8:36	250	4020	17.50	731.53	0.61	6.47	1114.1	2.51	19.65	white flakes
8:38	260	5540	17.49	725.40	0.61	6.46	1128.4	1.77	19.65	white flakes
8:40	250	6040	17.56	736.59	0.67	6.46	1122.2	1.55	19.65	white flakes

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-1R

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 19.65

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
9-25-24 8:40	250	17.56	736.59	0.67	6.46	1122.2	1.55

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: cloudy

Sample Characteristics: no odor / white flakes

Sample Collection Order: Per SAP

Comments and Observations:

Took Dup. Sample

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9-25-24 By: Alicia Powell Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-2
Name (Field Staff): AD/OL/AP
Date: 9-25-24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 9-25-24 (Date)

Field Sampling Log

Monitoring Well ID: MW-2 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 12.4 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): AD/JL/AP

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 10:45 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 12.4 Total Volume Purged (mL): 4200

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.4 Water Level after Sampling (feet btoc): 12.4 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 11:20

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
10:47		580	25.33	189.0	3.00	6.40	468.6	2.62	12.4	yellow flakes
10:49	250	1080	20.73	198.19	1.04	6.25	750.0	2.86	12.4	clear
10:51	260	1600	20.32	198.81	0.99	6.28	761.8	2.95	12.4	clear
10:53	250	2100	20.05	198.68	0.89	6.27	731.3	2.62	12.4	clear
10:55	270	2640	20.04	197.46	0.85	6.27	724.9	2.11	12.4	clear
10:57	250	3140	20.00	196.12	0.82	6.24	715.8	2.09	12.4	clear
10:59	250	3640	20.03	195.21	0.77	6.25	681.5	1.98	12.4	clear
11:01	280	4200	19.99	193.92	0.75	6.24	693.4	1.73	12.4	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-2

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 12.4

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
9-25-24 11:01	280	19.99	193.92	0.75	6.24	693.4	1.73

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: party cloudy

Sample Characteristics: no odor, yellowflakes

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9-25-24 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-3
Name (Field Staff): AD/JL/AP
Date: 9-25-24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 9-25-24 (Date)

Field Sampling Log

Monitoring Well ID: MW-3 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 13.45 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): AD/JL/AP

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 1:19 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 13.45 Total Volume Purged (mL): 6660

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.2 Water Level after Sampling (feet btoc): 13.45 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 2:10

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1:21		500	24.98	166.39	1.67	6.79	652.40	~~9~~9.14	13.45	clear
1:23	250	1000	20.86	174.38	0.87	6.77	668.8	6.79	13.45	clear
1:25	230	1460	20.00	176.51	0.78	6.76	702.8	6.46	13.45	clear
1:27	250	1960	19.42	177.67	0.69	6.75	809.0	6.10	13.45	clear
1:29	220	2400	19.39	176.58	0.64	6.76	877.2	4.98	13.45	clear
1:31	250	2900						5.16	13.45	clear
1:33	250	3~~0~~400						3.85	13.45	clear
1:35	220	3840						2.78	13.45	clear
1:37	230	4300	19.06	172.54	0.52	6.81	1082.4	3.38	13.45	clear
1:39	240	4780	19.06	172.63	0.52	6.81	1062.3	3.71	13.45	clear
1:41	240	5260	19.11	169.97	0.51	6.80	1064.4	2.40	13.45	clear
1:43	220	5700	19.01	171.84	0.50	6.80	1019.6	2.36	13.45	clear
1:45	260	6220	19.10	170.79	0.50	6.82	1005.2	2.29	13.45	clear
1:47	220	6660	19.06	170.21	0.50	6.82	1006.8	2.61	13.45	clear
~~1:49~~										

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-3

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 13.45

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
9-25-24 1:47	~~HP~~ AP 220	19.06	170.21	0.50	6.82	1006.8	2.61

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: partly cloudy

Sample Characteristics: no odor / clear

Sample Collection Order: Per SAP

Comments and Observations:

1:31 Ipad got too hot stop reading
Started reading at 1:37

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9-25-24 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-7
Name (Field Staff): AD/JL/AP
Date: 9-25-24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 9-25-24 (Date)

Field Sampling Log

Monitoring Well ID: MW-7 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 20.9 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): AD/JL/AP

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 10:04 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 20.9 Total Volume Purged (mL): 2460

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.35 Water Level after Sampling (feet btoc): 20.9 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 10:34

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
10:06		500	22.92	731.24	2.72	7.35	946.5	1.26	20.9	white flakes
10:08	240	980	19.07	734.55	0.52	7.40	545.6	1.16	20.9	clear
10:10	250	1480	18.53	741.95	0.47	7.41	499.3	1.32	20.9	clear
10:12	240	1960	18.35	741.13	0.40	7.41	494.6	1.23	20.9	clear
10:14	250	2460	18.20	742.40	0.40	7.40	494.5	0.96	20.9	clear

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Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-7

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 20.9

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data: •

Date Sample Time 9-25-24	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
10:14	250	18.20	742.40	0.40	7.40	494.5	0.96

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: partly cloudy

Sample Characteristics: no odor / some white flakes / clear

Sample Collection Order: Per SAP

Comments and Observations:

fly ash drain running past sample location.

Field Blank sample taken.

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9/25/24 By: Alicia Powell Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-9
Name (Field Staff): AD/JL/AP
Date: 9/25/24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech. (Title) 9/25/24 (Date)

Field Sampling Log

Monitoring Well ID: MW-9 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 20.15 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): _____

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 9:24 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 20.15 Total Volume Purged (mL): 3040

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.35 Water Level after Sampling (feet btoc): 20.15 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 9:56

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
9:26		560	21.47	801.78	1.63	7.08	1045.7	3.14	20.15	white flakes
9:28	270	1100	19.14	851.22	0.78	7.08	1120.8	1.87	20.15	white flakes
9:30	240	1580	18.62	833.90	0.64	7.07	1084.4	1.27	20.15	white flakes
9:32	250	2080	18.49	835.73	0.59	7.07	1088.3	1.23	20.15	clear
9:34	230	2540	18.44	841.87	0.57	7.06	1060.1	1.08	20.15	clear
9:36	250	3040	18.46	832.16	0.54	7.06	1099.2	1.41	20.15	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-9

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 20.15

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
9-25-24 9:36	250	18.46	832.16	0.54	7.06	1099.2	1.41

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: partly cloudy

Sample Characteristics: no odor / white flakes / clear

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9-25-2 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW-10
Name (Field Staff): AD/JL/AP
Date: 9-25-24

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech. (Title) 9-25-24 (Date)

Field Sampling Log

Monitoring Well ID: MW-10 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 12.35 Date: 9-25-24

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 9-25-24

Name (Sample Collector): AD/JL/AP

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 12:31 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 12.35 Total Volume Purged (mL): 4040

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 33.15 Water Level after Sampling (feet btoc): 12.35 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1:06

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
12:33		520	29.37	571.98	3.10	7.18	316.3	1.08	12.35	clear
12:35	260	1040	23.00	531.99	0.47	7.17	360.2	1.47	12.35	clear
12:37	260	1560	21.95	535.08	0.40	7.20	332.8	1.15	12.35	clear
12:39	260	2080	21.65	530.21	0.33	7.21	302.3	1.16	12.35	clear
12:41	270	2620	21.60	530.14	0.29	7.21	295.9	1.13	12.35	clear
12:43	240	3100	21.47	533.68	0.29	7.21	311.9	1.39	12.35	clear
12:45	250	3600	21.38	537.23	0.29	7.21	284.9	1.20	12.35	clear
12:47	220	4040	21.16	540.74	0.29	7.21	270.7	0.99	12.35	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW-10

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 12.35

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
9-25-24 12:47	220	21.16	540.74	0.29	7.21	270.7	0.99

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: partly cloudy

Sample Characteristics: no odor/clear

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 9-25-24 By: Alicia Powell Title: Lab Tech.

Drop off Loc:
☐ [illegible] ☐ Lenexa, KS
☐ Springfield, IL ☒ Collinsville, IL

CHAIN OF CUSTODY

pg. 1 of 1 Work order #

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

Client: Sikeston Board of Municipal Utilities
Address: 107 E Malone Ave
City / State / Zip: Sikeston, MO 63801
Contact: Luke St. Mary Phone: (573) 475-3119
E-Mail: lstmary@sbmu.net Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE ___ °C LTG#
Preserved in: ☐ LAB ☐ FIELD **FOR LAB USE ONLY**
Lab Notes:

Client Comments Report QC LVL 2

Total Metals = Ba Be B Cd Ca Cr (ICP), Sb As Co Pb Li Mo Se Tl (ICP/MS) and Hg

Tracking 1Z 673 027 01 4935 4868
1Z 673 027 01 5000 0451

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

Project Name/Number: Fly Ash Pond (FAP)
Sample Collector's Name: Justin Lowes

Results Requested (call for PFAS TAT and surcharges)
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Date ___ ☐ 3 Day (50% Surcharge)

Billing/PO#:

Lab Use Only	Sample Identification	Date/Time Sampled	UNP	HNO3	Aqueous	Groundwater	Trip Blank	Cl SO4 F-	Field pH	Ra226/228 (SUB)	TDS	Total Metals
✓	MW-1R	4/16/25 0846	1	3		X		X	X	X	X	X
	MW-2	4/16/25 1244	1	3		X		X	X	X	X	X
✓	MW-3	4/16/25 11:42	1	3		X		X	X	X	X	X
✓	MW-7	4/16/25 1056	1	3		X		X	X	X	X	X
✓	MW-9	4/16/25 1006	1	3		X		X	X	X	X	X
✓	MW-10	4/16/25 1400	1	3		X		X	X	X	X	X
✓	Duplicate	4/16/25 1056	1	3		X		X	X	X	X	X
	Trip Blank		1	3			X	X		X	X	X
✓	Field Blank	4/16/25	1	3	X			X		X	X	X

Relinquished By	Date/Time	Received By	Date/Time
4/16/25			

BottleOrder 96289

Field Instrumentation Calibration Log

Facility: Ameren RIEC Ash Ponds - Groundwater Monitoring

Calibrated by: JL/AP

Field Instruments: In-Situ SmarTROLL MP or In-Situ AquaTROLL 400 — HF scientific, inc. Micro TPI Field Portable Turbidimeter

S/N #: 893508 — 202302683

	Date	Time	pH Standards (S.U.)		pH Measurements (S.U./mV)	Specific Conductance Standard (µS/cm)		Specific Conductance Measurement (µS/cm)	Oxidation Reduction Potential Standard (mV)		Oxidation Reduction Potential Measurement (mV)	RDO Dissolved Oxygen (%)			Turbidity Standards (NTU)		Turbidity Measurements (NTU)
Beginning of Day Calibration	4/16/25	0730	4.00 @ 25.00°C	=	3.98	1413 @25.00°C	=	~~1431.5~~ @ 1411.8 @ 20.57°C	220 mV at 25.00°C	=	214.6 @ 20.58	Temperature (°C)	=	20.36	0.02	=	0.01
			Standard is 4.00 @ 25 °C	=	138.7							Tap Water Source	=	SBMU	10.0	=	10.04
			7.00 @25.00°C	=	7.01	1413 @ 25			Standard is 229 mV @ 25 °C			Barometric Pressure (mm/Hg)	=	1009.1	1000	=	1002
			Standard is 7.00 @ 25 °C	=	-34.4							Measurement	=	100.04			
			10.00 @25.00°C	=	10.05												
			Standard is 10.0 @ 25 °C	=	-213.5												
End of Day Check	4/16/25	1450	4.00 @ 25.00°C	=	4.16	1413 @25.00°C	=	1412.4 @ 20.84	220 mV at 25.00°C	=	228.2 @ 20.77	Temperature (°C)	=	20.84	0.02	=	0.02
			Standard is 4.0 @ 25 °C	=	NA							Tap Water Source	=	SBMU	10.0	=	9.97
			7.00 @25.00°C	=	7.19	1413 @ 25			Standard is 229 mV @ 25 °C			Barometric Pressure (mm/Hg)	=	754.84	1000	=	999.2
			Standard is 7.0 @ 25 °C	=	NA							Measurement	=	100.11			
			10.00 @25.00°C	=	10.23												
			Standard is 10.0 @ 25 °C	=	NA												

Notes: The In-Situ SmarTROLL MP Field Meter and In-Situ AquaTROLL 400 measure Temperature, Specific Conductance, Dissolved Oxygen, pH, and Oxidation Reduction Potential.
The HF scientific, inc. Micro TPI Field Portable Turbidimeter measures Turbidity.
Dissolved oxygen is calibrated via % saturation method; however, field measurements are recorded as mg/L.

I certify that the aforementioned meters were calibrated within the manufacturers specifications.

Date: 4/16/25 By: Alicia Powell

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW1R
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification
Signed Alicia Powell Title Lab Tech Date 4/16/25

Field Sampling Log

Monitoring Well ID: MW1R Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 15.77 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4-16-25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0824 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 15.77 Total Volume Purged (mL): 4520

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 38.3 Water Level after Sampling (feet btoc): 15.77 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 933AM

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0824	200	400	20.34	527.21	3.48	6.45	436.1	21.82	15.77	flakes
0826	200	800	16.84	983.70	1.30	6.28	592.0	6.48	15.77	flakes
0828	200	1200	16.25	1021.0	1.06	6.26	842.9	5.54	15.77	flakes
0830	200	1600	16.21	954.08	1.02	6.27	868.7	6.33	15.77	flakes
0832	200	2000	16.18	850.2	0.96	6.29	883.4	4.48	15.77	flakes
0834	210	2420	16.20	804.42	1.00	6.30	885.4	2.10	15.77	clear
0836	200	2820	16.20	787.58	0.96	6.26	891.6	3.22	15.77	clear
0838	210	3240	16.23	793.47	0.89	6.29	895.4	2.95	15.77	clear
0840	210	3660	16.25	795.43	0.83	6.29	893.8	1.70	15.77	clear
0842	210	4080	16.29	779.77	0.81	6.29	894.0	1.45	15.77	clear
0844	220	4520	16.32	775.52	0.67	6.32	894.2	1.65	15.77	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW1R

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 15.77

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 8:46	220	16.32	775.52	0.67	6.32	894.2	1.65

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear, odorless

Sample Collection Order: Per SAP

Comments and Observations:

Dup. taken

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW9
Name (Field Staff): Justen Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification
Signed Alicia Powell Title Lab Tech Date 4/16/25

Prepared by: GREDELL Engineering Resources, Inc. January 2017

Field Sampling Log

Monitoring Well ID: MW9 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 16.28 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4/16/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0950 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 16.28 Total Volume Purged (mL): 4080

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.3 Water Level after Sampling (feet btoc): 16.28 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 10:23

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0950	250	500	27.30	712.11	3.15	7.06	322.8	6.32	16.28	flakes
0952	250	1000	18.74	838.91	0.90	6.95	365.0	5.66	16.28	flakes
0954	250	1500	17.56	858.44	0.81	6.93	371.1	1.68	16.28	clear
0956	250	2000	17.19	869.98	0.69	6.92	374.3	1.51	16.28	clear
0958	270	2540	17.10	868.63	0.66	6.89	373.0	1.53	16.28	clear
1000	250	3040	17.05	868.31	0.61	6.89	372.3	1.89	16.28	clear
1002	270	3580	17.01	871.87	0.57	6.85	373.3	2.27	16.28	clear
1004	250	4080	17.06	867.46	0.52	6.87	375.2	1.58	16.28	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW9

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 16.28

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 10:06	250	17.06	867.46	0.52	6.87	375.2	1.58

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW7
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification
Signed Alicia Powell Title Lab Tech Date 4/16/25

Field Sampling Log

Monitoring Well ID: MW7 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 17.08 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4/16/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 10:34 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 17.08 Total Volume Purged (mL): 5740

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.45 Water Level after Sampling (feet btoc): 17.08 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 11:15

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1034	280	560	23.31	815.50	4.15	7.42	583.0	8.63	17.08	flakes
1036	280	1120	17.97	1030.4	0.81	7.37	303.1	12.52	17.08	flakes
1038	270	1660	16.89	1062.3	0.53	7.35	286.1	7.58	17.08	flakes
1040	290	2240	16.74	1067.6	0.49	7.33	284.3	8.50	17.08	flakes
1042	250	2740	16.69	1068.2	0.44	7.29	283.5	7.68	17.08	flakes
1044	250	3240	16.74	1061.7	0.44	7.34	284.6	6.55	17.08	flakes
1046	240	3726	16.73	1017.4	0.44	7.28	291.4	7.58	17.08	flakes
1048	260	4240	16.70	1006.9	0.44	7.26	294.0	8.73	17.08	flakes
1050	250	4740	16.65	1001.0	0.42	7.25	296.7	7.48	17.08	flakes
1052	250	5240	16.69	1003.0	0.40	7.25	295.0	7.63 M	17.08	flakes
1054	250	5740	16.65	1008.3	0.39	7.25	294.5	7.38	17.08	flakes

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Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW7

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 17.08

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 10:56	250	16.65	1008.3	0.39	7.25	294.5	7.38

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear with some flakes, odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW3
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification
Signed Alicia Powell Title Lab Tech. Date 4/16/25

Field Sampling Log

Monitoring Well ID: MW 3 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 9.33 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4/16/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 11:27 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 9.33 Total Volume Purged (mL): 4120

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.17 Water Level after Sampling (feet btoc): 9.33 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 12:03

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1127	300	600	24.45	14855	4.55	6.90	571.9	11.83	9.33	flakes
1129	270	1140	17.46	161.52	3.72	6.34	684.8	13.8	9.33	flakes
1131	250	1640	16.83	163.69	3.38	6.30	711.7	10.85	9.33	flakes
1132	260	~~1640~~ 2060	16.47	165.59	3.12	6.34	739.3	8.82	9.33	clear
1134	240	2640	16.46	166.91	3.04	6.36	751.7	7.59	9.33	clear
1136	250	3140	16.42	166.63	2.99	6.28	740.0	5.26	9.33	clear
1138	240	3620	16.43	167.09	2.92	6.30	700.4	5.37	9.33	clear
1140	250	4120	16.42	165.52	2.81	6.33	652.2	4.82	9.33	clear

AP 2060

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Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW3

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 9.33

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 1142	250	16.42	165.52	2.81	6.33	652.2	4.82 AP

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW2
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 4/16/25 (Date)

Field Sampling Log

Monitoring Well ID: MW2 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 8.4 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4/10/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 12:28 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 8.4 Total Volume Purged (mL): 4000

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.36 Water Level after Sampling (feet btoc): 8.4 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1:03

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1228	260	520	24.89	146.90	3.78	6.90	800.9	5.67	8.4	Clear
1230	270	1060	18.98	121.22	1.21	6.43	758.5	5.06	8.4	Clear
1232	240	1540	17.37	124.80	1.08	6.39	650.9	4.45	8.4	clear
1234	240	2020	17.01	125.89	1.04	6.36	598.0	4.57	8.4	clear
1236	250	2520	16.88	126.58	0.99	6.38	559.9	4.68	8.4	clear
1238	250	3020	16.83	127.12	0.94	6.34	538.0	4.42	8.4	clear
1240	240	3500	16.83	127.34	0.91	6.35	511.3	4.33	8.4	clear
1242	250	4000	16.85	127.96	0.87	6.36	492.1	4.24	8.4	clear

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Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW2

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 8.4

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 1244	250	16.85	127.96	0.87	6.36	492.1	4.24

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW10
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 4/16/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) ___ (Date)

Field Sampling Log

Monitoring Well ID: MW10 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 9.1 Date: 4/16/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 4/16/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 1315 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 9.1 Total Volume Purged (mL): 10980

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 33.2 Water Level after Sampling (feet btoc): 9.1 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1418

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1315	240	480	22.82	568.14	1.37	7.00	241.0	59.1	9.1	cloudy
1317	230	940	19.50	626.37	0.73	7.05	222.5	45.09	9.1	flakes
1319	250	1440	18.10	648.85	0.52	7.06	197.4	56.4	9.1	flakes
1321	250	1940	17.90	651.41	0.43	7.06	178.5	94.19	9.1	flakes
1323	250	2440	17.84	650.22	0.37	7.05	162.2	107.4	9.1	flakes
1325	250	2940	17.81	648.97	0.34	7.06	149.0	123.9	9.1	cloudy/flakes
1327	240	3420	17.80	645.17	0.31	7.07	140.4	128.5	9.1	cloudy/flakes
1329	250	3920	17.77	643.06	0.30	7.07	134.3	86.56	9.1	cloudy/flakes
1331	260	4440	17.75	639.09	0.29	7.06	130.6	51.85	9.1	flakes
1333	250	4940	17.77	634.10	0.28	7.07	121.3	32.26	9.1	flakes
1335	240	5420	17.73	631.85	0.28	7.05	118.4	13.81	9.1	clear
1337	260	5940	17.73	630.72	0.27	7.06	114.5	17.78	9.1	clear
1339	250	6440	17.73	629.04	0.27	7.07	110.4	11.85	9.1	clear
1341	250	6940	17.73	627.75	0.26	7.07	102.1	13.27	9.1	clear
1343	250	7440	17.72	625.93	0.26	7.08	96.4	7.86	9.1	clear
1345	260	7960	17.69	629.31	0.26	7.05	93.9	391.7	9.1	flakes
1347	250	8460	17.73	626.32	0.26	7.08	95.6	26.98	9.1	flakes
1349	240	8940	17.72	623.42	0.26	7.09	89.2	10.11	9.1	flakes
1351	260	9460	17.73	626.94	0.25	7.08	85.7	12.57	9.1	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc.

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW10

Date: 4/16/25

PURGE STABILIZATION DATA CONTINUED

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1353	250	9960	17.73	622.06	0.25	7.09	80.9	7.54	9.1	clear
1355	260	10480	17.73	622.48	0.25	7.09	75.2	7.81	9.1	clear
1357	250	10980	17.72	619.14	0.25	7.09	80.9 MR	8.24	9.1	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW10

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 9.1

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
4/16/25 1400	250	17.72	619.14	0.25	7.09	68.9	8.24

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations: field blank

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 4/16/25 By: Alicia Powell Title: Lab Tech

Drop off Location
☐ Downers Grove, IL ☐ Lenexa, KS
☐ Springfield, IL ☒ Collinsville, IL

CHAIN OF CUSTODY pg. ___ of ___ Work order # _____

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

Client:	Sikeston Power station
Address:	1551 W. Wakefield
City / State / Zip	Sikeston, MO 63801
Contact:	Ashish Patel
Phone:	(573) 475-3155
E-Mail:	apatel@sbmu.net
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? 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: Report QC LVL:___
Appendix III metals = B Ca (ICP)
Appendix IV metals = Ba (ICP) and As Co Li Mo Se (ICP/MS)

Project Name/Number: Fly Ash Pond (FAP)
Sample Collector's Name: Justin Lowes
Billing/PO#:
Results Requested (call for PFAS TAT and surcharges) ☐ Standard ☐ 1-2 Day (100% Surcharge) ☐ Date ___ ☐ 3 Day (50% Surcharge)

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: Appendix III metals	Appendix IV metals	Cl SO4	F-	TDS
	MW-1R	5/6/25 0717	1	3												X	X	X	X	X	X
	MW-2	5/6/25 1201	1	3												X	X	X	X	X	X
	MW-3	5/6/25 0958	1	3												X	X	X	X	X	X
	MW-7	5/6/25 0908	1	3												X	X	X	X	X	X
	MW-9	5/6/25 0822	1	3												X	X	X	X	X	X
	MW-10	5/6/25 1109	1	3												X	X	X	X	X	X
✓	Duplicate	5/6/25	1	3												X	X	X	X	X	X
	Field Blank	5/6/25 1201	1	3							X						X	X	X	X	X
	Trip Blank		1	3							X						X	X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
X	5/7/25 0700		

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

BottleOrder: 99772

Field Instrumentation Calibration Log

Facility: Ameren RIEC Ash Ponds - Groundwater Monitoring

Calibrated by: JL/AP

Field Instruments: In-Situ SmarTROLL MP or In-Situ AquaTROLL 400 | HF scientific, inc. Micro TPI Field Portable Turbidimeter

S/N #: 893508 | 2023020683

	Date	Time	pH Standards (S.U.)		pH Measurements (S.U./mV)	Specific Conductance Standard (µS/cm)		Specific Conductance Measurement (µS/cm)	Oxidation Reduction Potential Standard (mV)		Oxidation Reduction Potential Measurement (mV)	Dissolved Oxygen (%)			Turbidity Standards (NTU)		Turbidity Measurements (NTU)
Beginning of Day Calibration	5/6/25	0600	4.00 @ 25.00°C Standard is 4 @ 25 °C	=	4.00 155.2	1413 @25.00°C	=	1412.5 @ 20.32°C	220 mV at 25.00°C	=	228.99 @ 20.39°C	Temperature (°C)	=	19.78	0.02	=	0.03
			7.00 @25.00°C Standard is 7 @25 °C	=	7.04 -19.4	1413 @ 25°C			Standard is 229 mV @ 25 °C			Tap Water Source	=	SBMU	10.0	=	9.97
			10.00 @25.00°C Standard is 10 @ 25 °C	=	10.05 -195.7							Barometric Pressure (mm/Hg)	=	754.21	1000	=	1001
												Measurement	=	99.95			
End of Day Check	5/6/25	1245	4.00 @ 25.00°C Standard is 4 @25 °C	=	4.05 NA	1413 @25.00°C	=	1412.7 @ 20.71	220 mV at 25.00°C	=	227.2 ~~228.6~~ AP @ 21.24	Temperature (°C)	=	20.75	0.02	=	0.01
			7.00 @25.00°C Standard is 7 @25 °C	=	7.10 NA	1413 @ 25°C			Standard is 229 mV @ 25 °C			Tap Water Source	=	SBMU	10.0	=	9.99
			10.00 @25.00°C Standard is 10 @ 25 °C	=	10.06 NA							Barometric Pressure (mm/Hg)	=	754.40	1000	=	996.4
												Measurement	=	99.96			

Notes: The In-Situ SmarTROLL MP Field Meter and In-Situ AquaTROLL 400 measure Temperature, Specific Conductance, Dissolved Oxygen, pH, and Oxidation Reduction Potential.
The HF scientific, inc. Micro TPI Field Portable Turbidimeter measures Turbidity.
Dissolved oxygen is calibrated via % saturation method; however, field measurements are recorded as mg/L.

I certify that the aforementioned meters were calibrated within the manufacturers specifications.

Date: 5/6/25 By: Alicia Powell

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW1R
Name (Field Staff): Justin Lowes Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW1R Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 16.4 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0655 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 16.4 Total Volume Purged (mL): 5120

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 38.25 Water Level after Sampling (feet btoc): 16.4 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 0753

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0655	180	360	18.08	739.03	226.19	5.88	304.0	89.03	16.4	flakes
0657	210	780	15.95	1126.3	224.3	6.16	400.3	65.61	16.4	white flakes
0659	240	1260	15.53	1085.0	224.35	6.25	412.2	45.93	16.4	white flakes
0701	230	1720	15.47	1000.6	223.90	6.29	418.2	74.28	16.4	White flakes
0703	250	2220	15.48	1121.7	223.86	6.29	415.8	29.91	16.4	white flakes
0705	230	2680	15.49	896.53	221.76	6.35	428.3	18.56	16.4	white flakes
0707	250	3180	15.49	840.21	221.69	6.36	426.4	7.06	16.4	small flakes
0709	240	3660	15.44	803.06	221.68	6.38	423.2	14.11	16.4	small flakes
0711	250	4160	15.41	805.00	221.68	6.38	419.9	4.37	16.4	clear
0713	240	4640	15.41	798.75	221.68	6.38	421.4	4.48	16.4	clear
0715	240	5120	15.42	797.22	221.66	6.38	421.5	4.65	16.4	flakes

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW 1R

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 16.4

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 0717	240	15.42	797.22	221.66	6.38	421.5	4.65

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: tiny flakes, odorless

Sample Collection Order: Per SAP

Comments and Observations:

Dup. taken

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW9
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification: Alicia Powell (Signed) Lab Tech. (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW 9 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 16.9 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes / Alicia Powell

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0804 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 16.9 Total Volume Purged (mL): 4500

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.35 Water Level after Sampling (feet btoc): 16.9 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 0841

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0804	260	520	17.50	838.56	225.11	6.84	390.4	12.56	16.9	white flakes
0806	250	1020	16.65	850.84	222.72	6.95	307.5	5.77	16.9	white flakes
0808	250	1526	16.68	847.32	222.07	6.97	300.8	3.72	16.9	white flakes
0810	240	2006	16.65	850.11	221.79	6.99	297.3	3.96	16.9	white flakes
0812	250	2500	16.70	839.23	221.86	7.00	294.9	4.34	16.9	clear
0814	260	3020	16.68	834.93	221.64	7.00	292.4	4.54	16.9	clear
0816	260	3540	16.67	840.80	221.68	7.01	291.2	3.75	16.9	clear
0818	260	4060	16.74	838.70	221.54	7.00	290.9	3.38	16.9	clear
0820	220	4506	16.74	847.95	221.63	7.00	290.7	3.70	16.9	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW9

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 16.9

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 0822	220	16.74	847.95	221.63	7.00	290.7	3.70

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW7
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW7 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 17.7 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes / Alicia Powell

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0852 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 17.7 Total Volume Purged (mL): 4240

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.4 Water Level after Sampling (feet btoc): 17.7 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 0925

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0852	260	520	22.24	728.53	222.08	7.24	~~22.32~~ 516.7	8.77	17.7	clear
0854	260	1040	18.41	825.93	221.60	7.25	404.6	11.96	17.7	clear
0856	270	1580	17.30	895.82	221.48	7.25	311.1	8.46	17.7	black flakes
0858	260	2100	16.88	925.00	221.41	7.26	266.1	6.20	17.7	black flakes
0900	270	2640	16.83	940.43	221.36	7.26	250.7	4.72	17.7	clear
0902	260	3160	16.77	945.90	221.33	7.27	246.1	5.30	17.7	clear
0904	270	3700	16.74	950.77	221.32	7.27	243.0	4.97	17.7	clear
0906	270	4240	16.74	954.66	221.30	7.27	240.2	5.22	17.7	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW 7

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): TAP 17.7

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 0908	270	16.74	954.66	221.30	7.27	240.2	5.22

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: Clear odorless.

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW3
Name (Field Staff): Justin Lowes/Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech. (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW3 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 9.94 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes / Alicia Powell

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 0942 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 9.94 Total Volume Purged (mL): 4460

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y (N)

Well Total Depth (feet btoc): 37.2 Water Level after Sampling (feet btoc): 9.94 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1015

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
0942	310	620	21.94	153.90	224.03	7.48	788.7	11.74	9.94	clear
0944	280	1180	17.55	164.15	222.91	7.03	801.9	10.73	9.94	clear
0946	280	1740	16.86	165.37	222.85	6.88	802.2	7.16	9.94	clear
0948	280	2300	16.57	165.46	222.83	6.72	798.1	6.36	9.94	clear
0950	260	2820	16.52	164.35	222.74	6.67	793.3	5.21	9.94	clear
0952	280	3380	16.56	163.02	222.68	6.63	781.9	4.86	9.95	clear
0954	260	3900	16.51	161.95	222.53	6.62	782.5	4.69	9.95	clear
0956	280	4460	16.52	162.13	222.44	6.61	781.2	4.34	9.95	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW3

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 9.94

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 0958	280	16.52	162.13	222.44	6.61	781.2	4.34

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW10
Name (Field Staff): Justin Lowes / Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW10 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 9.95 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes / Alicia Powell

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 1039 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 9.95 Total Volume Purged (mL): 7400

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 33.2 Water Level after Sampling (feet btoc): 9.95 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1130

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1039	240	480	24.34	559.75	225.0	6.71	255.7	21.65	9.95	small flakes
1041	250	980	19.54	651.24	224.13	6.92	151.0	22.0	9.95	small flakes
1043	240	1460	18.37	670.54	223.79	7.00	122.5	18.2	9.95	clear
1045	250	1960	18.00	673.55	223.23	7.03	104.6	13.0	9.95	clear
1047	250	2460	17.90	671.53	221.56	7.04	95.9	11.06	9.95	clear
1049	240	2940	17.85	671.07	221.39	7.05	88.6	34.82	9.95	Clear Flakes
1051	260	3460	17.81	673.12	221.41	7.06	85.1	38.3	9.95	Flakes
1053	240	3940	17.85	668.71	221.38	7.06	81.2	12.57	9.95	clear
1055	270	4480	17.82	668.10	221.37	7.07	79.4	11.41	9.95	Clear
1057	240	4960	17.84	661.37	221.34	7.07	77.3	10.83	9.95	clear
1059	250	5460	17.81	660.87	221.33	7.07	75.8	8.53	9.95	clear
1101	250	5960	17.81	659.12	221.34	7.08	74.6	8.47	9.95	clear
1103	230	6420	17.81	658.40	221.33	7.08	74.9	6.86	9.95	clear
1105	250	6920	17.82	657.05	221.30	7.08	74.1	7.37	9.95	clear
1107	240	7400	17.82	655.14	221.32	7.08	73.7	7.12	9.95	clear

btoc - below top of casing

Prepared by: GREDELL Engineering Resources, Inc

January 2017

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW10

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 9.95

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 1109	240	17.82	665.14	221.32	7.08	73.7	7.12

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: sunny

Sample Characteristics: clear odorless

Sample Collection Order: Per SAP

Comments and Observations:

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring
Monitoring Well ID: MW2
Name (Field Staff): Justin Lowes/Alicia Powell
Date: 5/6/25

Access:
Accessibility: Good ✓ Fair ___ Poor ___
Well clear of weeds and/or debris?: Yes ✓ No ___
Well identification clearly visible?: Yes ✓ No ___
Remarks:

Concrete Pad:
Condition of Concrete Pad: Good ✓ Inadequate ___
Depressions or standing water around well?: Yes ___ No ✓
Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp
Condition of Protective Casing: Good ✓ Damaged ___
Condition of Locking Cap: Good ✓ Damaged ___
Condition of Lock: Good ✓ Damaged ___
Condition of Weep Hole: Good ✓ Damaged ___
Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded
Condition of Riser: Good ✓ Damaged ___
Condition of Riser Cap: Good ✓ Damaged ___
Measurement Reference Point: Yes ✓ No ___
Remarks:

Dedicated Purging/Sampling Device: Type = ¼ " ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing
Condition: Good ✓ Damaged ___ Missing ___
Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes ✓ No ___
Remarks:

Field Certification Alicia Powell (Signed) Lab Tech (Title) 5/6/25 (Date)

Field Sampling Log

Monitoring Well ID: MW2 Facility: SBMU Sikeston Power Station - Groundwater Monitoring

Initial Water Level (feet btoc): 8.92 Date: 5/6/25

Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / (N)

PURGE INFORMATION

Date: 5/6/25

Name (Sample Collector): Justin Lowes

Method of Well Purge: Low Flow Perstaltic Pump Dedicated Tubing? (Y) / N

Time Purging Initiated: 1143 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 8.92 Total Volume Purged (mL): 4460

Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / (N)

Well Total Depth (feet btoc): 37.4 Water Level after Sampling (feet btoc): 8.92 (i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1220

PURGE STABILIZATION DATA

Time	Purge Rate (mL/min)	Cumulative Volume (mL)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Water Level (feet btoc)	Notes (e.g., opacity, color, odor)
1143	280	560	23.15	156.52	225.05	7.24	282.4	13.14	8.92	small flakes
1145	240	1040	18.63	172.0	222.56	6.79	356.8	9.46	8.92	small flakes
1147	250	1540	17.77	174.61	222.86	6.61	383.7	5.92	8.92	clear
1149	240	2020	17.43	176.12	222.75	6.49	415.5	7.46	8.92	clear
1151	240	2500	17.33	176.68	222.53	6.41	445.8	6.78	8.92	clear
1153	240	2980	17.28	175.91	222.33	6.36	478.9	6.75	8.92	clear
1155	240	3460	17.23	175.43	222.24	6.35	497.6	5.45	8.92	clear
1157	250	3960	17.23	176.44	222.17	6.33	526.9	5.34	8.92	clear
1159	250	4460	17.25	175.90	222.16	6.33	544.9	5.49	8.92	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring Monitoring Well ID: MW2

Sampling Information:

Method of Sampling: Low Flow - Perstaltic Pump & Tubing Dedicated: (Y) / N

Water Level @ Sampling (feet btoc): 8.92

Monitoring Event: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( )

Final Purge Stablization Sampling Data:

Date Sample Time	Sample Rate (mL/min)	Temp (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
5/6/25 1201	250	17.25	175.90	222.16	6.33	544.9	5.49

Instrument Calibration Data:

See instrument calibration log of daily calibration data for the following instruments:

1 - In-Situ SmarTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potentia

2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: Clear odorless

Sample Collection Order: Per SAP

Comments and Observations: field blank

I certify that sampling procedures were in accordance with applicable EPA and State protocols.

Date: 5/6/25 By: Alicia Powell Title: Lab Tech

Appendix 2

Laboratory Analytical Results

Appendix 2

Laboratory Analytical Results
12th CCR Compliance Sampling Event
(2nd 2024 Semi-annual Detection Monitoring Event)
(September 25, 2024)

October 21, 2024

Luke St. Mary
Sikeston Board of Municipal Utilities
107 E Malone Ave
PO Box 370
Sikeston, MO 63801
TEL: (573) 475-3119
FAX:

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Fly Ash Pond (FAP) **WorkOrder:** 24092127

Dear Luke St. Mary:

TEKLAB, INC received 9 samples on 9/27/2024 10:11:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,

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

Report Contents

Client: Sikeston Board of Municipal Utilities
Work Order: 24092127
Client Project: Fly Ash Pond (FAP)
Report Date: 21-Oct-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	16
Receiving Check List	23
Chain of Custody	Appended

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

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: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

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: Sikeston Board of Municipal Utilities
Work Order: 24092127
Client Project: Fly Ash Pond (FAP)
Report Date: 21-Oct-24

Cooler Receipt Temp: 14.3 °C

Field pH was omitted from Duplicate. EAH 9/27/24

Ra226/228 analyses were 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

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

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-001 **Client Sample ID:** MW-1R

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 8:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.46**		1	09/25/2024 8:40	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**520**	mg/L	1	09/30/2024 14:25	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 20:13	R353791
Chloride	*	1.00	4.00		**16.6**	mg/L	1	09/27/2024 20:13	R353791
Sulfate	*	10.0	10.0		**242**	mg/L	1	09/27/2024 20:13	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**26.6**	µg/L	1	09/30/2024 16:15	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:15	228988
Boron	NELAP	10.0	10.0		**3700**	µg/L	1	09/30/2024 16:15	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:15	228988
Calcium	NELAP	0.200	0.200		**103**	mg/L	1	09/30/2024 16:15	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:15	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:30	228988
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:30	228988
Cobalt	NELAP	2.0	2.0		**13.6**	µg/L	5	09/30/2024 18:30	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:30	228988
Lithium	*	10.0	10.0		**10.2**	µg/L	5	10/01/2024 15:05	228988
Molybdenum	NELAP	1.0	1.0		**166**	µg/L	5	09/30/2024 18:30	228988
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 15:05	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:30	228988
Results have less certainty for Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:21	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-002 **Client Sample ID:** MW-2

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 11:01

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.24**		1	09/25/2024 11:01	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**108**	mg/L	1	09/30/2024 14:25	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 20:24	R353791
Chloride	*	1.00	4.00		**4.95**	mg/L	1	09/27/2024 20:24	R353791
Sulfate	*	10.0	10.0		**14.4**	mg/L	1	09/27/2024 20:24	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**220**	µg/L	1	09/30/2024 16:20	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:20	228988
Boron	NELAP	10.0	10.0		**49.6**	µg/L	1	09/30/2024 16:20	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:20	228988
Calcium	NELAP	0.200	0.200		**21.0**	mg/L	1	09/30/2024 16:20	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:20	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:36	228988
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:36	228988
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	09/30/2024 18:36	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:36	228988
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	10/01/2024 15:10	228988
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:36	228988
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 15:10	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:36	228988
Results have less certainty for Mo & Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:23	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-003 **Client Sample ID:** MW-3

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 13:47

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.82**		1	09/25/2024 13:47	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**98**	mg/L	1	09/30/2024 14:26	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 20:36	R353791
Chloride	*	1.0	4.0	J	**2.3**	mg/L	1	09/27/2024 20:36	R353791
Sulfate	*	10.0	10.0		**ND**	mg/L	1	09/27/2024 20:36	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**71.3**	µg/L	1	09/30/2024 16:20	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:20	228988
Boron	NELAP	10.0	10.0		**12.0**	µg/L	1	09/30/2024 16:20	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:20	228988
Calcium	NELAP	0.200	0.200		**15.2**	mg/L	1	09/30/2024 16:20	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:20	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:41	228988
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:41	228988
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	09/30/2024 18:41	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:41	228988
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	10/01/2024 15:16	228988
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:41	228988
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 15:16	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:41	228988
Results have less certainty for Mo & Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:25	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-004 **Client Sample ID:** MW-7

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 10:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.40**		1	09/25/2024 10:14	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**420**	mg/L	1	09/30/2024 14:26	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**0.58**	mg/L	1	09/27/2024 17:30	R353791
Chloride	*	1.00	4.00		**4.11**	mg/L	1	09/27/2024 17:30	R353791
Sulfate	*	10.0	10.0		**84.3**	mg/L	1	09/27/2024 17:30	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**64.4**	µg/L	1	09/30/2024 16:21	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:21	228988
Boron	NELAP	10.0	10.0		**1800**	µg/L	1	09/30/2024 16:21	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:21	228988
Calcium	NELAP	0.200	0.200		**98.0**	mg/L	1	09/30/2024 16:21	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:21	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:47	228988
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:47	228988
Cobalt	NELAP	2.0	2.0		**2.8**	µg/L	5	10/01/2024 15:22	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:47	228988
Lithium	*	10.0	10.0		**34.7**	µg/L	5	10/01/2024 15:22	228988
Molybdenum	NELAP	1.0	1.0		**119**	µg/L	5	09/30/2024 18:47	228988
Selenium	NELAP	1.0	1.0		**2.4**	µg/L	5	10/01/2024 15:22	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:47	228988
Results have less certainty for Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:28	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-005 **Client Sample ID:** MW-9

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 9:36

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.06**		1	09/25/2024 9:36	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**508**	mg/L	1	09/30/2024 14:26	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**0.55**	mg/L	1	09/27/2024 17:41	R353791
Chloride	*	1.00	4.00		**14.4**	mg/L	1	09/27/2024 17:41	R353791
Sulfate	*	10.0	10.0		**216**	mg/L	1	09/27/2024 17:41	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**91.5**	µg/L	1	09/30/2024 16:22	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:22	228988
Boron	NELAP	10.0	10.0		**4140**	µg/L	1	09/30/2024 16:22	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:22	228988
Calcium	NELAP	0.200	0.200		**88.9**	mg/L	1	09/30/2024 16:22	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:22	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:53	228988
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:53	228988
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	09/30/2024 18:53	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:53	228988
Lithium	*	10.0	10.0		**26.4**	µg/L	5	10/01/2024 15:27	228988
Molybdenum	NELAP	1.0	1.0		**109**	µg/L	5	09/30/2024 18:53	228988
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 15:27	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:53	228988
Results have less certainty for Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:37	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-006 **Client Sample ID:** MW-10

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 12:47

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.21**		1	09/25/2024 12:47	R354210
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**338**	mg/L	1	09/30/2024 14:43	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**0.28**	mg/L	1	09/27/2024 17:53	R353791
Chloride	*	1.00	4.00		**13.7**	mg/L	1	09/27/2024 17:53	R353791
Sulfate	*	10.0	10.0		**106**	mg/L	1	09/27/2024 17:53	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**108**	µg/L	1	09/30/2024 16:22	228988
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:22	228988
Boron	NELAP	10.0	10.0		**397**	µg/L	1	09/30/2024 16:22	228988
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	09/30/2024 16:22	228988
Calcium	NELAP	0.200	0.200		**64.4**	mg/L	1	09/30/2024 16:22	228988
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	09/30/2024 16:22	228988
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	09/30/2024 18:58	228988
Arsenic	NELAP	1.0	1.0		**4.9**	µg/L	5	09/30/2024 18:58	228988
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	09/30/2024 18:58	228988
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:58	228988
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	10/01/2024 15:33	228988
Molybdenum	NELAP	1.0	1.0		**25.3**	µg/L	5	09/30/2024 18:58	228988
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 15:33	228988
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	09/30/2024 18:58	228988
Results have less certainty for Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:30	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-007 **Client Sample ID:** Duplicate

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**502**	mg/L	1	09/30/2024 14:43	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 18:28	R353791
Chloride	*	1.00	4.00		**17.3**	mg/L	1	09/27/2024 18:28	R353791
Sulfate	*	10.0	10.0		**249**	mg/L	1	09/27/2024 18:28	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**29.3**	µg/L	1	10/02/2024 16:07	228995
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:50	228995
Boron	NELAP	10.0	10.0		**3770**	µg/L	1	10/01/2024 15:50	228995
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:50	228995
Calcium	NELAP	0.200	0.200		**106**	mg/L	1	10/01/2024 15:50	228995
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	10/01/2024 15:50	228995
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	10/01/2024 16:53	228995
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:53	228995
Cobalt	NELAP	2.0	2.0		**14.4**	µg/L	5	10/01/2024 16:53	228995
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:53	228995
Lithium	*	10.0	10.0		**10.9**	µg/L	5	10/01/2024 16:53	228995
Molybdenum	NELAP	1.0	1.0		**165**	µg/L	5	10/01/2024 16:53	228995
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:53	228995
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:53	228995
Results have less certainty for Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:44	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-008 **Client Sample ID:** Trip Blank

Matrix: TRIP BLANK **Collection Date:** 09/27/2024 10:11

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**< 20**	mg/L	1	09/30/2024 14:44	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 18:39	R353791
Chloride	*	1.00	4.00		**ND**	mg/L	1	09/27/2024 18:39	R353791
Sulfate	*	10.0	10.0		**ND**	mg/L	1	09/27/2024 18:39	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**< 2.5**	µg/L	1	10/01/2024 15:50	228995
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:50	228995
Boron	NELAP	10.0	10.0		**< 10.0**	µg/L	1	10/01/2024 15:50	228995
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:50	228995
Calcium	NELAP	0.200	0.200		**< 0.200**	mg/L	1	10/01/2024 15:50	228995
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	10/01/2024 15:50	228995
Contamination present in the CCB for Ca. Sample results below the reporting limit are reportable per the TNI Standard.									
Contamination present in the CCB for Ba. Sample results below the reporting limit are reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	10/01/2024 16:59	228995
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:59	228995
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	10/01/2024 16:59	228995
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:59	228995
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	10/01/2024 16:59	228995
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:59	228995
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:59	228995
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 16:59	228995
Results have less certainty for Mo & Tl - Client Requested Quantitation Limit is below the calibration range.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:47	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

Lab ID: 24092127-009 **Client Sample ID:** Field Blank

Matrix: GROUNDWATER **Collection Date:** 09/25/2024 10:14

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		**< 20**	mg/L	1	09/30/2024 14:44	R353970
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	*	0.25	0.25		**ND**	mg/L	1	09/27/2024 18:51	R353791
Chloride	*	1.00	4.00		**ND**	mg/L	1	09/27/2024 18:51	R353791
Sulfate	*	10.0	10.0		**ND**	mg/L	1	09/27/2024 18:51	R353791
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**< 2.5**	µg/L	1	10/01/2024 15:51	228995
Beryllium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:51	228995
Boron	NELAP	10.0	10.0		**< 10.0**	µg/L	1	10/01/2024 15:51	228995
Cadmium	NELAP	1.0	1.0		**< 1.0**	µg/L	1	10/01/2024 15:51	228995
Calcium	NELAP	0.200	0.200		**< 0.200**	mg/L	1	10/01/2024 15:51	228995
Chromium	NELAP	4.0	4.0		**< 4.0**	µg/L	1	10/01/2024 15:51	228995
Contamination present in the CCB for Ca. Sample results below the reporting limit are reportable per the TNI Standard.									
Contamination present in the CCB for Ba. Sample results below the reporting limit are reportable per the TNI Standard.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		**< 3.0**	µg/L	5	10/01/2024 17:28	228995
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 17:28	228995
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	10/01/2024 17:28	228995
Lead	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 17:28	228995
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	10/01/2024 17:28	228995
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 17:28	228995
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 17:28	228995
Thallium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	10/01/2024 17:28	228995
Results have less certainty for Mo & Tl - Client Requested Quantitation Limit is below the calibration range.									
Contamination present in the CCB for Sb. Sample results below the reporting limit are reportable per the TNI Standard.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		**< 0.20**	µg/L	1	10/01/2024 8:49	229020
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884
Radium-228	*	0	0		**See Attached**	pci/L	1	10/17/2024 14:26	R354884

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

October 18, 2024

Elizabeth Hurley
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24092127

Dear Elizabeth Hurley:

Order No.: 24100195

Summit Environmental Technologies, Inc. received 9 sample(s) on 10/2/2024 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

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24100195**
Date: **10/18/2024**

CLIENT: TEKLAB Inc,
Project: 24092127

WorkOrder Narrative:
24100195: 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 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.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Qualifiers and Acronyms

WO#: **24100195**
Date: **10/18/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	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.

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Workorder Sample Summary

WO#: **24100195**
18-Oct-24

CLIENT: TEKLAB Inc,
Project: 24092127

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24100195-001	24092127-001B		9/25/2024 8:40:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-002	24092127-002B		9/25/2024 11:01:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-003	24092127-003B		9/25/2024 1:47:00 PM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-004	24092127-004B		9/25/2024 10:14:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-005	24092127-005B		9/25/2024 9:36:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-006	24092127-006B		9/25/2024 12:47:00 PM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-007	24092127-007B		9/25/2024	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-008	24092127-008B		9/27/2024 10:11:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water
24100195-009	24092127-009B		9/25/2024 10:14:00 AM	10/2/2024 1:35:00 PM	Non-Potable Water

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DATES REPORT

WO#: **24100195**

18-Oct-24

Client: TEKLAB Inc,

Project: 24092127

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24100195-001A	24092127-001B	9/25/2024 8:40:00 AM	Non-Potable Water	Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-002A	24092127-002B	9/25/2024 11:01:00 AM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-003A	24092127-003B	9/25/2024 1:47:00 PM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-004A	24092127-004B	9/25/2024 10:14:00 AM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-005A	24092127-005B	9/25/2024 9:36:00 AM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-006A	24092127-006B	9/25/2024 12:47:00 PM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-007A	24092127-007B	9/25/2024		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-008A	24092127-008B	9/27/2024 10:11:00 AM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM

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DATES REPORT

WO#: **24100195**

18-Oct-24

Client: TEKLAB Inc,

Project: 24092127

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24100195-008A	24092127-008B	9/27/2024 10:11:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM
24100195-009A	24092127-009B	9/25/2024 10:14:00 AM		Combined Radium (EPA903+904)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-226 (EPA 903.0)		10/14/2024 12:41:00 PM	10/18/2024 9:30:25 AM
				Radium-228 (EPA 904.0)		10/14/2024 12:41:00 PM	10/17/2024 2:26:46 PM

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 8:40:00 AM

Project: 24092127

Lab ID: 24100195-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-001B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.46	2.00	U	pCi/L	± 0.370	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.06	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	1.00					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.4	1.00	U	pCi/L	± 0.330	1	10/17/2024 2:26:46 PM
Yield	0.990					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 11:01:00 AM

Project: 24092127

Lab ID: 24100195-002

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-002B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.6	2.00	U	pCi/L	± 0.380	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.18	1.00	U	pCi/L	± 0.0700	1	10/18/2024 9:30:25 AM
Yield	1.00					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.42	1.00	U	pCi/L	± 0.310	1	10/17/2024 2:26:46 PM
Yield	1.00					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 1:47:00 PM

Project: 24092127

Lab ID: 24100195-003

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-003B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.37	2.00	U	pCi/L	± 0.360	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.04	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	1.00					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.33	1.00	U	pCi/L	± 0.320	1	10/17/2024 2:26:46 PM
Yield	1.00					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 10:14:00 AM

Project: 24092127

Lab ID: 24100195-004

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-004B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.83	2.00	U	pCi/L	± 0.460	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.02	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	1.00					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.81	1.00	J	pCi/L	± 0.420	1	10/17/2024 2:26:46 PM
Yield	0.900					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 9:36:00 AM

Project: 24092127

Lab ID: 24100195-005

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-005B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.55	2.00	U	pCi/L	± 0.420	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.16	1.00	U	pCi/L	± 0.0600	1	10/18/2024 9:30:25 AM
Yield	0.920					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.39	1.00	U	pCi/L	± 0.360	1	10/17/2024 2:26:46 PM
Yield	0.870					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 12:47:00 PM

Project: 24092127

Lab ID: 24100195-006

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-006B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.69	2.00	U	pCi/L	± 0.430	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.03	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	0.980					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.66	1.00	J	pCi/L	± 0.390	1	10/17/2024 2:26:46 PM
Yield	0.890					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024

Project: 24092127

Lab ID: 24100195-007

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-007B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.19	2.00	U	pCi/L	± 0.330	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.06	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	0.960					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.13	1.00	U	pCi/L	± 0.290	1	10/17/2024 2:26:46 PM
Yield	0.940					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/27/2024 10:11:00 AM

Project: 24092127

Lab ID: 24100195-008

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-008B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.64	2.00	U	pCi/L	± 0.430	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.05	1.00	U	pCi/L	± 0.0400	1	10/18/2024 9:30:25 AM
Yield	0.950					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.59	1.00	U	pCi/L	± 0.390	1	10/17/2024 2:26:46 PM
Yield	1.00					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

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#: **24100195**

Date Reported: **10/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 9/25/2024 10:14:00 AM

Project: 24092127

Lab ID: 24100195-009

Matrix: NON-POTABLE WATER

Client Sample ID: 24092127-009B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.36	2.00	U	pCi/L	± 0.370	1	10/18/2024 9:30:25 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	0	1.00	U	pCi/L	± 0.0200	1	10/18/2024 9:30:25 AM
Yield	0.990					1	10/18/2024 9:30:25 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.36	1.00	U	pCi/L	± 0.350	1	10/17/2024 2:26:46 PM
Yield	1.00					1	10/17/2024 2:26:46 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL
W	Sample container temperature is out of limit as specified at testcode		

Original

Appendix 2

Laboratory Analytical Results
13th CCR Compliance Sampling Event
(1st 2025 Semi-annual Detection
and Assessment Monitoring Event)
May 6, 2025

May 20, 2025

Ashish Patel
Sikeston Board of Municipal Utilities
107 E Malone Ave
PO Box 370
Sikeston, MO 63801
TEL: (573) 380-7160
FAX:

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Fly Ash Pond (FAP) **WorkOrder:** 25050733

Dear Ashish Patel:

TEKLAB, INC received 9 samples on 5/8/2025 10:00:00 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

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

Report Contents

http://www.teklabinc.com/

Client: Sikeston Board of Municipal Utilities
Work Order: 25050733
Client Project: Fly Ash Pond (FAP)
Report Date: 20-May-25

This reporting package includes the following:

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

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

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: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Qualifiers

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

Case Narrative

http://www.teklabinc.com/

Client: Sikeston Board of Municipal Utilities
Work Order: 25050733
Client Project: Fly Ash Pond (FAP)
Report Date: 20-May-25

Cooler Receipt Temp: 2.5 °C

Field pH was omitted from the COC in error and will be included in final reporting (less duplicate and blanks).
(ehurley - 5/8/2025 3:01:16 PM)

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

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-001 **Client Sample ID:** MW-1R

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 7:17

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.38**		1	05/06/2025 7:17	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**576**	mg/L	1	05/10/2025 16:28	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25	J	**0.10**	mg/L	5	05/09/2025 14:41	R364707
Chloride	NELAP	0.50	4.00		**18.3**	mg/L	5	05/09/2025 14:41	R364707
Sulfate	NELAP	0.50	10.0		**289**	mg/L	5	05/09/2025 14:41	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**48.4**	µg/L	1	05/12/2025 16:50	238859
Boron	NELAP	10.0	10.0		**4690**	µg/L	1	05/12/2025 16:50	238859
Calcium	NELAP	0.200	0.200	S	**116**	mg/L	1	05/12/2025 16:50	238859
Matrix spike control limits are not applicable due to high sample/spike ratio.									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:49	238859
Cobalt	NELAP	2.0	2.0		**15.0**	µg/L	5	05/12/2025 16:49	238859
Lithium	*	10.0	10.0		**11.2**	µg/L	5	05/12/2025 16:49	238859
Molybdenum	NELAP	1.0	1.0		**208**	µg/L	5	05/12/2025 16:49	238859
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:49	238859
Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.									

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-002 **Client Sample ID:** MW-2

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 12:01

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.33**		1	05/06/2025 12:01	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**100**	mg/L	1	05/10/2025 16:26	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25	J	**0.06**	mg/L	5	05/09/2025 14:53	R364707
Chloride	NELAP	0.50	4.00		**4.68**	mg/L	5	05/09/2025 14:53	R364707
Sulfate	NELAP	0.50	10.0		**14.5**	mg/L	5	05/09/2025 14:53	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**188**	µg/L	1	05/12/2025 16:58	238860
Boron	NELAP	10.0	10.0		**28.6**	µg/L	1	05/12/2025 16:58	238860
Calcium	NELAP	0.200	0.200		**19.1**	mg/L	1	05/12/2025 16:58	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:03	238860
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	05/12/2025 15:03	238860
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	05/12/2025 15:03	238860
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:03	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:03	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-003 **Client Sample ID:** MW-3

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 9:58

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**6.61**		1	05/06/2025 9:58	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**90**	mg/L	1	05/10/2025 16:36	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25	J	**0.14**	mg/L	5	05/09/2025 15:44	R364707
Chloride	NELAP	0.50	4.0	J	**1.7**	mg/L	5	05/09/2025 15:44	R364707
Sulfate	NELAP	0.50	10.0		**10.1**	mg/L	5	05/09/2025 15:44	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**82.3**	µg/L	1	05/12/2025 16:59	238860
Boron	NELAP	10.0	10.0		**< 10.0**	µg/L	1	05/12/2025 16:59	238860
Calcium	NELAP	0.200	0.200		**14.8**	mg/L	1	05/12/2025 16:59	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:09	238860
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	05/12/2025 15:09	238860
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	05/12/2025 15:09	238860
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:09	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:09	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-004 **Client Sample ID:** MW-7

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 9:08

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.27**		1	05/06/2025 9:08	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**638**	mg/L	1	05/10/2025 16:35	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25		**0.63**	mg/L	5	05/09/2025 15:57	R364707
Chloride	NELAP	0.50	4.00		**10.9**	mg/L	5	05/09/2025 15:57	R364707
Sulfate	NELAP	0.50	10.0		**321**	mg/L	5	05/09/2025 15:57	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**95.2**	µg/L	1	05/12/2025 17:00	238860
Boron	NELAP	10.0	10.0		**3730**	µg/L	1	05/12/2025 17:00	238860
Calcium	NELAP	0.200	0.200		**139**	mg/L	1	05/12/2025 17:00	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 15:16	238860
Cobalt	NELAP	2.0	2.0		**2.3**	µg/L	5	05/12/2025 15:16	238860
Lithium	*	10.0	10.0		**41.3**	µg/L	5	05/12/2025 15:16	238860
Molybdenum	NELAP	1.0	1.0		**108**	µg/L	5	05/12/2025 15:16	238860
Selenium	NELAP	1.0	1.0		**2.1**	µg/L	5	05/12/2025 15:16	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-005 **Client Sample ID:** MW-9

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 8:22

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.00**		1	05/06/2025 8:22	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**510**	mg/L	1	05/10/2025 16:26	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25		**0.71**	mg/L	5	05/09/2025 16:09	R364707
Chloride	NELAP	0.50	4.00		**13.1**	mg/L	5	05/09/2025 16:09	R364707
Sulfate	NELAP	0.50	10.0		**213**	mg/L	5	05/09/2025 16:09	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**90.9**	µg/L	1	05/12/2025 17:01	238860
Boron	NELAP	10.0	10.0		**4060**	µg/L	1	05/12/2025 17:01	238860
Calcium	NELAP	0.200	0.200		**87.5**	mg/L	1	05/12/2025 17:01	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:06	238860
Cobalt	NELAP	2.0	2.0		**2.2**	µg/L	5	05/12/2025 16:06	238860
Lithium	*	10.0	10.0		**24.4**	µg/L	5	05/12/2025 16:06	238860
Molybdenum	NELAP	1.0	1.0		**184**	µg/L	5	05/12/2025 16:06	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:06	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-006 **Client Sample ID:** MW-10

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 11:09

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		**7.08**		1	05/06/2025 11:09	R365003
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**396**	mg/L	1	05/10/2025 16:28	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25	J	**0.24**	mg/L	5	05/09/2025 16:22	R364707
Chloride	NELAP	0.50	4.00		**8.41**	mg/L	5	05/09/2025 16:22	R364707
Sulfate	NELAP	0.50	10.0		**86.3**	mg/L	5	05/09/2025 16:22	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**130**	µg/L	1	05/12/2025 17:01	238860
Boron	NELAP	10.0	10.0		**210**	µg/L	1	05/12/2025 17:01	238860
Calcium	NELAP	0.200	0.200		**88.9**	mg/L	1	05/12/2025 17:01	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**6.8**	µg/L	5	05/12/2025 16:12	238860
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	05/12/2025 16:12	238860
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	05/12/2025 16:12	238860
Molybdenum	NELAP	1.0	1.0		**14.1**	µg/L	5	05/12/2025 16:12	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:12	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-007 **Client Sample ID:** Duplicate

Matrix: GROUNDWATER **Collection Date:** 05/06/2025 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**596**	mg/L	1	05/10/2025 14:08	R365004
QC recovered outside the acceptance criteria. Run is validated by passing LCS.									
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25	J	**0.11**	mg/L	5	05/09/2025 16:35	R364707
Chloride	NELAP	0.50	4.00		**19.0**	mg/L	5	05/09/2025 16:35	R364707
Sulfate	NELAP	0.50	10.0		**302**	mg/L	5	05/09/2025 16:35	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**49.4**	µg/L	1	05/12/2025 17:02	238860
Boron	NELAP	10.0	10.0		**4850**	µg/L	1	05/12/2025 17:02	238860
Calcium	NELAP	0.200	0.200		**121**	mg/L	1	05/12/2025 17:02	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:18	238860
Cobalt	NELAP	2.0	2.0		**16.8**	µg/L	5	05/12/2025 16:18	238860
Lithium	*	10.0	10.0		**12.4**	µg/L	5	05/12/2025 16:18	238860
Molybdenum	NELAP	1.0	1.0		**233**	µg/L	5	05/12/2025 16:18	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:18	238860
Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.									

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-008 **Client Sample ID:** Field Blank

Matrix: AQUEOUS **Collection Date:** 05/06/2025 12:01

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**< 20**	mg/L	1	05/10/2025 16:28	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25		**ND**	mg/L	5	05/09/2025 17:13	R364707
Chloride	NELAP	0.50	4.00		**ND**	mg/L	5	05/09/2025 17:13	R364707
Sulfate	NELAP	0.50	10.0		**ND**	mg/L	5	05/09/2025 17:13	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**< 2.5**	µg/L	1	05/12/2025 17:07	238860
Boron	NELAP	10.0	10.0		**< 10.0**	µg/L	1	05/12/2025 17:07	238860
Calcium	NELAP	0.200	0.200		**< 0.200**	mg/L	1	05/12/2025 17:07	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:24	238860
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	05/12/2025 16:24	238860
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	05/12/2025 16:24	238860
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:24	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:24	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

Lab ID: 25050733-009 **Client Sample ID:** Trip Blank

Matrix: TRIP BLANK **Collection Date:** 05/08/2025 10:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 2015									
Total Dissolved Solids	NELAP	20	20		**< 20**	mg/L	1	05/10/2025 16:28	R365217
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY									
Fluoride	NELAP	0.02	0.25		**ND**	mg/L	5	05/09/2025 17:25	R364707
Chloride	NELAP	0.50	4.00		**ND**	mg/L	5	05/09/2025 17:25	R364707
Sulfate	NELAP	0.50	10.0		**ND**	mg/L	5	05/09/2025 17:25	R364707
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		**< 2.5**	µg/L	1	05/12/2025 17:07	238860
Boron	NELAP	10.0	10.0		**< 10.0**	µg/L	1	05/12/2025 17:07	238860
Calcium	NELAP	0.200	0.200		**< 0.200**	mg/L	1	05/12/2025 17:07	238860
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:30	238860
Cobalt	NELAP	2.0	2.0		**< 2.0**	µg/L	5	05/12/2025 16:30	238860
Lithium	*	10.0	10.0		**< 10.0**	µg/L	5	05/12/2025 16:30	238860
Molybdenum	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:30	238860
Selenium	NELAP	1.0	1.0		**< 1.0**	µg/L	5	05/12/2025 16:30	238860

Results have less certainty for Mo - Client Requested Quantitation Limit is below the calibration range.

Appendix 3

Laboratory Quality Assurance/Quality Control Data

Appendix 3

Laboratory Quality Assurance/Quality Control Data
12th CCR Compliance Sampling Event
(2nd 2024 Semi-annual Detection Monitoring Event)
(September 25, 2024)

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R353970 **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	09/30/2024
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	09/30/2024
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	09/30/2024

Batch R353970 **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		**988**	1000	0	98.8	90	110	09/30/2024
Total Dissolved Solids		20		**968**	1000	0	96.8	90	110	09/30/2024
Total Dissolved Solids		20		**978**	1000	0	97.8	90	110	09/30/2024

Batch R353970 **SampType:** DUP Units **mg/L** RPD Limit **10**

SampID: 24092127-009ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**< 20**				0	0.00	09/30/2024

Batch R353970 **SampType:** DUP Units **mg/L** RPD Limit **10**

SampID: 24091849-001ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**1800**				1784	0.89	09/30/2024

Batch R353970 **SampType:** DUP Units **mg/L** RPD Limit **10**

SampID: 24092102-008BDUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**584**				600.0	2.70	09/30/2024

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R353791 **SampType:** MBLK Units **mg/L**

SampID: MBLK/ICB

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.05		**ND**						09/27/2024
Chloride		0.50		**ND**						09/27/2024
Sulfate		1.00		**ND**						09/27/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R353791 **SampType:** LCS Units **mg/L**
SampID: LCS/ICV/QCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.05		**1.02**	1.000	0	102.4	90	110	09/27/2024
Chloride		0.50		**20.1**	20.00	0	100.5	90	110	09/27/2024
Sulfate		1.00		**18.5**	20.00	0	92.6	90	110	09/27/2024

Batch R353791 **SampType:** MS Units **mg/L**
SampID: 24092062-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		**50.6**	10.00	40.94	96.2	80	120	09/27/2024

Batch R353791 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 24092062-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50		**50.2**	10.00	40.94	92.3	50.57	0.78	09/27/2024

Batch R353791 **SampType:** MS Units **mg/L**
SampID: 24092088-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		**10.4**	10.00	0.2720	101.7	80	120	09/27/2024
Chloride		5.00		**211**	200.0	9.752	100.8	80	120	09/27/2024
Sulfate		10.0		**252**	200.0	65.61	93.3	80	120	09/27/2024

Batch R353791 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 24092088-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50		**10.5**	10.00	0.2720	101.9	10.44	0.21	09/27/2024
Chloride		5.00		**211**	200.0	9.752	100.8	211.4	0.03	09/27/2024
Sulfate		10.0		**252**	200.0	65.61	93.4	252.3	0.05	09/27/2024

Batch R353791 **SampType:** MS Units **mg/L**
SampID: 24092102-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	*	0.50		**10.3**	10.00	0	103.2	80	120	09/27/2024
Chloride	*	5.00		**206**	200.0	4.922	100.3	80	120	09/27/2024
Sulfate	*	10.0		**232**	200.0	44.83	93.4	80	120	09/27/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R353791 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 24092102-001CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	*	0.50		**10.3**	10.00	0	103.1	10.32	0.14	09/27/2024
Chloride	*	5.00		**205**	200.0	4.922	100.2	205.6	0.11	09/27/2024
Sulfate	*	10.0		**231**	200.0	44.83	92.9	231.6	0.39	09/27/2024

Batch R353791 **SampType:** MS Units **mg/L**

SampID: 24092127-006AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	*	0.06		**1.32**	1.000	0.2797	104.3	80	120	09/27/2024
Chloride	*	0.55		**35.8**	20.00	13.68	110.6	80	120	09/27/2024
Sulfate	*	1.10		**127**	20.00	106.1	105.4	80	120	09/27/2024

Batch R353791 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 24092127-006AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	*	0.06		**1.33**	1.000	0.2797	105.5	1.323	0.89	09/27/2024
Chloride	*	0.55		**35.9**	20.00	13.68	111.0	35.80	0.25	09/27/2024
Sulfate	*	1.10		**127**	20.00	106.1	105.5	127.1	0.01	09/27/2024

Batch R353791 **SampType:** MS Units **mg/L**

SampID: 24092166-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride	*	0.50		**10.5**	10.00	0.2330	102.5	80	120	09/27/2024
Chloride	*	5.00		**209**	200.0	6.312	101.5	80	120	09/27/2024
Sulfate	*	10.0		**222**	200.0	34.11	93.9	80	120	09/27/2024

Batch R353791 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 24092166-001CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride	*	0.50		**10.5**	10.00	0.2330	102.7	10.48	0.18	09/27/2024
Chloride	*	5.00		**210**	200.0	6.312	101.6	209.3	0.12	09/27/2024
Sulfate	*	10.0		**222**	200.0	34.11	93.8	221.8	0.01	09/27/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

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

Batch 228988 **SampType:** MBLK Units **mg/L**

SampID: MBLK-228988

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	10/01/2024
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	09/30/2024

Batch 228988 **SampType:** LCS Units **mg/L**

SampID: LCS-228988

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100		**2.49**	2.500	0	99.6	85	115	09/30/2024
Calcium		0.100		**2.52**	2.500	0	100.7	85	115	10/01/2024

Batch 228995 **SampType:** MBLK Units **µg/L**

SampID: MBLK-228995

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**< 2.5**	0.7000	0	0	-100	100	10/02/2024
Beryllium		0.5		**< 0.5**	0.2000	0	0	-100	100	10/02/2024
Boron		20.0		**< 20.0**	9.000	0	0	-100	100	10/02/2024
Cadmium		2.0		**< 2.0**	0.5000	0	0	-100	100	10/02/2024
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	10/01/2024
Chromium		5.0		**< 5.0**	2.800	0	0	-100	100	10/02/2024

Batch 228995 **SampType:** LCS Units **µg/L**

SampID: LCS-228995

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**2100**	2000	0	105.0	85	115	10/02/2024
Beryllium		0.5		**55.0**	50.00	0	110.0	85	115	10/02/2024
Boron		20.0		**509**	500.0	0	101.7	85	115	10/02/2024
Cadmium		2.0		**50.7**	50.00	0	101.4	85	115	10/02/2024
Calcium		0.100		**2.50**	2.500	0	100.1	85	115	10/01/2024
Chromium		5.0		**213**	200.0	0	106.4	85	115	10/02/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

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

Batch 228988 **SampType:** MBLK Units **µg/L**

SampID: MBLK-228988

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	09/30/2024
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	09/30/2024
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	09/30/2024
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	09/30/2024
Calcium		125		**< 125**	70.00	0	0	-100	100	10/01/2024
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	09/30/2024
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	09/30/2024
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	09/30/2024
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	09/30/2024
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	09/30/2024
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	09/30/2024
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	09/30/2024

Batch 228988 **SampType:** LCS Units **µg/L**

SampID: LCS-228988

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**502**	500.0	0	100.3	80	120	09/30/2024
Arsenic		1.0		**516**	500.0	0	103.3	80	120	09/30/2024
Barium		1.0		**2110**	2000	0	105.5	80	120	10/01/2024
Cadmium		1.0		**47.4**	50.00	0	94.9	80	120	09/30/2024
Calcium		125		**2900**	2500	0	116.0	80	120	10/01/2024
Chromium		1.5		**194**	200.0	0	97.0	80	120	09/30/2024
Cobalt		1.0		**466**	500.0	0	93.2	80	120	09/30/2024
Lead		1.0		**475**	500.0	0	95.0	80	120	09/30/2024
Lithium	*	3.0		**527**	500.0	0	105.5	80	120	10/01/2024
Molybdenum		1.5		**464**	500.0	0	92.9	80	120	09/30/2024
Selenium		1.0		**503**	500.0	0	100.5	80	120	10/01/2024
Thallium		2.0		**201**	250.0	0	80.4	80	120	09/30/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

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

Batch 228995 **SampType:** MBLK Units µg/L

SampID: MBLK-228995

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**< 1.0**	0.4500	0	0	-100	100	10/01/2024
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	10/01/2024
Barium		1.0		**< 1.0**	0.7000	0	0	-100	100	10/01/2024
Cadmium		1.0		**< 1.0**	0.1340	0	0	-100	100	10/01/2024
Calcium		125		**< 125**	70.00	0	0	-100	100	10/01/2024
Chromium		1.5		**< 1.5**	0.7000	0	0	-100	100	10/01/2024
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	10/01/2024
Lead		1.0		**< 1.0**	0.6000	0	0	-100	100	10/01/2024
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	10/01/2024
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	10/01/2024
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	10/01/2024
Thallium		2.0		**< 2.0**	0.9500	0	0	-100	100	10/01/2024

Batch 228995 **SampType:** LCS Units µg/L

SampID: LCS-228995

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		**574**	500.0	0	114.8	80	120	10/01/2024
Arsenic		1.0		**514**	500.0	0	102.8	80	120	10/01/2024
Barium		1.0		**2110**	2000	0	105.6	80	120	10/01/2024
Cadmium		1.0		**50.6**	50.00	0	101.1	80	120	10/01/2024
Calcium		125		**2350**	2500	0	93.9	80	120	10/01/2024
Chromium		1.5		**206**	200.0	0	103.1	80	120	10/01/2024
Cobalt		1.0		**503**	500.0	0	100.6	80	120	10/01/2024
Lead		1.0		**532**	500.0	0	106.4	80	120	10/01/2024
Lithium	*	3.0		**533**	500.0	0	106.6	80	120	10/01/2024
Molybdenum		1.5		**484**	500.0	0	96.7	80	120	10/01/2024
Selenium		1.0		**511**	500.0	0	102.3	80	120	10/01/2024
Thallium		2.0		**227**	250.0	0	90.6	80	120	10/01/2024

SW-846 7470A (TOTAL)

Batch 229020 **SampType:** MBLK Units µg/L

SampID: MBLK-229020

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**< 0.20**	0.0550	0	0	-100	100	10/01/2024

Client: Sikeston Board of Municipal Utilities **Work Order:** 24092127

Client Project: Fly Ash Pond (FAP) **Report Date:** 21-Oct-24

SW-846 7470A (TOTAL)

Batch 229020 **SampType:** LCS Units **µg/L**

SampID: LCS-229020

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**4.30**	5.000	0	86.0	85	115	10/01/2024

Batch 229020 **SampType:** MS Units **µg/L**

SampID: 24092127-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		**4.82**	5.000	0	96.3	75	125	10/01/2024

Batch 229020 **SampType:** MSD Units **µg/L** RPD Limit **15**

SampID: 24092127-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Mercury		0.20		**4.79**	5.000	0	95.8	4.817	0.57	10/01/2024

Receiving Check List

http://www.teklabinc.com/

Client: Sikeston Board of Municipal Utilities
Work Order: 24092127
Client Project: Fly Ash Pond (FAP)
Report Date: 21-Oct-24

Carrier: UPS
Received By: JMD

Completed by: Laura E Henson
On: 27-Sep-24

Reviewed by: Ellie Hopkins
On: 27-Sep-24

Pages to follow: Chain of custody 1 Extra pages included 21

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	14.3	
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 #96651. - NR/lhenson - 9/27/2024 10:44:52 AM

The samples were out of temperature compliance upon receipt. Ice was melted upon arrival. Client was notified via work order summary. - lhenson/EAH - 9/27/2024 10:45:01 AM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - ehurley - 9/27/2024 4:50:56 PM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 2409212

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

Client:	Sikeston Board of Municipal Utilities		
Address:	107 E Malone Ave		
City / State / Zip	Sikeston, MO 63801		
Contact:	Luke St. Mary	**Phone:**	(573) 475-3119
E-Mail:	lstmary@sbmu.net	**Fax:**	

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 14.3 °C LTG# 10

Preserved in: [ ] LAB [X] FIELD

FOR LAB USE ONLY

Lab Notes: 9665 rd 9/27 Ice melted upon arrival MS 9/27

Client Comments

Total Metals = Ba Be B Cd Ca Cr (ICP), Sb As Co Pb Li Mo Se Tl (ICP/MS) and Hg

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

Are these samples known to be hazardous? If yes, include details of the hazard. [ ] Yes [X] No

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

Project Name/Number	Sample Collector's Name
Fly Ash Pond (FAP)	

Results Requested

[ ] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other ____ [ ] 3 Day (50% Surcharge)

Billing Instructions

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNP	HNO3	MATRIX: Aqueous	Groundwater	Trip Blank	INDICATE ANALYSIS REQUESTED: Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals
2409212-001	MW-1R	9/25/24 8:40	1	3		X		X	X	X	X	X	X	X
002	MW-2	9/25/24 1101	1	3		X		X	X	X	X	X	X	X
003	MW-3	9/25/24 1347	1	3		X		X	X	X	X	X	X	X
004	MW-7	9/25/24 1014	1	3		X		X	X	X	X	X	X	X
005	MW-9	9/25/24 0936	1	3		X		X	X	X	X	X	X	X
006	MW-10	9/25/24 1247	1	3		X		X	X	X	X	X	X	X
007	Duplicate	9/25/24	1	3		X		X	X	X	X	X	X	X
008	Trip Blank		1	3			X	X		X	X	X	X	X
009	Field Blank	9/25/24 1014	1	3	X			X		X	X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
	9/26/24 0714	UPS shipment	9/27/24 10:11

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: 90414

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#: **24100195**

18-Oct-24

Client: TEKLAB Inc,
Project: 24092127 **BatchID:** **79400**

Sample ID: **MB-79400**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195352**
Client ID: **PBW**	Batch ID: **79400**	TestNo: **E904.0**	**E903-904**	Analysis Date: **10/17/2024**	SeqNo: **5286499**

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	0.910			0	0						

Sample ID: **LCS-79400**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195352**
Client ID: **LCSW**	Batch ID: **79400**	TestNo: **E904.0**	**E903-904**	Analysis Date: **10/17/2024**	SeqNo: **5286500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.48	1.00	5.000	0	69.6	50	130				
Yield	0.980			0	0						

Sample ID: **LCSD-79400**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195352**
Client ID: **LCSS02**	Batch ID: **79400**	TestNo: **E904.0**	**E903-904**	Analysis Date: **10/17/2024**	SeqNo: **5286501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.04	1.00	5.000	0	60.8	50	130	3.480	13.5	20	
Yield	1.00			0	0			0.9800	2.02		

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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#: **24100195**

18-Oct-24

Client: TEKLAB Inc,
Project: 24092127 **BatchID:** **79400**

Sample ID: **24100425-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **10/14/2024** RunNo: **195352**
Client ID: **BatchQC** Batch ID: **79400** TestNo: **E904.0** **E903-904** Analysis Date: **10/17/2024** SeqNo: **5286521**

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	0.950			0	0			1.000	5.13		

Sample ID: **24100427-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **10/14/2024** RunNo: **195352**
Client ID: **BatchQC** Batch ID: **79400** TestNo: **E904.0** **E903-904** Analysis Date: **10/17/2024** SeqNo: **5286523**

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:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode		

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#: **24100195**

18-Oct-24

Client: TEKLAB Inc,
Project: 24092127 **BatchID:** **79400**

Sample ID: **MB-79400**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195354**
Client ID: **PBW**	Batch ID: **79400**	TestNo: **E903.0**	**E903-904**	Analysis Date: **10/18/2024**	SeqNo: **5286560**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	1.00										

Sample ID: **LCS-79400**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195354**
Client ID: **LCSW**	Batch ID: **79400**	TestNo: **E903.0**	**E903-904**	Analysis Date: **10/18/2024**	SeqNo: **5286561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.92	1.00	5.000	0	98.4	70	130				

Sample ID: **LCSD-79400**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195354**
Client ID: **LCSS02**	Batch ID: **79400**	TestNo: **E903.0**	**E903-904**	Analysis Date: **10/18/2024**	SeqNo: **5286562**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.30	1.00	5.000	0	86.0	70	130	4.920	13.4	20	

Sample ID: **24100425-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **10/14/2024**	RunNo: **195354**
Client ID: **BatchQC**	Batch ID: **79400**	TestNo: **E903.0**	**E903-904**	Analysis Date: **10/18/2024**	SeqNo: **5286582**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode		

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#: **24100195**

18-Oct-24

Client: TEKLAB Inc,

Project: 24092127 **BatchID:** **79400**

Sample ID: **24100425-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **10/14/2024** RunNo: **195354**

Client ID: **BatchQC** Batch ID: **79400** TestNo: **E903.0** **E903-904** Analysis Date: **10/18/2024** SeqNo: **5286582**

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	0.990							1.000	1.01	0	

Sample ID: **24100427-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **10/14/2024** RunNo: **195354**

Client ID: **BatchQC** Batch ID: **79400** TestNo: **E903.0** **E903-904** Analysis Date: **10/18/2024** SeqNo: **5286584**

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	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode		

Original

[redacted]

24100195

TEKLAB, INC. Chain of Custody

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

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

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: ____ Sampler: Client QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project#: 24092127

Contact: Elizabeth Hurley Email: ehurley@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 37096 Phone: (618) 344-1004 ext.33

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.

ERH 9/27/24

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228
	24092127-001B	09/25/24 8:40am	HNO3	Groundwater	✔
	24092127-002B	09/25/24 11:01am	HNO3	Groundwater	✔
	24092127-003B	09/25/24 1:47pm	HNO3	Groundwater	✔
	24092127-004B	09/25/24 10:14am	HNO3	Groundwater	✔
	24092127-005B	09/25/24 9:36am	HNO3	Groundwater	✔
	24092127-006B	09/25/24 12:47pm	HNO3	Groundwater	✔
	24092127-007B	09/25/24	HNO3	Groundwater	✔
	24092127-008B	09/27/24 10:11am	HNO3	~~Groundwater~~ TRIP BLANK	✔
	24092127-009B	09/25/24 10:14am	HNO3	~~Groundwater~~ AQUEOUS	✔
			Other	Aqueous	
			Other	Aqueous	

CPM: 18
CPM: 22
CPM: 30
CPM: 18
CPM: 33
CPM: 30
CPM: 15
CPM: 18
CPM: 33
CPM: 11
CPM: 7
CPM: 41
CPM: 11
CPM: 26
CPM: 26
CPM: 27
CPM: 37
CPM: 41

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	9/27/24	[signature]	10/02/24
		13:35 21.8-0.1=21.7	
		FedEx 67	

pH: 2 (×20, handwritten)

cooler

SubCocRevA 3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24100195 RcptNo: 1

Logged by:	Anthony W. Britton	10/2/2024 1:35:00 PM	Anthony Britton
Completed By:	Anthony W. Britton	10/2/2024 6:07:02 PM	Anthony Britton
Reviewed By:	Jennifer Woolf	10/2/2024 6:33:17 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
	No. Seal Date:	Signed By:		
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	21.7	Good	Not Present			

Appendix 3

Laboratory Quality Assurance/Quality Control Data
13th CCR Compliance Sampling Event
(1st 2025 Semi-annual Detection
and Assessment Monitoring Event)
May 6, 2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

STANDARD METHODS 2540 C (TOTAL) 2015

Batch R365004 **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	05/10/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/09/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/09/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/10/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/10/2025

Batch R365004 **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		**914**	1000	0	91.4	90	110	05/09/2025
Total Dissolved Solids		20		**916**	1000	0	91.6	90	110	05/10/2025
Total Dissolved Solids		20		**910**	1000	0	91.0	90	110	05/10/2025
Total Dissolved Solids		20		**918**	1000	0	91.8	90	110	05/10/2025
Total Dissolved Solids		20		**930**	1000	0	93.0	90	110	05/09/2025

Batch R365004 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25040374-002EDUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**1360**				1344	1.04	05/09/2025

Batch R365004 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25050826-025ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**560**				558.0	0.36	05/09/2025

Batch R365004 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25050900-004ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**92**				92.00	0.00	05/10/2025

Batch R365004 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25050966-002ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**482**				470.0	2.52	05/10/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

STANDARD METHODS 2540 C (TOTAL) 2015

Batch R365217 **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	05/10/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/10/2025
Total Dissolved Solids		20	J	**16**	16.00	0	100.0	-100	100	05/10/2025
Total Dissolved Solids		20		**< 20**	16.00	0	0	-100	100	05/10/2025

Batch R365217 **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		**910**	1000	0	91.0	90	110	05/10/2025
Total Dissolved Solids		20		**934**	1000	0	93.4	90	110	05/10/2025
Total Dissolved Solids		20		**916**	1000	0	91.6	90	110	05/10/2025
Total Dissolved Solids		20		**916**	1000	0	91.6	90	110	05/10/2025

Batch R365217 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25042658-004ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50	H	**5210**				5535	6.05	05/10/2025

Batch R365217 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25050389-001ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		20		**462**				456.0	1.31	05/10/2025

Batch R365217 **SampType:** DUP Units **mg/L** RPD Limit **10**
SampID: 25050905-008ADUP

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Total Dissolved Solids		50		**880**				890.0	1.13	05/10/2025

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** MBLK Units **mg/L**
SampID: MBLK/ICB

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.05		**ND**	0.0040	0	0	0	100	05/09/2025
Chloride		0.50		**ND**	0.1000	0	0	0	100	05/09/2025
Sulfate		1.00		**ND**	0.0990	0	0	0	100	05/09/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** LCS Units **mg/L**
SampID: LCS/ICV/QCS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.05		**1.04**	1.000	0	104.0	90	110	05/09/2025
Chloride		0.50		**20.7**	20.00	0	103.7	90	110	05/09/2025
Sulfate		1.00		**19.4**	20.00	0	97.2	90	110	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**
SampID: 25040375-008CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		5.00		**1320**	200.0	1120	100.4	80	120	05/10/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 25040375-008CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Chloride		5.00		**1330**	200.0	1120	106.0	1320	0.85	05/10/2025

Batch R364707 **SampType:** MS Units **mg/L**
SampID: 25050733-007AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.25		**5.16**	5.000	0.1065	101.2	80	120	05/09/2025
Chloride		2.50		**124**	100.0	18.98	105.0	80	120	05/09/2025
Sulfate		5.00		**403**	100.0	302.0	100.9	80	120	05/09/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**
SampID: 25050733-007AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.25		**5.13**	5.000	0.1065	100.5	5.164	0.62	05/09/2025
Chloride		2.50		**124**	100.0	18.98	104.9	124.0	0.06	05/09/2025
Sulfate		5.00		**405**	100.0	302.0	103.0	402.9	0.54	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**
SampID: 25050780-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		**10.3**	10.00	0.1700	100.9	80	120	05/09/2025
Chloride		5.00		**207**	200.0	5.190	101.1	80	120	05/09/2025
Sulfate		10.0		**215**	200.0	25.60	94.5	80	120	05/09/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050780-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50		**10.4**	10.00	0.1700	102.1	10.26	1.19	05/09/2025
Chloride		5.00		**210**	200.0	5.190	102.6	207.4	1.37	05/09/2025
Sulfate		10.0		**217**	200.0	25.60	95.5	214.6	0.93	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050784-002GMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50	S	**6.12**	10.00	0.2770	58.4	80	120	05/09/2025
Sulfate		10.0		**1420**	200.0	1224	96.6	80	120	05/09/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050784-002GMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50	S	**6.07**	10.00	0.2770	58.0	6.118	0.75	05/09/2025
Sulfate		10.0		**1400**	200.0	1224	90.5	1417	0.86	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050800-001FMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		**10.7**	10.00	0.1220	105.3	80	120	05/09/2025
Chloride		5.00		**895**	200.0	671.6	111.5	80	120	05/09/2025
Sulfate		10.0		**504**	200.0	287.9	107.9	80	120	05/09/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050800-001FMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50		**10.2**	10.00	0.1220	101.0	10.66	4.19	05/09/2025
Chloride		5.00		**886**	200.0	671.6	107.3	894.6	0.94	05/09/2025
Sulfate		10.0		**494**	200.0	287.9	103.0	503.7	1.99	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050826-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.03**	2.000	0.1050	96.0	80	120	05/09/2025
Chloride		1.00		**43.8**	40.00	0.8414	107.4	80	120	05/09/2025
Sulfate		2.00		**67.5**	40.00	25.38	105.4	80	120	05/09/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050826-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.03**	2.000	0.1050	96.3	2.026	0.27	05/09/2025
Chloride		1.00		**44.0**	40.00	0.8414	108.0	43.79	0.58	05/09/2025
Sulfate		2.00		**67.7**	40.00	25.38	105.9	67.55	0.30	05/09/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050826-012AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.11**	2.000	0.09560	100.9	80	120	05/10/2025
Chloride		1.00		**44.3**	40.00	0.7244	109.0	80	120	05/10/2025
Sulfate		2.00		**73.1**	40.00	30.43	106.6	80	120	05/10/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050826-012AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.11**	2.000	0.09560	100.7	2.113	0.20	05/10/2025
Chloride		1.00		**44.3**	40.00	0.7244	108.8	44.33	0.17	05/10/2025
Sulfate		2.00		**72.9**	40.00	30.43	106.2	73.08	0.26	05/10/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050826-021AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.31**	2.000	0.1818	106.4	80	120	05/10/2025
Chloride		1.00		**45.6**	40.00	1.791	109.5	80	120	05/10/2025
Sulfate		2.00		**50.3**	40.00	9.233	102.6	80	120	05/10/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050826-021AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.32**	2.000	0.1818	107.0	2.309	0.54	05/10/2025
Chloride		1.00		**45.8**	40.00	1.791	109.9	45.57	0.40	05/10/2025
Sulfate		2.00		**50.4**	40.00	9.233	103.0	50.29	0.25	05/10/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050826-034AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.19**	2.000	0	109.3	80	120	05/10/2025
Chloride		1.00		**43.8**	40.00	0	109.5	80	120	05/10/2025
Sulfate		2.00		**40.3**	40.00	0	100.7	80	120	05/10/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050826-034AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.19**	2.000	0	109.7	2.187	0.33	05/10/2025
Chloride		1.00		**44.0**	40.00	0	109.9	43.82	0.34	05/10/2025
Sulfate		2.00		**40.4**	40.00	0	101.1	40.29	0.33	05/10/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050826-041AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.10		**2.27**	2.000	0.2142	102.9	80	120	05/10/2025
Chloride		1.00		**57.5**	40.00	10.77	116.9	80	120	05/10/2025
Sulfate		2.00		**164**	40.00	118.5	113.5	80	120	05/10/2025

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050826-041AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.10		**2.27**	2.000	0.2142	102.8	2.273	0.12	05/10/2025
Chloride		1.00		**57.3**	40.00	10.77	116.3	57.52	0.38	05/10/2025
Sulfate		2.00		**164**	40.00	118.5	112.9	163.9	0.16	05/10/2025

Batch R364707 **SampType:** MS Units **mg/L**

SampID: 25050831-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Fluoride		0.50		**10.2**	10.00	0.1150	101.1	80	120	05/09/2025
Chloride		5.00		**205**	200.0	2.417	101.1	80	120	05/09/2025
Sulfate		10.0		**205**	200.0	15.51	94.9	80	120	05/09/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY

Batch R364707 **SampType:** MSD Units **mg/L** RPD Limit **15**

SampID: 25050831-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Fluoride		0.50		**10.2**	10.00	0.1150	100.7	10.22	0.37	05/09/2025
Chloride		5.00		**204**	200.0	2.417	100.6	204.6	0.52	05/09/2025
Sulfate		10.0		**204**	200.0	15.51	94.2	205.3	0.68	05/09/2025

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

Batch 238859 **SampType:** MBLK Units **µg/L**

SampID: MBLK-238859

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**< 2.5**	0.7000	0	0	-100	100	05/12/2025
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	05/12/2025

Batch 238859 **SampType:** LCS Units **µg/L**

SampID: LCS-238859

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**4170**	4000	0	104.2	85	115	05/12/2025
Calcium		0.100		**5.02**	5.000	0	100.4	85	115	05/12/2025

Batch 238859 **SampType:** MS Units **µg/L**

SampID: 25050733-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**4130**	4000	48.40	102.0	75	125	05/12/2025
Boron		20.0		**5880**	1000	4690	119.0	75	125	05/12/2025
Calcium		0.100	S	**126**	5.000	116.3	196.4	75	125	05/12/2025

Batch 238859 **SampType:** MSD Units **µg/L** RPD Limit **20**

SampID: 25050733-001CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		2.5		**4140**	4000	48.40	102.3	4130	0.24	05/12/2025
Boron		20.0		**5780**	1000	4690	109.2	5879	1.67	05/12/2025
Calcium		0.100	S	**124**	5.000	116.3	151.4	126.1	1.80	05/12/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

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

Batch 238860 **SampType:** MBLK Units **µg/L**

SampID: MBLK-238860

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**< 2.5**	0.7000	0	0	-100	100	05/12/2025
Boron		20.0		**< 20.0**	9.000	0	0	-100	100	05/12/2025
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	05/12/2025
Calcium		0.100		**< 0.100**	0.0350	0	0	-100	100	05/12/2025

Batch 238860 **SampType:** LCS Units **µg/L**

SampID: LCS-238860

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		**4120**	4000	0	103.0	85	115	05/12/2025
Boron		20.0		**1020**	1000	0	102.1	85	115	05/12/2025
Calcium		0.100		**5.01**	5.000	0	100.2	85	115	05/12/2025
Calcium		0.100		**5.01**	5.000	0	100.2	85	115	05/12/2025

Batch 238860 **SampType:** MS Units **mg/L**

SampID: 25050779-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Calcium		0.100	S	**213**	5.000	204.0	179.6	75	125	05/12/2025

Batch 238860 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 25050779-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Calcium		0.100	S	**210**	5.000	204.0	130.8	212.9	1.15	05/12/2025

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

Batch 238859 **SampType:** MBLK Units **µg/L**

SampID: MBLK-238859

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	05/12/2025
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	05/12/2025
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	05/12/2025
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	05/12/2025
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	05/12/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

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

Batch 238859 **SampType:** LCS Units µg/L

SampID: LCS-238859

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		**1060**	1000	0	105.8	80	120	05/12/2025
Cobalt		1.0		**974**	1000	0	97.4	80	120	05/12/2025
Lithium	*	3.0		**1010**	1000	0	101.1	80	120	05/12/2025
Molybdenum		1.5		**982**	1000	0	98.2	80	120	05/12/2025
Selenium		1.0		**1100**	1000	0	110.2	80	120	05/12/2025

Batch 238859 **SampType:** MS Units µg/L

SampID: 25050733-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		**1050**	1000	0	104.7	75	125	05/12/2025
Cobalt		1.0		**963**	1000	15.02	94.8	75	125	05/12/2025
Lithium	*	3.0		**1050**	1000	11.21	104.1	75	125	05/12/2025
Molybdenum		1.5		**1190**	1000	207.7	98.1	75	125	05/12/2025
Selenium		1.0		**1090**	1000	0	108.9	75	125	05/12/2025

Batch 238859 **SampType:** MSD Units µg/L RPD Limit **20**

SampID: 25050733-001CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Arsenic		1.0		**1040**	1000	0	103.7	1047	0.94	05/12/2025
Cobalt		1.0		**954**	1000	15.02	93.9	962.7	0.90	05/12/2025
Lithium	*	3.0		**1000**	1000	11.21	99.3	1052	4.67	05/12/2025
Molybdenum		1.5		**1170**	1000	207.7	96.4	1188	1.46	05/12/2025
Selenium		1.0		**1080**	1000	0	108.5	1089	0.37	05/12/2025

Batch 238860 **SampType:** MBLK Units µg/L

SampID: MBLK-238860

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		**< 1.0**	0.3750	0	0	-100	100	05/12/2025
Cobalt		1.0		**< 1.0**	0.1150	0	0	-100	100	05/12/2025
Lithium	*	3.0		**< 3.0**	1.450	0	0	-100	100	05/12/2025
Molybdenum		1.5		**< 1.5**	0.6000	0	0	-100	100	05/12/2025
Selenium		1.0		**< 1.0**	0.6000	0	0	-100	100	05/12/2025

Client: Sikeston Board of Municipal Utilities **Work Order:** 25050733

Client Project: Fly Ash Pond (FAP) **Report Date:** 20-May-25

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

Batch 238860 **SampType:** LCS Units **µg/L**

SampID: LCS-238860

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		**1040**	1000	0	103.8	80	120	05/12/2025
Cobalt		1.0		**973**	1000	0	97.3	80	120	05/12/2025
Lithium	*	3.0		**1020**	1000	0	101.6	80	120	05/12/2025
Molybdenum		1.5		**965**	1000	0	96.5	80	120	05/12/2025
Selenium		1.0		**1080**	1000	0	108.2	80	120	05/12/2025

Receiving Check List

Teklab, Inc. Environmental Laboratory

http://www.teklabinc.com/

Client: Sikeston Board of Municipal Utilities
Work Order: 25050733
Client Project: Fly Ash Pond (FAP)
Report Date: 20-May-25

Carrier: FedEx
Received By: NR

Completed by: Amber Dilallo
On: 08-May-25

Reviewed by: Ellie Hopkins
On: 08-May-25

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 2.5
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.

Per Elizabeth Hurley, Radium analysis is not required. Sample containers were disposed. AMD 5/8/25

pH strip #101358. - JD/amberdilallo - 5/8/2025 3:14:30 PM

One MW-10 2L containr was empty with lid off upon receipt but was not required for analysis. - AMD/JD/EAH 5/8/25

Drop off Location
☐ Downers Grove, IL ☐ Lenexa, KS
☐ Springfield, IL ☒ Collinsville, IL

CHAIN OF CUSTODY pg. __ of Work order # 25050733

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

Client: Sikeston Power station
Address: 1551 W. Wakefield
City / State / Zip: Sikeston, MO 63801
Contact: Ashish Patel Phone: (573) 475-3155
E-Mail: apatel@sbmu.net Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 2.5, 2.7 °C LTG# 5
Preserved in: ☐ LAB ☐ FIELD pH b1354 FOR LAB USE ONLY
Lab Notes 1/2 2 Liter MW-10 was Empty & had Lid off in Cooler JD 5/8/25

Client Comments:
Report QC LVL: __
Appendix III metals = B Ca (ICP)
Appendix IV metals = Ba (ICP) and As Co Li Mo Se (ICP/MS)

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

Project Name/Number: Fly Ash Pond (FAP)
Sample Collector's Name: Justin Lowes
Billing/PO#:
Results Requested (call for PFAS TAT and surcharges): ☐ Standard ☐ 1-2 Day (100% Surcharge) ☐ Date __ ☐ 3 Day (50% Surcharge)

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNPRES	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	OTHER	MATRIX: Aqueous	Drinking Water	Soil	Sludge	Special Waste	Groundwater	INDICATE ANALYSIS REQUESTED: Appendix III metals	Appendix IV metals	Cl SO4	F-	TDS
25050733 001	MW-1R	5/6/25 0717	1	3												X	X	X	X	X	X
002	MW-2	5/6/25 1201	1	3												X	X	X	X	X	X
003	MW-3	5/6/25 0958	1	3												X	X	X	X	X	X
004	MW-7	5/6/25 0908	1	3												X	X	X	X	X	X
005	MW-9	5/6/25 0822	1	3												X	X	X	X	X	X
006	MW-10	5/6/25 1109	1	3												X	X	X	X	X	X
007	Duplicate	5/6/25	1	3												X	X	X	X	X	X
008	Field Blank	5/6/25 1201	1	3							X						X	X	X	X	X
009	Trip Blank		1	3							X						X	X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
X	5/7/25 0700		5/8/25 1000

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: _____

Appendix 4

Fly Ash Pond Groundwater Quality Summary

Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

			Field Parameters						Appendix III Monitoring Constituents (Detection)						Appendix IV Monitoring Constituents (Assessment)														
Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-1R (DG) Baseline	10/20/2021	Background	511.3	15.25	32.2	6.41	4.62	6.55	**11**	<0.250	**130**	**330**	**2200**	**64**	<3.0	**1.3**	**40**	<1.0	<1.0	<4.0	**6.3**	<0.250	<1.0	**10**	<0.20	**160**	<1.0	<1.0	0.184	(0.0411)	0.184 (ND)
	11/1/2021	Background	532.4	12.98	16.9	0.60	5.38	6.55	**12**	**0.286**	**110**	**330**	**2100**	**58**	<3.0	**1.5**	**38**	<1.0	<1.0	<4.0	**5.4**	**0.286**	<1.0	<10	<0.20	**160**	<1.0	<1.0	0.0676	0.516	0.600(ND)
	11/16/2021	Background	540.4	11.47	41.9	0.94	1.27	6.54	**15**	**0.366**	**150**	**360**	**2800**	**73**	<3.0	<1.0	**49**	<1.0	<1.0	<4.0	**8.5**	**0.366**	<1.0	**10**	<0.20	**170**	<1.0	<1.0	0.513	0.552	1.065(ND)
	12/7/2021	Background	576.3	9.14	11.2	0.98	0.91	6.58	**13**	<0.250	**140**	**400**	**2300**	**61**	<3.0	<1.0	**37**	<1.0	<1.0	<4.0	**7.1**	<0.250	<1.0	**11**	<0.20	**190**	<1.0	<1.0	(0.298)	0.530	0.53(ND)
	12/27/2021	Background	757.3	8.40	21.7	1.28	1.32	6.48	**17**	<0.250	**210**	**390**	**3100**	**97**	<3.0	<1.0	**52**	<1.0	<1.0	<4.0	**9.6**	<0.250	<1.0	**19**	<0.20	**200**	<1.0	<1.0	(0.286)	0.430	0.430(ND)
	1/17/2022	Background	707.3	4.56	-0.3	1.02	1.46	6.56	**17**	<0.250	**190**	**440**	**2800**	**89**	<3.0	<1.0	**44**	<1.0	<1.0	<4.0	**7.9**	<0.250	<1.0	**17**	<0.20	**200**	<1.0	<1.0	(0.406)	0.556	0.556(ND)
	2/7/2022	Background	794.4	3.14	21.9	0.84	1.04	6.55	**19**	<0.250	**200**	**450**	**3500**	**90**	<3.0	<1.0	**51**	<1.0	<1.0	<4.0	**13.0**	<0.250	<1.0	**11**	<0.20	**210**	<1.0	<1.0	0.364	(0.007)	0.364(ND)
	3/2/2022	Background	515.0	2.07	36.1	0.91	4.31	6.57	**12**	<0.250	**130**	**290**	**2800**	**78**	<3.0	<1.0	**41**	<1.0	<1.0	<4.0	**8.6**	<0.250	<1.0	<10	<0.20	**190**	<1.0	<1.0	0.393	0.907	1.300
MW-1R (DG) Compliance	4/9/2022	Detection 7	671.2	-1.69	52.4	1.04	1.59	6.66	**12**	<0.250	**150**	**300**	**3,100**	**73**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022		687.8	18.18	60.3	0.56	4.87	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	11/2/2022	Det 8/ Ass 1	609.3	17.48	7.6	0.51	2.79	6.55	**14**	<0.250	**170**	**440**	**2,400**	**72**	<3.0	<1.0	**30**	<1.0	<1.0	<4.0	**8.5**	<0.250	<1.0	<10	<0.20	**150**	<1.0	<1.0	0.0595	0.775	**0.853**
	3/12/2023	Det 9/ Ass 2	577.8	14.68	31.0	0.38	1.06	6.60	**10**	<0.250	**140**	**300**	**3,000**	**70**	(NA)	(NA)	**52**	(NA)	(NA)	(NA)	**7.9**	<0.250	(NA)	<20	<0.20	**180**	<1.0	(NA)	(0.0842)	1.030	1.03(ND)
	12/11/2023	Det 10/ Ass 3	489.0	16.07	791.4	0.54	1.35	6.55	**9**	<0.25	**118**	**310**	**1,980**	**58.6**	<3.0	**2.2**	**45.5**	<1.0	<1.0	<4.0	**5.8**	<0.25	<1.0	**16.1**	<0.20	**204**	<1.0	<1.0	0.17	0.38	<2.0
	4/23/2024	Det 11/ Ass 4	584.0	16.74	1161.3	0.61	1.56	6.47	**14**	<0.25	**188**	**424**	**3,770**	**95.9**	(NA)	<1.0	**55.5**	(NA)	(NA)	(NA)	**10.4**	<0.25	(NA)	**10.2**	(NA)	**199**	<1.0	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	736.6	17.56	1122.2	0.67	1.55	6.46	**16.6**	<0.25	**242**	**520**	**3,700**	**103.0**	<3.0	<1.0	**26.6**	<1.0	<1.0	<4.0	**13.6**	<0.25	<1.0	**10.2**	<0.20	**166**	<1.0	<1.0	0.06	0.40	0.46 (ND)
	4/16/2025	Damaged	775.5	16.32	894.2	0.67	1.65	6.32	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	797.2	15.42	421.5	221.66	4.65	6.38	**18.3**	0.10"J"	**289**	**576**	**4,690**	**116"S"**	(NA)	<1.0	**48.4**	(NA)	(NA)	(NA)	**15.0**	0.10"J"	(NA)	**11.2**	(NA)	**208**	<1.0	(NA)	(NA)	(NA)	(NA)

Notes:

1. All data and Qualifiers transcribed from analytical lab data sheets or field notes.
2. Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
3. (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
4. (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
5. Baseline monitoring per USEPA 40 CFR 257.93.
6. Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
7. Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assesment and Detecion Monitoring Constituents, but data screening may be conducted over a different range.
8. Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
9. Red text with black border represent outlier values identified by Sanitas.
10. Blue shaded cells with black border indicate data removed for correction of a trend identified by Sanitas (Sen's Slope / Mann-Kendall).
11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
    b. "S" - Spike Recovery outside recovery limits

Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-2 (UG) Baseline	3/21/2018	Background	157.8	15.86	65.3	2.72	3.41	6.35	**3.4**	<0.250	**16**	**110**	**28**	**16**	<3.0	<1.0	**130**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.514	0.382	0.896 (ND)
	4/15/2018	Background	159.8	14.04	64.7	0.87	4.05	6.36	**2.3**	**0.335**	**18**	**63**	**23**	**14**	<3.0	<1.0	**120**	<1.0	<1.0	<4.0	<2.0	**0.335**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.381	0.102	0.483 (ND)
	5/23/2018	Background	175.3	17.40	121.7	0.58	1.72	6.18	**4.2**	<0.250	**20**	**100**	**36**	**18**	<3.0	<1.0	**170**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.119	1.080	1.199 (ND)
	6/27/2018	Background	172.1	18.38	243.8	0.27	5.30	6.16	**4.7**	<0.250	**18**	**87**	**42**	**19**	<3.0	<1.0	**180**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	**1.4**	<1.0	0.488	0.518	1.006 (ND)
	8/1/2018	Background	184.2	18.48	80.7	0.75	2.61	6.11	**5.9**	<0.250	**19**	**140**	**43**	**20**	<3.0	<1.0	**200**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	**2.0**	<1.0	0.308	0.443	0.751(ND)
	9/5/2018	Background	187.9	19.26	83.8	0.68	2.58	6.09	**6.8**	<0.250	**18**	**110**	**46**	**22**	<3.0	<1.0	**220**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	**2.2**	<1.0	0.801	0.933	**1.734**
	11/6/2018	Background	174.3	17.77	79.7	0.60	1.19	6.19	**4.2**	**0.272**	**19**	**100**	**43**	**20**	<3.0	<1.0	**170**	<1.0	<1.0	<4.0	<2.0	**0.272**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.353	1.230	**1.583**
	12/12/2018	Background	186.3	16.78	82.3	0.67	5.78	6.13	**5.5**	**0.254**	**21**	**140**	**48**	**21**	<3.0	<1.0	**210**	<1.0	<1.0	<4.0	**2.0**	**0.254**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.624	0.556	1.180 (ND)
	3/27/2019	Detection 1	165.9	15.87	70.4	0.72	2.60	6.25	**3.3**	<0.250	**20**	**130**	**31**	**17**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/2019	Detection 2	189.4	18.75	71.3	0.61	1.16	6.1	**6.6**	<0.250	**17**	**130**	**58**	**22**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2020	Detection 3	148.7	16.04	58.2	1.36	4.70	6.3	**2.1**	**0.336**	**16**	**140**	NA	**15**	NA	NA	NA	NA	NA	NA	NA	**0.336**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2020		168.1	16.47	-0.8	6.90	2.76	NA	NA	NA	NA	NA	**36**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/22/2020	Detection 4	189.8	18.34	-9.6	6.52	0.62	6.2	**4.8**	<0.250	**17**	**150**	NA	**21**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/8/2020		186.5	16.90	223.4	5.56	0.79	NA	NA	NA	NA	NA	**49**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/17/2021	Detection 5	178.9	14.70	21.7	12.02	1.68	6.3	**3.8**	<0.250	**17**	NA	**41**	**19**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/2021		165.4	17.03	55.1	18.10	1.55	NA	NA	NA	NA	**350**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2 (UG) Compliance	10/20/2021	Detection 6	188.0	14.85	19.6	5.97	1.36	6.25	**4.2**	<0.250	**15**	**140**	(NA)	**19**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	12/27/2021		161.0	8.90	17.7	0.88	1.53	6.31	(NA)	(NA)	(NA)	(NA)	**43**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	4/9/2022	Detection 7	156.4	-1.47	71.9	1.20	3.31	(NA)	**2.9**	<0.250	**15**	**150**	(NA)	16	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022		185.6	18.26	83.4	0.28	2.95	6.21	(NA)	(NA)	(NA)	(NA)	**53**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	11/2/2022	Det 8/ Ass 1	218.4	17.64	101.7	0.74	6.51	6.23	**7.4**	<0.250	**15**	180	**81**	**24**	<3.0	<1.0	**220**	<1.0	<1.0	<4.0	**2.4**	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.403	1.51	**1.913**
	3/12/2023	Det 9/ Ass 2	120.5	15.40	54.5	0.61	3.33	6.51	**1.3**	<0.250	**8.7**	700 H	**29**	**12**	(NA)	(NA)	**100**	(NA)	(NA)	(NA)	<2.0	<0.250	(NA)	<20	(NA)	<1.0	<1.0	(NA)	(0.150)	0.630	0.630(ND)
	12/11/2023	Det 10/ Ass 3	197.2	17.35	733.0	0.59	0.79	6.21	**4**	<0.25	**15**	**108**	**47.8**	**18.6**	<3.0	<1.0	**193**	<1.0	<1.0	<4.0	<2.0	<0.25	<1.0	<10.0	<0.20	**1.4**	<1.0	<1.0	0.19	1.2	<2.0
	4/23/2024	Det 11/ Ass 4	176.8	17.55	518.1	0.67	1.02	6.23	**4**	<0.25	**15**	**104**	**42.9**	**20.4**	(NA)	<1.0	**192**	(NA)	(NA)	(NA)	<2.0	<0.25	(NA)	<10.0	(NA)	<1.0	<1.0	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	193.9	19.99	693.4	0.75	1.73	6.24	**4.95**	<0.25	**14.4**	**108**	**49.6**	**21.0**	<3.0	<1.0	**220**	<1.0	<1.0	<4.0	<2.0	<0.25	<1.0	<10.0	<0.20	<1.0	<1.0	<1.0	0.18	0.42	0.6 (ND)
	4/16/2025	Damaged	128.0	16.85	492.1	0.87	4.24	6.36	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	175.9	17.25	544.9	222.16	5.49	6.33	**4.68**	0.06"J"	**14.5**	**100**	**28.6**	**19.1**	(NA)	<1.0	**188.0**	(NA)	(NA)	(NA)	<2.0	0.06"J"	(NA)	<10.0	(NA)	<1.0	<1.0	(NA)	(NA)	(NA)	(NA)

Notes:

1. All data and Qualifiers transcribed from analytical lab data sheets or field notes.
2. Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
3. (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
4. (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
5. Baseline monitoring per USEPA 40 CFR 257.93.
6. Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
7. Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assesment and Detecion Monitoring Constituents, but data screening may be conducted over a different range.
8. Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
9. Red text with black border represent outlier values identified by Sanitas.
10. Blue shaded cells with black border indicate data removed for correction of a trend identified by Sanitas (Sen's Slope / Mann-Kendall).
11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
    b. "S" - Spike Recovery outside recovery limits

Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-3 (UG) Baseline	3/21/2018	Background	220.7	15.22	40.7	0.38	14.88	6.57	**1.4**	**0.274**	**18**	**120**	**17**	**19**	<3.0	<1.0	**96**	<1.0	<1.0	<4.0	<2.0	**0.274**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.836	0.404	1.240 (ND)
	4/15/2018	Background	224.7	14.05	39.2	0.45	10.81	6.48	**1.5**	**0.386**	**20**	**120**	**25**	**18**	<3.0	<1.0	**100**	<1.0	<1.0	<4.0	<2.0	**0.386**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.556	0.919	1.475 (ND)
	5/23/2018	Background	221.3	17.77	43.2	0.39	13.39	6.49	**1.4**	<0.250	**20**	**100**	**20**	**18**	<3.0	<1.0	**100**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.526	0.468	0.994 (ND)
	6/27/2018	Background	198.7	17.81	123.8	0.45	17.03	6.45	**1.2**	<0.250	**17**	**110**	**27**	**18**	<3.0	<1.0	**100**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.214	(0.187)	0.214 (ND)
	8/1/2018	Background	209.2	16.74	41.4	0.43	10.96	6.55	**1.3**	<0.250	**17**	**150**	**21**	**18**	<3.0	<1.0	**91**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.315	(0.0763)	0.315(ND)
	9/5/2018	Background	196.8	17.62	56.8	0.46	6.21	6.51	**1.2**	**0.308**	**15**	**100**	**22**	**17**	<3.0	<1.0	**98**	<1.0	<1.0	<4.0	<2.0	**0.308**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.344	0.516	0.860(ND)
	11/6/2018	Background	206.7	16.84	63.3	0.49	2.37	6.49	**1.3**	**0.313**	**16**	**130**	**26**	**17**	<3.0	<1.0	**100**	<1.0	<1.0	<4.0	<2.0	**0.313**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.547	0.792	**1.339**
	12/12/2018	Background	195.6	15.39	48.7	0.40	3.10	6.50	**1.4**	**0.334**	**18**	**160**	**28**	**17**	<3.0	<1.0	**99**	<1.0	<1.0	<4.0	<2.0	**0.334**	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.414	0.386	0.800 (ND)
	3/27/2019	Detection 1	196.0	15.07	52.2	0.84	12.50	6.36	**1.5**	<0.250	**19**	**140**	**22**	**16**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/2019	Detection 2	191.4	17.07	58.1	0.53	2.28	6.5	**1.2**	**0.332**	**16**	**130**	**26**	**17**	NA	NA	NA	NA	NA	NA	NA	**0.332**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2020	Detection 3	198.4	14.94	61.3	1.17	7.37	6.4	NA	**0.371**	**20**	NA	**29**	**16**	NA	NA	NA	NA	NA	NA	NA	**0.371**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2020		205.5	15.25	14.9	13.48	7.29	NA	**1.5**	NA	NA	**130**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/22/2020	Detection 4	194.1	16.65	36.7	8.29	2.13	6.5	**1.1**	<0.250	**17**	**120**	**31**	**17**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/17/2021	Detection 5	196.8	14.04	34.3	12.04	3.47	6.6	<1.0	<0.250	**15**	**150**	**16**	**17**	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3 (UG) Compliance	10/20/2021	Detection 6	189.0	12.85	33.6	10.32	1.35	6.52	<1.0	<0.250	**13**	**130**	**30**	**14**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	4/9/2022	Detection 7	197.6	-2.74	66.7	2.86	2.58	6.67	<1.0	<0.250	**13**	**130**	(NA)	**15**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022		163.7	16.97	52.6	0.47	4.88	(NA)	(NA)	(NA)	(NA)	(NA)	**21**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	11/2/2022	Det 8/ Ass 1	161.8	16.28	9.1	0.36	9.56	6.93	<1.0	<0.250	**10**	**160**	**29**	**17**	<3.0	<1.0	**73**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<10	<0.20	<1.0	<1.0	<1.0	0.0589	1.16	**1.16**
	3/12/2023	Det 9/ Ass 2	177.2	14.09	73.2	1.35	3.90	6.51	<1.0	<0.250	**13**	**93 H**	**31**	**14**	(NA)	(NA)	**110**	(NA)	(NA)	(NA)	<2.0	<0.250	(NA)	<20	(NA)	<1.0	<1.0	(NA)	0.221	0.558	0.779(ND)
	12/11/2023	Det 10/ Ass 3	178.5	16.25	720.9	0.90	1.11	6.62	<4	<0.25	**10**	**102**	**17.4**	**13.7**	<3.0	<1.0	**71.0**	<1.0	<1.0	<4.0	<2.0	<0.25	<1.0	<10.0	<0.20	<1.0	<1.0	<1.0	(0.03)	0.72	<2.0
	4/23/2024	Det 11/ Ass 4	178.6	15.40	495.9	1.45	1.06	6.65	**1 "J"**	<0.25	**10**	**94**	**13.0**	**15.0**	(NA)	<1.0	**85.1**	(NA)	(NA)	(NA)	<2.0	<0.25	(NA)	<10.0	(NA)	<1.0	<1.0	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	170.2	19.06	1006.8	0.50	2.61	6.82	**2.3 "J"**	<0.25	<10.0	**98**	**12.0**	**15.2**	<3.0	<1.0	**71.3**	<1.0	<1.0	<4.0	<2.0	<0.25	<1.0	<10.0	<0.20	<1.0	<1.0	<1.0	0.04	0.33	0.37 (ND)
	4/16/2025	Damaged	165.5	16.42	652.2	2.81	4.82	6.33	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	162.1	16.52	781.2	222.44	4.34	6.61	**1.7"J"**	0.14"J"	**10.1**	**90**	**<10.0**	**14.8**	(NA)	<1.0	**82.3**	(NA)	(NA)	(NA)	<2.0	0.14"J"	(NA)	<10.0	(NA)	<1.0	<1.0	(NA)	(NA)	(NA)	(NA)

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8. Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
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11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
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Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-7 (DG) Baseline	3/21/2018	Background	901.8	14.85	41.8	0.58	1.61	7.30	**12**	**0.752**	**190**	**440**	**1900**	**110**	<3.0	<1.0	**41**	<1.0	<1.0	<4.0	<2.0	**0.752**	<1.0	**25**	<0.20	**160**	**5.4**	<1.0	0.457	0.426	0.883 (ND)
	4/15/2018	Background	936.4	14.04	40.0	0.51	0.96	7.24	**12**	**0.794**	**210**	**420**	**1900**	**110**	<3.0	<1.0	**43**	<1.0	<1.0	<4.0	**2.0**	**0.794**	<1.0	**19**	<0.20	**170**	**2.3**	<1.0	0.062	(0.036)	0.062 (ND)
	5/23/2018	Background	899.1	18.05	46.5	0.38	0.25	7.25	**11**	**0.650**	**220**	**480**	**1800**	**120**	<3.0	<1.0	**44**	<1.0	<1.0	<4.0	<2.0	**0.650**	<1.0	**22**	<0.20	**170**	**28**	<1.0	0.517	0.379	0.896 (ND)
	6/27/2018	Background	891.4	17.91	66.4	0.22	5.84	7.22	**11**	**0.592**	**220**	**500**	**2000**	**140**	<3.0	<1.0	**48**	<1.0	<1.0	<4.0	**2.1**	**0.592**	<1.0	**26**	<0.20	**160**	**53**	<1.0	0.335	0.818	1.153 (ND)
	8/1/2018	Background	958.3	18.03	53.0	0.28	1.77	7.22	**9.1**	**0.608**	**230**	**590**	**2300**	**140**	<3.0	<1.0	**47**	<1.0	<1.0	<4.0	**2.2**	**0.608**	<1.0	**30**	<0.20	**160**	**54**	<1.0	0.473	0.411	0.884(ND)
	9/5/2018	Background	873.3	19.46	69.3	0.28	2.29	7.29	**10**	**0.700**	**220**	**520**	**2100**	**130**	<3.0	<1.0	**47**	<1.0	<1.0	<4.0	**2.0**	**0.700**	<1.0	**27**	<0.20	**150**	**42**	<1.0	0.474	0.178	0.652(ND)
	11/6/2018	Background	787.9	18.12	344.4	0.44	0.44	7.35	**6.3**	**0.693**	**170**	**450**	**2000**	**120**	<3.0	<1.0	**43**	<1.0	<1.0	<4.0	**2.0**	**0.693**	<1.0	**26**	<0.20	**150**	**15**	<1.0	1.090	0.388	1.487(ND)
	12/12/2018	Background	784.8	17.26	51.6	1.05	0.41	7.27	**6.8**	**0.746**	**180**	**440**	**1800**	**120**	<3.0	<1.0	**44**	<1.0	<1.0	<4.0	**2.1**	**0.746**	<1.0	**26**	<0.20	**150**	**11**	<1.0	0.355	0.620	0.975 (ND)
	3/27/2019	Detection 1	797.4	16.39	52.6	0.32	2.37	7.25	**6.6**	**0.670**	**170**	**480**	**1800**	**110**	NA	NA	NA	NA	NA	NA	NA	**0.670**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/2019	Detection 2	751.7	18.88	119.0	0.31	0.59	7.3	**3.9**	**0.684**	**150**	**470**	**1900**	**120**	NA	NA	NA	NA	NA	NA	NA	**0.684**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2020	Detection 3	865.6	16.34	68.3	0.24	1.62	7.2	**4.0**	**0.737**	**200**	**540**	**2200**	**120**	NA	NA	NA	NA	NA	NA	NA	**0.737**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/22/2020	Detection 4	720.5	17.40	-80.8	3.63	0.50	NA	**3.1**	**0.628**	**110**	**460**	**1700**	**100**	NA	NA	NA	NA	NA	NA	NA	**0.628**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/2021		823.6	16.40	-49.2	0.27	0.41	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/17/2021	Detection 5	870.0	15.17	-19.6	3.40	0.85	7.4	**1.8**	**0.522**	**160**	**520**	**2200**	**120**	NA	NA	NA	NA	NA	NA	NA	**0.522**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7 (DG) Compliance	10/20/2021	Detection 6	855.3	14.58	-44.0	3.75	0.75	7.35	**3.7**	**0.375**	**160**	**520**	**1,900**	**120**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	**0.375**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	4/9/2022	Detection 7	958.3	-1.31	17.1	0.67	0.60	(NA)	**4.1**	**0.488**	**240**	**510**	**3,200**	**130**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	**0.488**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022		835.0	17.59	64.1	0.23	1.77	7.31	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	11/2/2022	Det 8/ Ass 1	874.2	18.26	56.8	0.44	2.60	7.36	**3.1**	**0.476**	**130**	**500**	**2,300**	**120**	<3.0	<1.0	**62**	<1.0	<1.0	<4.0	**3.5**	**0.476**	<1.0	**33**	<0.20	**100**	**4.7**	<1.0	-0.0488	2.31	**2.310**
	3/12/2023	Det 9/ Ass 2	880.0	15.09	35.7	0.49	0.54	7.40	**3.7**	**0.635**	**190**	**520**	**2,600**	**140**	(NA)	(NA)	**77**	(NA)	(NA)	(NA)	**4.1**	**0.635**	(NA)	**27**	(NA)	**120**	**4.1**	(NA)	0.0773	0.899	0.976(ND)
	12/11/2023	Det 10/ Ass 3	840.1	16.69	172.5	0.48	0.91	7.28	**3 "J"**	**0.57**	**141**	**460**	**2,270**	**105**	<3.0	<1.0	**66.7**	<1.0	<1.0	<4.0	**2.7**	**0.57**	<1.0	**49.2**	<0.20	**127**	**3.0**	<1.0	0.16	1.29	<2.0
	4/23/2024	Det 11/ Ass 4	723.4	16.59	761.7	0.38	0.93	7.29	**3 "J"**	**0.53**	**93**	**390**	**2,260**	**111 "S"**	(NA)	<1.0	**65.2**	(NA)	(NA)	(NA)	<2.0	**0.53**	(NA)	**30.6**	(NA)	**122**	**2.8**	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	742.4	18.20	494.5	0.40	0.96	7.40	**4.11**	**0.58**	**84.3**	**420**	**1,800**	**98.0**	<3.0	<1.0	**64.4**	<1.0	<1.0	<4.0	**2.8**	**0.58**	<1.0	**34.7**	<0.20	**119**	**2.4**	<1.0	0.02	0.81	0.83 (ND)
	4/16/2025	Damaged	1008.3	16.65	294.5	0.39	7.38	7.25	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	954.7	16.74	240.2	221.30	5.22	7.27	**10.9**	**0.63**	**321**	**638**	**3,730**	**139**	(NA)	**<1.0**	**95.2**	(NA)	(NA)	(NA)	**2.3**	**0.63**	(NA)	**41.3**	(NA)	**108**	**2.1**	(NA)	(NA)	(NA)	(NA)

Notes:

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2. Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
3. (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
4. (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
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7. Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assesment and Detecion Monitoring Constituents, but data screening may be conducted over a different range.
8. Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
9. Red text with black border represent outlier values identified by Sanitas.
10. Blue shaded cells with black border indicate data removed for correction of a trend identified by Sanitas (Sen's Slope / Mann-Kendall).
11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
    b. "S" - Spike Recovery outside recovery limits

Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-9 (DG) Baseline	3/21/2018	Background	979.8	14.98	25.1	0.52	1.60	7.35	**17**	**0.929**	**230**	**480**	**4700**	**65**	<3.0	<1.0	**49**	<1.0	<1.0	<4.0	<2.0	**0.929**	<1.0	**19**	<0.20	**630**	<1.0	<1.0	0.0898	0.401	0.491 (ND)
	4/15/2018	Background	972.7	14.63	24.9	1.73	2.32	7.37	**21**	**1.09**	**240**	**460**	**5100**	**57**	<3.0	**1.2**	**49**	<1.0	<1.0	<4.0	<2.0	**1.09**	<1.0	**11**	<0.20	**680**	<1.0	<1.0	(0.132)	0.982	0.982 (ND)
	5/23/2018	Background	1020.5	18.70	25.9	0.48	0.64	7.34	**17**	**1.05**	**240**	**520**	**5800**	**55**	<3.0	<1.0	**45**	<1.0	<1.0	**8.1**	<2.0	**1.05**	<1.0	**15**	<0.20	**840**	<1.0	<1.0	0.260	0.0989	0.359 (ND)
	6/27/2018	Background	902.9	19.33	25.2	0.42	4.97	7.32	**15**	**0.910**	**220**	**520**	**4600**	**73**	<3.0	<1.0	**47**	<1.0	<1.0	<4.0	<2.0	**0.910**	<1.0	**15**	<0.20	**560**	<1.0	<1.0	0.000	0.327	0.327 (ND)
	8/1/2018	Background	942.6	19.10	20.7	0.47	2.03	7.28	**16**	**0.916**	**220**	**560**	**4500**	**76**	<3.0	<1.0	**47**	<1.0	<1.0	<4.0	<2.0	**0.916**	<1.0	**18**	<0.20	**500**	<1.0	<1.0	0.248	0.1700	0.418(ND)
	9/5/2018	Background	829.2	19.85	20.9	0.45	2.68	7.31	**16**	**0.957**	**180**	**420**	**4400**	**80**	<3.0	<1.0	**48**	<1.0	<1.0	<4.0	<2.0	**0.957**	<1.0	**17**	<0.20	**460**	<1.0	<1.0	(0.076)	0.707	0.707(ND)
	11/6/2018	Background	732.8	18.19	428.8	0.60	0.45	7.34	**11**	**0.885**	**130**	**410**	**3800**	**79**	<3.0	<1.0	**47**	<1.0	<1.0	<4.0	<2.0	**0.885**	<1.0	**13**	<0.20	**420**	<1.0	<1.0	0.570	0.903	1.473(ND)
	12/12/2018	Background	742.9	16.95	36.5	0.48	0.63	7.33	**12**	**0.972**	**170**	**360**	**3700**	**78**	<3.0	<1.0	**53**	<1.0	<1.0	<4.0	<2.0	**0.972**	<1.0	**17**	<0.20	**420**	<1.0	<1.0	0.452	0.780	1.232 (ND)
	3/27/2019	Detection 1	673.2	16.74	22.1	0.51	0.96	7.40	**11**	**0.827**	**120**	**440**	**3100**	**70**	NA	NA	NA	NA	NA	NA	NA	**0.827**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/2019	Detection 2	891.5	19.25	38.3	0.41	0.62	7.4	**16**	**0.847**	**220**	**540**	**5000**	**87**	NA	NA	NA	NA	NA	NA	NA	**0.847**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2020	Detection 3	967.5	17.60	61.6	0.34	0.92	7.3	**18**	**0.816**	**250**	NA	**4900**	**92**	NA	NA	NA	NA	NA	NA	NA	**0.816**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2020		1024.4	17.09	-51.1	4.95	0.59	NA	NA	NA	NA	**560**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/22/2020	Detection 4	891.9	17.59	-70.4	4.18	0.64	7.5	**15**	**0.832**	**210**	**550**	**5000**	**80**	NA	NA	NA	NA	NA	NA	NA	**0.832**	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/26/2021		971.7	16.07	-69.1	0.34	0.47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/17/2021	Detection 5	1098.1	15.16	-19.7	7.52	0.91	7.4	**21**	**0.775**	**250**	**630**	**6200**	**57**	NA	NA	NA	NA	NA	NA	NA	**0.775**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9 (DG) Compliance	10/20/2021	Detection 6	1020.5	15.70	13.1	6.16	0.87	7.52	**18**	**1.33**	**240**	(NA)	**5,500**	**5**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	**1.330**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	12/27/2021		886.0	8.57	-21.5	0.70	0.87	(NA)	(NA)	(NA)	(NA)	**520**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	4/9/2022	Detection 7	894.7	-0.98	1.9	0.86	0.70	(NA)	11	(NA)	160	**330**	**3,800**	**64**	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022		681.8	18.12	27.6	0.30	2.29	7.39	(NA)	0.860	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	0.860	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	11/2/2022	Det 8/ Ass 1	785.3	19.11	6.4	0.44	2.67	7.39	**12**	**1.03**	**160**	**540**	**3,000**	**97**	<3.0	<1.0	**78**	<1.0	<1.0	<4.0	<2.0	**1.03**	<1.0	**21**	<0.20	**210**	<1.0	<1.0	0.164	0.648	0.812 (ND)
	3/12/2023	Det 9/ Ass 2	764.4	16.07	26.7	0.42	0.34	7.43	**11**	**1.02**	**160**	**480**	**3,600**	**95**	(NA)	(NA)	**85**	(NA)	(NA)	(NA)	<2.0	**1.02**	(NA)	<20	(NA)	**160**	<1.0	(NA)	0.451	1.05	1.50(ND)
	12/11/2023	Det 10/ Ass 3	804.1	16.27	782.2	0.52	1.13	7.15	**13**	**0.70**	**171**	**466**	**2,750**	**101**	<3.0	<1.0	**84.1**	<1.0	<1.0	<4.0	<2.0	**0.70**	<1.0	**34.9**	<0.20	**102**	<1.0	<1.0	0.16	1.14	<2.0
	4/23/2024	Det 11/ Ass 4	801.5	17.45	1035.7	0.44	1.06	7.05	**14**	**0.58**	**203**	**512**	**3,700**	**103**	(NA)	<1.0	**102**	(NA)	(NA)	(NA)	<2.0	**0.58**	(NA)	**23.0**	(NA)	**89.8**	<1.0	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	832.2	18.46	1099.2	0.54	1.41	7.06	**14.4**	**0.55**	**216**	**508**	**4,140**	**88.9**	<3.0	<1.0	**91.5**	<1.0	<1.0	<4.0	<2.0	**0.55**	<1.0	**26.4**	<0.20	**109**	<1.0	<1.0	0.16	0.39	0.55 (ND)
	4/16/2025	Damaged	867.5	17.06	375.2	0.52	1.58	6.87	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	848.0	16.74	290.7	221.63	3.70	7.00	**13.1**	**0.71**	**213**	**510**	**4,060**	**87.5**	(NA)	<1.0	**90.9**	(NA)	(NA)	(NA)	**2.2**	**0.71**	(NA)	**24.4**	(NA)	**184**	<1.0	(NA)	(NA)	(NA)	(NA)

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11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
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Sikeston Board of Municipal Utilities - Sikeston Power Station
Fly Ash Pond Baseline Groundwater Statistical Evaluation
Scott County, Missouri

Appendix 4 - Groundwater Quality Summary

Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron ug/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	Mercury ug/L	Molybdenum ug/L	Selenium ug/L	Thallium ug/L	Radium 226 pCi/L	Radium 228 pCi/L	Radium 226/228 (Combined) pCi/L
Federal MCL									None	4.0	None	None	None	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-10 (DG) Baseline	2/15/2023	Background	599.92	18.30	-64.8	0.14	8.51	7.02	**14**	<0.250	**120**	**360**	**340**	**81**	<3.0	**6.9**	**150**	<1.0	<1.0	<4.0	<2.0	<0.250	<1.0	<20	<0.20	**25**	<1.0	<1.0			<0.773
	8/21/2023	Background	677.61	20.31	-29.0	0.34	5.79	6.91	**17**	**0.31**	**141**	**465**	**233**	**90.1**	<3.0	**5.7**	**139**	<1.0	<1.0	<4.0	<2.0	**0.31**	<1.0	**31.0**	<0.20	**15.4**	<1.0	<1.0	0.19	0.86	<2.00
	9/5/2023	Background	695.13	20.58	-36.5	0.28	1.86	6.85	**18**	**0.30**	**168**	**490**	**240**	**83.5**	<3.0	**7.4**	**134**	<1.0	<1.0	<4.0	<2.0	**0.30**	<1.0	**34.7**	<0.20	**24.8**	<1.0	<1.0	0.18	0.85	<2.00
	9/20/2023	Background	693.51	19.95	-82.5	0.33	0.40	6.79	**21**	**0.28**	**182**	**450**	**249**	**86.4**	<3.0	**5.6**	**141**	<1.0	<1.0	<4.0	<2.0	**0.28**	<1.0	**32.2**	<0.20	**21.7**	<1.0	<1.0	-0.02	0.05	<2.00
	10/2/2023	Background	720.70	20.81	-44.2	0.26	2.62	6.98	**19**	**0.29**	**171**	**440**	**265**	**87.6**	<3.0	**5.5**	**157**	<1.0	<1.0	<4.0	<2.0	**0.29**	<1.0	**36.2**	<0.20	**20.7**	<1.0	<1.0	0.17	0.59	<2.00
	10/17/2023	Background	726.4	19.44	-101.1	0.33	0.72	7.05	**20**	**0.42**	**164**	**412**	**284**	**86.5**	<3.0	**6.1**	**146**	<1.0	<1.0	<4.0	<2.0	**0.42**	<1.0	**40**	<0.20	**24.2**	<1.0	<1.0	0.19	0.58	<2.00
	11/2/2023	Background	722.98	19.46	198.7	0.42	0.53	6.84	**20**	**0.30**	**161**	**394**	**282**	**86.3**	<3.0	**8.7**	**141**	<1.0	<1.0	<4.0	<2.0	**0.30**	<1.0	**40.6**	<0.20	**18.0**	<1.0	<1.0	0.35	1.29	<2.0
	11/15/2023	Background	181.18	19.51	383.6	0.30	0.74	6.87	**21**	**0.30**	**187**	**400**	**342**	**91.7**	<3.0	**6.3**	**151**	<1.0	<1.0	<4.0	<1.0	**0.30**	<1.0	**13.4**	<0.20	**24.0**	<1.0	<1.0	0.24	1.11	<2.0
MW-10 (DG) Compliance	12/11/2023	Det 10/ Ass 3	720.43	18.48	98.6	0.35	0.60	7.06	**19**	**0.29**	**166**	**455**	**378**	**88.8**	<3.0	**5.9**	**142**	<1.0	<1.0	<4.0	<2.0	**0.29**	<1.0	**11.4**	<0.20	**25.2**	<1.0	<1.0	0.12	1.38	<2.0
	4/23/2024	Det 11/ Ass 4	680.1	18.28	432.0	0.31	9.96	6.93	**8**	<0.25	**140**	**420**	**241**	**90.4**	(NA)	**6.6**	**138**	(NA)	(NA)	(NA)	<2.0	<0.25	(NA)	<10.0	(NA)	**19.3**	<1.0	(NA)	(NA)	(NA)	(NA)
	9/25/2024	Det 12/ Ass 5	540.7	21.16	270.7	0.29	0.99	7.21	**13.7**	**0.28**	**106**	**338**	**397**	**64.4**	<3.0	**4.9**	**108**	<1.0	<1.0	<4.0	<2.0	**0.28**	<1.0	<10.0	<0.20	**25.3**	<1.0	<1.0	0.03	0.66	0.69 (ND)
	4/16/2025	Damaged	619.1	17.72	68.9	0.25	8.24	7.09	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	5/6/2025	Det 13 / Ass 6	665.1	17.82	73.7	221.32	7.12	7.08	**8.41**	0.24"J"	**86.3**	**396**	**210**	**88.9**	(NA)	**6.8**	**130**	(NA)	(NA)	(NA)	<2.0	0.24"J"	(NA)	<10.0	(NA)	**14.1**	<1.0	(NA)	(NA)	(NA)	(NA)

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11. Analytical Data Qualifiers provided by Laboratory:
    a. "J" - Analyte detected below quantitation limits
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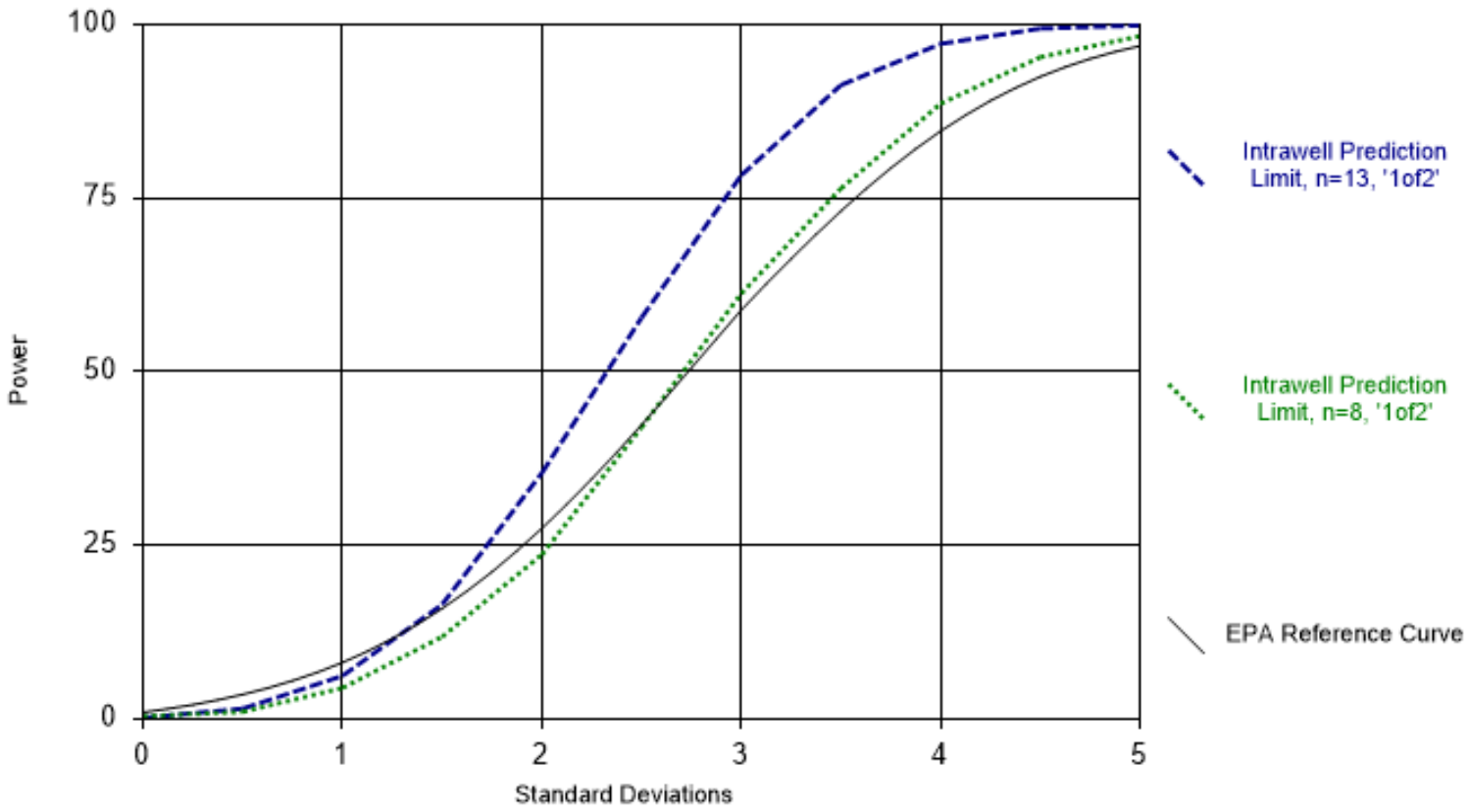
Appendix 5

Statistical Power Curves

Power Curve



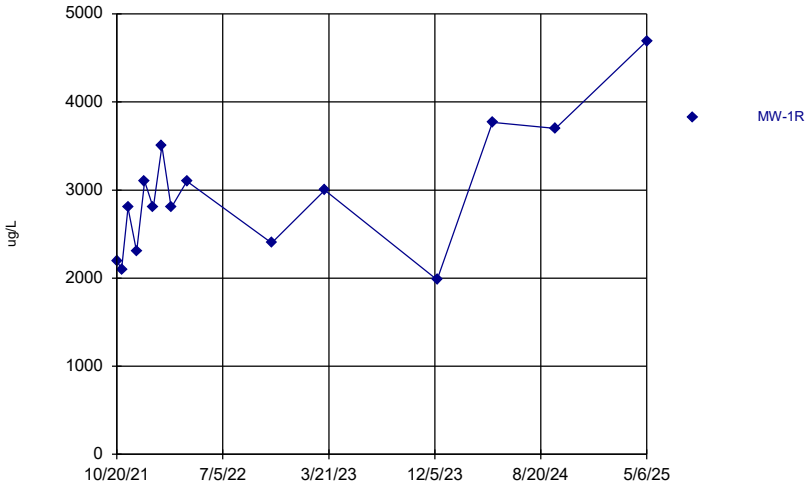
Analysis Run 7/24/2023 2:53 PM View: AppIII&IV

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 6

Time Series Plots

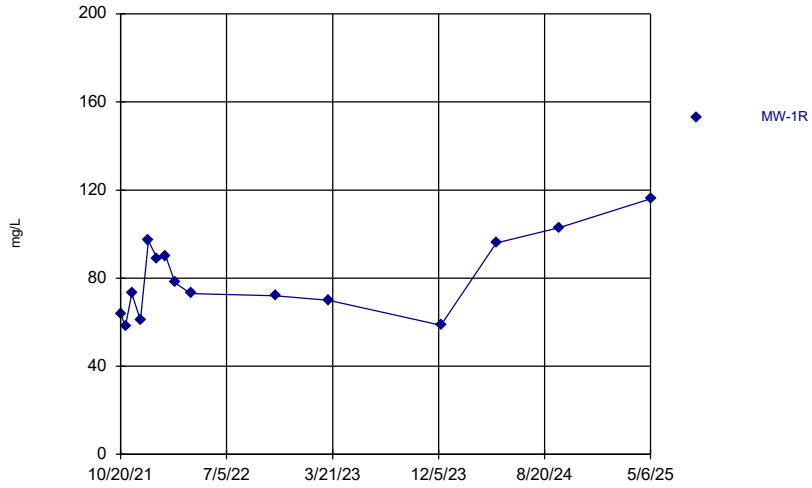
Boron



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

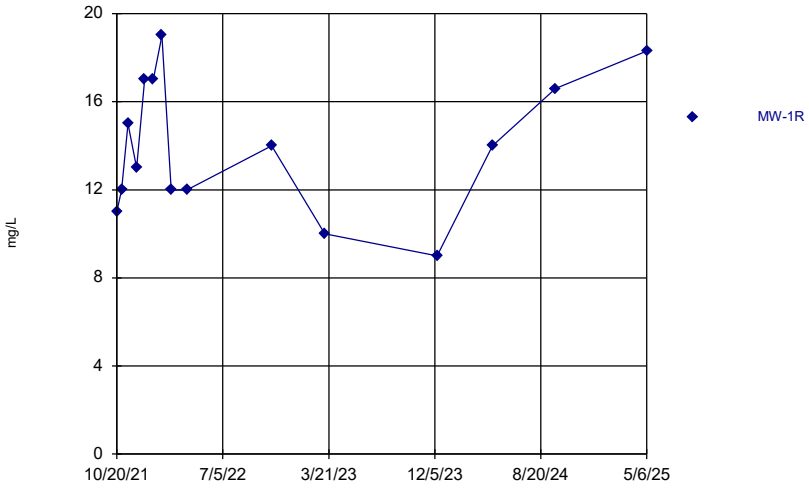
Calcium



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

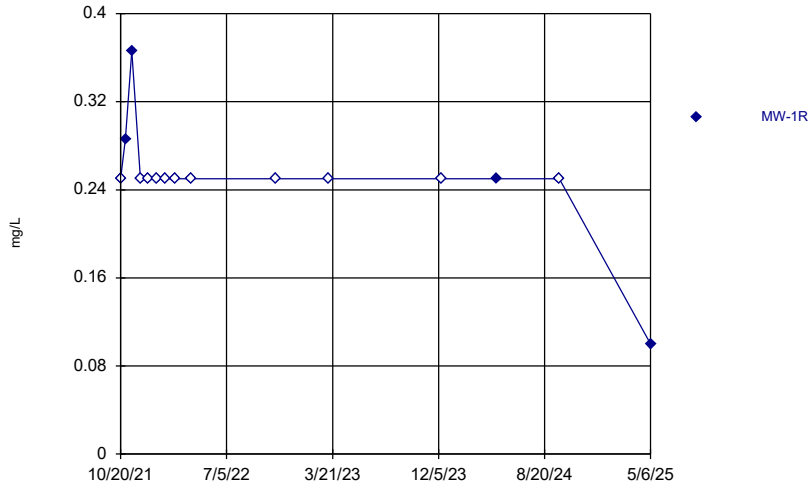
Chloride



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

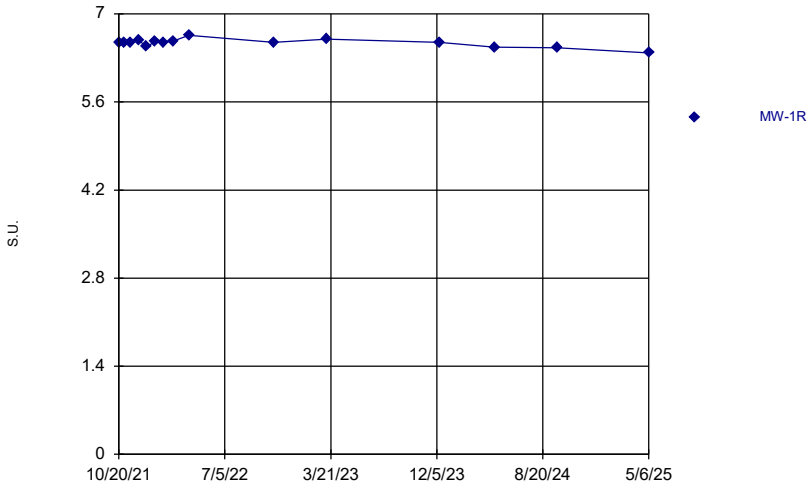
Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Fluoride



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

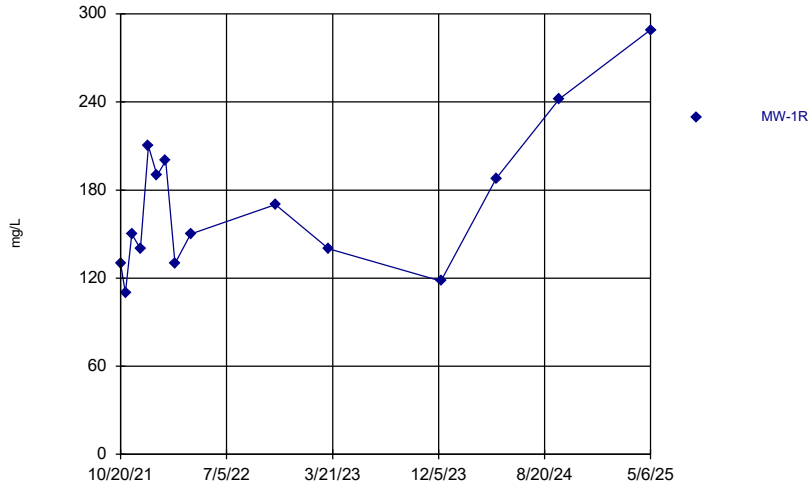
pH



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

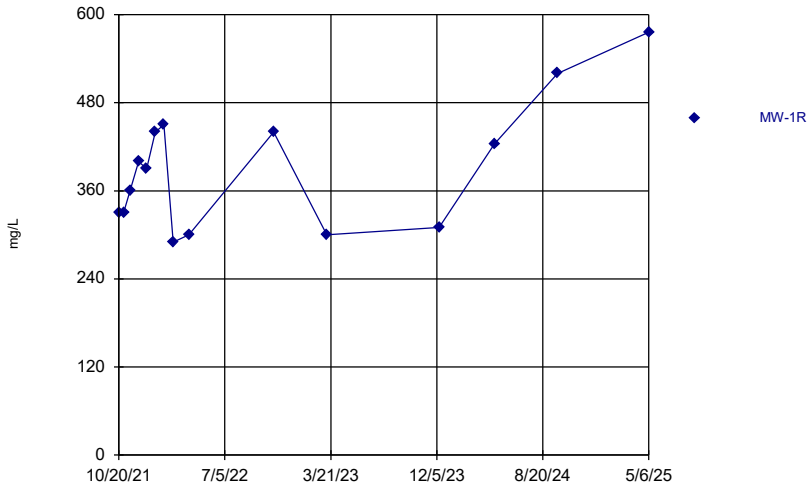
Sulfate



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

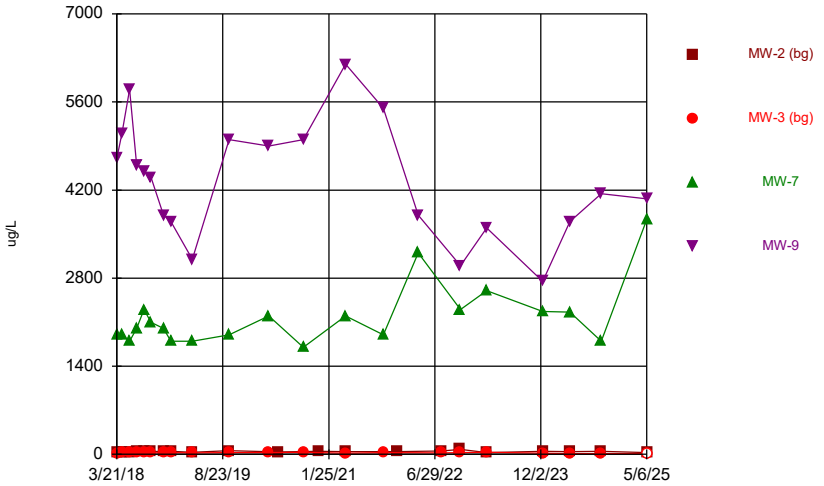
Total Dissolved Solids



Time Series Analysis Run 5/21/2025 10:43 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

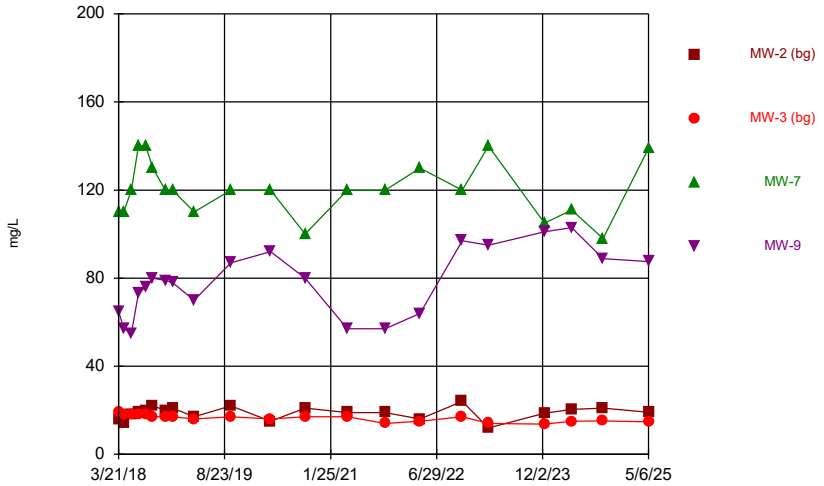
Boron



Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

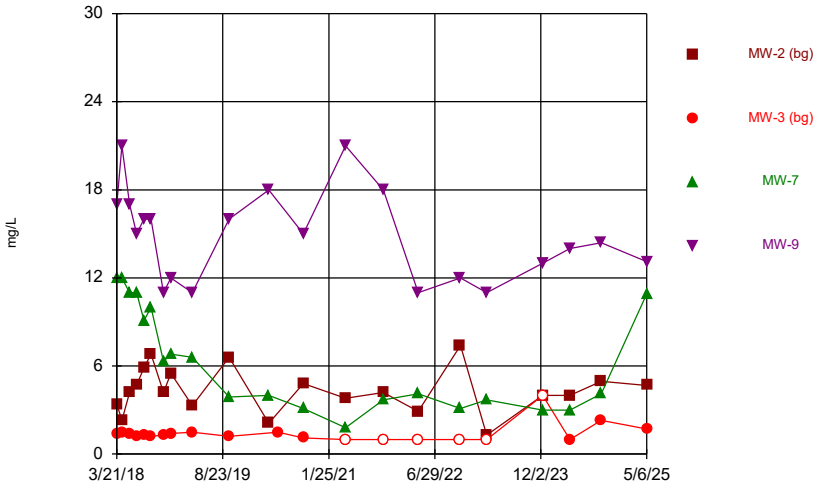
Calcium



Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

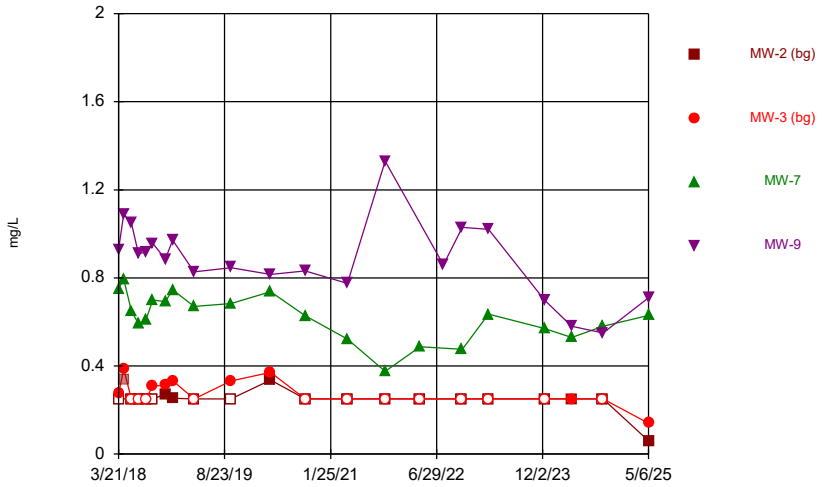
Chloride



Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

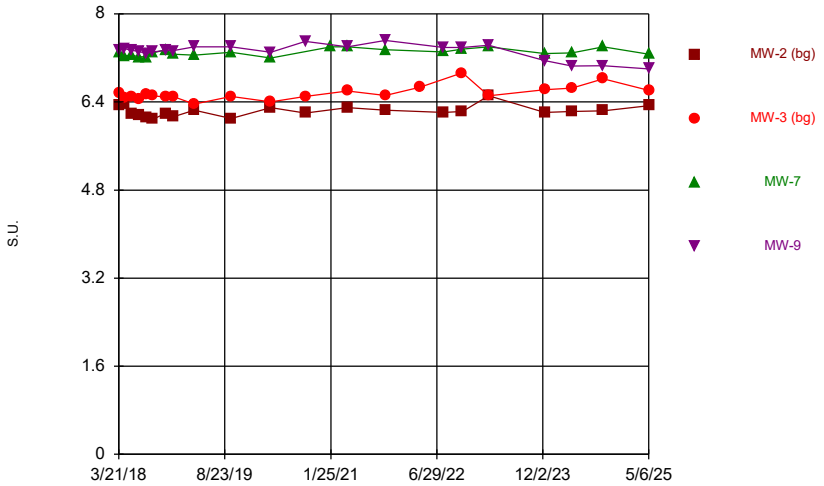
Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Fluoride



Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

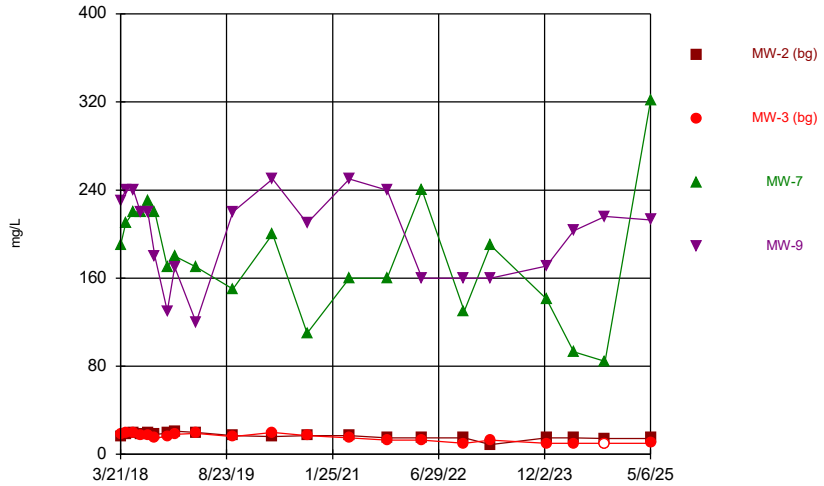
pH



Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

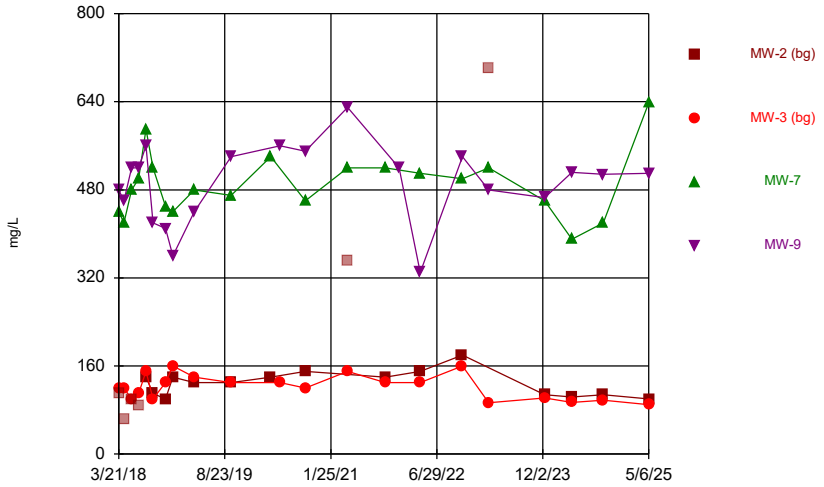
Hollow symbols indicate censored values.

Sulfate



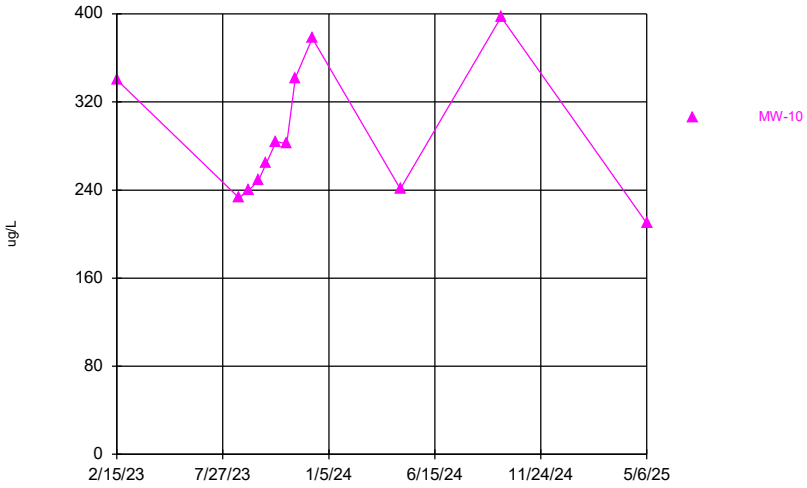
Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Total Dissolved Solids



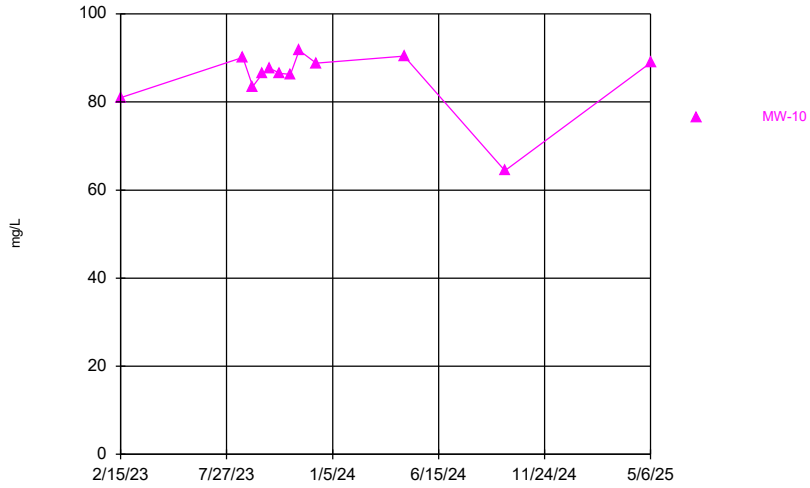
Time Series Analysis Run 5/21/2025 10:37 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Boron



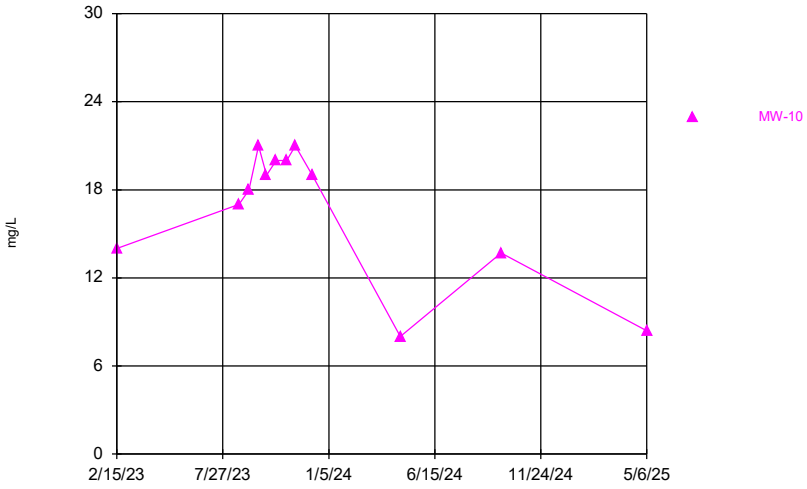
Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Calcium



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

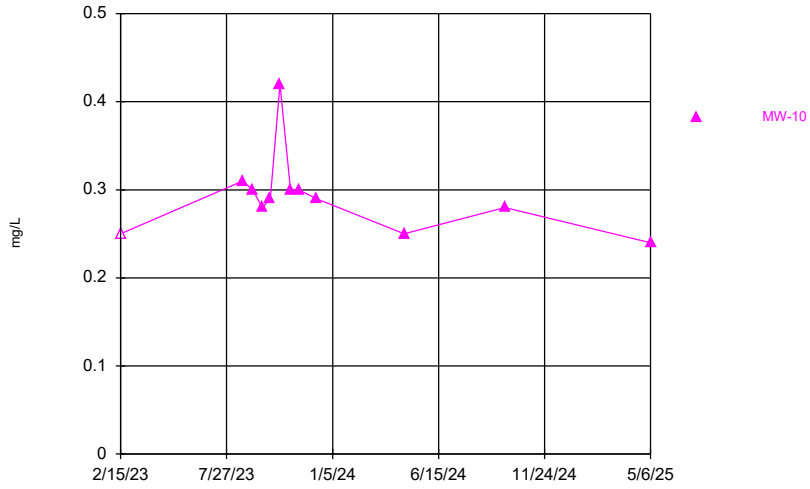
Chloride



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

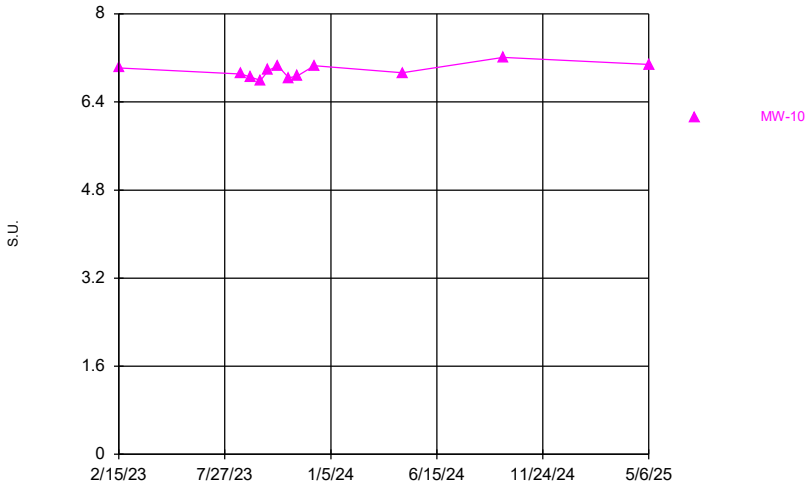
Hollow symbols indicate censored values.

Fluoride



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

pH



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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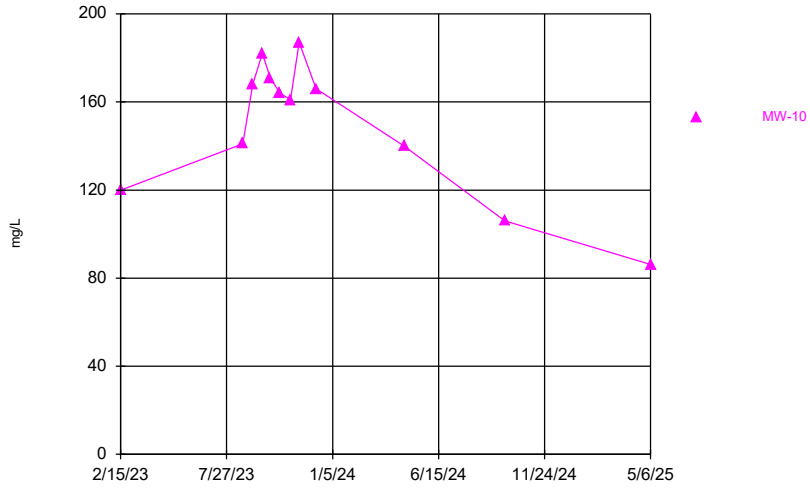
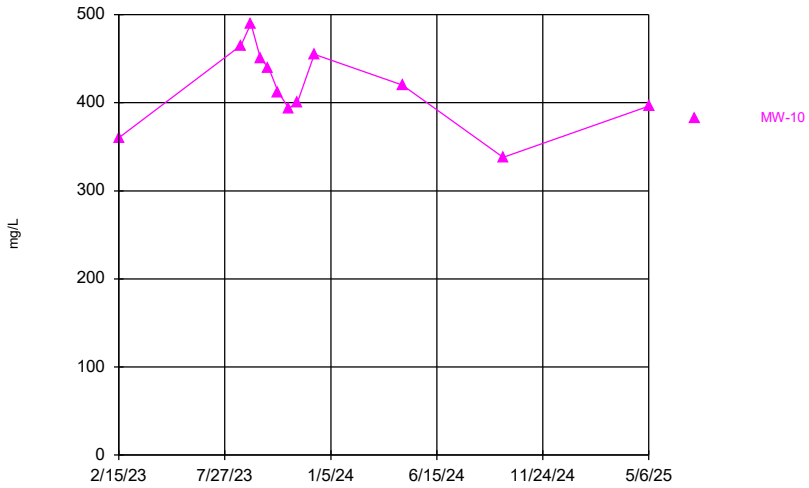
Sulfate



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Total Dissolved Solids



Time Series Analysis Run 5/21/2025 10:46 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 7

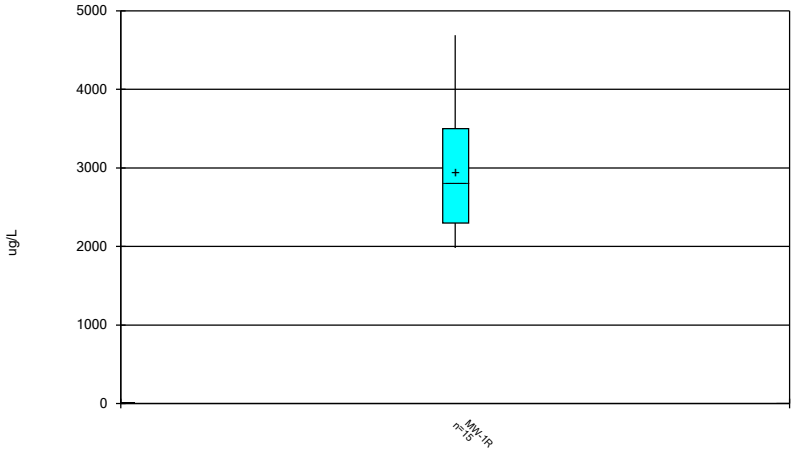
Box and Whiskers Plots

Box & Whiskers Plot

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:45 AM

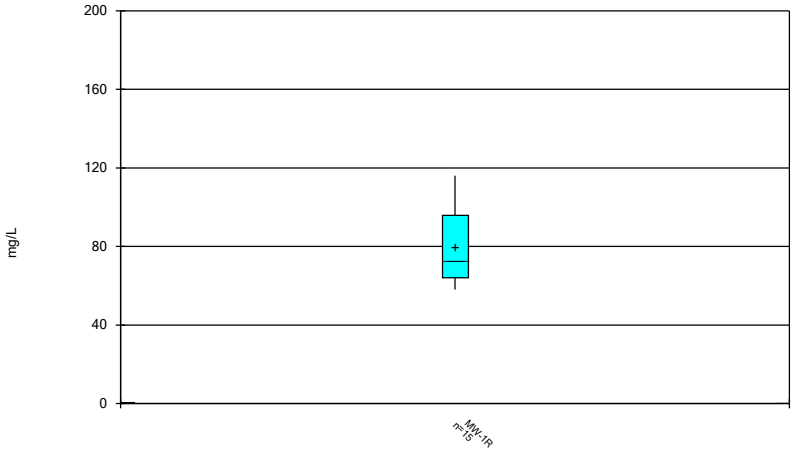
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (ug/L)	MW-1R	15	2949	738.3	190.6	2800	1980	4690	0
Calcium (mg/L)	MW-1R	15	79.9	17.67	4.563	73	58	116	0
Chloride (mg/L)	MW-1R	15	13.99	3.073	0.7936	14	9	19	0
Fluoride (mg/L)	MW-1R	15	0.2501	0.05158	0.01332	0.25	0.1	0.366	73.33
pH (S.U.)	MW-1R	15	6.537	0.0664	0.01715	6.55	6.38	6.66	0
Sulfate (mg/L)	MW-1R	15	170.5	49.76	12.85	150	110	289	0
Total Dissolved Solids (mg/L)	MW-1R	15	390.7	85.38	22.04	390	290	576	0

Boron



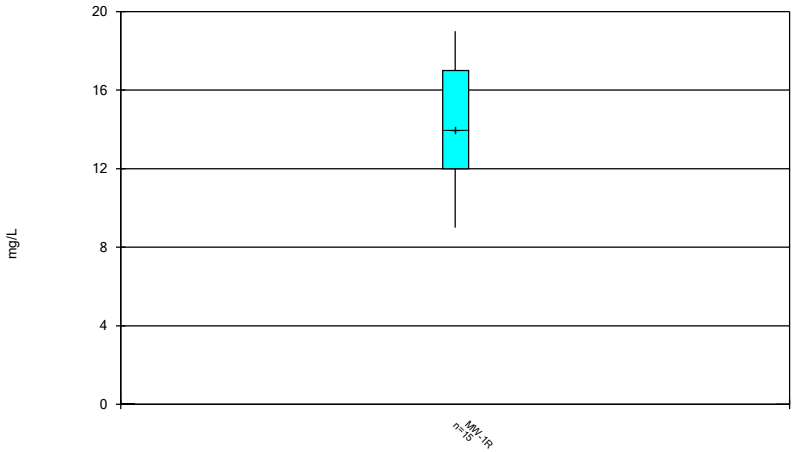
Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Calcium



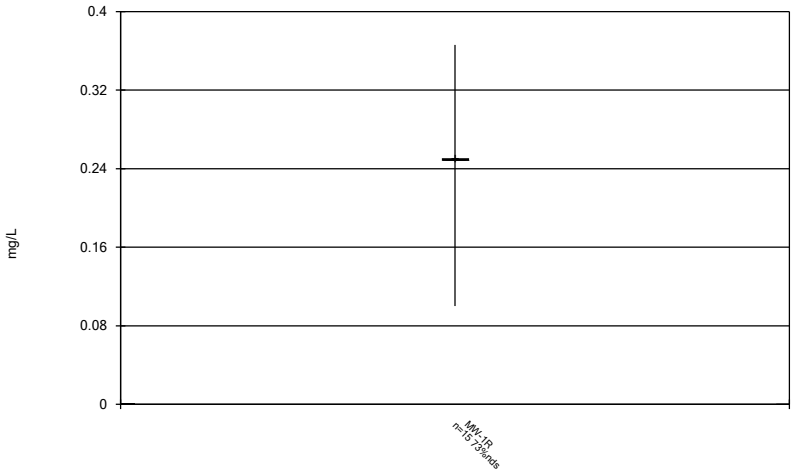
Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chloride



Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

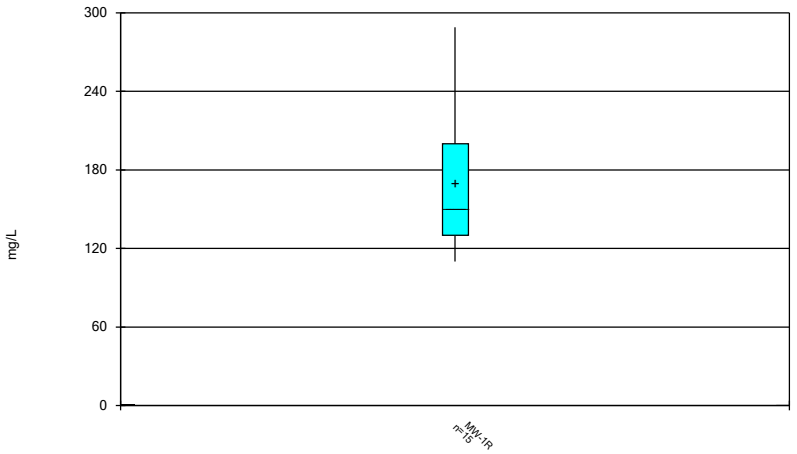


Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

pH

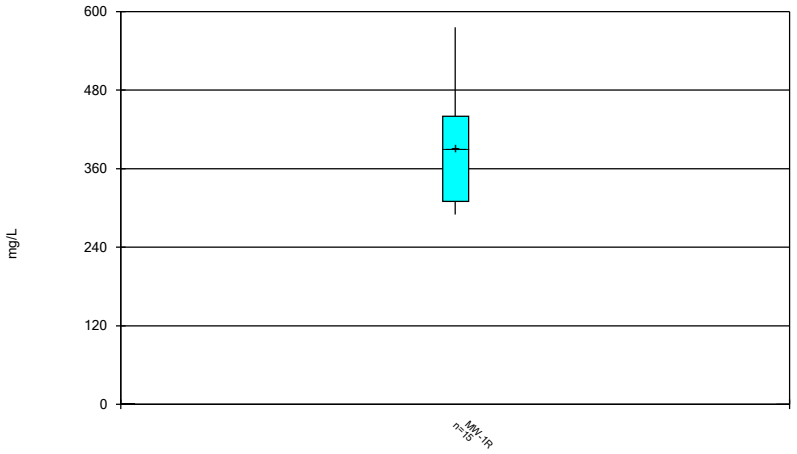
Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sulfate



Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Total Dissolved Solids



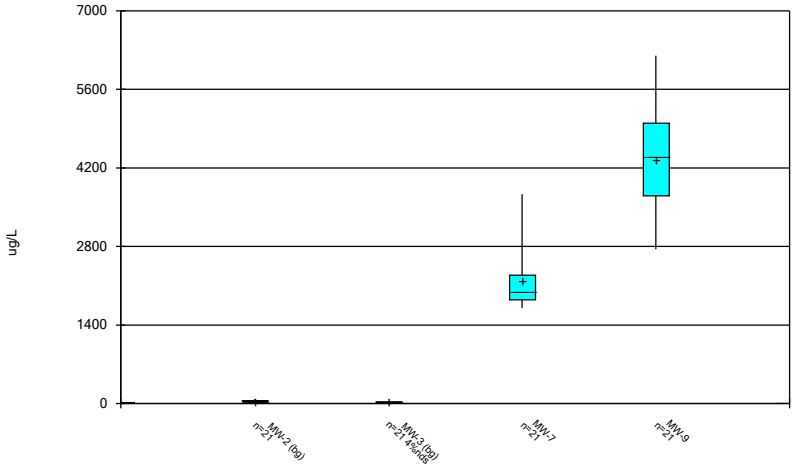
Box & Whiskers Plot Analysis Run 5/21/2025 10:44 AM View: Detection 1R 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Box & Whiskers Plot

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:42 AM

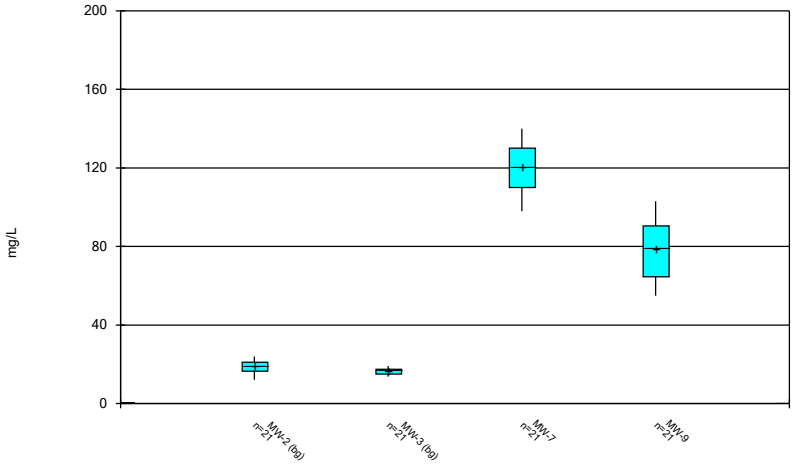
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (ug/L)	MW-2 (bg)	21	42.8	12.61	2.752	43	23	81	0
Boron (ug/L)	MW-3 (bg)	21	22.54	6.454	1.408	22	10	31	4.762
Boron (ug/L)	MW-7	21	2174	492.7	107.5	2000	1700	3730	0
Boron (ug/L)	MW-9	21	4350	918	200.3	4400	2750	6200	0
Calcium (mg/L)	MW-2 (bg)	21	18.77	2.924	0.6381	19	12	24	0
Calcium (mg/L)	MW-3 (bg)	21	16.37	1.526	0.3329	17	13.7	19	0
Calcium (mg/L)	MW-7	21	120.1	12.75	2.782	120	98	140	0
Calcium (mg/L)	MW-9	21	78.21	15.18	3.312	79	55	103	0
Chloride (mg/L)	MW-2 (bg)	21	4.335	1.552	0.3387	4.2	1.3	7.4	0
Chloride (mg/L)	MW-3 (bg)	21	1.429	0.6657	0.1453	1.3	1	4	28.57
Chloride (mg/L)	MW-7	21	6.343	3.528	0.7698	4.11	1.8	12	0
Chloride (mg/L)	MW-9	21	14.88	3.096	0.6755	15	11	21	0
Fluoride (mg/L)	MW-2 (bg)	20	0.2461	0.04795	0.01072	0.25	0.06	0.336	75
Fluoride (mg/L)	MW-3 (bg)	21	0.2718	0.05336	0.01164	0.25	0.14	0.386	57.14
Fluoride (mg/L)	MW-7	21	0.6219	0.1043	0.02277	0.63	0.375	0.794	0
Fluoride (mg/L)	MW-9	21	0.885	0.1758	0.03836	0.885	0.55	1.33	0
pH (S.U.)	MW-2 (bg)	21	6.235	0.1004	0.0219	6.23	6.09	6.51	0
pH (S.U.)	MW-3 (bg)	21	6.559	0.1311	0.02861	6.51	6.36	6.93	0
pH (S.U.)	MW-7	21	7.302	0.06418	0.01401	7.29	7.2	7.4	0
pH (S.U.)	MW-9	21	7.316	0.1399	0.03052	7.34	7	7.52	0
Sulfate (mg/L)	MW-2 (bg)	21	16.6	2.698	0.5887	17	8.7	21	0
Sulfate (mg/L)	MW-3 (bg)	21	15.1	3.597	0.785	16	10	20	4.762
Sulfate (mg/L)	MW-7	21	180.4	54.69	11.93	180	84.3	321	0
Sulfate (mg/L)	MW-9	21	200.1	39.16	8.546	213	120	250	0
Total Dissolved Solids (mg/L)	MW-2 (bg)	15	128.7	23.17	5.983	130	100	180	0
Total Dissolved Solids (mg/L)	MW-3 (bg)	21	121.8	22.19	4.842	120	90	160	0
Total Dissolved Solids (mg/L)	MW-7	21	489	58.04	12.67	480	390	638	0
Total Dissolved Solids (mg/L)	MW-9	21	491.2	70.66	15.42	510	330	630	0

Boron



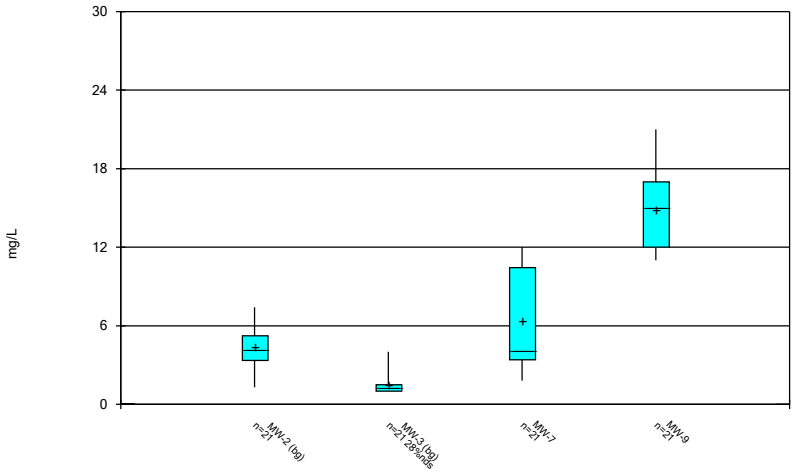
Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Calcium



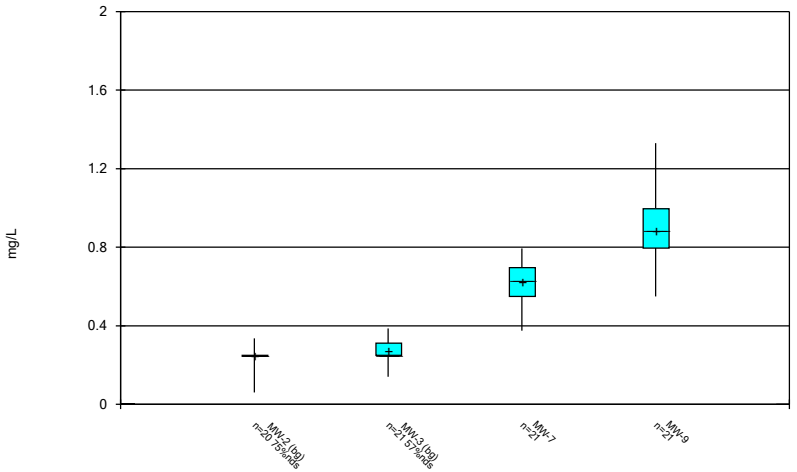
Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chloride



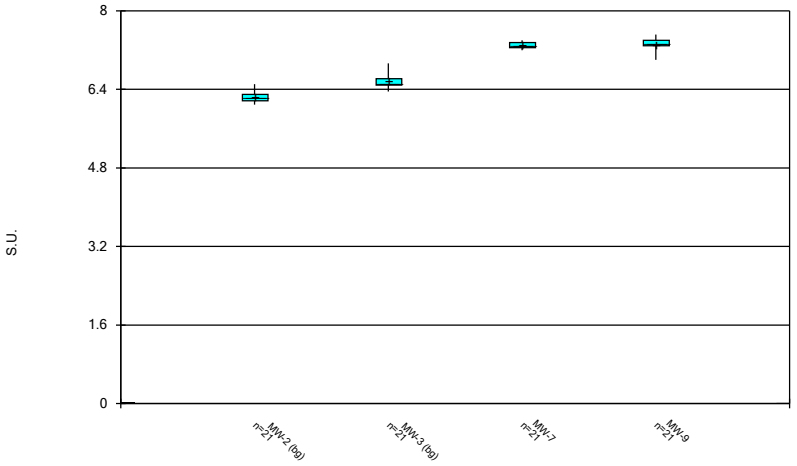
Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride



Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

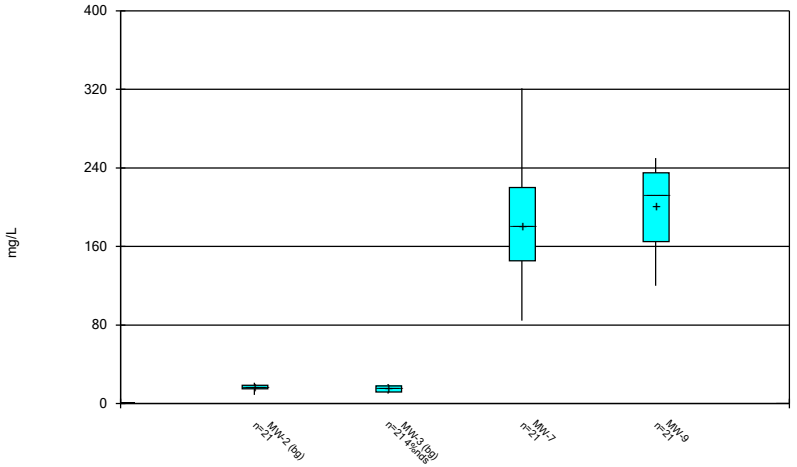
pH



Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

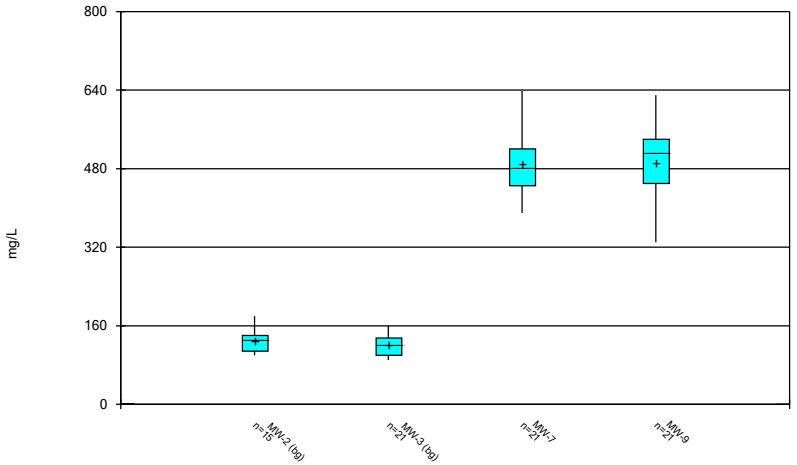
Sulfate



Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Total Dissolved Solids



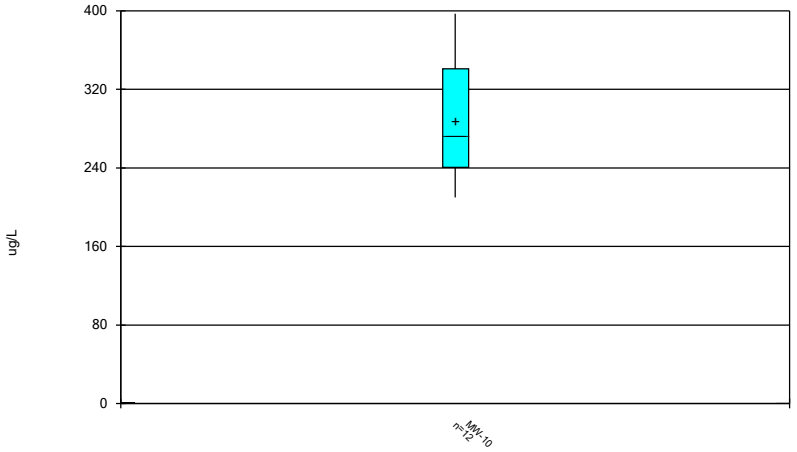
Box & Whiskers Plot Analysis Run 5/21/2025 10:40 AM View: Detection 237&9 n=13 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Box & Whiskers Plot

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:48 AM

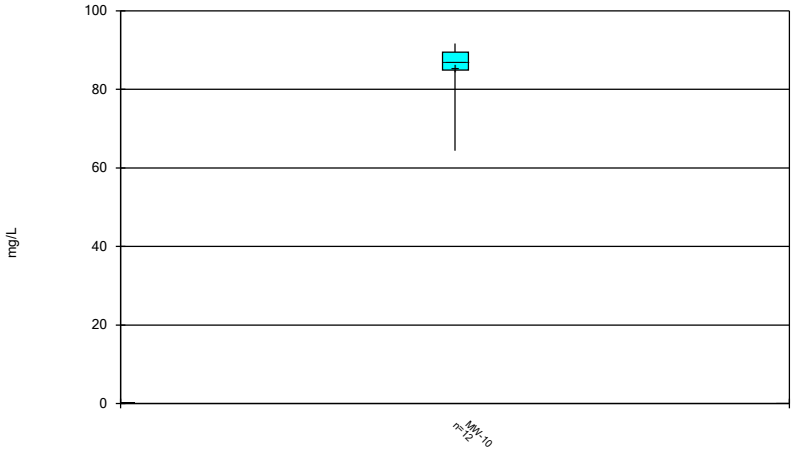
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Boron (ug/L)	MW-10	12	288.4	61.29	17.69	273.5	210	397	0
Calcium (mg/L)	MW-10	12	85.47	7.276	2.1	87.05	64.4	91.7	0
Chloride (mg/L)	MW-10	12	16.59	4.589	1.325	18.5	8	21	0
Fluoride (mg/L)	MW-10	12	0.2925	0.04615	0.01332	0.29	0.24	0.42	8.333
pH (S.U.)	MW-10	12	6.966	0.1227	0.03541	6.955	6.79	7.21	0
Sulfate (mg/L)	MW-10	12	149.4	31.34	9.046	162.5	86.3	187	0
Total Dissolved Solids (mg/L)	MW-10	12	418.3	44.17	12.75	416	338	490	0

Boron



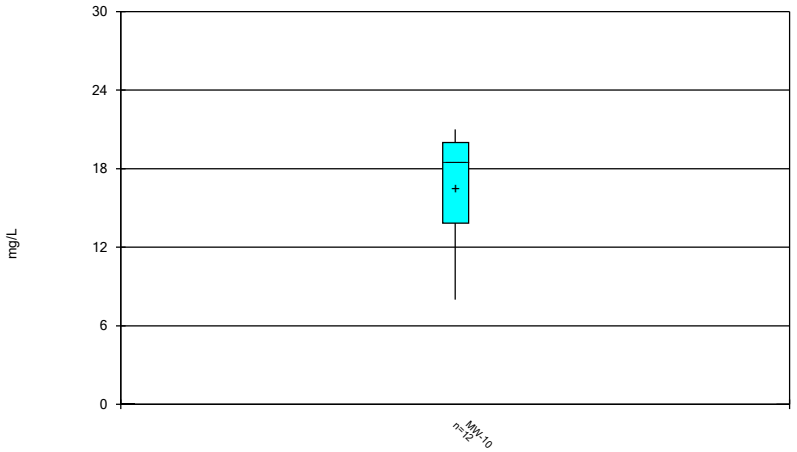
Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Calcium



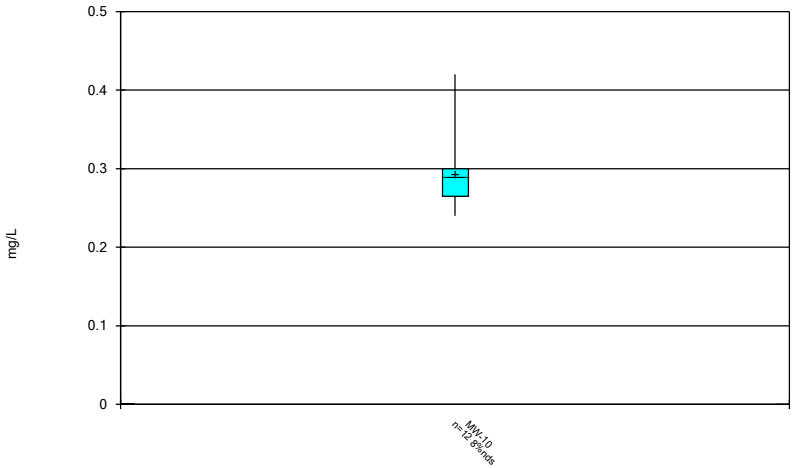
Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chloride



Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

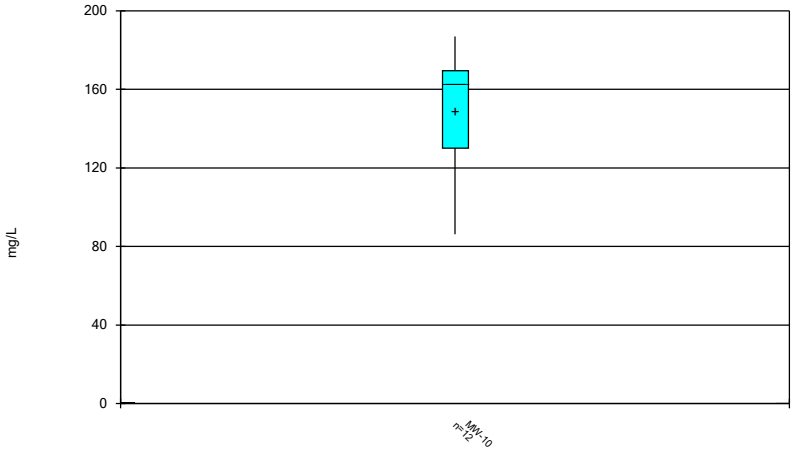


Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

pH

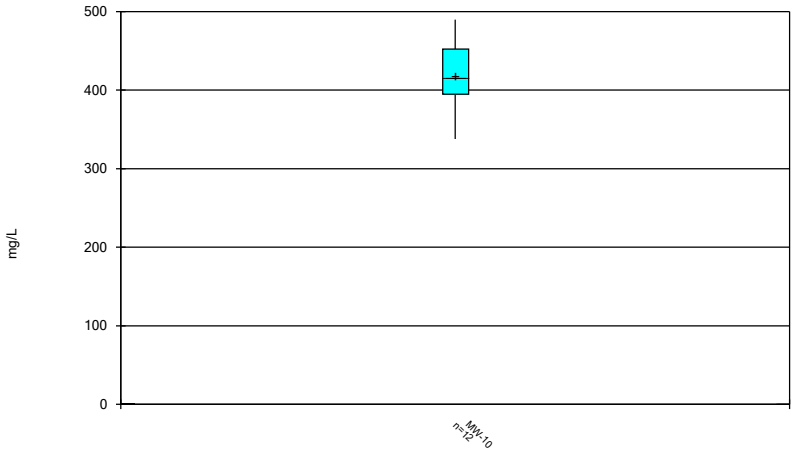
Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sulfate



Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Total Dissolved Solids



Box & Whiskers Plot Analysis Run 5/21/2025 10:47 AM View: Detection 10 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 8

Prediction Limit Charts – Detection Constituents

Appendix 8

Prediction Limit Charts – Detection Constituents
12th CCR Compliance Sampling Event
(2nd 2024 Semi-annual Detection Monitoring Event)
(September 25, 2024)

Prediction Limit

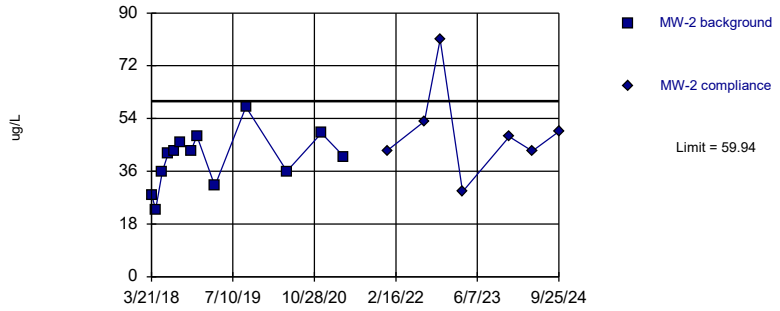
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:58 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-2	59.94	n/a	9/25/2024	49.6	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-3	33.39	n/a	9/25/2024	12	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-7	2352	n/a	9/25/2024	1800	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-9	6408	n/a	9/25/2024	4140	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-2	24.21	n/a	9/25/2024	21	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-3	19.08	n/a	9/25/2024	15.2	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-7	144	n/a	9/25/2024	98	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-9	97.23	n/a	9/25/2024	88.9	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-2	7.525	n/a	9/25/2024	4.95	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-3	1.641	n/a	9/25/2024	2.3J	No	13	7.692	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-7	14.94	n/a	9/25/2024	4.11	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-9	22.51	n/a	9/25/2024	14.4	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.272	n/a	9/25/2024	0.25ND	No	11	81.82	n/a	0.01276	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-3	0.386	n/a	9/25/2024	0.25ND	No	13	46.15	n/a	0.009692	NP Intra (normality) ...
Fluoride (mg/L)	MW-7	0.831	n/a	9/25/2024	0.58	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-9	1.101	n/a	9/25/2024	0.55	No	13	0	No	0.002505	Param Intra 1 of 2
pH (S.U.)	MW-2	6.405	6.013	9/25/2024	6.24	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	**MW-3**	**6.626**	**6.359**	**9/25/2024**	**6.82**	**Yes**	**13**	**0**	**No**	**0.001253**	**Param Intra 1 of 2**
pH (S.U.)	MW-7	7.42	7.148	9/25/2024	7.4	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	**MW-9**	**7.477**	**7.237**	**9/25/2024**	**7.06**	**Yes**	**13**	**0**	**No**	**0.001253**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-2	21.42	n/a	9/25/2024	14.4	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	21.29	n/a	9/25/2024	10ND	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	259	n/a	9/25/2024	84.3	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-9	279.2	n/a	9/25/2024	216	No	13	0	x^2	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	171.5	n/a	9/25/2024	108	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	166.7	n/a	9/25/2024	98	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	584.1	n/a	9/25/2024	420	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-9	653	n/a	9/25/2024	508	No	13	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=40.31, Std. Dev.=9.455, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.98, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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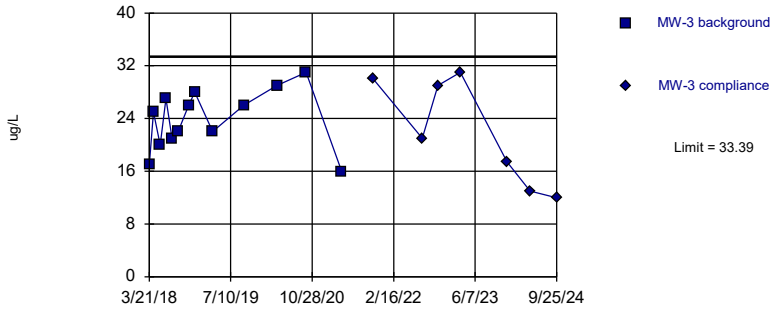
Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=23.85, Std. Dev.=4.598, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9639, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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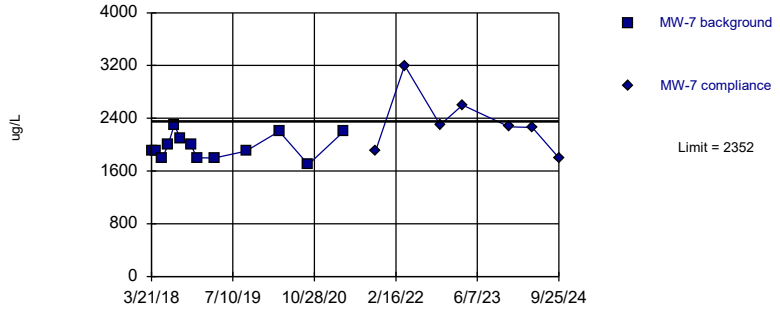
Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=1969, Std. Dev.=184.3, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9386, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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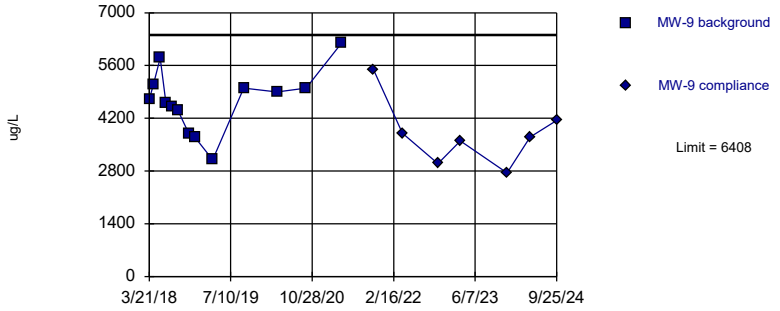
Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=4677, Std. Dev.=833.8, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9713, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

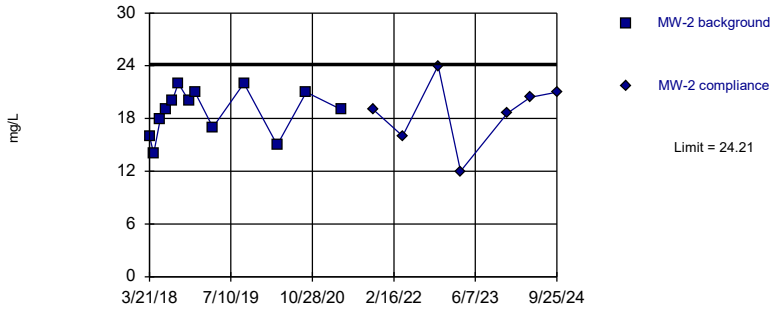
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=18.77, Std. Dev.=2.619, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.936, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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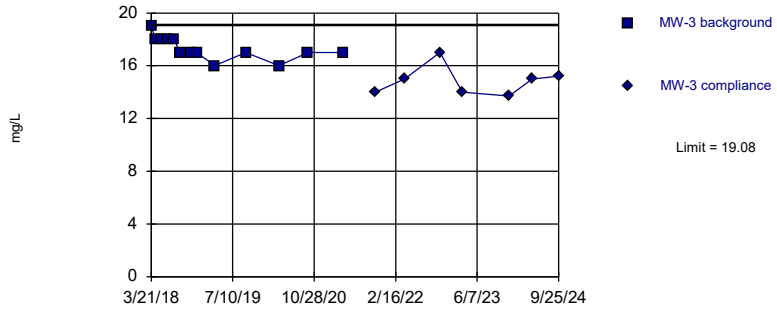
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=17.31, Std. Dev.=0.8549, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8905, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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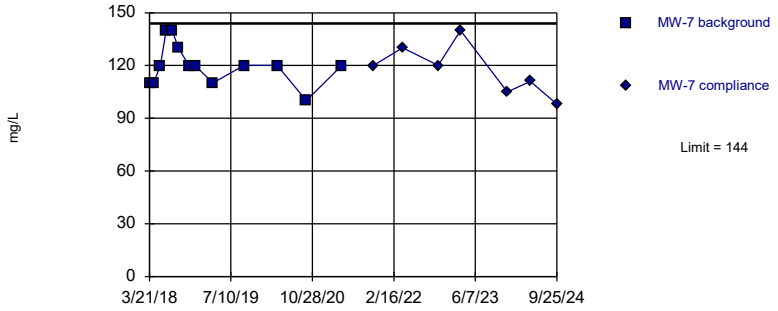
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=120, Std. Dev.=11.55, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8997, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

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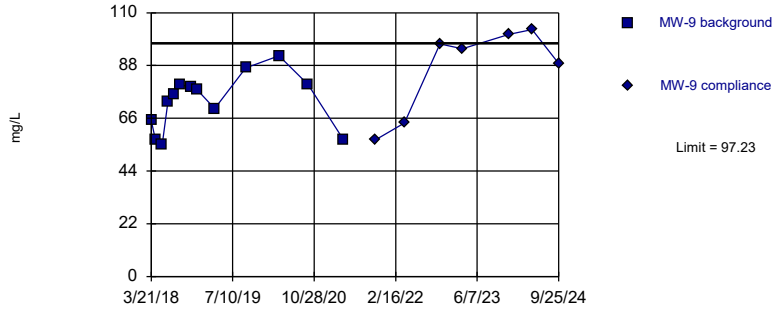
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=73, Std. Dev.=11.67, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.939, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

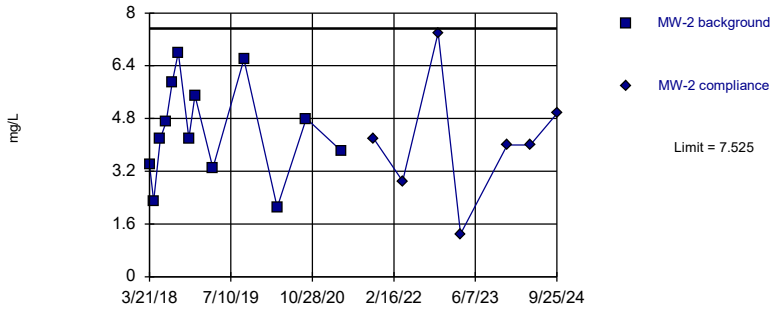
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=4.431, Std. Dev.=1.49, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.965, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

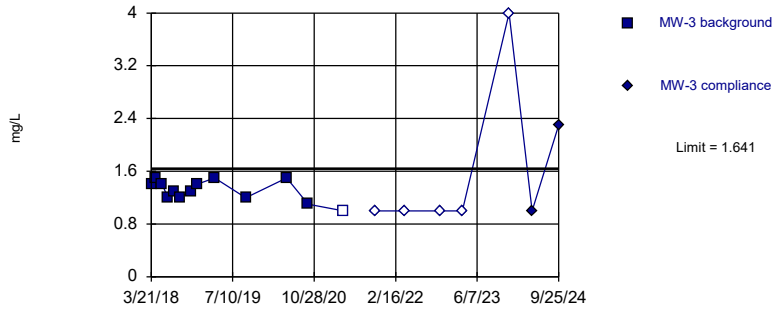
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=1.308, Std. Dev.=0.1605, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.925, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

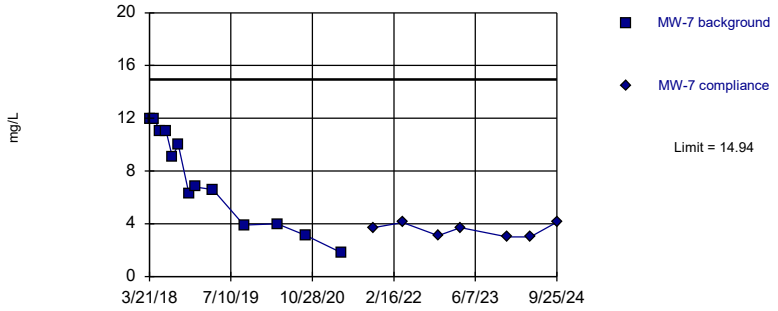
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=7.508, Std. Dev.=3.578, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9179, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

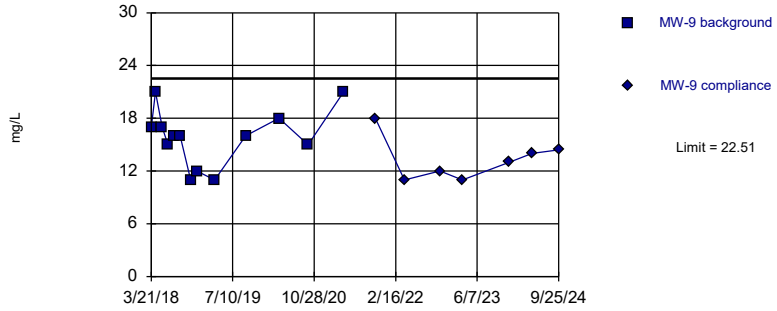
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=15.85, Std. Dev.=3.211, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9243, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

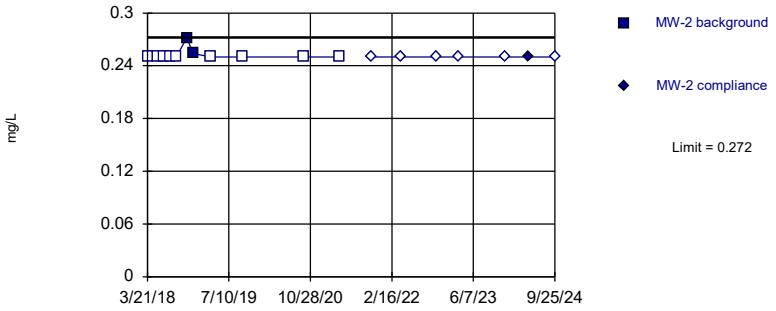
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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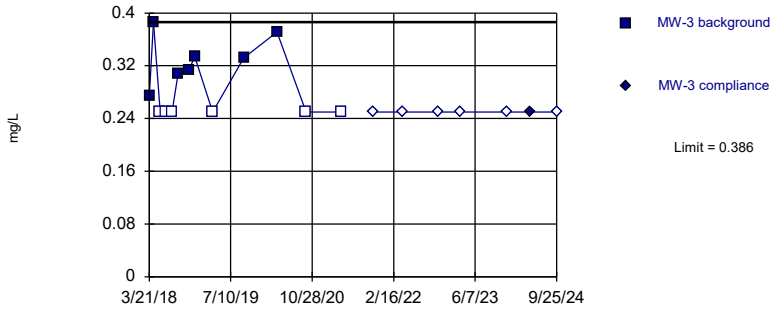
Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 13 background values. 46.15% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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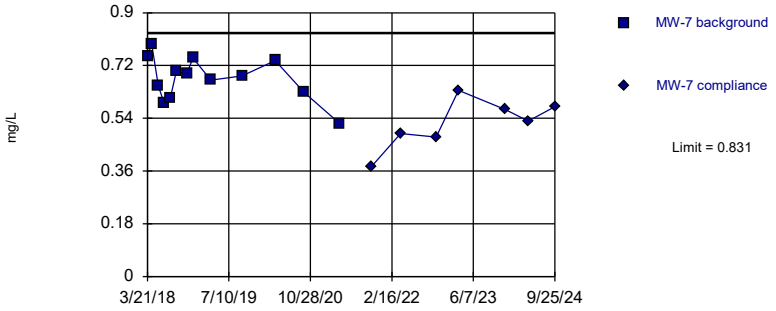
Within Limit

Fluoride

Intrawell Parametric



Background Data Summary: Mean=0.6751, Std. Dev.=0.07508, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9808, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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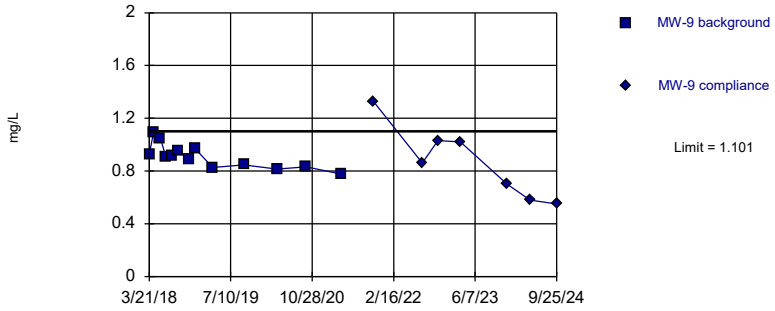
Within Limit

Fluoride

Intrawell Parametric



Background Data Summary: Mean=0.9082, Std. Dev.=0.09266, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9545, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

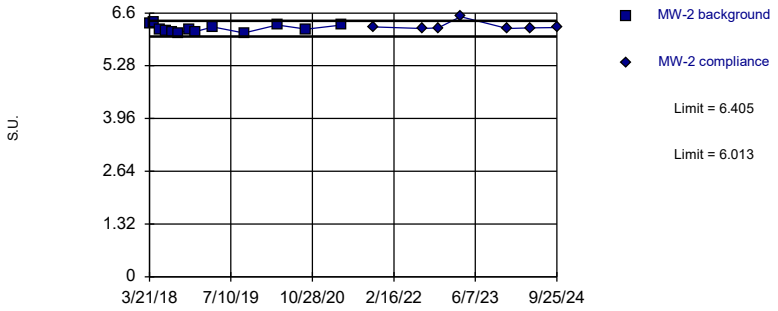
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.209, Std. Dev.=0.09429, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.922, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

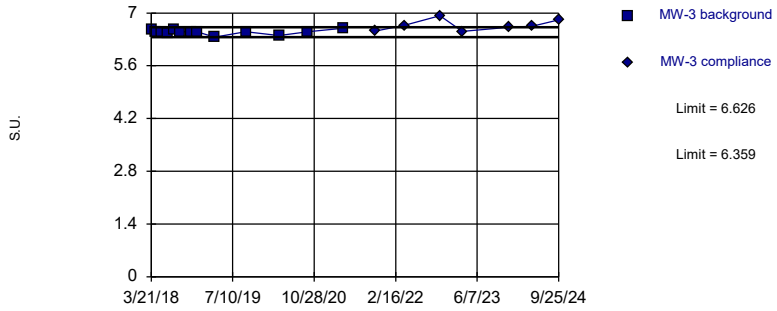
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.492, Std. Dev.=0.06418, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

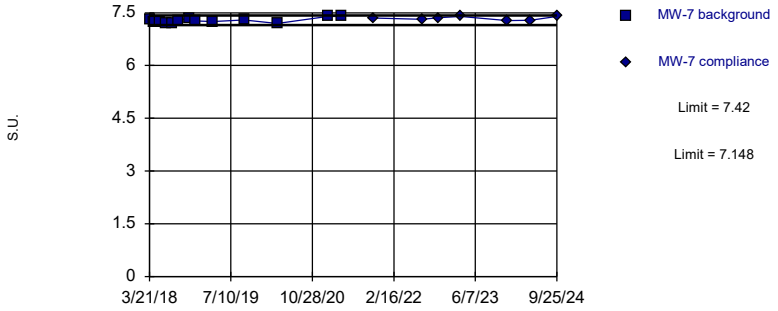
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=7.284, Std. Dev.=0.06552, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9081, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

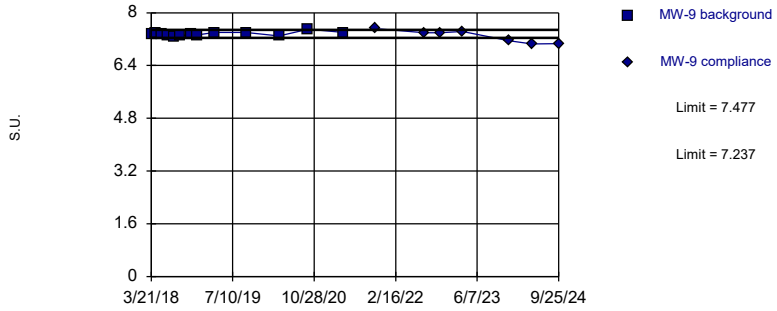
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH

Intrawell Parametric



Background Data Summary: Mean=7.357, Std. Dev.=0.05793, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.91, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

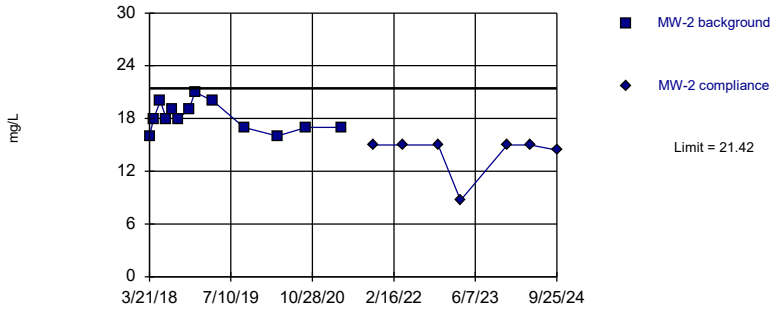
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=18.15, Std. Dev.=1.573, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

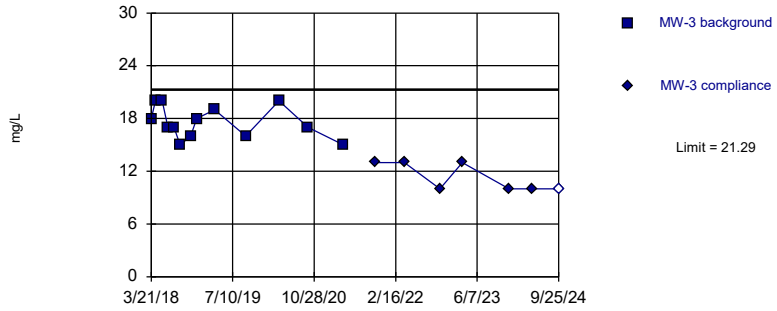
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=17.54, Std. Dev.=1.808, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9124, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

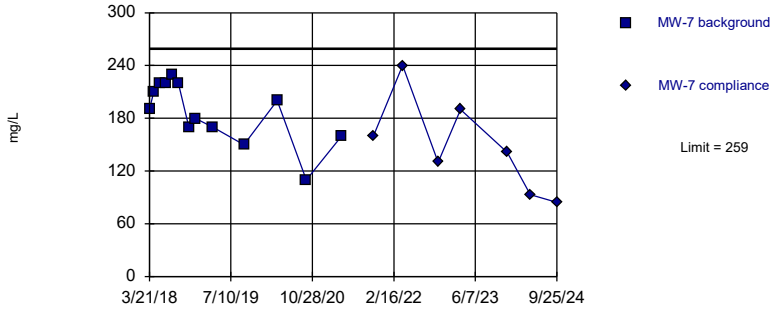
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=186.9, Std. Dev.=34.73, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9305, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

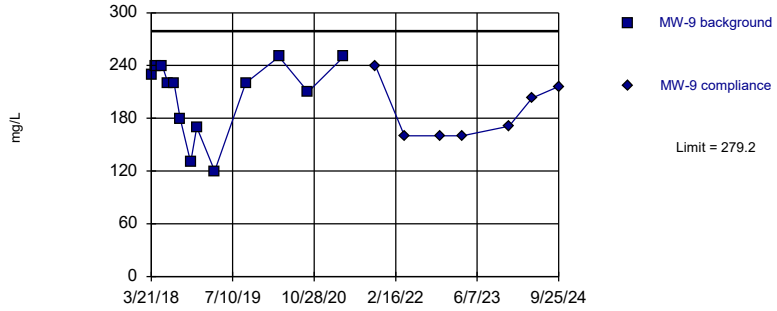
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=44231, Std. Dev.=16238, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

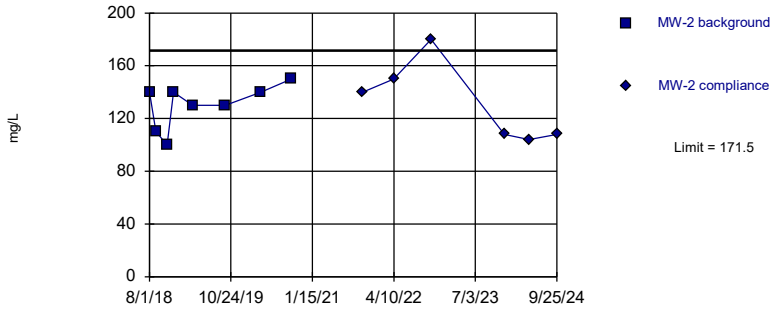
Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=130, Std. Dev.=16.9, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8844, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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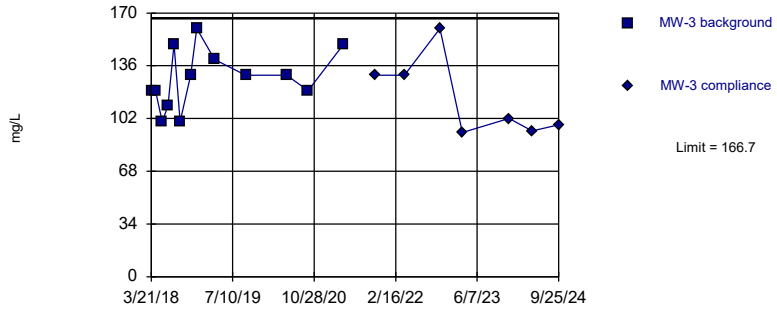
Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=127.7, Std. Dev.=18.78, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9524, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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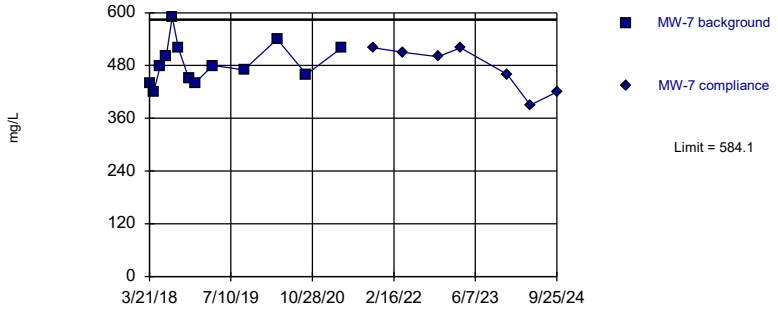
Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=485.4, Std. Dev.=47.54, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9501, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

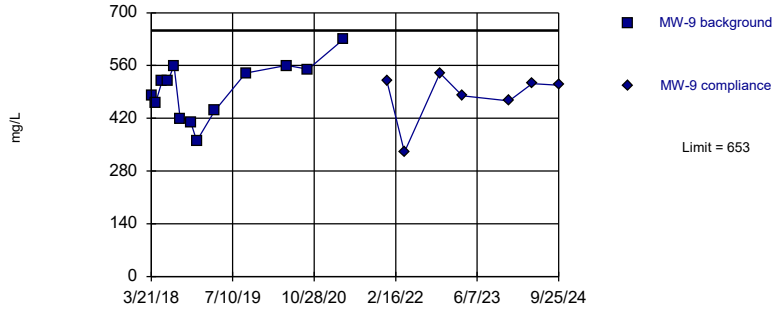
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=496.2, Std. Dev.=75.56, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9721, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:57 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Prediction Limit

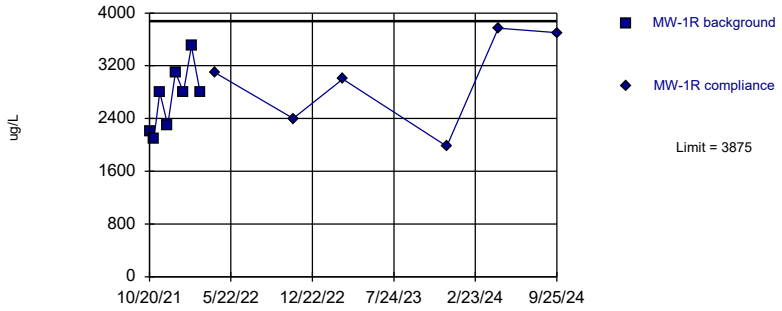
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/1/2025, 12:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-1R	3875	n/a	9/25/2024	3700	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-1R	112.4	n/a	9/25/2024	103	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-1R	21.7	n/a	9/25/2024	16.6	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-1R	0.366	n/a	9/25/2024	0.25ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
pH (S.U.)	**MW-1R**	**6.58**	**6.48**	**9/25/2024**	**6.46**	**Yes**	**8**	**0**	**n/a**	**0.04288**	**NP Intra (normality) ...**
Sulfate (mg/L)	MW-1R	249.2	n/a	9/25/2024	242	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	**MW-1R**	**512.1**	**n/a**	**9/25/2024**	**520**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=2700, Std. Dev.=478.1, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.929, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

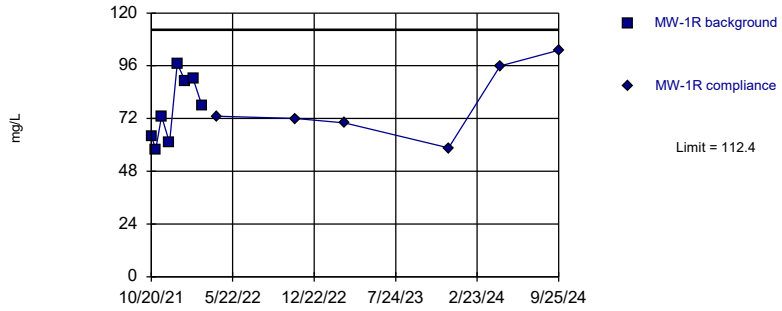
Prediction Limit Analysis Run 5/1/2025 12:39 PM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=76.25, Std. Dev.=14.69, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9262, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

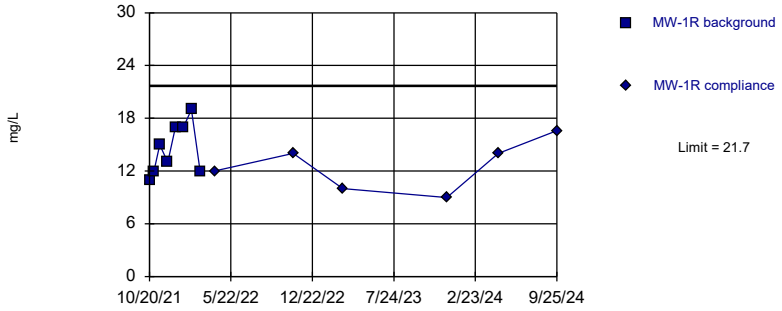
Prediction Limit Analysis Run 5/1/2025 12:39 PM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=14.5, Std. Dev.=2.928, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9145, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/1/2025 12:39 PM View: Detection 1R 5.1.2025

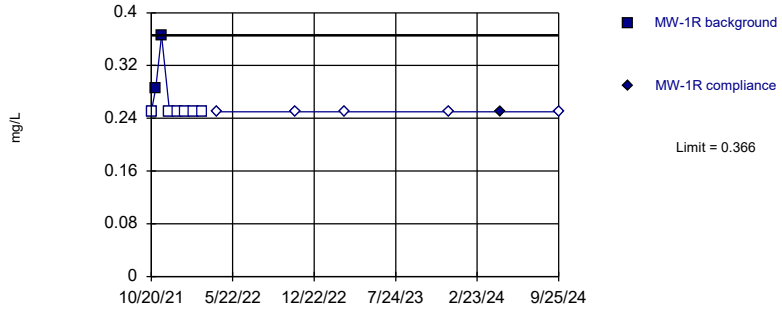
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

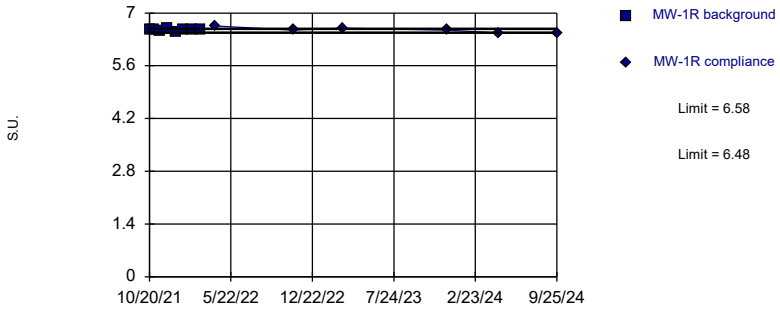
Prediction Limit Analysis Run 5/1/2025 12:39 PM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

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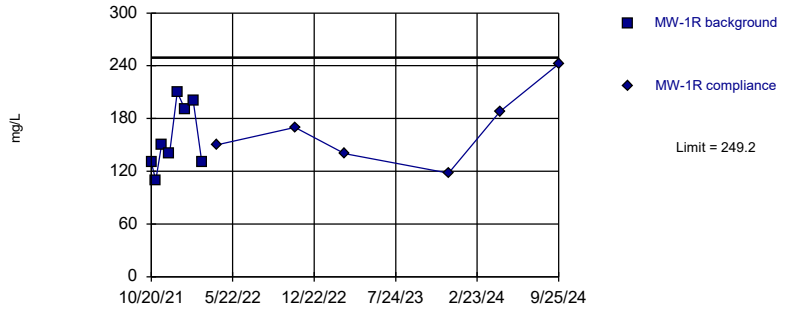
Within Limit

Sulfate

Intrawell Parametric



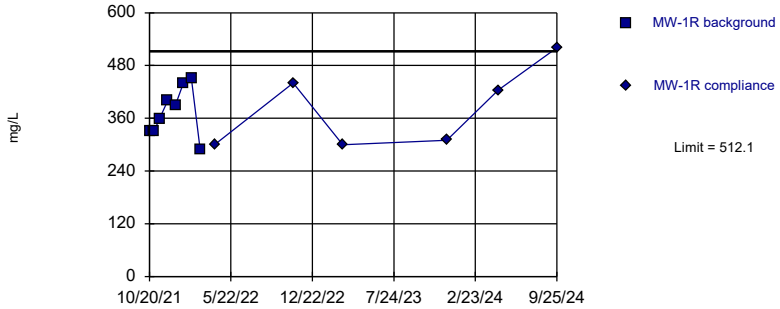
Background Data Summary: Mean=157.5, Std. Dev.=37.32, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9002, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Sanitas™ v.10.0.24 Software licensed to GREDELL Engineering. UG

Exceeds Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=373.8, Std. Dev.=56.3, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9544, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit

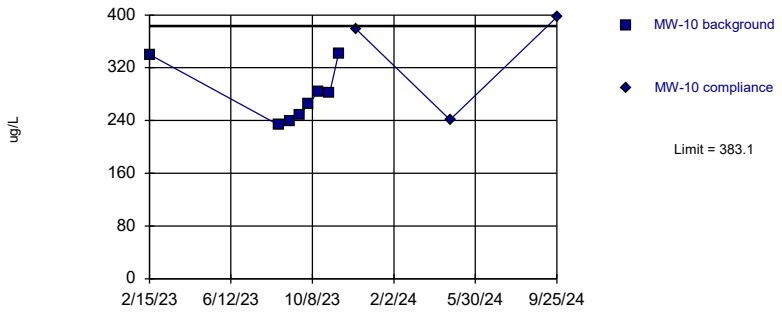
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:26 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	**MW-10**	**383.1**	**n/a**	**9/25/2024**	**397**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Calcium (mg/L)	MW-10	94.97	n/a	9/25/2024	64.4	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-10	24.59	n/a	9/25/2024	13.7	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.42	n/a	9/25/2024	0.28	No	8	12.5	n/a	0.02144	NP Intra (normality) ...
pH (S.U.)	**MW-10**	**7.143**	**6.684**	**9/25/2024**	**7.21**	**Yes**	**8**	**0**	**No**	**0.001253**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-10	215.5	n/a	9/25/2024	106	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	530.8	n/a	9/25/2024	338	No	8	0	No	0.002505	Param Intra 1 of 2

Exceeds Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=279.4, Std. Dev.=42.18, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8794, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

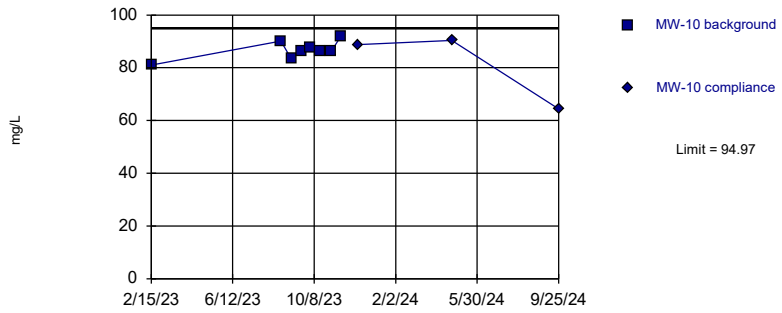
Prediction Limit Analysis Run 5/21/2025 10:23 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=86.64, Std. Dev.=3.388, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9628, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

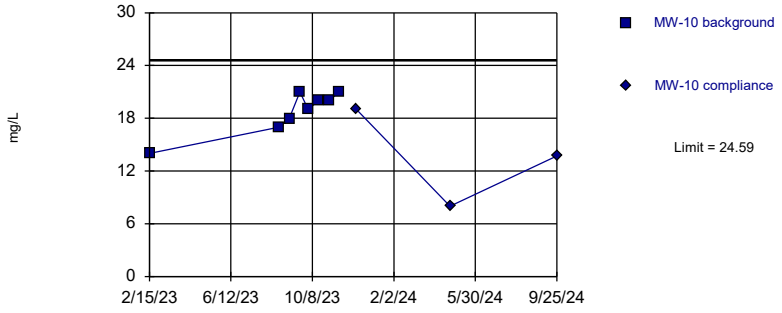
Prediction Limit Analysis Run 5/21/2025 10:23 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=18.75, Std. Dev.=2.375, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8833, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:23 AM View: Detection 10 5.1.2025

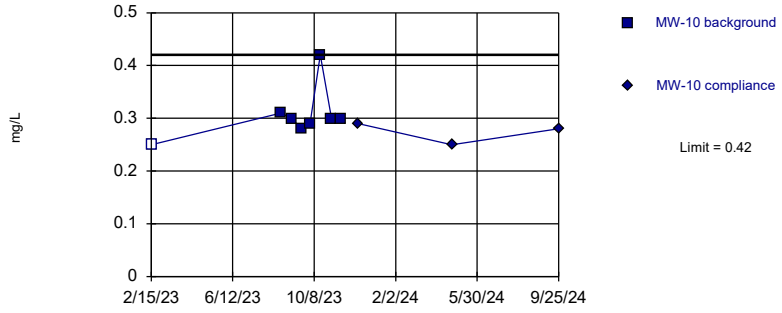
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limit is highest of 8 background values. 12.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

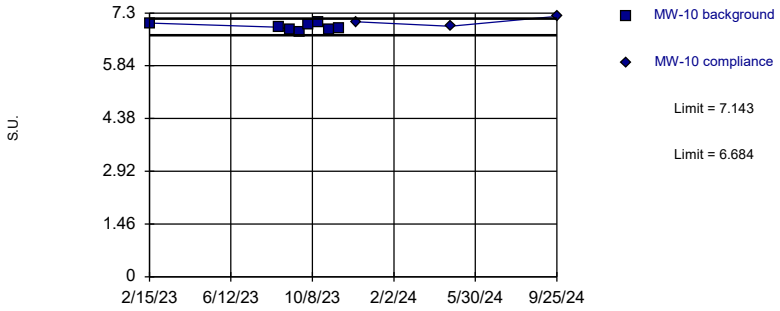
Prediction Limit Analysis Run 5/21/2025 10:23 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.914, Std. Dev.=0.09334, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9382, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

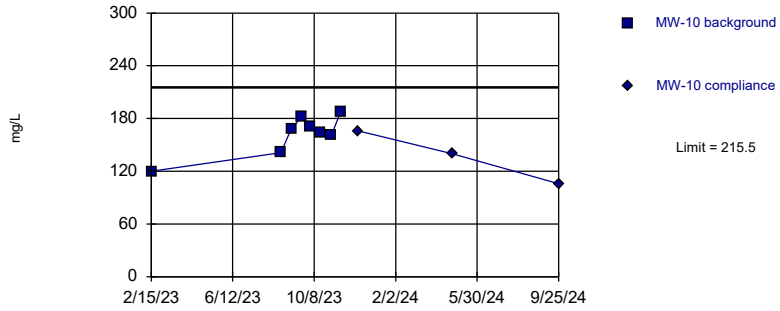
Prediction Limit Analysis Run 5/21/2025 10:24 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=161.8, Std. Dev.=21.88, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9187, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

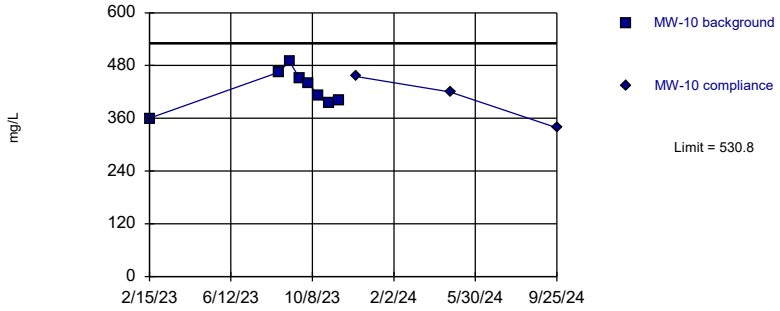
Prediction Limit Analysis Run 5/21/2025 10:24 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=426.4, Std. Dev.=42.49, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9823, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:24 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 8

Prediction Limit Charts – Detection Constituents
13th CCR Compliance Sampling Event
(1st 2025 Semi-annual Detection
and Assessment Monitoring Event)
May 6, 2025

Prediction Limit

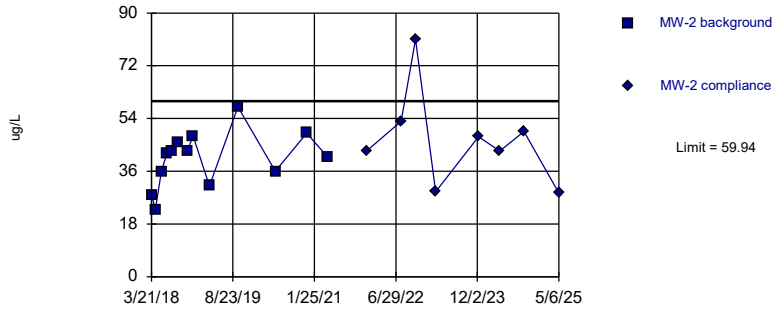
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:00 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-2	59.94	n/a	5/6/2025	28.6	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-3	33.39	n/a	5/6/2025	10ND	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	**MW-7**	**2352**	**n/a**	**5/6/2025**	**3730**	**Yes**	**13**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Boron (ug/L)	MW-9	6408	n/a	5/6/2025	4060	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-2	24.21	n/a	5/6/2025	19.1	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-3	19.08	n/a	5/6/2025	14.8	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-7	144	n/a	5/6/2025	139	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-9	97.23	n/a	5/6/2025	87.5	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-2	7.525	n/a	5/6/2025	4.68	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-3	1.641	n/a	5/6/2025	1.7J	No	13	7.692	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-7	14.94	n/a	5/6/2025	10.9	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-9	22.51	n/a	5/6/2025	13.1	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.272	n/a	5/6/2025	0.06J	No	11	81.82	n/a	0.01276	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-3	0.386	n/a	5/6/2025	0.14J	No	13	46.15	n/a	0.009692	NP Intra (normality) ...
Fluoride (mg/L)	MW-7	0.831	n/a	5/6/2025	0.63	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-9	1.101	n/a	5/6/2025	0.71	No	13	0	No	0.002505	Param Intra 1 of 2
pH (S.U.)	MW-2	6.405	6.013	5/6/2025	6.33	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-3	6.626	6.359	5/6/2025	6.61	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-7	7.42	7.148	5/6/2025	7.27	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	**MW-9**	**7.477**	**7.237**	**5/6/2025**	**7**	**Yes**	**13**	**0**	**No**	**0.001253**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-2	21.42	n/a	5/6/2025	14.5	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	21.29	n/a	5/6/2025	10.1	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	**MW-7**	**259**	**n/a**	**5/6/2025**	**321**	**Yes**	**13**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Sulfate (mg/L)	MW-9	279.2	n/a	5/6/2025	213	No	13	0	x^2	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	171.5	n/a	5/6/2025	100	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	166.7	n/a	5/6/2025	90	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	**MW-7**	**584.1**	**n/a**	**5/6/2025**	**638**	**Yes**	**13**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Total Dissolved Solids (mg/L)	MW-9	653	n/a	5/6/2025	510	No	13	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=40.31, Std. Dev.=9.455, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.98, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

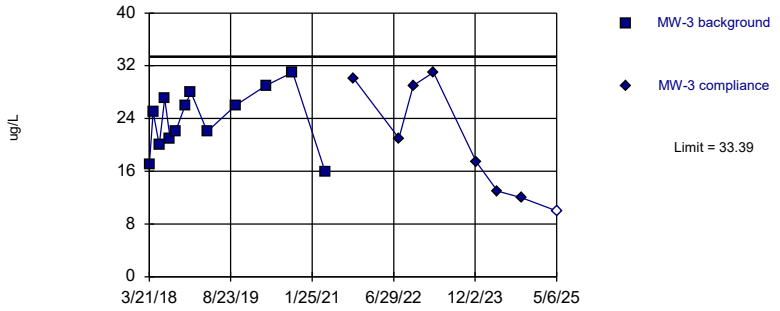
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=23.85, Std. Dev.=4.598, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9639, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

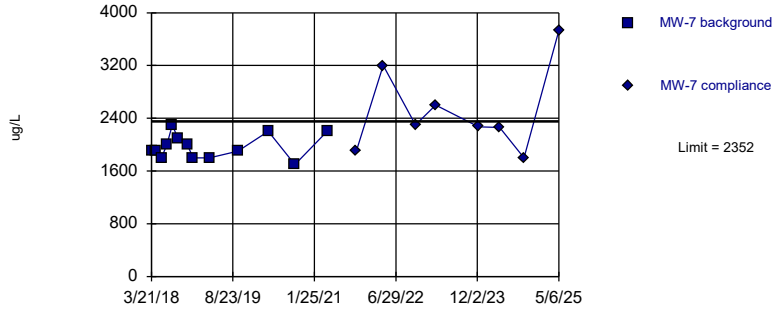
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=1969, Std. Dev.=184.3, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9386, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

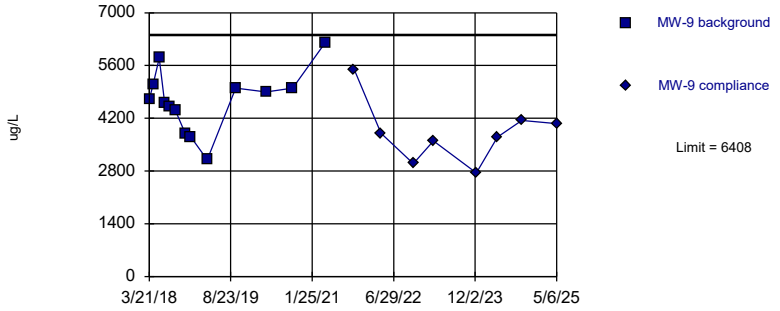
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=4677, Std. Dev.=833.8, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9713, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

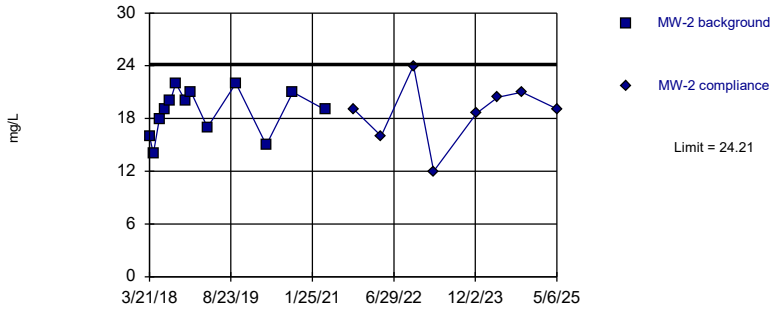
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=18.77, Std. Dev.=2.619, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.936, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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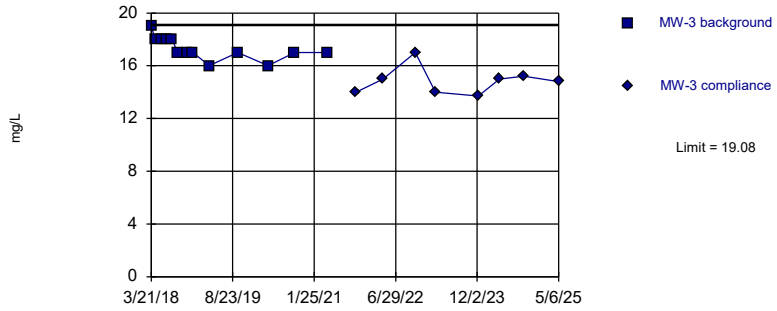
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=17.31, Std. Dev.=0.8549, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8905, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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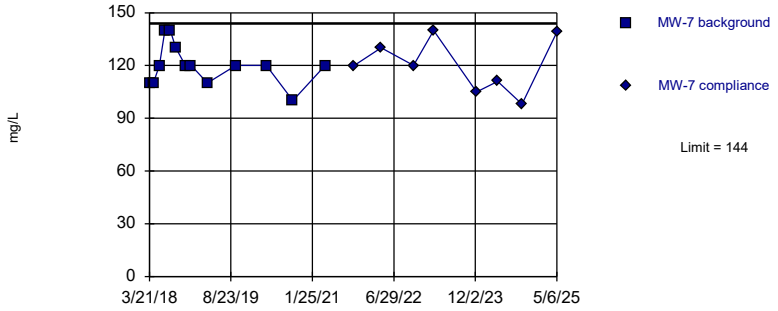
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=120, Std. Dev.=11.55, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8997, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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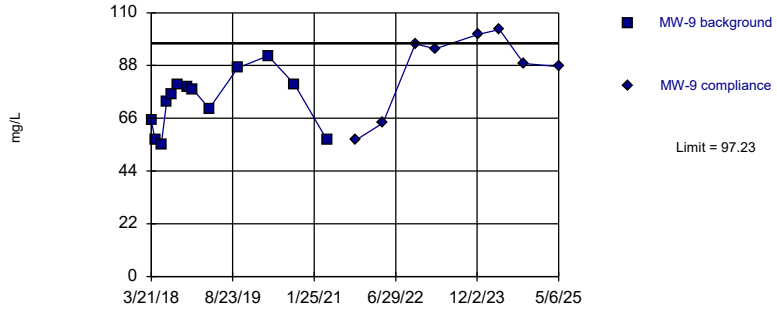
Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=73, Std. Dev.=11.67, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.939, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

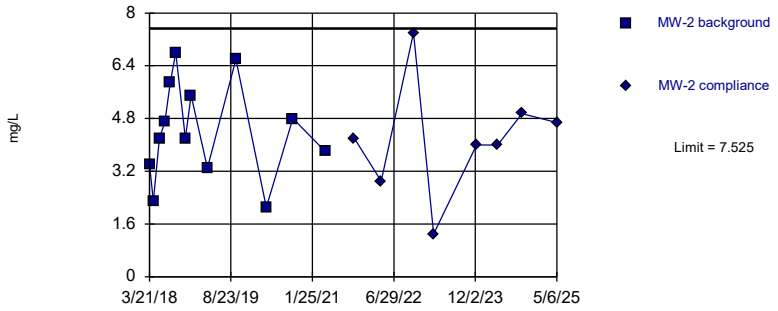
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=4.431, Std. Dev.=1.49, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.965, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

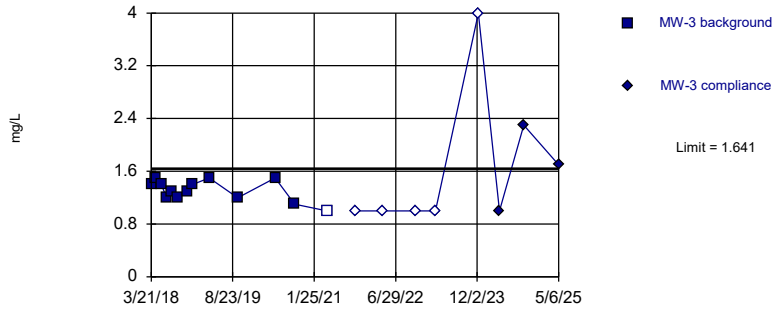
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=1.308, Std. Dev.=0.1605, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.925, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

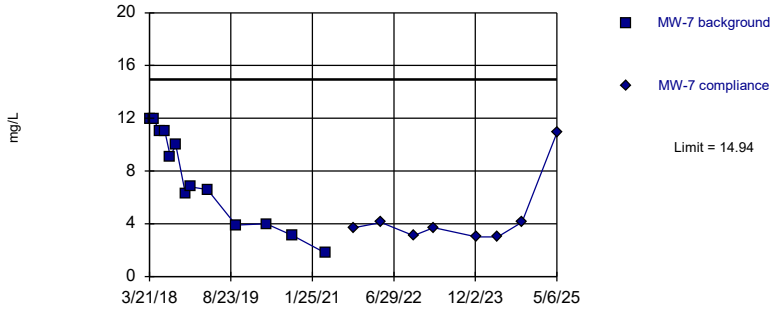
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=7.508, Std. Dev.=3.578, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9179, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

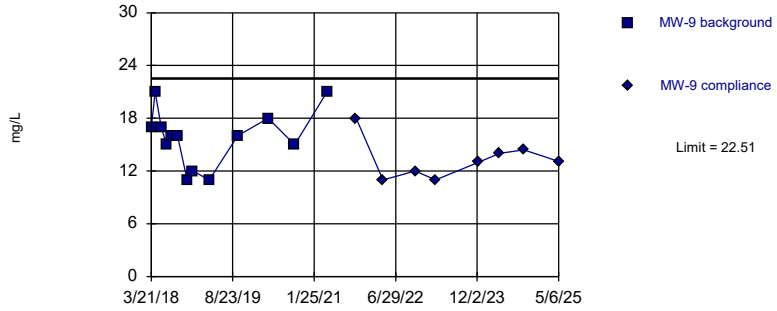
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=15.85, Std. Dev.=3.211, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9243, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

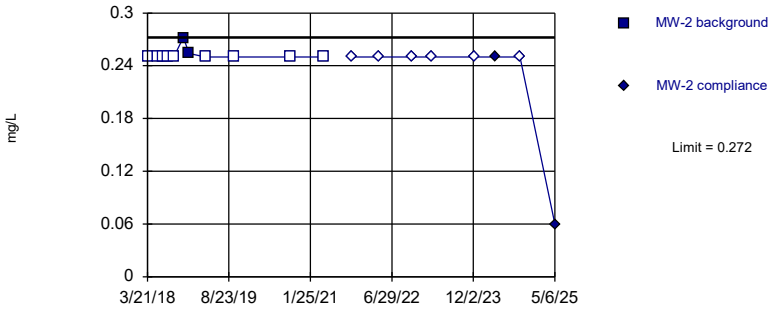
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

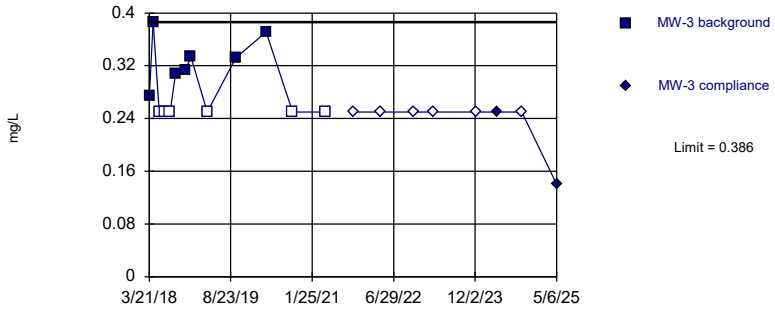
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 13 background values. 46.15% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

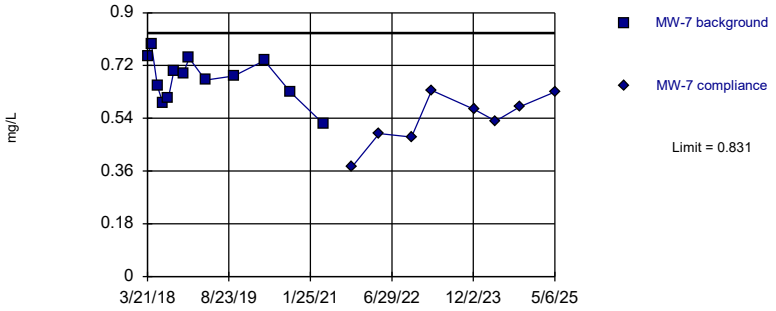
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Fluoride

Intrawell Parametric



Background Data Summary: Mean=0.6751, Std. Dev.=0.07508, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9808, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

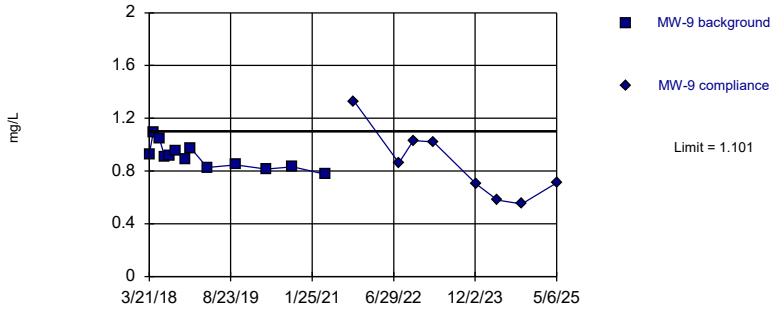
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Fluoride

Intrawell Parametric



Background Data Summary: Mean=0.9082, Std. Dev.=0.09266, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9545, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

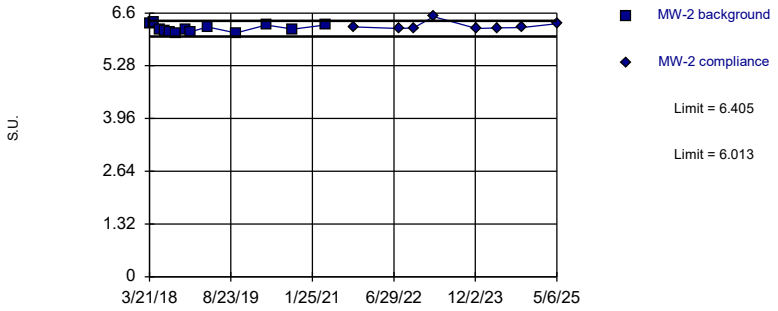
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.209, Std. Dev.=0.09429, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.922, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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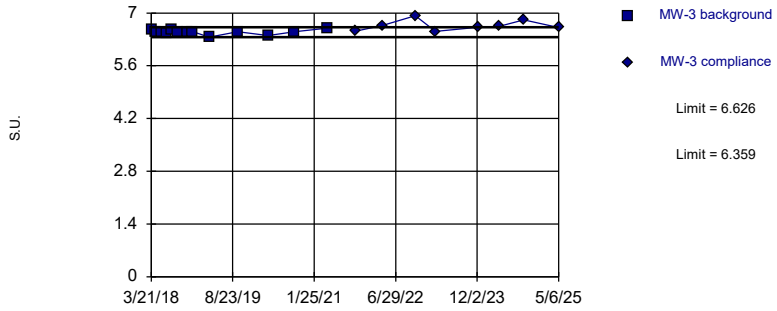
Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.492, Std. Dev.=0.06418, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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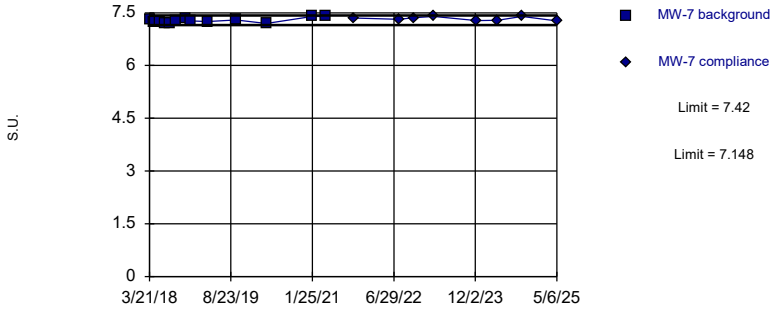
Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=7.284, Std. Dev.=0.06552, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9081, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

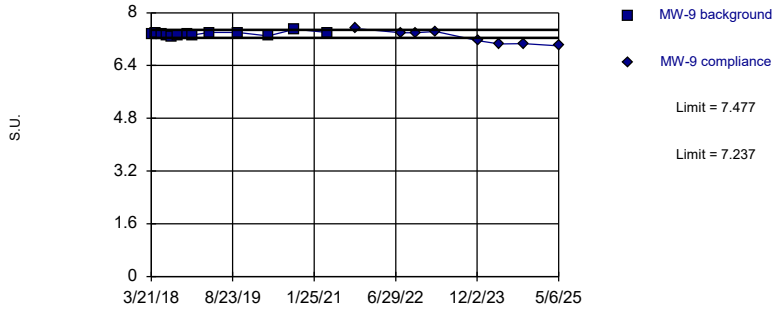
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Exceeds Limits

pH

Intrawell Parametric



Background Data Summary: Mean=7.357, Std. Dev.=0.05793, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.91, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

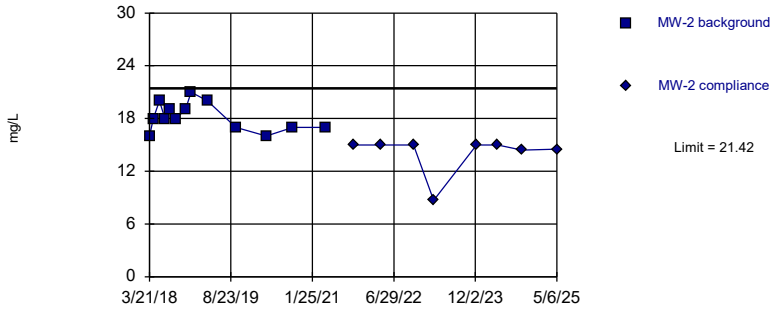
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=18.15, Std. Dev.=1.573, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

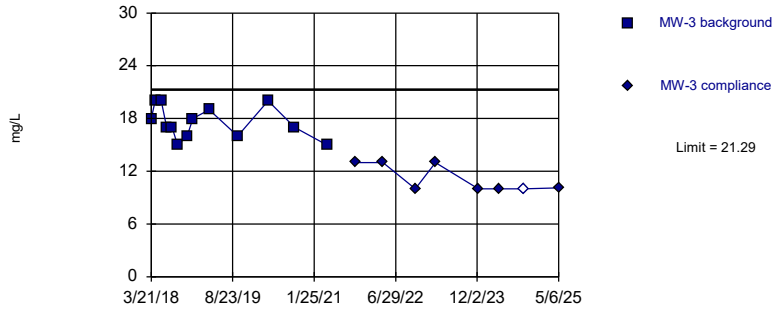
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=17.54, Std. Dev.=1.808, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9124, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

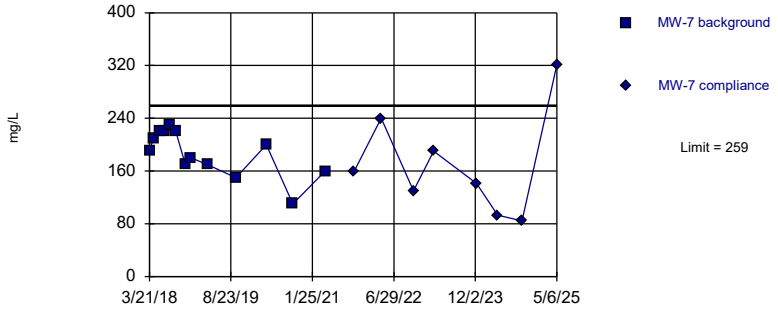
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=186.9, Std. Dev.=34.73, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9305, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

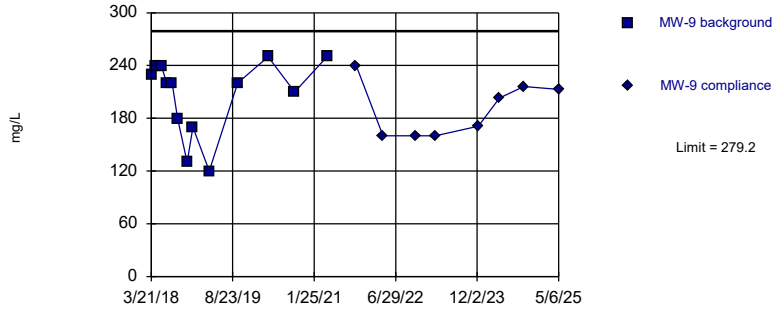
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=44231, Std. Dev.=16238, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

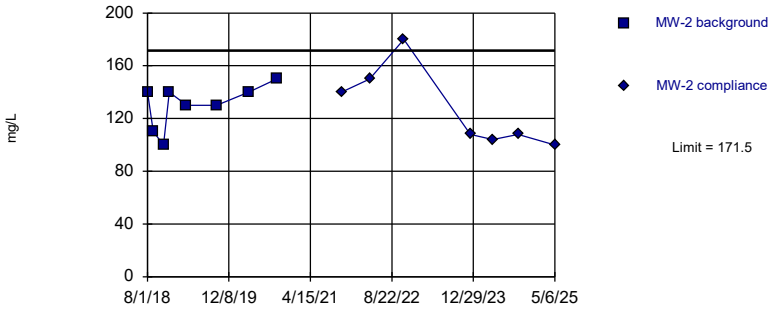
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=130, Std. Dev.=16.9, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8844, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

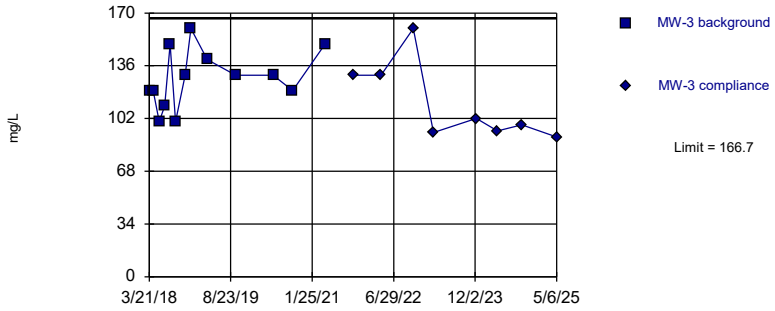
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=127.7, Std. Dev.=18.78, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9524, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

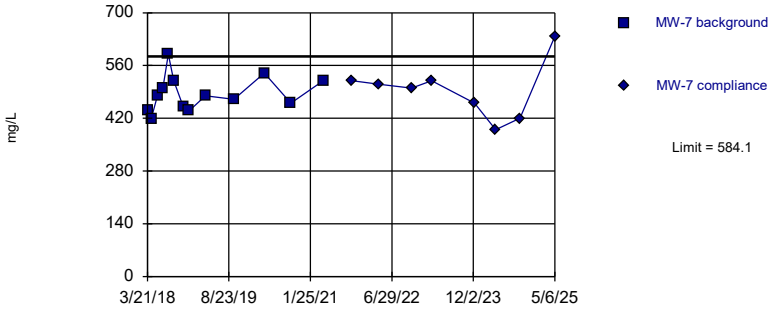
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=485.4, Std. Dev.=47.54, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9501, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

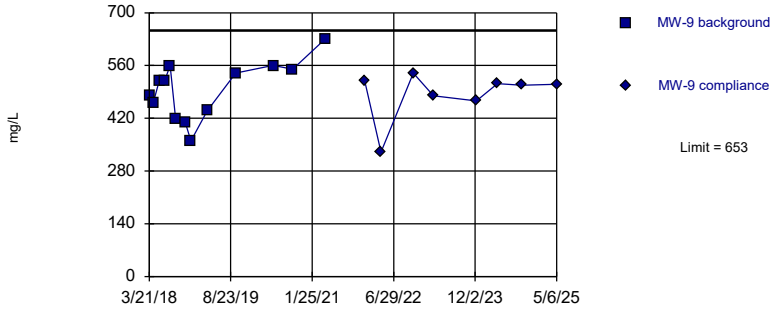
Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=496.2, Std. Dev.=75.56, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9721, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:59 AM View: Detection 237&9 n=13 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Prediction Limit

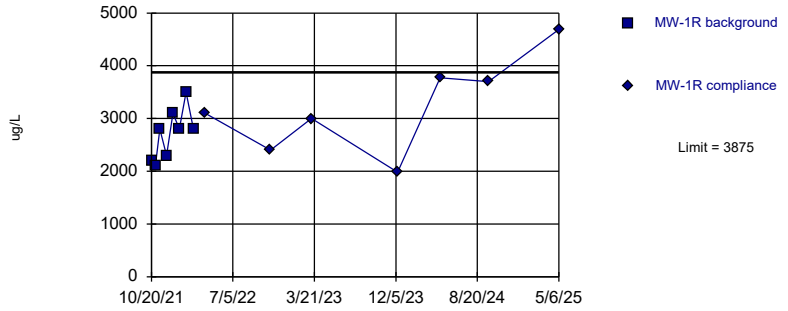
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:31 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	**MW-1R**	**3875**	**n/a**	**5/6/2025**	**4690**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Calcium (mg/L)	**MW-1R**	**112.4**	**n/a**	**5/6/2025**	**116**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Chloride (mg/L)	MW-1R	21.7	n/a	5/6/2025	18.3	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-1R	0.366	n/a	5/6/2025	0.1	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
pH (S.U.)	**MW-1R**	**6.58**	**6.48**	**5/6/2025**	**6.38**	**Yes**	**8**	**0**	**n/a**	**0.04288**	**NP Intra (normality) ...**
Sulfate (mg/L)	**MW-1R**	**249.2**	**n/a**	**5/6/2025**	**289**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**
Total Dissolved Solids (mg/L)	**MW-1R**	**512.1**	**n/a**	**5/6/2025**	**576**	**Yes**	**8**	**0**	**No**	**0.002505**	**Param Intra 1 of 2**

Exceeds Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=2700, Std. Dev.=478.1, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.929, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

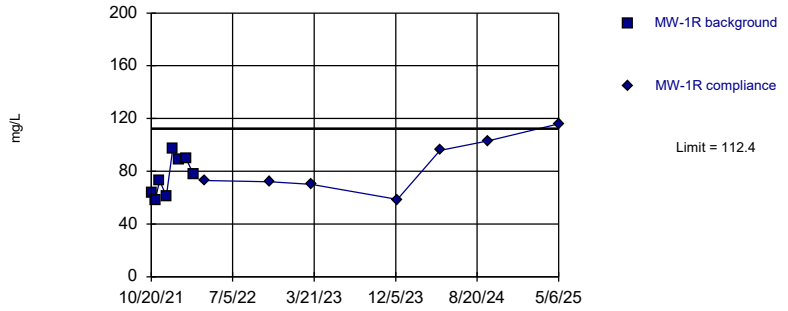
Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=76.25, Std. Dev.=14.69, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9262, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

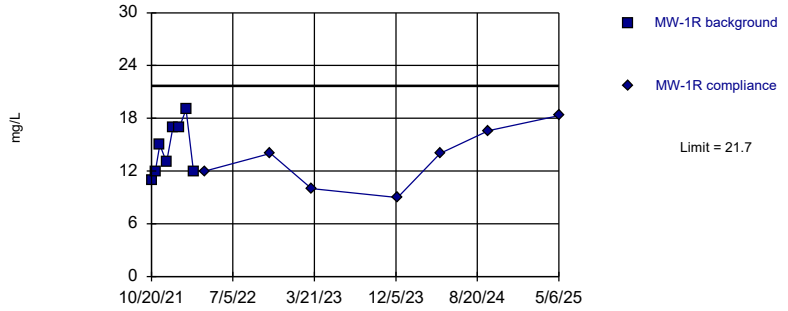
Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=14.5, Std. Dev.=2.928, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9145, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

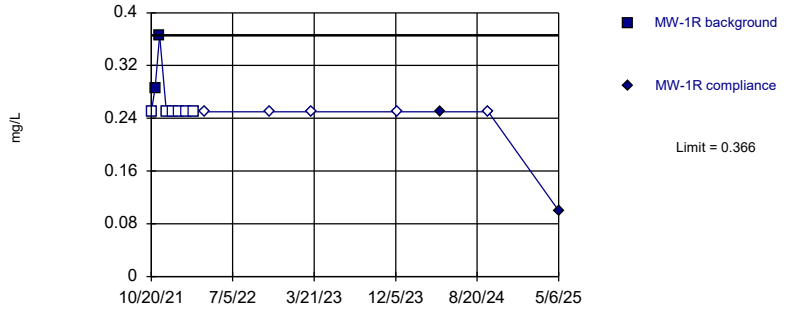
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

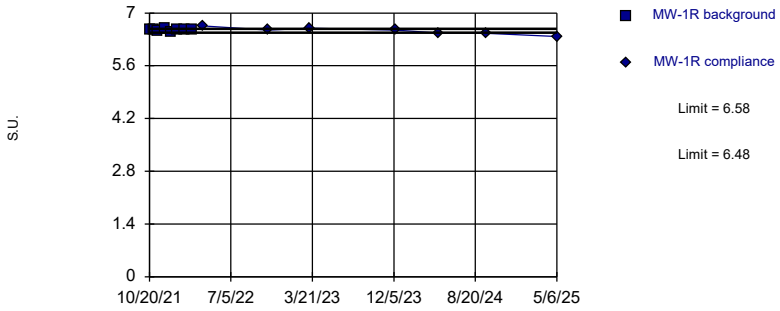
Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

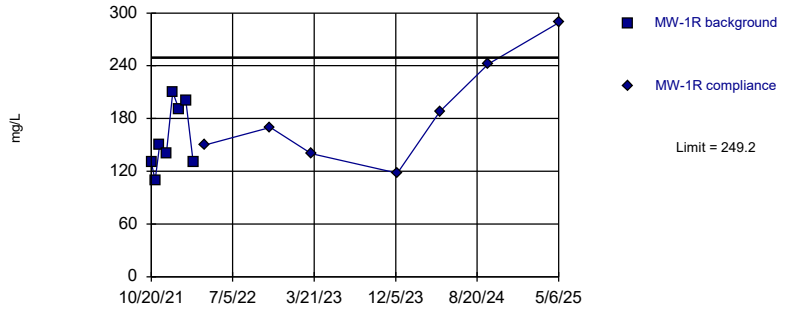
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Exceeds Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=157.5, Std. Dev.=37.32, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9002, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

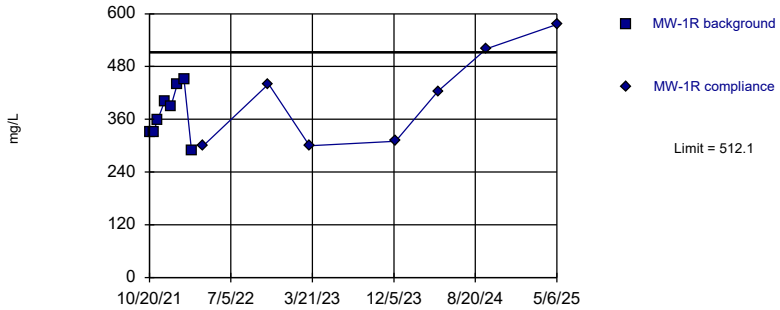
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Exceeds Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=373.8, Std. Dev.=56.3, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9544, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:31 AM View: Detection 1R 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Prediction Limit

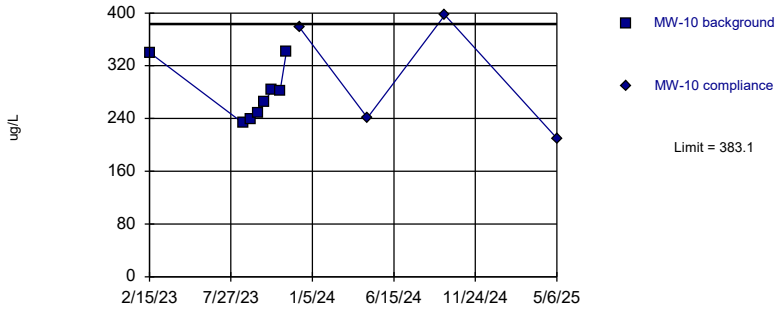
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 10:28 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-10	383.1	n/a	5/6/2025	210	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-10	94.97	n/a	5/6/2025	88.9	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-10	24.59	n/a	5/6/2025	8.41	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-10	0.42	n/a	5/6/2025	0.24	No	8	12.5	n/a	0.02144	NP Intra (normality) ...
pH (S.U.)	MW-10	7.143	6.684	5/6/2025	7.08	No	8	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-10	215.5	n/a	5/6/2025	86.3	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-10	530.8	n/a	5/6/2025	396	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron

Intrawell Parametric



Background Data Summary: Mean=279.4, Std. Dev.=42.18, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8794, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

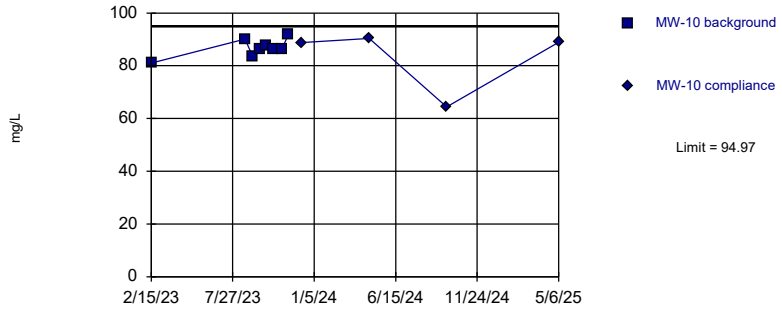
Prediction Limit Analysis Run 5/21/2025 10:26 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



Background Data Summary: Mean=86.64, Std. Dev.=3.388, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9628, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

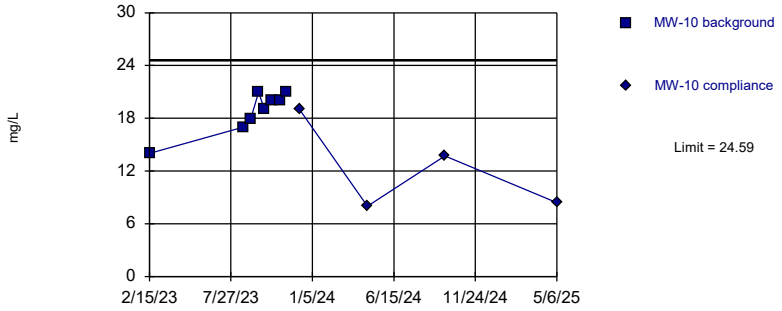
Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



Background Data Summary: Mean=18.75, Std. Dev.=2.375, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8833, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

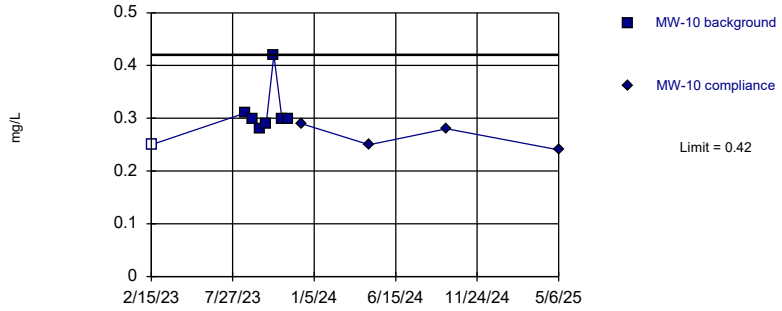
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limit is highest of 8 background values. 12.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

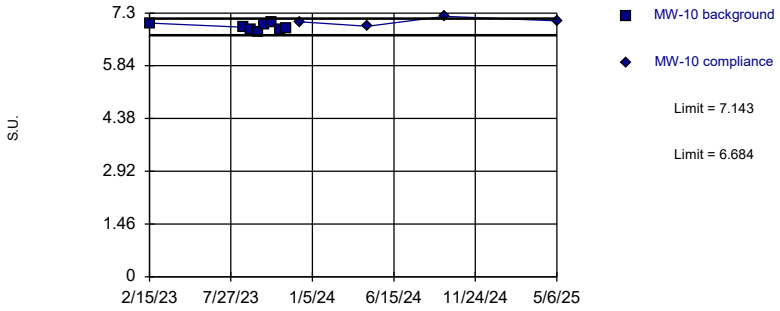
Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH

Intrawell Parametric



Background Data Summary: Mean=6.914, Std. Dev.=0.09334, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9382, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

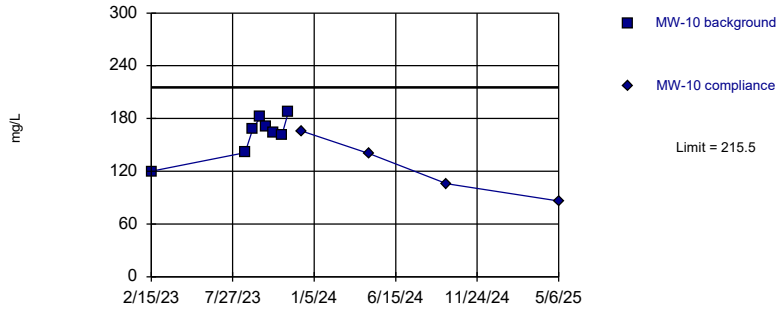
Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



Background Data Summary: Mean=161.8, Std. Dev.=21.88, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9187, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

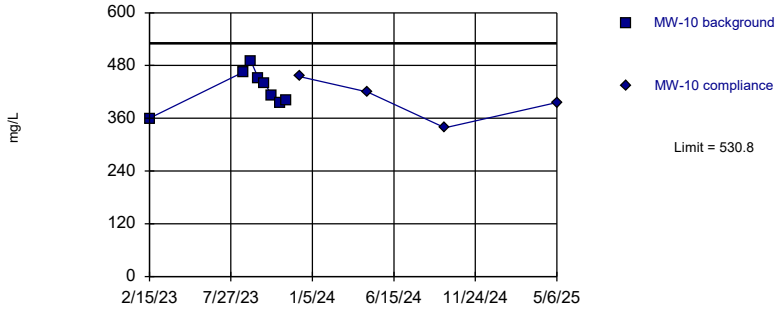
Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids

Intrawell Parametric



Background Data Summary: Mean=426.4, Std. Dev.=42.49, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9823, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/21/2025 10:27 AM View: Detection 10 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 9

Assessment Monitoring Statistical Evaluation Summaries

Appendix 9

Assessment Monitoring Statistical Evaluation Summary

For SBMU – Sikeston Power Station Fly Ash Pond
September 25, 2024 and May 6, 2025 Monitoring Events

The following summarizes the results of the Assessment Monitoring Statistical Evaluation for the September 25, 2024 and May 6, 2025 groundwater sampling events for 40 CFR (§) 257 (CCR Rule) compliance for the Fly Ash Pond (FAP) at the Sikeston Board of Municipal Utilities – Sikeston Power Station. Included are the following Tables and Statistical Analysis Summary Reports:

Table 9-1 – Confidence Interval Summary (for each detected Assessment Monitoring Constituent Well Pairs)
Appendix 9-1 – Outlier Analysis Summary (Sanitas* Output Summary)
Appendix 9-2 – Confidence Interval Summary (Sanitas* Output Summary)
Appendix 9-3 – Trend Tests with Confidence Bands (Sanitas* Output Summary)

Outlier Removal (data evaluation and screening)

The §257 Appendix IV - Constituents for Assessment Monitoring were evaluated for Statistically Significant Levels (SSLs) over groundwater protection standards (GWPS) using Sanitas* to calculate confidence intervals based on the monitoring data following traditional data review, quality control, and outlier testing (Appendix 9-1). Sanitas* identified three outliers (associated with Arsenic (1) in MW-1R, and Selenium (2) in MW-2) in the assessment monitoring database. These outliers were removed from the assessment monitoring database, the remaining values were re-screened to confirm there were no masked outliers during the previous test, then confidence intervals were calculated, and trend testing was conducted.

Confidence Intervals/ SSLs

Confidence Intervals were calculated for each well constituent pair as summarized in Table 9-1 and Appendix 9-2. If the lower confidence interval is greater than its respective GWPS, an SSL is apparent. Four SSLs were identified in the data and are indicated on Table 9-1. The SSLs are:

- Molybdenum (MW-1R, MW-7, and MW-9), and
- Cobalt (MW-1R)

Note: * = Sanitas© Statistical Software, © 1992-2025 SANITAS TECHNOLOGIES, Alamosa Colorado 81101-0012.

Trend Analysis

Trend analysis was also conducted to determine if the SSLs are symptomatic of increasing concentrations of these constituents. Results of the trend analysis are provided in Appendix 9-3, and they demonstrate the following:

- Barium concentrations at MW-7 and MW-9 are increasing with statistically significant trends,
- Fluoride concentrations at MW-7 and MW-9 are decreasing with a statistically significant trend,
- Lithium concentrations at MW-7 and MW-9 are increasing with a statistically significant trend,
- Molybdenum concentrations at MW-7, and MW-9 are decreasing with statistically significant trends,
- Molybdenum and Cobalt concentrations at MW-1R do not have statistically significant trends, and
- Selenium concentrations at MW-7 are decreasing with a statistically significant trend.
-

Recommendations

Sample all FAP System Wells (MW-1R, MW-2, MW-3, MW-7, MW-9, and MW-10):

- During the Second half of 2025 (Semi-annual) for all Appendix III Detection and all Appendix IV Assessment Monitoring Constituents.
- During the First half of 2026 (Semi-annual) for all Appendix III Detection and the Appendix IV Assessment Monitoring Constituents **that were detected during the previous event (late 2025)**.

Sikeston Board of Municipal Utilities
Sikeston Power Station
Fly Ash Pond Statistical Evaluation for Assessment Groundwater Monitoring
Sikeston, Missouri

Table 9-1 - Confidence Interval Summary

		MW-1R		MW-2		MW-3		MW-7		MW-9		MW-10	
40 CFR 257 Appendix IV Constituents for Assessment Monitoring	**Units**	**Upper Confidence Limit**	**Lower Confidence Limit**	**Upper Confidence Limit**	**Lower Confidence Limit**	**Upper Confidence Limit**	**Lower Confidence Limit**	**Upper Confidence Limit**	**Lower Confidence Limit**	**Upper Confidence Limit**	**Lower Confidence Limit**	**Upper Confidence Limit**	**Lower Confidence Limit**
Antimony	ug/L	3	3	3	3	3	3	3	3	3	3	3	3
Arsenic	ug/L	1.3	1	1	1	1	1	1	1	1.2	1	7.2	5
Barium	ug/L	49.66	37.48	206.7	152.3	100.1	82.31	66.7	43	90.9	47	149.6	129.9
Beryllium	ug/L	1	1	1	1	1	1	1	1	1	1	1	1
Cadmium	ug/L	1	1	1	1	1	1	1	1	1	1	1	1
Chromium	ug/L	4	4	4	4	4	4	4	4	4	4	4	4
Cobalt	ug/L	11.2	7.031	2.4	2	2	2	2.8	2	2.2	2	2	1
Fluoride	mg/L	0.286	0.1	0.254	0.06	0.313	0.25	0.6795	0.5643	0.982	0.7881	0.31	0.25
Lead	ug/L	1	1	1	1	1	1	1	1	1	1	1	1
Lithium	ug/L	19	10	20	10	20	10	35.34	24.2	23.98	15.26	40	10
Mercury	ug/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Molybdenum	ug/L	199.1	170.5	1.4	1	1	1	157.2	123.7	555.7	210.7	24.6	18.35
Selenium	ug/L	1	1	1.4	1	1	1	42	2.4	1	1	1	1
Thallium	ug/L	1	1	1	1	1	1	1	1	1	1	1	1
Radium 226/228 (Combined)	pCi/L	0.9191	0.4012	1.482	0.7459	1.178	0.5203	1.47	0.6213	1.19	0.5016	1.5	0.69

NOTES:
1. ug/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.
4. Assessment Monitoring determines compliance with the Lower Confidence Limit.
5. Corrective Action Monitoring determines compliance with the Upper Confidence Limit.

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: KAE
Checked by: CMH
Approved by: KAE

Outlier Analysis

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:51 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	11	3.818	2.714	unknown	ShapiroWilk
Antimony (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	3	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-7	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	13	1.015	0.05547	unknown	ShapiroWilk
Arsenic (ug/L)	**MW-1R**	**Yes**	**2.2**	**12/11/2023**	**NP**	**NaN**	**13**	**1.154**	**0.3503**	**ln(x)**	**ShapiroWilk**
Arsenic (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	6.367	1.012	ln(x)	ShapiroWilk
Barium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	14	179.5	38.4	x^3	ShapiroWilk
Barium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	91.19	12.54	x^4	ShapiroWilk
Barium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	56.25	16.08	ln(x)	ShapiroWilk
Barium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	65.46	21.47	x^2	ShapiroWilk
Barium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	43.57	8.603	x^3	ShapiroWilk
Barium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	139.8	12.49	x^6	ShapiroWilk
Beryllium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Chromium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	11	4.373	1.236	unknown	ShapiroWilk
Chromium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	4	0	normal	ShapiroWilk
Cobalt (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	2.457	1.599	unknown	ShapiroWilk
Cobalt (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	2	0	normal	ShapiroWilk
Cobalt (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	2.414	0.6526	ln(x)	ShapiroWilk
Cobalt (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	14	2.014	0.05345	unknown	ShapiroWilk
Cobalt (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	9.114	2.941	ln(x)	ShapiroWilk
Cobalt (ug/L)	MW-10	n/a	n/a	n/a	NP	NaN	12	1.917	0.2887	unknown	ShapiroWilk
Fluoride (mg/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	21	0.2503	0.05061	unknown	ShapiroWilk
Fluoride (mg/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	21	0.2718	0.05336	normal	ShapiroWilk
Fluoride (mg/L)	MW-7	No	n/a	n/a	NP	NaN	21	0.6219	0.1043	x^2	ShapiroWilk
Fluoride (mg/L)	MW-9	No	n/a	n/a	NP	NaN	21	0.885	0.1758	sqrt(x)	ShapiroWilk
Fluoride (mg/L)	MW-1R	n/a	n/a	n/a	NP	NaN	15	0.2501	0.05158	unknown	ShapiroWilk
Fluoride (mg/L)	MW-10	No	n/a	n/a	NP	NaN	12	0.2925	0.04615	ln(x)	ShapiroWilk
Lead (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk

Outlier Analysis

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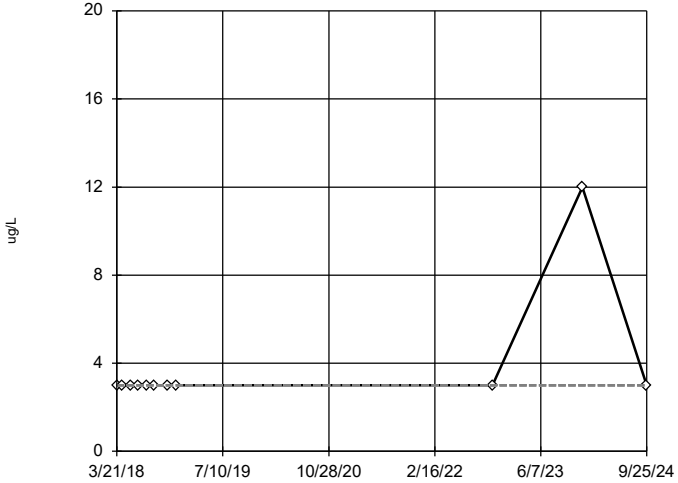
Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lead (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Lithium (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	11.43	3.631	unknown	ShapiroWilk
Lithium (ug/L)	MW-3 (bg)	n/a	n/a	n/a	NP	NaN	14	11.43	3.631	unknown	ShapiroWilk
Lithium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	29.77	7.86	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	19.62	6.16	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	13.26	4.128	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	24.13	12.74	x^2	ShapiroWilk
Mercury (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	0.2	0	normal	ShapiroWilk
Molybdenum (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	1.029	0.1069	unknown	ShapiroWilk
Molybdenum (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Molybdenum (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	140.4	23.62	x^2	ShapiroWilk
Molybdenum (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	383.2	243.5	normal	ShapiroWilk
Molybdenum (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	184.8	20.18	x^5	ShapiroWilk
Molybdenum (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	21.48	3.983	x^3	ShapiroWilk
Radium (pCi/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	12	1.114	0.4689	x^(1/3)	ShapiroWilk
Radium (pCi/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	12	0.8491	0.4191	normal	ShapiroWilk
Radium (pCi/L)	MW-7	No	n/a	n/a	NP	NaN	12	1.046	0.5406	normal	ShapiroWilk
Radium (pCi/L)	MW-9	No	n/a	n/a	NP	NaN	12	0.8459	0.4388	ln(x)	ShapiroWilk
Radium (pCi/L)	MW-1R	No	n/a	n/a	NP	NaN	12	0.6602	0.3301	x^(1/3)	ShapiroWilk
Radium (pCi/L)	MW-10	No	n/a	n/a	NP	NaN	10	0.9613	0.4632	normal	ShapiroWilk
Selenium (ug/L)	**MW-2 (bg)**	**Yes**	**2,2.2**	**8/1/2018,...**	**NP**	**NaN**	**14**	**1.186**	**0.4036**	**ln(x)**	**ShapiroWilk**
Selenium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	16.41	19.51	ln(x)	ShapiroWilk
Selenium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk

Antimony

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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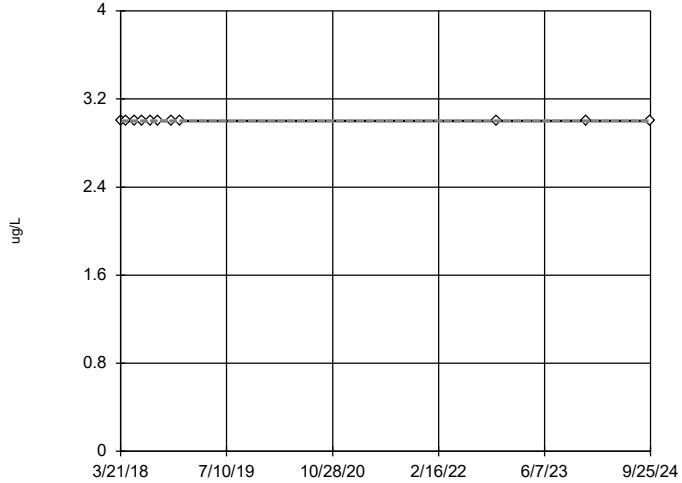
Antimony

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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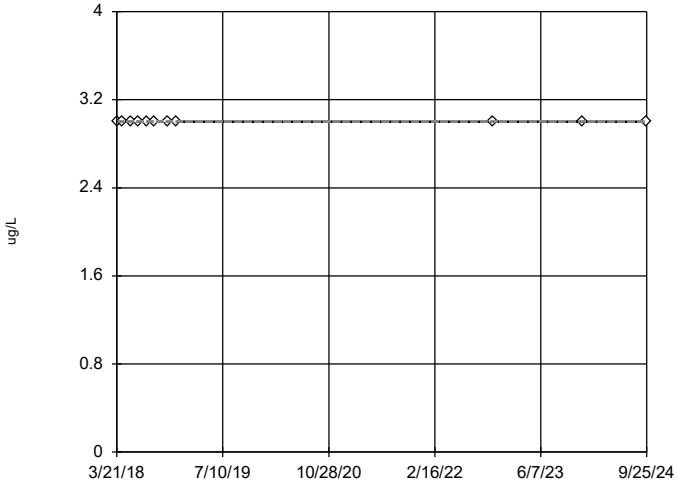
Antimony

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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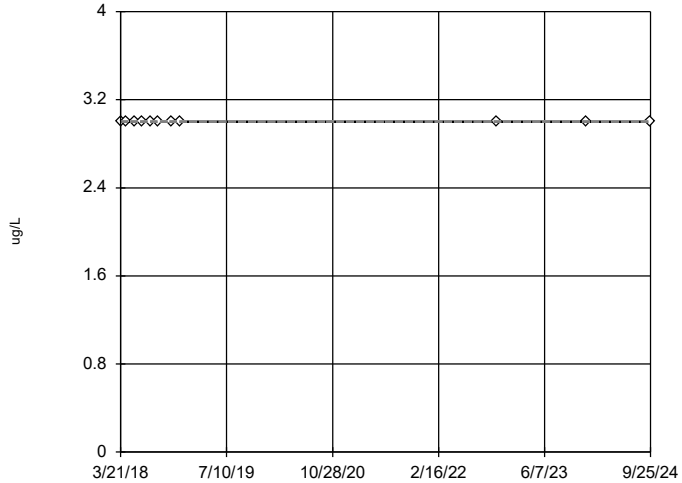
Antimony

MW-9



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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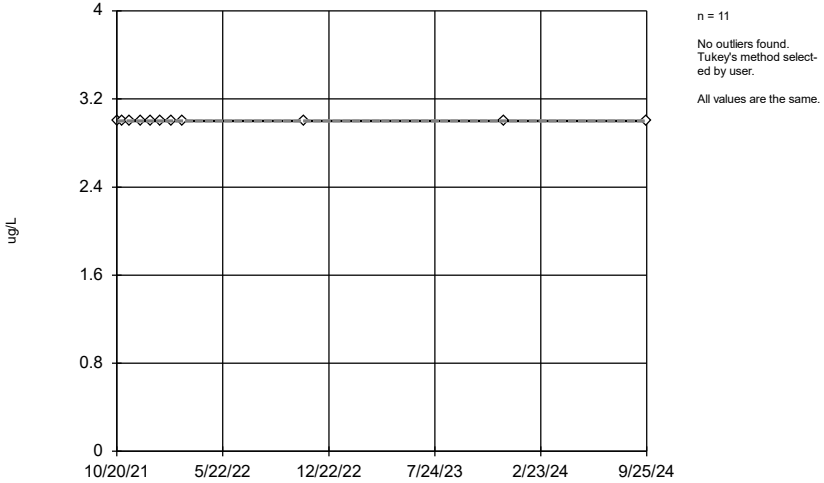
Antimony

MW-1R



n = 11

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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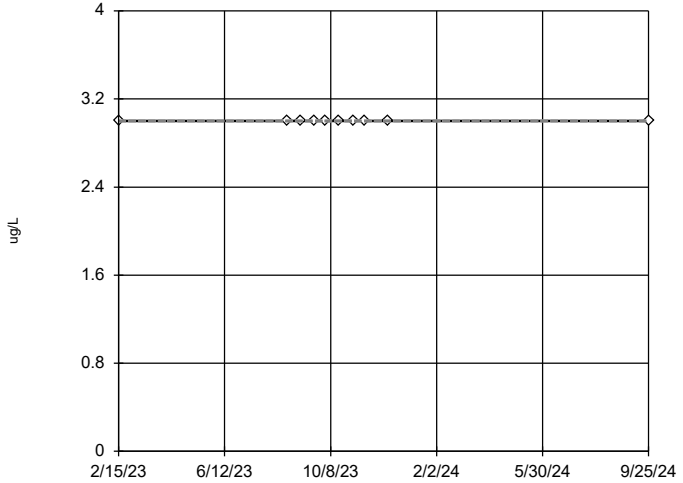
Antimony

MW-10



n = 10

No outliers found.
Tukey's Outlier Screening-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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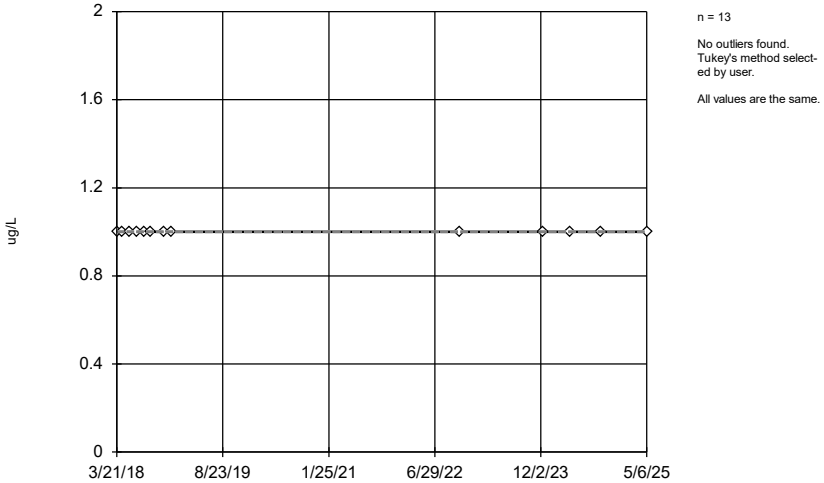
Arsenic

MW-2 (bg)



n = 13

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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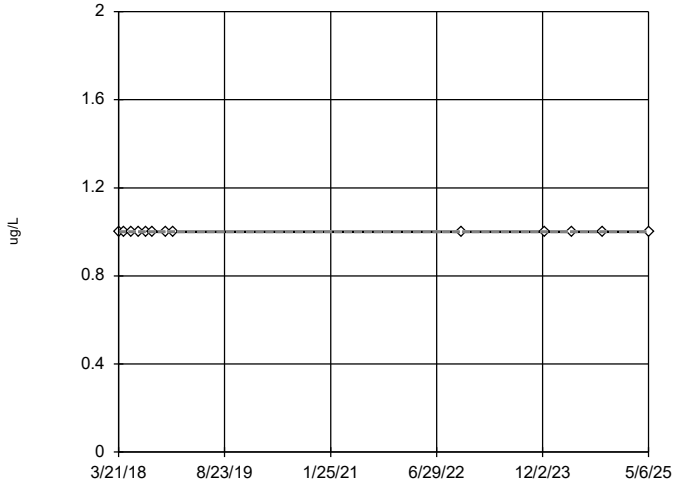
Arsenic

MW-3 (bg)



n = 13

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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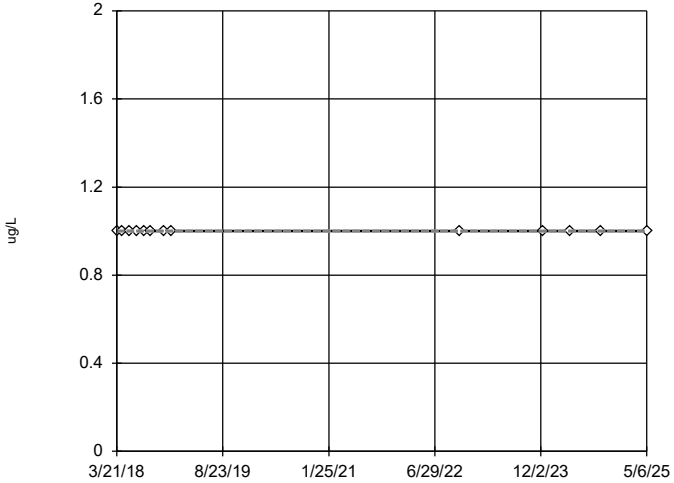
Arsenic

MW-7



n = 13

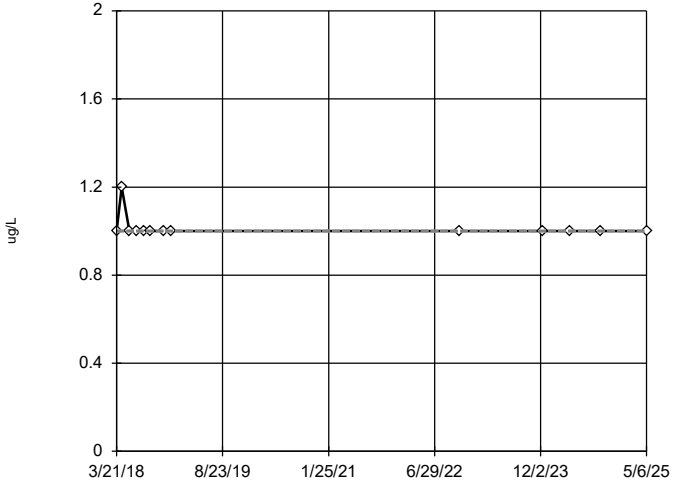
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Arsenic

MW-9



n = 13

No outliers found.
Tukey's method selected by user.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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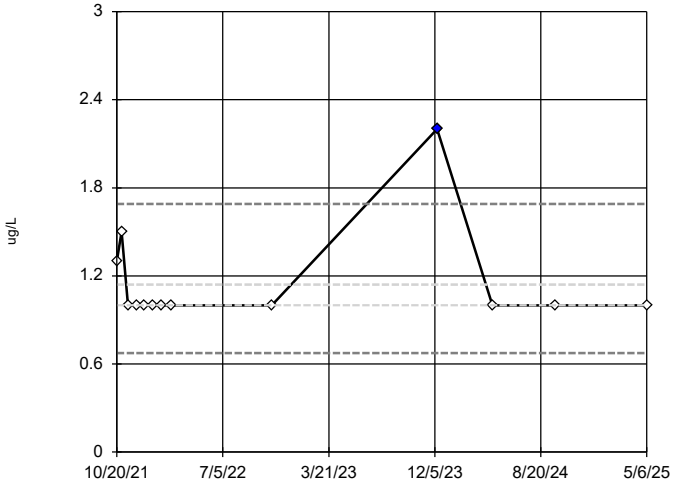
Arsenic

MW-1R



n = 13

Outlier is drawn as solid.
Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.69, low cutoff = 0.6747, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
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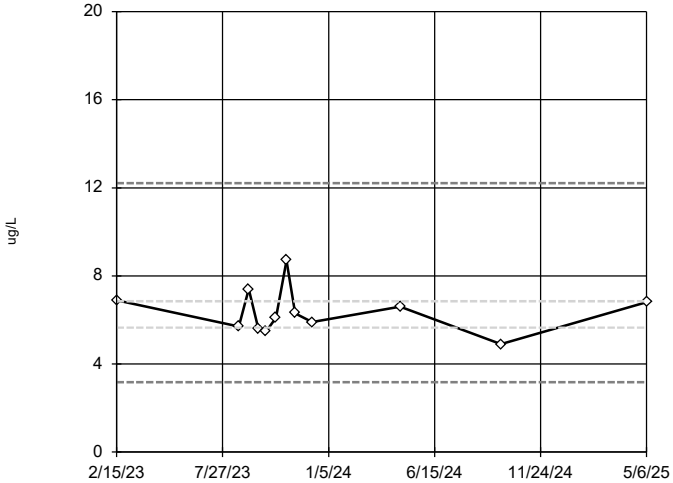
Arsenic

MW-10



n = 12

No outliers found.
Tukey's method selected by user.

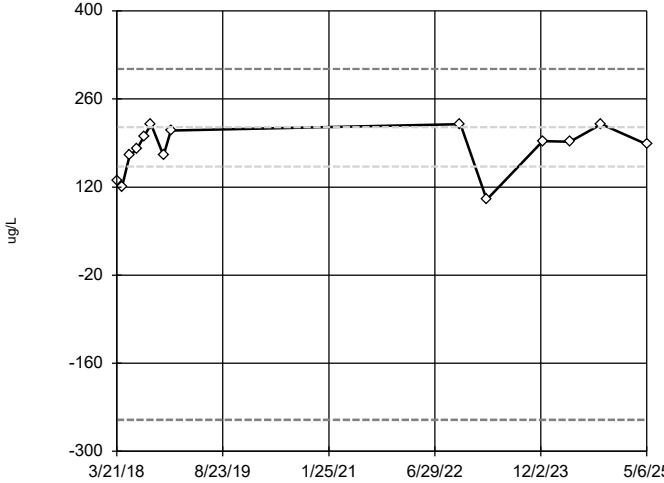
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 12.21, low cutoff = 3.17, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

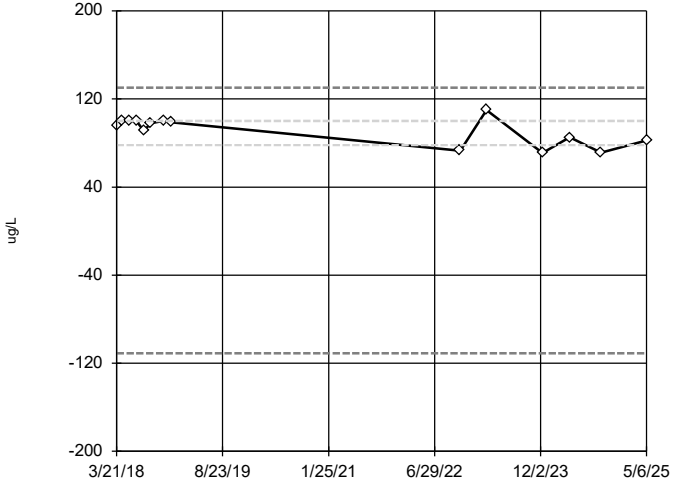
High cutoff = 307.8, low cutoff = -250.1, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Barium

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 130.3, low cutoff = -110.9, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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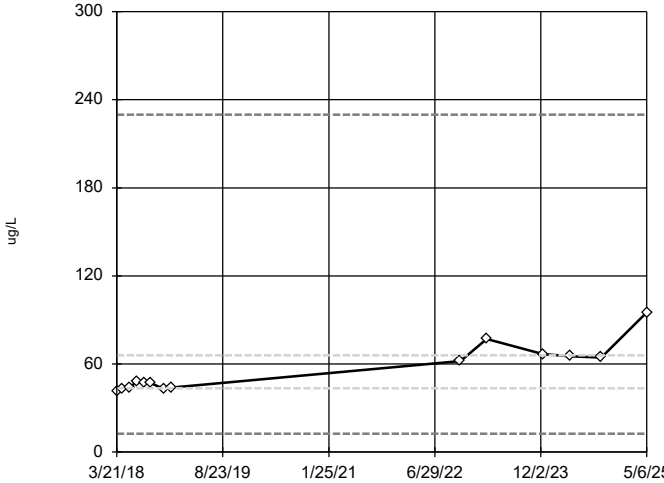
Barium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 229.8, low cutoff = 12.48, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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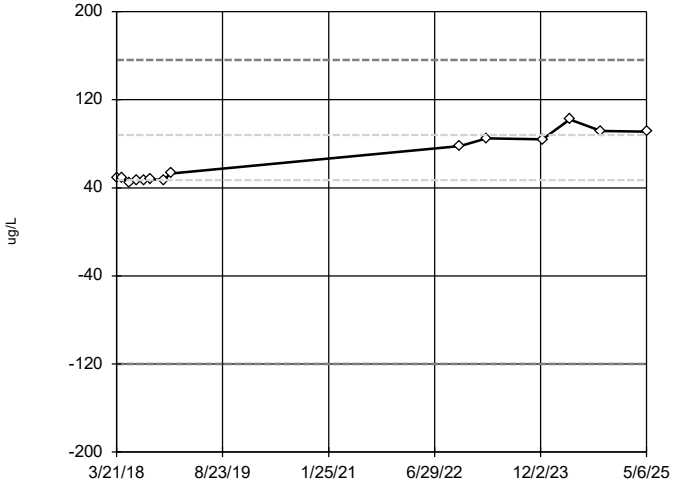
Barium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

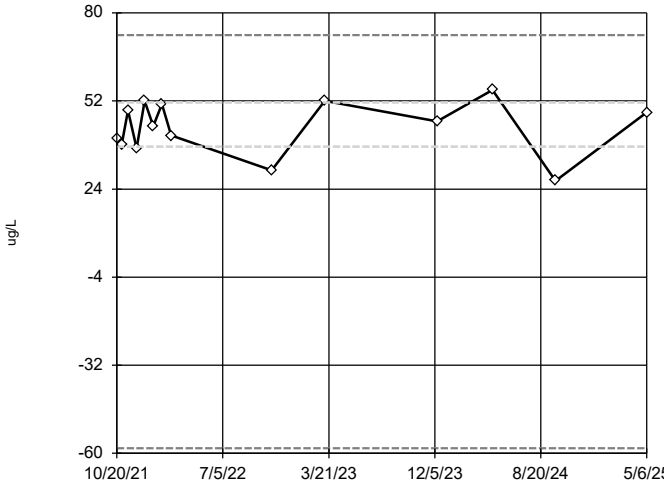
Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 156, low cutoff = -120, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 72.95, low cutoff = -58.37, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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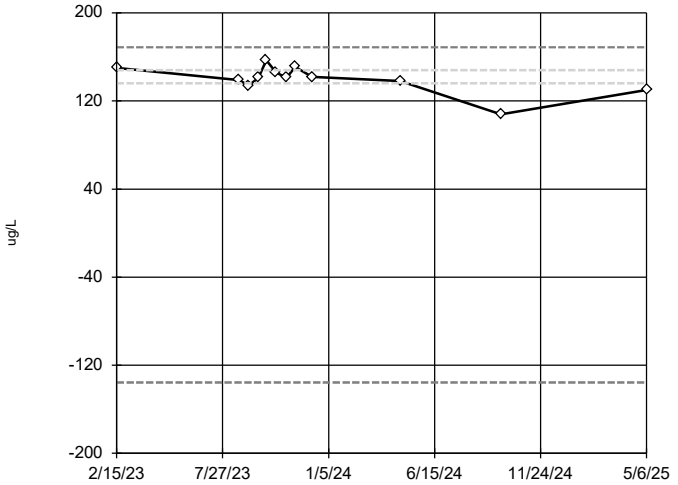
Barium

MW-10



n = 12

No outliers found. Tukey's method selected by user.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 168.8, low cutoff = -135.6, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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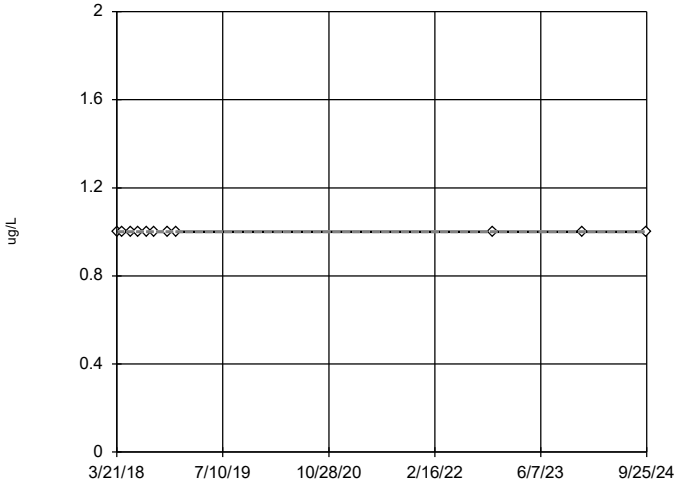
Beryllium

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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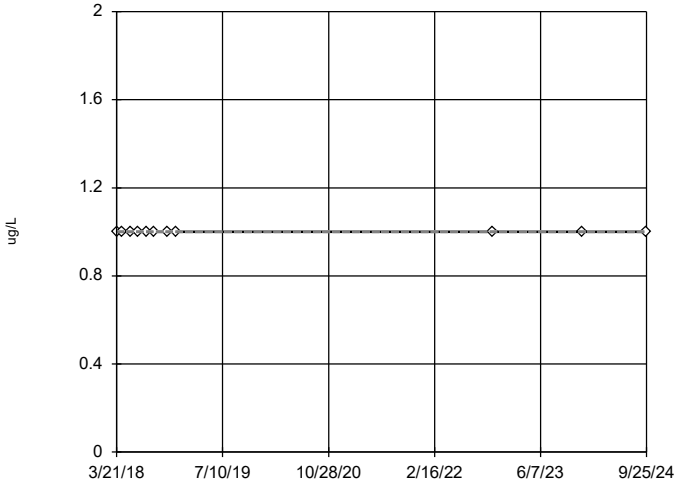
Beryllium

MW-3 (bg)



n = 11

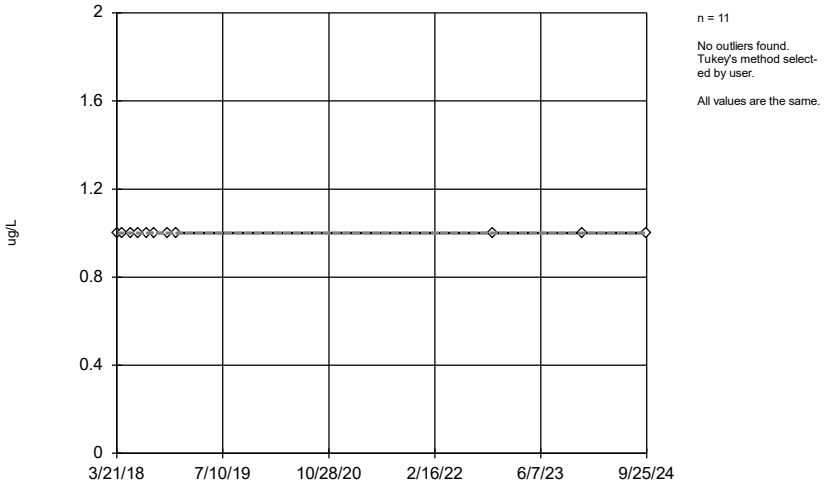
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Beryllium

MW-7



n = 11

No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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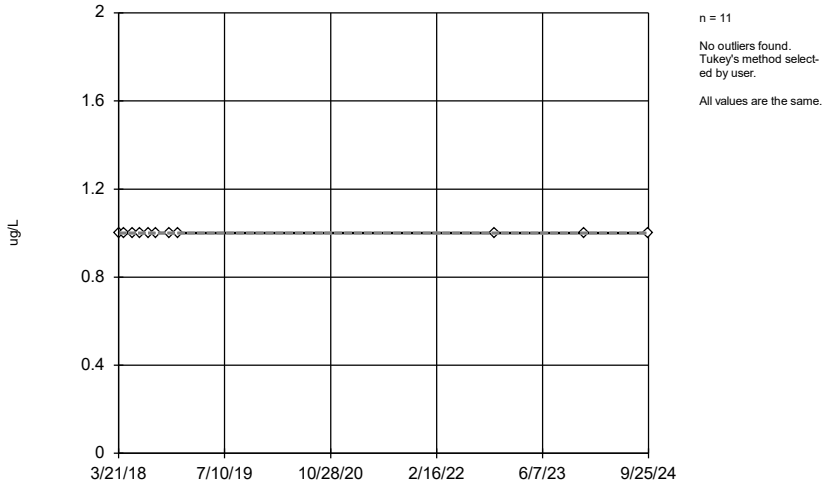
Beryllium

MW-9



n = 11

No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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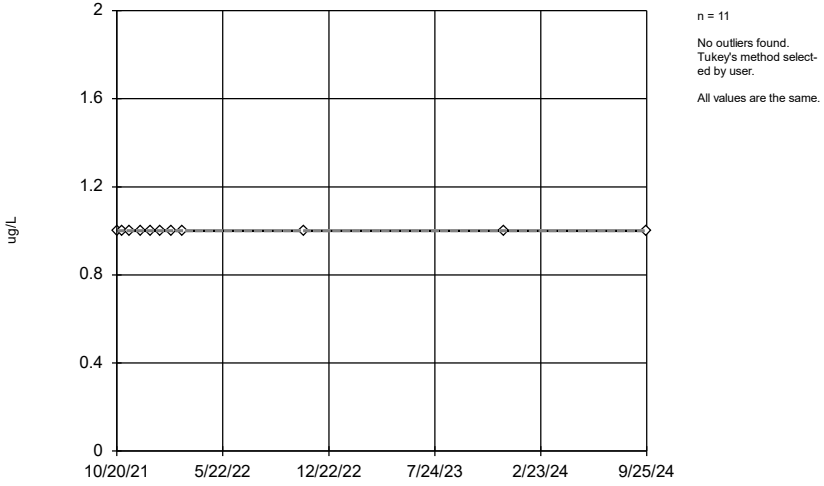
Beryllium

MW-1R



n = 11

No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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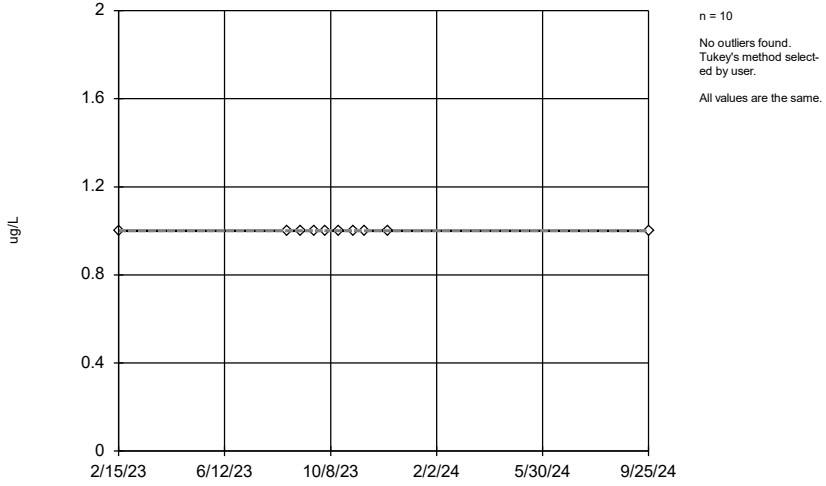
Beryllium

MW-10



n = 10

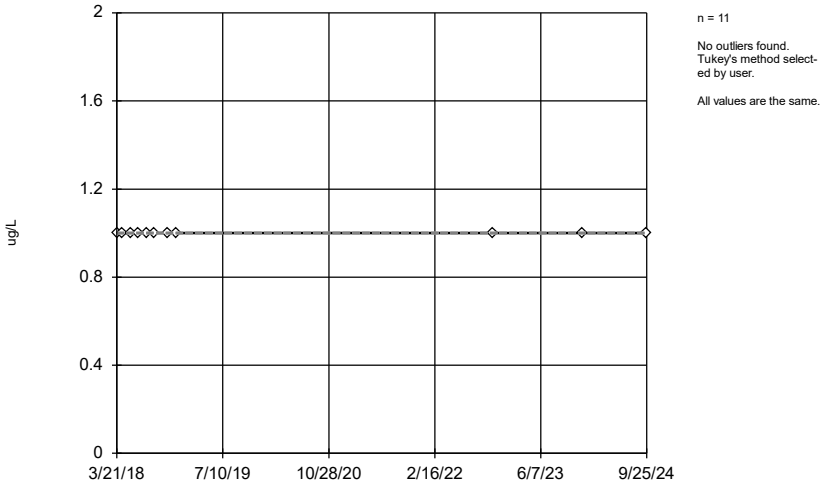
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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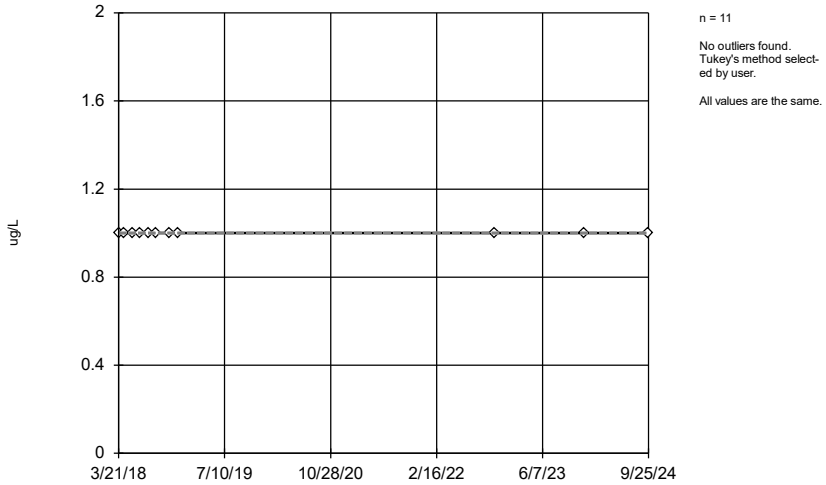
Cadmium

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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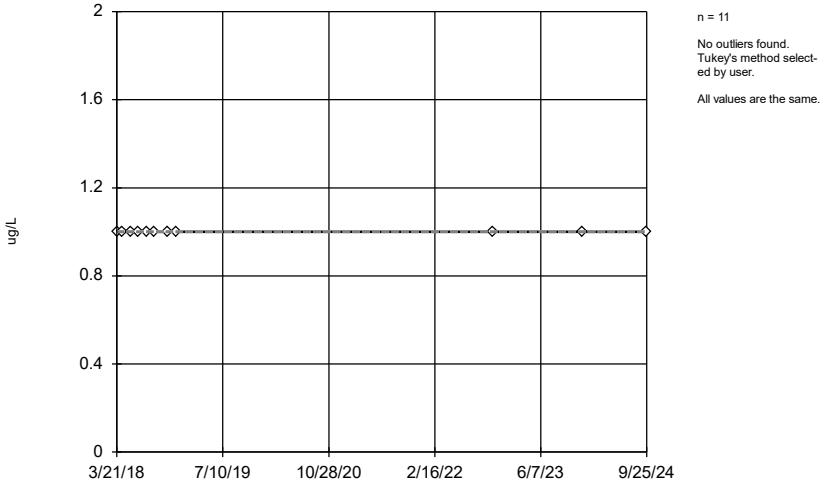
Cadmium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

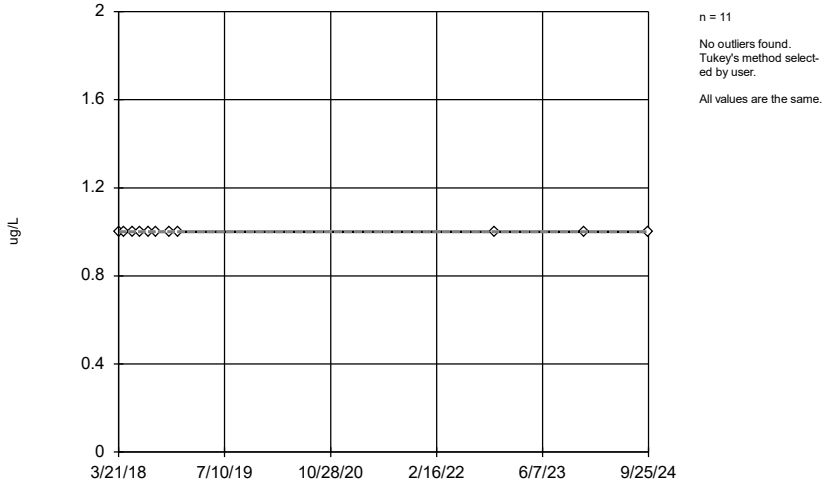
Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cadmium

MW-9



n = 11

No outliers found. Tukey's method selected by user.

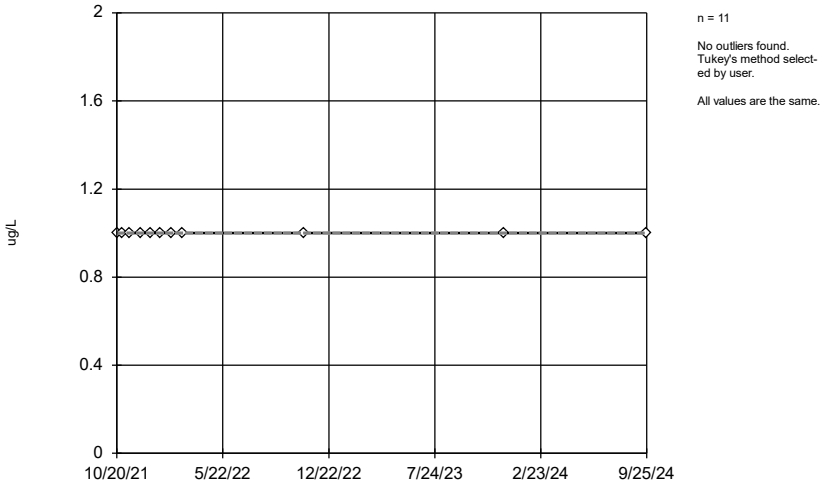
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-1R



n = 11

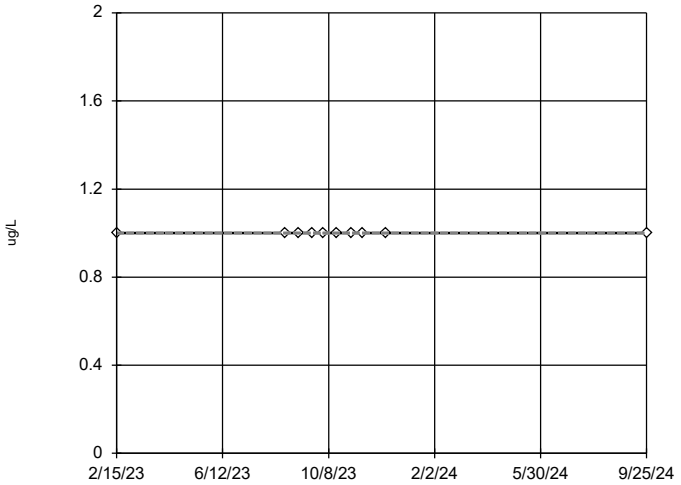
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-10



n = 10

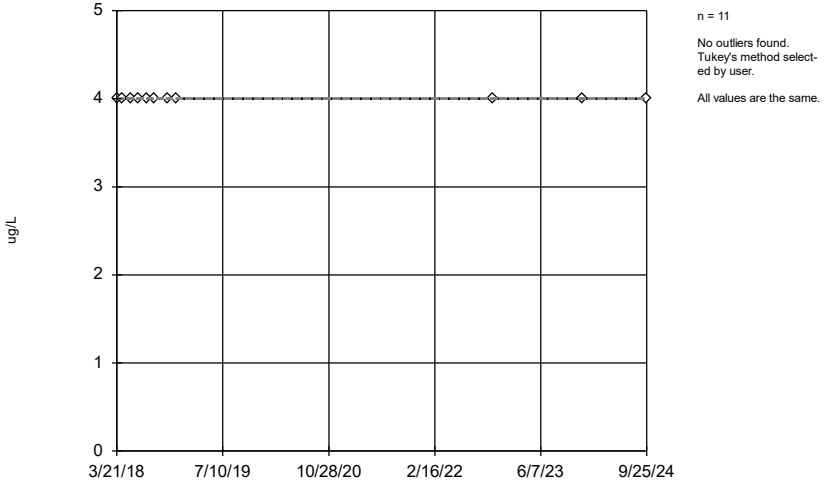
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-2 (bg)



n = 11

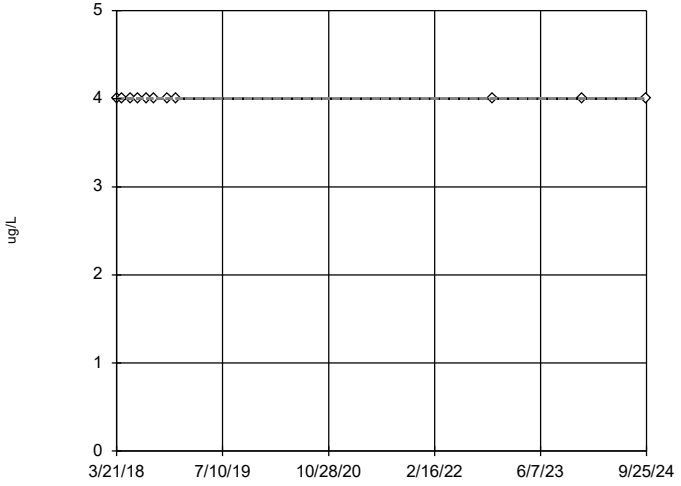
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-3 (bg)



n = 11

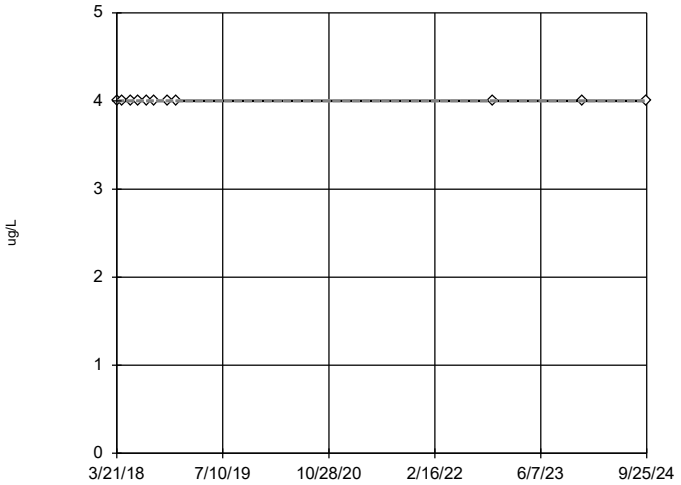
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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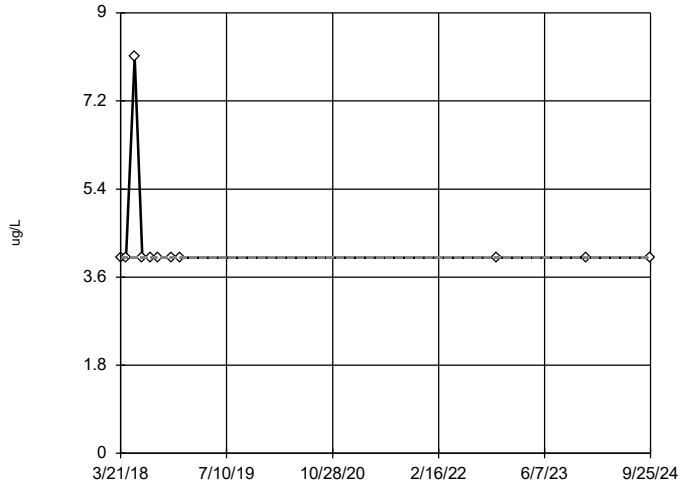
Chromium

MW-9



n = 11

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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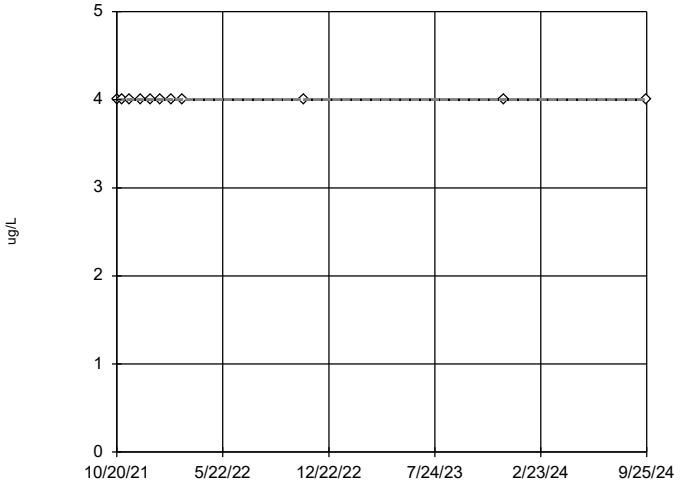
Chromium

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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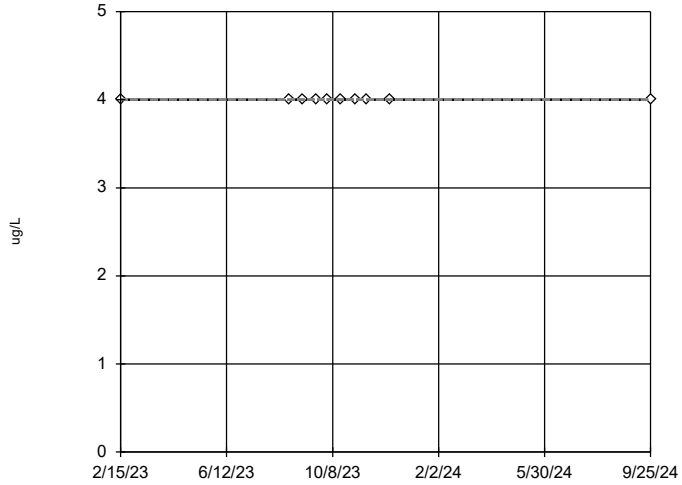
Chromium

MW-10



n = 10

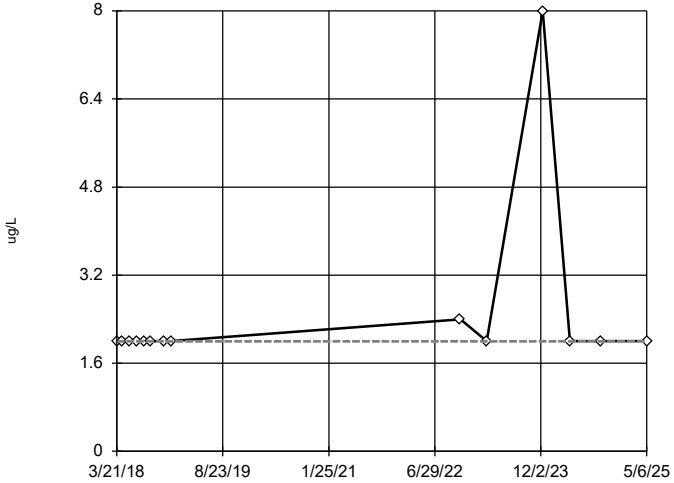
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

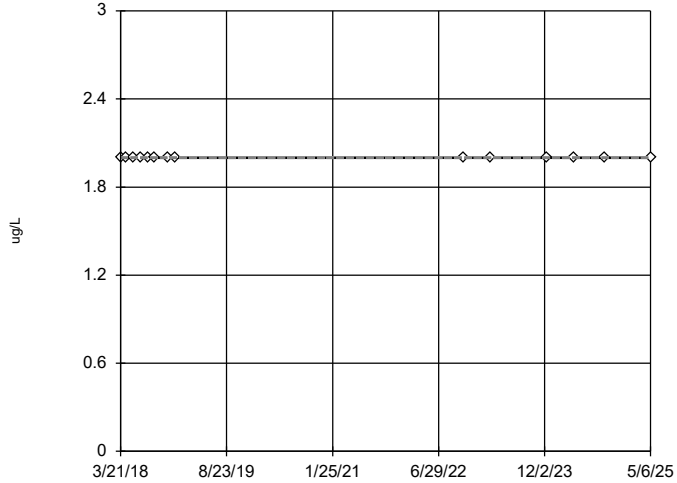
The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cobalt

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

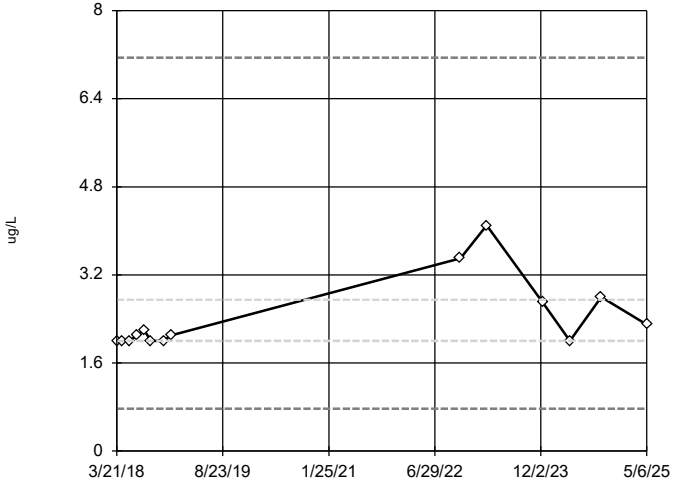
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cobalt

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

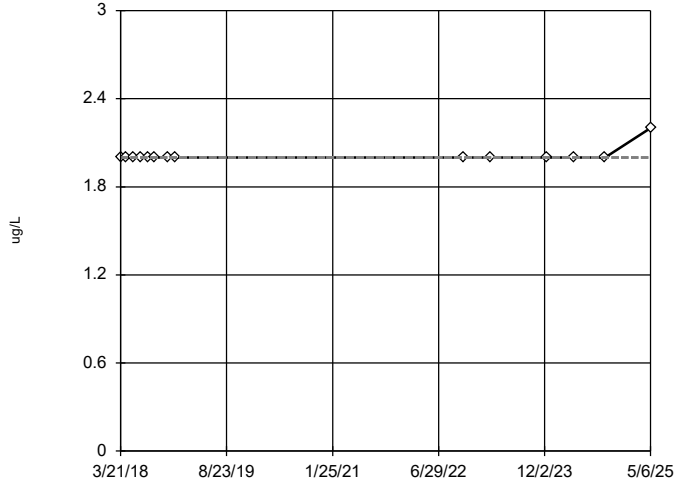
High cutoff = 7.144, low cutoff = 0.7697, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cobalt

MW-9



n = 14

No outliers found. Tukey's method selected by user.

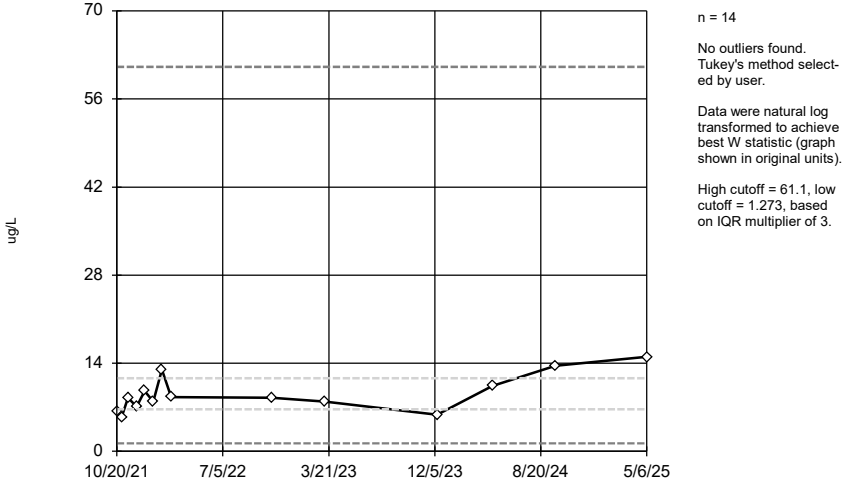
Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

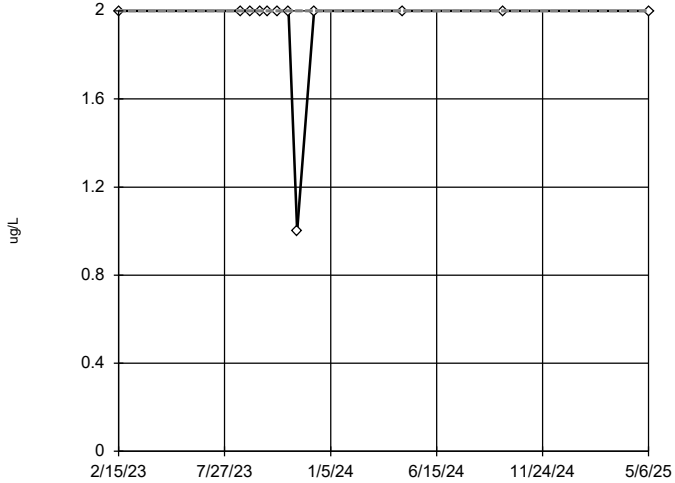
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 61.1, low cutoff = 1.273, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt

MW-10



n = 12

No outliers found. Tukey's method selected by user.

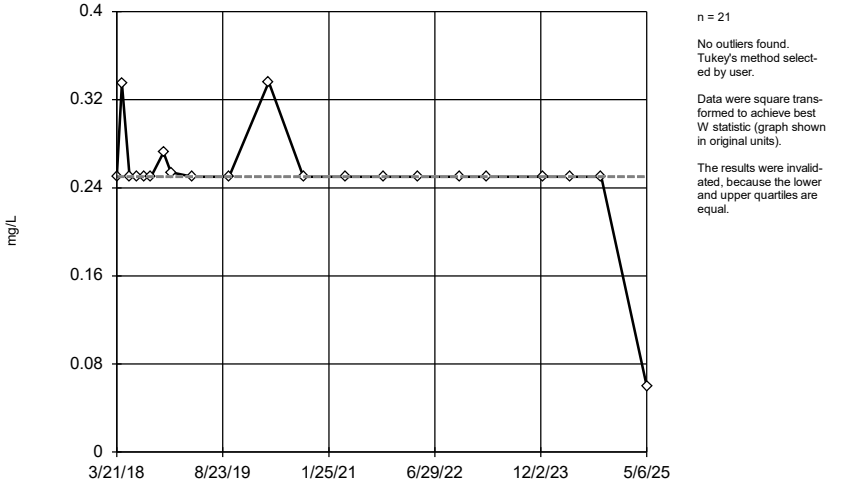
Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

MW-2 (bg)



n = 21

No outliers found. Tukey's method selected by user.

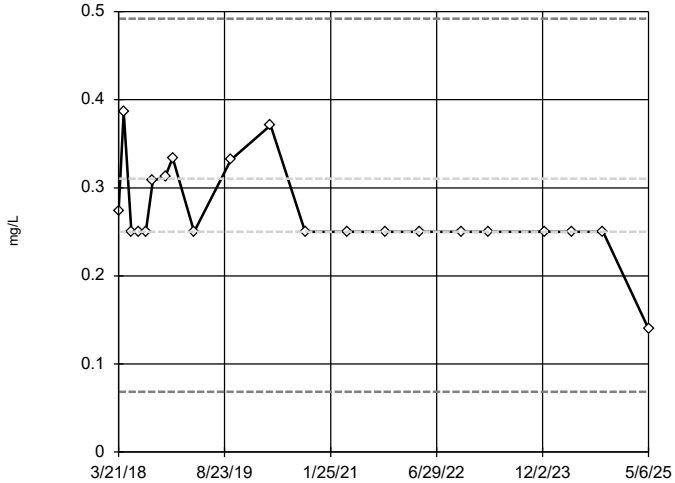
Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

MW-3 (bg)



n = 21

No outliers found. Tukey's method selected by user.

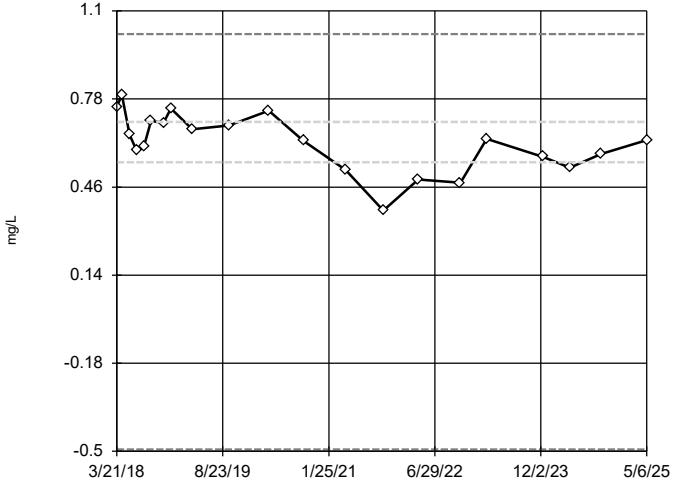
Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 0.492, low cutoff = 0.0685, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

MW-7



n = 21

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.016, low cutoff = -0.4937, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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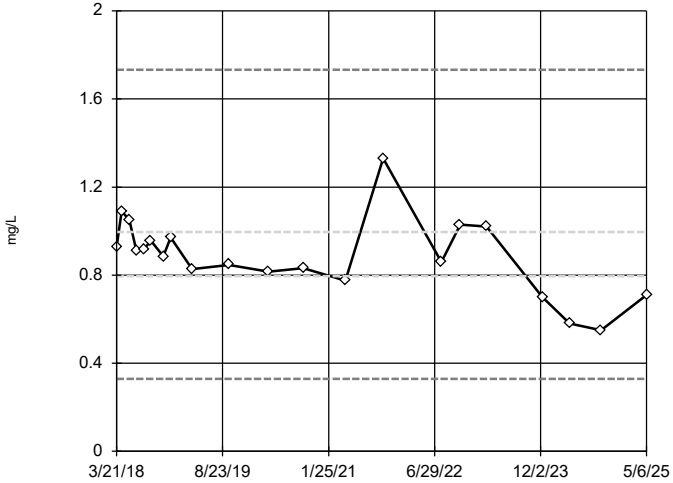
Fluoride

MW-9



n = 21

No outliers found. Tukey's method selected by user.

Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.732, low cutoff = 0.329, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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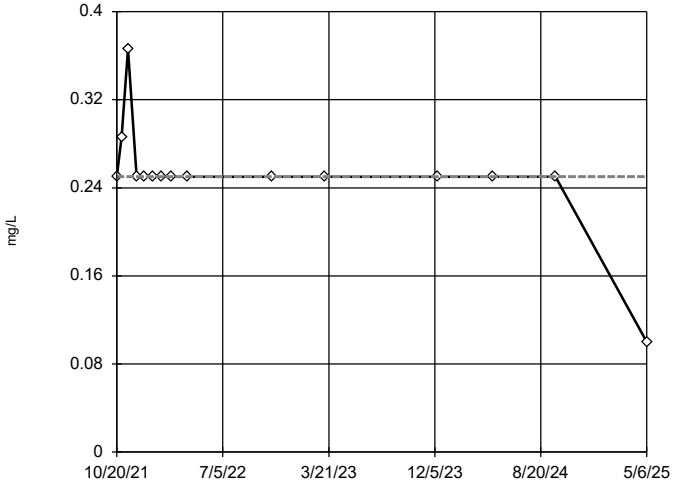
Fluoride

MW-1R



n = 15

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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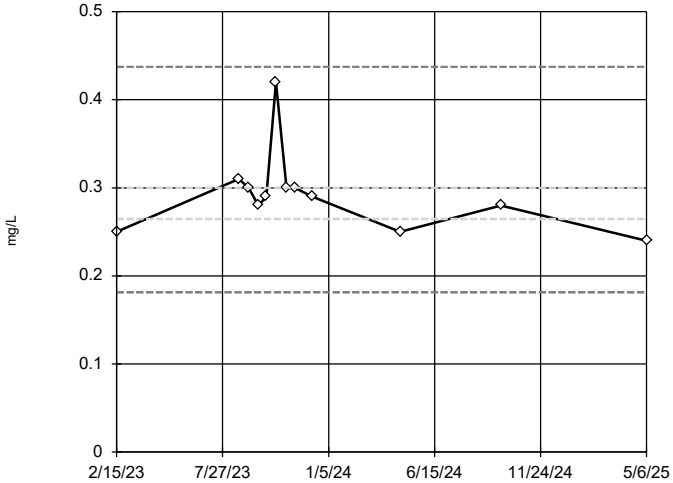
Fluoride

MW-10



n = 12

No outliers found. Tukey's method selected by user.

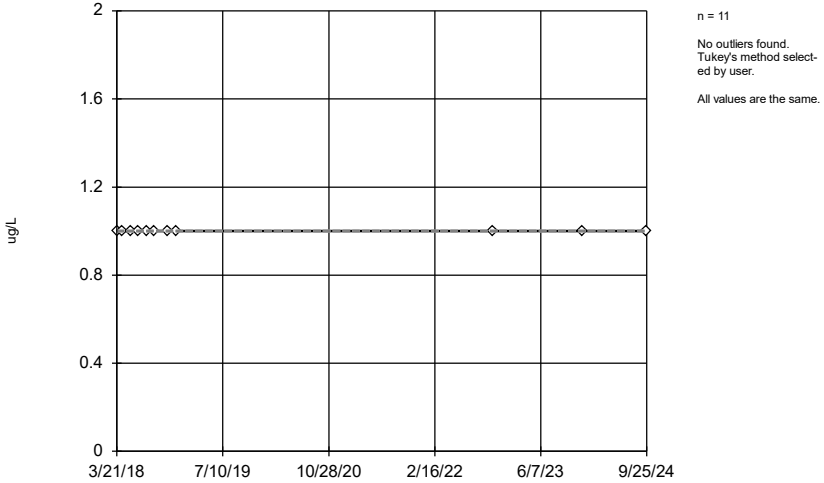
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.4374, low cutoff = 0.1815, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:49 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lead

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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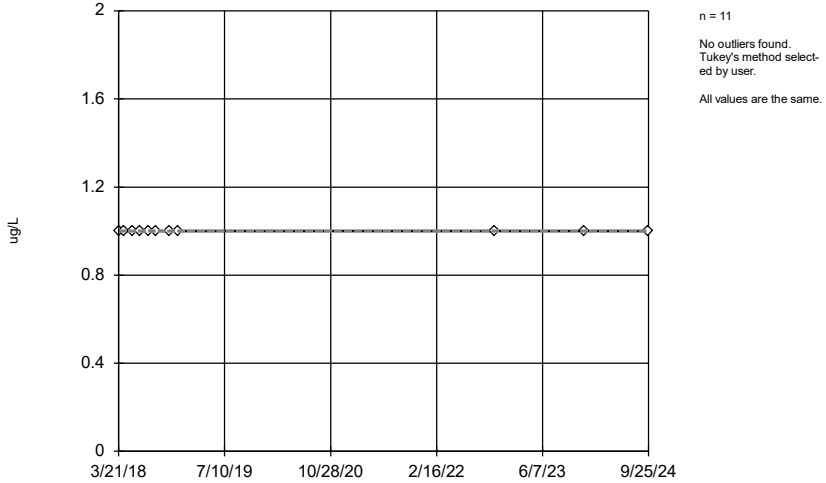
Lead

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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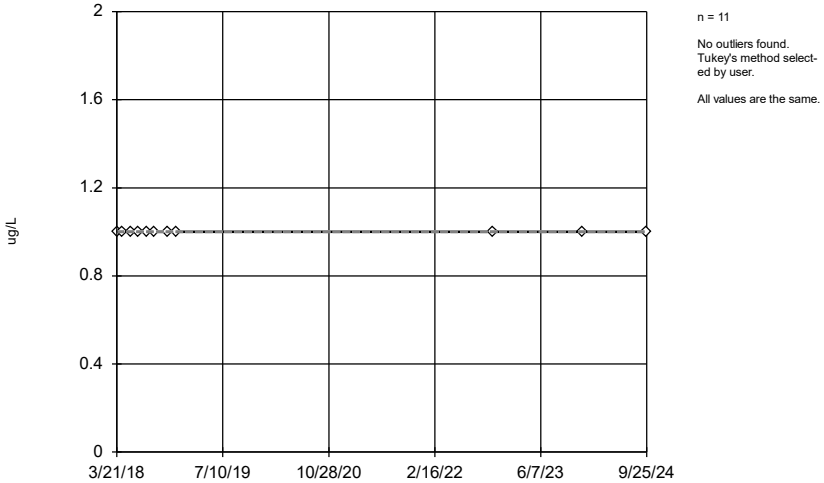
Lead

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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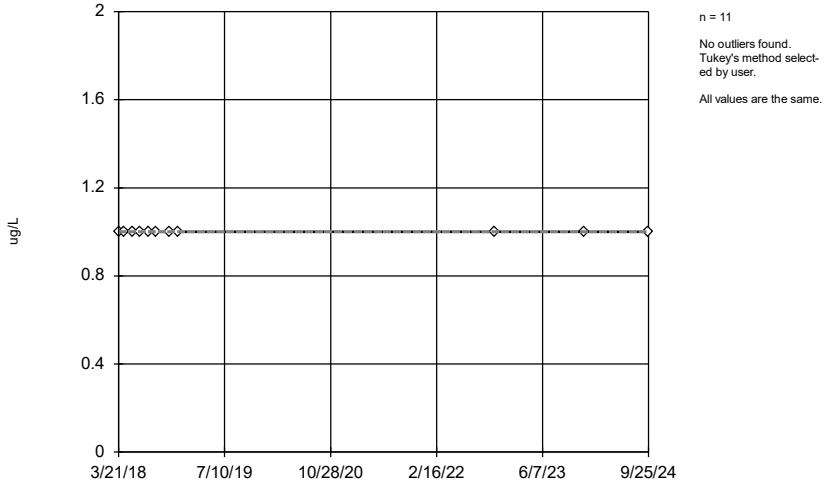
Lead

MW-9



n = 11

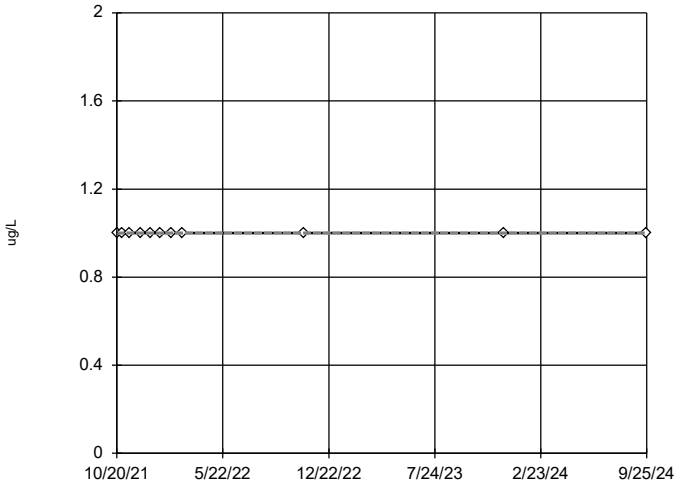
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lead

MW-1R



n = 11

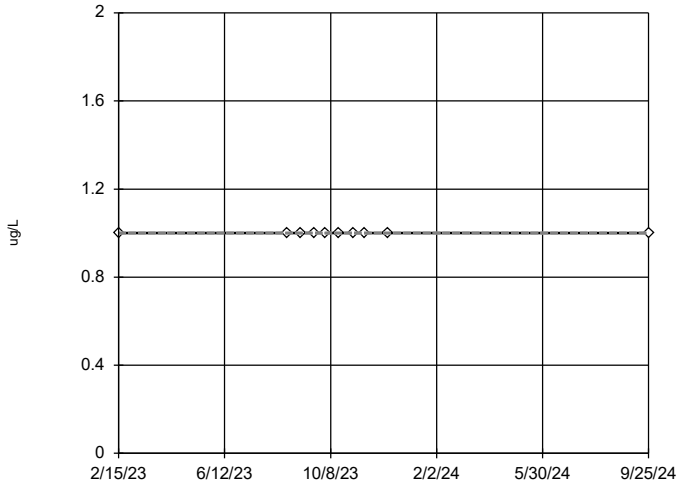
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lead

MW-10



n = 10

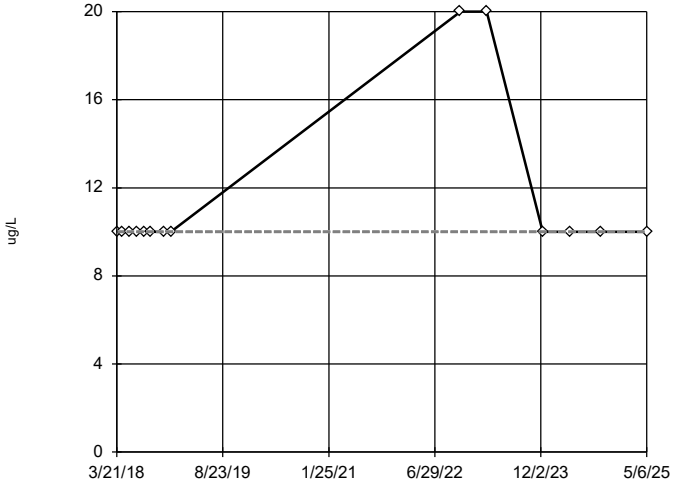
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lithium

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

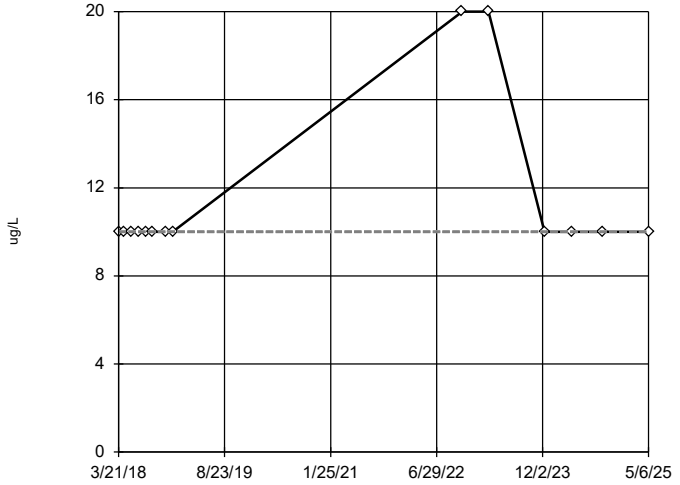
Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lithium

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

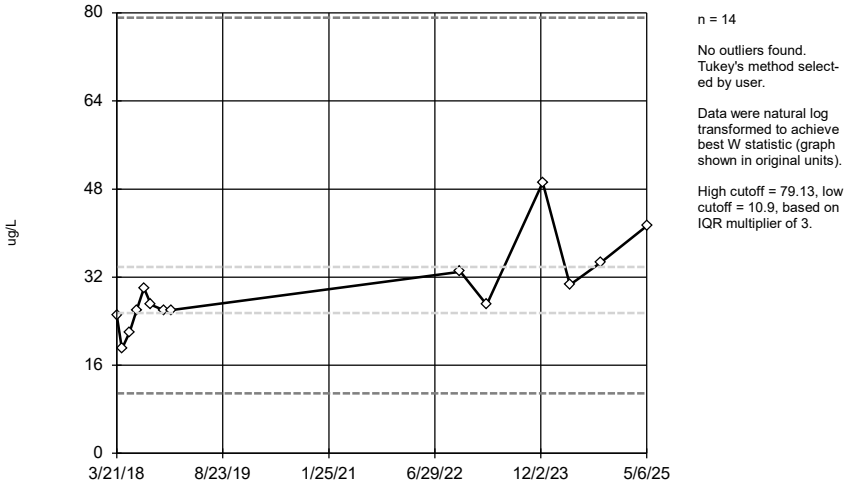
Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lithium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 79.13, low cutoff = 10.9, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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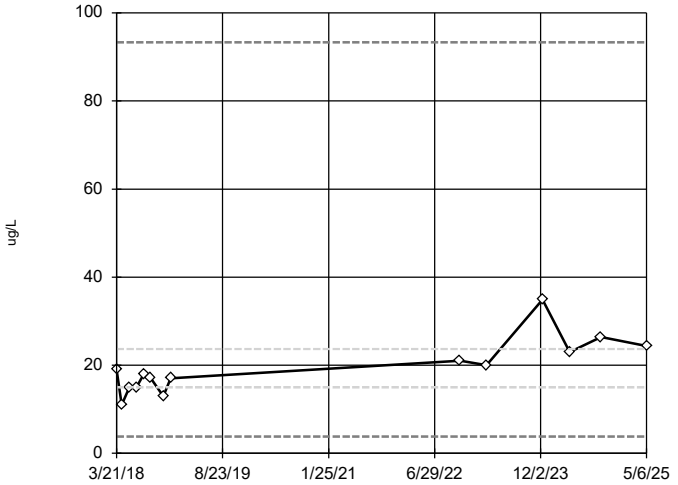
Lithium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 93.32, low cutoff = 3.808, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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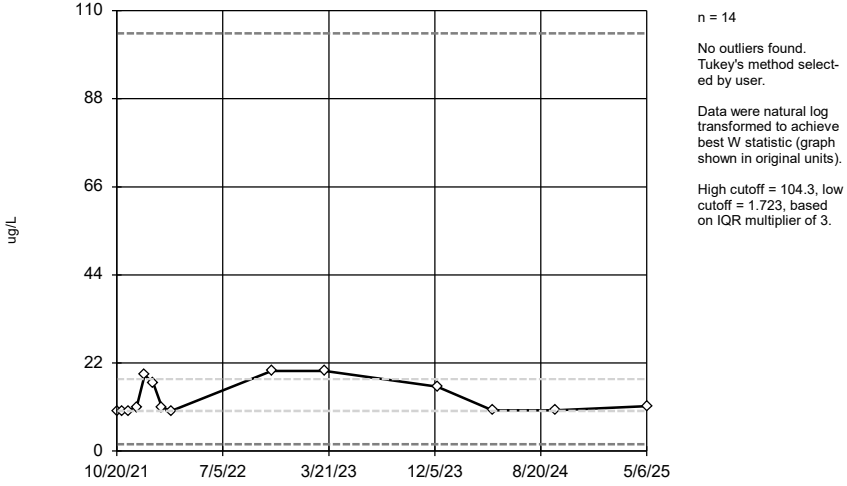
Lithium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 104.3, low cutoff = 1.723, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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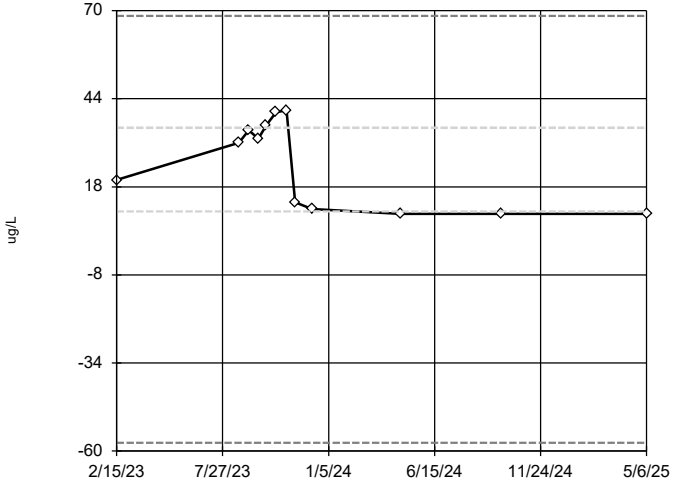
Lithium

MW-10



n = 12

No outliers found. Tukey's method selected by user.

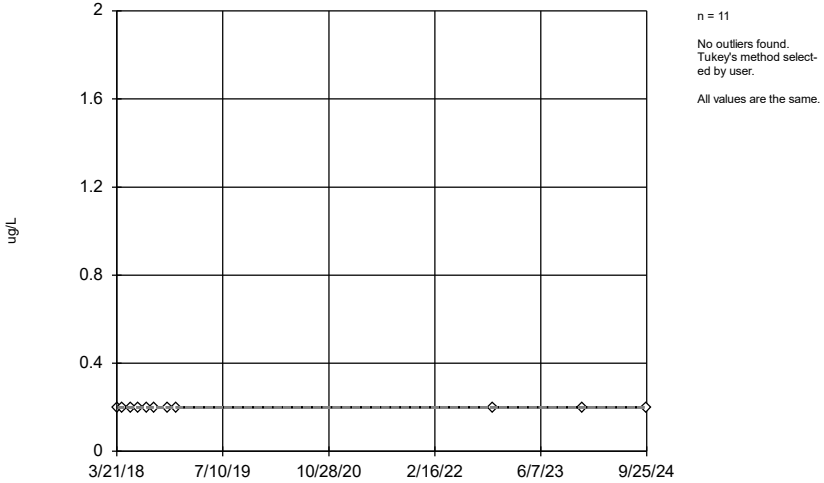
Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 68.44, low cutoff = -57.55, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-2 (bg)



n = 11

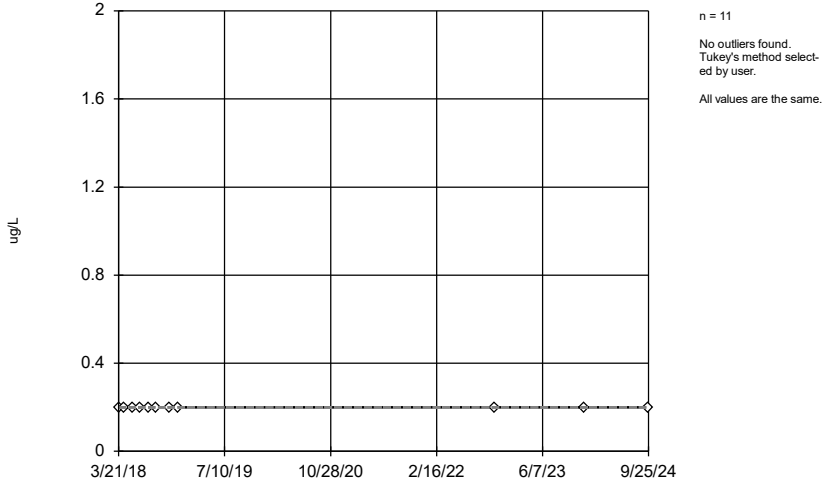
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-3 (bg)



n = 11

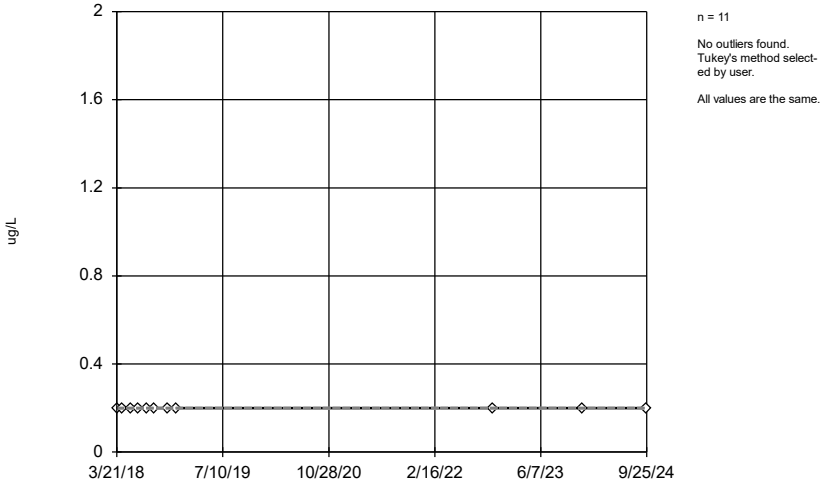
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-7



n = 11

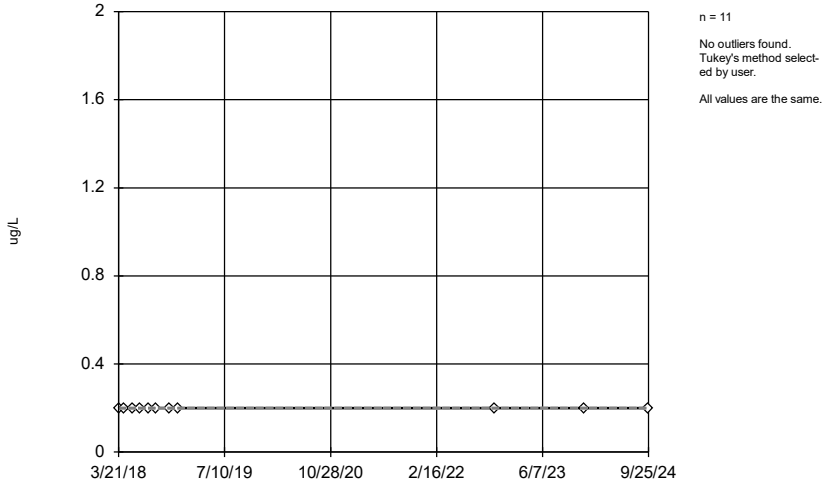
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-9



n = 11

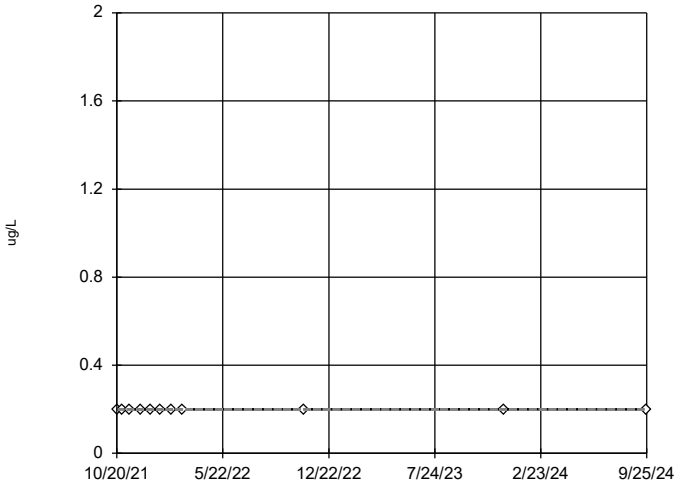
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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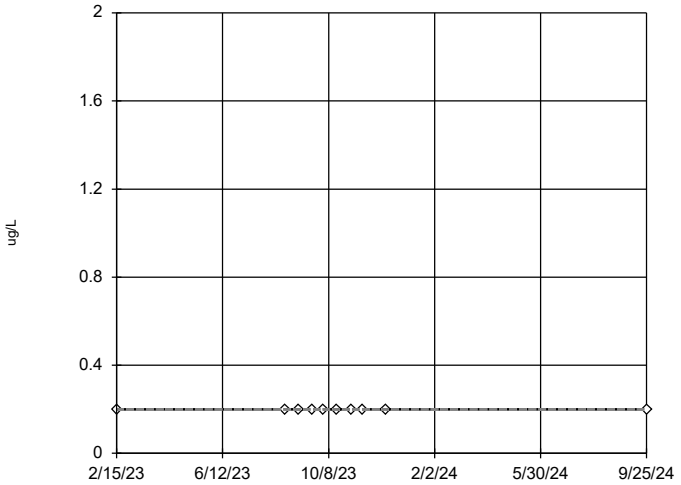
Mercury

MW-10



n = 10

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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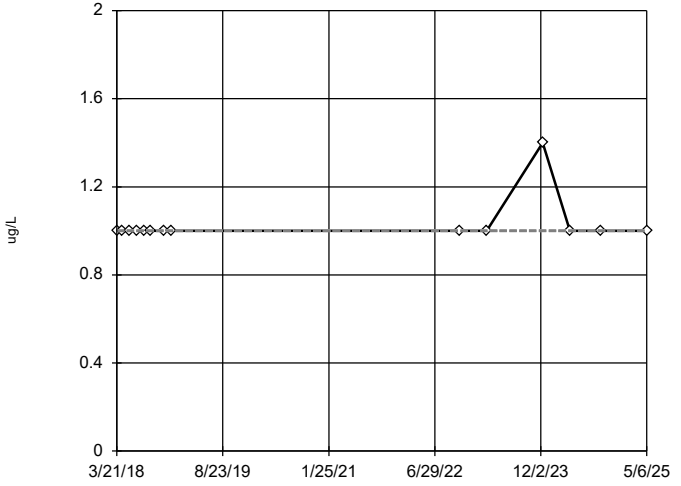
Molybdenum

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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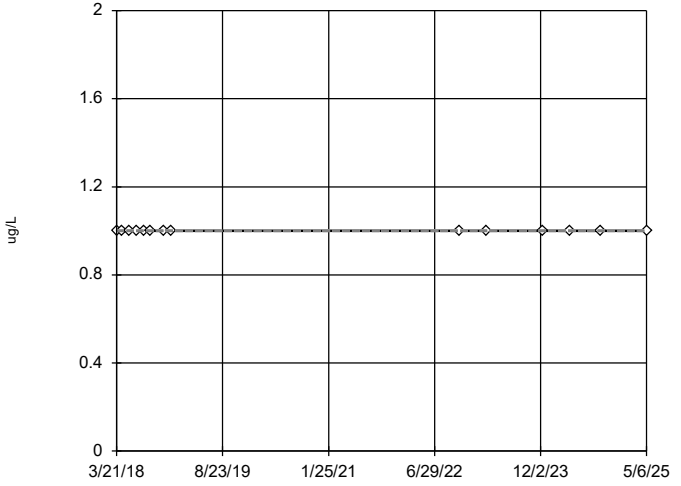
Molybdenum

MW-3 (bg)



n = 14

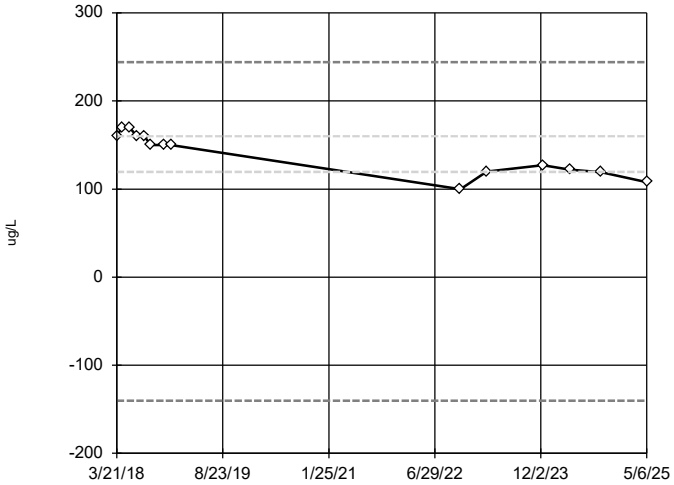
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Molybdenum

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 244, low cutoff = -140.3, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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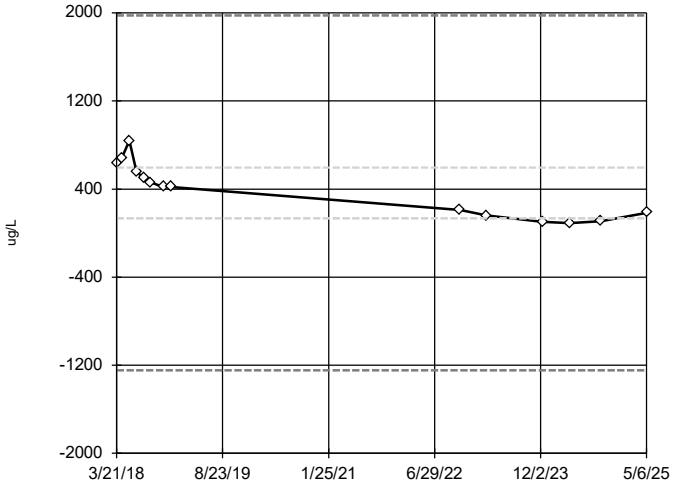
Molybdenum

MW-9



n = 14

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 1977, low cutoff = -1247, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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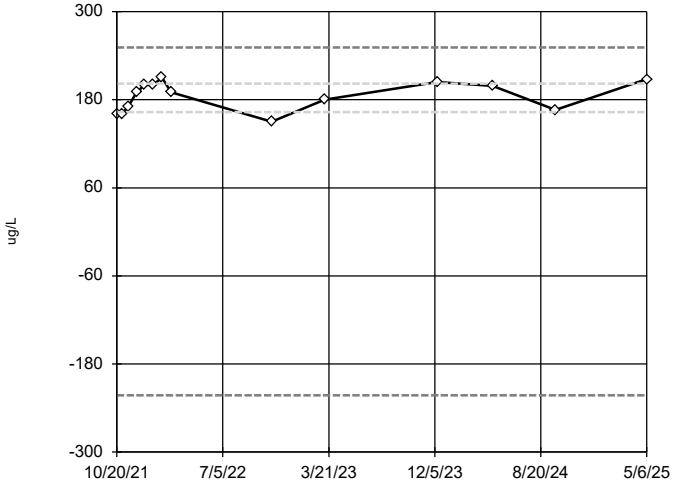
Molybdenum

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 251.2, low cutoff = -222.7, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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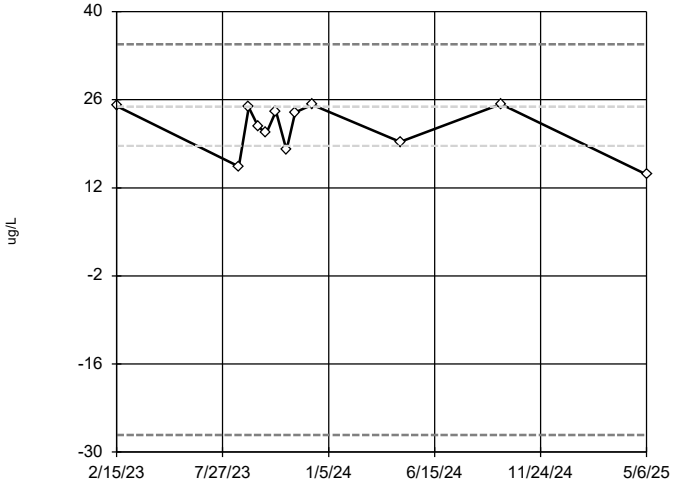
Molybdenum

MW-10



n = 12

No outliers found. Tukey's method selected by user.

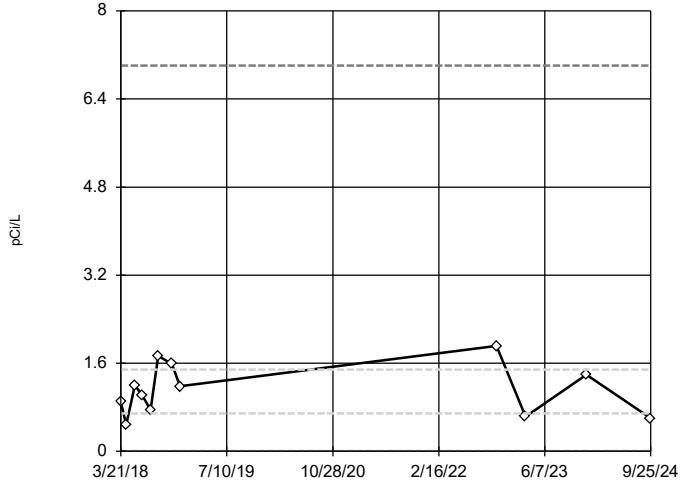
Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 34.82, low cutoff = -27.27, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Radium

MW-2 (bg)



n = 12

No outliers found. Tukey's method selected by user.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.007, low cutoff = 0.00134, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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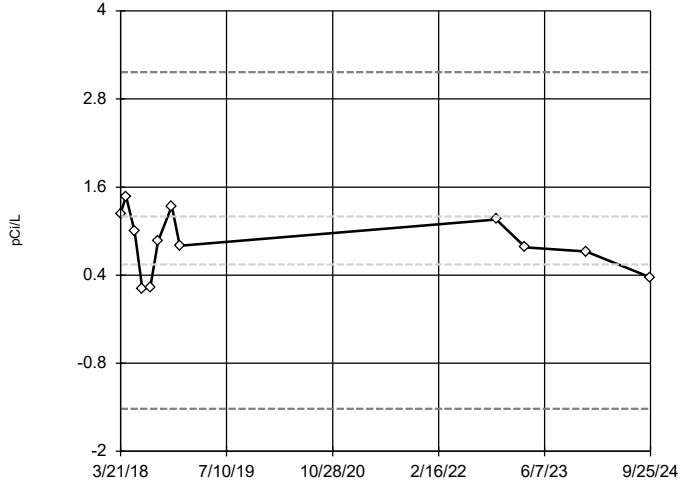
Radium

MW-3 (bg)



n = 12

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 3.165, low cutoff = -1.42, based on IQR multiplier of 3.

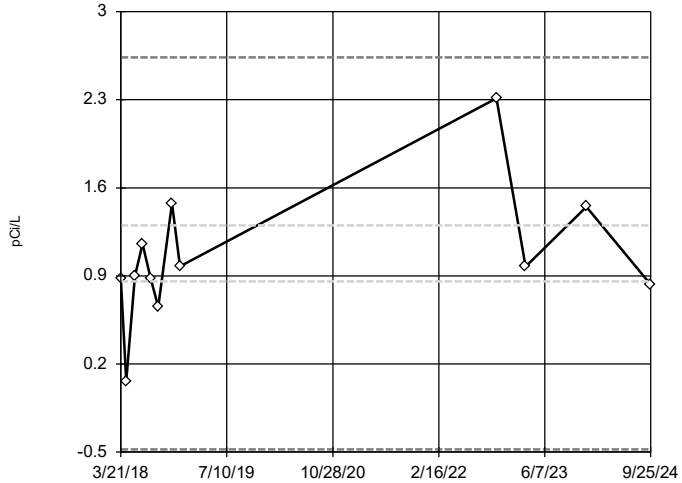
Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Radium

MW-7



n = 12

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 2.637, low cutoff = -0.4785, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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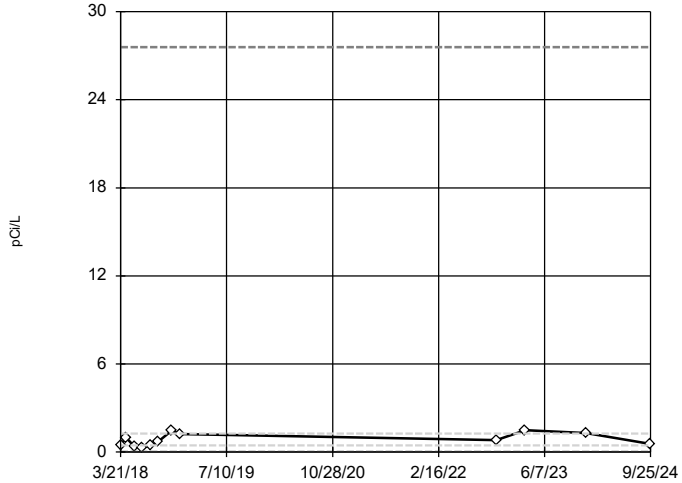
Radium

MW-9



n = 12

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

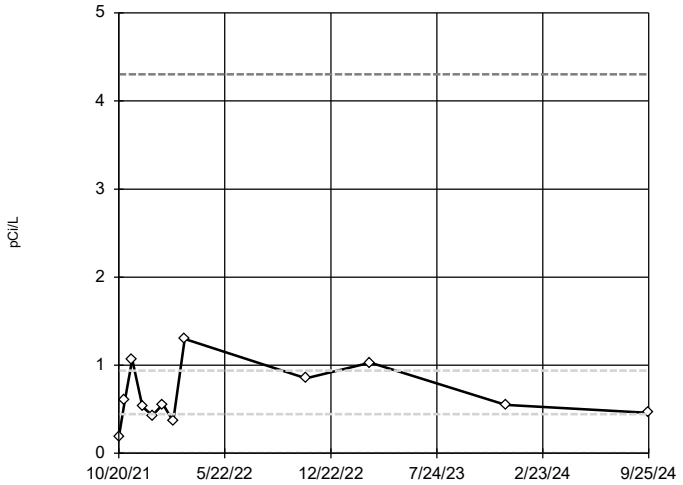
High cutoff = 27.59, low cutoff = 0.02078, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Radium

MW-1R



n = 12

No outliers found.
Tukey's method selected by user.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 4.303, low cutoff = 0.001562, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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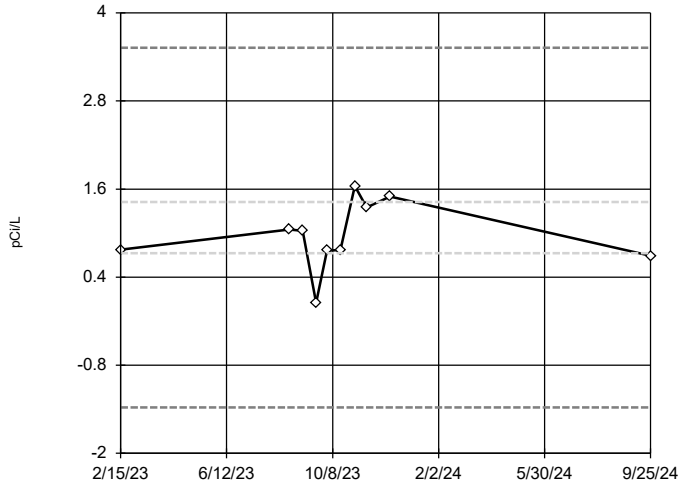
Radium

MW-10



n = 10

No outliers found.
Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 3.525, low cutoff = -1.375, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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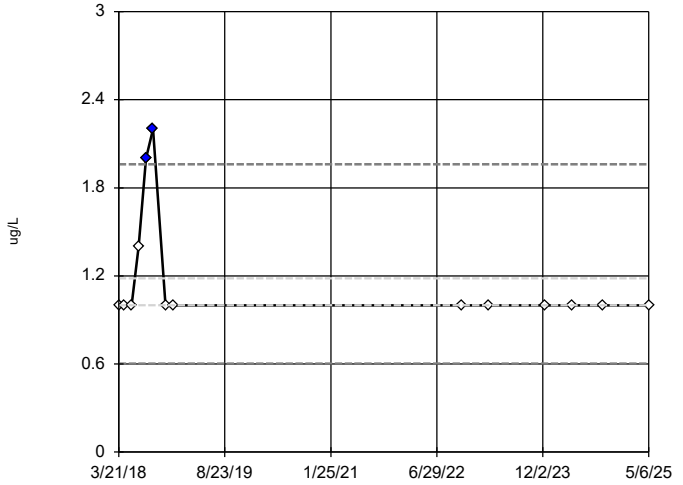
Selenium

MW-2 (bg)



n = 14

Outliers are drawn as solid.
Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.96, low cutoff = 0.6037, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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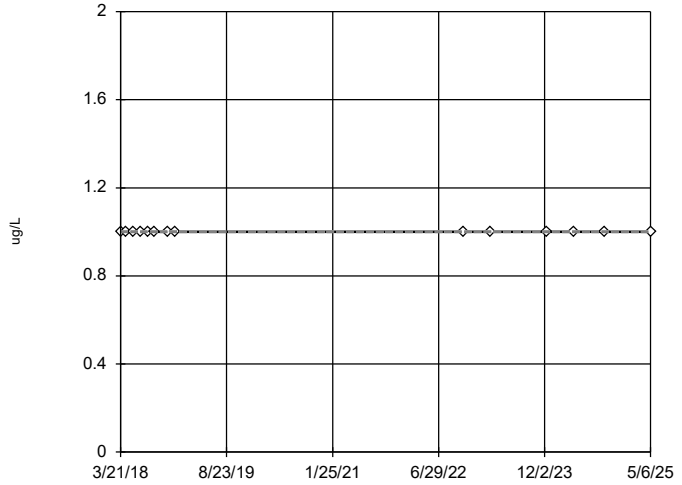
Selenium

MW-3 (bg)



n = 14

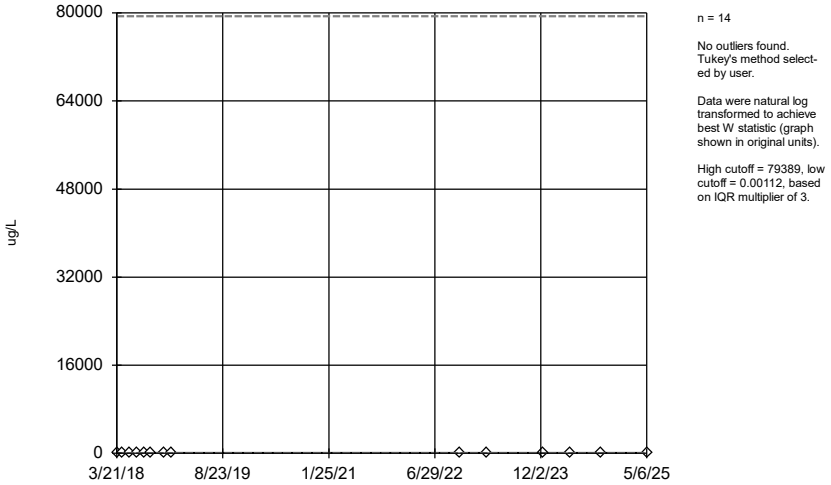
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Selenium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 79389, low cutoff = 0.00112, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
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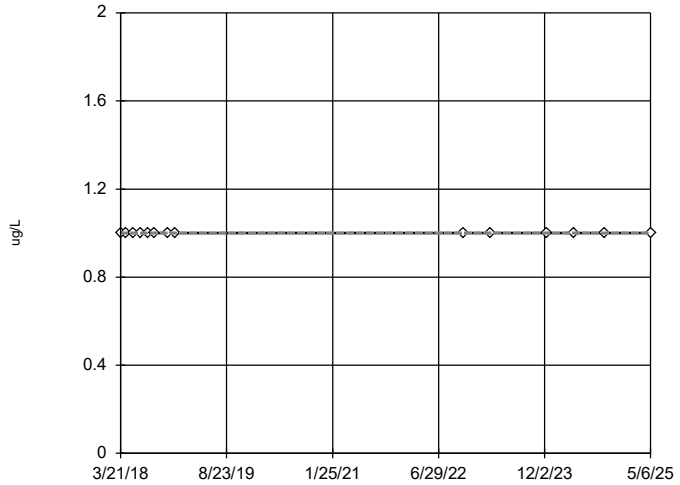
Selenium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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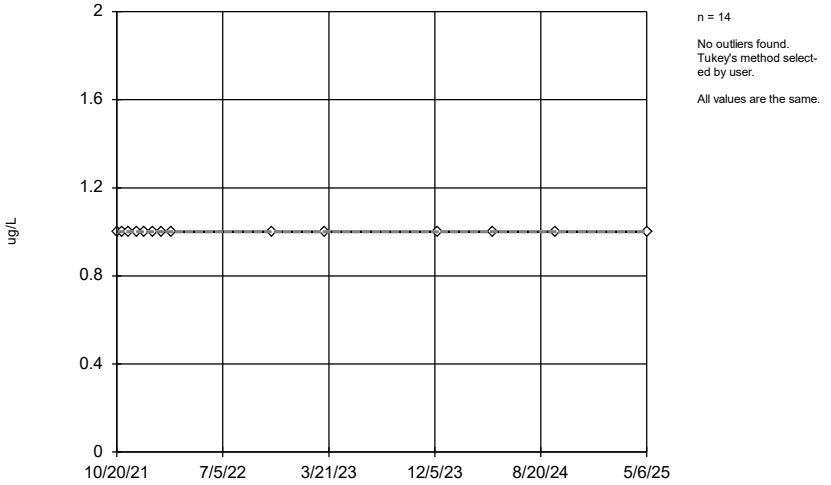
Selenium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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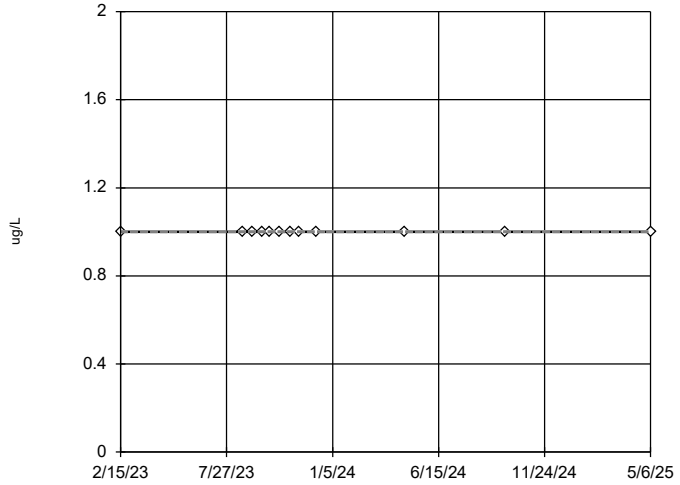
Selenium

MW-10



n = 12

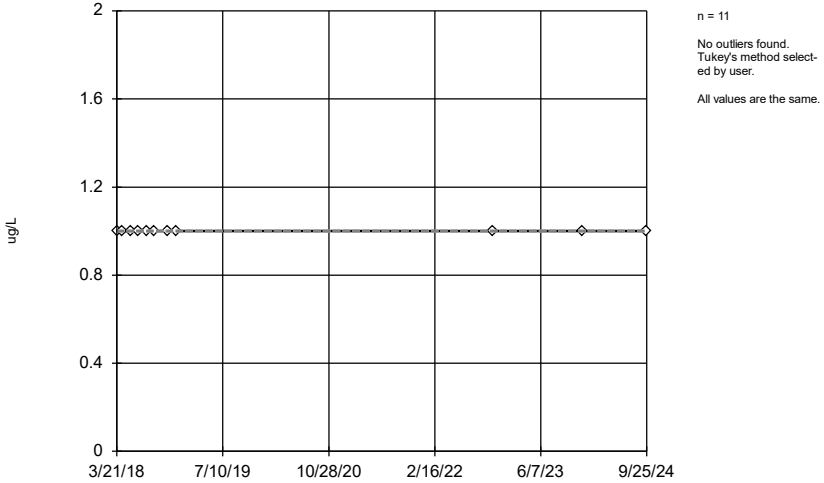
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Thallium

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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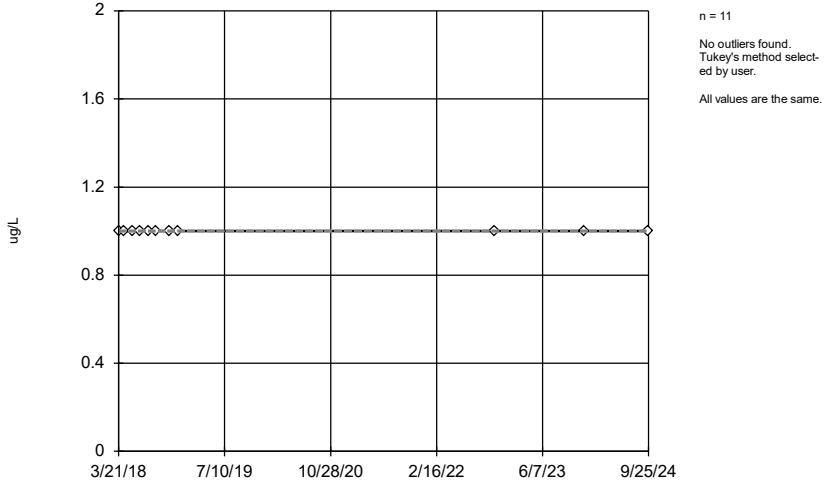
Thallium

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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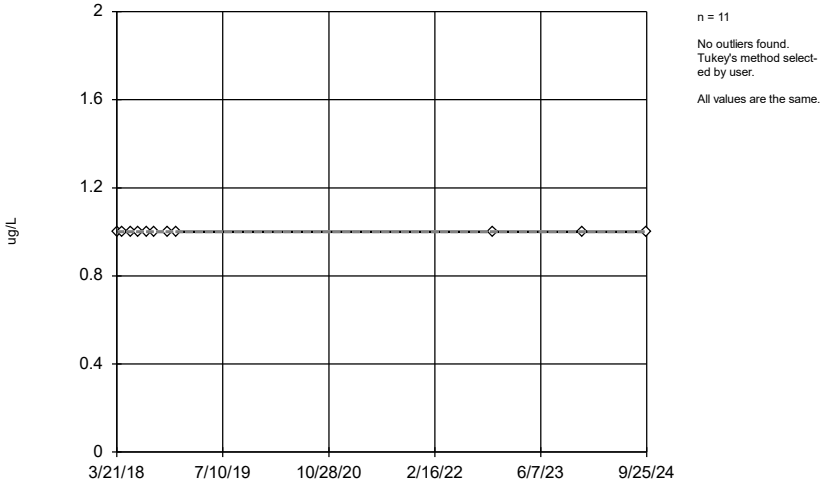
Thallium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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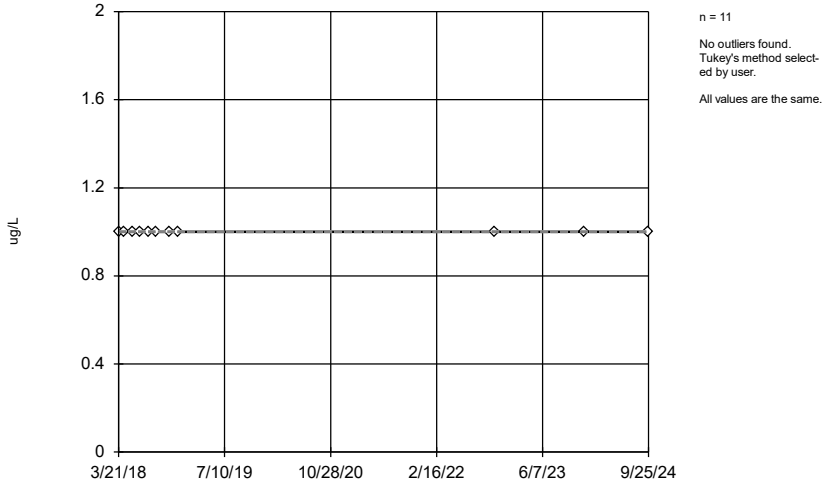
Thallium

MW-9



n = 11

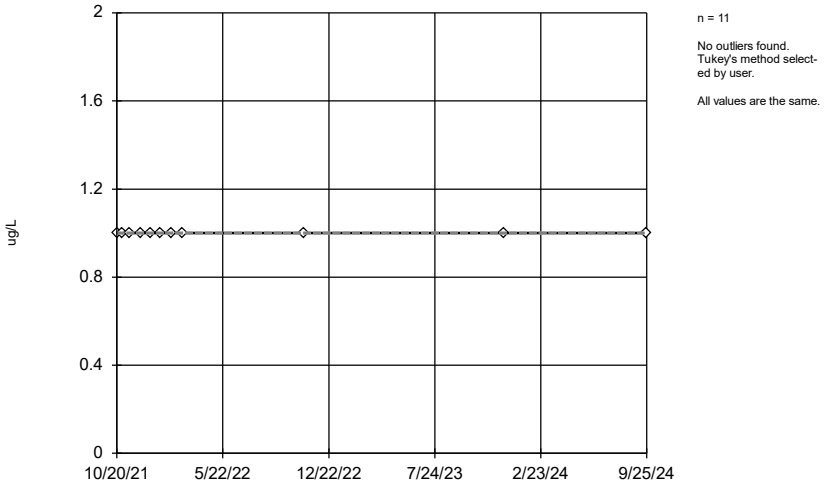
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Thallium

MW-1R



n = 11

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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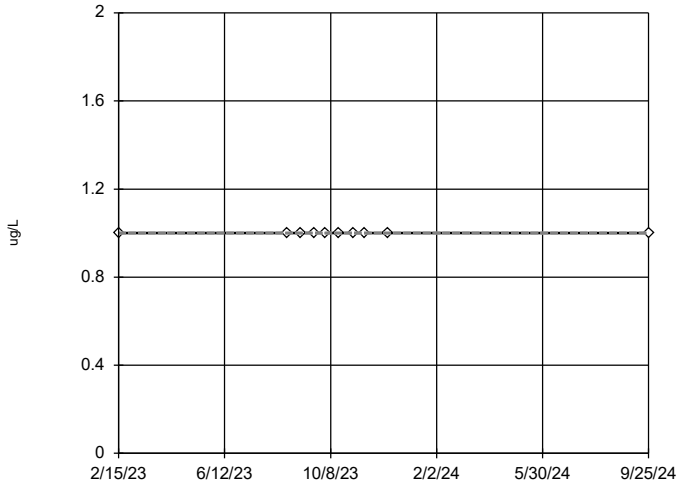
Thallium

MW-10



n = 10

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:50 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Outlier Analysis

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:58 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	11	3.818	2.714	unknown	ShapiroWilk
Antimony (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	3	0	normal	ShapiroWilk
Antimony (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	3	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-7	No	n/a	n/a	NP	NaN	13	1	0	normal	ShapiroWilk
Arsenic (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	13	1.015	0.05547	unknown	ShapiroWilk
Arsenic (ug/L)	MW-1R	n/a	n/a	n/a	NP	NaN	12	1.067	0.1614	unknown	ShapiroWilk
Arsenic (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	6.367	1.012	ln(x)	ShapiroWilk
Barium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	14	179.5	38.4	x^3	ShapiroWilk
Barium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	91.19	12.54	x^4	ShapiroWilk
Barium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	56.25	16.08	ln(x)	ShapiroWilk
Barium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	65.46	21.47	x^2	ShapiroWilk
Barium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	43.57	8.603	x^3	ShapiroWilk
Barium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	139.8	12.49	x^6	ShapiroWilk
Beryllium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Beryllium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Cadmium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Chromium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	11	4.373	1.236	unknown	ShapiroWilk
Chromium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	4	0	normal	ShapiroWilk
Chromium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	4	0	normal	ShapiroWilk
Cobalt (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	2.457	1.599	unknown	ShapiroWilk
Cobalt (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	2	0	normal	ShapiroWilk
Cobalt (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	2.414	0.6526	ln(x)	ShapiroWilk
Cobalt (ug/L)	MW-9	n/a	n/a	n/a	NP	NaN	14	2.014	0.05345	unknown	ShapiroWilk
Cobalt (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	9.114	2.941	ln(x)	ShapiroWilk
Cobalt (ug/L)	MW-10	n/a	n/a	n/a	NP	NaN	12	1.917	0.2887	unknown	ShapiroWilk
Fluoride (mg/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	20	0.2461	0.04795	unknown	ShapiroWilk
Fluoride (mg/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	21	0.2718	0.05336	normal	ShapiroWilk
Fluoride (mg/L)	MW-7	No	n/a	n/a	NP	NaN	21	0.6219	0.1043	x^2	ShapiroWilk
Fluoride (mg/L)	MW-9	No	n/a	n/a	NP	NaN	21	0.885	0.1758	sqrt(x)	ShapiroWilk
Fluoride (mg/L)	MW-1R	n/a	n/a	n/a	NP	NaN	15	0.2501	0.05158	unknown	ShapiroWilk
Fluoride (mg/L)	MW-10	No	n/a	n/a	NP	NaN	12	0.2925	0.04615	ln(x)	ShapiroWilk
Lead (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk

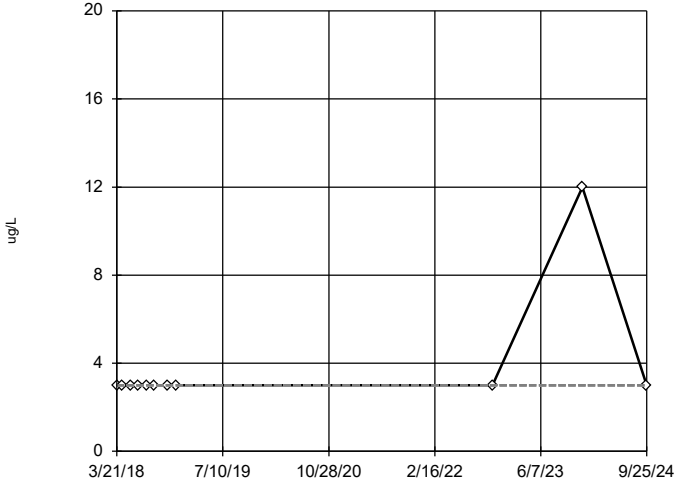
Outlier Analysis

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:58 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lead (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Lead (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk
Lithium (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	11.43	3.631	unknown	ShapiroWilk
Lithium (ug/L)	MW-3 (bg)	n/a	n/a	n/a	NP	NaN	14	11.43	3.631	unknown	ShapiroWilk
Lithium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	29.77	7.86	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	19.62	6.16	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	13.26	4.128	ln(x)	ShapiroWilk
Lithium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	24.13	12.74	x^2	ShapiroWilk
Mercury (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	0.2	0	normal	ShapiroWilk
Mercury (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	0.2	0	normal	ShapiroWilk
Molybdenum (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	1.029	0.1069	unknown	ShapiroWilk
Molybdenum (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Molybdenum (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	140.4	23.62	x^2	ShapiroWilk
Molybdenum (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	383.2	243.5	normal	ShapiroWilk
Molybdenum (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	184.8	20.18	x^5	ShapiroWilk
Molybdenum (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	21.48	3.983	x^3	ShapiroWilk
Radium (pCi/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	12	1.114	0.4689	x^(1/3)	ShapiroWilk
Radium (pCi/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	12	0.8491	0.4191	normal	ShapiroWilk
Radium (pCi/L)	MW-7	No	n/a	n/a	NP	NaN	12	1.046	0.5406	normal	ShapiroWilk
Radium (pCi/L)	MW-9	No	n/a	n/a	NP	NaN	12	0.8459	0.4388	ln(x)	ShapiroWilk
Radium (pCi/L)	MW-1R	No	n/a	n/a	NP	NaN	12	0.6602	0.3301	x^(1/3)	ShapiroWilk
Radium (pCi/L)	MW-10	No	n/a	n/a	NP	NaN	10	0.9613	0.4632	normal	ShapiroWilk
Selenium (ug/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	12	1.033	0.1155	unknown	ShapiroWilk
Selenium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	14	16.41	19.51	ln(x)	ShapiroWilk
Selenium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	14	1	0	normal	ShapiroWilk
Selenium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	12	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-2 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-3 (bg)	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-7	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-9	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-1R	No	n/a	n/a	NP	NaN	11	1	0	normal	ShapiroWilk
Thallium (ug/L)	MW-10	No	n/a	n/a	NP	NaN	10	1	0	normal	ShapiroWilk

Antimony

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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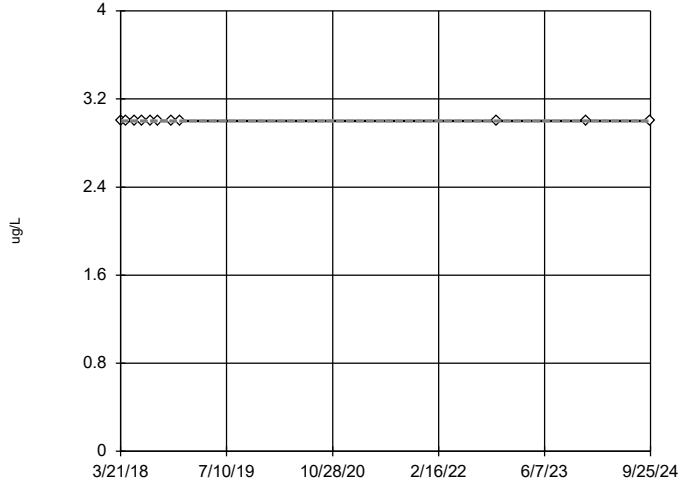
Antimony

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

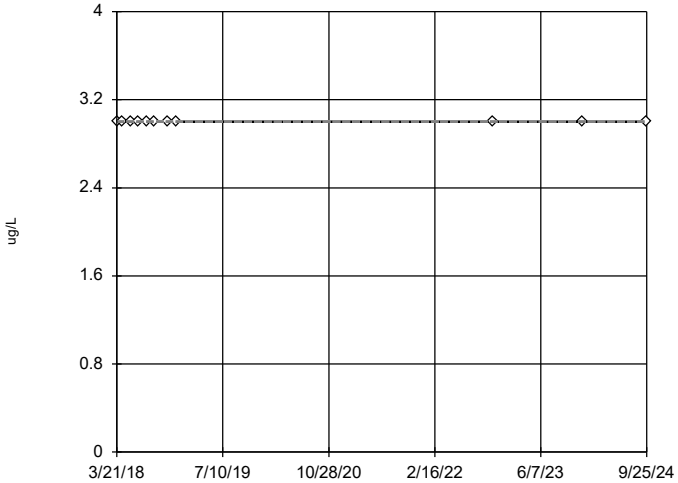
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Antimony

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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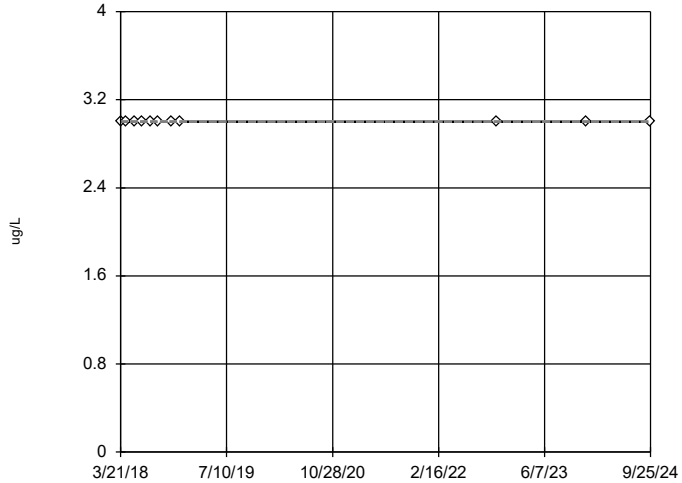
Antimony

MW-9



n = 11

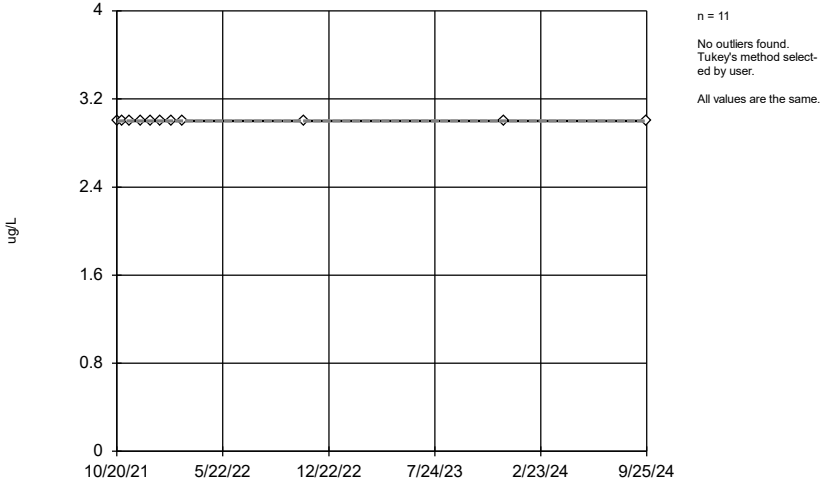
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Antimony

MW-1R



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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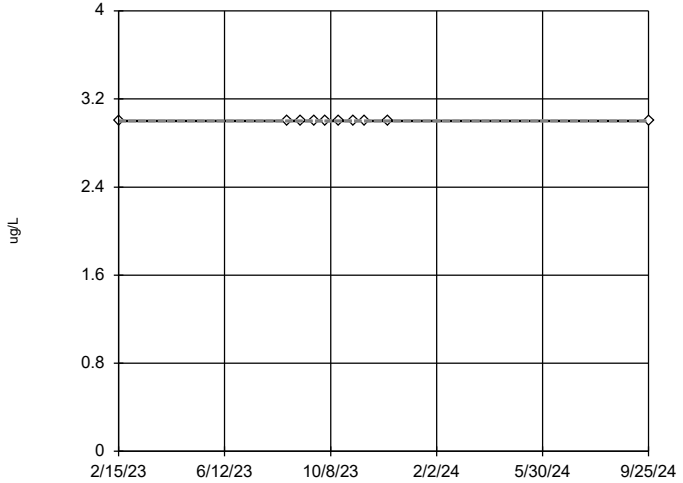
Antimony

MW-10



n = 10

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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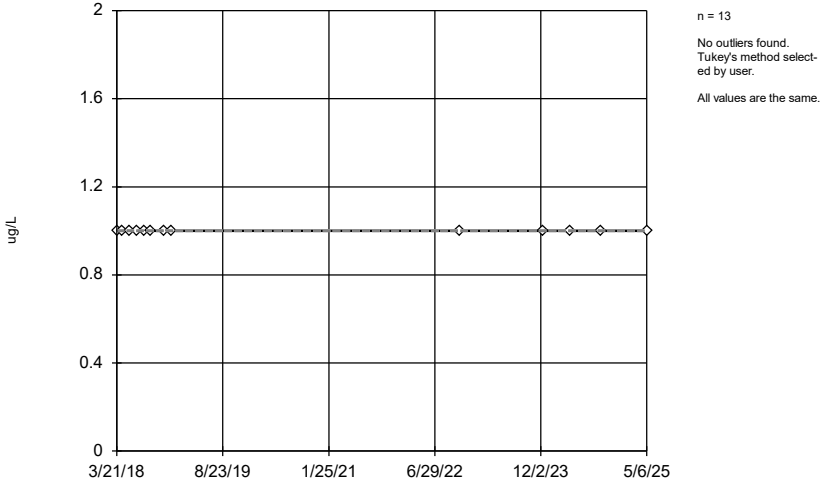
Arsenic

MW-2 (bg)



n = 13

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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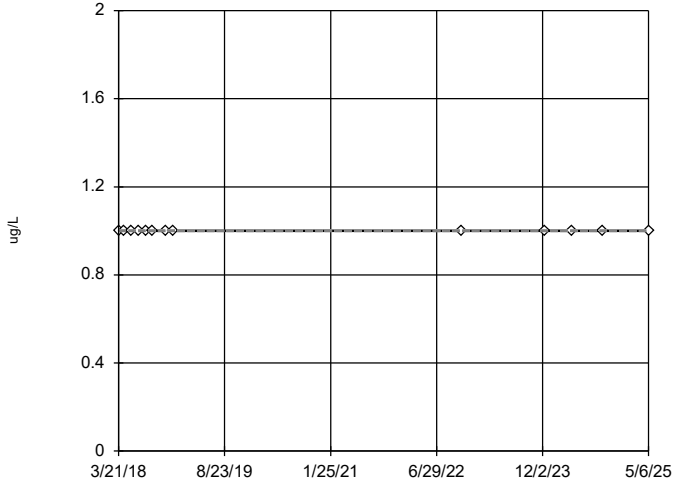
Arsenic

MW-3 (bg)



n = 13

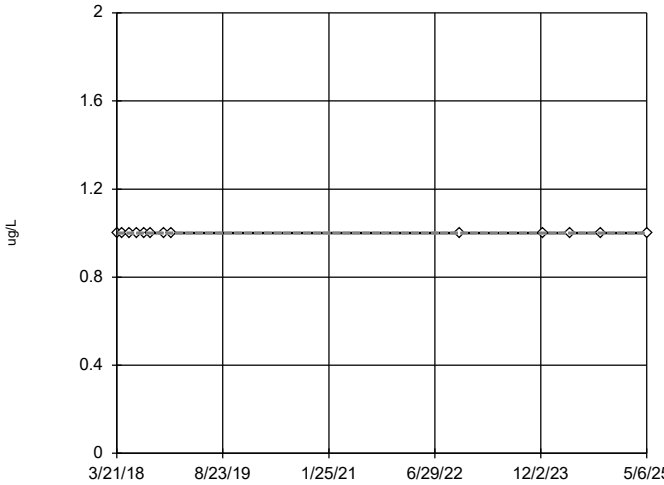
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Arsenic

MW-7



n = 13

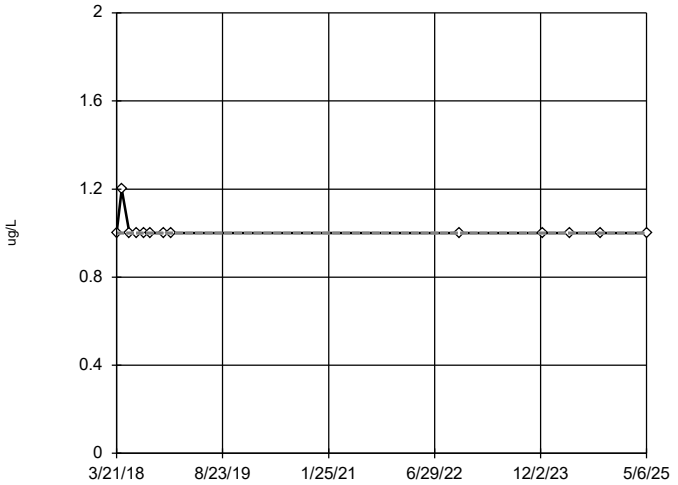
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Arsenic

MW-9



n = 13

No outliers found. Tukey's method selected by user.

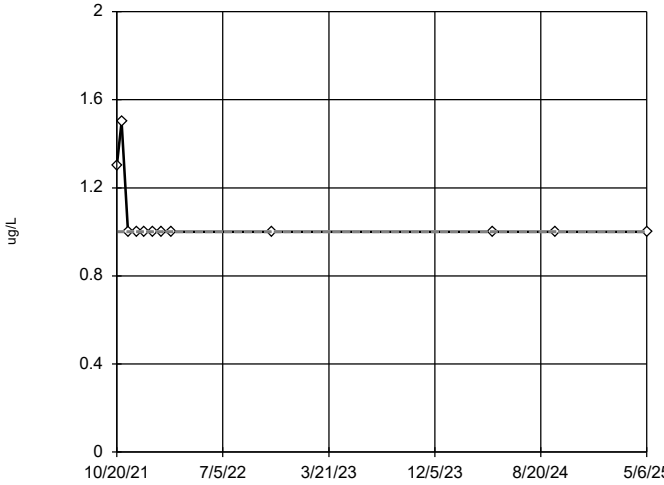
Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:55 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Arsenic

MW-1R



n = 12

No outliers found. Tukey's method selected by user.

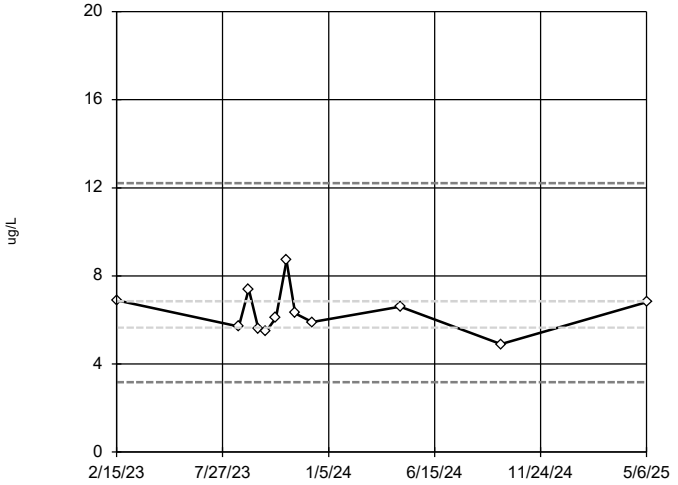
Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Arsenic

MW-10



n = 12

No outliers found. Tukey's method selected by user.

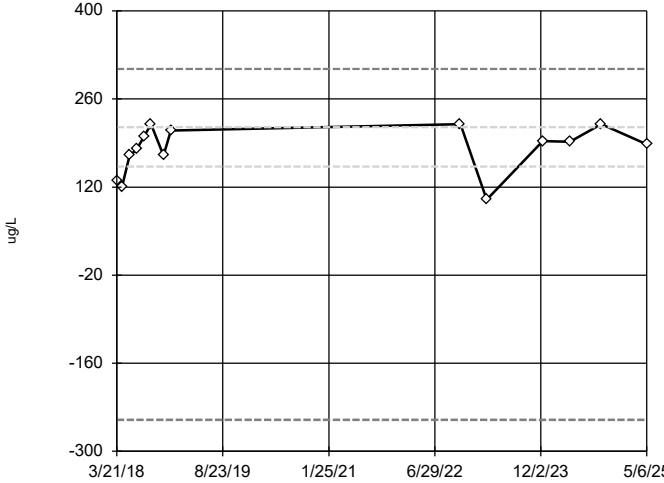
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 12.21, low cutoff = 3.17, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 307.8, low cutoff = -250.1, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025

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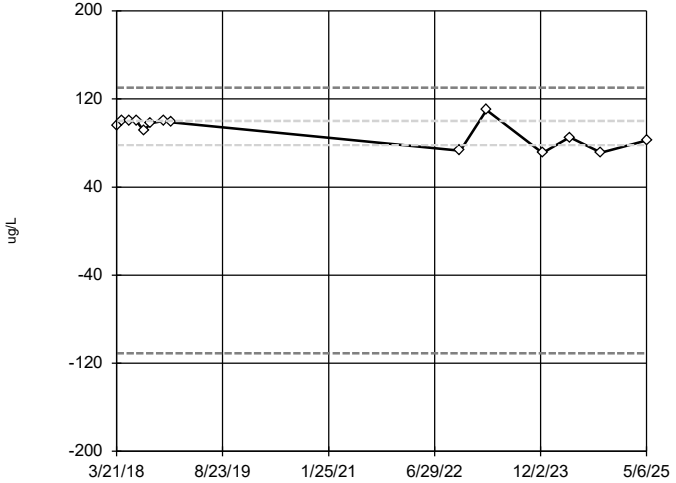
Barium

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 130.3, low cutoff = -110.9, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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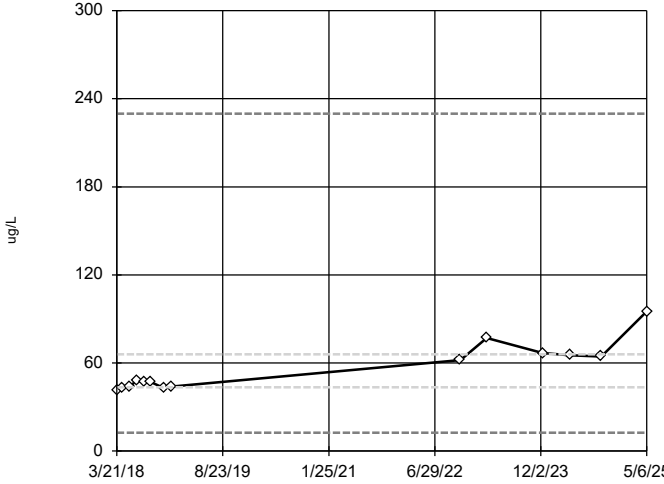
Barium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 229.8, low cutoff = 12.48, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025

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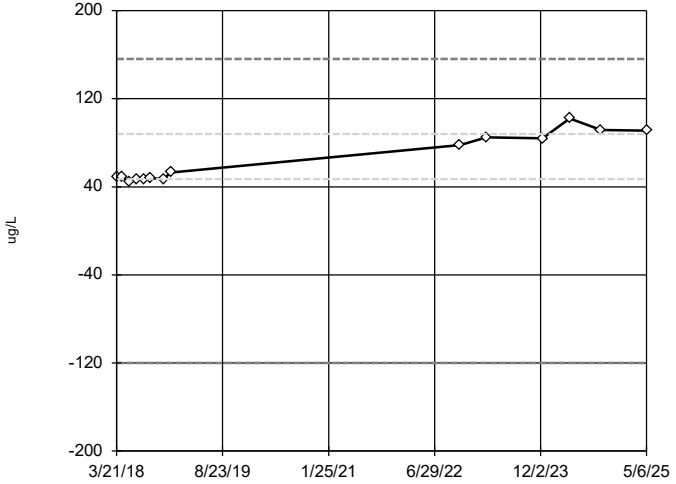
Barium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

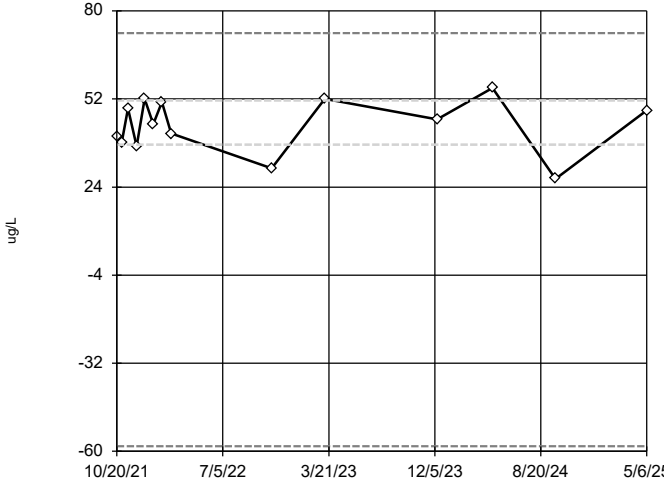
High cutoff = 156, low cutoff = -120, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 72.95, low cutoff = -58.37, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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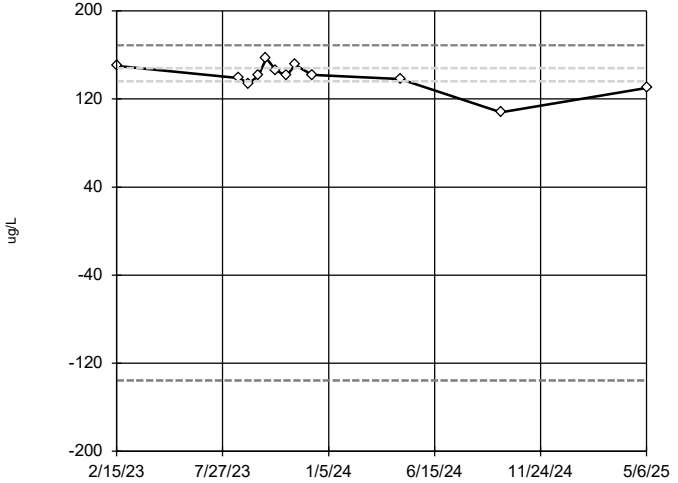
Barium

MW-10



n = 12

No outliers found. Tukey's method selected by user.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 168.8, low cutoff = -135.6, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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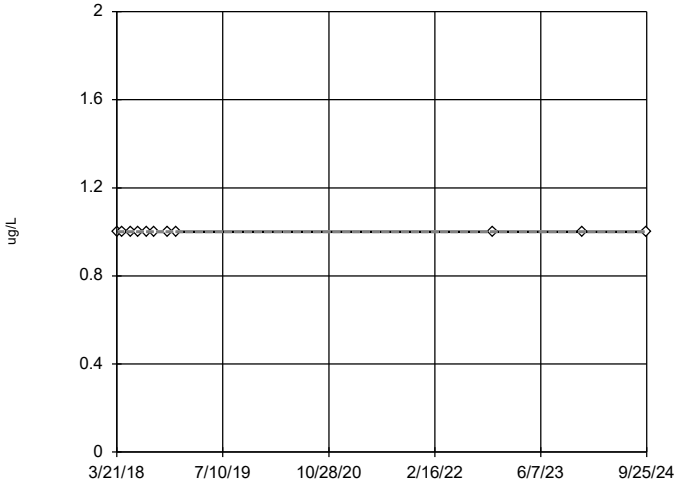
Beryllium

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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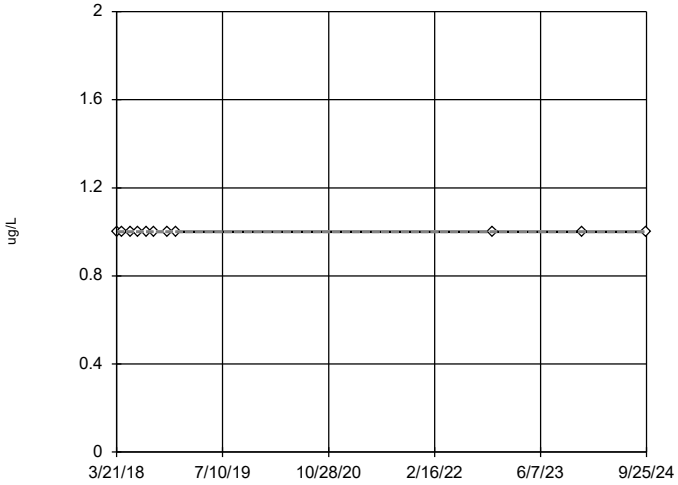
Beryllium

MW-3 (bg)



n = 11

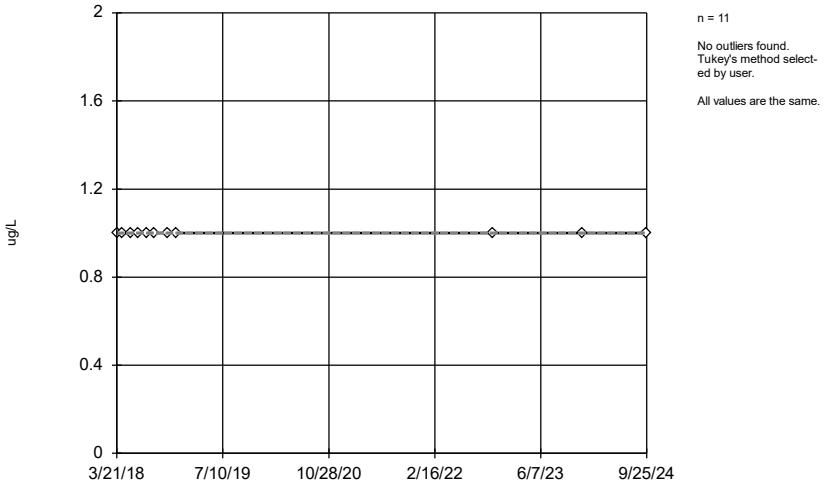
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Beryllium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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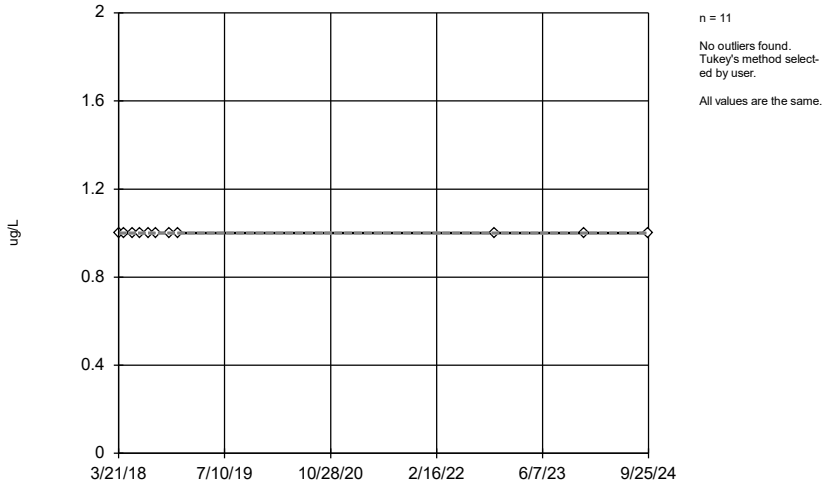
Beryllium

MW-9



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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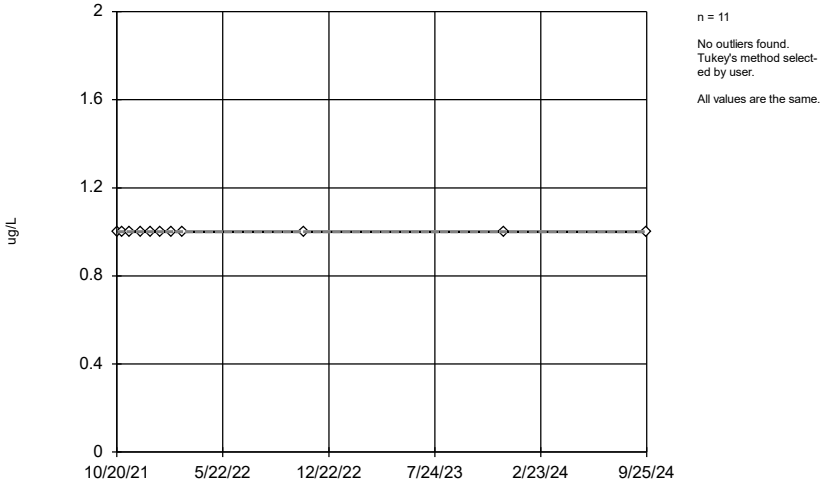
Beryllium

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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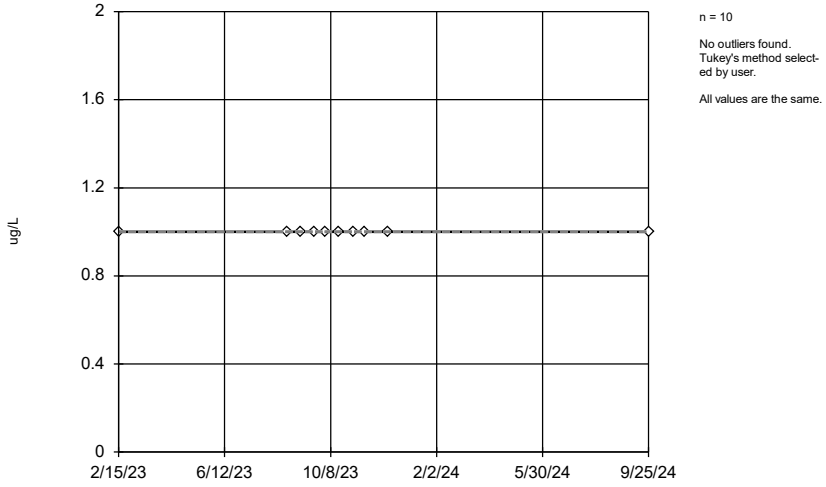
Beryllium

MW-10



n = 10

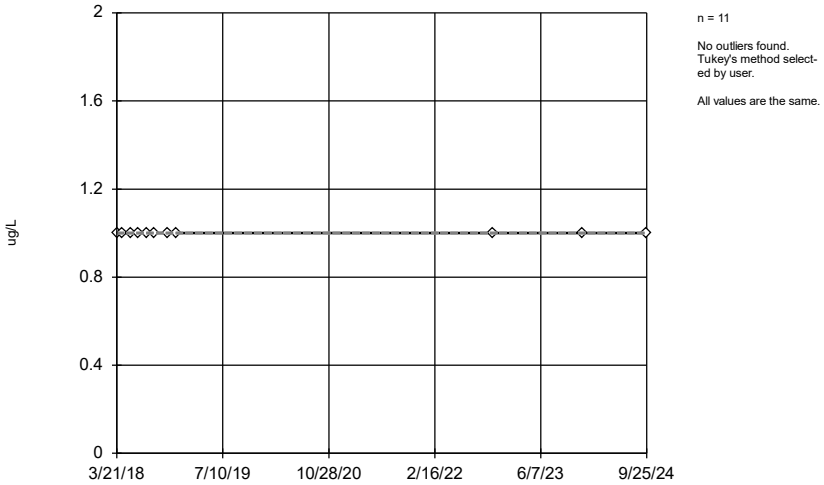
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-2 (bg)



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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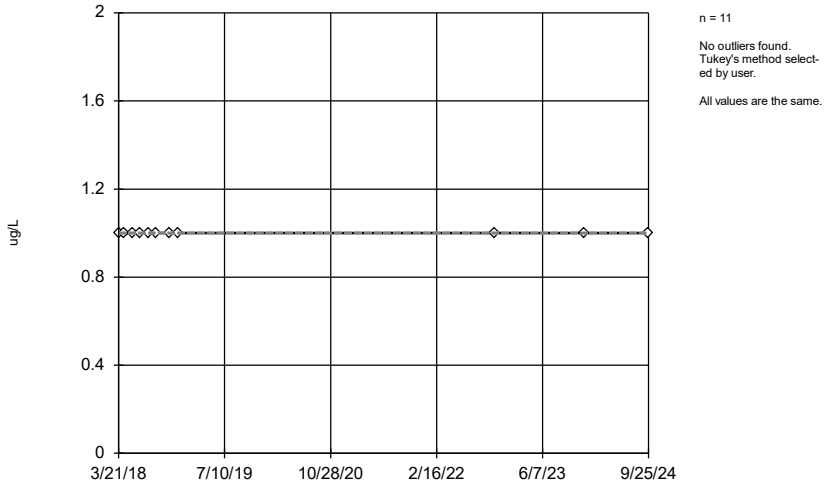
Cadmium

MW-3 (bg)



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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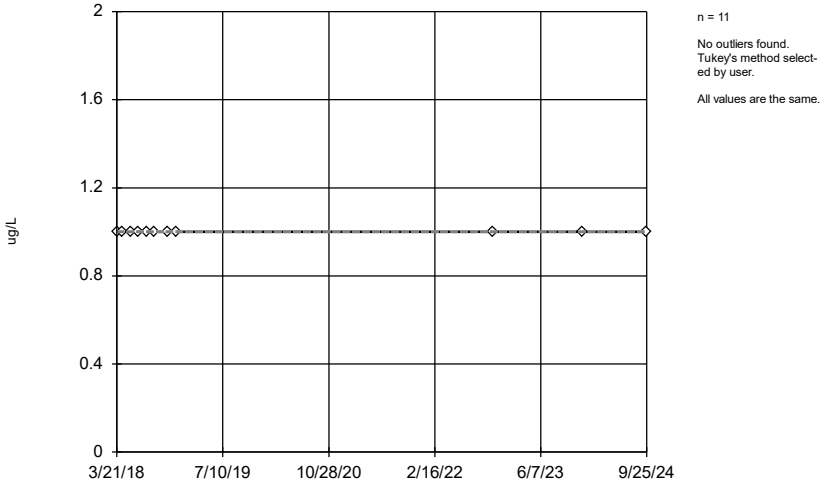
Cadmium

MW-7



n = 11

No outliers found.
Tukey's method select-
ed by user.

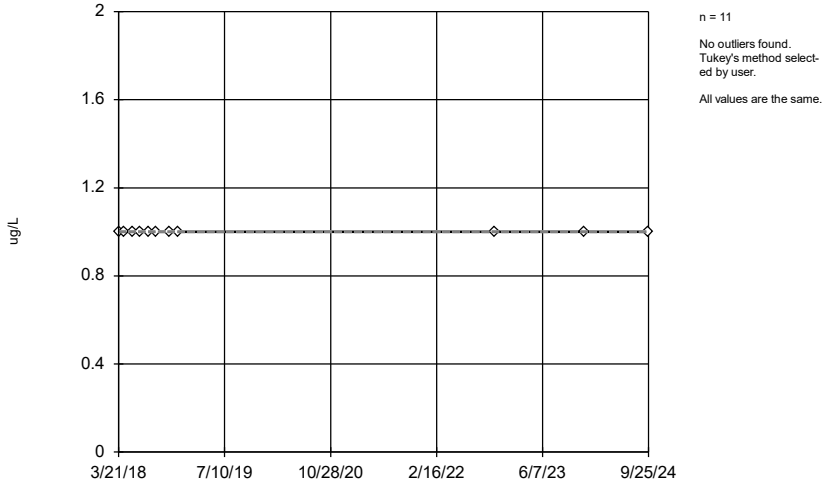
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cadmium

MW-9



n = 11

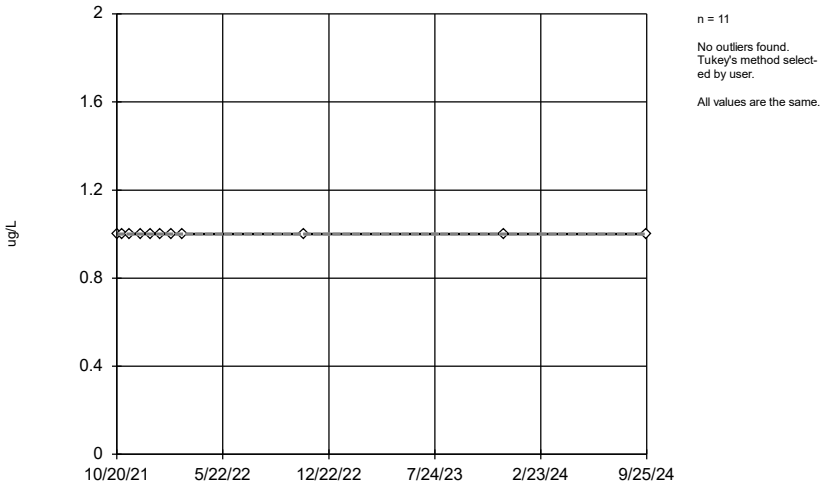
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-1R



n = 11

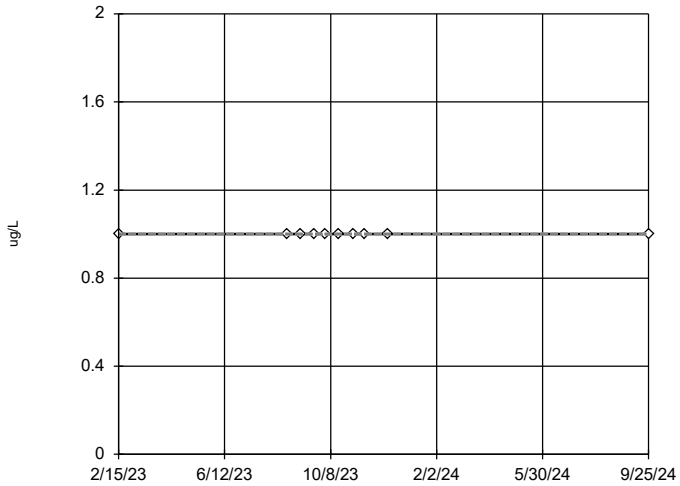
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cadmium

MW-10



n = 10

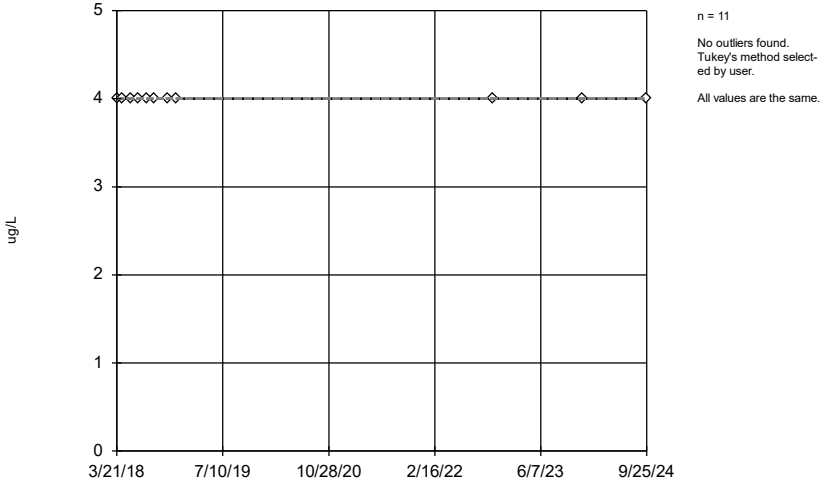
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-2 (bg)



n = 11

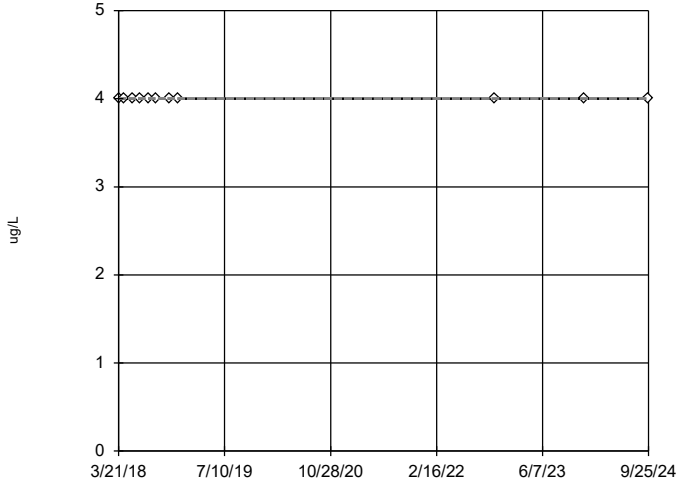
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-3 (bg)



n = 11

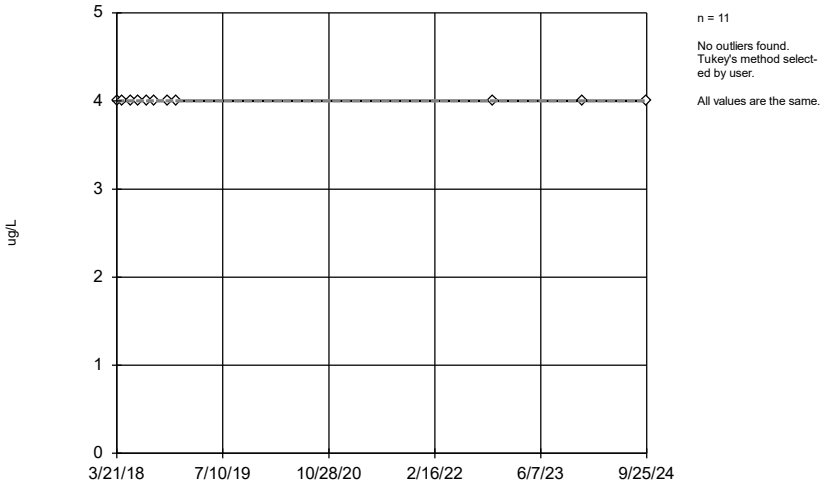
No outliers found.
Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

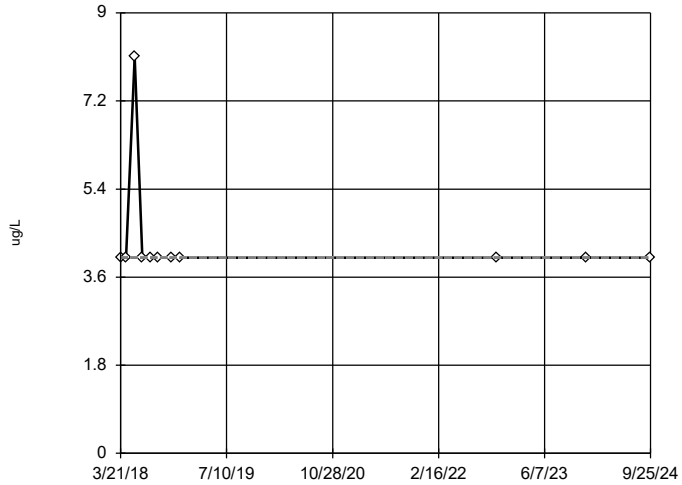
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Chromium

MW-9



n = 11

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

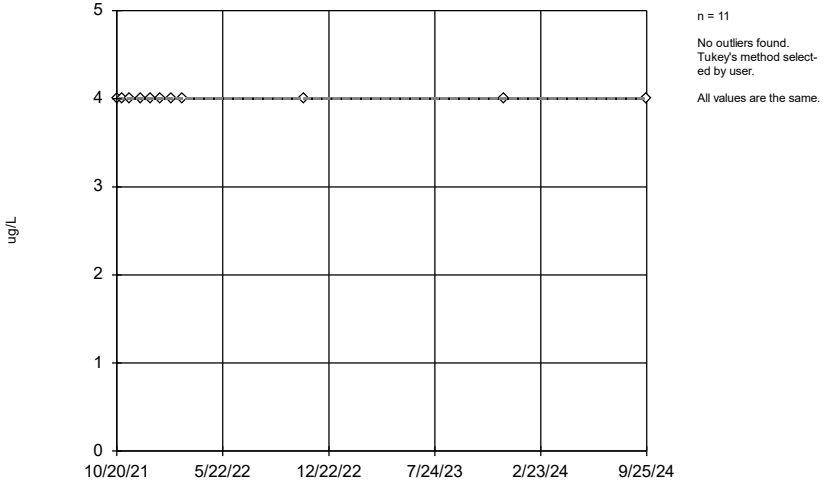
The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Chromium

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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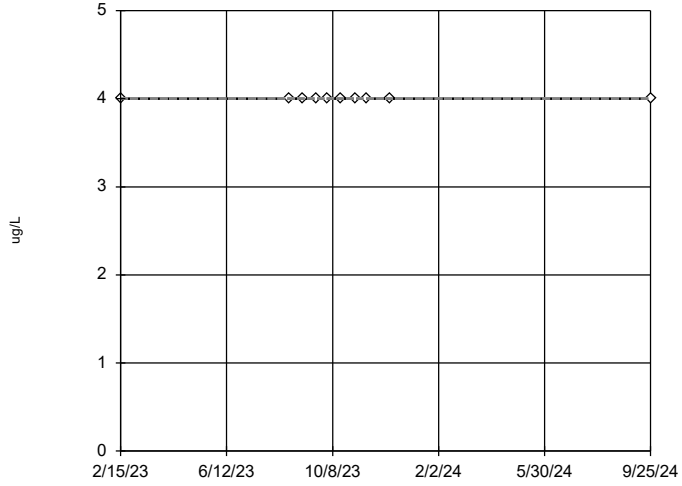
Chromium

MW-10



n = 10

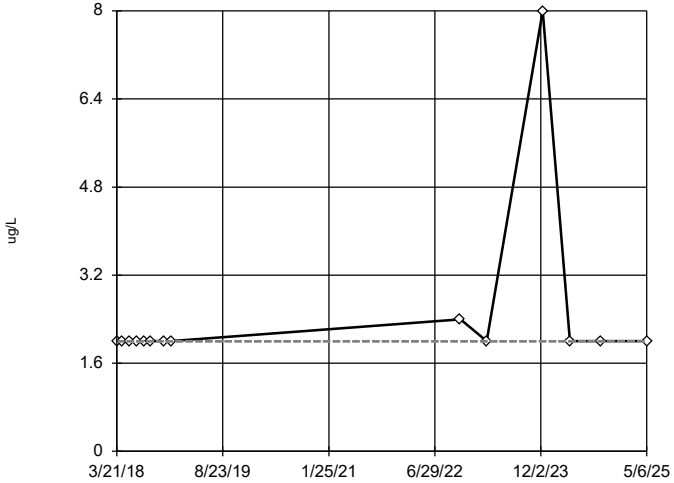
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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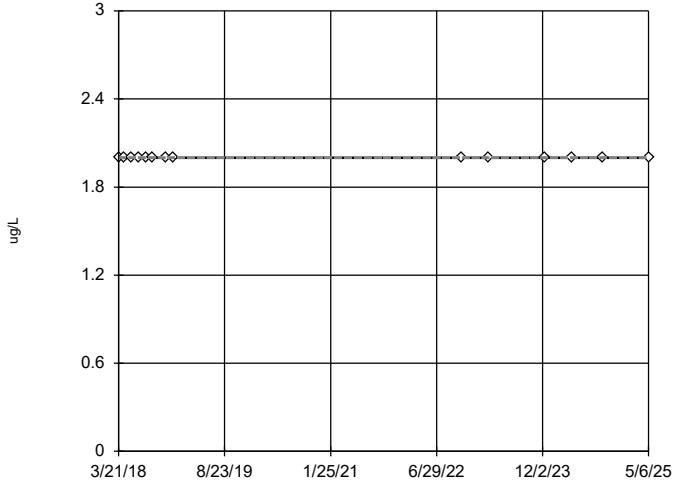
Cobalt

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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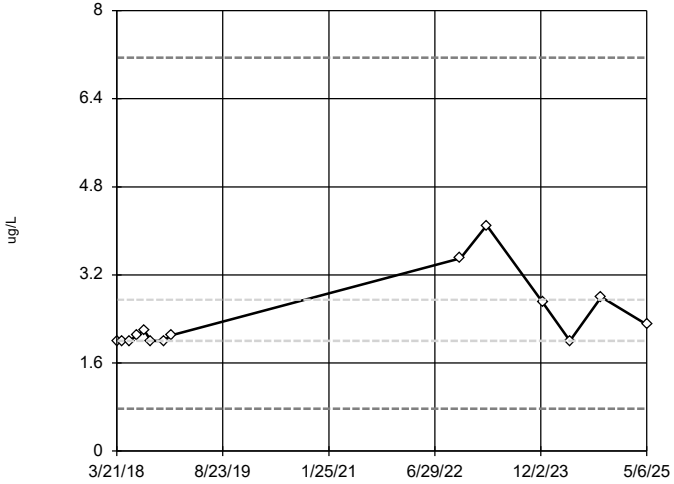
Cobalt

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.144, low cutoff = 0.7697, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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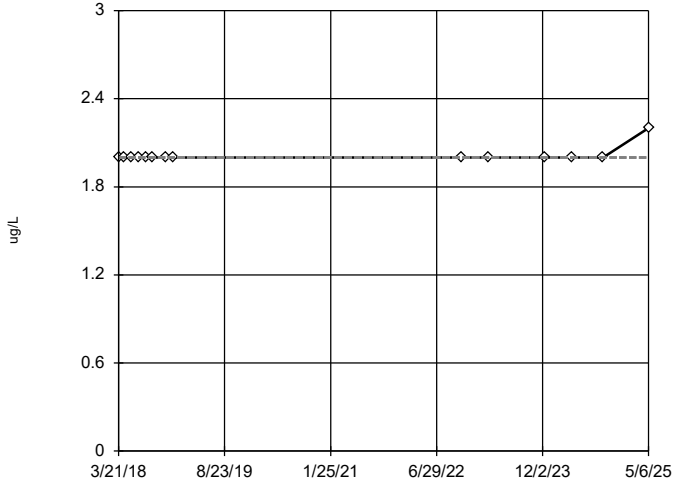
Cobalt

MW-9



n = 14

No outliers found. Tukey's method selected by user.

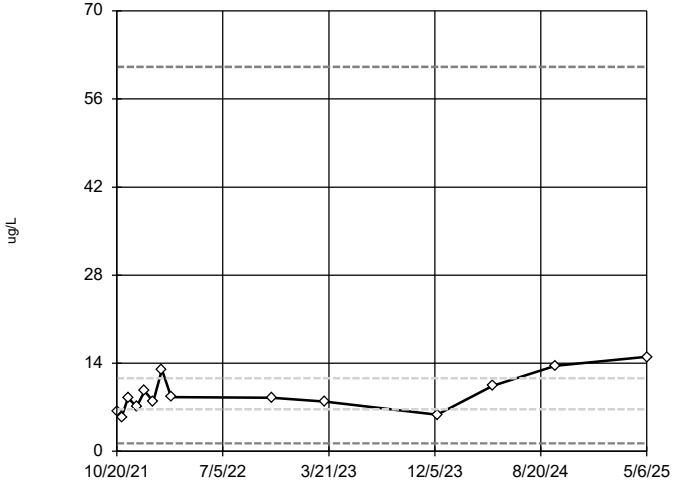
Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 61.1, low cutoff = 1.273, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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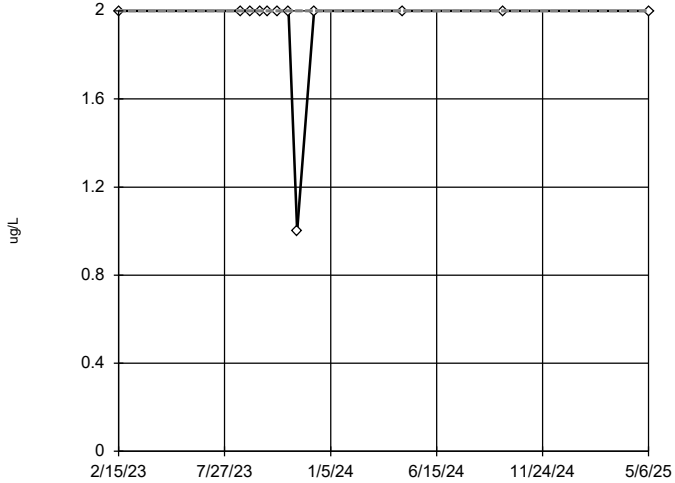
Cobalt

MW-10



n = 12

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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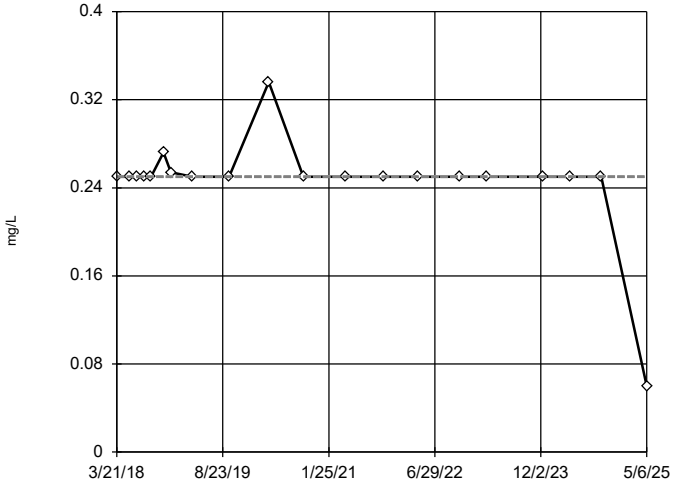
Fluoride

MW-2 (bg)



n = 20

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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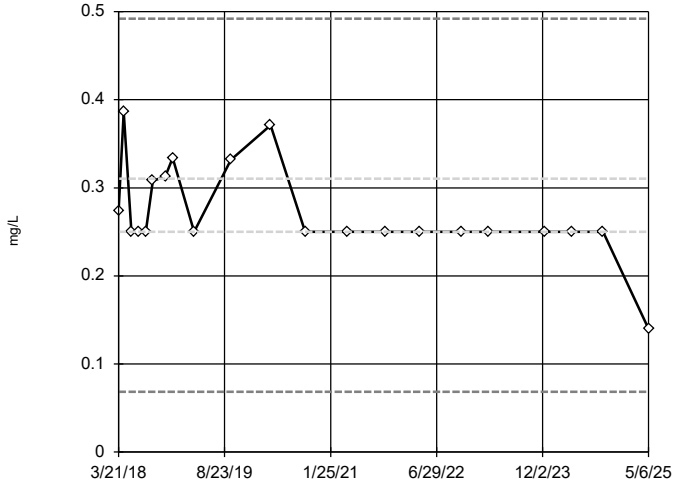
Fluoride

MW-3 (bg)



n = 21

No outliers found. Tukey's method selected by user.

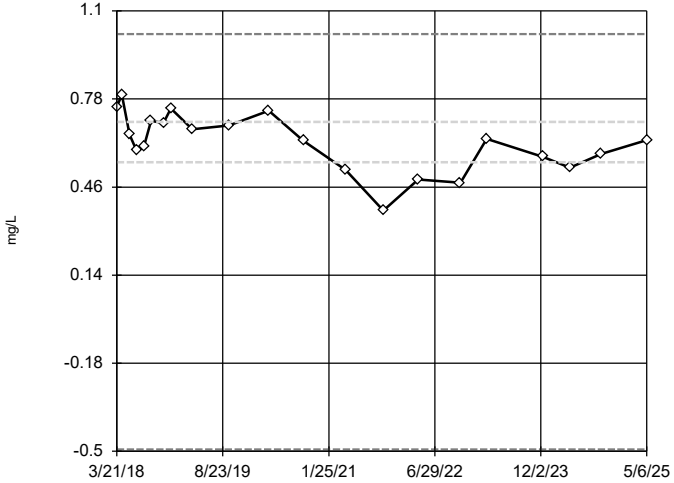
Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 0.492, low cutoff = 0.0685, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride

MW-7



n = 21

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.016, low cutoff = -0.4937, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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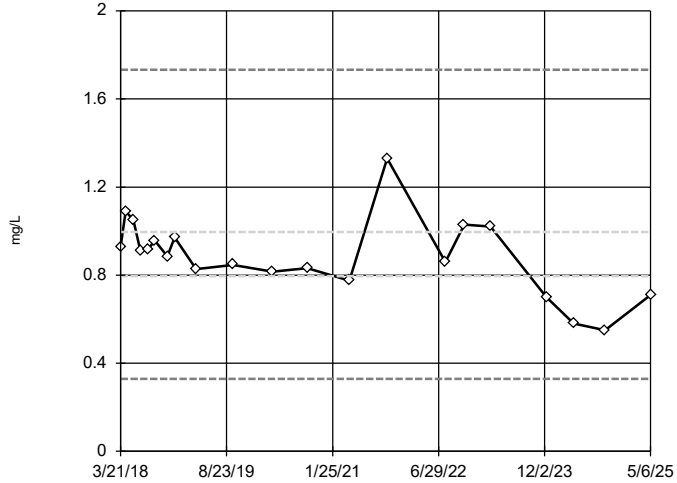
Fluoride

MW-9



n = 21

No outliers found. Tukey's method selected by user.

Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.732, low cutoff = 0.329, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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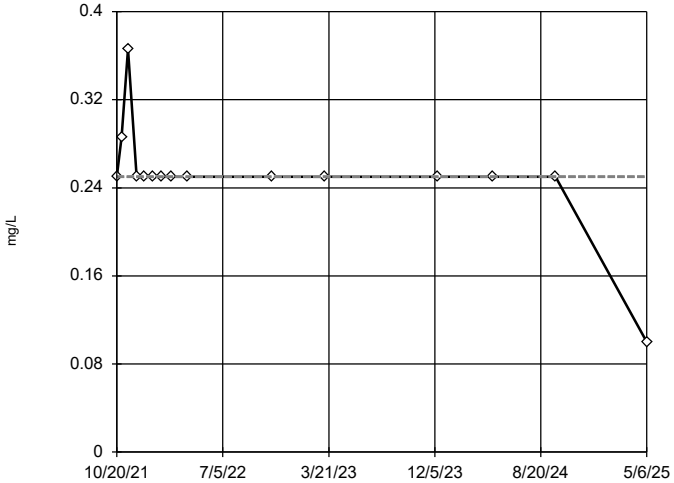
Fluoride

MW-1R



n = 15

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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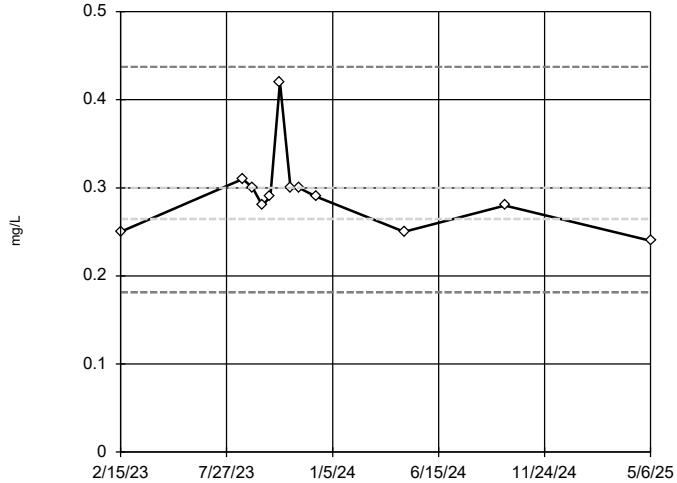
Fluoride

MW-10



n = 12

No outliers found. Tukey's method selected by user.

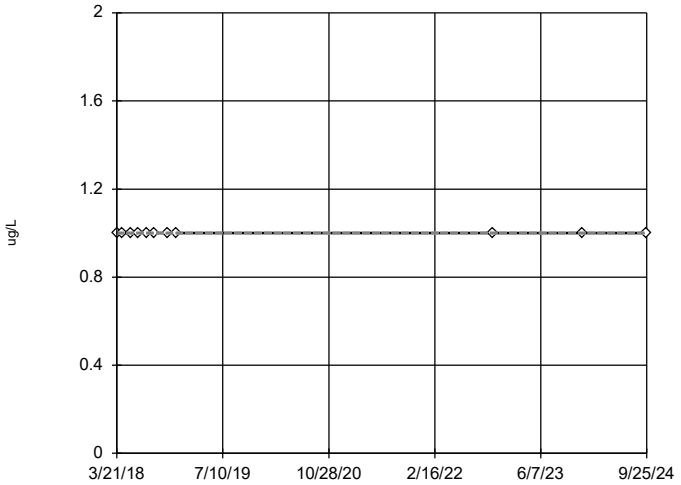
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.4374, low cutoff = 0.1815, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lead

MW-2 (bg)



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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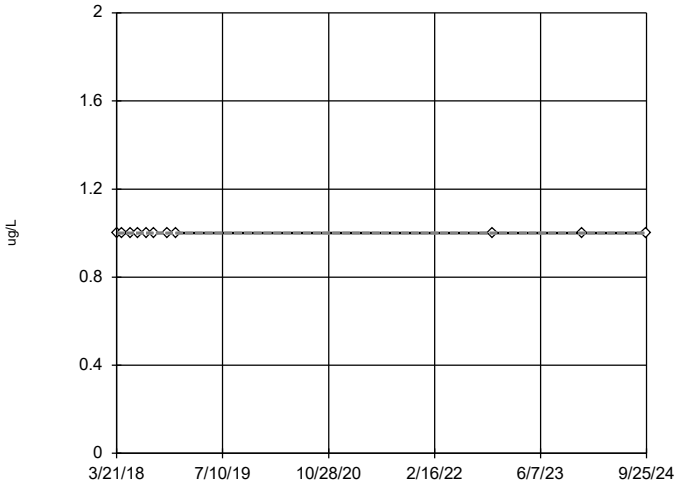
Lead

MW-3 (bg)



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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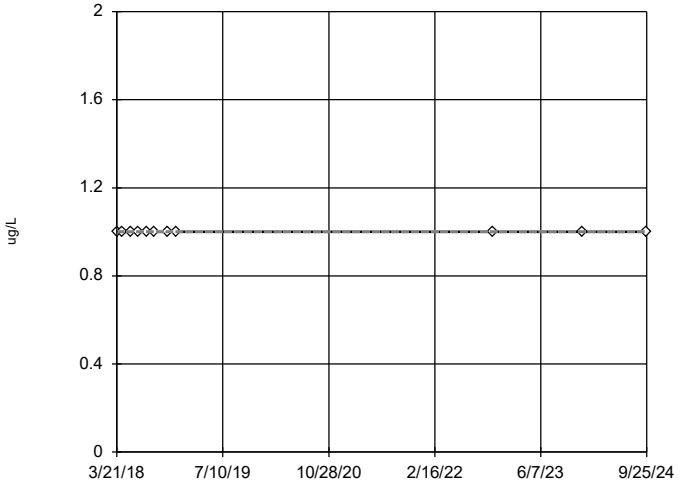
Lead

MW-7



n = 11

No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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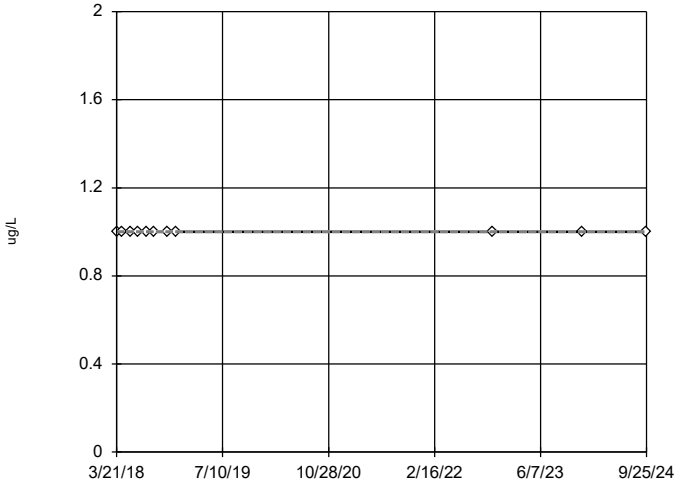
Lead

MW-9



n = 11

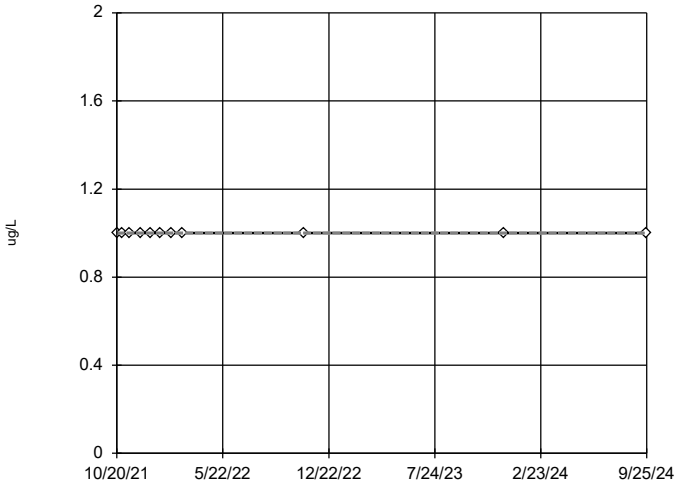
No outliers found.
Tukey's method select-
ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lead

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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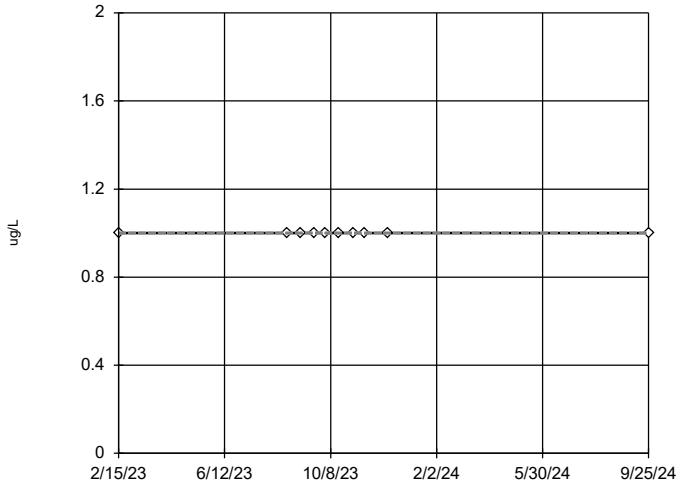
Lead

MW-10



n = 10

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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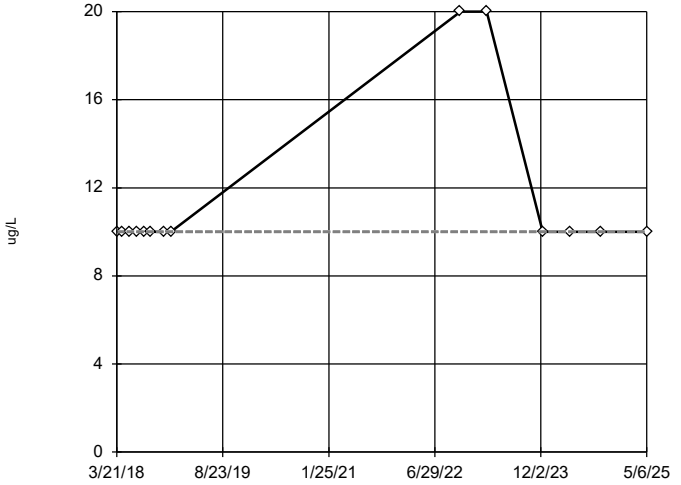
Lithium

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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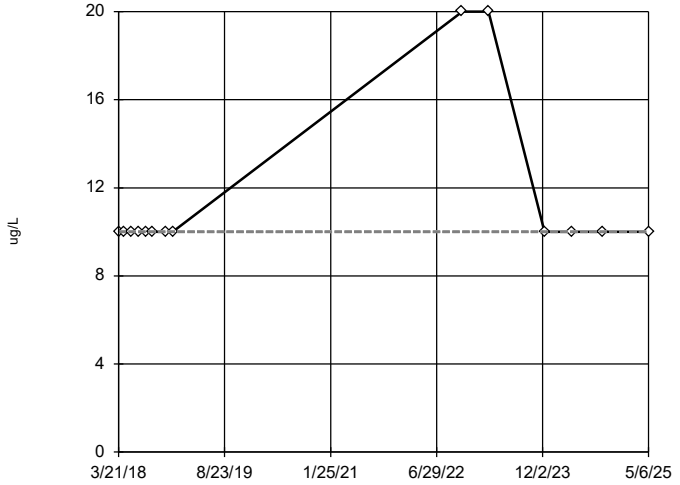
Lithium

MW-3 (bg)



n = 14

No outliers found. Tukey's method selected by user.

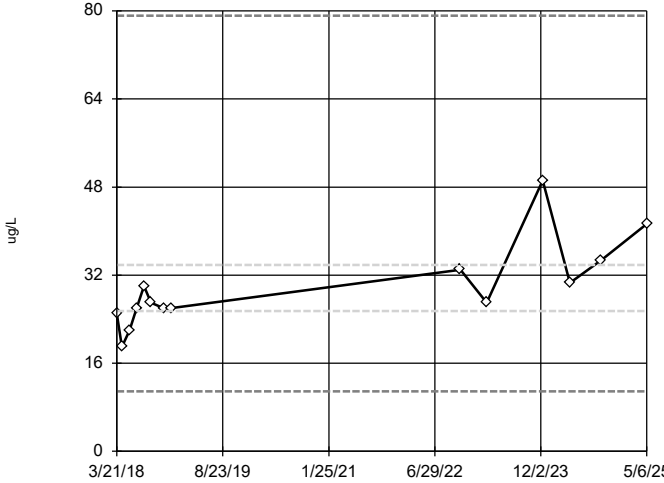
Data were square transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lithium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 79.13, low cutoff = 10.9, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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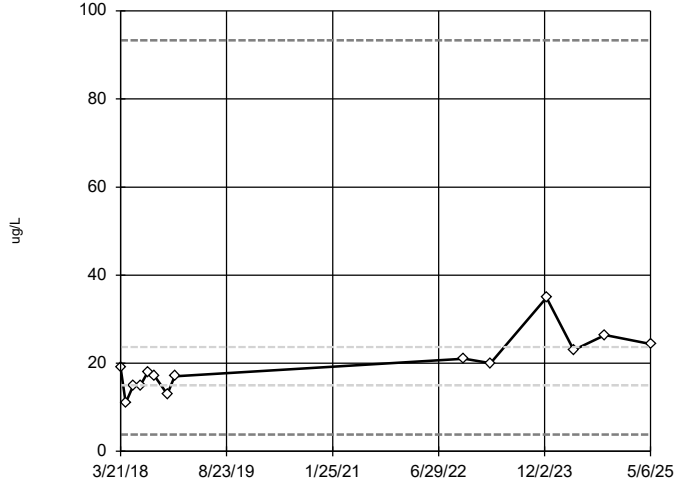
Lithium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 93.32, low cutoff = 3.808, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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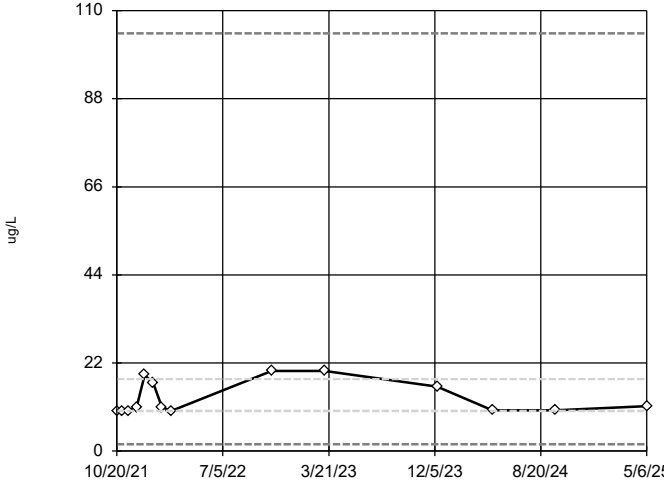
Lithium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 104.3, low cutoff = 1.723, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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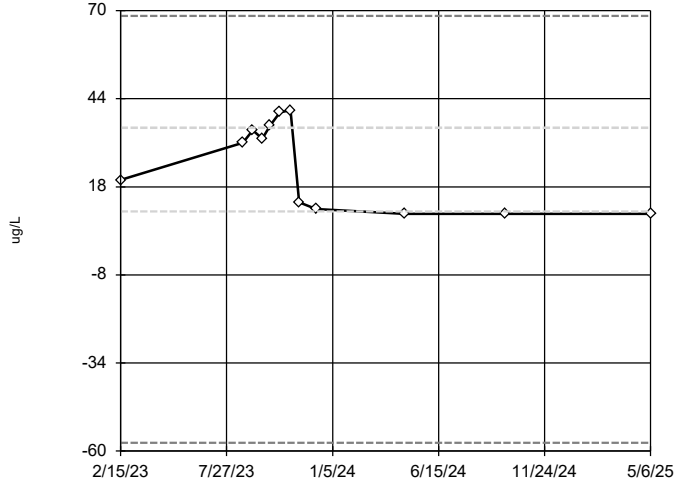
Lithium

MW-10



n = 12

No outliers found. Tukey's method selected by user.

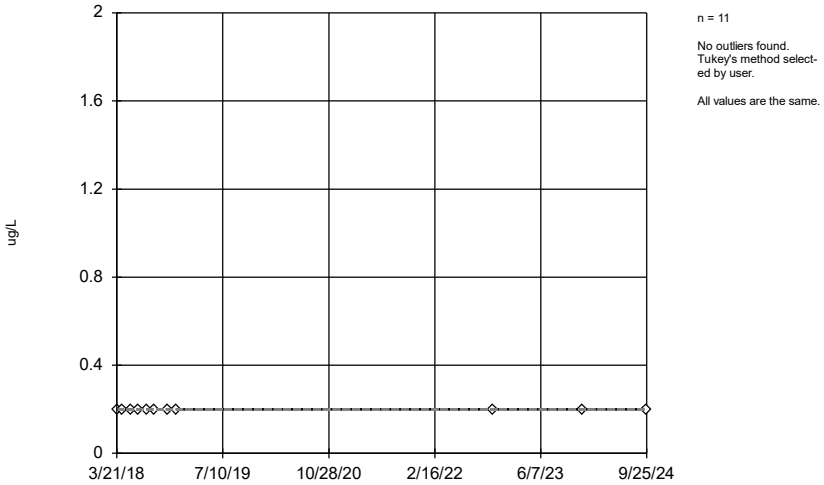
Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 68.44, low cutoff = -57.55, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:56 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-2 (bg)



n = 11

No outliers found.
Tukey's method select-ed by user.

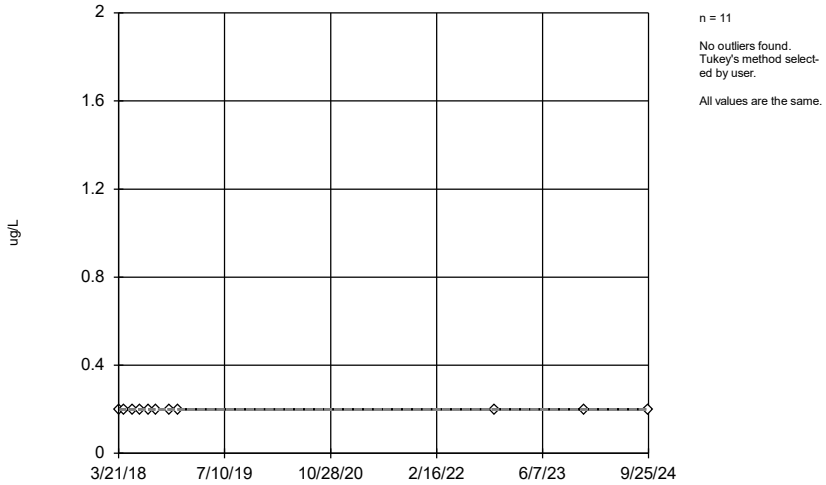
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Mercury

MW-3 (bg)



n = 11

No outliers found.
Tukey's method select-ed by user.

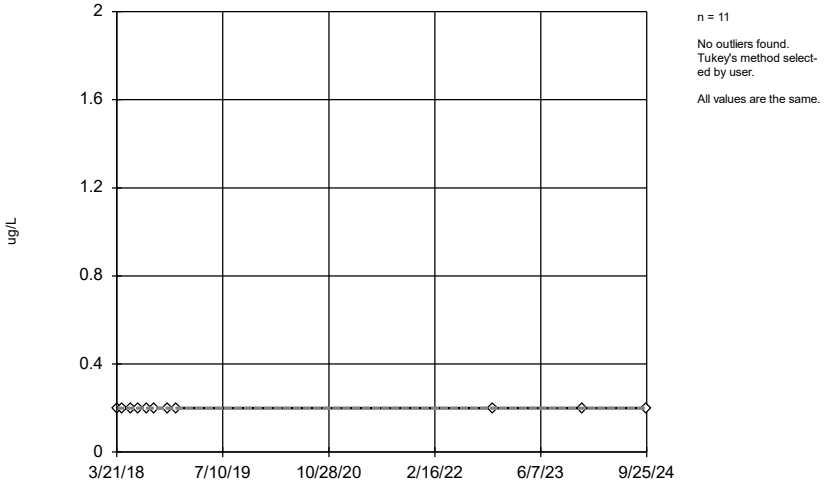
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Mercury

MW-7



n = 11

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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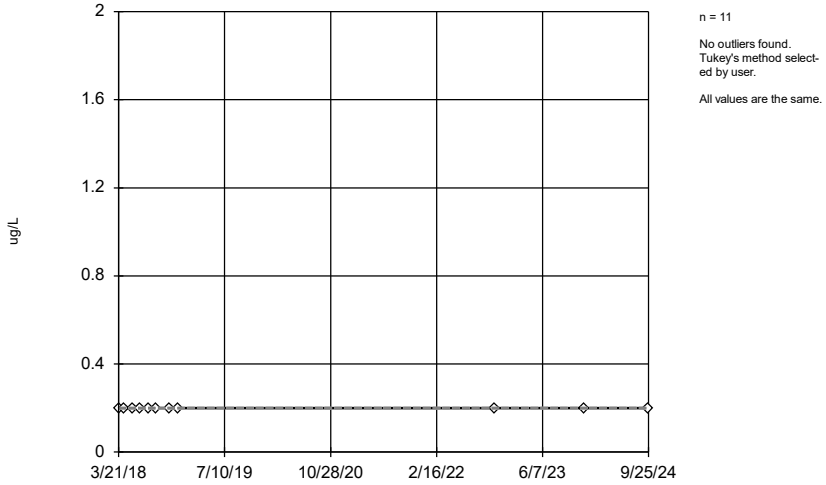
Mercury

MW-9



n = 11

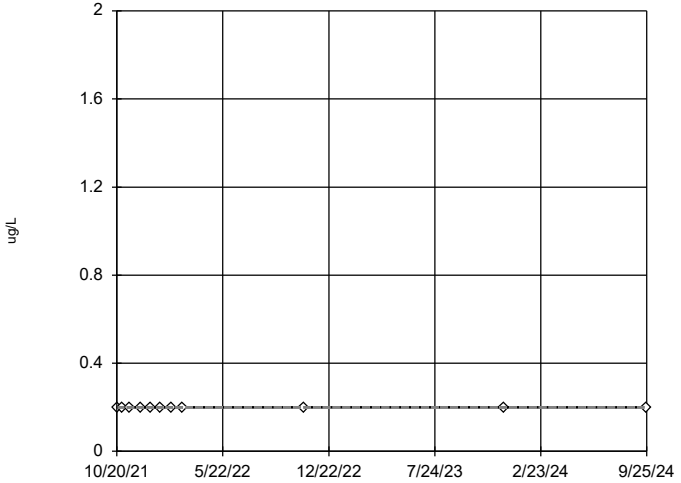
No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Mercury

MW-1R



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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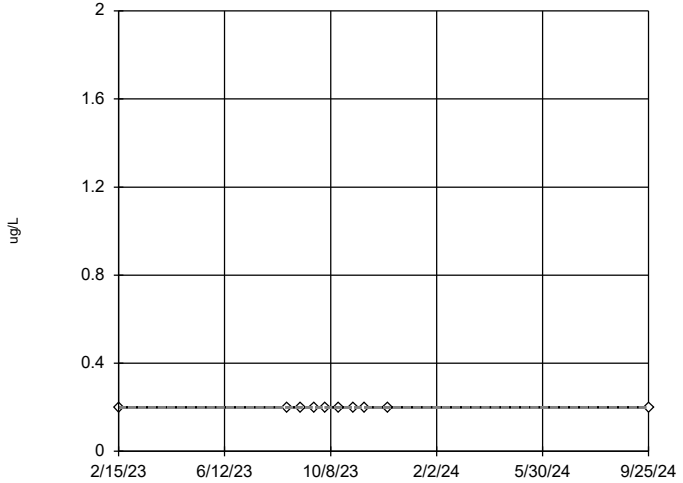
Mercury

MW-10



n = 10

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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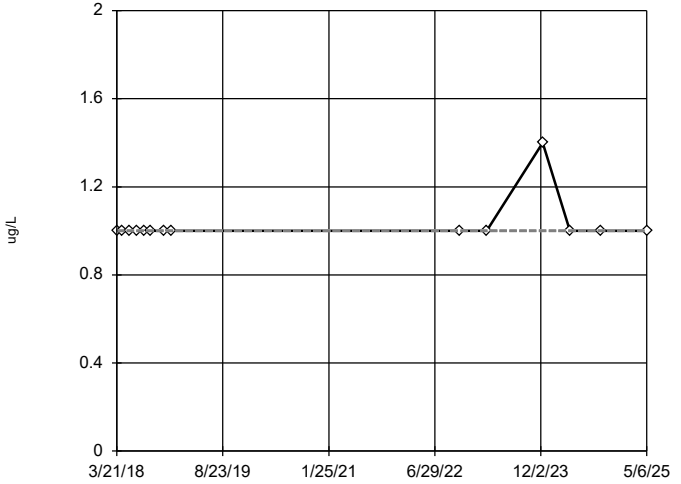
Molybdenum

MW-2 (bg)



n = 14

No outliers found. Tukey's method selected by user.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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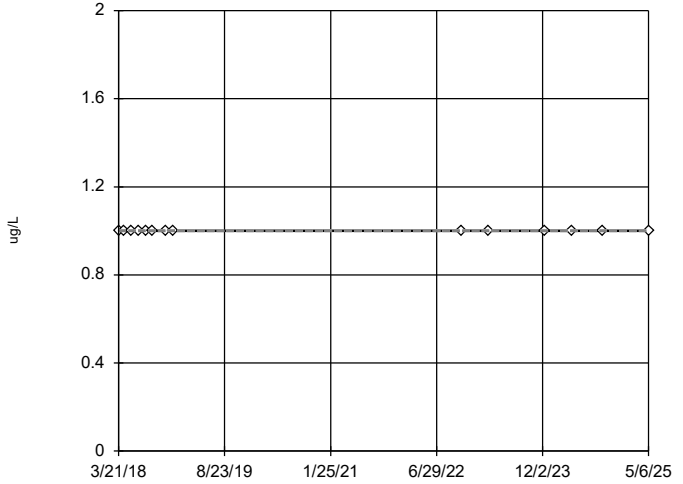
Molybdenum

MW-3 (bg)



n = 14

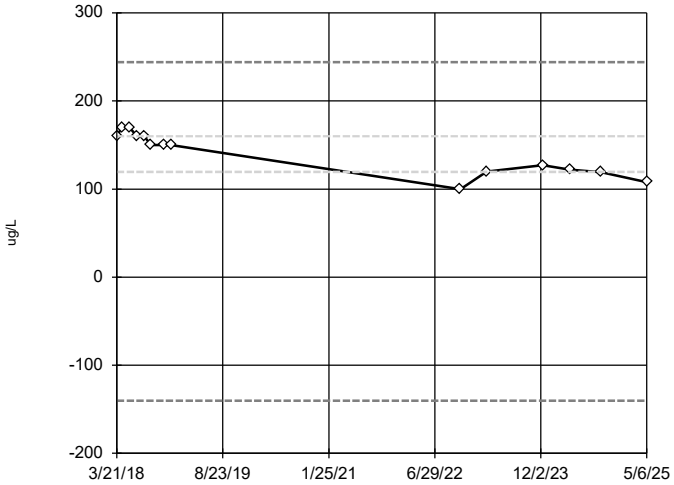
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Molybdenum

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 244, low cutoff = -140.3, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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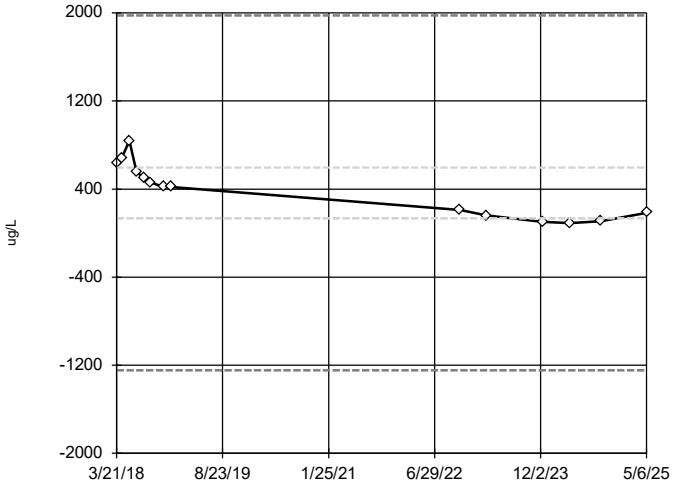
Molybdenum

MW-9



n = 14

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 1977, low cutoff = -1247, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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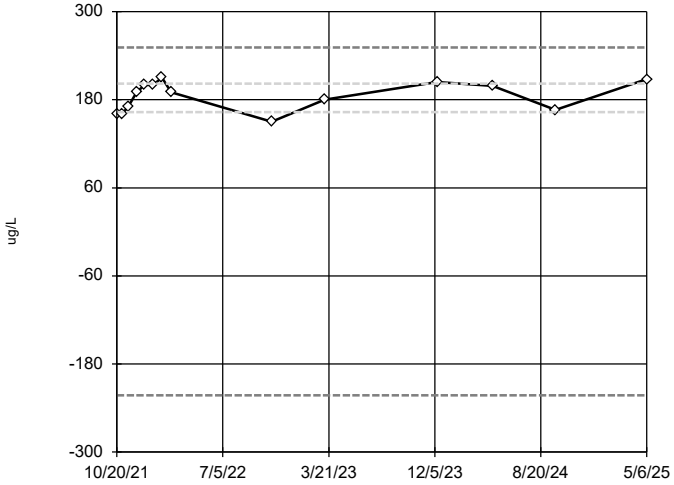
Molybdenum

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 251.2, low cutoff = -222.7, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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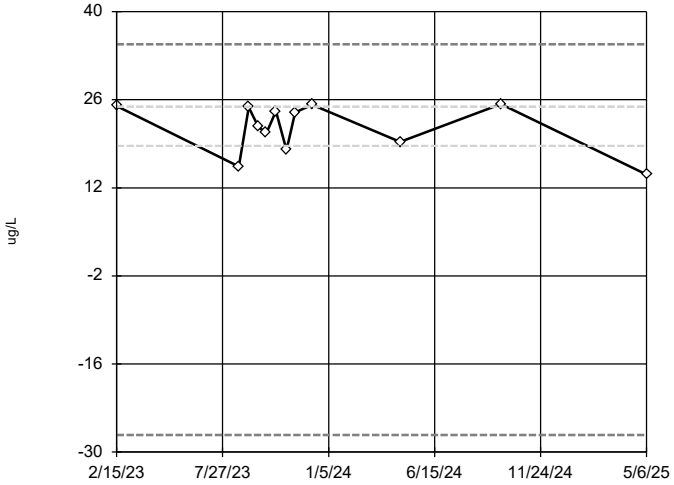
Molybdenum

MW-10



n = 12

No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

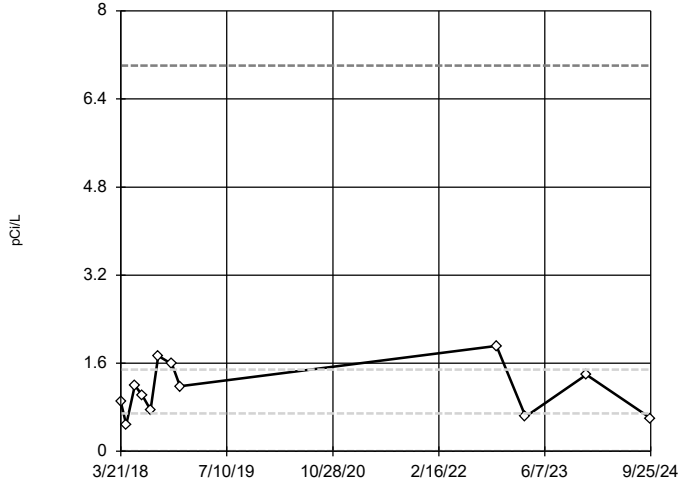
High cutoff = 34.82, low cutoff = -27.27, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Radium

MW-2 (bg)



n = 12

No outliers found. Tukey's method selected by user.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.007, low cutoff = 0.00134, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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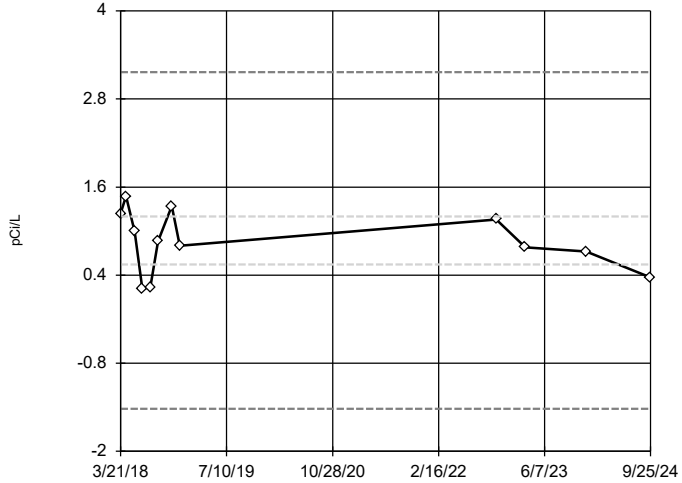
Radium

MW-3 (bg)



n = 12

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 3.165, low cutoff = -1.42, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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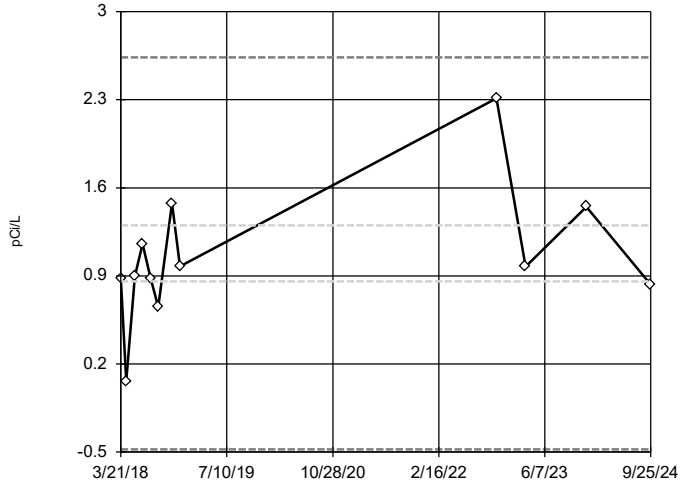
Radium

MW-7



n = 12

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 2.637, low cutoff = -0.4785, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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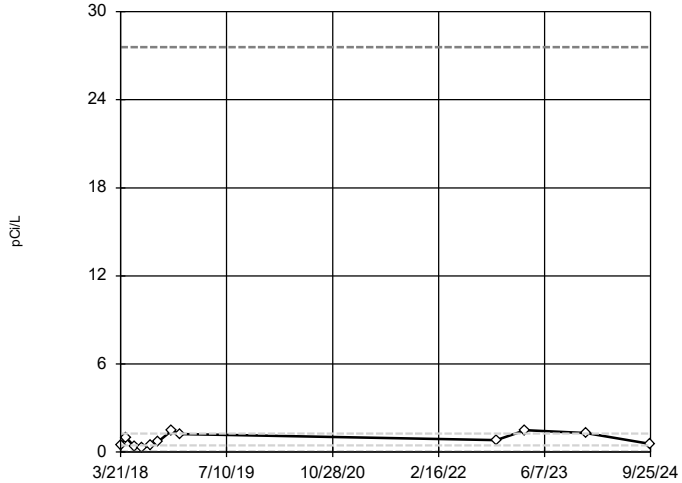
Radium

MW-9



n = 12

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

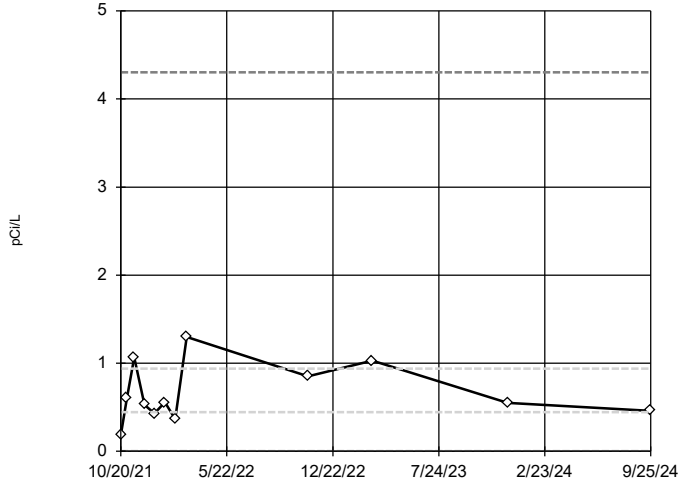
High cutoff = 27.59, low cutoff = 0.02078, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Radium

MW-1R



n = 12

No outliers found. Tukey's method selected by user.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 4.303, low cutoff = 0.001562, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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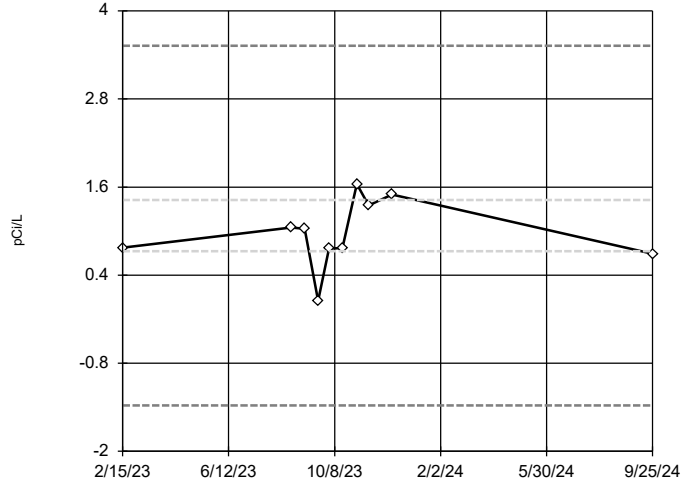
Radium

MW-10



n = 10

No outliers found. Tukey's method selected by user.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 3.525, low cutoff = -1.375, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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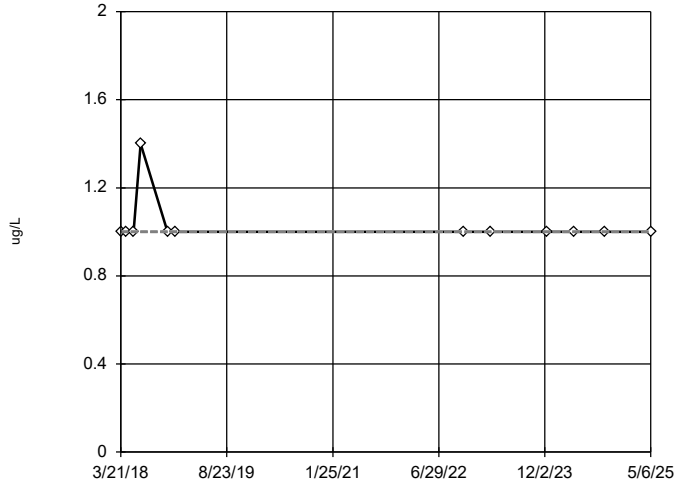
Selenium

MW-2 (bg)



n = 12

No outliers found. Tukey's method selected by user.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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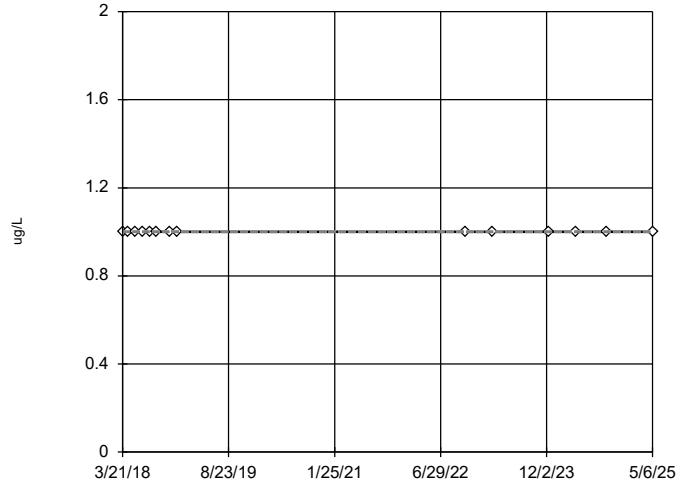
Selenium

MW-3 (bg)



n = 14

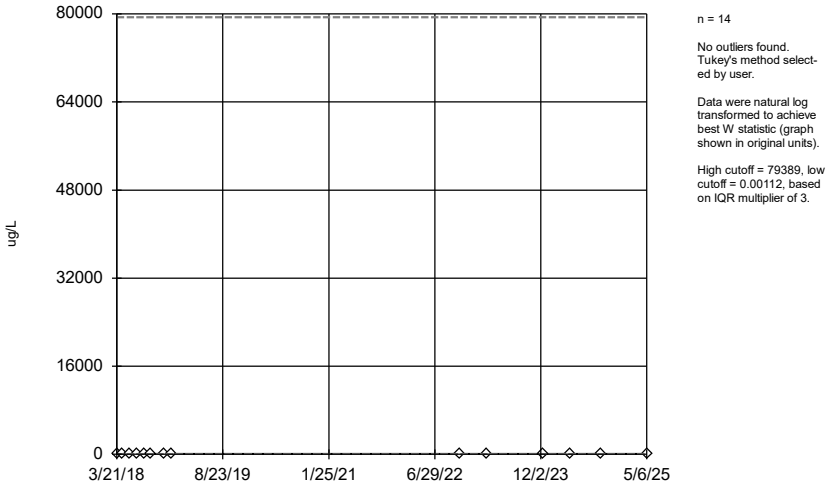
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Selenium

MW-7



n = 14

No outliers found. Tukey's method selected by user.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 79389, low cutoff = 0.00112, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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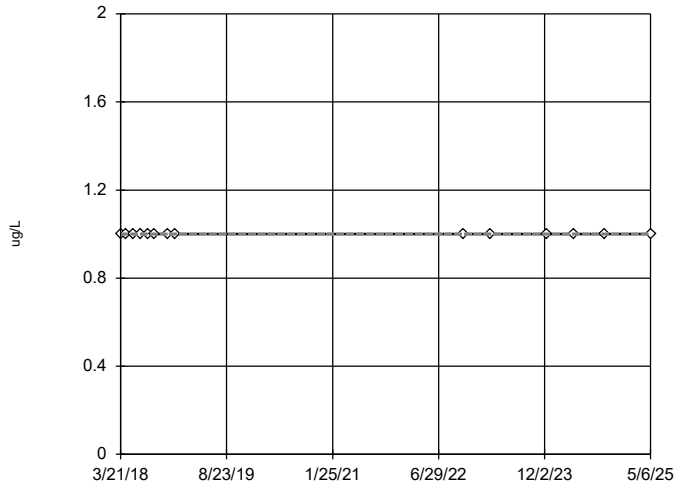
Selenium

MW-9



n = 14

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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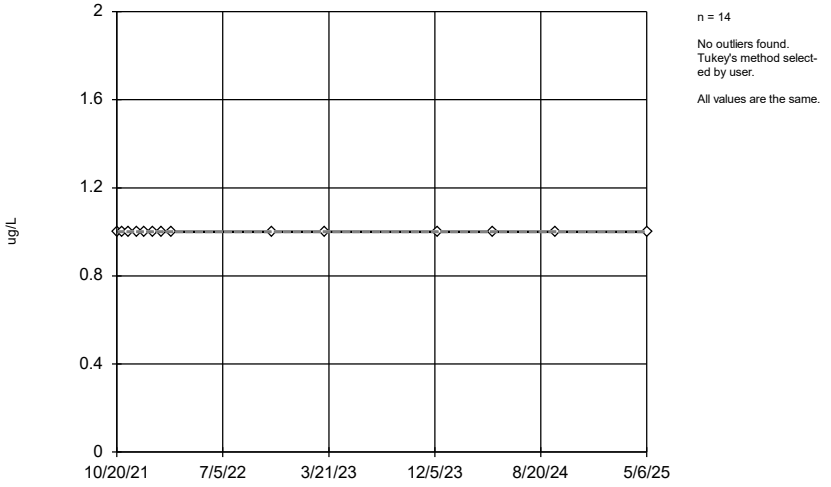
Selenium

MW-1R



n = 14

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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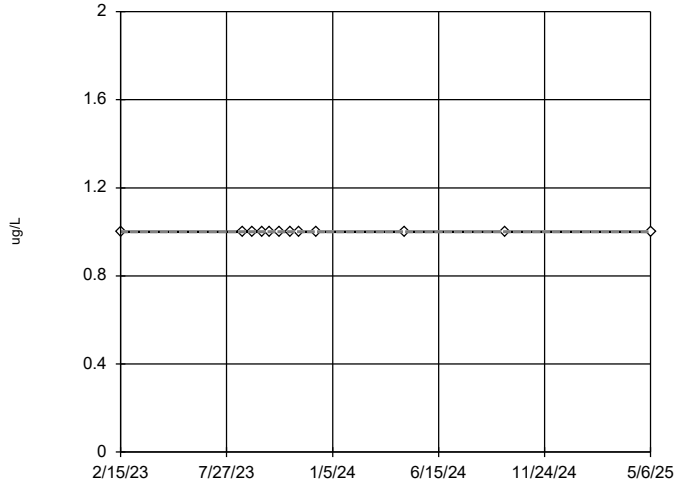
Selenium

MW-10



n = 12

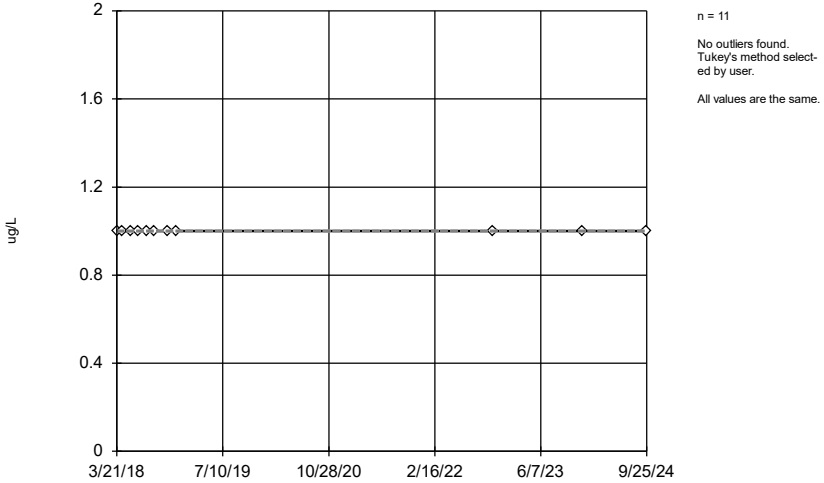
No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Thallium

MW-2 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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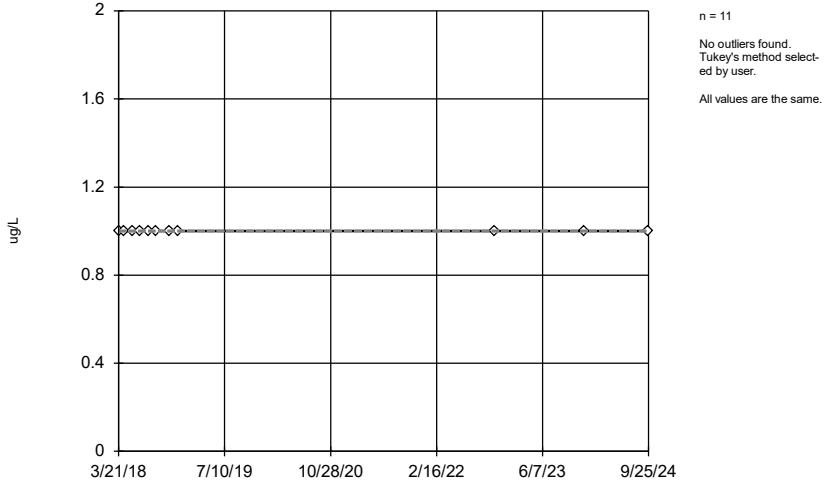
Thallium

MW-3 (bg)



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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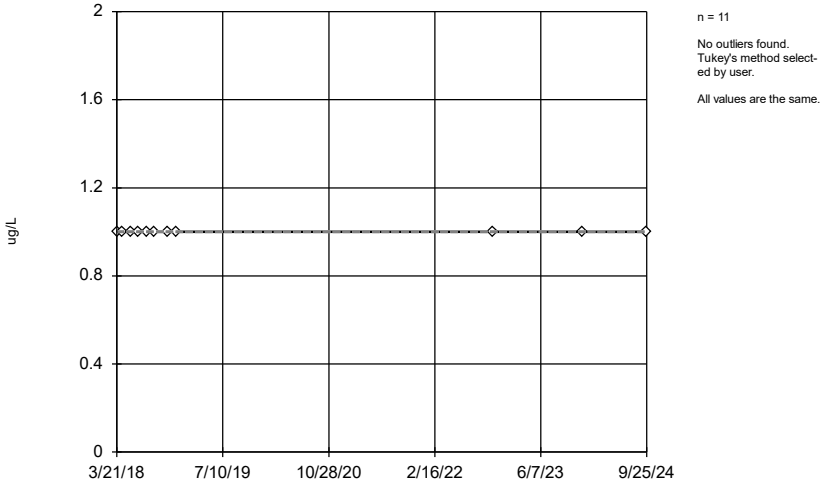
Thallium

MW-7



n = 11

No outliers found. Tukey's method selected by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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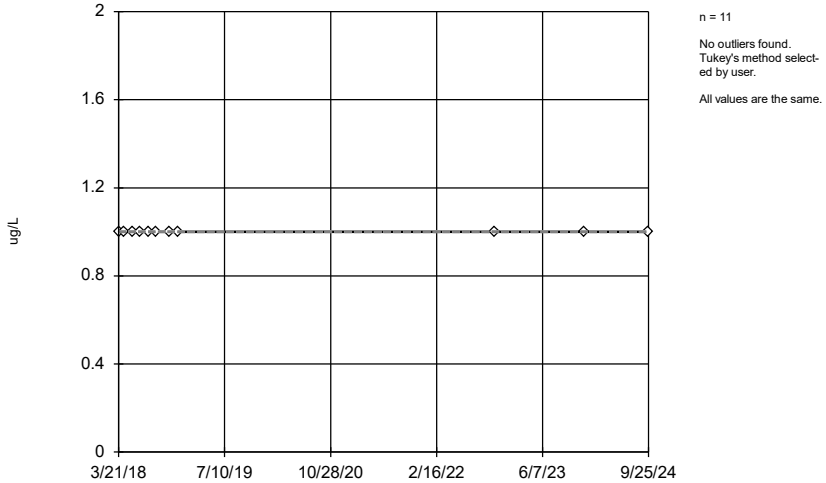
Thallium

MW-9



n = 11

No outliers found. Tukey's method selected by user.

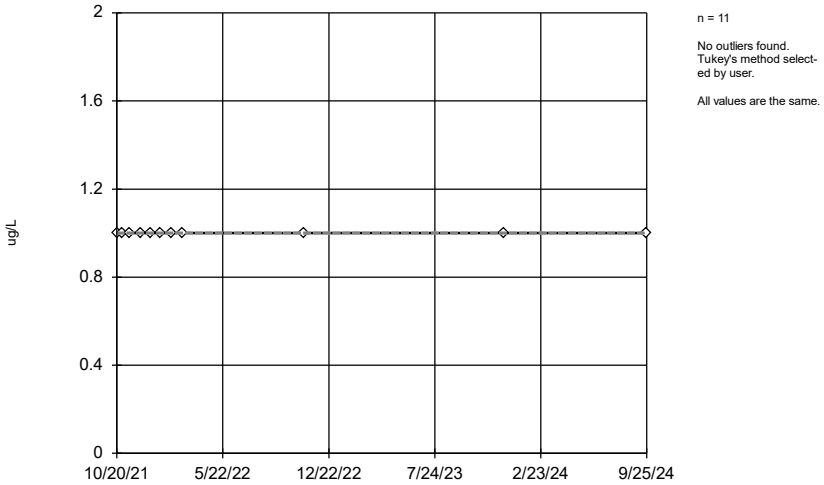
All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Thallium

MW-1R



n = 11

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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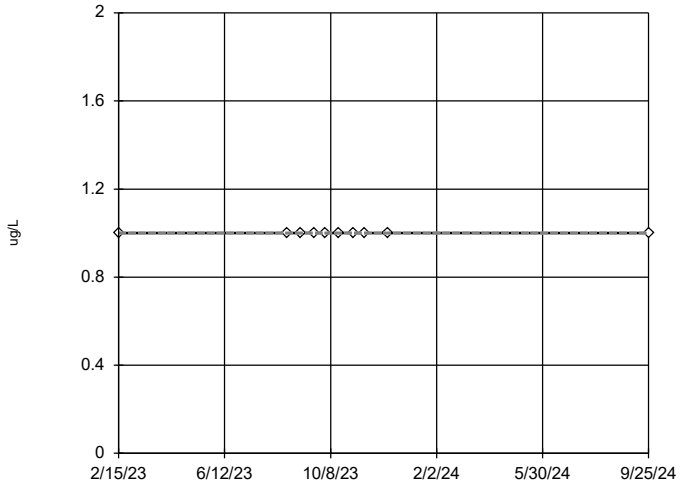
Thallium

MW-10



n = 10

No outliers found.
Tukey's method select-ed by user.

All values are the same.

Tukey's Outlier Screening Analysis Run 5/21/2025 11:57 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Confidence Interval

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (ug/L)	MW-2 (bg)	3	3	6	No	11	100	No	0.006	NP (NDs)
Antimony (ug/L)	MW-3 (bg)	3	3	6	No	11	100	No	0.006	NP (NDs)
Antimony (ug/L)	MW-7	3	3	6	No	11	100	No	0.006	NP (NDs)
Antimony (ug/L)	MW-9	3	3	6	No	11	100	No	0.006	NP (NDs)
Antimony (ug/L)	MW-1R	3	3	6	No	11	100	No	0.006	NP (NDs)
Antimony (ug/L)	MW-10	3	3	6	No	10	100	No	0.011	NP (NDs)
Arsenic (ug/L)	MW-2 (bg)	1	1	10	No	13	100	No	0.01	NP (NDs)
Arsenic (ug/L)	MW-3 (bg)	1	1	10	No	13	100	No	0.01	NP (NDs)
Arsenic (ug/L)	MW-7	1	1	10	No	13	100	No	0.01	NP (NDs)
Arsenic (ug/L)	MW-9	1.2	1	10	No	13	92.31	No	0.01	NP (NDs)
Arsenic (ug/L)	MW-1R	1.3	1	10	No	12	83.33	No	0.01	NP (NDs)
Arsenic (ug/L)	MW-10	7.161	5.573	10	No	12	0	No	0.01	Param.
Barium (ug/L)	MW-2 (bg)	206.7	152.3	2000	No	14	0	No	0.01	Param.
Barium (ug/L)	MW-3 (bg)	100.1	82.31	2000	No	14	0	No	0.01	Param.
Barium (ug/L)	MW-7	66.7	43	2000	No	14	0	No	0.01	NP (normality)
Barium (ug/L)	MW-9	90.9	47	2000	No	14	0	No	0.01	NP (normality)
Barium (ug/L)	MW-1R	49.66	37.48	2000	No	14	0	No	0.01	Param.
Barium (ug/L)	MW-10	149.6	129.9	2000	No	12	0	No	0.01	Param.
Beryllium (ug/L)	MW-2 (bg)	1	1	4	No	11	100	No	0.006	NP (NDs)
Beryllium (ug/L)	MW-3 (bg)	1	1	4	No	11	100	No	0.006	NP (NDs)
Beryllium (ug/L)	MW-7	1	1	4	No	11	100	No	0.006	NP (NDs)
Beryllium (ug/L)	MW-9	1	1	4	No	11	100	No	0.006	NP (NDs)
Beryllium (ug/L)	MW-1R	1	1	4	No	11	100	No	0.006	NP (NDs)
Beryllium (ug/L)	MW-10	1	1	4	No	10	100	No	0.011	NP (NDs)
Cadmium (ug/L)	MW-2 (bg)	1	1	5	No	11	100	No	0.006	NP (NDs)
Cadmium (ug/L)	MW-3 (bg)	1	1	5	No	11	100	No	0.006	NP (NDs)
Cadmium (ug/L)	MW-7	1	1	5	No	11	100	No	0.006	NP (NDs)
Cadmium (ug/L)	MW-9	1	1	5	No	11	100	No	0.006	NP (NDs)
Cadmium (ug/L)	MW-1R	1	1	5	No	11	100	No	0.006	NP (NDs)
Cadmium (ug/L)	MW-10	1	1	5	No	10	100	No	0.011	NP (NDs)
Chromium (ug/L)	MW-2 (bg)	4	4	100	No	11	100	No	0.006	NP (NDs)
Chromium (ug/L)	MW-3 (bg)	4	4	100	No	11	100	No	0.006	NP (NDs)
Chromium (ug/L)	MW-7	4	4	100	No	11	100	No	0.006	NP (NDs)
Chromium (ug/L)	MW-9	4	4	100	No	11	90.91	No	0.006	NP (NDs)
Chromium (ug/L)	MW-1R	4	4	100	No	11	100	No	0.006	NP (NDs)
Chromium (ug/L)	MW-10	4	4	100	No	10	100	No	0.011	NP (NDs)
Cobalt (ug/L)	MW-2 (bg)	2.4	2	6	No	14	78.57	No	0.01	NP (NDs)
Cobalt (ug/L)	MW-3 (bg)	2	2	6	No	14	92.86	No	0.01	NP (NDs)
Cobalt (ug/L)	MW-7	2.8	2	6	No	14	14.29	No	0.01	NP (normality)
Cobalt (ug/L)	MW-9	2.2	2	6	No	14	85.71	No	0.01	NP (NDs)
Cobalt (ug/L)	**MW-1R**	**11.2**	**7.031**	**6**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Cobalt (ug/L)	MW-10	2	1	6	No	12	91.67	No	0.01	NP (NDs)
Fluoride (mg/L)	MW-2 (bg)	0.254	0.06	4	No	20	75	No	0.01	NP (normality)
Fluoride (mg/L)	MW-3 (bg)	0.313	0.25	4	No	21	57.14	No	0.01	NP (normality)
Fluoride (mg/L)	MW-7	0.6795	0.5643	4	No	21	0	No	0.01	Param.
Fluoride (mg/L)	MW-9	0.982	0.7881	4	No	21	0	No	0.01	Param.
Fluoride (mg/L)	MW-1R	0.286	0.1	4	No	15	73.33	No	0.01	NP (normality)
Fluoride (mg/L)	MW-10	0.31	0.25	4	No	12	8.333	No	0.01	NP (normality)
Lead (ug/L)	MW-2 (bg)	1	1	15	No	11	100	No	0.006	NP (NDs)
Lead (ug/L)	MW-3 (bg)	1	1	15	No	11	100	No	0.006	NP (NDs)

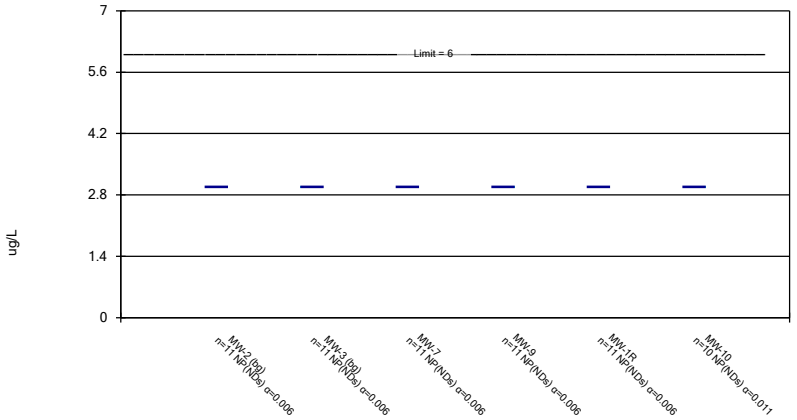
Confidence Interval

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 11:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Lead (ug/L)	MW-7	1	1	15	No	11	100	No	0.006	NP (NDs)
Lead (ug/L)	MW-9	1	1	15	No	11	100	No	0.006	NP (NDs)
Lead (ug/L)	MW-1R	1	1	15	No	11	100	No	0.006	NP (NDs)
Lead (ug/L)	MW-10	1	1	15	No	10	100	No	0.011	NP (NDs)
Lithium (ug/L)	MW-2 (bg)	20	10	40	No	14	92.86	No	0.01	NP (NDs)
Lithium (ug/L)	MW-3 (bg)	20	10	40	No	14	92.86	No	0.01	NP (NDs)
Lithium (ug/L)	MW-7	35.34	24.2	40	No	14	0	No	0.01	Param.
Lithium (ug/L)	MW-9	23.98	15.26	40	No	14	7.143	No	0.01	Param.
Lithium (ug/L)	MW-1R	19	10	40	No	14	28.57	No	0.01	NP (normality)
Lithium (ug/L)	MW-10	40	10	40	No	12	25	No	0.01	NP (normality)
Mercury (ug/L)	MW-2 (bg)	0.2	0.2	2	No	11	100	No	0.006	NP (NDs)
Mercury (ug/L)	MW-3 (bg)	0.2	0.2	2	No	11	100	No	0.006	NP (NDs)
Mercury (ug/L)	MW-7	0.2	0.2	2	No	11	100	No	0.006	NP (NDs)
Mercury (ug/L)	MW-9	0.2	0.2	2	No	11	100	No	0.006	NP (NDs)
Mercury (ug/L)	MW-1R	0.2	0.2	2	No	11	100	No	0.006	NP (NDs)
Mercury (ug/L)	MW-10	0.2	0.2	2	No	10	100	No	0.011	NP (NDs)
Molybdenum (ug/L)	MW-2 (bg)	1.4	1	100	No	14	85.71	No	0.01	NP (NDs)
Molybdenum (ug/L)	MW-3 (bg)	1	1	100	No	14	92.86	No	0.01	NP (NDs)
Molybdenum (ug/L)	**MW-7**	**157.2**	**123.7**	**100**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-9**	**555.7**	**210.7**	**100**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-1R**	**199.1**	**170.5**	**100**	**Yes**	**14**	**0**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	MW-10	24.6	18.35	100	No	12	0	No	0.01	Param.
Radium (pCi/L)	MW-2 (bg)	1.482	0.7459	5	No	12	8.333	No	0.01	Param.
Radium (pCi/L)	MW-3 (bg)	1.178	0.5203	5	No	12	8.333	No	0.01	Param.
Radium (pCi/L)	MW-7	1.47	0.6213	5	No	12	8.333	No	0.01	Param.
Radium (pCi/L)	MW-9	1.19	0.5016	5	No	12	8.333	No	0.01	Param.
Radium (pCi/L)	MW-1R	0.9191	0.4012	5	No	12	8.333	No	0.01	Param.
Radium (pCi/L)	MW-10	1.5	0.69	5	No	10	90	No	0.011	NP (NDs)
Selenium (ug/L)	MW-2 (bg)	1.4	1	50	No	12	83.33	No	0.01	NP (NDs)
Selenium (ug/L)	MW-3 (bg)	1	1	50	No	14	92.86	No	0.01	NP (NDs)
Selenium (ug/L)	MW-7	42	2.4	50	No	14	0	No	0.01	NP (normality)
Selenium (ug/L)	MW-9	1	1	50	No	14	92.86	No	0.01	NP (NDs)
Selenium (ug/L)	MW-1R	1	1	50	No	14	92.86	No	0.01	NP (NDs)
Selenium (ug/L)	MW-10	1	1	50	No	12	91.67	No	0.01	NP (NDs)
Thallium (ug/L)	MW-2 (bg)	1	1	2	No	11	100	No	0.006	NP (NDs)
Thallium (ug/L)	MW-3 (bg)	1	1	2	No	11	100	No	0.006	NP (NDs)
Thallium (ug/L)	MW-7	1	1	2	No	11	100	No	0.006	NP (NDs)
Thallium (ug/L)	MW-9	1	1	2	No	11	100	No	0.006	NP (NDs)
Thallium (ug/L)	MW-1R	1	1	2	No	11	100	No	0.006	NP (NDs)
Thallium (ug/L)	MW-10	1	1	2	No	10	100	No	0.011	NP (NDs)

Non-Parametric Confidence Interval

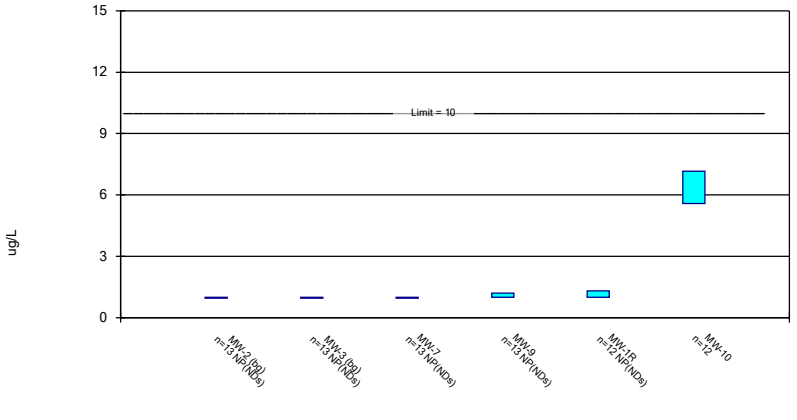
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

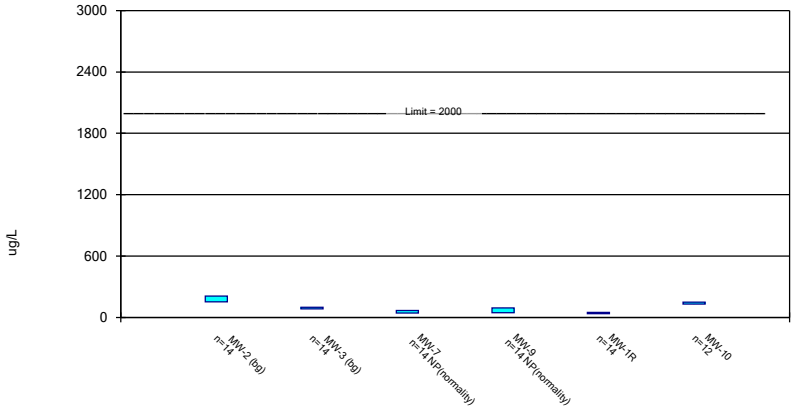
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

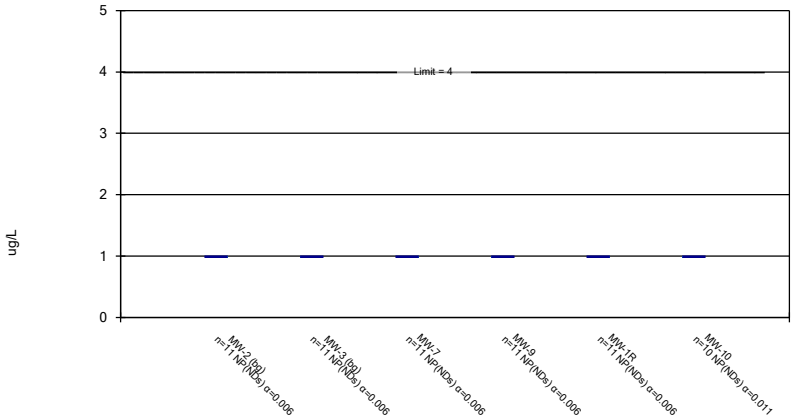
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

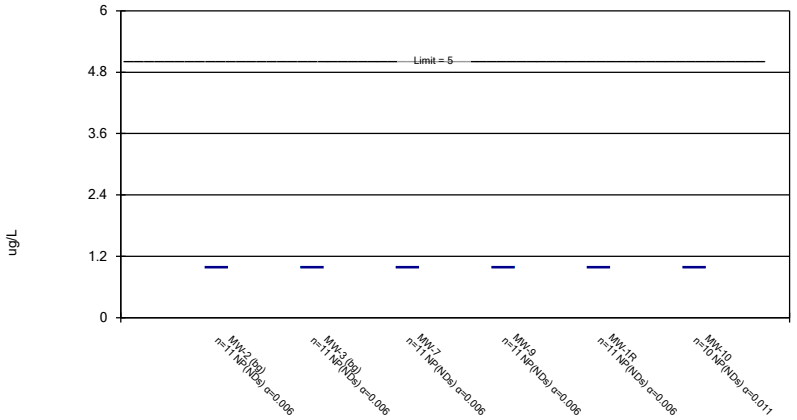
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

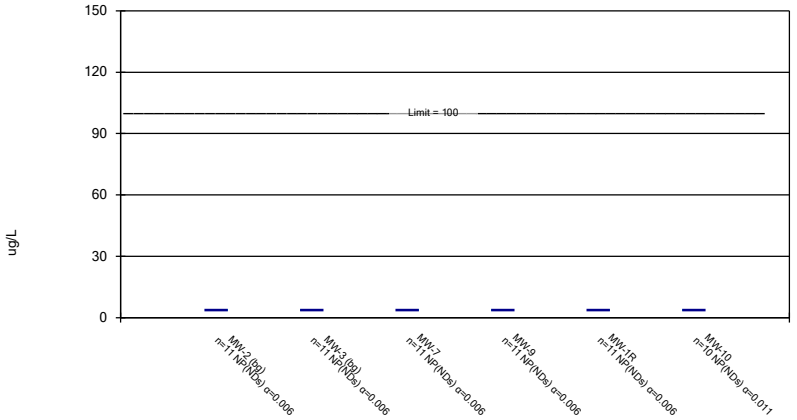
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

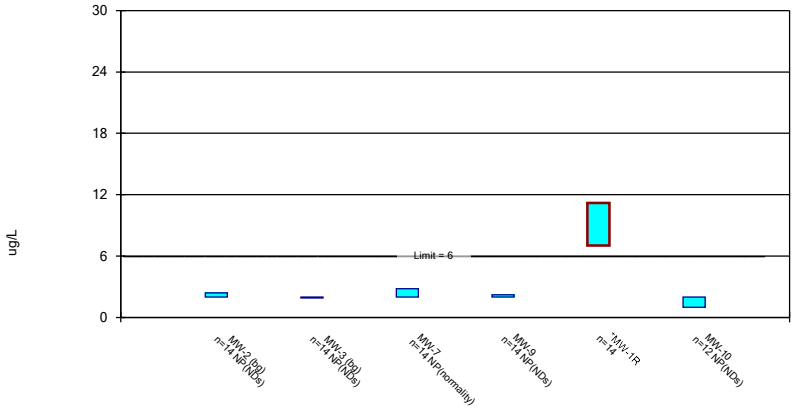
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

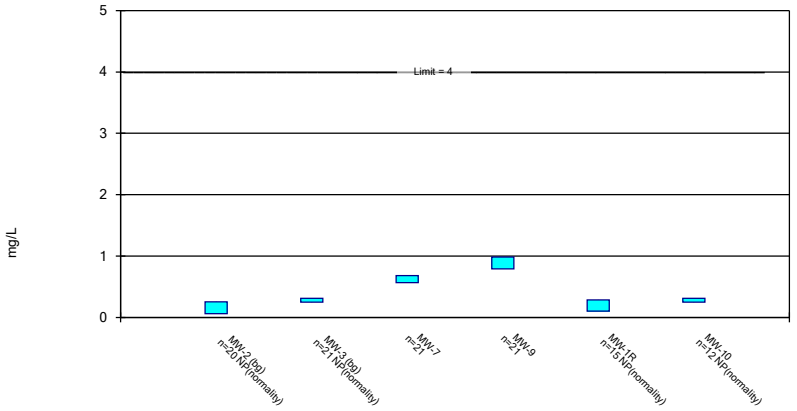
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

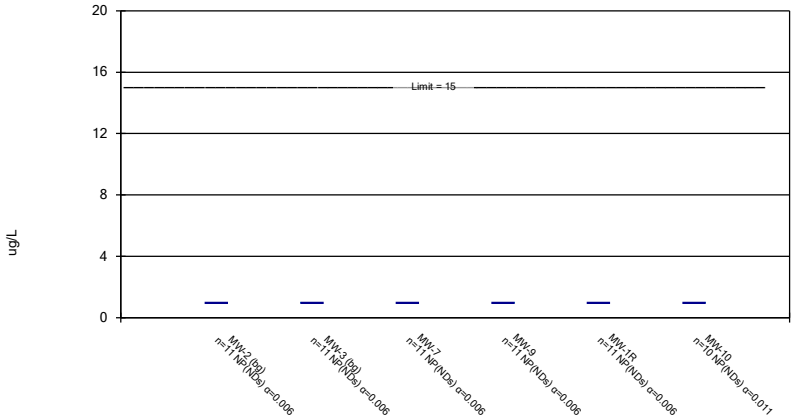
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

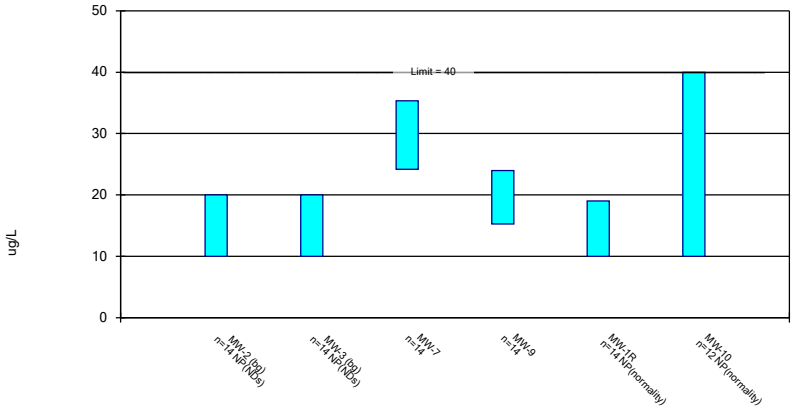
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

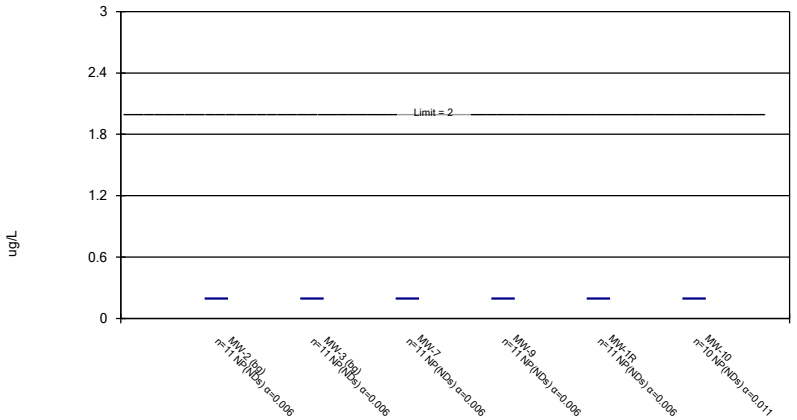
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

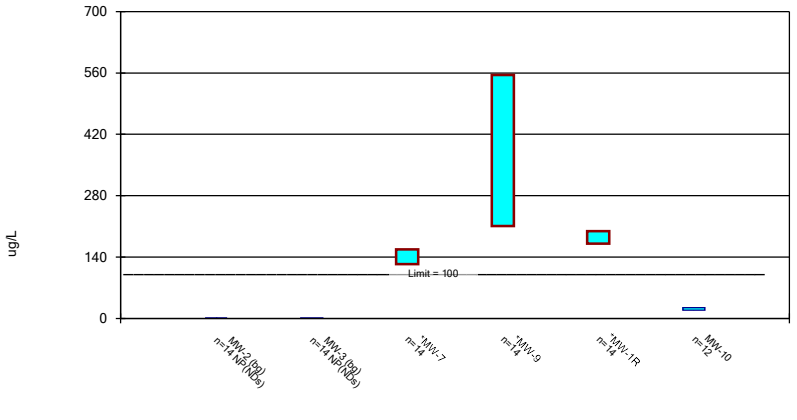
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

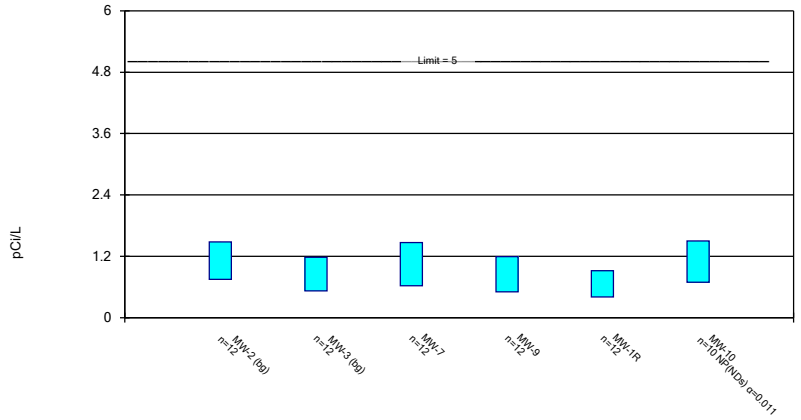
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

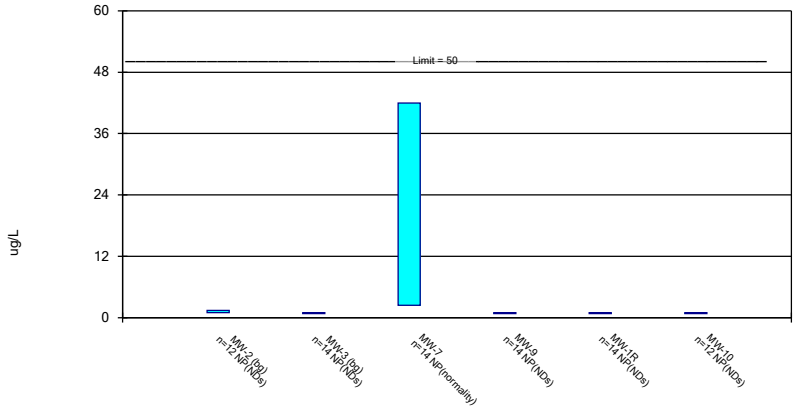
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Radium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

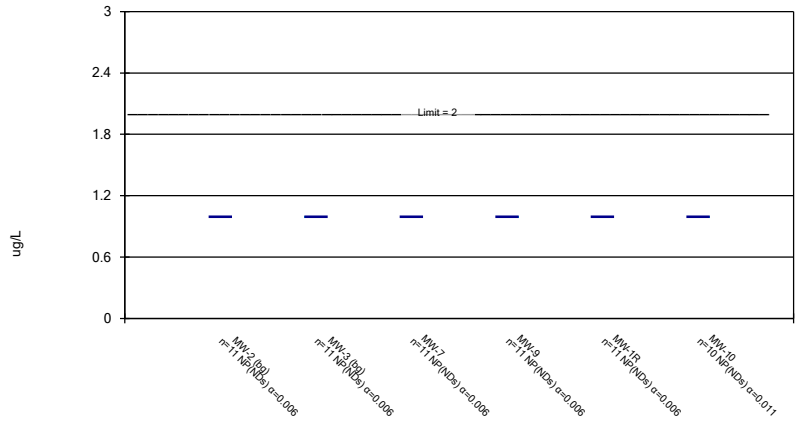
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Selenium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 5/21/2025 11:58 AM View: Assessment Stats 5.1.2025
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Trend Test

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 12:02 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (ug/L)	MW-2 (bg)	0	8	31	No	11	100	n/a	n/a	0.02	NP
Antimony (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Antimony (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Antimony (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Antimony (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Antimony (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-2 (bg)	0	0	39	No	13	100	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-3 (bg)	0	0	39	No	13	100	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-7	0	0	39	No	13	100	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-9	0	-10	-39	No	13	92.31	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-1R	0	-19	-35	No	12	83.33	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-10	-0.1487	-2	-35	No	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-2 (bg)	4.511	27	44	No	14	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-3 (bg)	-2.514	-33	-44	No	14	0	n/a	n/a	0.02	NP
Barium (ug/L)	**MW-7**	**4.086**	**58**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Barium (ug/L)	**MW-9**	**6.795**	**57**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Barium (ug/L)	MW-1R	2.035	10	44	No	14	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-10	-8.15	-19	-35	No	12	0	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Beryllium (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Cadmium (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-9	0	-6	-31	No	11	90.91	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-2 (bg)	0	11	44	No	14	78.57	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-3 (bg)	0	0	44	No	14	92.86	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-7	0.1099	37	44	No	14	14.29	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-9	0	13	44	No	14	85.71	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-1R	1.873	41	44	No	14	0	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-10	0	-3	-35	No	12	91.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-2 (bg)	0	-32	-73	No	20	75	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-3 (bg)	0	-68	-78	No	21	57.14	n/a	n/a	0.02	NP
Fluoride (mg/L)	**MW-7**	**-0.02625**	**-86**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	**MW-9**	**-0.04866**	**-92**	**-78**	**Yes**	**21**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	MW-1R	0	-33	-48	No	15	73.33	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-10	-0.02388	-20	-35	No	12	8.333	n/a	n/a	0.02	NP
Lead (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Lead (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP

Trend Test

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/21/2025, 12:02 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lead (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Lead (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Lead (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Lead (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-2 (bg)	0	8	44	No	14	92.86	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-3 (bg)	0	8	44	No	14	92.86	n/a	n/a	0.02	NP
Lithium (ug/L)	**MW-7**	**1.798**	**61**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (ug/L)	**MW-9**	**1.364**	**53**	**44**	**Yes**	**14**	**7.143**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (ug/L)	MW-1R	0.07961	22	44	No	14	28.57	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-10	-9.661	-23	-35	No	12	25	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Mercury (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-2 (bg)	0	7	44	No	14	85.71	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-3 (bg)	0	0	44	No	14	92.86	n/a	n/a	0.02	NP
Molybdenum (ug/L)	**MW-7**	**-7.597**	**-66**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (ug/L)	**MW-9**	**-80.4**	**-72**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (ug/L)	MW-1R	6.962	26	44	No	14	0	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-10	-0.9786	-4	-35	No	12	0	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-2 (bg)	0.03819	6	35	No	12	8.333	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-3 (bg)	-0.07972	-22	-35	No	12	8.333	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-7	0.09699	18	35	No	12	8.333	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-9	0.1037	24	35	No	12	8.333	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-1R	0.0489	6	35	No	12	8.333	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-10	0.5407	5	27	No	10	90	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-2 (bg)	0	-5	-35	No	12	83.33	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-3 (bg)	0	0	44	No	14	92.86	n/a	n/a	0.02	NP
Selenium (ug/L)	**MW-7**	**-1.6**	**-49**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (ug/L)	MW-9	0	0	44	No	14	92.86	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-1R	0	0	44	No	14	92.86	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-10	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-2 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-3 (bg)	0	0	31	No	11	100	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-7	0	0	31	No	11	100	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-9	0	0	31	No	11	100	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-1R	0	0	31	No	11	100	n/a	n/a	0.02	NP
Thallium (ug/L)	MW-10	0	0	27	No	10	100	n/a	n/a	0.02	NP

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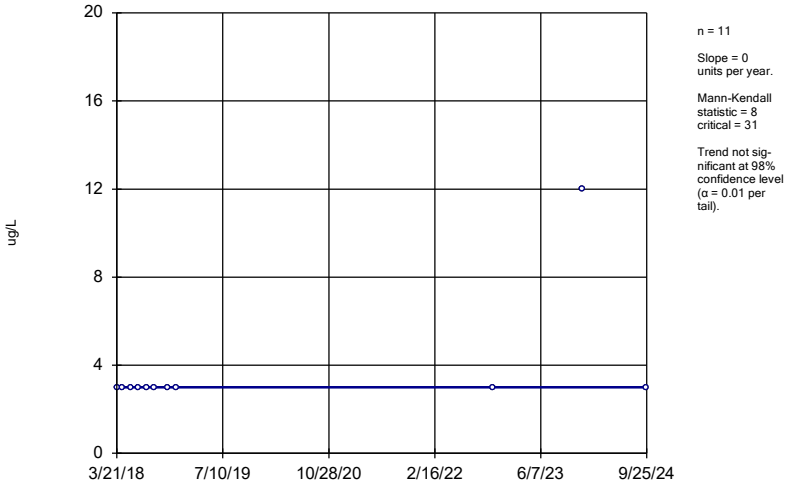
Hollow symbols indicate censored values.

Antimony

MW-2 (bg)



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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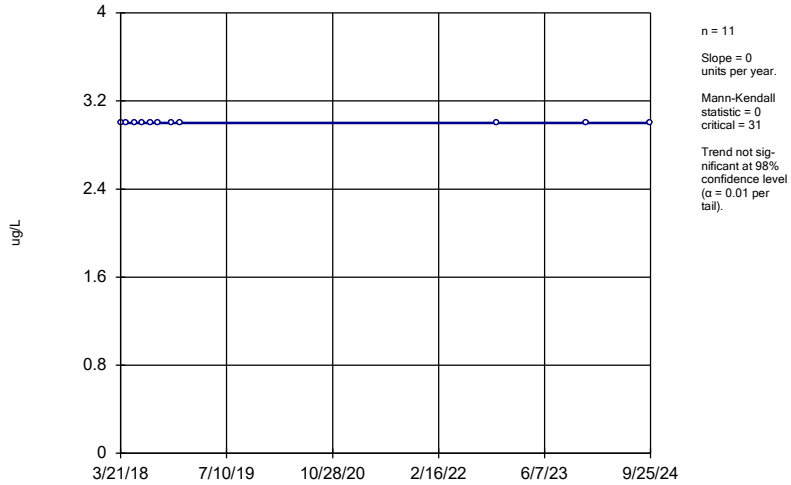
Hollow symbols indicate censored values.

Antimony

MW-3 (bg)



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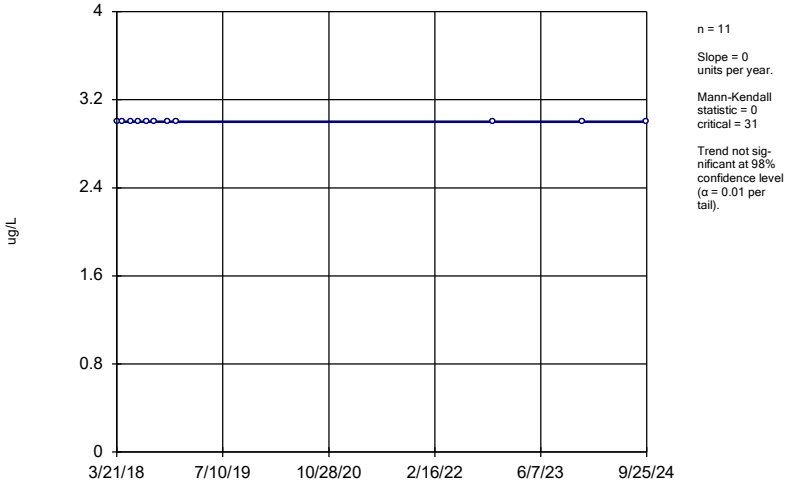
Antimony

MW-7



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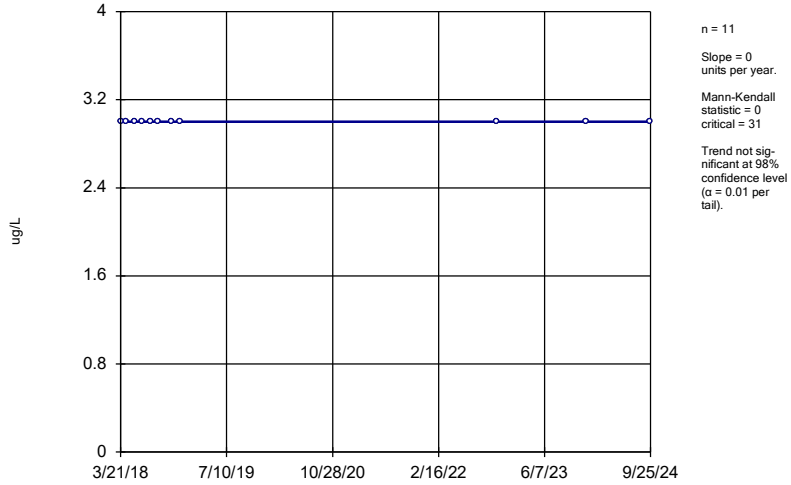
Antimony

MW-9



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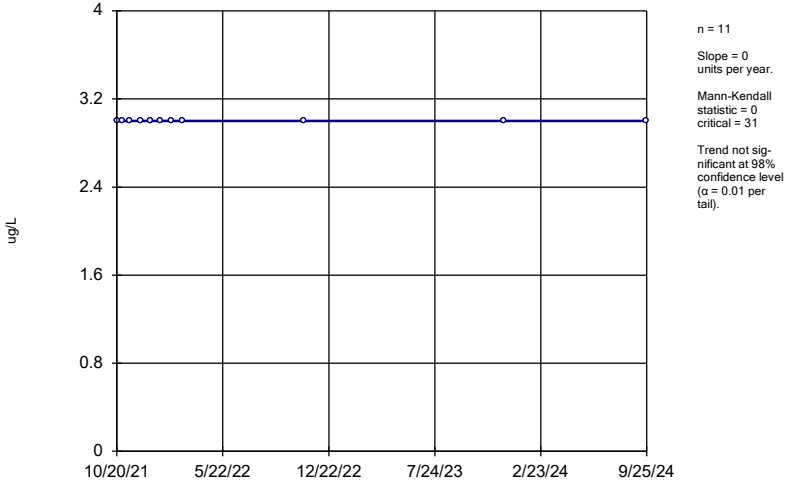
Antimony

MW-1R



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 31

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
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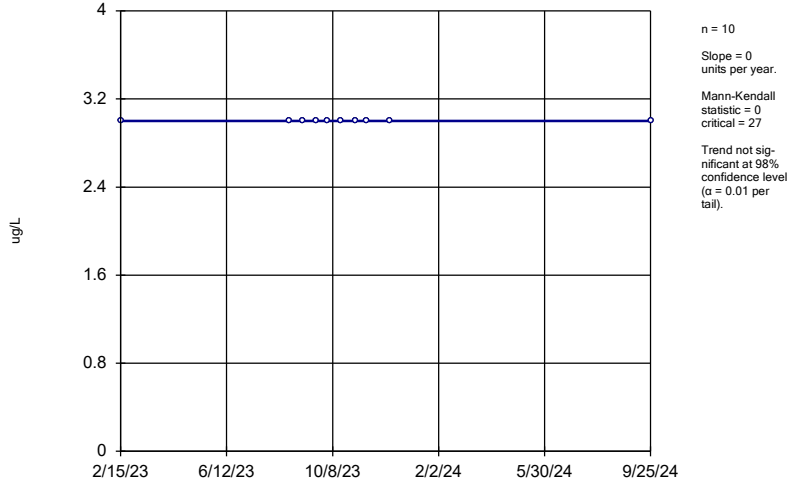
Antimony

MW-10



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

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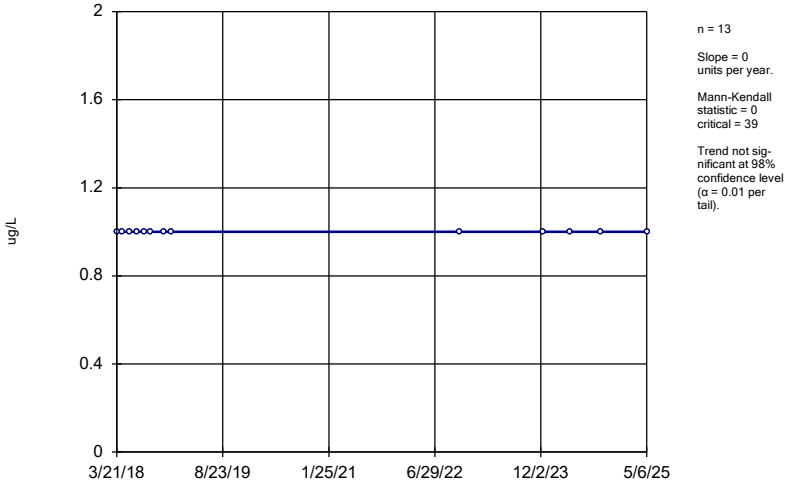
Arsenic

MW-2 (bg)



n = 13

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 39

Trend not significant at 98% confidence level (α = 0.01 per tail).

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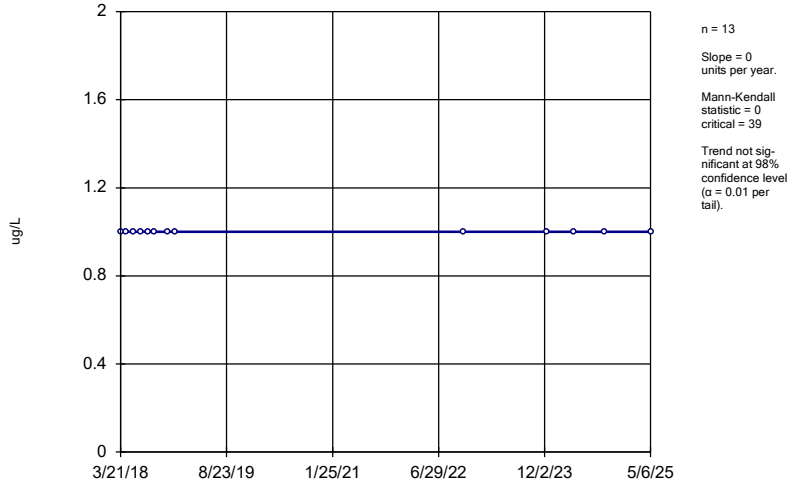
Arsenic

MW-3 (bg)



n = 13

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 39

Trend not significant at 98% confidence level (α = 0.01 per tail).

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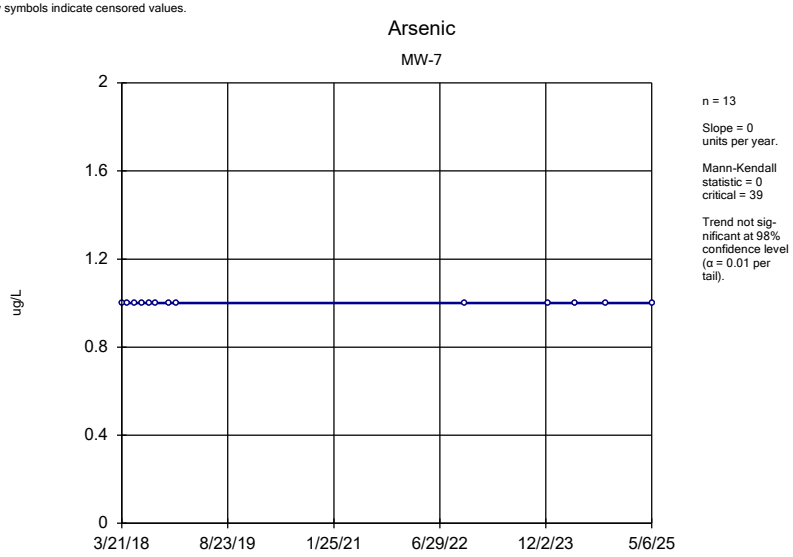
Hollow symbols indicate censored values.



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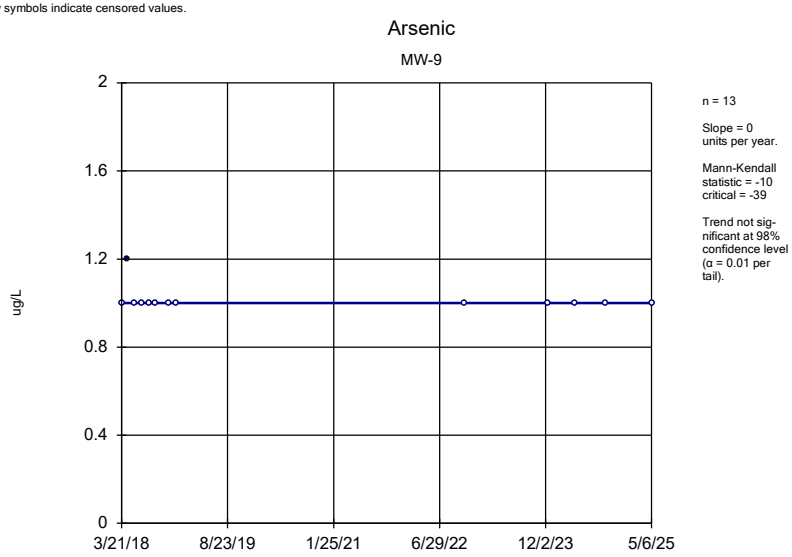

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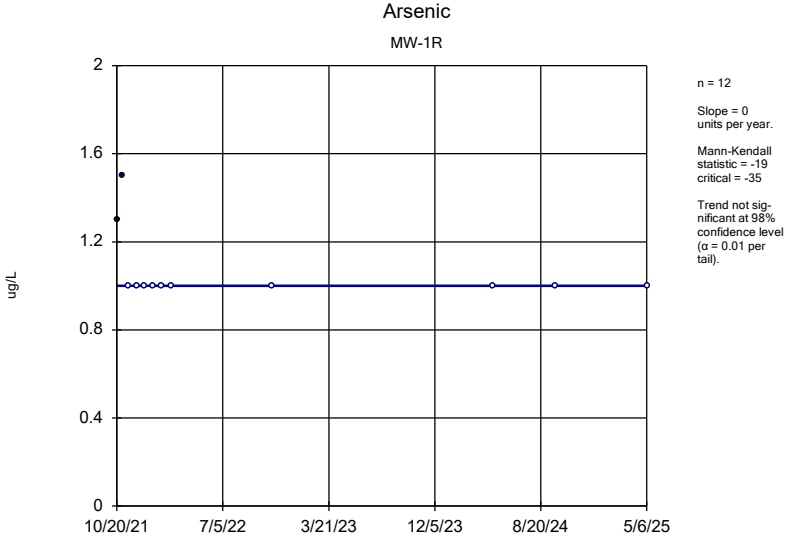

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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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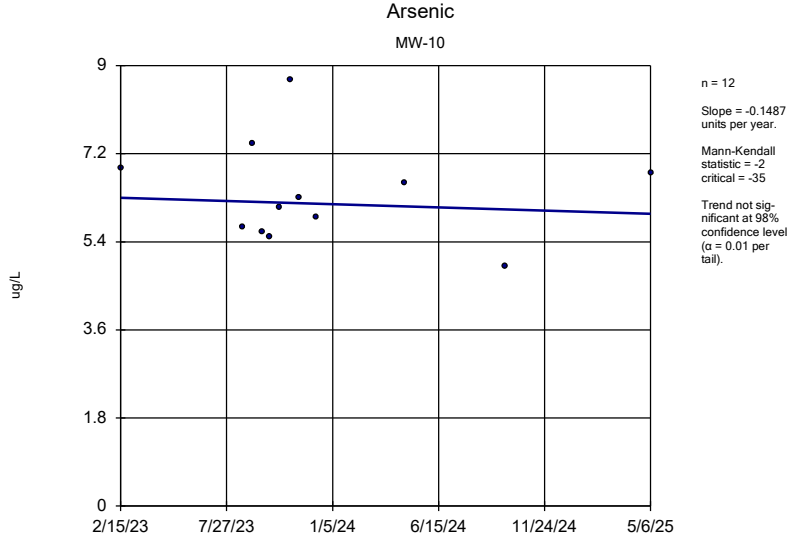
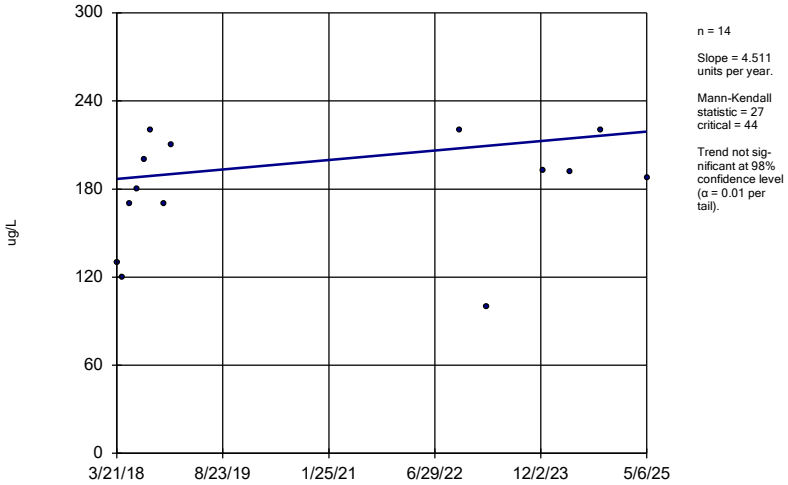


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-2 (bg)



n = 14

Slope = 4.511 units per year.

Mann-Kendall statistic = 27 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

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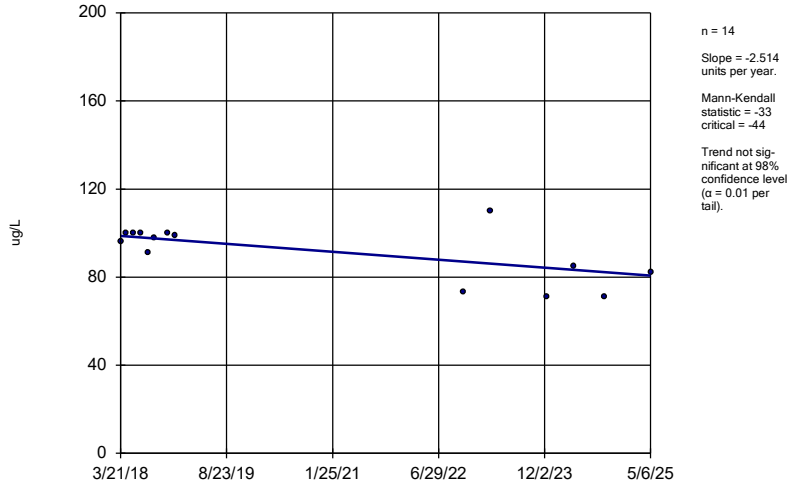
Barium

MW-3 (bg)



n = 14

Slope = -2.514 units per year.

Mann-Kendall statistic = -33 critical = -44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

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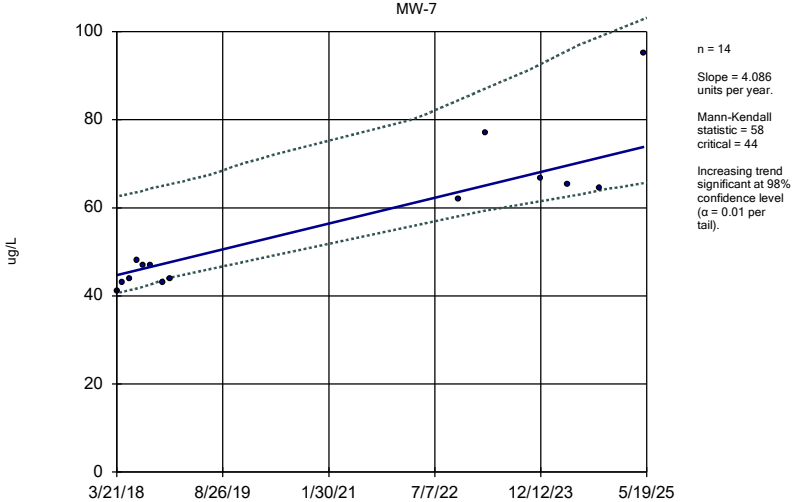
Barium

MW-7



n = 14

Slope = 4.086 units per year.

Mann-Kendall statistic = 58 critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

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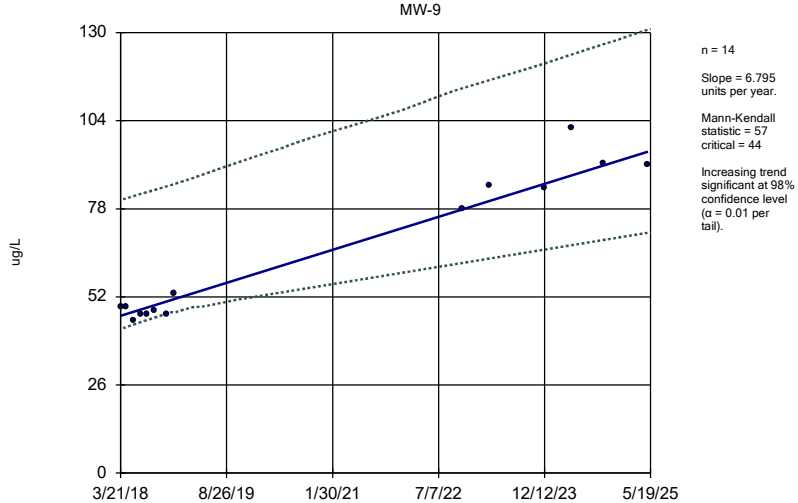
Barium

MW-9



n = 14

Slope = 6.795 units per year.

Mann-Kendall statistic = 57 critical = 44

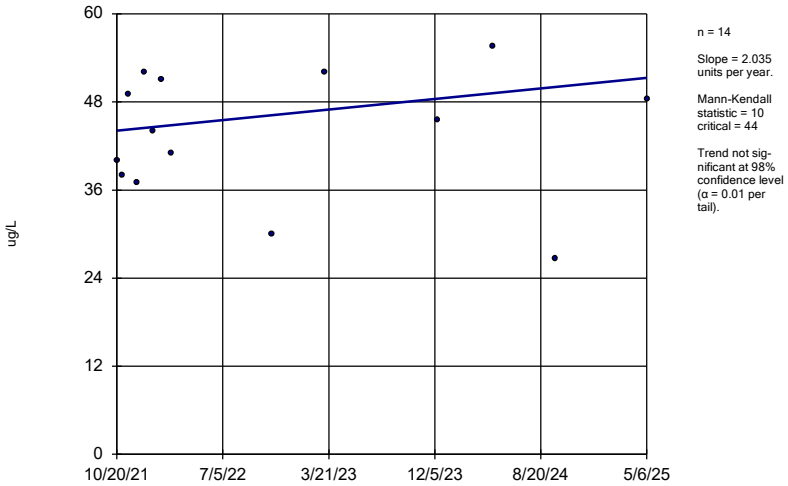
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium

MW-1R



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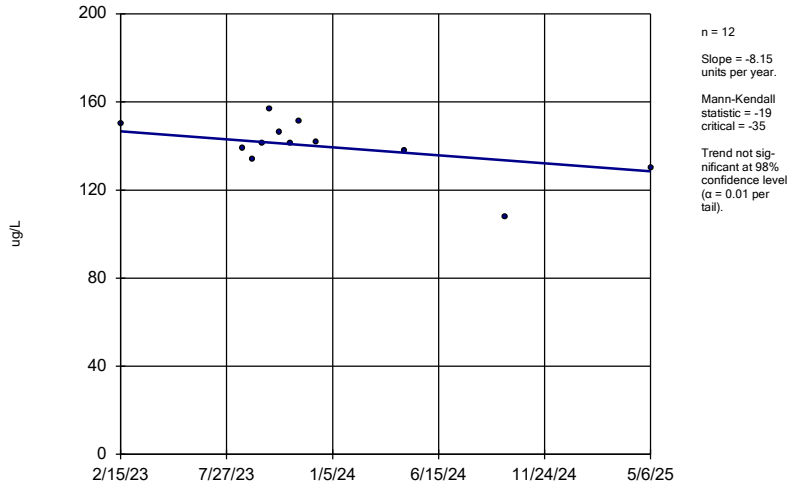
Barium

MW-10



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

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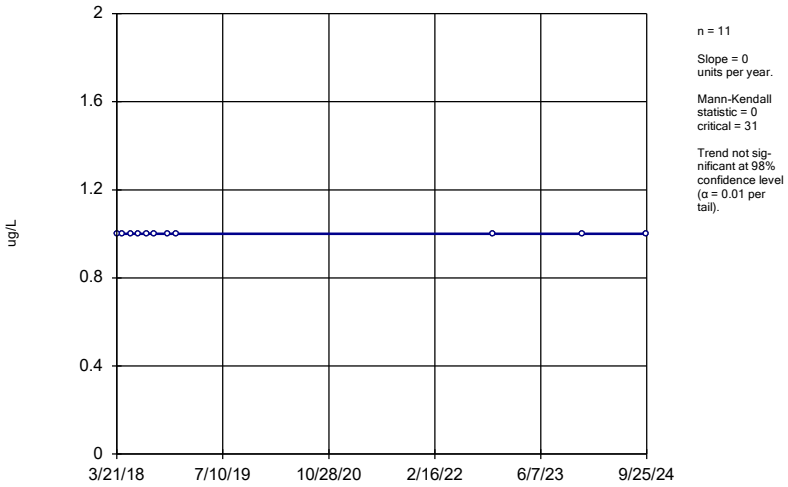
Hollow symbols indicate censored values.

Beryllium

MW-2 (bg)



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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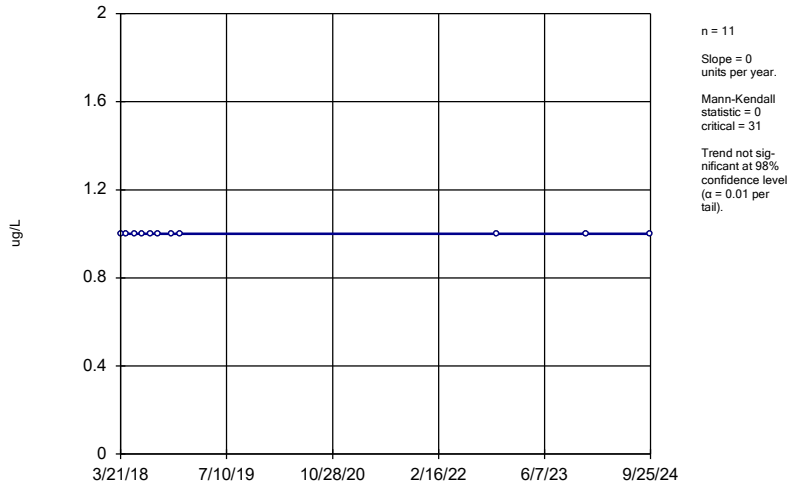
Hollow symbols indicate censored values.

Beryllium

MW-3 (bg)



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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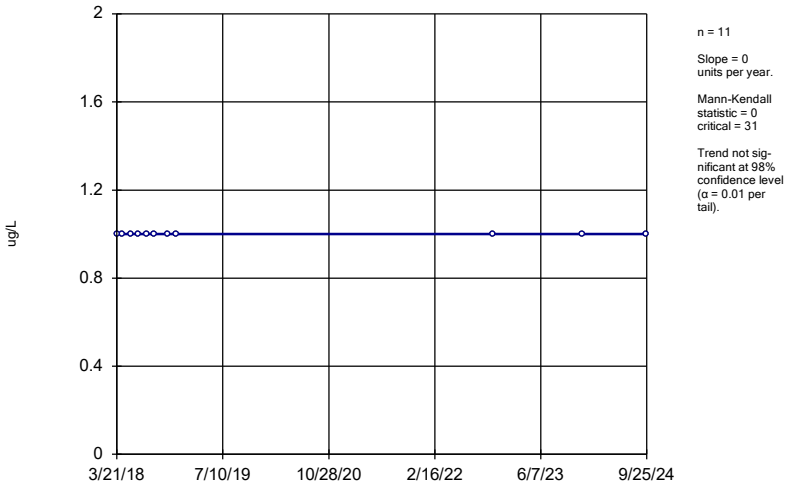
Hollow symbols indicate censored values.

Beryllium

MW-7



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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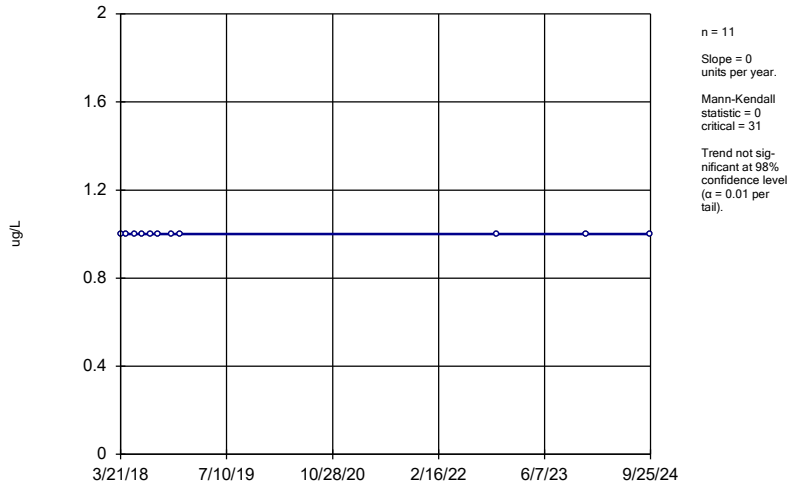
Hollow symbols indicate censored values.

Beryllium

MW-9



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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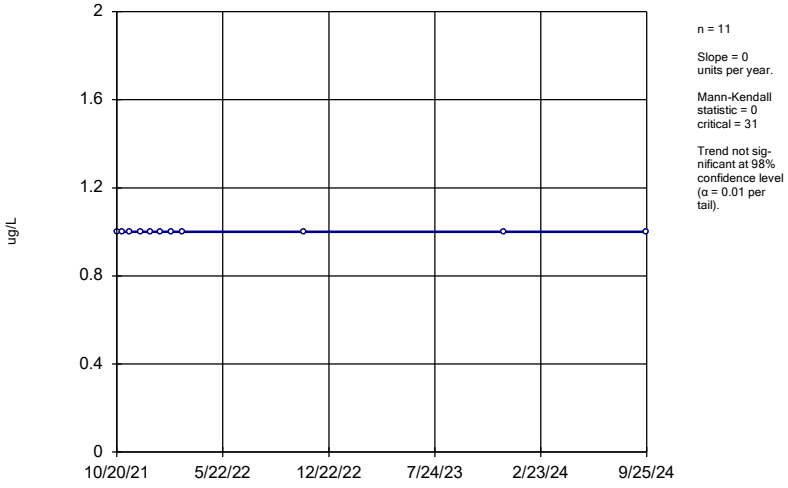
Beryllium

MW-1R



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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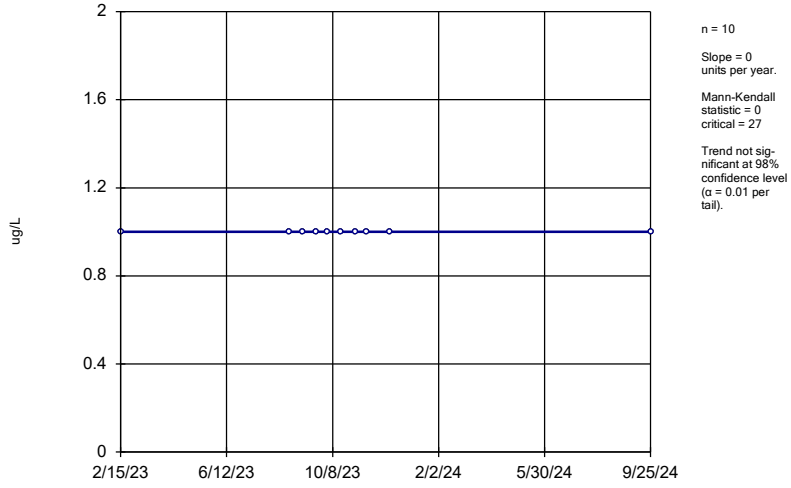
Beryllium

MW-10



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
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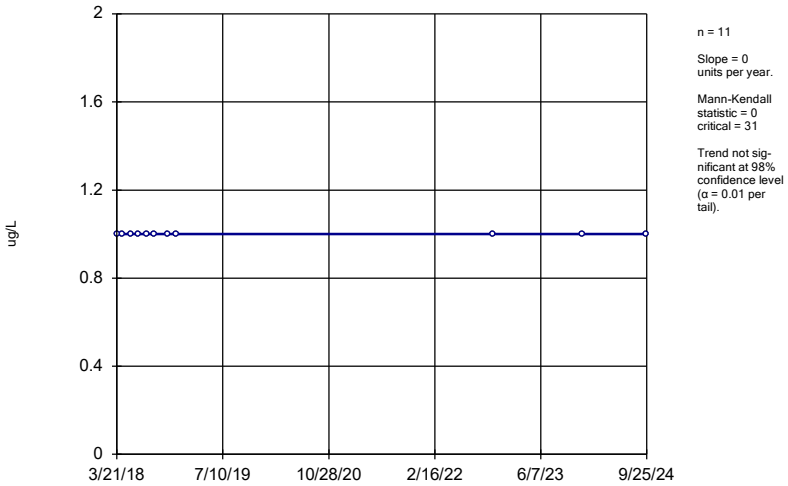
Cadmium

MW-2 (bg)

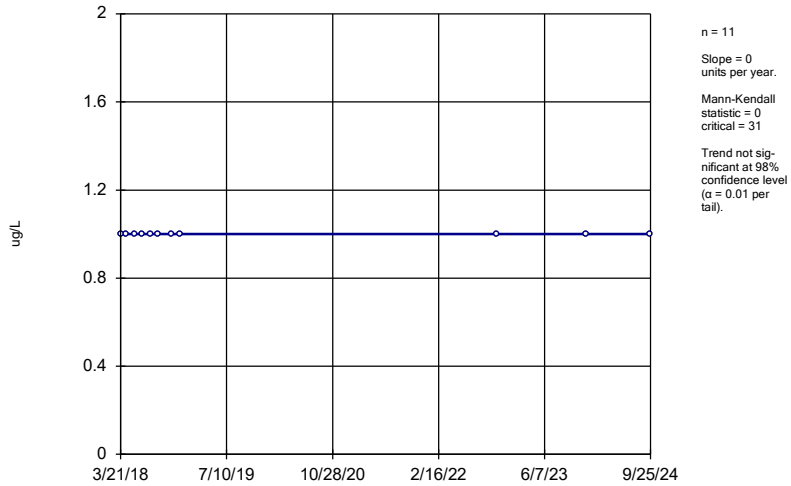


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cadmium

MW-3 (bg)

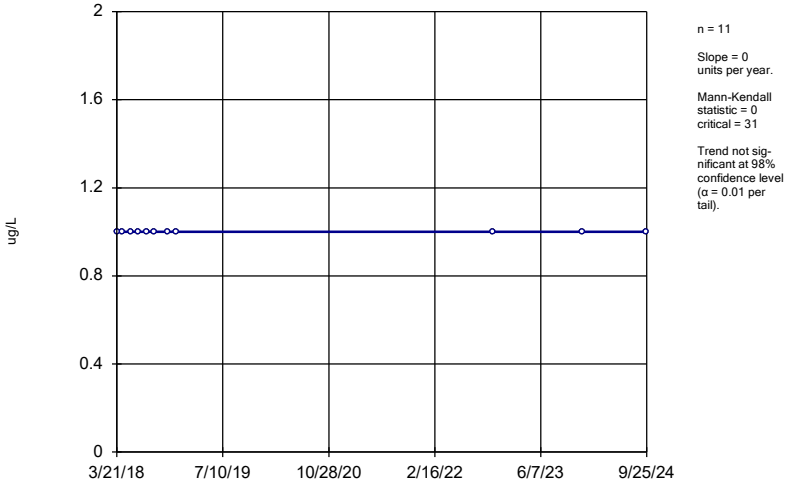


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cadmium

MW-7

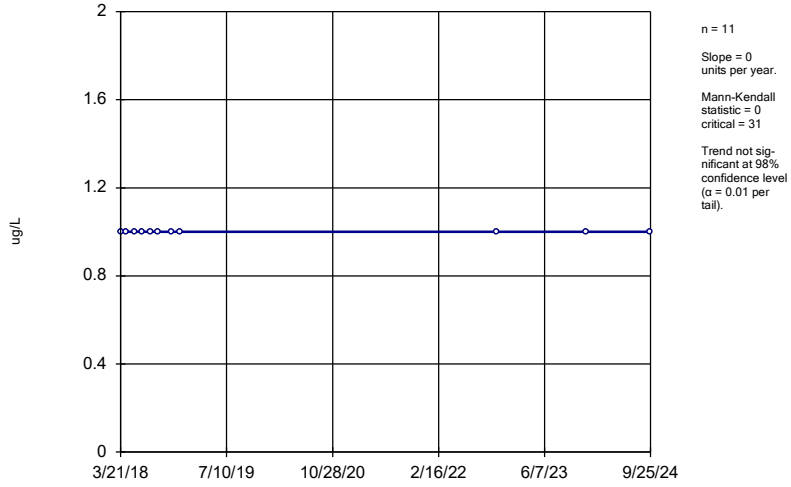


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cadmium

MW-9

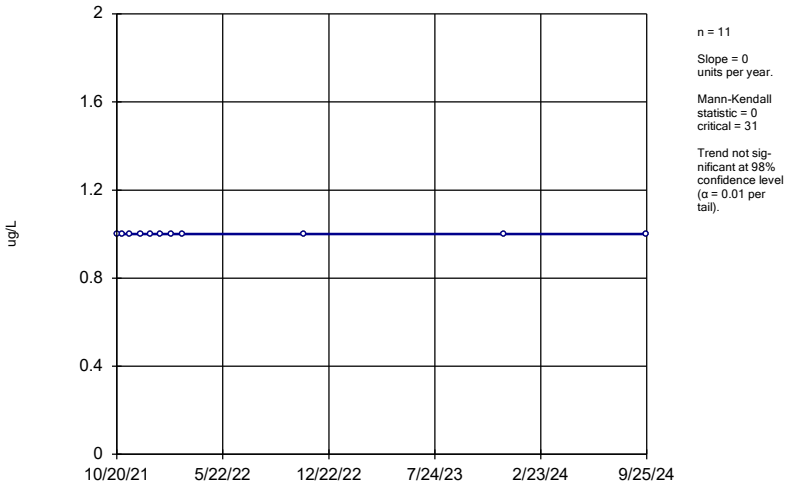


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cadmium

MW-1R

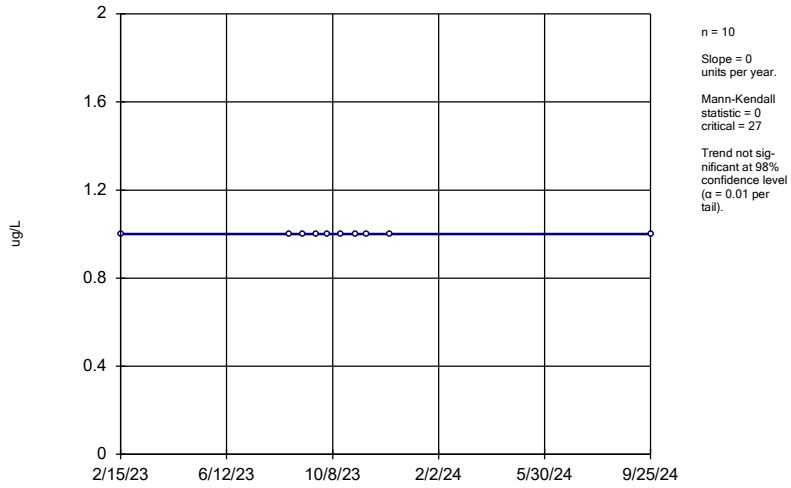


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cadmium

MW-10

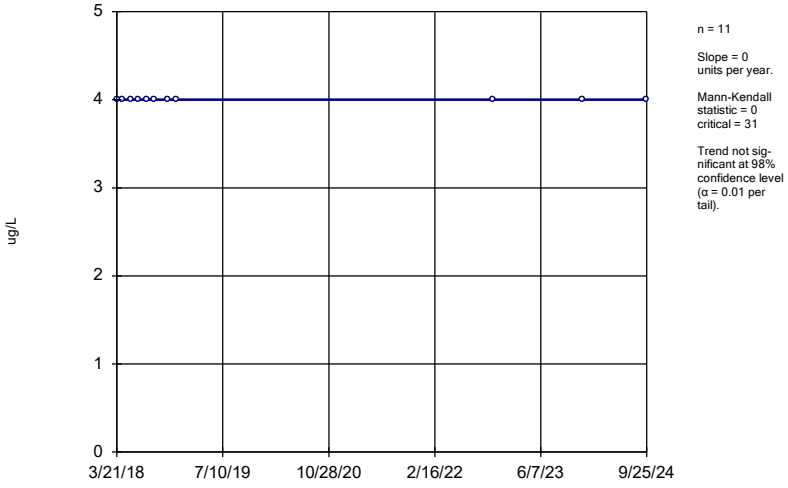


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-2 (bg)

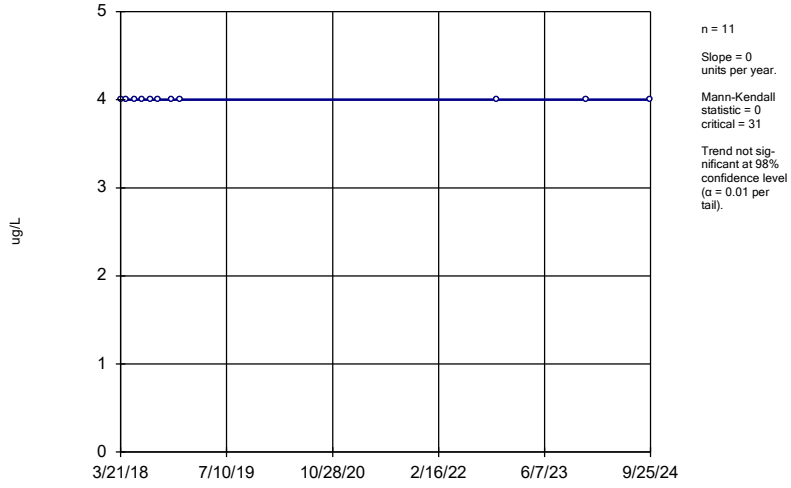


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-3 (bg)

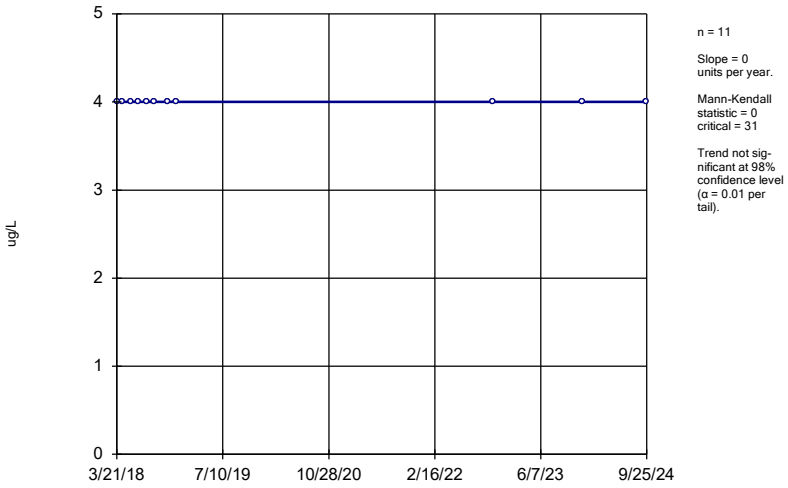


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-7

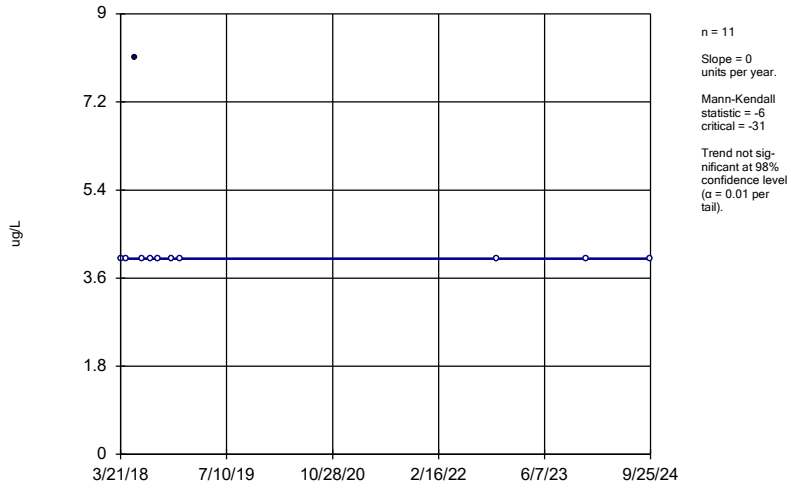


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-9

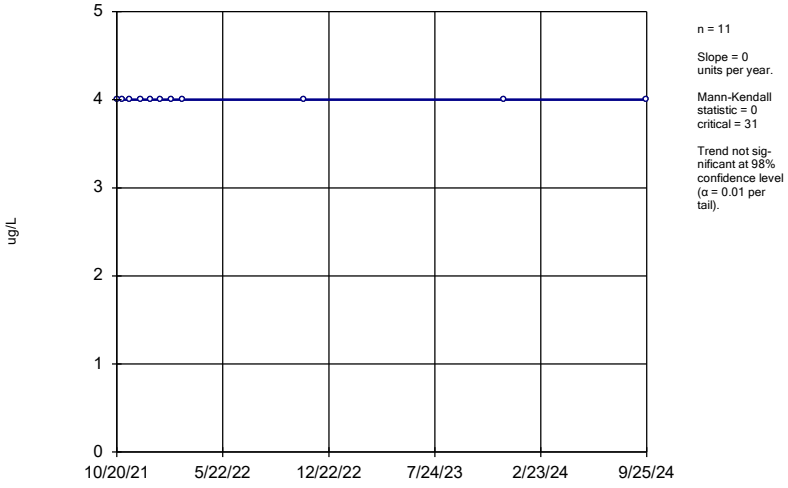


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-1R

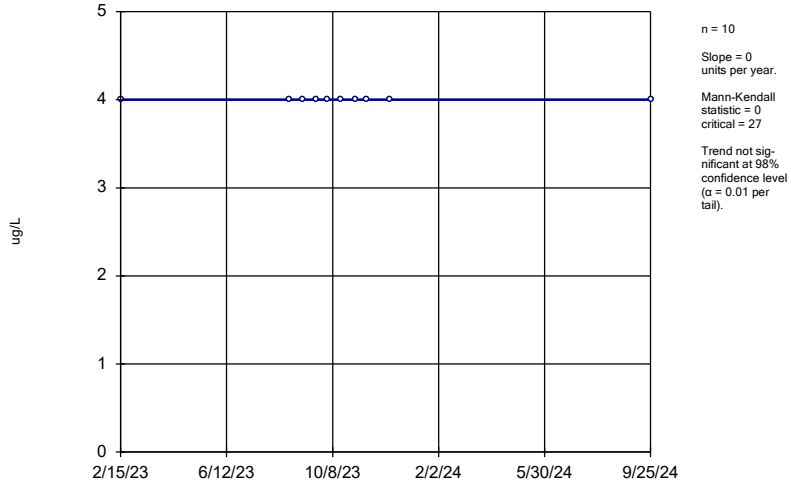


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Chromium

MW-10

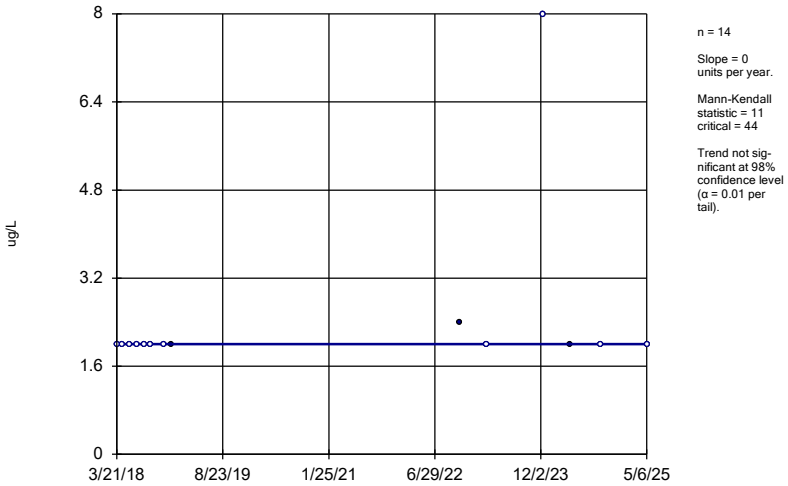


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cobalt

MW-2 (bg)

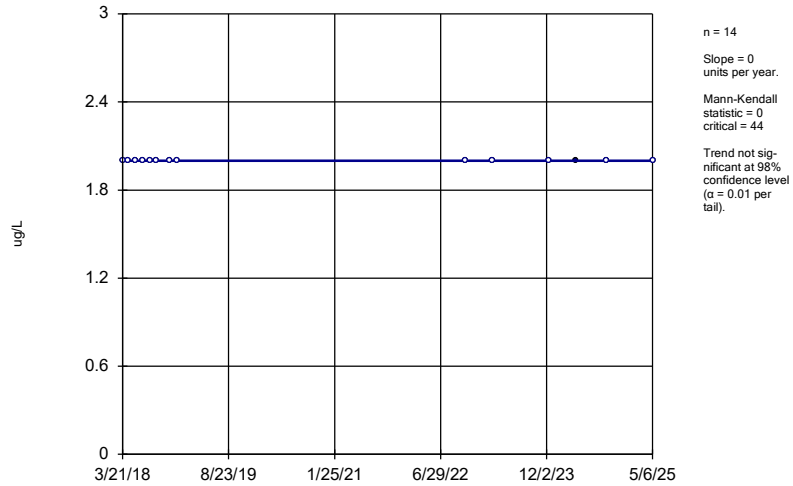


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cobalt

MW-3 (bg)

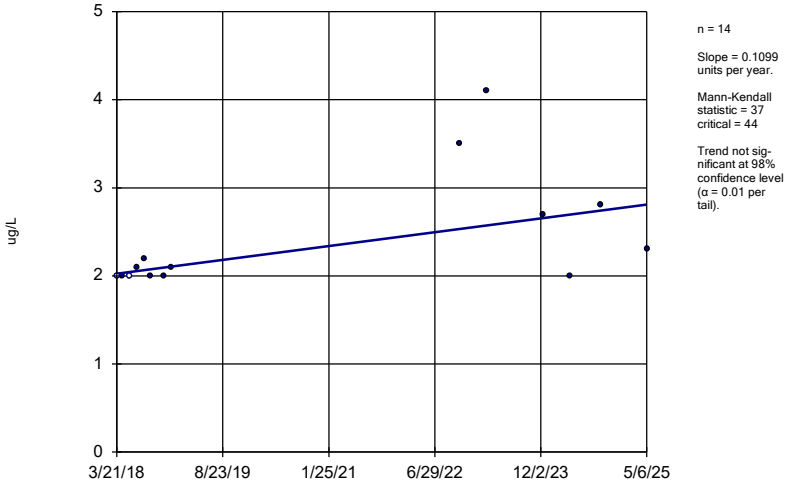


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cobalt

MW-7

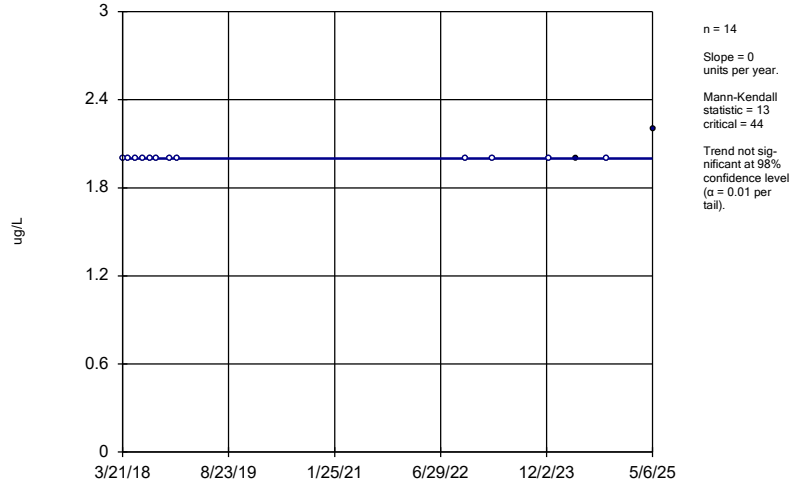


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Cobalt

MW-9

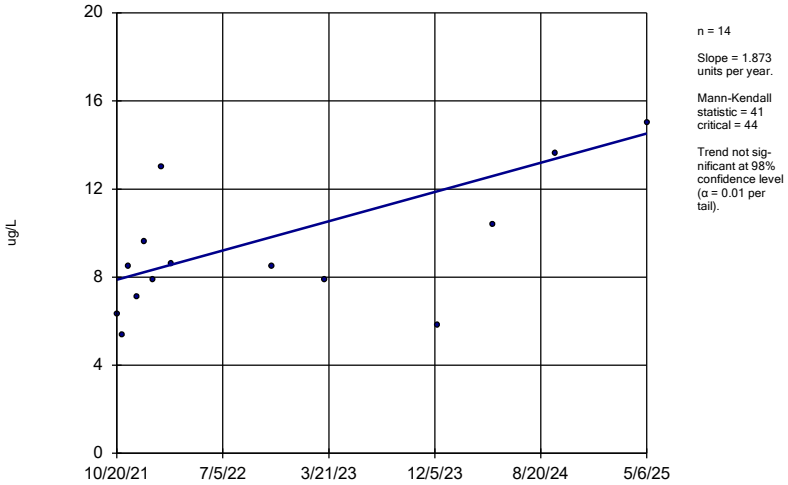


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Cobalt

MW-1R



n = 14

Slope = 1.873 units per year.

Mann-Kendall statistic = 41 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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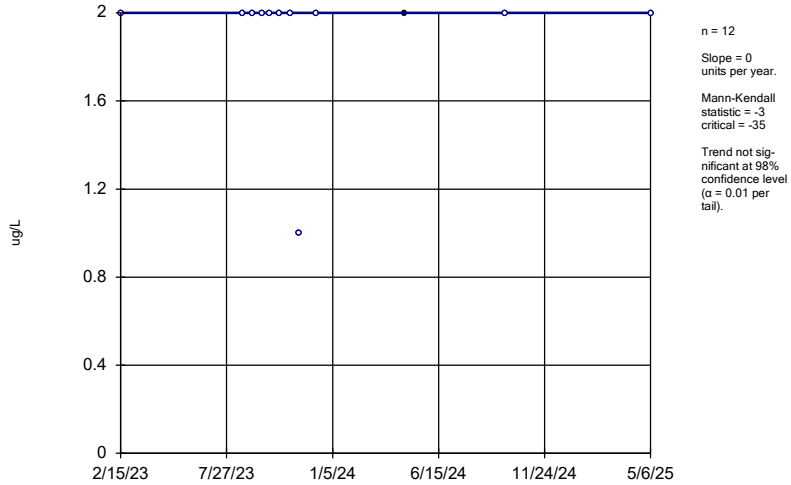
Hollow symbols indicate censored values.

Cobalt

MW-10



n = 12

Slope = 0 units per year.

Mann-Kendall statistic = -3 critical = -35

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

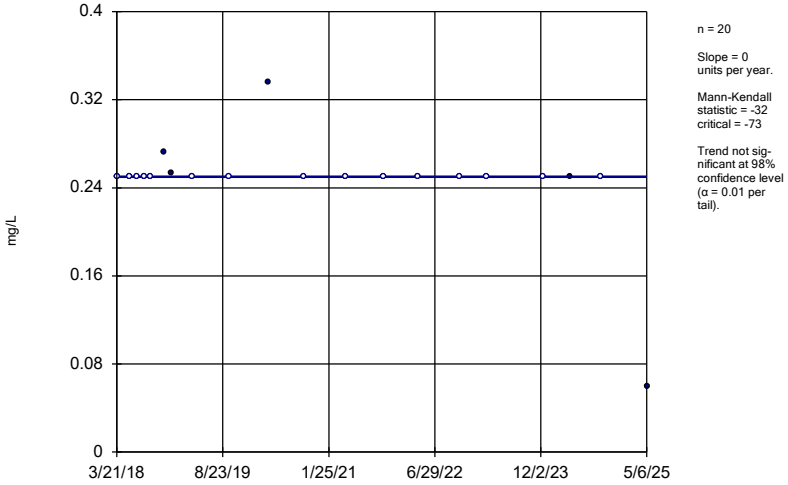
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Hollow symbols indicate censored values.

Fluoride

MW-2 (bg)



n = 20

Slope = 0 units per year.

Mann-Kendall statistic = -32 critical = -73

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

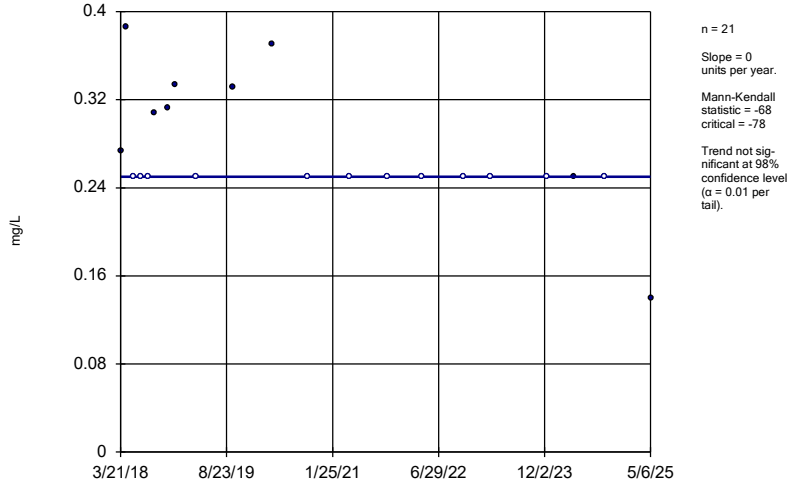
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Hollow symbols indicate censored values.

Fluoride

MW-3 (bg)



n = 21

Slope = 0 units per year.

Mann-Kendall statistic = -68 critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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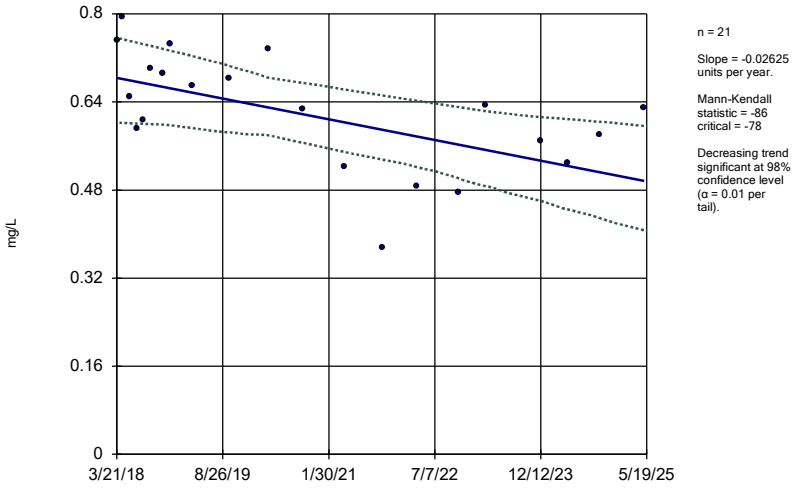
Fluoride

MW-7



n = 21

Slope = -0.02625 units per year.

Mann-Kendall statistic = -86 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:00 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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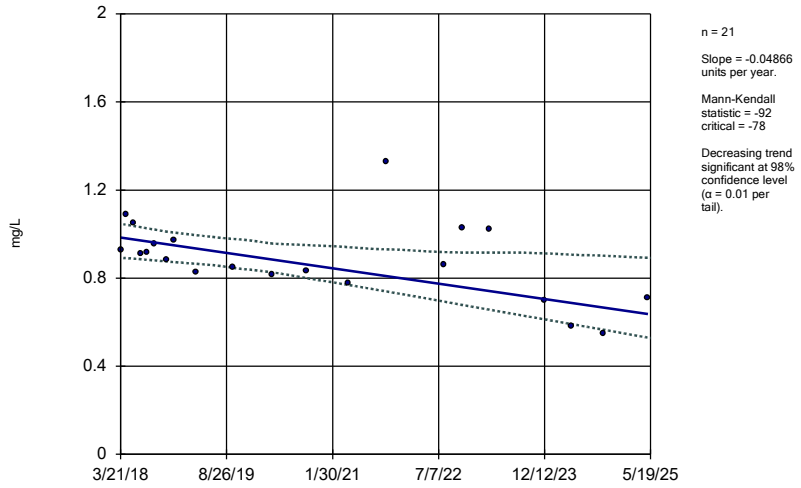
Fluoride

MW-9



n = 21

Slope = -0.04866 units per year.

Mann-Kendall statistic = -92 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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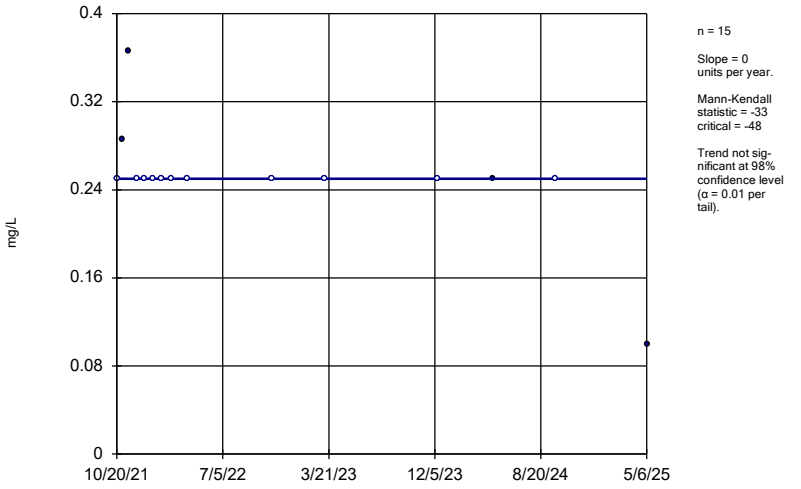
Hollow symbols indicate censored values.

Fluoride

MW-1R



n = 15

Slope = 0 units per year.

Mann-Kendall statistic = -33 critical = -48

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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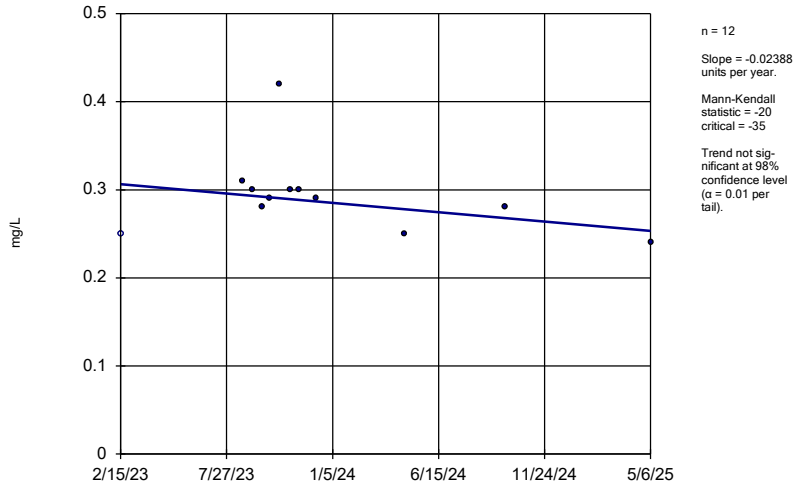
Hollow symbols indicate censored values.

Fluoride

MW-10



n = 12

Slope = -0.02388 units per year.

Mann-Kendall statistic = -20 critical = -35

Trend not significant at 98% confidence level (α = 0.01 per tail).

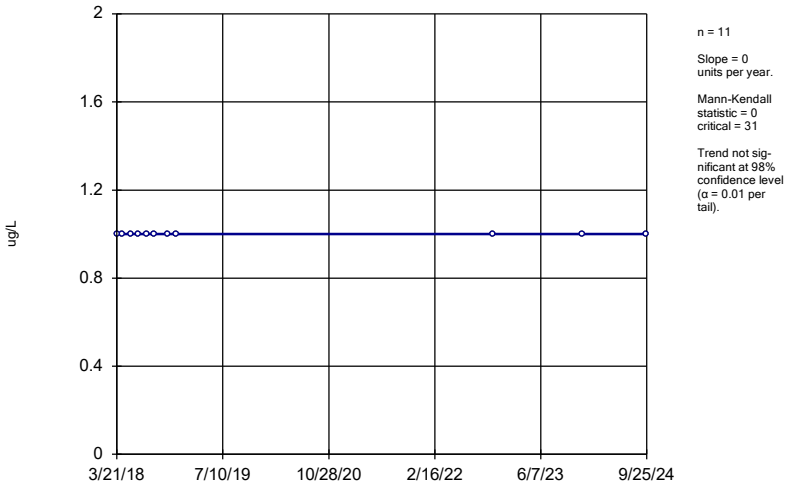
Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-2 (bg)

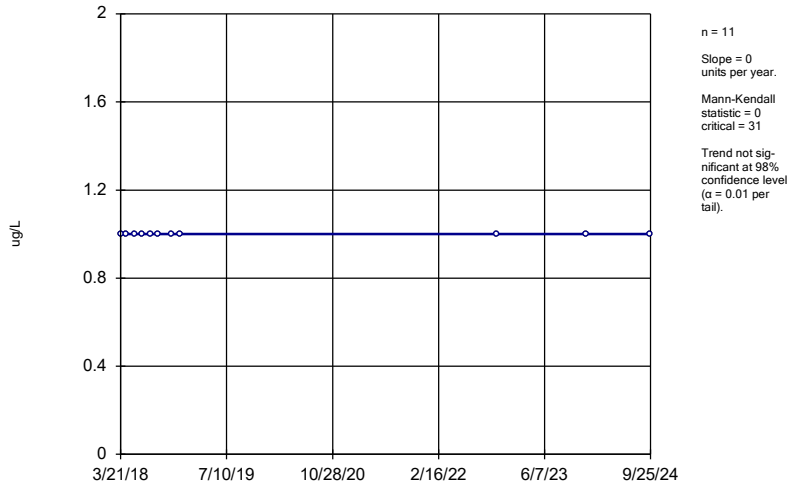


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-3 (bg)

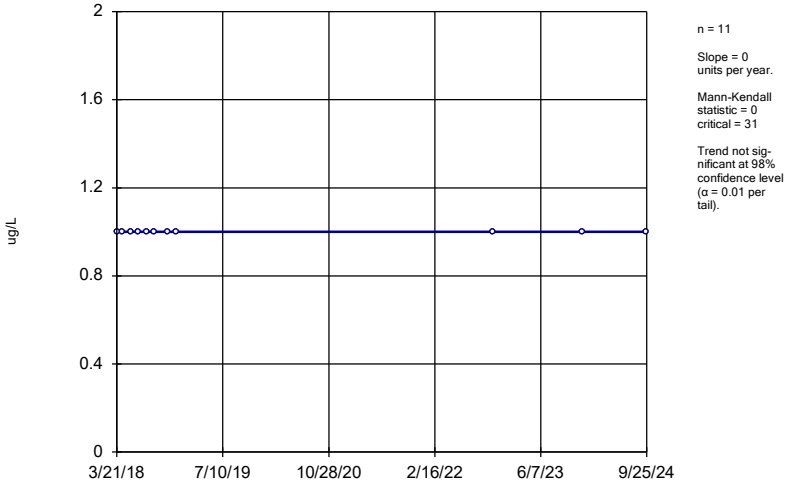


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-7

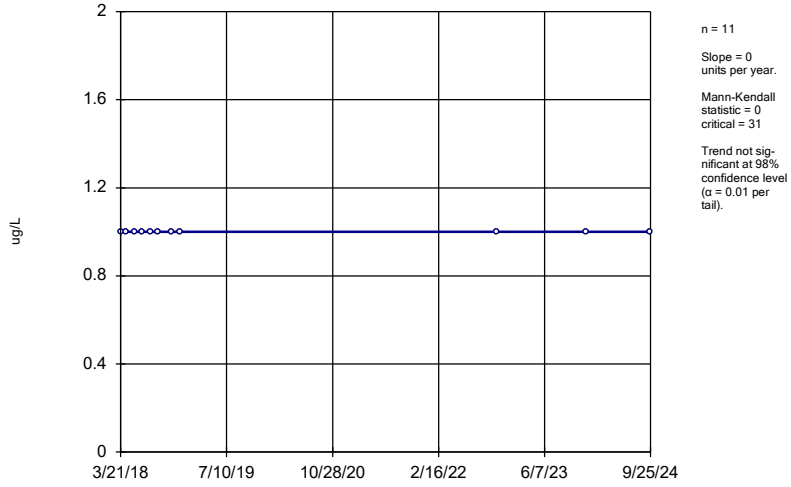


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-9

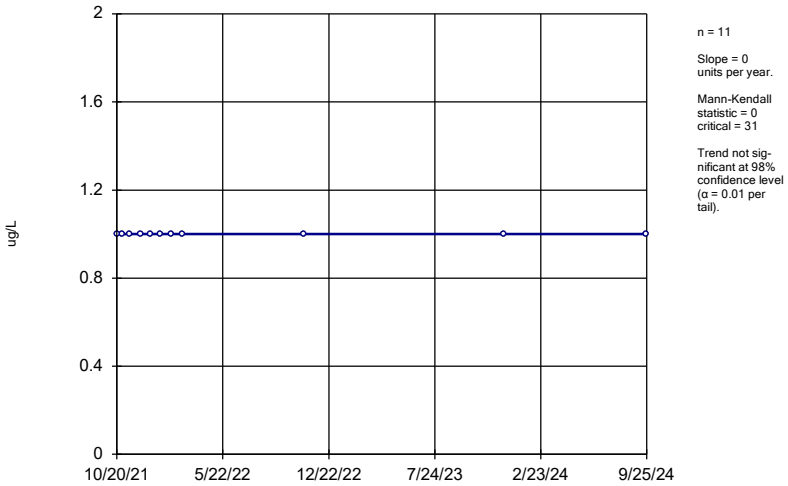


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-1R



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 31

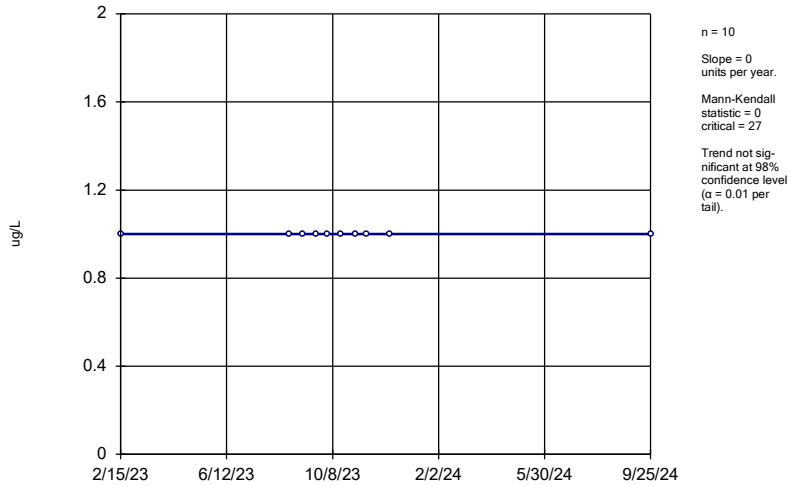
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lead

MW-10



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 27

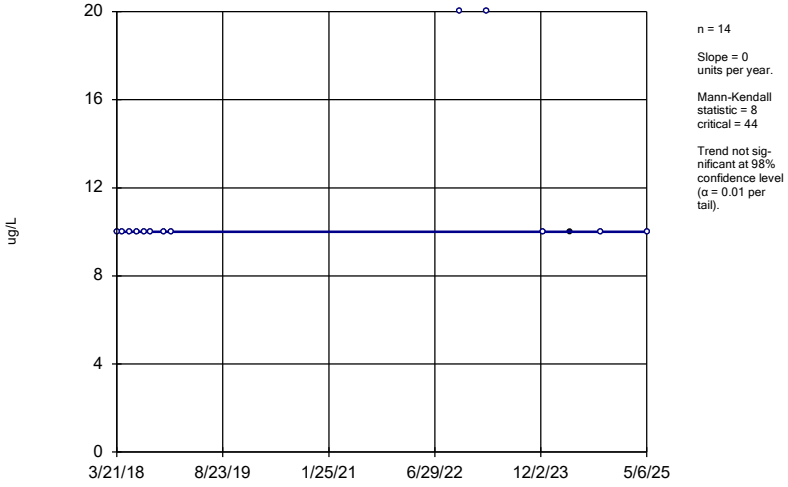
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lithium

MW-2 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 8 critical = 44

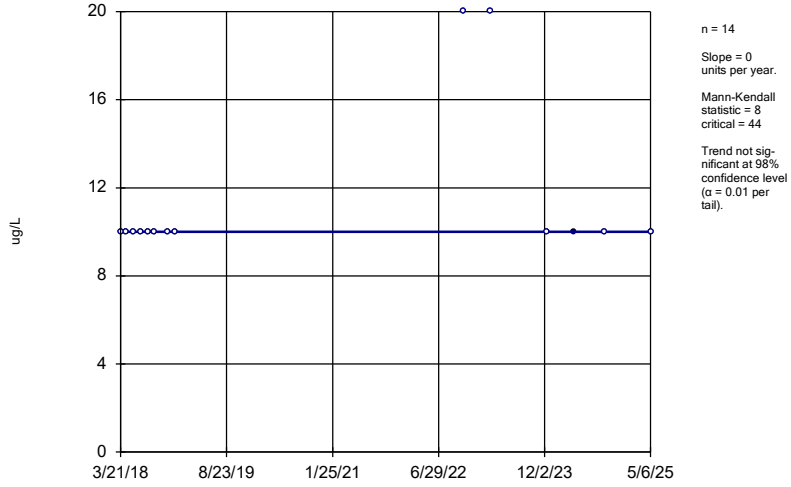
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Lithium

MW-3 (bg)



n = 14

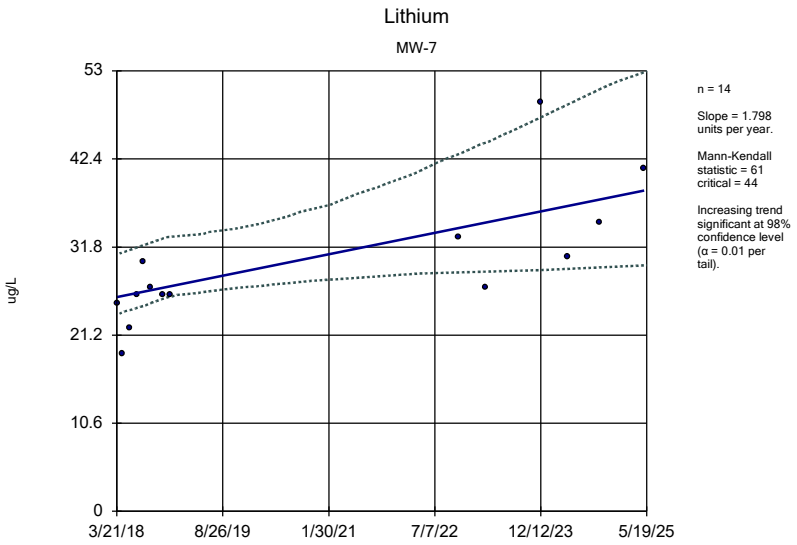
Slope = 0 units per year.

Mann-Kendall statistic = 8 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

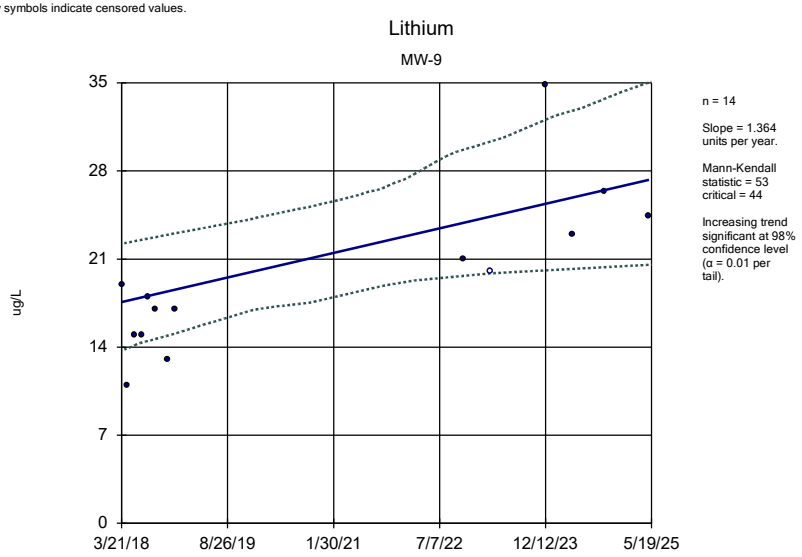
Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG



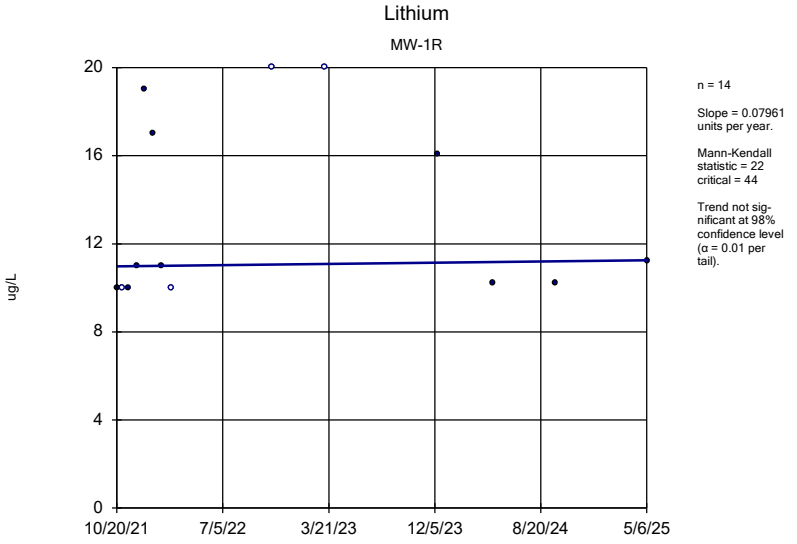
Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.



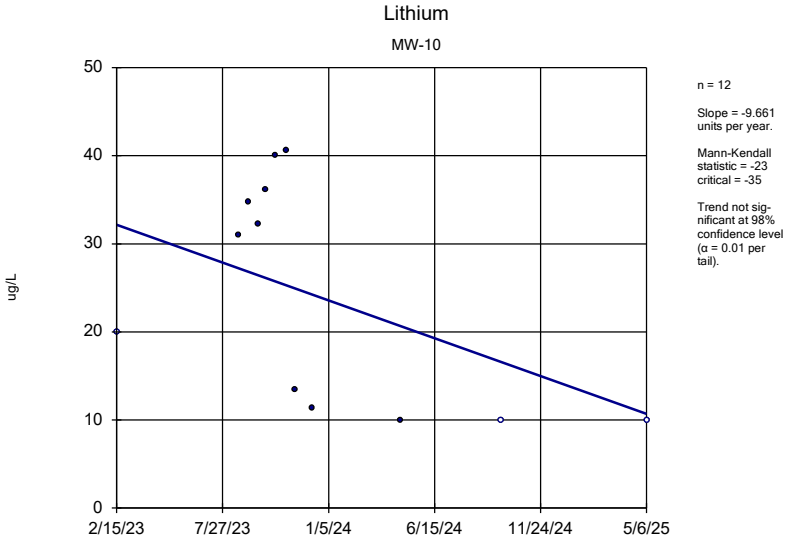
Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

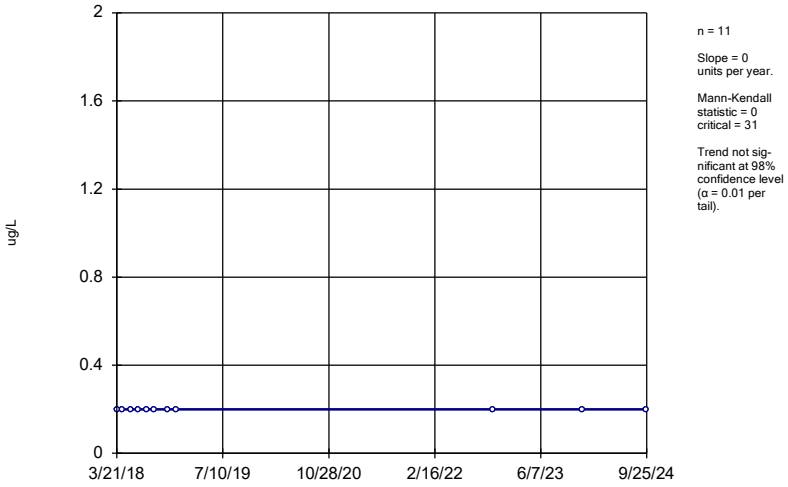


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Mercury

MW-2 (bg)

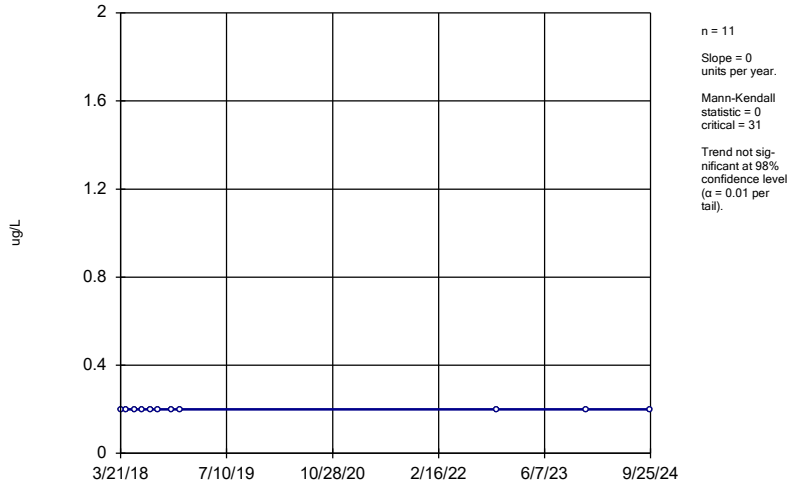


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Mercury

MW-3 (bg)

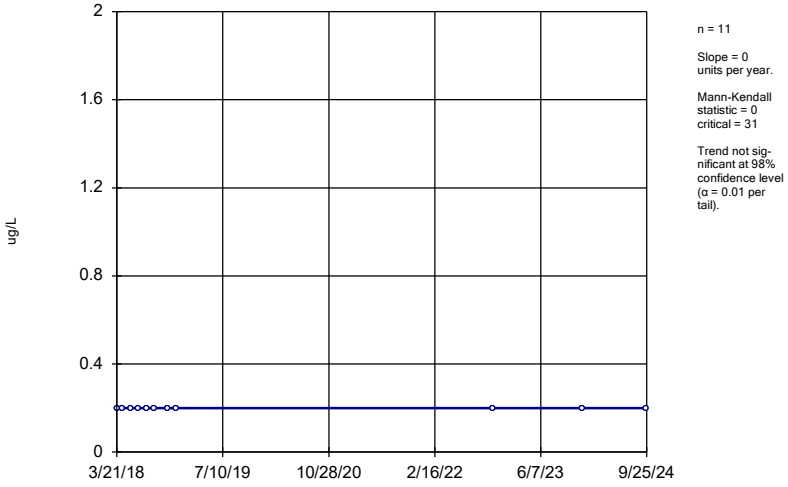


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Mercury

MW-7

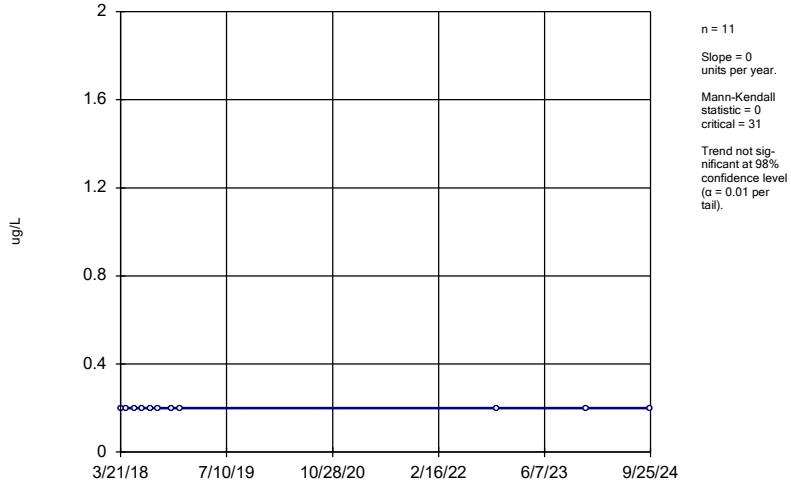


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Mercury

MW-9

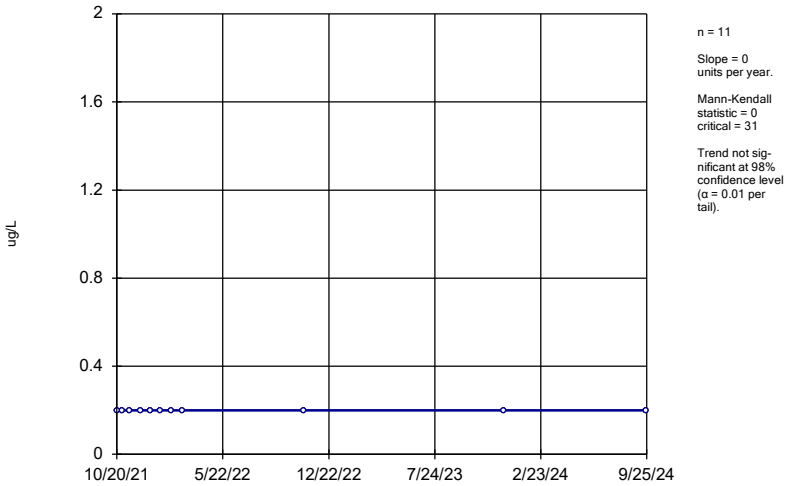


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Mercury

MW-1R



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 31

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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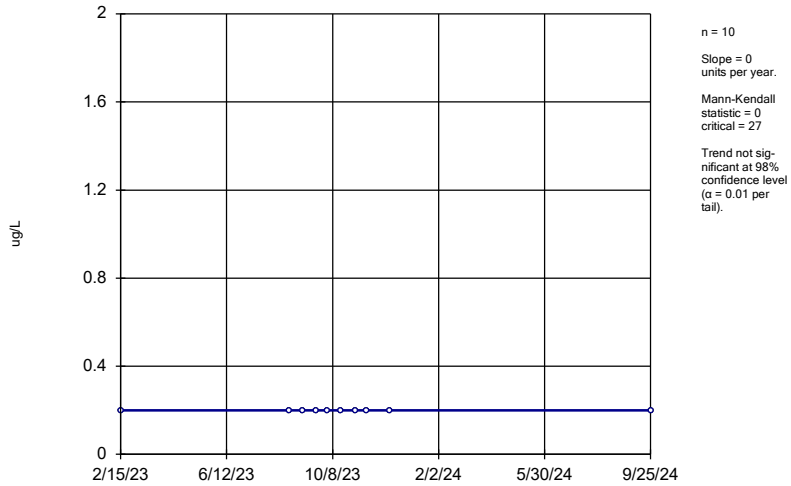
Hollow symbols indicate censored values.

Mercury

MW-10



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 27

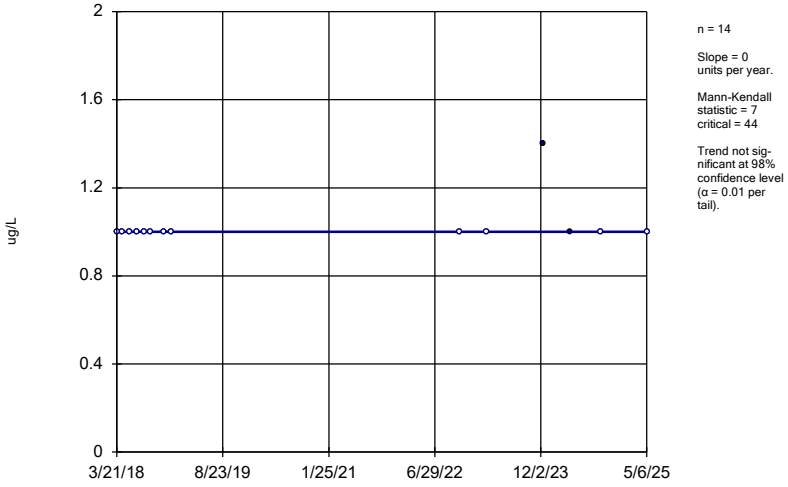
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Molybdenum

MW-2 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 7 critical = 44

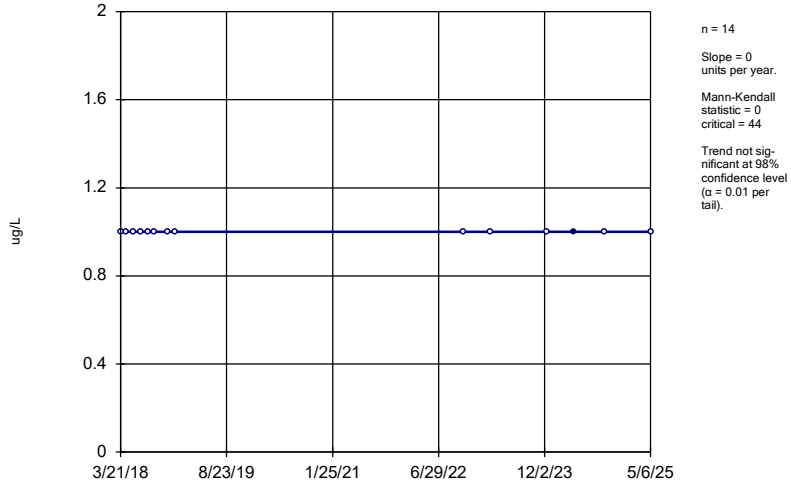
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Molybdenum

MW-3 (bg)



n = 14

Slope = 0 units per year.

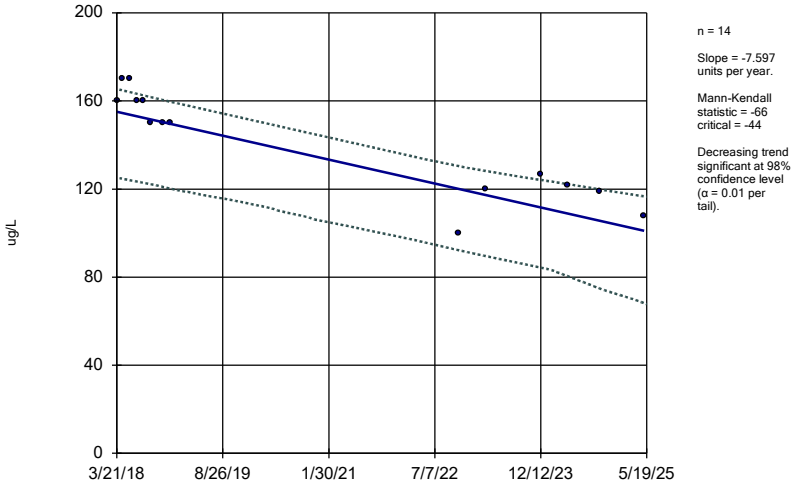
Mann-Kendall statistic = 0 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Molybdenum

MW-7



n = 14

Slope = -7.597 units per year.

Mann-Kendall statistic = -66
critical = -44

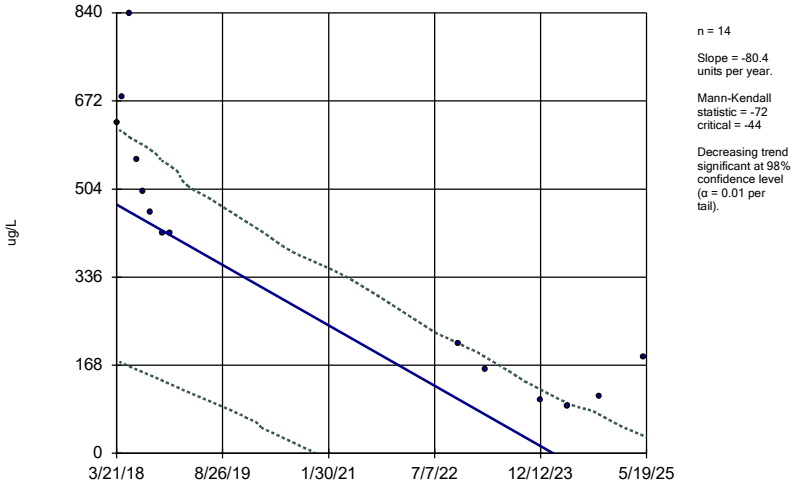
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Molybdenum

MW-9



n = 14

Slope = -80.4 units per year.

Mann-Kendall statistic = -72
critical = -44

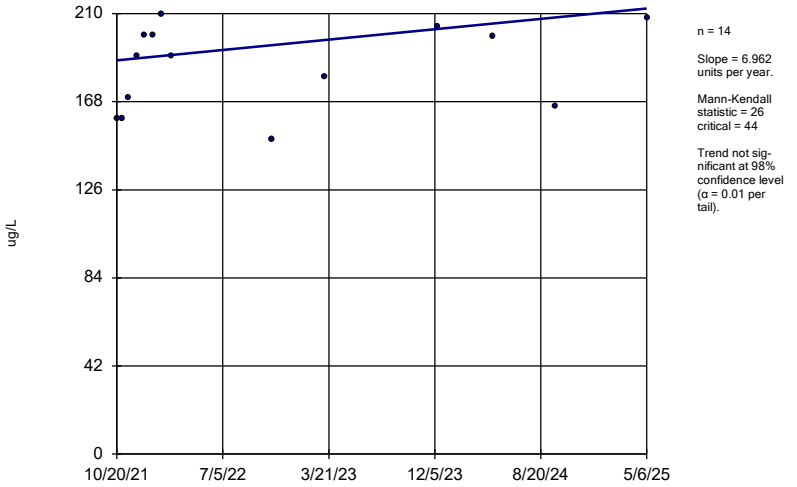
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Molybdenum

MW-1R



n = 14

Slope = 6.962 units per year.

Mann-Kendall statistic = 26
critical = 44

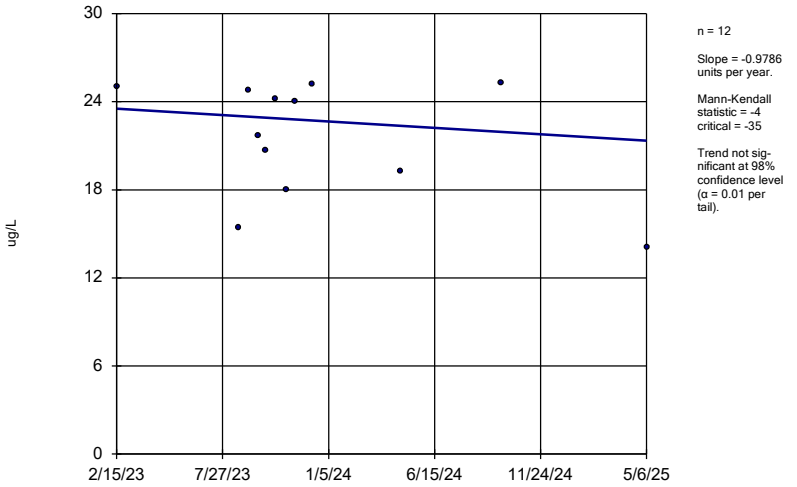
Trend not sig-nificant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Molybdenum

MW-10



n = 12

Slope = -0.9786 units per year.

Mann-Kendall statistic = -4
critical = -35

Trend not sig-nificant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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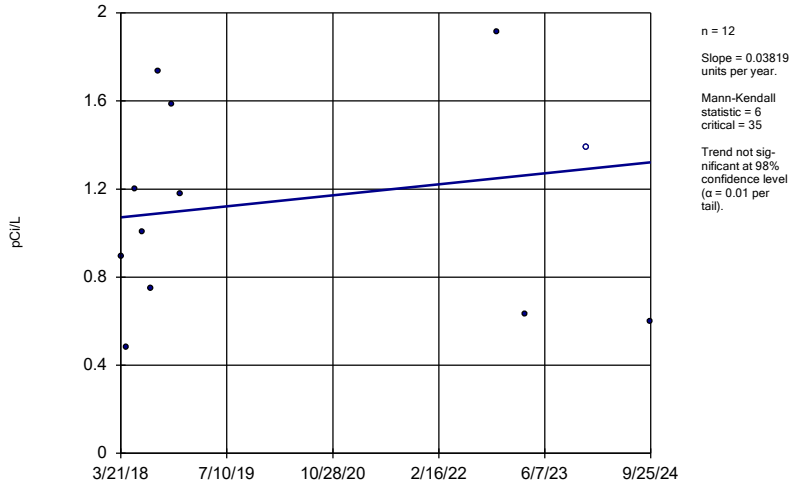
Hollow symbols indicate censored values.

Radium

MW-2 (bg)



n = 12

Slope = 0.03819 units per year.

Mann-Kendall statistic = 6
critical = 35

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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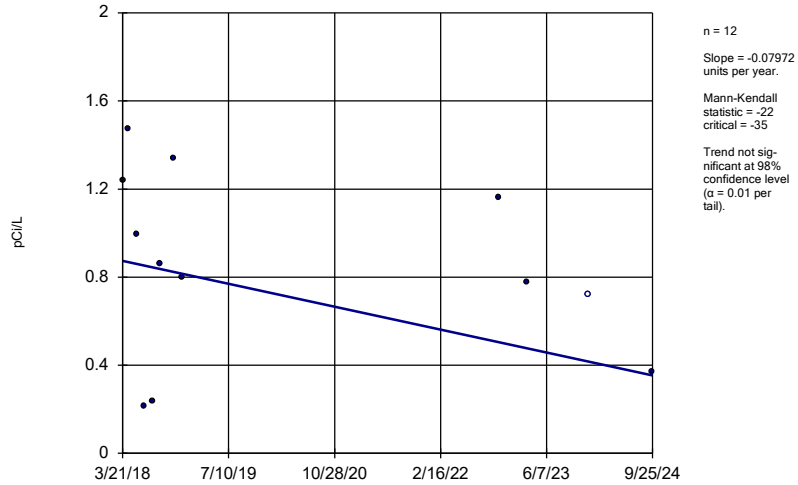
Hollow symbols indicate censored values.

Radium

MW-3 (bg)



n = 12

Slope = -0.07972 units per year.

Mann-Kendall statistic = -22
critical = -35

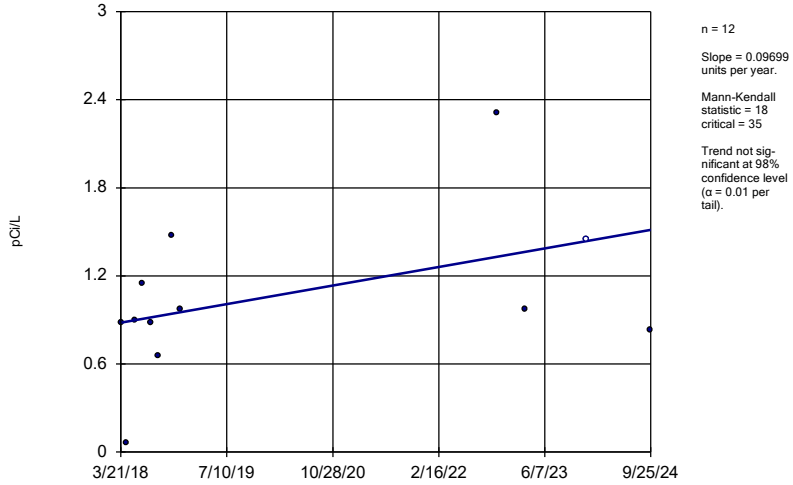
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Radium

MW-7



n = 12

Slope = 0.09699 units per year.

Mann-Kendall statistic = 18
critical = 35

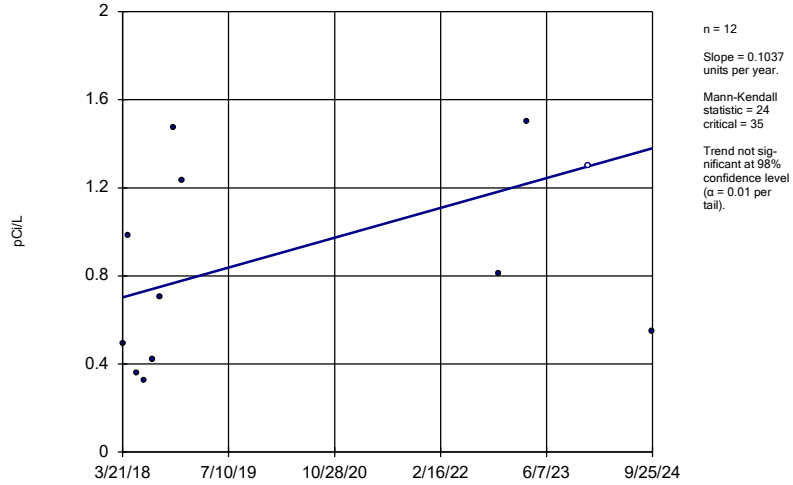
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Radium

MW-9



n = 12

Slope = 0.1037 units per year.

Mann-Kendall statistic = 24
critical = 35

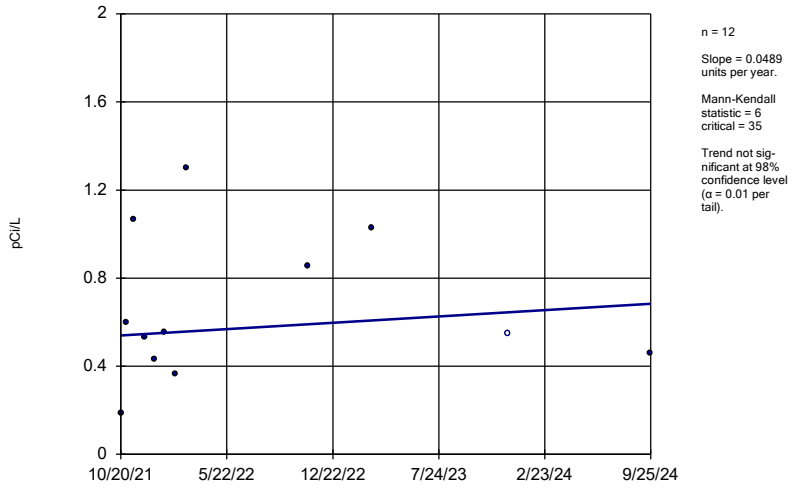
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Radium

MW-1R



n = 12

Slope = 0.0489 units per year.

Mann-Kendall statistic = 6
critical = 35

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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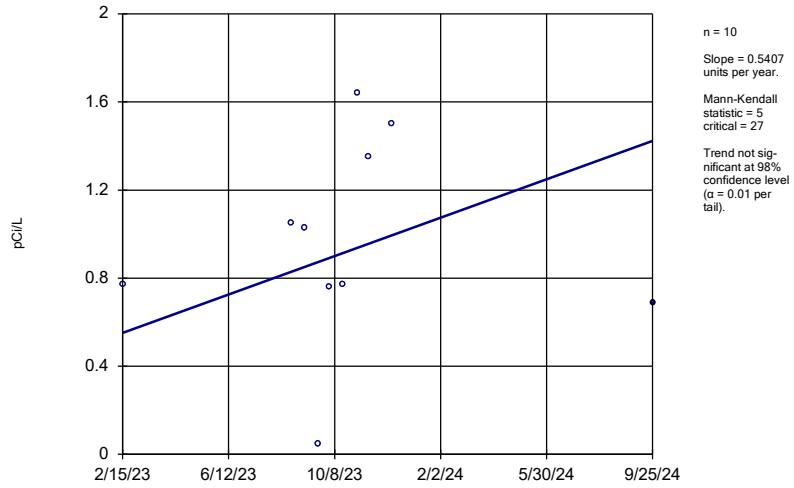
Hollow symbols indicate censored values.

Radium

MW-10



n = 10

Slope = 0.5407 units per year.

Mann-Kendall statistic = 5
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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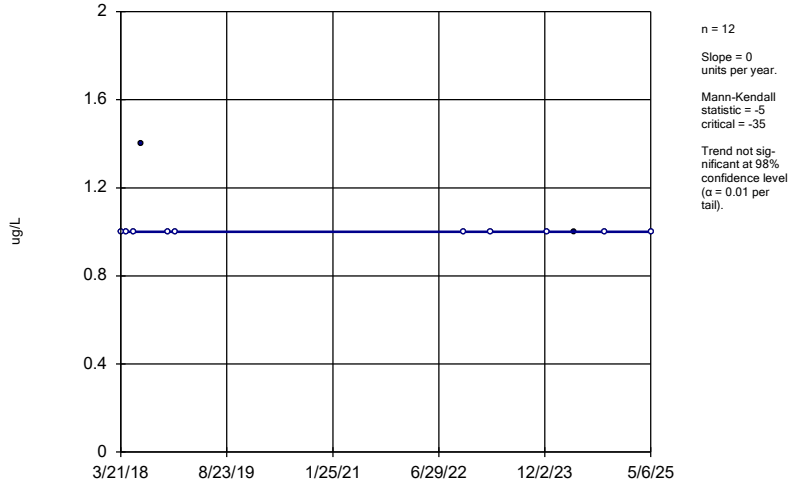
Hollow symbols indicate censored values.

Selenium

MW-2 (bg)



n = 12

Slope = 0 units per year.

Mann-Kendall statistic = -5
critical = -35

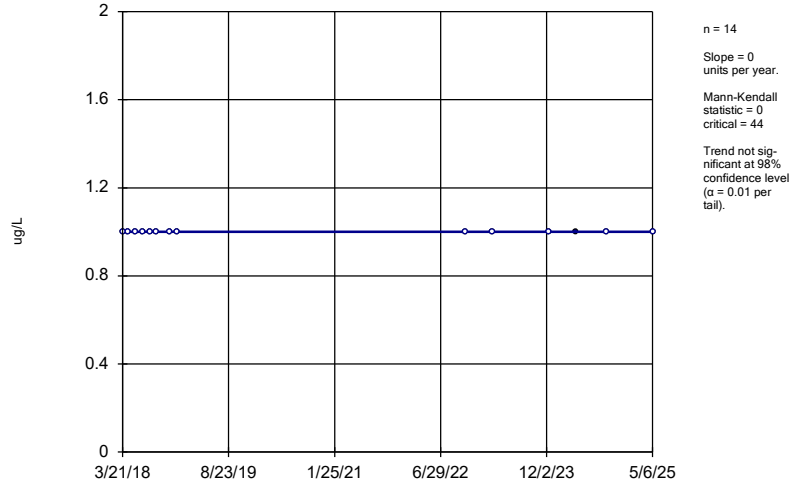
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Selenium

MW-3 (bg)



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 44

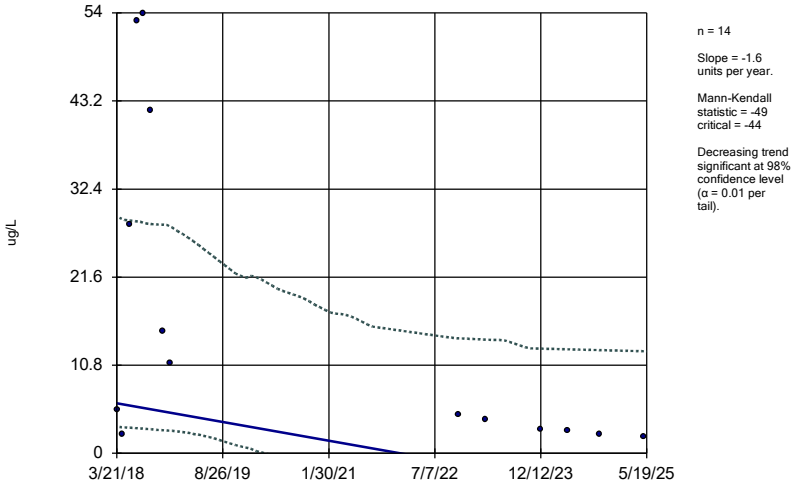
Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Selenium

MW-7



n = 14

Slope = -1.6 units per year.

Mann-Kendall statistic = -49 critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

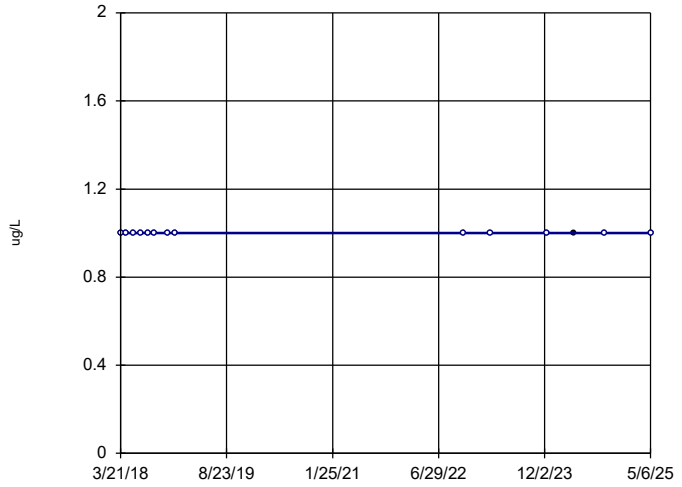
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Hollow symbols indicate censored values.

Selenium

MW-9



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

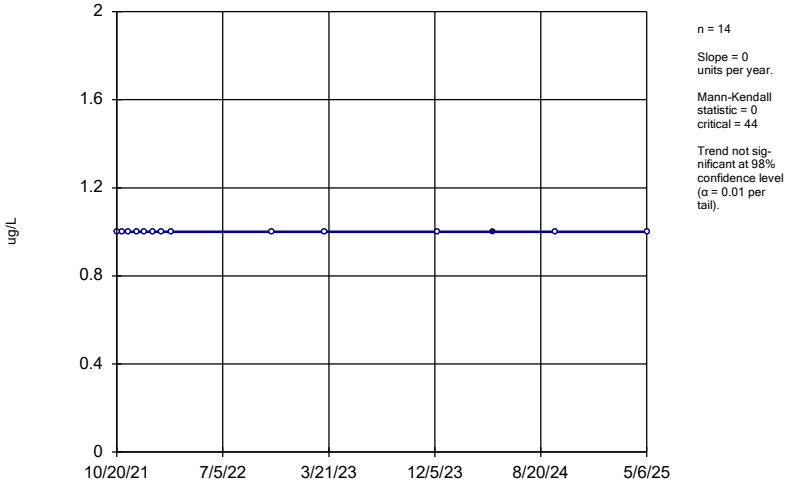
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Hollow symbols indicate censored values.

Selenium

MW-1R



n = 14

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 44

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

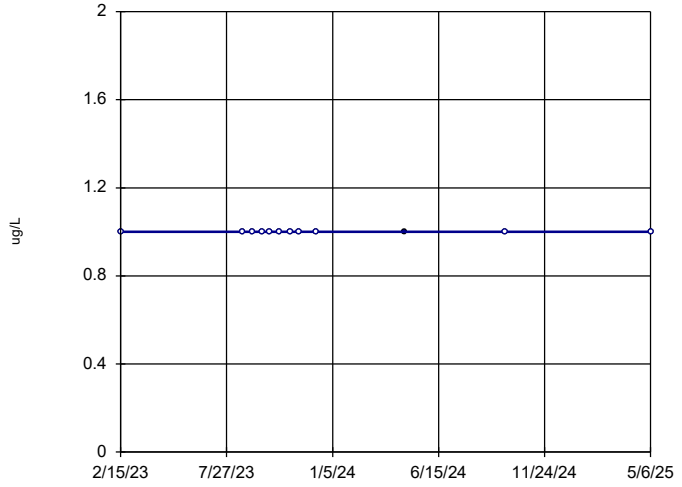
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG

Hollow symbols indicate censored values.

Selenium

MW-10



n = 12

Slope = 0 units per year.

Mann-Kendall statistic = 0 critical = 35

Trend not significant at 98% confidence level (α = 0.01 per tail).

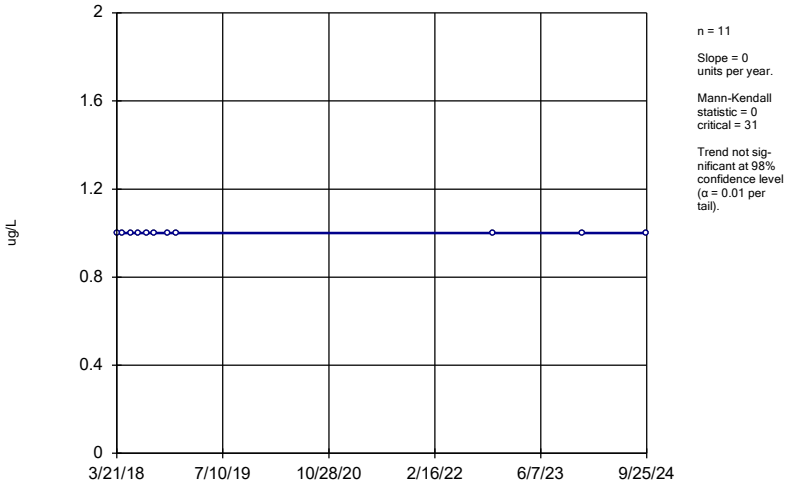
Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Thallium

MW-2 (bg)

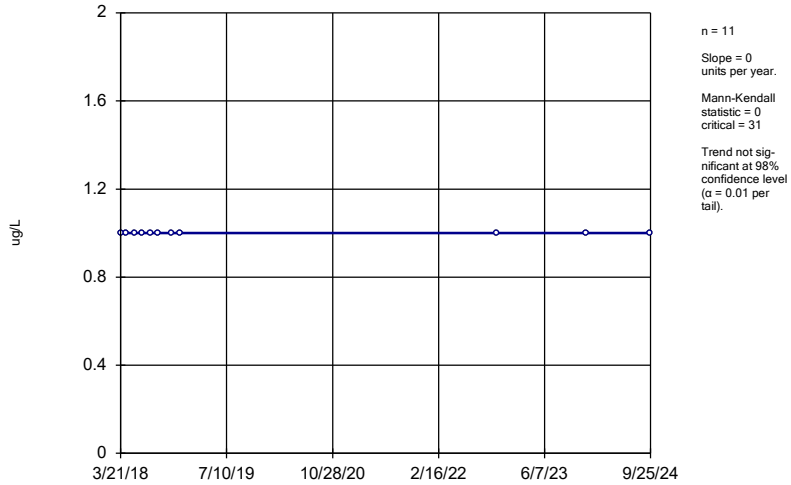


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Thallium

MW-3 (bg)

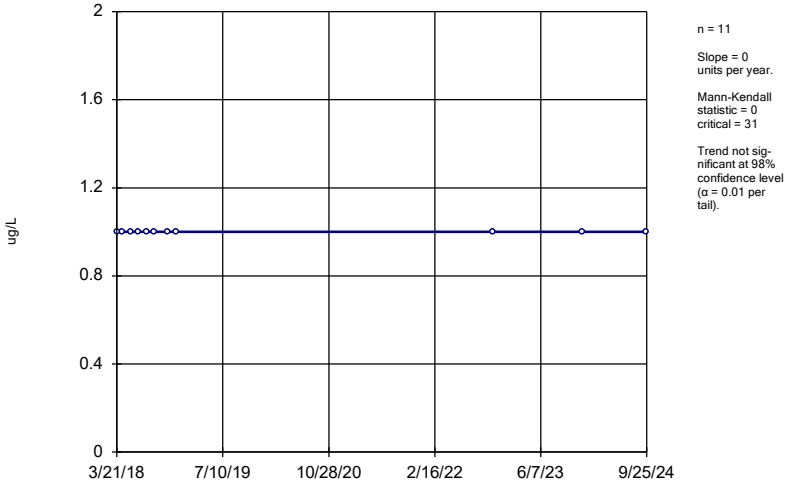


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Thallium

MW-7

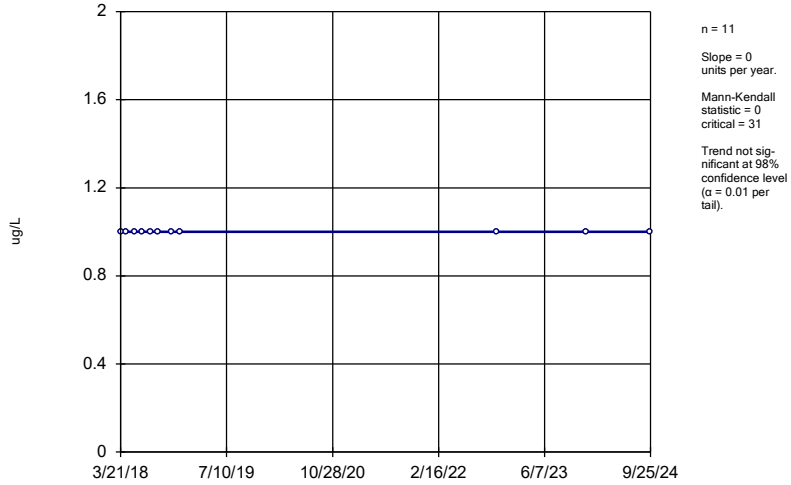


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v.10.0.25 Software licensed to GREDELL Engineering. UG
Hollow symbols indicate censored values.

Thallium

MW-9

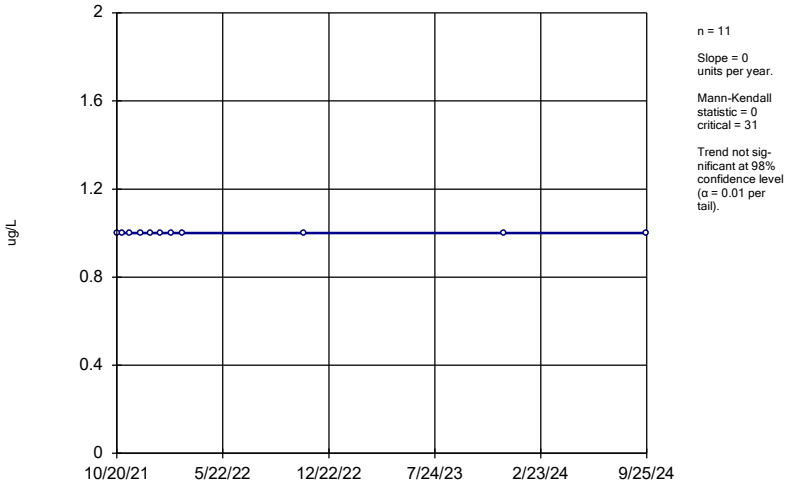


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Thallium

MW-1R



Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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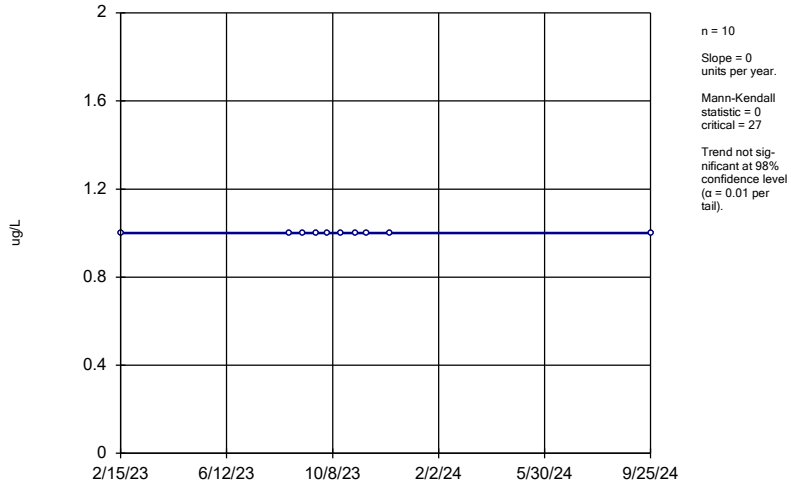
Hollow symbols indicate censored values.

Thallium

MW-10

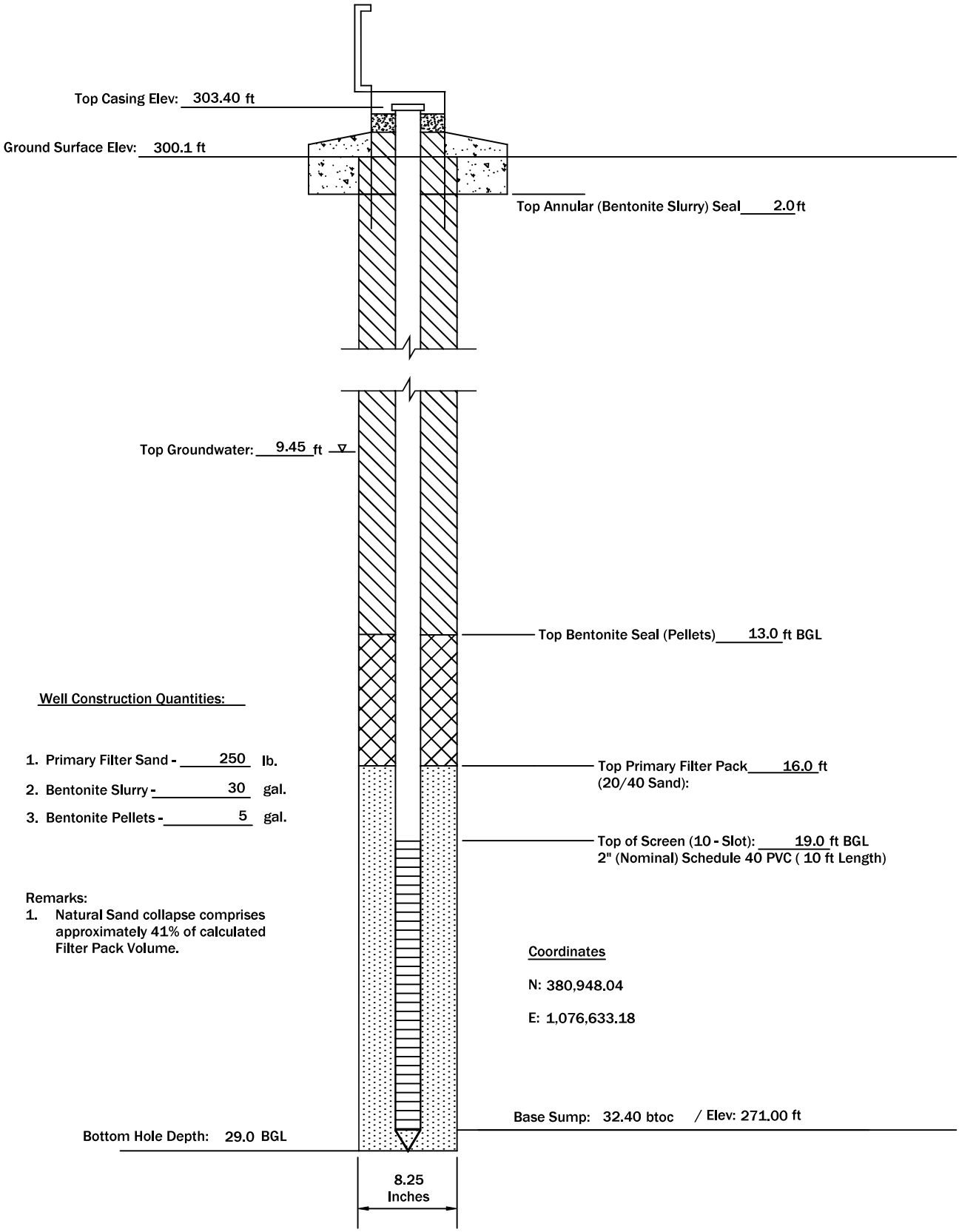


Sen's Slope and 95% Confidence Band Analysis Run 5/21/2025 12:01 PM View: Assessment Stats 5.1.20

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 10

NE-3 Construction Data



NE-3	SIKESTON POWER STATION FLY ASH POND NATURE & EXTENT CHARACTERIZATION	GREDELL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING LAND AIR WATER 1505 East High Street Jefferson City, Missouri 65101 Telephone: (573) 659-9078 Facsimile: (573) 659-9079
Date Piezometer Installed: 2-9-23	PIEZOMETER CONSTRUCTION DIAGRAM NATURE AND EXTENT	DATE 03/2023 | SCALE N.T.S. | DRAWN BY: CM | APPROVED BY: KE

Well Development Record

Location: Sikeston Power Station Nature and Extent		*Date: 2-9-2023*	
Well/Piezometer:	***NE-3***	*Initial Depth to Groundwater (ft, btoc):*	9.45 ft.
Borehole Diameter:	*8.25 "*	*Base of Well (ft, btoc):*	32.4 ft.
Casing Diameter:	*2 "*	*Filter Pack Hgt (ft):*	13.0 ft.
Development method:	*Bailer/ Submersible Pump*	*Screened Interval Lithology: Alluvium*	

Date/Time		*Purge Volume (cummulative) (gallons)*	*Notes*	*Turbidity (NTU)*	*pH (s.u.)*	*Specific Conductance (umhos/cm)*	*Temperature (^{o}C)*	*Initial Water Level (ft., btoc)*	*Ending Water Level (ft., btoc)*
2/9		5	Bailed to remove fines					NA	NA
2/15	7:40		Pump on					9.45	
2/15	7:42	50	off at 7:55 / on at 8:00	36.02	6.99		16.1	9.51	
2/15	8:08	60	off at 8:15 / on at 8:20	16.62	7.13		16.6	9.53	9.46
2/15	8:28	90	off at 8:35 / on at 8:41	2.36	7.13		16.7	9.52	9.46
2/15	8:48	120	off at 8:56 / on at 9:01	8.55	7.16		16.7	9.52	9.45
2/15	9:05	150	off at 9:16 / on at 9:21	1.32	7.15		16.8	9.53	9.46
2/15	9:26	160		1.49	7.16		16.8	9.53	
2/15	9:29	170		1.73	7.16		16.8	9.53	
2/15	9:32	185	off at 9:37	1.15	7.17		16.8	9.53	9.46

Comments: Well volume calculation based on minimum depth to groundwater.

Developed via bailer, and geosquirt pump — One Well Volume = 13.8 gallons

Potable Water Used While Drilling = 150.0 gallons

Name: K Ewers and J Fitzpatrick *Company:* GREDELL Engineering Resources, Inc.

Prepared by: GREDELL Engineering Resources, Inc.

Prepared by: KAE
Checked by: JF
Approved by: MCC

GREDELL Engineering Resources, Inc.

BORING LOG NE-3

Nature & Extent Evaluation
Sikeston, Missouri

CLIENT: SBMU Sikeston Power Station

LOCATION: See Plan of Boring Locations
G.S. ELEVATION: 300.1 **T.O.C. ELEVATION:** 303.40
NORTHING: 380,948.04 **EASTING:** 1,076,633.18

DEPTH (FEET)	ELEVATION	WELL CONSTRUCTION DIAGRAM	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	PERCENT RECOVERY	DESCRIPTION	FACIES I.D.
0	300						SILTY SAND: Dark yellowish brown (10YR 3/6), interbedded with 1-inch thick silt lenses.	
2	298					80		
4	296						SAND: Dark yellowish brown (10YR 4/6), coarse.	
							SANDY SILT: Dark grayish brown (10YR 4/2).	
6	294						SANDY CLAY: Dark gray (10YR 4/1).	
							SAND: Dark grayish brown (10YR 4/2), fine, some coarse.	
						77		
8	292						- wet.	
10	290						SAND: Dark grayish brown (10YR 4/2), fine to medium, few small gravel, wet.	
							SAND: Dark gray (10YR 4/1), coarse to medium, few small gravel.	

LITHOLOGY: CLAY | SILTY CLAY | SILT | VF SAND | F SAND | M SAND | C SAND | VC SAND | SM GRAVEL | LG GRAVEL

DRILLING CO.: Bulldog Drilling
DRILLER: Rob Scharringhausen
LOGGED BY: JZ Upp
DATE DRILLED: 02-09-23
START TIME: 7:52
END TIME: 10:30
BOREHOLE DIA.: 8.25"

STRATIFICATION LINES ARE APPROXIMATE LITHOLOGIC BOUNDARIES ONLY.

NOTES: Sand heave noted at 10 feet BGS. Used 150 gallons potable water.

WATER LEVELS: DURING DRILLING 8.0 FEET
AFTER DRILLING: 7.0 FEET
DATE: 02-09-23

PIEZOMETER: INSTALLED AT +/- 29.0 FEET

VERTICAL DATUM: NAVD 88
HORIZONTAL DATUM: MO State Plane NAD 83
WEATHER: Cool, mostly cloudy, windy, 48°F

Date Printed: 3/17/2023

GREDELL Engineering Resources, Inc.

BORING LOG NE-3

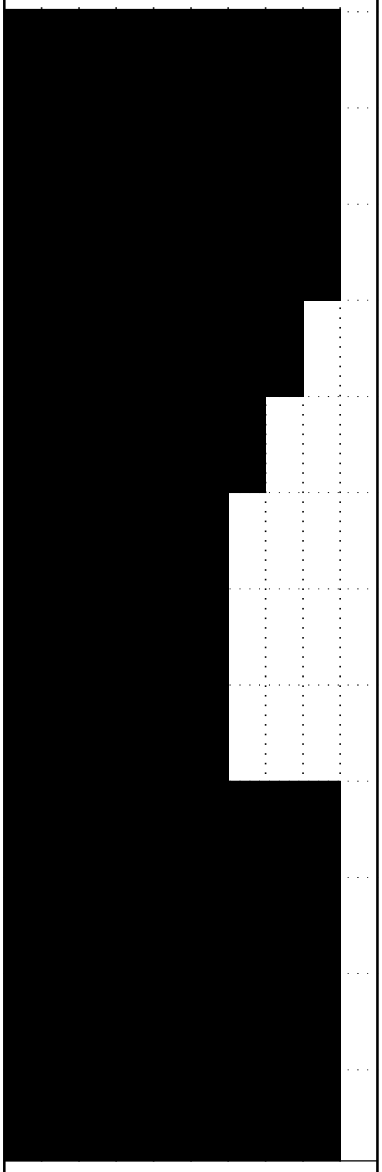
Nature & Extent Evaluation
Sikeston, Missouri

CLIENT: SBMU Sikeston Power Station

LOCATION: See Plan of Boring Locations
G.S. ELEVATION: 300.1 **T.O.C. ELEVATION:** 303.40
NORTHING: 380,948.04 **EASTING:** 1,076,633.18

DEPTH (FEET)	ELEVATION	WELL CONSTRUCTION DIAGRAM	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	PERCENT RECOVERY	DESCRIPTION	FACIES I.D.
12	288					80		
14	286						- Dark grayish brown (10YR 4/2)	
							- Dark gray (10YR 4/1), grading to fine to medium sand at 18 feet.	
16	284							
18	282					61	SAND: Dark gray (10YR 4/1), fine to medium.	
20	280						SAND: Dark gray (10YR 4/1), fine to medium, few small gravel.	
22	278					60		

LITHOLOGY



DRILLING CO.: Bulldog Drilling
DRILLER: Rob Scharringhausen
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GREDELL Engineering Resources, Inc.

BORING LOG NE-3

Nature & Extent Evaluation
Sikeston, Missouri
CLIENT: SBMU Sikeston Power Station

LOCATION: See Plan of Boring Locations
G.S. ELEVATION: 300.1 **T.O.C. ELEVATION:** 303.40
NORTHING: 380,948.04 **EASTING:** 1,076,633.18

DEPTH (FEET)	ELEVATION	WELL CONSTRUCTION DIAGRAM	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	PERCENT RECOVERY	DESCRIPTION	FACIES I.D.	LITHOLOGY: CLAY	SILTY CLAY	SILT	VF SAND	F SAND	M SAND	C SAND	VC SAND	SM GRAVEL	LG GRAVEL
24	276						SAND: Dark gray (10YR 4/1), fine to medium, few small gravel.											
26	274					60												
28	272																	
30	270						Boring terminated at 30.0 feet in Sand.											
32	268																	
34	266																	

DRILLING CO.: Bulldog Drilling
DRILLER: Rob Scharringhausen
LOGGED BY: JZ Upp
DATE DRILLED: 02-09-23
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