

**Sikeston Power Station
2024 Annual Groundwater Monitoring Report
For Fly Ash Pond
Compliance with USEPA 40 CFR 257.90(e)**

Prepared for:



**Sikeston Power Station
1551 West Wakefield Avenue
Sikeston, Missouri 63801**



July 2024

**Sikeston Power Station
2024 Annual Groundwater Monitoring and
Corrective Action Report for Fly Ash Pond
Compliance with USEPA 40 CFR 257.90(e)**

**Prepared for:
Sikeston Board of Municipal Utilities
1551 West Wakefield Avenue
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July 2024

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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 July 2023 and June 2024 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 tenth CCR compliance groundwater sampling event confirmed (detection constituent) SSIs of pH and Calcium in MW-9, and results from the eleventh event confirmed two additional SSIs (pH at MW-1R and MW-3). As a result, the FAP will remain in assessment monitoring when the twelfth CCR compliance groundwater sampling event 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 tenth and eleventh CCR compliance groundwater sampling events conducted on December 11, 2023, and April 23, 2024, respectively, SSLs of Molybdenum (in MW-1R, MW-7, and MW-9) and Cobalt (MW-1R) were confirmed for each event.

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	Verified SSIs Detection Monitoring Constituents	Verified SSLs Assessment Constituents over GWPS*	Statistical Analysis Results Completed
10th CCR Compliance Sampling Event (2 nd 2023 Semi-annual Detection and Assessment Monitoring Event)	12/11/2023	1/12/24	Appendix III & IV Constituents	pH & Calcium: MW-9	Molybdenum: MW-1R, MW-7, MW-9 Cobalt: MW-1R	2/22/24
11th CCR Compliance Sampling Event (1 st 2024 Semi-annual Detection and Assessment Monitoring Event)	4/23/2024	5/9/24	Appendix III & detected IV Constituents (Appendix III & As, Ba, Co, Fl, Li, Mo, & Se)	pH: MW-1R, MW-3, MW-9 Calcium: MW-9	Molybdenum: MW-1R, MW-7, MW-9 Cobalt: MW-1R	5/30/24

*GWPS = Groundwater Protection Standards

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, 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; 2021). 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.

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

- 10th Compliance Sampling Event (2nd 2023 Detection and Assessment Event) and
- 11th Compliance Sampling Event (1st 2024 Detection and Assessment Event).

As summarized on Table 1, these events were initiated on December 11, 2023 (tenth event) and April 23, 2024 (eleventh 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 and 2. The wells are identified as MW-1R, MW-2, MW-3, MW-7, MW-9, and MW-10. 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 Dupon, 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. As part of the Nature and Extent investigation, monitoring well MW-10 was installed on February 9, 2023. It serves as a downgradient compliance well at the facility boundary. Well installation records for MW-10 are provided for reference in Appendix 12.

Table 3 presents a construction summary of the wells comprising the FAP groundwater monitoring system. Figures 1 and 2 depict groundwater contour maps of the uppermost aquifer for the tenth and eleventh 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 and 2 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; 2021).

3.1 Installation or Decommissioning of Monitoring Wells

Monitoring well MW-10 was installed on February 9, 2023, and eight rounds of background sampling were collected following installation. Following collection of the last background sample on November 15, 2023, MW-10 was added to the FAP detection and assessment groundwater monitoring system (now comprised of MW-1R, MW-2, MW-3, MW-7, MW-9, and MW-10). The first compliance samples from MW-10 were collected during the tenth CCR compliance groundwater sampling event, and the results are presented in this report. No other monitoring wells were installed or decommissioned for the FAP detection and/or assessment groundwater monitoring systems since the 2023 Annual Groundwater Monitoring Report (GER, 2023).

4.0 DETECTION AND ASSESSMENT SAMPLING SUMMARY

The tenth and eleventh CCR compliance groundwater sampling events for the FAP were completed by SPS environmental staff. The tenth CCR compliance groundwater sampling event (2nd 2023 semi-annual event) was initiated in December 2023 and the eleventh event (1st 2023 semi-annual event) was initiated in April 2024.

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), Groundwater Protection Standards (GWPS) were established as specified in §257.95(h) for all detected §257 Appendix IV constituents. Statistical results for the tenth, and eleventh detection groundwater sampling events are discussed in detail in Section 6.0. Assessment monitoring statistical results for the tenth and eleventh compliance groundwater sampling events (assessment monitoring events three and four) 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; 2021). 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 tenth and eleventh events were collected at MW-10 and MW-7 respectively. 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 tenth event were received by the primary facility on December 13, 2023, 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 January 12, 2024.

Samples collected during the eleventh event were received by the primary facility on April 26, 2024, and subsequently analyzed for detection monitoring and the seven previously detected assessment monitoring constituents (Table 9-1 in Appendix 9). Final analytical results were received May 9, 2024.

5.0 ANALYTICAL SUMMARY

Analytical data reports for each monitoring well sampled during the tenth and eleventh 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 tenth and eleventh 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 tenth and eleventh event analytical reports indicate that quality controls met acceptance criteria with the following exceptions:

10th Compliance Sampling Event (2nd 2023 Detection and Assessment Monitoring Event):

- The MW-7 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.
- All quality controls met for verification sampling event.

11th Compliance Sampling Event (1st 2024 Detection and Assessment Monitoring Event):

- The MW-3, MW-7, and Duplicate (MW-7) results for Chloride are flagged “J” because the analyte detected was below quantitation limits.
- The MW-7 result for Calcium is flagged “S” because the matrix spike control limits are not applicable due to high sample/spike ratio.
- 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.
- *Field Blank:* One field blank was incorporated into the data set for each sampling event. Results for the field blanks showed no reportable concentrations.
- *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 indicate a relatively low (3.1 ug/L) Barium concentration during the tenth event. No other reportable concentrations were associated with trip blanks.
- *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), 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 tenth and eleventh 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 tenth and eleventh groundwater compliance sampling events were initiated at the SPS FAP in December 2023 and April 2024, 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 eleventh 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 tenth and eleventh 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 trend. 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 tenth and eleventh 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 tenth FAP groundwater sampling event confirmed two detection constituent SSIs associated with MW-9 (pH and Calcium (Table 1)). The statistical analysis for the eleventh FAP groundwater sampling event suggests two additional detection constituent SSIs (pH at MW-1R and MW-3) in addition to pH and Calcium at MW-9. 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 four outliers in the Appendix

IV database, all associated with Fluoride, which were subsequently screened from the Appendix IV database prior to calculating confidence intervals:

- (3) Fluoride at MW-2 sample results for (0.335 mg/L on April 15, 2016; 0.272 mg/L on November 6, 2018; and 0.336 mg/L on April 6, 2020),
- (1) Fluoride at MW-10 (0.420 mg/L on October 17, 2023).

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 December 2023 and April 2024 data sets. The SSLs reported for both of these events 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:

- Molybdenum concentrations at MW-7, and MW-9 are decreasing with a significant trend,
- Molybdenum concentrations at MW-1R do not show a significant trend with time, and
- Cobalt Concentrations at MW-1R do not show a significant trend with time.

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 an assessment of corrective measures to address the following:

- Identify and evaluate suitable corrective measures intended 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.

In summary, GER recommends:

1. Continue Assessment and Detection Monitoring for the FAP in accordance with the CCR Rule.
2. Continue Assessment of Corrective Measures for Molybdenum and Cobalt in accordance with the CCR Rule.

8.0 SUMMARY

The tenth and eleventh semi-annual sampling events for the FAP were initiated by SPS environmental staff for detection and assessment monitoring on December 11, 2023, and April 23, 2024, respectively. Two detection constituent SSIs (pH and Calcium in MW-9) were apparent with the tenth event results, and four detection constituent SSIs (pH in MW-1R, MW-3, and MW-9 and Calcium in MW-9) were apparent with the eleventh event results.

The tenth and eleventh 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 a result of the confirmed SSIs and SSLs, SPS continues assessment monitoring for the FAP, and is assessing corrective measures to identify and evaluate suitable methods 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 to restore groundwater in the affected area to conditions that do not exceed GWPS for those constituents.

The Assessment of Corrective Measures was initiated on July 14, 2023, in accordance with §257.95(g)(3). SPS will continue detection and assessment monitoring of the FAP in accordance with §257.94 & 95. It is also noted that a Demonstration of Time Extension Needed to Complete an Assessment of Corrective Measures was filed in SPS' Operating Record on October 12, 2023 (Appendix 11). In addition, the Nature and Extent Characterization effort has been summarized in a Technical Memorandum dated November 29, 2023 (Appendix 10).

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

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FIGURES

FILE PATH: G:\CAD\Drawings\SIKESTON\GROUNDWATER MAP\DWG\2024\2024-GW-ContourMap.dwg



- LEGEND**
- PROPERTY LINE ——— PL ———
 - GROUNDWATER CONTOUR (DASHED WHERE INFERRED) C1 = 0.5 FT. - - - - -
 - MONITORING WELL: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - PEZOMETER: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - HIGH-CAPACITY WELL: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - UP GRADIENT: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - DOWN GRADIENT: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - MONITORING LOCATION: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)
 - GROUNDWATER FLOW: MW-10 (circle with dot), NE-3 (circle with cross), MW-7 (circle with dot), MW-9 (circle with dot), MW-8 (circle with dot), MW-6 (circle with dot), MW-5 (circle with dot), MW-4 (circle with dot), MW-3 (circle with dot), MW-2 (circle with dot), MW-1 (circle with dot)

- NOTES**
1. IMAGE PROVIDED BY Bing Maps.
 2. MONITORING WELL LOCATIONS, CASING ELEVATIONS & UNDERGROUND CULVERT ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
 3. GROUNDWATER ELEVATIONS MEASURED BY SIKESTON POWER STATION STAFF ON DECEMBER 11, 2023.
 4. MAP DEVELOPMENT BASED ON CONTOURS GENERATED BY SURFER'S SOFTWARE.
 5. RANGE OF GROUNDWATER FLOW GENERATED AS DETERMINED BY SURFER'S SOFTWARE 0.0063 FT./FT. TO 0.001 FT./FT.

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1R	295.44	314.34	382926.45	1078805.61
MW-2	296.31	308.01	383207.42	1079751.30
MW-3	295.81	308.56	381130.00	1079945.62
MW-7	294.86	315.03	381554.50	1079847.00
MW-9	295.28	314.68	382429.94	1078825.60
MW-10	292.83	304.28	381324.39	1076261.22

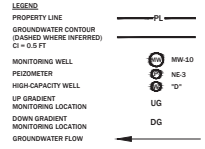
THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT HAS REVIEWED THE DATA AND CONCLUSIONS OF THIS REPORT AND HAS DETERMINED THAT THE DATA AND CONCLUSIONS ARE REASONABLY ACCURATE AND RELIABLE FOR THE PURPOSES INTENDED. THE GEOLOGIST'S REVIEW IS LIMITED TO THE DATA AND CONCLUSIONS OF THIS REPORT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE DATA OR CONCLUSIONS. THE GEOLOGIST'S REVIEW IS LIMITED TO THE DATA AND CONCLUSIONS OF THIS REPORT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE DATA OR CONCLUSIONS. THE GEOLOGIST'S REVIEW IS LIMITED TO THE DATA AND CONCLUSIONS OF THIS REPORT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE DATA OR CONCLUSIONS.

SIKESTON POWER STATION
FLY ASH POND
2024 ANNUAL GROUNDWATER MONITORING & REPORT

FIGURE 1
GROUNDWATER CONTOUR MAP
DECEMBER 11, 2023

PROJECT: SIKESTON_GWMAP.dwg
 DRAWN BY: SIK
 CHECKED BY: SIK
 DATE: 07/2/2024
 SCALE: 1" = 600'
 SHEET: 1 OF 2

GREDELL
ENGINEERING RESOURCES
 CIVIL - GEOTECHNICAL - ENVIRONMENTAL - GEOLOGY - EARTH SCIENCES
 1505 East High Street
 Jefferson City, Missouri 64504
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 Fax: (672) 659-9079
 www.gredell.com



- NOTES:**
1. IMAGE PROVIDED BY Bing Maps.
 2. MONITORING WELL LOCATIONS, CASING ELEVATIONS & UNDERGROUND CONDUIT ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
 3. GROUNDWATER ELEVATIONS MEASURED BY SIKESTON POWER STATION STAFF ON APRIL 23, 2024.
 4. MAP DEVELOPMENT BASED ON CONTOURS GENERATED BY SURFER'S SOFTWARE.
 5. RANGE OF GROUNDWATER FLOW CONTOURS AS DETERMINED BY SURFER'S SOFTWARE 0.0062 FT./FT. TO 0.001 FT./FT.

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1R	296.30	314.34	382926.45	1078805.61
MW-2	296.71	308.01	383207.42	1079751.30
MW-3	296.20	308.56	381130.00	1079745.62
MW-7	295.38	315.03	381554.50	1079847.00
MW-9	295.83	314.68	382429.94	1078825.60
MW-10	293.18	304.28	381324.39	1076261.22

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT HAS REVIEWED THE DATA AND CONCLUSIONS OF THIS REPORT AND HAS DETERMINED THAT THE DATA AND CONCLUSIONS ARE REASONABLY ACCURATE AND RELIABLE FOR THE PURPOSES INTENDED. THE GEOLOGIST'S REVIEW IS LIMITED TO THE DATA AND CONCLUSIONS OF THIS REPORT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE DATA OR CONCLUSIONS OF THIS REPORT. THE GEOLOGIST'S REVIEW IS LIMITED TO THE DATA AND CONCLUSIONS OF THIS REPORT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE DATA OR CONCLUSIONS OF THIS REPORT.

SIKESTON POWER STATION FLY ASH POND 2024 ANNUAL GROUNDWATER MONITORING & REPORT

FIGURE 2 GROUNDWATER CONTOUR MAP APRIL 23, 2024

SHEET 2 OF 2
 DRAWN BY: SIKESTON, GWMP/JPB
 CHECKED BY: SIKESTON, GWMP/JPB
 DATE: 07/2/2024
 SCALE: 1" = 600'
 PROJECT: SIKESTON, GWMP/JPB

GREDELL ENGINEERING RESOURCES
 CIVIL, GEOTECHNICAL, ENVIRONMENTAL, GEOLOGY & EARTH SCIENCES
 Telephone: (678) 659-9078
 1505 East High Street
 Jefferson City, Missouri 64504

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.

Prepared by: GREDELL Engineering Resources, Inc.

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

**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 Depth⁵ (feet)	Base of Well Elevation⁶ (feet)	Screen Length⁷ (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: GREDELL Engineering Resources, Inc.

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

**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

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 installation and completion of background sampling of MW-1R on March 2, 2022.
7. MW-10 added to Fly Ash Pond Monitoring System following installation and completion of background sampling on November 3, 2023.

**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**

10th Compliance Sampling Event initiated December 11, 2023

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	11.70	11.70	300	4,780	6.21
MW-3	Upgradient	12.74	12.74	300	4,840	6.62
MW-7	Downgradient	20.17	20.17	300	6,960	7.28
MW-9	Downgradient	19.40	19.40	300	4,240	7.15
MW-1R	Downgradient	18.90	18.90	300	8,200	6.55
MW-10	Downgradient	11.45	11.45	300	3,400	7.06

11th Compliance Sampling Event initiated April 23, 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	11.30	11.30	300	4,540	6.23
MW-3	Upgradient	12.35	12.35	300	2,760	6.65
MW-7	Downgradient	19.65	19.65	300	5,020	7.26
MW-9	Downgradient	18.85	18.85	300	3,700	7.05
MW-1R	Downgradient	18.04	18.04	300	3,340	6.47
MW-10	Downgradient	11.10	11.10	300	7,900	6.93

NOTES:

1. Sequence of sampling is MW-3, MW-2, MW-1R, MW-7, then MW-9.
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
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SBMU - Sikeston Power Station
Scott County, Missouri**

**Table 6
Relative Percent Differences Summary**

10th Compliance Sampling Event initiated December 11, 2023

Chemical Parameter	Units	MW-10	DUP	Relative Percent Difference
Total Dissolved Solids	mg/L	455	430	5.6
Sulfate	mg/L	166	169	1.8
Fluoride	mg/L	0.29	0.29	0.0
Chloride	mg/L	19	19	0.0
Barium	µg/L	142	149	4.8
Boron	µg/L	378	405	6.9
Calcium	mg/L	88.8	97.6	9.4
Arsenic	µg/L	5.9	6.1	3.3
Lithium	µg/L	11.4	13.4	16.1
Molybdenum	µg/L	25.2	25.2	0.0

11th Compliance Sampling Event initiated April 23, 2024

Chemical Parameter	Units	MW-7	DUP	Relative Percent Difference
Total Dissolved Solids	mg/L	390	438	11.6
Sulfate	mg/L	93	107	14.0
Fluoride	mg/L	0.53	0.52	1.9
Chloride	mg/L	3 "J"	3 "J"	0.0
Barium	mg/L	65.2	64.6	0.9
Boron	µg/L	2,260	2,280.0	0.9
Calcium	mg/L	111.0	111.0	0.0
Lithium	µg/L	30.6	31.3	2.3
Molybdenum	µg/L	122	119	2.5
Selenium	ug/L	2.8	3.0	6.9

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

**Annual Groundwater Monitoring Report for Fly Ash Pond
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SBMU - Sikeston Power Station
Scott County, Missouri**

**Table 7
Alternate Data Sets**

10th and 11th Compliance Sampling Events

Constituent-Well Pair¹		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.

**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**

10th and 11th 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	0.254	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 March 2022.
2. MW-10 prediction limits based on eight rounds of background data spanning February 2023 to November 2023.
3. 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: MCC

**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: MCC

APPENDICES

Appendix 1

Field Sampling Notes

Appendix 1

Field Sampling Notes
(2nd 2023 Semi-annual Monitoring Event)
December 11, 2023

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW1R

Name (Field Staff): SL/AD

Date: 12/11/23

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 = 1/4" 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

Ashley [Signature]
Signed

Lab Tech
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): 18.90 Date: 12/11/23
 Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y N

PURGE INFORMATION

Date: 12/11/2023
 Name (Sample Collector): Justin Lowes
 Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? Y / N
 Time Purging Initiated: 0916 One (1) Well Volume (mL): NA
 Beginning Water Level (feet btoc): 18.90 Total Volume Purged (mL): 8200
 Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / N
 Well Total Depth (feet btoc): 38.25 Water Level after Sampling (feet btoc): 18.91
 (i.e., pump is off)
 Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1014

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)
0918		460	17.15	493.05	1.36	6.75	605.9	67.12	18.90	White floke
0920	230	920	16.74	493.46	0.99	6.60	714.6	45.69	18.90	" "
0922	230	1380	16.52	495.28	0.88	6.57	738.9	71.12	18.90	" "
0924	240	1860	16.47	501.00	0.80	6.57	746.9	21.08	18.90	" "
0926	220	2300	16.40	499.74	0.76	6.56	756.5	16.72	18.90	" "
0928	230	2760	16.34	487.90	0.75	6.56	764.9	35.56	18.90	" "
0930	240	3240	16.33	489.78	0.71	6.55	767.1	22.80	18.90	" "
0932	250	3740	16.34	496.09	0.65	6.55	768.9	38.52	18.90	" "
0934	260	4260	16.33	499.04	0.64	6.56	781.8	4.12	18.90	" "
0936	220	4700	16.18	488.0	0.61	6.55	791.0	5.45	18.90	Clear
0938	260	5220	16.19	487.31	0.59	6.55	788.5	13.69	18.90	Brown floke
0940	240	5700	16.21	487.65	0.60	6.55	783.9	4.05	18.90	Clear
0942	250	6200	16.23	488.17	0.57	6.56	783.9	5.16	18.90	" "
0944	250	6700	16.28	487.89	0.55	6.54	788.3	2.01	18.90	" "
0946	250	7200	16.21	490.32	0.55	6.55	789.7	1.53	18.90	" "
0948	250	7700	16.07	490.90	0.55	6.55	803.0	1.96	18.90	" "
0950	250	8200	16.07	488.96	0.54	6.55	791.4	1.38	18.90	" "

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW 1 R

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing

Dedicated: Y / N

Water Level @ Sampling (feet btoc): 18.90

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

Final Purge Stabilization 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)
<u>12/11/23</u> <u>AP 0950</u>	<u>250</u>	<u>16.07</u>	<u>488.96</u>	<u>.54</u>	<u>6.55</u>	<u>791.4</u>	<u>1.35</u>

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 Potential)
- 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: 12/11/23 By: *Anthony [Signature]* Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW 9

Name (Field Staff): JL/AD

Date: 12/11/23

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 = 1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing

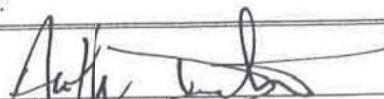
Condition: Good Damaged Missing

Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes No

Remarks:

Field Certification


Signed

Lab Tech
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): 19.40 Date: 12-11-23
 Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / N

PURGE INFORMATION
 Date: 12/11/24
 Name (Sample Collector): Justin Lowes
 Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? Y / N
 Time Purging Initiated: 1040 One (1) Well Volume (mL): NA
 Beginning Water Level (feet btoc): 19.40 Total Volume Purged (mL): 4240
 Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / N
 Well Total Depth (feet btoc): 37.35 Water Level after Sampling (feet btoc): 19.40
 (i.e., pump is off)
 Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1118

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)
1043		560	14.95	822.90	1.37	7.17	759.5	1.00	19.40	Clear
1045	260	1080	15.85	814.05	1.03	7.16	764.6	1.25	19.40	Clear
1047	225	1500	16.12	807.9	.90	7.15	767.9	.73	19.40	Clear
1049	300	2100	16.19	809.44	.85	7.15	767.6	.89	19.40	Clear
1051	270	2640	16.21	809.05	.79	7.15	763.8	.71	19.40	Clear
1053	260	3160	16.25	805.2	.72	7.15	778.4	.88	19.40	Clear
1052	275	3710	16.25	809.1	.57	7.15	773.8	.70	19.40	Clear
1055	265	4240	16.27	804.1	.52	7.15	782.2	1.13	19.40	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 - Peristaltic Pump & Tubing

Dedicated: Y / N

Water Level @ Sampling (feet btoc): 19.40

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

Final Purge Stabilization 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)
<u>12-11-23</u> <u>1055</u>	<u>265</u>	<u>16.27</u>	<u>804.1</u>	<u>52</u>	<u>7.15</u>	<u>782.2</u>	<u>1.13</u>

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 Potential)
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: 12/11/23 By: [Signature] Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW 7

Name (Field Staff): JL/AD

Date: 12/11/23

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 = 1/4" 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

Leah Feck
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): 20.17 Date: 12/11/2023
 Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / N

PURGE INFORMATION

Date: 12/11/23
 Name (Sample Collector): Justin Lowes
 Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? Y / N
 Time Purging Initiated: 1127 One (1) Well Volume (mL): NA
 Beginning Water Level (feet btoc): 20.17 Total Volume Purged (mL): 6960
 Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / N
 Well Total Depth (feet btoc): 37.80 Water Level after Sampling (feet btoc): 20.17
 (i.e., pump is off)
 Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1215

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)
1129		600	15.32	875.29	1.34	7.34	672.9	0.79	20.17	Clear
1131	280	1160	15.93	861.9	0.98	7.32	583.9	0.83	20.17	" "
1133	270	1700	15.98	896.23	0.76	7.32	542.6	0.84	20.17	" "
1135	300	2300	16.31	892.40	0.64	7.32	462.4	1.08	20.17	" "
1137	300	2900	16.21	847.47	0.67	7.32	427.6	0.97	20.17	" "
1139	290	3480	16.29	865.28	0.54	7.31	371.4	0.91	20.17	" "
1141	260	4000	16.47	841.93	0.53	7.30	312.4	0.71	20.17	" "
1143	300	4600	16.29	848.83	0.51	7.30	263.8	0.82	20.17	" "
1145	280	5160	16.31	845.9	0.47	7.30	239.0	0.75	20.17	" "
1147	300	5760	16.47	841.5	0.46	7.29	210.1	0.99	20.17	" "
1149	330	6420	16.47	841.79	0.54	7.28	182.8	1.00	20.17	" "
1151	270	6960	16.69	843.09	0.48	7.28	172.5	0.91	20.17	" "

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 - Peristaltic Pump & Tubing

Dedicated: Y / N

Water Level @ Sampling (feet btoc): 20.17

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

Final Purge Stabilization 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)
<u>12/11/23</u> <u>1153</u>	<u>270</u>	<u>16.69</u>	<u>840.09</u>	<u>.48</u>	<u>7.28</u>	<u>172.5</u> <u>122.5</u>	<u>.91</u>

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 Potential)
- 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: 12/11/23 By: *[Signature]* Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS - CCR Groundwater Monitoring

Monitoring Well ID: MW 2

Name (Field Staff): JL/AD

Date: 12/11/23

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 = 1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing

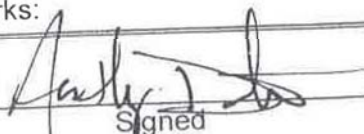
Condition: Good Damaged Missing

Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes No

Remarks:

Field Certification


Signed

Lab Tech
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): _____	Date: <u>12/11/2023</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? Y <input checked="" type="radio"/> N

PURGE INFORMATION

Date: <u>12/11/2023</u>	
Name (Sample Collector): <u>Justin Lowes</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <input checked="" type="radio"/> Y / <input type="radio"/> N
Time Purging Initiated: <u>1257</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>11.70</u>	Total Volume Purged (mL): <u>47.80</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? Y <input checked="" type="radio"/> N
Well Total Depth (feet btoc): <u>37.30</u>	Water Level after Sampling (feet btoc): <u>11.70</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>1331</u>

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)
1259		580	16.84	203.74	1.55	6.39	749.3	2.47	11.70	clear, no odor
1301	280	1140	17.32	201.1	1.01	6.22	747.9	1.50	11.70	" "
1303	300	1740	17.61	194.94	0.82	6.20	739.4	0.98	11.70	" "
1305	310	2360	17.45	197.98	0.80	6.20	729.9	1.00	11.70	" "
1307	300	2960	17.61	198.81	0.64	6.20	731.1	0.82	11.70	" "
1309	320	3600	17.61	198.63	0.66	6.21	727.3	0.81	11.70	" "
1311	300	4200	17.61	197.06	0.55	6.21	732.1	0.82	11.70	" "
1313	290	4780	17.35	197.18	0.59	6.21	733.0	0.79	11.70	" "

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW 2

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing

Dedicated: Y / N

Water Level @ Sampling (feet btoc): 11.70

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

Final Purge Stabilization 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)
<u>8/14/23</u> AP 133	<u>300</u>	<u>17.35</u>	<u>197.18</u>	<u>.59</u>	<u>6.21</u>	<u>733.0</u>	<u>.79</u>

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 Potential)
 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: 8/14/23 By: [Signature] Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW 10

Name (Field Staff): JL/AD

Date: 12/11/23

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

Anthony [Signature]
Signed

Colin [Signature]
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): 11.45 Date: 12/11/23
 Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y / N

PURGE INFORMATION

Date: 12/11/23
 Name (Sample Collector): Justin Lowes
 Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? (Y) / N
 Time Purging Initiated: 1346 One (1) Well Volume (mL): NA
 Beginning Water Level (feet btoc): 11.65 Total Volume Purged (mL): 4840
 Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y / N
 Well Total Depth (feet btoc): 33.35 Water Level after Sampling (feet btoc): 11.45
 (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)
1348		300	17.32	747.91	0.66	6.89	171.9	0.68	11.45	Clear, no odor
1350	440	1180	17.99	763.67	0.55	6.97	157.1	2.32	11.45	" "
1352	300	1780	18.30	736.1	0.45	7.02	125.6	0.61	11.45	" "
1354	310	2400	18.44	730.12	0.40	7.04	110.8	0.55	11.45	" "
1356	300	3000	18.49	728.8	0.37	7.05	106.6	0.64	11.45	" "
1358	300	3600	18.53	724.53	0.39	7.06	101.8	0.61	11.45	" "
1400	320	4240	18.50	720.00	0.34	7.06	98.7	0.60	11.45	" "
1402	300	4840	18.48	720.43	0.35	7.06	98.6	0.60	11.45	" "

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW 10

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 11.45

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

Final Purge Stabilization 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)
<u>12/11/23</u> <u>1402</u>	<u>300</u>	<u>18.48</u>	<u>720.43</u>	<u>.35</u>	<u>7.06</u>	<u>98.6</u>	<u>.60</u>

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 Potential)
- 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:

Took DUPLICATE, Collect Field Duplicate

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

Date: 12/11/23 By:  Title: Lab Tech

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW 3

Name (Field Staff): AL/AD

Date: 12/11/23

Access:

Accessibility: Good X Fair ____ Poor ____

Well clear of weeds and/or debris?: Yes X No ____

Well identification clearly visible?: Yes X No ____

Remarks:

Concrete Pad:

Condition of Concrete Pad: Good X Inadequate ____

Depressions or standing water around well?: Yes ____ No X

Remarks:

Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp

Condition of Protective Casing: Good X Damaged ____

Condition of Locking Cap: Good X Damaged ____

Condition of Lock: Good X Damaged ____

Condition of Weep Hole: Good X Damaged ____

Remarks:

Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded

Condition of Riser: Good X Damaged ____

Condition of Riser Cap: Good X Damaged ____

Measurement Reference Point: Yes X No ____

Remarks:

Dedicated Purging/Sampling Device: Type = 1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing

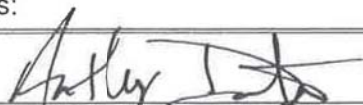
Condition: Good X Damaged ____ Missing ____

Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes X No ____

Remarks:

Field Certification


Signed

Lb fech
Title

12/11/23
Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>12.74</u>	Date: <u>12/11/23</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? Y / <u>N</u>

PURGE INFORMATION

Date: <u>12/11/23</u>	
Name (Sample Collector): <u>Justin Lawes</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <u>(Y)</u> / N
Time Purging Initiated: <u>1446</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>12.74</u>	Total Volume Purged (mL): <u>3400</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? Y / <u>(N)</u>
Well Total Depth (feet btoc): <u>37.2</u>	Water Level after Sampling (feet btoc): <u>12.74</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>1323</u>

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)
1448		500	15.85	186.65	1.57	6.89	728.9	5.14	12.74	clear
1450	240	980	16.16	183.68	1.19	6.71	728.7	2.07	12.74	clear
1452	230	1440	16.20	183.65	1.13	6.64	728.8	2.43	12.74	clear
1454	220	1880	16.27	181.50	1.04	6.61	725.3	1.78	12.74	clear
1456	220	2320	16.22	180.9	.98	6.61	724.2	1.52	12.74	clear
1458	500 240	2800	16.28	179.49	.93	6.62	721.4	1.25	12.74	clear
1500	300	3400	16.25	178.54	.90	6.62	720.9	1.11	12.74	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 - Peristaltic Pump & Tubing

Dedicated: Y / N

Water Level @ Sampling (feet btoc): 12.74

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

Final Purge Stabilization 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)
<u>12/11/23</u> <u>1500</u>	<u>300</u>	<u>16.25</u>	<u>178.54</u>	<u>.90</u>	<u>6.62</u>	<u>720.9</u>	<u>1.11</u>

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 Potential)
- 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 Collect Field Blank

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

Date: 12/11/23 By: [Signature] Title: Lab Tech

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	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE _____ °C LTG# _____
Address: 107 E Malone Ave	Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD FOR LAB USE ONLY
City / State / Zip: Sikeston, MO 63801	Lab Notes:
Contact: Luke St. Mary Phone: (573) 475-3119	
E-Mail: lstmary@sbrmu.net Fax:	


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

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

Project Name/Number		Sample Collector's Name			MATRIX		INDICATE ANALYSIS REQUESTED																
Fly Ash Pond (FAP)		Justin Loms			Aqueous	Groundwater	Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals										
Results Requested	Billing Instructions	# and Type of Containers																					
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge)		UNP	HNO3																				
<input checked="" type="checkbox"/> Lab Use Only	Sample Identification	Date/Time Sampled																					
	MW-1R	12/11/23 0950	1	3	X		X	X	X	X	X	X	X										
	MW-2	12/11/23 1315	1	3	X		X	X	X	X	X	X	X										
	MW-3	12/11/23 1503	1	3	X		X	X	X	X	X	X	X										
	MW-7	12/11/23 1153	1	3	X		X	X	X	X	X	X	X										
	MW-9	12/11/23 1055	1	3	X		X	X	X	X	X	X	X										
	MW-10	12/11/23 1400	1	3	X		X	X	X	X	X	X	X										
	Duplicate	12/11/23	1	3	X		X	X	X	X	X	X	X										
	Trip Blank	12/11/23	1	3		X	X	X	X	X	X	X	X										
	Field Blank	12/11/23 1509	1	3	X		X	X	X	X	X	X	X										

Relinquished By: Ashia Peters	Date/Time: 12/12/23 0930	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: 81588 

Field Instrumentation Calibration Log

Calibrated by: Ashish Patel

Facility: Ameron RIEC Ash Ponds - Groundwater Monitoring

HF scientific, Inc. Micro TPI Field Portable Turbidimeter

Field Instruments: In-Situ SmarTROLL MP or In-Situ AquaTROLL 400

201607366

S/N #: 893508

	Date	Time	pH		Specific Conductance		Oxidation Reduction Potential		Dissolved Oxygen (%)		Turbidity	
			Standards (S.U.)	Measurements (S.U./mV)	Standard (µS/cm)	Measurement (µS/cm)	Standard (mV)	Measurement (mV)	Temperature (°C)	Tap Water Source	Standards (NTU)	Measurements (NTU)
Beginning of Day Calibration	12/11/2023	0850	4.00 @ 25.00°C	3.99	1413 @ 25.00°C	1412.5	220 mV at 25.00°C	228.9	21.63	Sikesh City	0.02	0.03
			Standard is 4.00 @ 25°C	139.7								
			7.00 @ 25.00°C	6.99								
			Standard is 7.00 @ 25°C	-35.9								
End of Day Check	12/11/2023	1547	4.00 @ 25.00°C	4.05	1413 @ 25.00°C	1488	220 mV at 25.00°C	230.1	16.65	Sikesh City	0.02	0.04
			Standard is 4.00 @ 25°C	NA								
			7.00 @ 25.00°C	7.05								
			Standard is 7.00 @ 25°C	NA								
			10.00 @ 25.00°C	6.09								
			Standard is 10.00 @ 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: 12/11/2023

By: Ashish Patel

Appendix 1

Field Sampling Notes
(1st 2024 Semi-annual Monitoring Event)
April 23, 2024

Monitoring Well Field Inspection

Facility: <u>SBMU SPS - CCR Groundwater Monitoring</u> Monitoring Well ID: <u>MW-1R</u> Name (Field Staff): <u>AD/SL</u> Date: <u>4/23/24</u>		
<u>Access:</u>		
Accessibility:	Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/> Poor <input type="checkbox"/>
Well clear of weeds and/or debris?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Well Identification clearly visible?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
<u>Concrete Pad:</u>		
Condition of Concrete Pad:	Good <input checked="" type="checkbox"/>	Inadequate <input type="checkbox"/>
Depressions or standing water around well?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
<u>Protective Outer Casing:</u> Material = <u>4" x 4" Steel Hinged Casing with Hasp</u>		
Condition of Protective Casing:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Locking Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Lock:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Weep Hole:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Remarks:		
<u>Well Riser:</u> Material = <u>2" Diameter, Schedule 40 PVC, Flush Threaded</u>		
Condition of Riser:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Riser Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Measurement Reference Point:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
<u>Dedicated Purging/Sampling Device:</u> Type = <u>1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing</u>		
Condition:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/> Missing <input type="checkbox"/>	
Remarks:		
Monitoring Well Locked/Secured Post Sampling?: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		

Field Certification Andy Doherty Signed Lead Lab Tech Title 4/23/24 Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>18.04</u>	Date: <u>4/23/24</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? <u>Y</u> <input checked="" type="checkbox"/>

PURGE INFORMATION

Date: <u>4/23/24</u>	
Name (Sample Collector): <u>AD/JL</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N
Time Purging Initiated: <u>1009</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>18.04</u>	Total Volume Purged (mL): <u>3340</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? <u>Y</u> / <input type="checkbox"/> N
Well Total Depth (feet btoc): <u>38.30</u>	Water Level after Sampling (feet btoc): <u>18.04</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>1110</u>

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)
1006	270	440	18.00	827.75	2.22	6.43	1181.2	7.26	18.04	White Spots
1008	210	860	16.94	782.80	1.43	6.43	1177.6	33.46	18.04	White Spots
1010	190	1240	16.80	731.89	1.04	6.43	1173.9	2.90	18.04	White Spots
1012	220	1680	16.73	675.80	.78	6.45	1178.8	4.61	18.04	White Spots
1014	190	2060	16.75	610.36	.72	6.47	1169.1	1.91	18.04	Clear
1016	220	2500	16.70	572.0	.68	6.47	1162.5	1.54	18.04	Clear
1018	210	2780	16.73	583.64	.64	6.47	1162.8	1.85	18.04	Clear
1020	210	3340	16.74	584.01	.61	6.47	1161.3	1.56	18.04	Clear

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 - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 18.04

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

Final Purge Stabilization 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)
<u>4/23/24 1020</u>	<u>210</u>	<u>16.74</u>	<u>584.0</u>	<u>.61</u>	<u>6.47</u>	<u>116.3</u>	<u>1.52</u>

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 Potential)
- 2 - HF scientific, Inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny, windy

Sample Characteristics: odor less, color less

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: 4/23/24 By: [Signature] Title: Lead Lab Tech

Monitoring Well Field Inspection

Facility: <u>SBMU SPS – CCR Groundwater Monitoring</u> Monitoring Well ID: <u>MW-2</u> Name (Field Staff): <u>A.D./JL/AP</u> Date: <u>4/24/24</u>		
Access:		
Accessibility:	Good <input checked="" type="checkbox"/>	Fair ___ Poor ___
Well clear of weeds and/or debris?:	Yes <input checked="" type="checkbox"/>	No ___
Well identification clearly visible?:	Yes <input checked="" type="checkbox"/>	No ___
Remarks:		
Concrete Pad:		
Condition of Concrete Pad:	Good <input checked="" type="checkbox"/>	Inadequate ___
Depressions or standing water around well?:	Yes ___	No <input checked="" type="checkbox"/>
Remarks:		
Protective Outer Casing: Material = 4" x 4" Steel Hinged Casing with Hasp		
Condition of Protective Casing:	Good <input checked="" type="checkbox"/>	Damaged ___
Condition of Locking Cap:	Good <input checked="" type="checkbox"/>	Damaged ___
Condition of Lock:	Good <input checked="" type="checkbox"/>	Damaged ___
Condition of Weep Hole:	Good <input checked="" type="checkbox"/>	Damaged ___
Remarks:		
Well Riser: Material = 2" Diameter, Schedule 40 PVC, Flush Threaded		
Condition of Riser:	Good <input checked="" type="checkbox"/>	Damaged ___
Condition of Riser Cap:	Good <input checked="" type="checkbox"/>	Damaged ___
Measurement Reference Point:	Yes <input checked="" type="checkbox"/>	No ___
Remarks:		
Dedicated Purging/Sampling Device: Type = 1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing		
Condition:	Good <input checked="" type="checkbox"/>	Damaged ___ Missing ___
Remarks:		
Monitoring Well Locked/Secured Post Sampling?: Yes <input checked="" type="checkbox"/> No ___		
Remarks:		

Field Certification [Signature] Lead Lab Tech 4/24/24
Signed Title Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>11.30</u>	Date: <u>4/24/24</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>

PURGE INFORMATION

Date: <u>4/24/24</u>	
Name (Sample Collector): <u>AD/DL/AP</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>
Time Purging Initiated: <u>0927</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>11.30</u>	Total Volume Purged (mL): <u>4540</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>
Well Total Depth (feet btoc): <u>37.40</u>	Water Level after Sampling (feet btoc): <u>11.30</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>1018</u>

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)
0929	240	480	17.66	171.65	1.00	6.46	520.5	6.42 3.55	11.30	Clear
0931	260	1000	17.55	174.43	.93	6.40	529.2	2.33	11.30	Clear
0933	250	1500	17.50	175.02	.88	6.34	525.1	4.26	11.20	Clear
0935	250	2000	17.47	176.78	.89	6.30	521.4	2.48	10.30	Clear
0937	250	2500	17.53	177.59	.74	6.27	519.2	3.08	11.30	Clear
0939	250	3000	17.48	178.96	.70	6.26	518.7	.92	11.30	Clear
0941	260	3520	17.46	178.01	.70	6.24	517.6	1.34	11.30	Clear
0943	260	4040	17.55	176.52	.68	6.23	517.2	.90	11.30	Clear
0945	250	4540	17.55	176.82	.67	6.23	518.1	1.02	11.30	Clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW-2

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 11.30

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

Final Purge Stabilization 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)
<u>4/24/24</u> <u>0945</u>	<u>4540</u>	<u>17.55</u>	<u>176.82</u>	<u>.67</u>	<u>6.23</u>	<u>518.1</u>	<u>1.02</u>

Instrument Calibration Data:

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

- 1 - In-Situ SmartTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potential)
- 2 - HF scientific, Inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: Colorless, odorless

Sample Collection Order: Per SAP

Comments and Observations:

Duplicate

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

Date: 4/24/24 By: Audrey [Signature] Title: Lead Lab Tech.

Monitoring Well Field Inspection

Facility: SBMU SPS – CCR Groundwater Monitoring

Monitoring Well ID: MW-3

Name (Field Staff): AJ/AP/SL

Date: 9/24/24

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 = 1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing

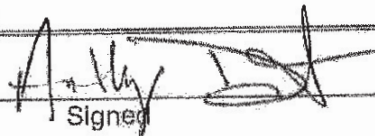
Condition: Good Damaged Missing

Remarks:

Monitoring Well Locked/Secured Post Sampling?: Yes No

Remarks:

Field Certification


Signed

Lead Lab Tech
Title

9/24/24
Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>12.55</u>	Date: <u>4/24/09</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? <u>Y</u> / <u>N</u>

PURGE INFORMATION

Date: <u>4/24/09</u>	
Name (Sample Collector): <u>Justin Lowes</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <u>Y</u> / N
Time Purging Initiated: <u>0829</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>12.55</u>	Total Volume Purged (mL): <u>2760</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? <u>Y</u> / <u>N</u>
Well Total Depth (feet btoc): <u>37.20</u>	Water Level after Sampling (feet btoc): <u>12.35</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>0910</u>

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)
0831	250	500	17.15	175.27	2.66	7.11	573.2	1.34	12.35	clear
0833	230	960	15.90	178.94	1.93	6.94	523.1	1.57	12.35	clear
0835	220	1400	15.58	179.55	1.77	6.82	523.6	1.03	12.35	clear
0837	220	1840	15.46	177.76	1.64	6.74	515.2	1.18	12.35	clear
0839	230	2300	15.42	178.57	1.53	6.68	503.1	.89	12.35	clear
0841	230	2760	15.40	178.64	1.45	6.65	495.9	1.06	12.35	clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: ML-3

Sampling Information:

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

Water Level @ Sampling (feet btoc): 12.55

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

Final Purge Stabilization 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)
1/10/24 0844	230	15.40	178.04	1.45	6.65	455.9	1.86

Instrument Calibration Data:

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

- 1 - In-Situ SmartTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potential)
- 2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny

Sample Characteristics: colorless, odorless

Sample Collection Order: Per SAP

Comments and Observations:

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

Date: 1/10/24 By: [Signature] Title: Lab Tech

Monitoring Well Field Inspection

Facility: <u>SBMU SPS – CCR Groundwater Monitoring</u> Monitoring Well ID: <u>MAW-7</u> Name (Field Staff): <u>AD/SL</u> Date: <u>4/23/24</u>		
Access:		
Accessibility:	Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/> Poor <input type="checkbox"/>
Well clear of weeds and/or debris?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Well identification clearly visible?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Concrete Pad:		
Condition of Concrete Pad:	Good <input checked="" type="checkbox"/> Inadequate <input type="checkbox"/>	
Depressions or standing water around well?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Protective Outer Casing: Material = <u>4" x 4" Steel Hinged Casing with Hasp</u>		
Condition of Protective Casing:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Locking Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Lock:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Weep Hole:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Remarks:		
Well Riser: Material = <u>2" Diameter, Schedule 40 PVC, Flush Threaded</u>		
Condition of Riser:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Riser Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Measurement Reference Point:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Dedicated Purging/Sampling Device: Type = <u>1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing</u>		
Condition:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/> Missing <input type="checkbox"/>	
Remarks:		
Monitoring Well Locked/Secured Post Sampling?: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		

Field Certification [Signature] Lead Lab Tech 4/23/24
 Signed Title Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>19.65</u>	Date: <u>9/23/24</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure in Well? <u>Y</u> <input checked="" type="checkbox"/> <u>N</u>

PURGE INFORMATION

Date: 9-23-24

Name (Sample Collector): AB/JL

Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? Y / N

Time Purging Initiated: 1311 One (1) Well Volume (mL): NA

Beginning Water Level (feet btoc): 19.65 Total Volume Purged (mL): 5020

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

Well Total Depth (feet btoc): 37.95 Water Level after Sampling (feet btoc): 19.65
(i.e., pump is off)

Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 1404

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)
1313	230	460	19.04	682.78	.87	7.23	951.1	1.16	19.65	Clear
1315	220	900	17.24	676.15	.67	7.25	888.8	1.26	19.65	Clear
1317	240	1380	16.97	706.62	.59	7.26	863.4	1.13	19.65	Clear
1319	210	1800	16.88	710.35	.55	7.26	840.1	.89	19.65	Clear
1321	220	2960	16.75	716.77	.53	7.27	817.8	.95	19.65	Clear
1323	230	2720	16.72	712.09	.48	7.28	811.7	.88	19.65	Clear
1325	220	3160	16.72	720.16	.45	7.28	814.5	.95	19.65	Clear
1327	280	3520	16.67	714.85	.38	7.28	789.3	1.04	19.65	Clear
1329	280	4080	16.64	715.11	.36	7.28	770.0	1.02	19.65	Clear
1331	240	4560	16.61	720.83	.38	7.29	763.7	.82	19.65	Clear
1333	230	5020	16.59	723.42	.38	7.29	761.7	.93	19.65	Clear

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW-7

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 19.65

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

Final Purge Stabilization 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)
<u>4/23/24</u> <u>1336</u>	<u>230</u>	<u>16.59</u>	<u>723.42</u>	<u>.38</u>	<u>7.29</u>	<u>761.7</u>	<u>.93</u>

Instrument Calibration Data:

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

- 1 - In-Situ SmarTrol Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potential)
- 2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: Sunny, Windy

Sample Characteristics: odorless, clear

Sample Collection Order: Per SAP

Comments and Observations:

Replicate

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

Date: 4/23/24 By: [Signature] Title: Lead Lab Tech

Monitoring Well Field Inspection

Facility: <u>SBMU SPS - CCR Groundwater Monitoring</u> Monitoring Well ID: <u>MW-9</u> Name (Field Staff): <u>AG/OL</u> Date: <u>4/23/24</u>		
Access:		
Accessibility:	Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/> Poor <input type="checkbox"/>
Well clear of weeds and/or debris?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Well Identification clearly visible?:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Concrete Pad:		
Condition of Concrete Pad:	Good <input checked="" type="checkbox"/> Inadequate <input type="checkbox"/>	
Depressions or standing water around well?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Protective Outer Casing: Material = <u>4" x 4" Steel Hinged Casing with Hasp</u>		
Condition of Protective Casing:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Locking Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Lock:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Weep Hole:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Remarks:		
Well Riser: Material = <u>2" Diameter, Schedule 40 PVC, Flush Threaded</u>		
Condition of Riser:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Condition of Riser Cap:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/>	
Measurement Reference Point:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Dedicated Purging/Sampling Device: Type = <u>1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing</u>		
Condition:	Good <input checked="" type="checkbox"/> Damaged <input type="checkbox"/> Missing <input type="checkbox"/>	
Remarks:		
Monitoring Well Locked/Secured Post Sampling?: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		

Field Certification *Mark ES* Signed Lead Lab Tech Title 4/23/24 Date

Field Sampling Log

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

Initial Water Level (feet btoc): <u>18.85</u>	Date: <u>4/23/24</u>
Initial Groundwater Elevation (NAVD88): _____	Air Pressure In Well? <u>Y</u> <input checked="" type="checkbox"/> <u>10</u>

PURGE INFORMATION

Date: <u>4/23/24</u>	
Name (Sample Collector): <u>AO/SL</u>	
Method of Well Purge: <u>Low Flow Peristaltic Pump</u>	Dedicated Tubing? <input checked="" type="checkbox"/> <u>Y</u> / <input type="checkbox"/> <u>N</u>
Time Purging Initiated: <u>1211</u>	One (1) Well Volume (mL): <u>NA</u>
Beginning Water Level (feet btoc): <u>18.85</u>	Total Volume Purged (mL): <u>3700</u>
Beginning Groundwater Elevation (NAVD88): _____	Well Purged To Dryness? <input checked="" type="checkbox"/> <u>Y</u> / <input type="checkbox"/> <u>N</u>
Well Total Depth (feet btoc): <u>37.40</u>	Water Level after Sampling (feet btoc): <u>18.85</u> (i.e., pump is off)
Casing Diameter (feet): <u>2" Sch 40 PVC</u>	Time Sampling Completed: <u>1259</u>

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)
1213	230	460	19.33	764.12	1.08	6.99	1071.7	3.94	18.85	Clear
1215	220	900	17.86	789.58	.82	7.02	1069.5	5.74	18.85	Clear
1217	230	1360	17.60	797.9	.68	7.04	1067.0	1.44	18.85	Clear
1219	230	1820	17.46	796.82	.62	7.05	1064.3	1.54	18.85	Clear
1221	230	2280	17.45	802.32	.49	7.05	1056.4	2.00	18.85	Clear
1223	240	2760	17.41	799.81	.51	7.05	1052.2	1.05	18.85	Clear
1225	220	3200	17.43	804.71	.49	7.05	1049.4	1.21	18.85	Clear
1227	250	3700	17.45	801.45	.44	7.05	1035.7	1.06	18.85	Clear

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW-9

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 18.85

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

Final Purge Stabilization 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)
<u>4/23/14 1227</u>	<u>250</u>	<u>17.45</u>	<u>801.45</u>	<u>.44</u>	<u>7.05</u>	<u>1055.1</u>	<u>1.06</u>

Instrument Calibration Data:

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

- 1 - In-Situ SmartTroll Multi-Probe Field Meter (Temperature, Specific Conductance, Dissolved Oxygen, pH, Oxidation Reduction Potential)
- 2 - HF scientific, inc. Micro TPI Field Portable Turbidimeter

General Information:

Weather Conditions @ time of sampling: clear & windy

Sample Characteristics: odorless & colorless

Sample Collection Order: Per SAP

Comments and Observations:

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

Date: 4/25/14 By: Anthony [Signature] Title: Lead Lab Tech

Monitoring Well Field Inspection

Facility: <u>SBMU SPS -- CCR Groundwater Monitoring</u> Monitoring Well ID: <u>MW-10</u> Name (Field Staff): <u>AJ/AP/JS</u> Date: <u>4/24/29</u>		
Access:		
Accessibility:	Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/> Poor <input type="checkbox"/>
Well clear of weeds and/or debris?:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Well identification clearly visible?:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks:		
Concrete Pad:		
Condition of Concrete Pad:	Good <input checked="" type="checkbox"/>	Inadequate <input type="checkbox"/>
Depressions or standing water around well?:	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks:		
Protective Outer Casing: Material = <u>4" x 4" Steel Hinged Casing with Hasp</u>		
Condition of Protective Casing:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Condition of Locking Cap:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Condition of Lock:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Condition of Weep Hole:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Remarks:		
Well Riser: Material = <u>2" Diameter, Schedule 40 PVC, Flush Threaded</u>		
Condition of Riser:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Condition of Riser Cap:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/>
Measurement Reference Point:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks:		
Dedicated Purging/Sampling Device: Type = <u>1/4" ID Semi-Rigid Polyethylene & 0.170" ID Flexible Silicone Tubing</u>		
Condition:	Good <input checked="" type="checkbox"/>	Damaged <input type="checkbox"/> Missing <input type="checkbox"/>
Remarks:		
Monitoring Well Locked/Secured Post Sampling?: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:		

Field Certification [Signature] Lab Tech 4/24/29
 Signed Title Date

Field Sampling Log

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

Initial Water Level (feet btoc): 11.10 Date: 1/29/21
 Initial Groundwater Elevation (NAVD88): _____ Air Pressure in Well? Y 10

PURGE INFORMATION

Date: 1/29/21
 Name (Sample Collector): Justin Lowers
 Method of Well Purge: Low Flow Peristaltic Pump Dedicated Tubing? (Y) N
 Time Purging Initiated: 10:38 One (1) Well Volume (mL): NA
 Beginning Water Level (feet btoc): 11.10 Total Volume Purged (mL): 7900
 Beginning Groundwater Elevation (NAVD88): _____ Well Purged To Dryness? Y 10
 Well Total Depth (feet btoc): 3510 Water Level after Sampling (feet btoc): 11.10
 (i.e., pump is off)
 Casing Diameter (feet): 2" Sch 40 PVC Time Sampling Completed: 11:34

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)
10:40	300	600	18.52	895.01	74	6.55	187.2	46.5	11.10	cloudy
10:43	280	1860	18.39	716.74	.52	6.71	163.1	33.09	"	"
10:44	260	1640	18.23	710.24	.48	6.76	174.0	16.73	"	"
10:46	250	2200	18.17	707.00	.43	6.91	215.9	142.5	"	"
10:49	260	2720	18.13	694.71	.42	6.84	274.8	25.80	"	"
10:50	255	3230	18.13	707.00	.40	6.86	331.4	20.95	"	"
10:52	255	3740	18.11	694.69	.39	6.89	372.5	23.31	"	"
10:54	270	4260	18.15	707.89	.38	6.89	404.2	17.73	"	"
10:56	270	4800	18.15	703.63	.38	6.91	413.5	19.29	"	"
10:58	285	5310	18.17	687.27	.31	6.92	431.0	14.69	"	"
10:50	255	5840	18.17	688.19	.31	6.93	437.5	12.81	"	"
10:50	250	6340	18.20	687.96	.32	6.93	412.5	10.51	"	"
11:02	270	6880	18.22	694.88	.30	6.94	424.0	10.16	"	"
11:01	250	7380	18.25	686.74	.31	6.95	436.0	9.61	"	"
11:06	260	7920	18.28	680.1	.33	6.95	432.0	9.98	"	"
11:08										

btoc - below top of casing

Field Sampling Log

Facility: SBMU Sikeston Power Station - CCR Groundwater Monitoring

Monitoring Well ID: MW-10

Sampling Information:

Method of Sampling: Low Flow - Peristaltic Pump & Tubing Dedicated: Y / N

Water Level @ Sampling (feet btoc): 111

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

Final Purge Stabilization 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)
4/24/14 11:08	260	18.28	580.1	.31	6.93	436.0	9.98

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: clear, sunny

Sample Characteristics: odor less, color less

Sample Collection Order: Per SAP

Comments and Observations:

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

Date: 4/24/14 By: [Signature] Title: Col Tech

Field Instrumentation Calibration Log

Facility: SPS
RIEC Ash Ponds - Groundwater Monitoring

Calibrated by: J. Lewis

		In-Situ SmartROLL MP or In-Situ AquaTROLL 400				HF scientific, inc. Micro TPI Field Portable Turbidimeter						
		SN #: <u>893508</u>										
	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	<u>4/23</u>	<u>7:59</u>	4.00 @ 25.00°C	4.03	1413 @ 25.00°C	1415	220 mV at 25.00°C	237.0 @ 20.31°	Temperature (°C)	<u>22.2</u>	0.02	.03
			Standard is <u>4</u> @ 25°C	21.24					Tap Water Source	<u>58Mµ</u>		
			7.00 @ 25.00°C	7.17					Barometric Pressure (mm/Hg)	<u>754.48</u>		
			Standard is <u>7</u> @ 25°C	21.74					Measurement	<u>100.59</u>		
			10.00 @ 25.00°C	10.12						10.00	10.0	
			Standard is <u>10</u> @ 25°C	21.25						1000	999.0	
End of Day Check	<u>4/23</u>	<u>1440</u>	4.00 @ 25.00°C	4.02	1413 @ 25.00°C	1411 @ 22.31°	220 mV at 25.00°C	228.7 @ 21.87°	Temperature (°C)	<u>23.51</u>	0.02	.01
			Standard is <u>4</u> @ 25°C	NA					Tap Water Source	<u>58Mµ</u>		
			7.00 @ 25.00°C	7.12					Barometric Pressure (mm/Hg)	<u>1001.7</u>		
			Standard is <u>7</u> @ 25°C	NA					Measurement	<u>99.17</u>		
			10.00 @ 25.00°C	10.03						10.00	1003	
			Standard is <u>10</u> @ 25°C	NA						1000	1003	

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: 4/23/24 By: JL/AD

Field Instrumentation Calibration Log

Facility: Ameren RIEC Ash Ponds - Groundwater Monitoring

Calibrated by: JLAW

		Field Instruments: In-Situ SmartROLL MP or In-Situ AquaTROLL 400				HF scientific, Inc. Micro TPI Field Portable Turbidimeter								
		S/N #: <u>899</u> <u>493808</u>												
	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	4/14/24	0751	4.00 @ 25.00°C	4.18 156.0	1413 @25.00°C	1384 @ 21.75	220 mV at 25.00°C	220 @ 21.75	Temperature (°C) =	21.75	0.02	.02		
			Standard is 4 @ 25°C						Tap Water Source =				50.14	
			7.00 @ 25.00°C						Barometric Pressure (mm/Hg) =					755.90
			Standard is 7 @ 25°C						Measurement =					
			10.00 @ 25.00°C	Standard is 10 @ 25°C										
End of Day Check	4/14/24	1603	4.00 @ 25.00°C	4.04	1413 @25.00°C	1464.5 @ 21.21	220 mV at 25.00°C	220 @ 21.96	Temperature (°C) =	21.27	0.02	.02		
			Standard is 4 @ 25°C						Tap Water Source =				58.14	
			7.00 @ 25.00°C						Barometric Pressure (mm/Hg) =					1002.5
			Standard is 7 @ 25°C						Measurement =					
			10.00 @ 25.00°C	Standard is 10 @ 25°C										

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: 4/24/24 By: JLAW

Appendix 2

Laboratory Analytical Results

Appendix 2

Laboratory Analytical Results
(2nd 2023 Semi-annual Monitoring Event)
December 11, 2023

January 12, 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
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Fly Ash Pond (FAP)

WorkOrder: 23121014

Dear Luke St. Mary:

TEKLAB, INC received 9 samples on 12/13/2023 10:25:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,



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



Report Contents

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
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Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-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: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Qualifiers

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Cooler Receipt Temp: 4.2 °C

Per Ken Ewers, report Lithium by ICP/MS rather than ICP. (ehurley - 1/3/2024 3:28:04 PM)

Ra226/228 analyses were performed by Summit Environmental Technologies, Inc. See attached report for results and QC.

This report was revised on January 12, 2024 per Ken Ewers' request. The reason for the revision is to include lower limits for Antimony and Cobalt for MW-2. Please replace report dated January 9, 2024 with this report. EAH 1/12/24

Locations

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Accreditations

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

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



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Lab ID: 23121014-001

Client Sample ID: MW-1R

Matrix: GROUNDWATER

Collection Date: 12/11/2023 9:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.55		1	12/11/2023 9:50	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		310	mg/L	1	12/13/2023 15:17	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		118	mg/L	10	12/14/2023 11:45	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	12/15/2023 9:11	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		9	mg/L	1	12/14/2023 11:34	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		45.5	µg/L	1	12/14/2023 18:52	215915
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/18/2023 12:32	215915
Boron	NELAP	10.0	10.0		1980	µg/L	1	12/14/2023 18:52	215915
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/14/2023 18:52	215915
Calcium	NELAP	0.200	0.200		58.6	mg/L	1	12/14/2023 18:52	215915
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/18/2023 12:32	215915
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 11:43	215915
Arsenic	NELAP	1.0	1.0		2.2	µg/L	5	12/15/2023 15:32	215915
Cobalt	NELAP	2.0	2.0		5.8	µg/L	5	12/19/2023 11:43	215915
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:00	215915
Lithium	*	10.0	10.0		16.1	µg/L	5	01/04/2024 10:40	215915
Molybdenum	NELAP	1.0	1.0		204	µg/L	5	12/15/2023 15:32	215915
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:32	215915
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:00	215915
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 12:46	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 23121014-002
 Matrix: GROUNDWATER

Work Order: 23121014
 Report Date: 12-Jan-24

Client Sample ID: MW-2

Collection Date: 12/11/2023 13:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.21		1	12/11/2023 13:15	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		108	mg/L	1	12/13/2023 15:17	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		15	mg/L	1	12/14/2023 12:11	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	12/15/2023 9:14	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		4	mg/L	1	12/14/2023 12:12	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		193	µg/L	1	12/14/2023 18:53	215915
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/18/2023 12:33	215915
Boron	NELAP	10.0	10.0		47.8	µg/L	1	12/14/2023 18:53	215915
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/14/2023 18:53	215915
Calcium	NELAP	0.200	0.200		18.6	mg/L	1	12/14/2023 18:53	215915
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/18/2023 12:33	215915
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	20	12/20/2023 9:27	215915
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:38	215915
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	20	12/19/2023 13:01	215915
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:06	215915
Lithium	*	10.0	10.0		< 10.0	µg/L	5	01/04/2024 10:45	215915
Molybdenum	NELAP	1.0	1.0		1.4	µg/L	5	12/15/2023 15:38	215915
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:38	215915
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:06	215915
<i>Results have less certainty for Sb and Co. Client Requested Quantitation Limit is below the calibration range. Elevated reporting limit due to matrix interference.</i>									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 12:49	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Lab ID: 23121014-003

Client Sample ID: MW-3

Matrix: GROUNDWATER

Collection Date: 12/11/2023 15:03

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.62		1	12/11/2023 15:03	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		102	mg/L	1	12/13/2023 15:18	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		10	mg/L	1	12/14/2023 12:19	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	12/15/2023 9:16	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		< 4	mg/L	1	12/14/2023 12:20	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		71.0	µg/L	1	12/14/2023 19:03	215915
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/18/2023 12:54	215915
Boron	NELAP	10.0	10.0		17.4	µg/L	1	12/18/2023 12:54	215915
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/14/2023 19:03	215915
Calcium	NELAP	0.200	0.200		13.7	mg/L	1	12/14/2023 19:03	215915
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/18/2023 12:54	215915
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/20/2023 10:58	215915
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:44	215915
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 13:14	215915
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:12	215915
Lithium	*	10.0	10.0		< 10.0	µg/L	5	01/04/2024 10:49	215915
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:44	215915
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:44	215915
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 16:12	215915
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 12:52	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 23121014-004
 Matrix: GROUNDWATER

Work Order: 23121014
 Report Date: 12-Jan-24

Client Sample ID: MW-7

Collection Date: 12/11/2023 11:53

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		7.28		1	12/11/2023 11:53	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		460	mg/L	1	12/13/2023 15:18	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		141	mg/L	10	12/14/2023 12:33	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.57	mg/L	1	12/15/2023 9:19	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4	J	3	mg/L	1	12/14/2023 12:27	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		66.7	µg/L	1	12/14/2023 19:04	215915
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/18/2023 12:55	215915
Boron	NELAP	10.0	10.0		2270	µg/L	1	12/14/2023 19:04	215915
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/14/2023 19:04	215915
Calcium	NELAP	0.200	0.200		105	mg/L	1	12/14/2023 19:04	215915
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/18/2023 12:55	215915
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/15/2023 13:54	215915
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 13:54	215915
Cobalt	NELAP	2.0	2.0		2.7	µg/L	5	12/19/2023 13:20	215915
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:19	215915
Lithium	*	10.0	10.0		49.2	µg/L	5	01/04/2024 10:53	215915
Molybdenum	NELAP	1.0	1.0		127	µg/L	5	12/15/2023 13:54	215915
Selenium	NELAP	1.0	1.0		3.0	µg/L	5	12/15/2023 13:54	215915
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:19	215915
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 12:54	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 23121014-005
 Matrix: GROUNDWATER

Work Order: 23121014
 Report Date: 12-Jan-24

Client Sample ID: MW-9

Collection Date: 12/11/2023 10:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		7.15		1	12/11/2023 10:55	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		466	mg/L	1	12/13/2023 15:18	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		171	mg/L	10	12/14/2023 12:41	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.70	mg/L	1	12/15/2023 9:20	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		13	mg/L	1	12/14/2023 12:36	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		84.1	µg/L	1	12/15/2023 13:15	215936
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:15	215936
Boron	NELAP	10.0	10.0		2750	µg/L	1	12/15/2023 13:15	215936
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:15	215936
Calcium	NELAP	0.200	0.200		101	mg/L	1	12/15/2023 13:15	215936
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/15/2023 13:15	215936
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 9:57	215936
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:50	215936
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 9:57	215936
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:25	215936
Lithium	*	10.0	10.0		34.9	µg/L	5	01/04/2024 10:58	215936
Molybdenum	NELAP	1.0	1.0		102	µg/L	5	12/15/2023 15:50	215936
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/15/2023 15:50	215936
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:25	215936
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 13:01	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Lab ID: 23121014-006

Client Sample ID: MW-10

Matrix: GROUNDWATER

Collection Date: 12/11/2023 14:02

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		7.06		1	12/11/2023 14:02	R340705
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	50	50		455	mg/L	2.5	12/13/2023 15:18	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		166	mg/L	10	12/14/2023 13:07	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.29	mg/L	1	12/15/2023 9:22	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		19	mg/L	1	12/14/2023 13:02	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		142	µg/L	1	12/15/2023 13:16	215936
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:16	215936
Boron	NELAP	10.0	10.0		378	µg/L	1	12/15/2023 13:16	215936
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:16	215936
Calcium	NELAP	0.200	0.200		88.8	mg/L	1	12/15/2023 13:16	215936
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/15/2023 13:16	215936
SW-846 3005A, 6020A, METALS BY ICMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 11:31	215936
Arsenic	NELAP	1.0	1.0		5.9	µg/L	5	12/19/2023 11:31	215936
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 11:31	215936
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:32	215936
Lithium	*	10.0	10.0		11.4	µg/L	5	01/04/2024 11:02	215936
Molybdenum	NELAP	1.0	1.0		25.2	µg/L	5	12/19/2023 11:31	215936
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:31	215936
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:32	215936
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 13:04	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Lab ID: 23121014-007

Client Sample ID: Duplicate

Matrix: GROUNDWATER

Collection Date: 12/11/2023 0:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	50	50		430	mg/L	2.5	12/13/2023 15:19	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		169	mg/L	10	12/14/2023 13:23	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.29	mg/L	1	12/15/2023 9:24	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		19	mg/L	1	12/14/2023 13:13	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		149	µg/L	1	12/15/2023 16:12	215936
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 16:12	215936
Boron	NELAP	10.0	10.0		405	µg/L	1	12/15/2023 16:12	215936
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 16:12	215936
Calcium	NELAP	0.200	0.200		97.6	mg/L	1	12/15/2023 16:12	215936
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/15/2023 16:12	215936
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 9:51	215936
Arsenic	NELAP	1.0	1.0		6.1	µg/L	5	12/19/2023 9:51	215936
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 9:51	215936
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:38	215936
Lithium	*	10.0	10.0		13.4	µg/L	5	01/04/2024 11:25	215936
Molybdenum	NELAP	1.0	1.0		25.2	µg/L	5	12/19/2023 9:51	215936
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 9:51	215936
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:38	215936
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 13:06	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 23121014-008
 Matrix: TRIP BLANK

Work Order: 23121014
 Report Date: 12-Jan-24

Client Sample ID: Trip Blank
 Collection Date: 12/13/2023 10:25

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	12/13/2023 15:19	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		< 10	mg/L	1	12/14/2023 13:34	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	12/15/2023 9:26	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		< 4	mg/L	1	12/14/2023 13:34	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		3.1	µg/L	1	12/18/2023 16:10	215936
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 16:14	215936
Boron	NELAP	10.0	10.0		< 10.0	µg/L	1	12/15/2023 16:14	215936
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 16:14	215936
Calcium	NELAP	0.200	0.200		< 0.200	mg/L	1	12/15/2023 16:14	215936
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/15/2023 16:14	215936
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 11:37	215936
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:37	215936
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 11:37	215936
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:44	215936
Lithium	*	10.0	10.0		< 10.0	µg/L	5	01/04/2024 11:30	215936
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:37	215936
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:37	215936
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 17:44	215936
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 13:09	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 23121014-009
 Matrix: AQUEOUS

Work Order: 23121014
 Report Date: 12-Jan-24

Client Sample ID: Field Blank
 Collection Date: 12/11/2023 15:03

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	12/13/2023 15:19	R340566
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		< 10	mg/L	1	12/14/2023 13:37	R340579
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	12/15/2023 9:37	R340563
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		< 4	mg/L	1	12/14/2023 13:37	R340532
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		< 2.5	µg/L	1	12/15/2023 13:18	215936
Beryllium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:18	215936
Boron	NELAP	10.0	10.0		< 10.0	µg/L	1	12/15/2023 13:18	215936
Cadmium	NELAP	1.0	1.0		< 1.0	µg/L	1	12/15/2023 13:18	215936
Calcium	NELAP	0.200	0.200		< 0.200	mg/L	1	12/15/2023 13:18	215936
Chromium	NELAP	4.0	4.0		< 4.0	µg/L	1	12/15/2023 13:18	215936
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	3.0	3.0		< 3.0	µg/L	5	12/19/2023 11:55	215936
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:55	215936
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	12/19/2023 11:55	215936
Lead	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 19:09	215936
Lithium	*	10.0	10.0		< 10.0	µg/L	5	01/04/2024 11:34	215936
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:55	215936
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/19/2023 11:55	215936
Thallium	NELAP	1.0	1.0		< 1.0	µg/L	5	12/14/2023 19:09	215936
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.20	0.20		< 0.20	µg/L	1	12/14/2023 13:15	215935
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446
Radium-228	*	0	0		See Attached	pci/L	1	01/02/2024 14:32	R341446



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

January 04, 2024

Elizabeth Hurley
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:
RE: 23121014

Order No.: 23121342

Dear Elizabeth Hurley:

Summit Environmental Technologies, Inc. received 9 sample(s) on 12/15/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

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

Sincerely,

A handwritten signature in black ink that reads "Jennifer M. Woolf". The signature is written in a cursive, flowing style.

Jennifer Woolf
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C



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Case Narrative

WO#: 23121342
Date: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014

WorkOrder Narrative:

23121342: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence Sample Notes:

23121342-001A Radium-228_NPW(904.0): Parent sample and duplicate exhibited a high RPD, both sample and duplicate are below the PQL.

23121342-002A Radium-228_NPW(904.0): Parent sample and duplicate exhibited a high RPD possible due to sample matrix.

Original

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.



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

Workorder Sample Summary

WO#: 23121342
 04-Jan-24

CLIENT: TEKLAB Inc,
Project: 23121014

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23121342-001	23121014-001		12/11/2023 9:50:00 AM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-002	23121014-002		12/11/2023 1:15:00 PM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-003	23121014-003		12/11/2023 3:03:00 PM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-004	23121014-004		12/11/2023 11:53:00 AM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-005	23121014-005		12/11/2023 10:55:00 AM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-006	23121014-006		12/11/2023 2:02:00 PM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-007	23121014-007		12/11/2023	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-008	23121014-008		12/13/2023 10:25:00 AM	12/15/2023 10:55:00 AM	Non-Potable Water
23121342-009	23121014-009		12/11/2023 3:03:00 PM	12/15/2023 10:55:00 AM	Non-Potable Water



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DATES REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23121342-001A	23121014-001	12/11/2023 9:50:00 AM	Non-Potable Water	Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-002A	23121014-002	12/11/2023 1:15:00 PM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-003A	23121014-003	12/11/2023 3:03:00 PM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-004A	23121014-004	12/11/2023 11:53:00 AM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-005A	23121014-005	12/11/2023 10:55:00 AM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-006A	23121014-006	12/11/2023 2:02:00 PM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-007A	23121014-007	12/11/2023		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-008A	23121014-008	12/13/2023 10:25:00 AM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM

Original



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DATES REPORT

WO#: 23121342
04-Jan-24

Client: TEKLAB Inc,
Project: 23121014

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23121342-008A	23121014-008	12/13/2023 10:25:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM
23121342-009A	23121014-009	12/11/2023 3:03:00 PM		Combined Radium (EPA903+904)			1/4/2024 7:05:53 AM
				Radium-226 (EPA 903.0)		12/28/2023 3:55:48 PM	1/3/2024 10:11:00 AM
				Radium-228 (EPA 904.0)		12/28/2023 3:55:48 PM	1/2/2024 2:32:00 PM

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>

Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-001
Client Sample ID: 23121014-001

Collection Date: 12/11/2023 9:50:00 AM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	0.55	2.00	U	pCi/L	± 0.780	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	0.17	1.00	U	pCi/L	± 0.0800	1	1/3/2024 10:11:00 AM
Yield	0.99					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	0.38	1.00	UQDR	pCi/L	± 0.700	1	1/2/2024 2:32:00 PM
Yield	0.88					1	1/2/2024 2:32:00 PM

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



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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-002
Client Sample ID: 23121014-002

Collection Date: 12/11/2023 1:15:00 PM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	1.39	2.00	U	pCi/L	± 0.730	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0		E903-904 Analyst: HDJ	
Radium-226	0.19	1.00	U	pCi/L	± 0.0800	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0		E903-904 Analyst: SMZ	
Radium-228	1.2	1.00	QDR	pCi/L	± 0.650	1	1/2/2024 2:32:00 PM
Yield	0.99					1	1/2/2024 2:32:00 PM

Qualifiers:

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



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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-003
Client Sample ID: 23121014-003

Collection Date: 12/11/2023 3:03:00 PM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	0.72	2.00	U	pCi/L	± 0.630	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	-0.03	1.00	U	pCi/L	± 0.0400	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	0.72	1.00	J	pCi/L	± 0.590	1	1/2/2024 2:32:00 PM
Yield	1					1	1/2/2024 2:32:00 PM

Qualifiers:

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



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

Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-004
Client Sample ID: 23121014-004

Collection Date: 12/11/2023 11:53:00 AM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	1.45	2.00	U	pCi/L	± 0.790	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	0.16	1.00	U	pCi/L	± 0.0800	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	1.29	1.00		pCi/L	± 0.710	1	1/2/2024 2:32:00 PM
Yield	1					1	1/2/2024 2:32:00 PM

Qualifiers:

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



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

Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-005
Client Sample ID: 23121014-005

Collection Date: 12/11/2023 10:55:00 AM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION			Analyst: CXS
Radium-226/Radium-228	1.3	2.00	U	pCi/L	± 0.790	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0		E903-904	Analyst: HDJ
Radium-226	0.16	1.00	U	pCi/L	± 0.0800	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0		E903-904	Analyst: SMZ
Radium-228	1.14	1.00		pCi/L	± 0.710	1	1/2/2024 2:32:00 PM
Yield	0.99					1	1/2/2024 2:32:00 PM

Qualifiers:

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



Summit Environmental Technologies, Inc.
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 Cuyahoga Falls, Ohio 44223
 TEL: (330) 253-8211 FAX: (330) 253-4489
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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-006
Client Sample ID: 23121014-006

Collection Date: 12/11/2023 2:02:00 PM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION			Analyst: CXS
Radium-226/Radium-228	1.5	2.00	U	pCi/L	± 0.870	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	0.12	1.00	U	pCi/L	± 0.0700	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	1.38	1.00		pCi/L	± 0.800	1	1/2/2024 2:32:00 PM
Yield	0.92					1	1/2/2024 2:32:00 PM

Qualifiers:

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



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 Cuyahoga Falls, Ohio 44223
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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-007
Client Sample ID: 23121014-007

Collection Date: 12/11/2023

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	1.25	2.00	U	pCi/L	± 0.790	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0		E903-904 Analyst: HDJ	
Radium-226	0.22	1.00	U	pCi/L	± 0.0900	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0		E903-904 Analyst: SMZ	
Radium-228	1.03	1.00		pCi/L	± 0.700	1	1/2/2024 2:32:00 PM
Yield	0.96					1	1/2/2024 2:32:00 PM

Qualifiers:

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

Original



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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-008
Client Sample ID: 23121014-008

Collection Date: 12/13/2023 10:25:00 AM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION			Analyst: CXS
Radium-226/Radium-228	0.67	2.00	U	pCi/L	± 0.640	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	-0.01	1.00	U	pCi/L	± 0.0400	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	0.67	1.00	J	pCi/L	± 0.600	1	1/2/2024 2:32:00 PM
Yield	1					1	1/2/2024 2:32:00 PM

Qualifiers:

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



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 Cuyahoga Falls, Ohio 44223
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Analytical Report

(consolidated)

WO#: 23121342

Date Reported: 1/4/2024

CLIENT: TEKLAB Inc,
Project: 23121014
Lab ID: 23121342-009
Client Sample ID: 23121014-009

Collection Date: 12/11/2023 3:03:00 PM

Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				CALCULATION		Analyst: CXS	
Radium-226/Radium-228	0.67	2.00	U	pCi/L	± 0.780	1	1/4/2024 7:05:53 AM
RAD226/228 RADIUM-226 (EPA 903.0)				E903.0	E903-904	Analyst: HDJ	
Radium-226	0.03	1.00	U	pCi/L	± 0.0500	1	1/3/2024 10:11:00 AM
Yield	1					1	1/3/2024 10:11:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)				E904.0	E903-904	Analyst: SMZ	
Radium-228	0.64	1.00	J	pCi/L	± 0.730	1	1/2/2024 2:32:00 PM
Yield	1					1	1/2/2024 2:32:00 PM

Qualifiers:

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

Appendix 2

Laboratory Analytical Results
(1st 2024 Semi-annual Monitoring Event)
April 23, 2024

May 08, 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: 24042192

Dear Luke St. Mary:

TEKLAB, INC received 3 samples on 4/26/2024 10:18:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,



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



Report Contents

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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	10
Receiving Check List	19
Chain of Custody	Appended

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Qualifiers

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



Case Narrative

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Cooler Receipt Temp: 4.3 °C

Per Ken Ewers (Gredell Eng.), analyze for only Appendix III parameters (Cl, F-, SO₄, TDS, field pH, B and Ca) plus As Ba Co Li Mo and Se. (ehurley - 5/1/2024 8:32:40 AM)

Field data was provided via email from Gredell Engineering Resources, Inc.

Locations

Collinsville

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

Collinsville Air

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

Springfield

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

Chicago

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

Kansas City

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	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



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042192-001
 Matrix: GROUNDWATER

Work Order: 24042192
 Report Date: 08-May-24

Client Sample ID: MW-1R

Collection Date: 04/23/2024 10:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.47		1	04/23/2024 10:20	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		424	mg/L	1	04/29/2024 9:41	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		188	mg/L	10	05/01/2024 20:28	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 11:04	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		14	mg/L	1	05/01/2024 20:22	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		55.5	µg/L	1	05/01/2024 17:29	221351
Boron	NELAP	10.0	10.0		3770	µg/L	1	05/01/2024 17:29	221351
Calcium	NELAP	0.200	0.200		95.9	mg/L	1	05/01/2024 17:29	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:37	221351
Cobalt	NELAP	2.0	2.0		10.4	µg/L	5	05/02/2024 15:37	221351
Lithium	*	10.0	10.0		10.2	µg/L	5	05/02/2024 15:37	221351
Molybdenum	NELAP	1.0	1.0		199	µg/L	5	05/06/2024 18:16	221351
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:37	221351



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042192-002
 Matrix: GROUNDWATER

Work Order: 24042192
 Report Date: 08-May-24

Client Sample ID: MW-2

Collection Date: 04/24/2024 9:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.23		1	04/24/2024 9:45	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		104	mg/L	1	04/29/2024 9:42	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		15	mg/L	1	05/01/2024 20:30	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 11:30	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		4	mg/L	1	05/01/2024 20:30	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		192	µg/L	1	05/01/2024 17:30	221351
Boron	NELAP	10.0	10.0		42.9	µg/L	1	05/01/2024 17:30	221351
Calcium	NELAP	0.200	0.200		20.4	mg/L	1	05/01/2024 17:30	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:43	221351
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/02/2024 15:43	221351
Lithium	*	10.0	10.0		< 10.0	µg/L	5	05/02/2024 15:43	221351
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	05/06/2024 18:22	221351
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:43	221351

Results have less certainty - Client Requested Quantitation Limit is below the calibration range.



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042192-003
 Matrix: GROUNDWATER

Work Order: 24042192
 Report Date: 08-May-24

Client Sample ID: MW-3

Collection Date: 04/24/2024 8:41

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.65		1	04/24/2024 8:41	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		94	mg/L	1	04/29/2024 9:42	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		10	mg/L	1	05/01/2024 20:33	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 11:33	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4	J	1	mg/L	1	05/01/2024 20:33	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		85.1	µg/L	1	05/01/2024 17:39	221351
Boron	NELAP	10.0	10.0		13.0	µg/L	1	05/01/2024 17:39	221351
Calcium	NELAP	0.200	0.200		15.0	mg/L	1	05/01/2024 17:39	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:49	221351
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/02/2024 15:49	221351
Lithium	*	10.0	10.0		< 10.0	µg/L	5	05/02/2024 15:49	221351
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	05/06/2024 18:27	221351
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:49	221351

Results have less certainty - Client Requested Quantitation Limit is below the calibration range.

May 08, 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: 24042196

Dear Luke St. Mary:

TEKLAB, INC received 3 samples on 4/26/2024 10:18:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,



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



Report Contents

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

This reporting package includes the following:

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Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	10
Receiving Check List	20
Chain of Custody	Appended

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Qualifiers

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



Case Narrative

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Cooler Receipt Temp: 4.9 °C

Per Ken Ewers (Gredell Eng.), analyze for only Appendix III parameters (Cl, F-, SO4, TDS, field pH, B and Ca) plus As Ba Co Li Mo and Se. (ehurley - 5/1/2024 8:32:57 AM)

Field data was provided via email from Gredell Engineering Resources, Inc.

Locations

Collinsville

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

Collinsville Air

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

Springfield

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

Chicago

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

Kansas City

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	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



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042196-001
 Matrix: GROUNDWATER

Work Order: 24042196
 Report Date: 08-May-24

Client Sample ID: MW-7

Collection Date: 04/23/2024 13:38

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		7.29		1	04/23/2024 13:38	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		390	mg/L	1	04/29/2024 9:42	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	50	50		93	mg/L	5	05/02/2024 0:33	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.53	mg/L	1	05/03/2024 11:20	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4	J	3	mg/L	1	05/02/2024 0:27	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		65.2	µg/L	1	05/01/2024 15:38	221702
Boron	NELAP	10.0	10.0		2260	µg/L	1	05/01/2024 15:38	221702
Calcium	NELAP	0.200	0.200	S	111	mg/L	1	05/01/2024 15:38	221702
<i>Matrix spike control limits are not applicable due to high sample/spike ratio.</i>									
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/03/2024 10:18	221702
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/03/2024 10:18	221702
Lithium	*	10.0	10.0		30.6	µg/L	5	05/03/2024 10:18	221702
Molybdenum	NELAP	1.0	1.0		122	µg/L	5	05/06/2024 10:23	221702
Selenium	NELAP	1.0	1.0		2.8	µg/L	5	05/03/2024 10:18	221702



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Lab ID: 24042196-002

Client Sample ID: Trip Blank

Matrix: TRIP BLANK

Collection Date: 04/26/2024 10:18

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	04/29/2024 9:43	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		< 10	mg/L	1	05/02/2024 0:36	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 12:39	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		< 4	mg/L	1	05/02/2024 0:35	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		< 2.5	µg/L	1	05/01/2024 15:41	221702
Boron	NELAP	10.0	10.0		< 10.0	µg/L	1	05/01/2024 15:41	221702
Calcium	NELAP	0.200	0.200		< 0.200	mg/L	1	05/01/2024 15:41	221702
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/03/2024 9:59	221702
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/03/2024 9:59	221702
Lithium	*	10.0	10.0		< 10.0	µg/L	5	05/03/2024 9:59	221702
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	05/06/2024 10:12	221702
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/03/2024 9:59	221702

Results have less certainty - Client Requested Quantitation Limit is below the calibration range.



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042196-003
 Matrix: GROUNDWATER

Work Order: 24042196
 Report Date: 08-May-24

Client Sample ID: Field Blank

Collection Date: 04/23/2024 10:20

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	04/29/2024 9:43	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	10	10		< 10	mg/L	1	05/02/2024 0:41	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 11:13	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		< 4	mg/L	1	05/02/2024 0:41	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		< 2.5	µg/L	1	05/01/2024 15:41	221702
Boron	NELAP	10.0	10.0		< 10.0	µg/L	1	05/01/2024 15:41	221702
Calcium	NELAP	0.200	0.200		< 0.200	mg/L	1	05/01/2024 15:41	221702
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/03/2024 10:06	221702
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/03/2024 10:06	221702
Lithium	*	10.0	10.0		< 10.0	µg/L	5	05/03/2024 10:06	221702
Molybdenum	NELAP	1.0	1.0		< 1.0	µg/L	5	05/06/2024 10:18	221702
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/03/2024 10:06	221702

Results have less certainty - Client Requested Quantitation Limit is below the calibration range.

May 08, 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: 24042191

Dear Luke St. Mary:

TEKLAB, INC received 3 samples on 4/26/2024 10:18:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,



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



Report Contents

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

This reporting package includes the following:

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Chain of Custody	Appended

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Qualifiers

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



Case Narrative

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Cooler Receipt Temp: 2.3 °C

Per Ken Ewers (Gredell Eng.), analyze for only Appendix III parameters (Cl, F-, SO4, TDS, field pH, B and Ca) plus As Ba Co Li Mo and Se. (ehurley - 5/1/2024 8:32:02 AM)

Per Ken Ewers (Gredell Eng.), field pH is not required for Duplicate reporting. (ehurley - 5/8/2024 1:55:34 PM)

Field data was provided via email from Gredell Engineering Resources, Inc.

Locations

Collinsville

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Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-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	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	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



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042191-001
 Matrix: GROUNDWATER

Work Order: 24042191
 Report Date: 08-May-24

Client Sample ID: MW-9

Collection Date: 04/23/2024 12:27

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		7.05		1	04/23/2024 12:27	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	20	20		512	mg/L	1	04/29/2024 9:07	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		203	mg/L	10	05/01/2024 20:03	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.58	mg/L	1	05/03/2024 11:02	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		14	mg/L	1	05/01/2024 19:58	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		102	µg/L	1	05/01/2024 17:24	221351
Boron	NELAP	10.0	10.0		3700	µg/L	1	05/01/2024 17:24	221351
Calcium	NELAP	0.200	0.200		103	mg/L	1	05/01/2024 17:24	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 14:35	221351
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/02/2024 14:35	221351
Lithium	*	10.0	10.0		23.0	µg/L	5	05/02/2024 14:35	221351
Molybdenum	NELAP	1.0	1.0		89.8	µg/L	5	05/06/2024 17:36	221351
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 14:35	221351



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities
 Client Project: Fly Ash Pond (FAP)
 Lab ID: 24042191-002
 Matrix: GROUNDWATER

Work Order: 24042191
 Report Date: 08-May-24

Client Sample ID: MW-10

Collection Date: 04/24/2024 11:06

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9040B FIELD									
pH	*	0	1.00		6.93		1	04/24/2024 11:06	R346951
STANDARD METHODS 2540 C (TOTAL) 1997, 2011									
Total Dissolved Solids	NELAP	50	50		420	mg/L	2.5	04/29/2024 9:08	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	100	100		140	mg/L	10	05/01/2024 20:11	R346635
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		< 0.25	mg/L	1	05/03/2024 11:26	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		8	mg/L	1	05/01/2024 20:06	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		138	µg/L	1	05/01/2024 17:25	221351
Boron	NELAP	10.0	10.0		241	µg/L	1	05/01/2024 17:25	221351
Calcium	NELAP	0.200	0.200		90.4	mg/L	1	05/01/2024 17:25	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		6.6	µg/L	5	05/02/2024 14:41	221351
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/02/2024 14:41	221351
Lithium	*	10.0	10.0		< 10.0	µg/L	5	05/02/2024 14:41	221351
Molybdenum	NELAP	1.0	1.0		19.3	µg/L	5	05/06/2024 17:41	221351
Selenium	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 14:41	221351



Laboratory Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Lab ID: 24042191-003

Client Sample ID: Duplicate

Matrix: GROUNDWATER

Collection Date: 04/24/2024 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		438	mg/L	1	04/29/2024 9:08	R346521
SW-846 9036 (TOTAL)									
Sulfate	NELAP	50	50		107	mg/L	5	05/06/2024 15:28	R346843
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.25	0.25		0.52	mg/L	1	05/03/2024 11:29	R346729
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4	J	3	mg/L	1	05/01/2024 20:14	R346639
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)									
Barium	NELAP	2.5	2.5		64.6	µg/L	1	05/01/2024 17:27	221351
Boron	NELAP	10.0	10.0		2280	µg/L	1	05/01/2024 17:27	221351
Calcium	NELAP	0.200	0.200		111	mg/L	1	05/01/2024 17:27	221351
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Arsenic	NELAP	1.0	1.0		< 1.0	µg/L	5	05/02/2024 15:30	221351
Cobalt	NELAP	2.0	2.0		< 2.0	µg/L	5	05/02/2024 15:30	221351
Lithium	*	10.0	10.0		31.3	µg/L	5	05/02/2024 15:30	221351
Molybdenum	NELAP	1.0	1.0		119	µg/L	5	05/06/2024 18:11	221351
Selenium	NELAP	1.0	1.0		3.0	µg/L	5	05/02/2024 15:30	221351

Appendix 3

Laboratory Quality Assurance/Quality Control Data

Appendix 3

Laboratory Quality Assurance/Quality Control Data
(2nd 2023 Semi-annual Monitoring Event)
December 11, 2023



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R340566		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	12/13/2023	

Batch R340566		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Total Dissolved Solids		20		982	1000	0	98.2	90	110	12/13/2023	

Batch R340566		SampType: DUP		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 23120001-010ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Total Dissolved Solids		20		< 20				0	0.00	12/13/2023		

SW-846 9036 (TOTAL)

Batch R340579		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		< 10	6.140	0	0	-100	100	12/14/2023	

Batch R340579		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		10		19	20.00	0	94.0	90	110	12/14/2023	

Batch R340579		SampType: MS		Units mg/L							Date Analyzed
SampID: 23121014-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Sulfate		100		289	200.0	117.9	85.8	85	115	12/14/2023	

Batch R340579		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 23121014-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Sulfate		100		295	200.0	117.9	88.4	289.5	1.75	12/14/2023		



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

SW-846 9036 (TOTAL)

Batch R340579		SampType: MS		Units mg/L							Date Analyzed
SampID: 23121014-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		100		354	200.0	169.2	92.2	85	115	12/14/2023	

Batch R340579		SampType: MSD		Units mg/L							RPD Limit: 10	Date Analyzed
SampID: 23121014-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Sulfate		100		351	200.0	169.2	90.9	353.6	0.72	12/14/2023		

SW-846 9214 (TOTAL)

Batch R340563		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	12/14/2023	

Batch R340563		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.00	1.000	0	100.0	90	110	12/14/2023	

Batch R340563		SampType: MS		Units mg/L							Date Analyzed
SampID: 23120637-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		1.00		25.6	20.00	6.430	95.9	75	125	12/15/2023	

Batch R340563		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23120637-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		1.00		26.9	20.00	6.430	102.4	25.61	4.95	12/15/2023		

Batch R340563		SampType: MS		Units mg/L							Date Analyzed
SampID: 23120667-017AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.33	2.000	0.1860	107.4	75	125	12/15/2023	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

SW-846 9214 (TOTAL)

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23120667-017AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.17	2.000	0.1860	99.3	2.334	7.19	12/15/2023	

Batch R340563		SampType: MS		Units mg/L							
SampID: 23120667-020AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.30	2.000	0.2460	102.9	75	125	12/15/2023	

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23120667-020AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.37	2.000	0.2460	106.2	2.304	2.78	12/15/2023	

Batch R340563		SampType: MS		Units mg/L							
SampID: 23121014-008AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.10	2.000	0	105.0	75	125	12/15/2023	

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23121014-008AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.10	2.000	0	104.8	2.100	0.24	12/15/2023	

Batch R340563		SampType: MS		Units mg/L							
SampID: 23121094-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.28	2.000	0.2000	104.0	75	125	12/14/2023	

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23121094-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.26	2.000	0.2000	103.0	2.279	0.79	12/14/2023	

Batch R340563		SampType: MS		Units mg/L							
SampID: 23121112-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		3.01	2.000	0.8810	106.5	75	125	12/15/2023	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

SW-846 9214 (TOTAL)

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23121112-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		3.04	2.000	0.8810	108.0	3.011	0.96	12/15/2023	

Batch R340563		SampType: MS		Units mg/L							
SampID: 23121247-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.41	2.000	0.2990	105.5	75	125	12/15/2023	

Batch R340563		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23121247-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		2.43	2.000	0.2990	106.8	2.409	1.03	12/15/2023	

SW-846 9251 (TOTAL)

Batch R340532		SampType: MBLK		Units mg/L							
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		< 4	0.5000	0	0	-100	100	12/14/2023	

Batch R340532		SampType: LCS		Units mg/L							
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		20	20.00	0	100.4	90	110	12/14/2023	

Batch R340532		SampType: MS		Units mg/L							
SampID: 23121014-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		27	20.00	9.200	89.7	85	115	12/14/2023	

Batch R340532		SampType: MSD		Units mg/L				RPD Limit: 15			
SampID: 23121014-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		27	20.00	9.200	91.4	27.13	1.25	12/14/2023	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

SW-846 9251 (TOTAL)

Batch R340532		SampType: MS		Units mg/L							Date Analyzed
SampID: 23121014-007AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		37	20.00	19.01	88.0	85	115	12/14/2023	

Batch R340532		SampType: MSD		Units mg/L							RPD Limit: 15	Date Analyzed
SampID: 23121014-007AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		37	20.00	19.01	88.9	36.60	0.52	12/14/2023		

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

Batch 215915		SampType: MBLK		Units µg/L							Date Analyzed
SampID: MBLK-215915											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		2.5		< 2.5	0.7000	0	0	-100	100	12/14/2023	
Beryllium		0.5		< 0.5	0.2000	0	0	-100	100	12/14/2023	
Boron		20.0		< 20.0	9.000	0	0	-100	100	12/14/2023	
Cadmium		2.0		< 2.0	0.5000	0	0	-100	100	12/14/2023	
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	12/14/2023	
Chromium		5.0		< 5.0	2.800	0	0	-100	100	12/14/2023	

Batch 215915		SampType: LCS		Units µg/L							Date Analyzed
SampID: LCS-215915											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Barium		2.5		1950	2000	0	97.5	85	115	12/14/2023	
Beryllium		0.5		51.8	50.00	0	103.6	85	115	12/14/2023	
Boron		20.0		501	500.0	0	100.2	85	115	12/14/2023	
Cadmium		2.0		48.1	50.00	0	96.2	85	115	12/14/2023	
Calcium		0.100		2.67	2.500	0	106.6	85	115	12/14/2023	
Chromium		5.0		196	200.0	0	98.0	85	115	12/14/2023	

Batch 215915		SampType: MS		Units mg/L							Date Analyzed
SampID: 23120996-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Calcium		0.100	S	45.1	2.500	44.35	30.0	75	125	12/14/2023	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

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

Batch 215915		SampType: MSD		Units mg/L				RPD Limit: 20			Date Analyzed
SampID: 23120996-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Calcium		0.100	S	42.6	2.500	44.35	-70.8	45.10	5.75	12/14/2023	

Batch 215936		SampType: MBLK		Units µg/L						Date Analyzed
SampID: MBLK-215936										
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	12/15/2023
Beryllium		0.5		< 0.5	0.2000	0	0	-100	100	12/15/2023
Boron		20.0		< 20.0	9.000	0	0	-100	100	12/15/2023
Cadmium		2.0		< 2.0	0.5000	0	0	-100	100	12/15/2023
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	12/15/2023
Chromium		5.0		< 5.0	2.800	0	0	-100	100	12/15/2023

Batch 215936		SampType: LCS		Units µg/L						Date Analyzed
SampID: LCS-215936										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		1960	2000	0	98.2	85	115	12/15/2023
Beryllium		0.5		50.6	50.00	0	101.2	85	115	12/15/2023
Boron		20.0		487	500.0	0	97.5	85	115	12/15/2023
Cadmium		2.0		48.0	50.00	0	96.0	85	115	12/15/2023
Calcium		0.100		2.58	2.500	0	103.0	85	115	12/15/2023
Chromium		5.0		192	200.0	0	96.1	85	115	12/15/2023

Batch 215936		SampType: MS		Units µg/L						Date Analyzed
SampID: 23121014-009CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		2030	2000	0	101.5	75	125	12/15/2023
Beryllium		0.5		53.7	50.00	0	107.4	75	125	12/15/2023
Boron		20.0		519	500.0	0	103.8	75	125	12/15/2023
Cadmium		2.0		49.3	50.00	0	98.6	75	125	12/15/2023
Calcium		0.100		2.79	2.500	0	111.7	75	125	12/15/2023
Chromium		5.0		203	200.0	0	101.4	75	125	12/15/2023



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

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

Batch 215936		SampType: MSD		Units µg/L			RPD Limit: 20			
SampID: 23121014-009CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Barium		2.5		2120	2000	0	106.0	2030	4.34	12/15/2023
Beryllium		0.5		56.2	50.00	0	112.4	53.70	4.55	12/15/2023
Boron		20.0		540	500.0	0	108.0	519.2	3.89	12/15/2023
Cadmium		2.0		51.4	50.00	0	102.8	49.30	4.17	12/15/2023
Calcium		0.100		2.91	2.500	0	116.3	2.794	4.01	12/15/2023
Chromium		5.0		212	200.0	0	106.0	202.7	4.53	12/15/2023

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

Batch 215915		SampType: MBLK		Units µg/L						
SampID: MBLK-215915										
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	12/14/2023
Cobalt		1.0		< 1.0	0.1150	0	0	-100	100	12/14/2023
Lead		1.0		< 1.0	0.6000	0	0	-100	100	12/14/2023
Lithium	*	3.0		< 3.0	1.450	0	0	-100	100	01/04/2024
Molybdenum		1.5		< 1.5	0.6000	0	0	-100	100	12/14/2023
Selenium		1.0		< 1.0	0.6000	0	0	-100	100	12/14/2023
Thallium		2.0		< 2.0	0.9500	0	0	-100	100	12/14/2023

Batch 215915		SampType: LCS		Units µg/L						
SampID: LCS-215915										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		563	500.0	0	112.6	80	120	12/14/2023
Cobalt		1.0		547	500.0	0	109.4	80	120	12/14/2023
Lead		1.0		524	500.0	0	104.8	80	120	12/14/2023
Lithium	*	3.0		558	500.0	0	111.6	80	120	01/04/2024
Molybdenum		1.5		509	500.0	0	101.9	80	120	12/14/2023
Selenium		1.0		532	500.0	0	106.3	80	120	12/14/2023
Thallium		2.0		249	250.0	0	99.7	80	120	12/14/2023



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

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

Batch 215936		SampType: MBLK		Units µg/L						
SampID: MBLK-215936										
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	12/15/2023
Arsenic		1.0		< 1.0	0.3750	0	0	-100	100	12/15/2023
Cobalt		1.0		< 1.0	0.1150	0	0	-100	100	12/18/2023
Lead		1.0		< 1.0	0.6000	0	0	-100	100	12/14/2023
Lithium	*	3.0		< 3.0	1.450	0	0	-100	100	01/04/2024
Molybdenum		1.5		< 1.5	0.6000	0	0	-100	100	12/15/2023
Selenium		1.0		< 1.0	0.6000	0	0	-100	100	12/15/2023
Thallium		2.0		< 2.0	0.9500	0	0	-100	100	12/14/2023

Batch 215936		SampType: LCS		Units µg/L						
SampID: LCS-215936										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		500	500.0	0	100.0	80	120	12/15/2023
Arsenic		1.0		528	500.0	0	105.6	80	120	12/15/2023
Cobalt		1.0		523	500.0	0	104.7	80	120	12/18/2023
Lead		1.0		514	500.0	0	102.7	80	120	12/14/2023
Lithium	*	3.0		523	500.0	0	104.6	80	120	01/04/2024
Molybdenum		1.5		505	500.0	0	101.0	80	120	12/15/2023
Selenium		1.0		537	500.0	0	107.4	80	120	12/15/2023
Thallium		2.0		241	250.0	0	96.6	80	120	12/14/2023

Batch 215936		SampType: MS		Units µg/L						
SampID: 23121014-009CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		1.0		533	500.0	0	106.7	75	125	12/19/2023
Arsenic		1.0		526	500.0	0	105.3	75	125	12/19/2023
Cobalt		1.0		469	500.0	0	93.7	75	125	12/19/2023
Lead		1.0		515	500.0	0	103.0	75	125	12/14/2023
Lithium	*	3.0		535	500.0	0	107.1	75	125	01/04/2024
Molybdenum		1.5		471	500.0	0	94.2	75	125	12/19/2023
Selenium		1.0		465	500.0	0	93.0	75	125	12/19/2023
Thallium		2.0		247	250.0	0	98.7	75	125	12/14/2023



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

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

Batch 215936		SampType: MSD		Units µg/L				RPD Limit: 20			Date Analyzed
SampID: 23121014-009CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Antimony		1.0		545	500.0	0	108.9	533.3	2.08	12/19/2023	
Arsenic		1.0		538	500.0	0	107.7	526.5	2.25	12/19/2023	
Cobalt		1.0		481	500.0	0	96.1	468.6	2.52	12/19/2023	
Lead		1.0		526	500.0	0	105.2	515.1	2.07	12/14/2023	
Lithium	*	3.0		540	500.0	0	108.0	535.3	0.84	01/04/2024	
Molybdenum		1.5		484	500.0	0	96.9	471.1	2.78	12/19/2023	
Selenium		1.0		472	500.0	0	94.4	465.2	1.50	12/19/2023	
Thallium		2.0		249	250.0	0	99.6	246.7	0.93	12/14/2023	

SW-846 7470A (TOTAL)

Batch 215935		SampType: MBLK		Units µg/L						Date Analyzed
SampID: MBLK-215935										
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	12/14/2023

Batch 215935		SampType: LCS		Units µg/L						Date Analyzed
SampID: LCS-215935										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		4.42	5.000	0	88.4	85	115	12/14/2023

Batch 215935		SampType: MS		Units µg/L						Date Analyzed
SampID: 23121014-004CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Mercury		0.20		4.38	5.000	0	87.6	75	125	12/14/2023

Batch 215935		SampType: MSD		Units µg/L				RPD Limit: 15			Date Analyzed
SampID: 23121014-004CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Mercury		0.20		4.31	5.000	0	86.1	4.378	1.64	12/14/2023	



Receiving Check List

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

Client: Sikeston Board of Municipal Utilities

Work Order: 23121014

Client Project: Fly Ash Pond (FAP)

Report Date: 12-Jan-24

Carrier: UPS

Received By: LEH

Completed by:

Mary E. Kemp

Reviewed by:

Ellie Hopkins

On:

13-Dec-23

Mary E Kemp

On:

13-Dec-23

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **4.2**
- Type of thermal preservation? None Ice Blue Ice Dry Ice
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Reported field parameters measured: Field Lab NA
- Container/Temp Blank temperature in compliance? Yes No

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

- Water – at least one vial per sample has zero headspace? Yes No No VOA vials
- Water - TOX containers have zero headspace? Yes No No TOX containers
- Water - pH acceptable upon receipt? Yes No NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes No NA

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

pH strip #90719. - LH/MaryKemp - 12/13/2023 11:16:18 AM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 23121014

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@sbtmu.net Fax:	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>4.2 °C</u> LTG# <u>5</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes: PHV 90719 # Bottle time of 1403 MEIC 12/12/23
---	--

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

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

Project Name/Number			Sample Collector's Name			MATRIX		INDICATE ANALYSIS REQUESTED																
Fly Ash Pond (FAP)			Justin Loms			Aqueous	Trip Blank	Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals										
Results Requested	Billing Instructions	# and Type of Containers	UNP	HNO3																				
Lab Use Only	Sample Identification	Date/Time Sampled																						
	MW-1R	12/11/23 0950	1	3			X		X	X	X	X	X	X	X									
	MW-2	12/11/23 1315	1	3			X		X	X	X	X	X	X	X									
	MW-3	12/11/23 1503	1	3			X		X	X	X	X	X	X	X									
	MW-7	12/11/23 1153	1	3			X		X	X	X	X	X	X	X									
	MW-9	12/11/23 1055	1	3			X		X	X	X	X	X	X	X									
	MW-10	12/11/23 1400	1	3			X		X	X	X	X	X	X	X									
	Duplicate	12/11/23 *	1	3			X		X	X	X	X	X	X	X									
	Trip Blank	12/11/23	1	3				X	X	X	X	X	X	X	X									
	Field Blank	12/11/23 1503	1	3			X		X	X	X	X	X	X	X									

Relinquished By	Date/Time	Received By	Date/Time
Ashia [Signature]	12/12/23 0930	Jana [Signature] UPS	12/13/2023 10:25

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: 81588



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#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

BatchID: 71670

Sample ID: 23121342-001ADUP	SampType: DUP	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: 23121014-001	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807387						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.71	1.00		0	0			0	200	30	JR
Yield	0.94			0	0			0.8800	6.59		

Sample ID: 23121342-002ADUP	SampType: DUP	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: 23121014-002	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.75	1.00		0	0			1.200	46.2	30	JR
Yield	1			0	0			0.9900	1.01		

Qualifiers: H Holding times for preparation or analysis exceeded
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec



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QC SUMMARY REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

BatchID: 71670

Sample ID: MB-71670	SampType: MBLK	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: PBW	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807377						
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	1.00			0	0						

Sample ID: LCS-71670	SampType: LCS	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: LCSW	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.35	1.00	5.000	0	107	70	130				QLR
Yield	1.00			0	0						

Sample ID: LCSD-71670	SampType: LCSD	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: LCSS02	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807379						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.84	1.00	5.000	0	76.8	70	130	5.350	32.9	20	R
Yield	0.910			0	0			1.000	9.42		

Qualifiers: H Holding times for preparation or analysis exceeded
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec



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QC SUMMARY REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
Project: 23121014

BatchID: 71670

Sample ID: RLCD-71670	SampType: RLC	TestCode: Radium-228_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177460						
Client ID: BatchQC	Batch ID: 71670	TestNo: E904.0	E903-904	Analysis Date: 1/2/2024	SeqNo: 4807382						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	51.0	50	150				
Yield	0.830			0	0						

Qualifiers: H Holding times for preparation or analysis exceeded
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec



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QC SUMMARY REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

BatchID: 71670

Sample ID: 23121342-001ADUP	SampType: DUP	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: 23121014-001	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807428						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.12	1.00						0	0	30	U
Yield	0.99							0.9900	0	0	

Sample ID: 23121342-002ADUP	SampType: DUP	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: 23121014-002	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807430						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.19	1.00						0	0	30	U
Yield	1							1.000	0	0	

Qualifiers: H Holding times for preparation or analysis exceeded
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec



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QC SUMMARY REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

BatchID: 71670

Sample ID: MB-71670	SampType: MBLK	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: PBW	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807418						
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-71670	SampType: LCS	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: LCSW	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.85	1.00	5.000	0	117	70	130				

Sample ID: LCSD-71670	SampType: LCSD	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: LCSS02	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807420						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.94	1.00	5.000	0	98.8	70	130	5.850	16.9	20	

Sample ID: RLC-71670	SampType: RLC	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: BatchQC	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807422						
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
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area response
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec



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 TEL: (330) 253-8211 FAX: (330) 253-4489
 Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23121342
 04-Jan-24

Client: TEKLAB Inc,
 Project: 23121014

BatchID: 71670

Sample ID: RLC-71670	SampType: RLC	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: BatchQC	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.890	1.00	1.000	0	89.0	50	150				J

Sample ID: RLCD-71670	SampType: RLC	TestCode: Radium-226_	Units: pCi/L	Prep Date: 12/28/2023	RunNo: 177464						
Client ID: BatchQC	Batch ID: 71670	TestNo: E903.0	E903-904	Analysis Date: 1/3/2024	SeqNo: 4807423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.980	1.00	1.000	0	98.0	50	150				J

Qualifiers: H Holding times for preparation or analysis exceeded
 ND Not Detected
 RL Reporting Detection Limit

J Analyte detected below quantitation limits
 PL Permit Limit
 U Samples with CalcVal < MDL

M Manual Integration used to determine area response
 R RPD outside accepted recovery limits
 W Sample container temperature is out of limit as spec

TEKLAB, INC. Chain of Custody

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

23121342

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: Justin Colp QC Level:

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226 and 228) by method EPA903.0/904.0
on your standard turnaround time.
Batch QC is required with the report. Receipt summary requested.

Project#

Contact: Elizabeth A. Hurley Email: EHurley@teklabinc.com
Requested Due Date: 20 business days or less Billing/PO: 35493

Phone: (618) 344-1004 ext. 33

State of Origin: MO
15.8-0.2 = 15.6°C
16.1-0.2 = 15.9°C
17.0-0.2 = 16.8°C
Fedex, cooler

PLEASE NOTE:

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

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228														
	23121014-001	12/11/23 0950	HNO3	Groundwater	✓	✓														
	23121014-002	12/11/23 1315	HNO3	Groundwater	✓	✓														
	23121014-003	12/11/23 1503	HNO3	Groundwater	✓	✓														
	23121014-004	12/11/23 1153	HNO3	Groundwater	✓	✓														
	23121014-005	12/11/23 1055	HNO3	Groundwater	✓	✓														
	23121014-006	12/11/23 1403	HNO3	Groundwater	✓	✓														
	23121014-007	12/11/23	HNO3	Groundwater	✓	✓														
	23121014-008	12/13/23 1025	HNO3	Trip Blank	✓	✓														
	23121014-009	12/11/23 1503	HNO3	Aqueous	✓	✓														
			HNO3	Aqueous																
			HNO3	Groundwater																

*Relinquished By	Date/Time	Received By	Date/Time
Mary Kemp	12/13/23	Justin Colp	12/15/23, 1055



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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 23121342 RcptNo: 1

Logged by:	Tegan A. Richards	12/15/2023 10:55:00 AM	<i>Tegan Richards</i>
Completed By:	Tegan A. Richards	12/18/2023 4:34:17 PM	<i>Tegan Richards</i>
Reviewed By:	Jennifer Woolf	12/19/2023 1:13:25 PM	<i>Jennifer Woolf</i>

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? Yes No
- (Note discrepancies on chain of custody)
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? Yes No
- (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	15.6	Good	Not Present			



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Sample Log-In Check List

Client Name: TEK-IL-62234-A

Work Order Number: 23121342

RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	15.9	Good	Not Present			
3	16.8	Good	Not Present			

Appendix 3

Laboratory Quality Assurance/Quality Control Data
(1st 2024 Semi-annual Monitoring Event)
April 23, 2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R346521		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	

Batch R346521		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		952	1000	0	95.2	90	110	04/29/2024	
Total Dissolved Solids		20		976	1000	0	97.6	90	110	04/29/2024	
Total Dissolved Solids		20		984	1000	0	98.4	90	110	04/29/2024	

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-002ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		20		364				344.0	5.65	04/29/2024		

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-004ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		50		260				245.0	5.94	04/29/2024		

SW-846 9036 (TOTAL)

Batch R346635		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		< 10	6.140	0	0	-100	100	05/01/2024	

Batch R346635		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		18	20.00	0	90.2	90	110	05/01/2024	

Batch R346635		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-031AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		66	40.00	31.81	86.2	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		68	40.00	31.81	89.4	66.31	1.87	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24041541-031BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		68	40.00	31.35	92.8	85	115	05/02/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		69	40.00	31.35	95.3	68.46	1.48	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24042088-010BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	23	20.00	0	116.9	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	23	20.00	0	116.6	23.38	0.21	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24042088-010CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		27	20.00	8.280	95.1	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		27	20.00	8.280	95.8	27.30	0.48	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24042186-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	49	20.00	35.56	66.5	85	115	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042186-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	49	20.00	35.56	66.8	48.86	0.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		41	20.00	23.14	89.1	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		41	20.00	23.14	91.4	40.96	1.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		74	40.00	34.96	98.4	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		74	40.00	34.96	97.0	74.30	0.76	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		208	100.0	115.6	92.0	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		206	100.0	115.6	90.8	207.6	0.57	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042357-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	50	20.00	37.08	62.4	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042357-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	SE	50	20.00	37.08	66.8	49.57	1.74	05/02/2024	

Batch R346635		SampType: MS		Units mg/L							
SampID: 24042384-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	24	20.00	6.850	86.4	90	110	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		25	20.00	6.850	91.8	24.13	4.34	05/01/2024	

SW-846 9214 (TOTAL)

Batch R346729		SampType: MBLK		Units mg/L							
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	05/03/2024	

Batch R346729		SampType: LCS		Units mg/L							
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.95	1.000	0	95.4	90	110	05/03/2024	

Batch R346729		SampType: MS		Units mg/L							
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.86	2.000	0	93.0	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		1.93	2.000	0	96.5	1.861	3.64	05/03/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9214 (TOTAL)

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042194-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.03	2.000	0	101.3	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042194-005AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		1.90	2.000	0	94.8	2.026	6.68	05/03/2024		

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042196-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.64	2.000	0	81.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042196-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		1.70	2.000	0	85.2	1.637	3.95	05/03/2024		

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042264-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.15	2.000	0.3950	87.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042264-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Fluoride		0.10		2.08	2.000	0.3950	84.4	2.150	3.21	05/03/2024		

SW-846 9251 (TOTAL)

Batch R346639		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		< 4	0.5000	0	0	-100	100	05/01/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: LCS		Units mg/L							
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		18	20.00	0	91.0	90	110	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-025AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		24	20.00	4.470	99.8	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-025AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.470	99.9	24.42	0.12	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-025BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		24	20.00	3.840	99.9	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-025BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	3.840	101.1	23.82	1.00	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-031AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8		75	40.00	37.23	95.6	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	37.23	95.5	75.47	0.04	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-031BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8		75	40.00	35.91	97.6	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		76	40.00	35.91	101.0	74.96	1.81	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042193-004AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	4.460	95.4	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.460	96.8	23.54	1.22	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042262-003FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8		78	40.00	40.01	95.0	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042262-003FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	40.01	88.2	78.03	3.56	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042262-006FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		154	100.0	62.72	91.6	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042262-006FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20		150	100.0	62.72	87.4	154.3	2.80	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042357-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4	SE	90	20.00	43.14	232.6	85	115	05/02/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042357-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4	SE	90	20.00	43.14	234.6	89.65	0.46	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042384-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	4.650	96.7	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.650	98.9	23.98	1.86	05/01/2024	

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

Batch 221351		SampType: MBLK		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: MBLK-221351										
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	05/01/2024
Boron		20.0		< 20.0	9.000	0	0	-100	100	05/01/2024
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/01/2024

Batch 221351		SampType: LCS		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: LCS-221351										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		1950	2000	0	97.5	85	115	05/01/2024
Boron		20.0		502	500.0	0	100.4	85	115	05/01/2024
Calcium		0.100		2.58	2.500	0	103.2	85	115	05/01/2024

Batch 221351		SampType: MS		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042195-005BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		1930	2000	0	96.5	75	125	05/01/2024
Boron		20.0		491	500.0	0	98.2	75	125	05/01/2024
Calcium		0.100		2.52	2.500	0	101.0	75	125	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

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

Batch 221351		SampType: MSD		Units µg/L				RPD Limit 20			Date Analyzed
SampID: 24042195-005BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Barium		2.5		1930	2000	0	96.5	1930	0.00	05/01/2024	
Boron		20.0		492	500.0	0	98.5	491.2	0.22	05/01/2024	
Calcium		0.100		2.53	2.500	0	101.0	2.524	0.05	05/01/2024	

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

Batch 221351		SampType: MBLK		Units µg/L						Date Analyzed
SampID: MBLK-221351										
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	05/02/2024
Cobalt		1.0		< 1.0	0.1150	0	0	-100	100	05/02/2024
Lithium	*	3.0		< 3.0	1.450	0	0	-100	100	05/02/2024
Molybdenum		1.5		< 1.5	0.6000	0	0	-100	100	05/02/2024
Selenium		1.0		< 1.0	0.6000	0	0	-100	100	05/02/2024

Batch 221351 SampType: LCS Units µg/L

SampID: LCS-221351										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		513	500.0	0	102.6	80	120	05/02/2024
Cobalt		1.0		494	500.0	0	98.8	80	120	05/02/2024
Lithium	*	3.0		532	500.0	0	106.3	80	120	05/02/2024
Molybdenum		1.5		494	500.0	0	98.8	80	120	05/02/2024
Selenium		1.0		541	500.0	0	108.2	80	120	05/02/2024

Batch 221351 SampType: MS Units µg/L

SampID: 24042195-005BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		494	500.0	0	98.8	75	125	05/02/2024
Cobalt		1.0		481	500.0	0	96.1	75	125	05/02/2024
Selenium		1.0		528	500.0	0	105.7	75	125	05/02/2024

Batch 221351 SampType: MSD Units µg/L

SampID: 24042195-005BMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Arsenic		1.0		497	500.0	0	99.3	494.0	0.54	05/02/2024
Cobalt		1.0		479	500.0	0	95.9	480.7	0.28	05/02/2024
Selenium		1.0		539	500.0	0	107.8	528.3	2.04	05/02/2024



Receiving Check List

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042192

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Carrier: UPS

Received By: ERH

Completed by:

Reviewed by:

On:

26-Apr-24

Paul Schultz

On:

26-Apr-24

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **4.3**
- 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. WO - pschultz - 4/26/2024 1:59:53 PM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 24042192

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@sblmu.net Fax:	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>43</u> °C LTG# <u>5</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD FOR LAB USE ONLY Lab Notes: PHV AWST WS 4/26/24											
Client Comments Total Metals = Ba Be B Cd Ca Cr Li (ICP), Sb As Co Pb Mo Se Tl (ICP/MS) and Hg <div style="font-size: 2em; color: red; text-align: center; margin-top: 10px;">(Red cooler)</div>												
Are these samples known to be involved in litigation? If yes, a surcharge will apply <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? If yes, include details of the hazard. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No												
Project Name/Number Fly Ash Pond (FAP)	Sample Collector's Name	MATRIX	INDICATE ANALYSIS REQUESTED									
Results Requested <input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		Billing Instructions										
# and Type of Containers		Aqueous Groundwater Trip Blank										
Lab Use Only		Chloride Field pH Fluoride Ra226/228 (SUB) Sulfate TDS Total Metals										
Sample Identification	Date/Time Sampled	UNP	HNO3	Trip Blank	Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals	
24042192-001 -002 -003	MW-1R MW-2 MW-3 MW-7 MW-9 MW-10 Duplicate Trip Blank Field Blank	4/23/24 1020 4/24/24 0945 4/24/24 0841	1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X	X X X X X X X X X X
Relinquished By			Date/Time			Received By			Date/Time			
[Signature]			4/20/24			GUYLE FOPPLA (UPS)			4/20/24 1018			

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: 85786





Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R346521		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	

Batch R346521		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		976	1000	0	97.6	90	110	04/29/2024	
Total Dissolved Solids		20		952	1000	0	95.2	90	110	04/29/2024	
Total Dissolved Solids		20		984	1000	0	98.4	90	110	04/29/2024	

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-002ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		20		364				344.0	5.65	04/29/2024		

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-004ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		50		260				245.0	5.94	04/29/2024		

SW-846 9036 (TOTAL)

Batch R346635		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		< 10	6.140	0	0	-100	100	05/01/2024	

Batch R346635		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		18	20.00	0	90.2	90	110	05/01/2024	

Batch R346635		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-031AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		66	40.00	31.81	86.2	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		68	40.00	31.81	89.4	66.31	1.87	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-031BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		68	40.00	31.35	92.8	85	115	05/02/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		69	40.00	31.35	95.3	68.46	1.48	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042088-010BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	23	20.00	0	116.9	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	23	20.00	0	116.6	23.38	0.21	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042088-010CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		27	20.00	8.280	95.1	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		27	20.00	8.280	95.8	27.30	0.48	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042186-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	49	20.00	35.56	66.5	85	115	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042186-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	49	20.00	35.56	66.8	48.86	0.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		41	20.00	23.14	89.1	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		41	20.00	23.14	91.4	40.96	1.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		74	40.00	34.96	98.4	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		74	40.00	34.96	97.0	74.30	0.76	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		208	100.0	115.6	92.0	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		206	100.0	115.6	90.8	207.6	0.57	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042357-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	50	20.00	37.08	62.4	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042357-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	SE	50	20.00	37.08	66.8	49.57	1.74	05/02/2024	

Batch R346635		SampType: MS		Units mg/L							
SampID: 24042384-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	24	20.00	6.850	86.4	90	110	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		25	20.00	6.850	91.8	24.13	4.34	05/01/2024	

SW-846 9214 (TOTAL)

Batch R346729		SampType: MBLK		Units mg/L							
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	05/03/2024	

Batch R346729		SampType: LCS		Units mg/L							
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.95	1.000	0	95.4	90	110	05/03/2024	

Batch R346729		SampType: MS		Units mg/L							
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.86	2.000	0	93.0	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		1.93	2.000	0	96.5	1.861	3.64	05/03/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9214 (TOTAL)

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042194-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.03	2.000	0	101.3	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042194-005AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		1.90	2.000	0	94.8	2.026	6.68	05/03/2024		

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042196-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		1.64	2.000	0	81.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042196-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		1.70	2.000	0	85.2	1.637	3.95	05/03/2024		

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042264-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.15	2.000	0.3950	87.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042264-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.08	2.000	0.3950	84.4	2.150	3.21	05/03/2024		

SW-846 9251 (TOTAL)

Batch R346639		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		< 4	0.5000	0	0	-100	100	05/01/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: LCS		Units mg/L							
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		18	20.00	0	91.0	90	110	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-025AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		24	20.00	4.470	99.8	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-025AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.470	99.9	24.42	0.12	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-025BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		24	20.00	3.840	99.9	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-025BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	3.840	101.1	23.82	1.00	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-031AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8		75	40.00	37.23	95.6	85	115	05/02/2024	

Batch R346639		SampType: MSD		Units mg/L							
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	37.23	95.5	75.47	0.04	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24041541-031BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8		75	40.00	35.91	97.6	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		76	40.00	35.91	101.0	74.96	1.81	05/02/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		24	20.00	4.460	95.4	85	115	05/01/2024	

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.460	96.8	23.54	1.22	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24042262-003FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8		78	40.00	40.01	95.0	85	115	05/01/2024	

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042262-003FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	40.01	88.2	78.03	3.56	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24042262-006FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		20		154	100.0	62.72	91.6	85	115	05/01/2024	

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042262-006FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20		150	100.0	62.72	87.4	154.3	2.80	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							
SampID: 24042357-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4	SE	90	20.00	43.14	232.6	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042357-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4	SE	90	20.00	43.14	234.6	89.65	0.46	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042384-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	4.650	96.7	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.650	98.9	23.98	1.86	05/01/2024	

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

Batch 221702		SampType: MBLK		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: MBLK-221702										
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	05/01/2024
Boron		20.0		< 20.0	9.000	0	0	-100	100	05/01/2024
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/01/2024

Batch 221702		SampType: LCS		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: LCS-221702										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		2090	2000	0	104.5	85	115	05/01/2024
Boron		20.0		502	500.0	0	100.4	85	115	05/01/2024
Calcium		0.100		2.49	2.500	0	99.8	85	115	05/01/2024

Batch 221702		SampType: MS		Units µg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042196-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		2180	2000	65.20	105.7	75	125	05/01/2024
Boron		20.0		2740	500.0	2258	96.3	75	125	05/01/2024
Calcium		0.100	S	113	2.500	111.3	74.8	75	125	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

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

Batch 221702		SampType: MSD		Units µg/L				RPD Limit 20			Date Analyzed
SampID: 24042196-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Barium		2.5		2140	2000	65.20	103.7	2180	1.85	05/01/2024	
Boron		20.0		2740	500.0	2258	96.6	2740	0.05	05/01/2024	
Calcium		0.100	S	112	2.500	111.3	35.2	113.2	0.88	05/01/2024	

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

Batch 221702		SampType: MBLK		Units µg/L				RPD Limit 20		Date Analyzed
SampID: MBLK-221702										
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	05/03/2024
Cobalt		1.0		< 1.0	0.1150	0	0	-100	100	05/03/2024
Lithium	*	3.0		< 3.0	1.450	0	0	-100	100	05/03/2024
Molybdenum		1.5		< 1.5	0.6000	0	0	-100	100	05/06/2024
Selenium		1.0		< 1.0	0.6000	0	0	-100	100	05/03/2024

Batch 221702 SampType: LCS Units µg/L

SampID: LCS-221702										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		515	500.0	0	103.0	80	120	05/03/2024
Cobalt		1.0		507	500.0	0	101.4	80	120	05/03/2024
Lithium	*	3.0		508	500.0	0	101.5	80	120	05/03/2024
Molybdenum		1.5		454	500.0	0	90.8	80	120	05/06/2024
Selenium		1.0		534	500.0	0	106.9	80	120	05/03/2024

Batch 221702 SampType: MS Units µg/L

SampID: 24042196-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		1.0		491	500.0	0	98.2	75	125	05/03/2024
Cobalt		1.0		476	500.0	0	95.2	75	125	05/03/2024
Lithium	*	3.0		539	500.0	30.60	101.6	75	125	05/03/2024
Molybdenum		1.5		550	500.0	121.8	85.6	75	125	05/06/2024
Selenium		1.0		513	500.0	2.821	102.1	75	125	05/03/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

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

Batch 221702		SampType: MSD		Units µg/L				RPD Limit 20			Date Analyzed
SampID: 24042196-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Arsenic		1.0		485	500.0	0	97.0	491.0	1.28	05/03/2024	
Cobalt		1.0		464	500.0	0	92.8	476.2	2.59	05/03/2024	
Lithium	*	3.0		528	500.0	30.60	99.5	538.8	2.00	05/03/2024	
Molybdenum		1.5		541	500.0	121.8	83.8	549.9	1.68	05/06/2024	
Selenium		1.0		502	500.0	2.821	99.9	513.2	2.18	05/03/2024	



Receiving Check List

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042196

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Carrier: UPS

Received By: ERH

Completed by:

Mary E. Kemp

Reviewed by:

Ellie Hopkins

On:

26-Apr-24

Mary E Kemp

On:

26-Apr-24

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **4.9**
- 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. - LH/MaryKemp - 4/26/2024 1:36:53 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MaryKemp - 4/26/2024 1:36:56 PM

Additional nitric acid (97921) was needed in Field Blank (Ra226/228 container) upon arrival at the laboratory. - LH/MaryKemp - 4/26/2024 1:37:40 PM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 24042R10

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: lsmay@sbmu.net **Fax:**

Samples on: ICE BLUE ICE NO ICE 4.9 °C LTG# 7
Preserved in: LAB FIELD **FOR LAB USE ONLY**
Lab Notes: PH 9.6651 added HNO3 (97291) to 2L Field OK 4/26/24

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

Project Name/Number			Sample Collector's Name				MATRIX		INDICATE ANALYSIS REQUESTED													
Fly Ash Pond (FAP)							Aqueous	Groundwater	Trip Blank	Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals						
Results Requested	Billing Instructions	# and Type of Containers	UNP	HNO3																		
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)																						
Lab Use Only	Sample Identification	Date/Time Sampled																				
	MW-1R	_____	1	3			X		X	X	X	X	X	X	X							
	MW-2	_____	1	3			X		X	X	X	X	X	X	X							
	MW-3	_____	1	3			X		X	X	X	X	X	X	X							
24042R6-001	MW-7	4/23/24 1338	1	3			X		X	X	X	X	X	X	X							
	MW-9	_____	1	3			X		X	X	X	X	X	X	X							
	MW-10	_____	1	3			X		X	X	X	X	X	X	X							
	Duplicate	_____	1	3			X		X	X	X	X	X	X	X							
002	Trip Blank	included	1	3				X		X	X	X	X	X	X							
003	Field Blank	4/23/24 1020	1	3			X		X	X	X	X	X	X	X							

Relinquished By	Date/Time	Received By	Date/Time
		<u>Colleen Hogan (UPS)</u>	<u>4/26/24 1018</u>

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: 85786





Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

STANDARD METHODS 2540 C (TOTAL) 1997, 2011

Batch R346521		SampType: MBLK		Units mg/L							Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	
Total Dissolved Solids		20		< 20	16.00	0	0	-100	100	04/29/2024	

Batch R346521		SampType: LCS		Units mg/L							Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Total Dissolved Solids		20		976	1000	0	97.6	90	110	04/29/2024	
Total Dissolved Solids		20		984	1000	0	98.4	90	110	04/29/2024	
Total Dissolved Solids		20		952	1000	0	95.2	90	110	04/29/2024	

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-002ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		20		364				344.0	5.65	04/29/2024		

Batch R346521		SampType: DUP		Units mg/L							RPD Limit 10	Date Analyzed
SampID: 24042193-004ADUP												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Total Dissolved Solids		50		260				245.0	5.94	04/29/2024		

SW-846 9036 (TOTAL)

Batch R346635		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		< 10	6.140	0	0	-100	100	05/01/2024	

Batch R346635		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		18	20.00	0	90.2	90	110	05/01/2024	

Batch R346635		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-031AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		66	40.00	31.81	86.2	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		68	40.00	31.81	89.4	66.31	1.87	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-031BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		68	40.00	31.35	92.8	85	115	05/02/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		69	40.00	31.35	95.3	68.46	1.48	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042088-010BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	23	20.00	0	116.9	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	23	20.00	0	116.6	23.38	0.21	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042088-010CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		27	20.00	8.280	95.1	85	115	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042088-010CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		27	20.00	8.280	95.8	27.30	0.48	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042186-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	49	20.00	35.56	66.5	85	115	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042186-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	49	20.00	35.56	66.8	48.86	0.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10		41	20.00	23.14	89.1	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		41	20.00	23.14	91.4	40.96	1.12	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		20		74	40.00	34.96	98.4	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-003FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		74	40.00	34.96	97.0	74.30	0.76	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		50		208	100.0	115.6	92.0	85	115	05/01/2024	

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			
SampID: 24042262-006FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		206	100.0	115.6	90.8	207.6	0.57	05/01/2024	

Batch R346635		SampType: MS		Units mg/L				RPD Limit 10			
SampID: 24042357-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Sulfate		10	S	50	20.00	37.08	62.4	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042357-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	SE	50	20.00	37.08	66.8	49.57	1.74	05/02/2024	

Batch R346635		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042384-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	24	20.00	6.850	86.4	90	110	05/01/2024

Batch R346635		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		25	20.00	6.850	91.8	24.13	4.34	05/01/2024	

Batch R346706		SampType: MBLK		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: ICB/MBLK										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	05/02/2024

Batch R346706		SampType: LCS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: ICV/LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		19	20.00	0	96.9	90	110	05/02/2024

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-010FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20	SE	107	40.00	79.07	70.6	85	115	05/02/2024

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-010FMDS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20	SE	109	40.00	79.07	75.8	107.3	1.93	05/02/2024	

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-033AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		100		278	200.0	105.3	86.4	85	115	05/03/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-033AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		100		292	200.0	105.3	93.2	278.1	4.74	05/03/2024	

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-090FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		20		97	40.00	60.50	92.2	85	115	05/03/2024

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-090FMMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		20		98	40.00	60.50	93.3	97.39	0.42	05/03/2024	

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042186-003BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	101.8	85	115	05/02/2024

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042186-003BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		21	20.00	0	106.2	20.35	4.28	05/02/2024	

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042406-003AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		39	20.00	18.04	104.0	85	115	05/02/2024

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042406-003AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		39	20.00	18.04	105.2	38.83	0.67	05/02/2024	

Batch R346706		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042406-006AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		200		793	400.0	392.1	100.1	85	115	05/02/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042406-006AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		200		804	400.0	392.1	102.9	792.6	1.41	05/02/2024	

Batch R346706		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24042406-011AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		31	20.00	12.12	95.2	85	115	05/02/2024

Batch R346706		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042406-011AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		32	20.00	12.12	98.6	31.17	2.13	05/02/2024	

Batch R346843		SampType: MBLK		Units mg/L				RPD Limit 10		Date Analyzed
SampID: ICB/MBLK										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		< 10	6.140	0	0	-100	100	05/06/2024

Batch R346843		SampType: LCS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: ICB/LCS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		20	20.00	0	98.0	90	110	05/06/2024

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24041541-007FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		207	100.0	112.8	94.2	85	115	05/07/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-007FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		215	100.0	112.8	102.4	207.1	3.85	05/07/2024	

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24041541-025AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		176	100.0	80.06	95.9	85	115	05/06/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-025AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		186	100.0	80.06	105.6	176.0	5.36	05/06/2024	

Batch R346843		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-025BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		50		175	100.0	84.53	90.4	85	115	05/06/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-025BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		50		178	100.0	84.53	93.6	174.9	1.85	05/06/2024	

Batch R346843		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-045AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		200		874	400.0	477.2	99.2	85	115	05/06/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-045AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		200		895	400.0	477.2	104.3	874.1	2.32	05/06/2024	

Batch R346843		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-045BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		200		898	400.0	516.5	95.3	85	115	05/06/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24041541-045BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		200		916	400.0	516.5	99.9	897.5	2.04	05/06/2024	

Batch R346843		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042163-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10		36	20.00	17.35	92.2	90	110	05/06/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24042163-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10		36	20.00	17.35	94.6	35.79	1.30	05/06/2024	

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24050031-005BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	19	20.00	7.900	57.1	85	115	05/07/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24050031-005BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	20	20.00	7.900	58.4	19.32	1.39	05/07/2024	

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24050031-005CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	19	20.00	7.640	57.5	85	115	05/07/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24050031-005CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	20	20.00	7.640	60.7	19.14	3.29	05/07/2024	

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24050053-001BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	21	20.00	9.700	54.8	85	115	05/07/2024

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24050053-001BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	20	20.00	9.700	53.0	20.66	1.76	05/07/2024	

Batch R346843		SampType: MS		Units mg/L				RPD Limit 10		Date Analyzed
SampID: 24050053-001CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Sulfate		10	S	20	20.00	9.080	52.1	85	115	05/07/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9036 (TOTAL)

Batch R346843		SampType: MSD		Units mg/L				RPD Limit 10			Date Analyzed
SampID: 24050053-001CMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Sulfate		10	S	21	20.00	9.080	59.6	19.50	7.45	05/07/2024	

SW-846 9214 (TOTAL)

Batch R346729		SampType: MBLK		Units mg/L				Low Limit		High Limit	Date Analyzed
SampID: MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		< 0.10	0.0500	0	0	-100	100	05/03/2024	

Batch R346729		SampType: LCS		Units mg/L				Low Limit		High Limit	Date Analyzed
SampID: LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		0.95	1.000	0	95.4	90	110	05/03/2024	

Batch R346729		SampType: MS		Units mg/L				Low Limit		High Limit	Date Analyzed
SampID: 24042193-004AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		1.86	2.000	0	93.0	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		1.93	2.000	0	96.5	1.861	3.64	05/03/2024	

Batch R346729		SampType: MS		Units mg/L				Low Limit		High Limit	Date Analyzed
SampID: 24042194-005AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Fluoride		0.10		2.03	2.000	0	101.3	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042194-005AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Fluoride		0.10		1.90	2.000	0	94.8	2.026	6.68	05/03/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9214 (TOTAL)

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042196-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		1.64	2.000	0	81.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042196-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		1.70	2.000	0	85.2	1.637	3.95	05/03/2024		

Batch R346729		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042264-001AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Fluoride		0.10		2.15	2.000	0.3950	87.8	75	125	05/03/2024	

Batch R346729		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042264-001AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Fluoride		0.10		2.08	2.000	0.3950	84.4	2.150	3.21	05/03/2024		

SW-846 9251 (TOTAL)

Batch R346639		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		< 4	0.5000	0	0	-100	100	05/01/2024	

Batch R346639		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		18	20.00	0	91.0	90	110	05/01/2024	

Batch R346639		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-025AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		24	20.00	4.470	99.8	85	115	05/02/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24041541-025AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.470	99.9	24.42	0.12	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-025BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	3.840	99.9	85	115	05/02/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24041541-025BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	3.840	101.1	23.82	1.00	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-031AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8		75	40.00	37.23	95.6	85	115	05/02/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24041541-031AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	37.23	95.5	75.47	0.04	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24041541-031BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8		75	40.00	35.91	97.6	85	115	05/02/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24041541-031BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		76	40.00	35.91	101.0	74.96	1.81	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042193-004AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	4.460	95.4	85	115	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042193-004AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.460	96.8	23.54	1.22	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042262-003FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		8		78	40.00	40.01	95.0	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042262-003FMMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		75	40.00	40.01	88.2	78.03	3.56	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042262-006FMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		20		154	100.0	62.72	91.6	85	115	05/01/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042262-006FMMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		20		150	100.0	62.72	87.4	154.3	2.80	05/01/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042357-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4	SE	90	20.00	43.14	232.6	85	115	05/02/2024

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			Date Analyzed
SampID: 24042357-001AMMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4	SE	90	20.00	43.14	234.6	89.65	0.46	05/02/2024	

Batch R346639		SampType: MS		Units mg/L				Low Limit	High Limit	Date Analyzed
SampID: 24042384-001AMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Chloride		4		24	20.00	4.650	96.7	85	115	05/01/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346639		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24042384-001AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		4		24	20.00	4.650	98.9	23.98	1.86	05/01/2024	

Batch R346714		SampType: MBLK		Units mg/L							
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		< 4	0.5000	0	0	-100	100	05/02/2024	

Batch R346714		SampType: MBLK		Units mg/Kg							
SampID: MBLK-240501											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride	*	40		< 40	0.5000	0	0	-100	100	05/02/2024	

Batch R346714		SampType: LCS		Units mg/L							
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		21	20.00	0	103.0	90	110	05/02/2024	

Batch R346714		SampType: MS		Units mg/L							
SampID: 24041541-010FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		8	S	70	40.00	36.49	83.8	85	115	05/02/2024	

Batch R346714		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24041541-010FMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		8		71	40.00	36.49	87.2	70.01	1.90	05/02/2024	

Batch R346714		SampType: MS		Units mg/L							
SampID: 24041541-033AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		40		258	200.0	76.14	91.1	85	115	05/03/2024	

Batch R346714		SampType: MSD		Units mg/L				RPD Limit 15			
SampID: 24041541-033AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Chloride		40		260	200.0	76.14	91.7	258.3	0.48	05/03/2024	



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346714		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-045AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		40		254	200.0	65.43	94.4	85	115	05/03/2024	

Batch R346714		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24041541-045AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		40		248	200.0	65.43	91.2	254.2	2.50	05/03/2024		

Batch R346714		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-090FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		8		69	40.00	33.46	88.6	85	115	05/03/2024	

Batch R346714		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24041541-090FMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		8		70	40.00	33.46	90.4	68.91	1.03	05/03/2024		

Batch R346714		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042406-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		4		29	20.00	9.490	96.8	85	115	05/02/2024	

Batch R346714		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042406-003AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		4		29	20.00	9.490	95.9	28.85	0.63	05/02/2024		

Batch R346714		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042406-006AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Chloride		40		403	200.0	229.3	86.7	85	115	05/02/2024	

Batch R346714		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042406-006AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
Chloride		40		410	200.0	229.3	90.2	402.6	1.75	05/02/2024		



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

SW-846 9251 (TOTAL)

Batch R346714		SampType: MS		Units mg/L							Date Analyzed
SampID: 24042406-011AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		35	20.00	17.65	89.0	85	115	05/02/2024	

Batch R346714		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24042406-011AMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride		4		35	20.00	17.65	88.9	35.46	0.08	05/02/2024		

Batch R346846		SampType: MBLK		Units mg/L							Date Analyzed
SampID: ICB/MBLK											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		< 4	0.5000	0	0	-100	100	05/06/2024	

Batch R346846		SampType: LCS		Units mg/L							Date Analyzed
SampID: ICV/LCS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4		20	20.00	0	98.8	90	110	05/06/2024	

Batch R346846		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-007EMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4	E	56	20.00	37.01	97.0	85	115	05/06/2024	

Batch R346846		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24041541-007EMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride		4	E	59	20.00	37.01	109.3	56.40	4.29	05/06/2024		

Batch R346846		SampType: MS		Units mg/L							Date Analyzed
SampID: 24041541-007FMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Chloride		4	E	59	20.00	37.73	106.1	85	115	05/06/2024	

Batch R346846		SampType: MSD		Units mg/L							RPD Limit 15	Date Analyzed
SampID: 24041541-007FMSD												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed		
Chloride		4	E	59	20.00	37.73	107.9	58.95	0.61	05/06/2024		



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

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

Batch 221351		SampType: MBLK		Units µg/L						
SampID: MBLK-221351										
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	05/01/2024
Boron		20.0		< 20.0	9.000	0	0	-100	100	05/01/2024
Calcium		0.100		< 0.100	0.0350	0	0	-100	100	05/01/2024

Batch 221351		SampType: LCS		Units µg/L						
SampID: LCS-221351										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		1950	2000	0	97.5	85	115	05/01/2024
Boron		20.0		502	500.0	0	100.4	85	115	05/01/2024
Calcium		0.100		2.58	2.500	0	103.2	85	115	05/01/2024

Batch 221351		SampType: MS		Units µg/L						
SampID: 24042195-005BMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Barium		2.5		1930	2000	0	96.5	75	125	05/01/2024
Boron		20.0		491	500.0	0	98.2	75	125	05/01/2024
Calcium		0.100		2.52	2.500	0	101.0	75	125	05/01/2024

Batch 221351		SampType: MSD		Units µg/L				RPD Limit 20			
SampID: 24042195-005BMUSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Barium		2.5		1930	2000	0	96.5	1930	0.00	05/01/2024	
Boron		20.0		492	500.0	0	98.5	491.2	0.22	05/01/2024	
Calcium		0.100		2.53	2.500	0	101.0	2.524	0.05	05/01/2024	

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

Batch 221351		SampType: MBLK		Units µg/L						
SampID: MBLK-221351										
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	05/02/2024
Cobalt		1.0		< 1.0	0.1150	0	0	-100	100	05/02/2024
Lithium	*	3.0		< 3.0	1.450	0	0	-100	100	05/02/2024
Molybdenum		1.5		< 1.5	0.6000	0	0	-100	100	05/02/2024
Selenium		1.0		< 1.0	0.6000	0	0	-100	100	05/02/2024



Quality Control Results

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

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

Batch 221351		SampType: LCS		Units µg/L							Date Analyzed
SampID: LCS-221351											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Arsenic		1.0		513	500.0	0	102.6	80	120	05/02/2024	
Cobalt		1.0		494	500.0	0	98.8	80	120	05/02/2024	
Lithium	*	3.0		532	500.0	0	106.3	80	120	05/02/2024	
Molybdenum		1.5		494	500.0	0	98.8	80	120	05/02/2024	
Selenium		1.0		541	500.0	0	108.2	80	120	05/02/2024	

Batch 221351		SampType: MS		Units µg/L							Date Analyzed
SampID: 24042195-005BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Arsenic		1.0		494	500.0	0	98.8	75	125	05/02/2024	
Cobalt		1.0		481	500.0	0	96.1	75	125	05/02/2024	
Selenium		1.0		528	500.0	0	105.7	75	125	05/02/2024	

Batch 221351		SampType: MSD		Units µg/L					RPD Limit 20		Date Analyzed
SampID: 24042195-005BMUSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Arsenic		1.0		497	500.0	0	99.3	494.0	0.54	05/02/2024	
Cobalt		1.0		479	500.0	0	95.9	480.7	0.28	05/02/2024	
Selenium		1.0		539	500.0	0	107.8	528.3	2.04	05/02/2024	



Receiving Check List

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

Client: Sikeston Board of Municipal Utilities

Work Order: 24042191

Client Project: Fly Ash Pond (FAP)

Report Date: 08-May-24

Carrier: UPS

Received By: ERH

Completed by:

Mary E. Kemp

Reviewed by:

Ellie Hopkins

On:

26-Apr-24

Mary E Kemp

On:

26-Apr-24

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **2.3**
- 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. - LH/ehopkins - 4/29/2024 9:12:09 AM

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 24042191

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 2.3 °C LTG# 7
Preserved in: LAB FIELD **FOR LAB USE ONLY**
Lab Notes: *PAJ 94651* *LT 4/26/24*

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

Project Name/Number		Sample Collector's Name		MATRIX		INDICATE ANALYSIS REQUESTED													
Fly Ash Pond (FAP)				Aqueous	Groundwater	Trip Blank	Chloride	Field pH	Fluoride	Ra226/228 (SUB)	Sulfate	TDS	Total Metals						
Results Requested	Billing Instructions	# and Type of Containers																	
<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		UNP	HNO3																
Lab Use Only	Sample Identification	Date/Time Sampled																	
	MW-1R			1	3														
	MW-2			1	3														
	MW-3			1	3														
	MW-7			1	3														
<i>24042191-001</i>	MW-9	<i>4/23/24 1227</i>		1	3														
<i>002</i>	MW-10	<i>4/24/24 1106</i>		1	3														
<i>003</i>	Duplicate	<i>4/24/24</i>		1	3														
	Trip Blank			1	3														
	Field Blank			1	3														

Relinquished By	Date/Time	Received By	Date/Time
		<i>ELLEN HOPKINS (US)</i>	<i>4/24/24 1018</i>

Appendix 4

Fly Ash Pond Groundwater
Quality Data Base

**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	Field Parameters						Appendix III Monitoring Constituents (Detection)										Appendix IV Monitoring Constituents (Assessment)												
			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	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5
MW-IR (OO) 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	(0.288)	0.530	0.530(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-IR (OO) 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	1.030(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)	

- Notes:
- All data and Qualifiers transcribed from analytical lab data sheets or field notes.
 - Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
 - (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
 - (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
 - Baseline monitoring per USEPA 40 CFR 257.93.
 - Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
 - Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assessment and Detection Monitoring Constituents, but data screening may be conducted over a different range.
 - Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
 - Red text with black border represent outlier values identified by Sanitas.
 - Blue shaded cells with black border indicate data removed for correction of a trend identified by Sanitas (Sen's Slope / Mann-Kendall).
 - Analytical Data Qualifiers provided by Laboratory:
 - "J" - Analyte detected below quantitation limits
 - "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	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron mg/L	Calcium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Fluoride mg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Selenium µg/L	Thallium µg/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	<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	<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	0.88	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	0.566	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	NA	<0.250	NA	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	NA	<0.250	NA	NA	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	0.335	16	140	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	0.335	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	5/21/2020	Detection 3	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	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	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/8/2020	Detection 4	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	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	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/15/2021	Detection 5	165.4	17.03	55.1	18.10	1.55	NA	NA	NA	NA	NA	350	NA	NA	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)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)		
	12/27/2021	Detection 6	161.0	8.90	17.7	0.88	1.53	6.31	(NA)	(NA)	(NA)	(NA)	49	(NA)	(NA)	(NA)	(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)	(NA)	<0.250	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	8/2/2022	Detection 7	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)	(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	<1.0	0.403	1.51	1.913			
	3/12/2023	Det 8/ 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)	(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)	(NA)	(NA)		

- Notes:**
- All data and Qualifiers transcribed from analytical lab data sheets or field notes.
 - Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
 - (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
 - (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
 - Baseline monitoring per USEPA 40 CFR 257.93.
 - Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
 - Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assessment and Detection Monitoring Constituents, but data screening may be conducted over a different range.
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 - Red text with black border represent outlier values identified by Sanitas.
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 - Analytical Data Qualifiers provided by Laboratory:
 - "J" - Analyte detected below quantitation limits
 - "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	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron µg/L	Calcium mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Cobalt µg/L	Fluoride mg/L	Lead µg/L	Lithium µg/L	Mercury µg/L	Molybdenum µg/L	Selenium µg/L	Thallium µg/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 (UO) 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	<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	16	<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	196.7	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	0.167	0.214 (ND)		
	8/10/2018	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	88	<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	16.64	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		
	12/27/2018	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	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	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	NA	0.371	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2020		205.5	15.25	14.9	13.48	7.29	NA	1.6	NA	NA	190	NA	NA	NA	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	16.85	36.7	8.29	2.13	6.5	1.1	<0.250	17	120	31	17	NA	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	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	160	16	17	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10/20/2021	Detection 6	189.0	12.85	33.6	10.32	1.35	6.52	<1.0	<0.250	13	130	39	14	NA	NA	NA	NA	NA	NA	NA	NA	<0.250	NA	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	NA	<0.250	NA	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	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	NA	NA	NA	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	178.5	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	NA	<2.0	<0.25	NA	<10.0	NA	<1.0	<1.0	NA	NA	NA	NA		

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 - (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
 - Baseline monitoring per USEPA 40 CFR 257.93.
 - Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
 - Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assessment and Detection Monitoring Constituents, but data screening may be conducted over a different range.
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 - Red text with black border represent outlier values identified by Sanitas.
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 - Analytical Data Qualifiers provided by Laboratory:
 - "J" - Analyte detected below quantitation limits
 - "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 mg/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	17.81	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	<2.0	0.592	<1.0	26	<0.20	160	53	<1.0	0.335	0.818	1.153 (ND)		
	9/10/2018	Background	958.3	18.03	53.0	0.28	1.77	7.22	9.1	0.609	230	590	2300	140	<3.0	<1.0	47	<1.0	<1.0	<4.0	<2.0	0.609	<1.0	30	<0.20	160	64	<1.0	0.473	0.411	0.884(ND)		
	9/5/2018	Background	873.3	19.66	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)		
	12/17/2018	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	<2.0	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	NA	NA	NA	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	NA	NA	NA	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	NA	0.737	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
9/22/2020	Detection 4	720.5	17.40	-60.8	3.63	0.50	NA	3.1	0.628	110	460	1700	100	NA	NA	NA	NA	NA	NA	NA	NA	0.628	NA	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	NA	NA	
MW-7 (DG) Compliance	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	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)	(NA)	0.375	(NA)	(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)	(NA)	0.488	(NA)	(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)	(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)	(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	165	<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	399	2,269	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)	(NA)		

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 - (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
 - Baseline monitoring per USEPA 40 CFR 257.93.
 - Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
 - Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assessment and Detection Monitoring Constituents, but data screening may be conducted over a different range.
 - 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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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	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron mg/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 ug/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	None	6	10	2000	4	5	100	6	4	15	40	2	100	50	2			5		
MW-9 (OO) Baseline	3/21/2018	Background	978.8	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	0.050	0.327	0.327 (ND)		
	8/10/2018	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	19.95	20.9	0.45	2.88	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	190	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	NA	0.827	NA	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	NA	0.847	NA	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	NA	0.816	NA	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	NA	NA	
9/22/2020		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	NA	0.832	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1/28/2021	Detection 4	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	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	NA	0.775	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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)	(NA)	1.330	(NA)	(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)	(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)	(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)	(NA)	0.860	(NA)	(NA)	(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	1.83	160	540	3,000	97	<3.0	<1.0	78	<1.0	<1.0	<4.0	<2.0	1.83	<1.0	21	<0.20	210	<1.0	<1.0	0.164	0.648	0.812 (ND)			
3/10/2023	Det 9/ Ass 2	764.4	16.07	26.7	0.42	0.34	7.43	11	1.02	160	490	3,600	95	(NA)	(NA)	85	(NA)	(NA)	(NA)	(NA)	(NA)	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)	(NA)	<2.0	0.58	(NA)	23.0	(NA)	89.8	<1.0	(NA)	(NA)	(NA)	(NA)		

Notes:

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- Less than (<) symbol denotes concentration not detected at or above reporting limits. Bold values indicate analyte detected above reporting limit.
- (ND) denotes Radium 226 and 228 (combined) concentration not detected above minimum detectable activity.
- (NA) denotes analysis not conducted, not available at time of report, or not confirmed/replaced by resampling.
- Baseline monitoring per USEPA 40 CFR 257.93.
- Detection monitoring per USEPA 40 CFR 257.94. Detection Monitoring database comprised of analytical results for pH, Chloride, Fluoride, Sulfate, TDS, Boron, and Calcium.
- Assessment monitoring per USEPA 40 CFR 257.95. Note Fluoride included in both Assessment and Detection Monitoring Constituents, but data screening may be conducted over a different range.
- Shaded cells indicate resampling occurred. Data that were not confirmed or were replaced by resample data is indicated with (NA) in shaded cell.
- Red text with black border represent outlier values identified by Sanitas.
- Blue shaded cells with black border indicate data removed for correction of a trend identified by Sanitas (Sen's Slope / Mann-Kendall).
- Analytical Data Qualifiers provided by Laboratory:
 - "L" - Analyte detected below quantitation limits
 - "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

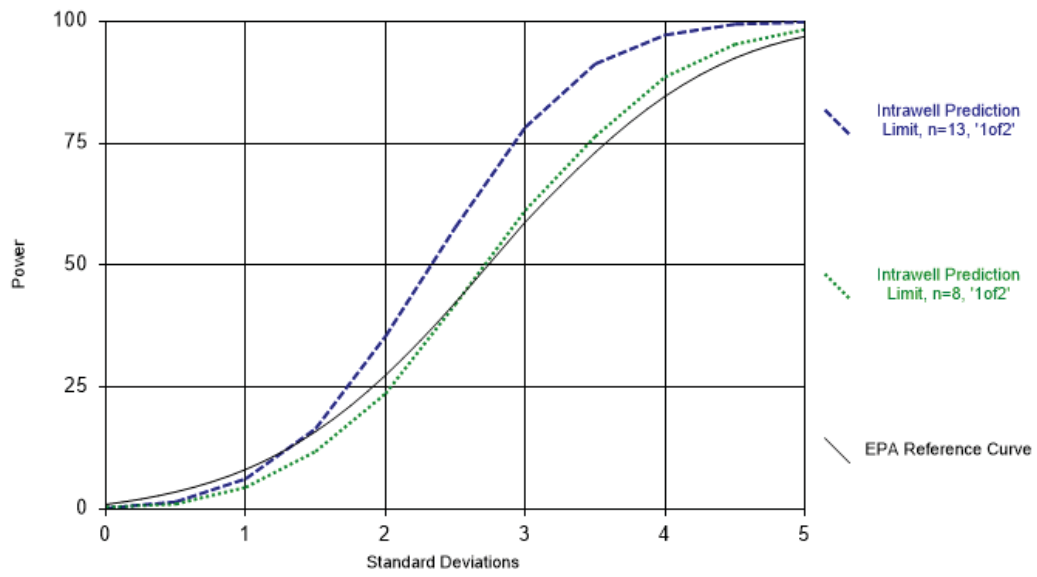
Well ID	Date	Monitoring Purpose	Spec. Cond. µmhos/cm	Temp. °C	ORP mV	D.O. mg/L	Turbidity NTU	pH S.U.	Chloride mg/L	Fluoride mg/L	Sulfate mg/L	TDS mg/L	Boron mg/L	Calcium mg/L	Antimony ug/L	Arsenic ug/L	Barium ug/L	Beryllium ug/L	Cadmium ug/L	Chromium ug/L	Cobalt ug/L	Fluoride mg/L	Lead ug/L	Lithium ug/L	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
	10/02/2023	Background	720.70	20.81	-44.2	0.26	2.52	6.98	19	0.29	171	440	285	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	725.4	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)	(NA)	<2.0	<0.25	(NA)	<10.0	(NA)	19.3	<1.0	(NA)	(NA)	(NA)

- Notes:**
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 - Baseline monitoring per USEPA 40 CFR 257.93.
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 - Red text with black border represent outlier values identified by Santitas.
 - Blue shaded cells with black border indicate data removed for correction of a trend identified by Santitas (Sen's Slope / Mann-Kendall).
 - Analytical Data Qualifiers provided by Laboratory:
 - "J" - Analyte detected below quantitation limits
 - "S" - Spike Recovery outside recovery limits

Appendix 5

Statistical Power Curves

Power Curve



Analysis Run 7/24/2023 2:53 PM View: ApplII&IV

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 6

Time Series Plots

100% Non-Detects

Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Antimony (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Beryllium (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Cadmium (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Chromium (ug/L)

MW-2, MW-3, MW-7, MW-1R, MW10

Lead (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Mercury (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

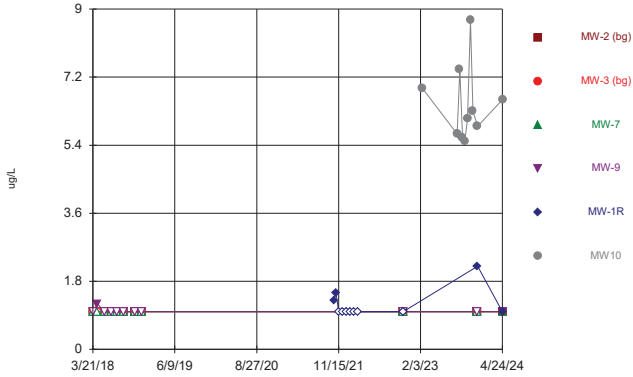
Radium (pCi/L)

MW10

Thallium (ug/L)

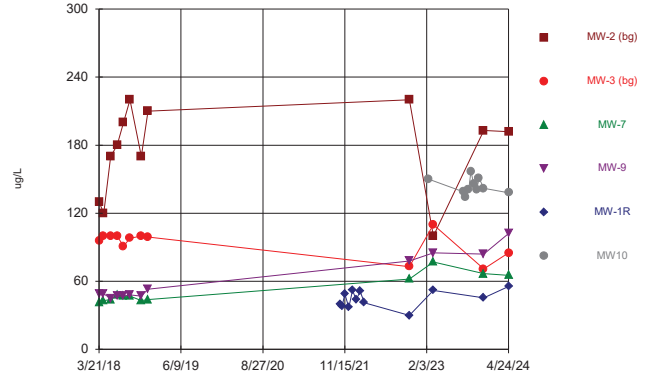
MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Arsenic



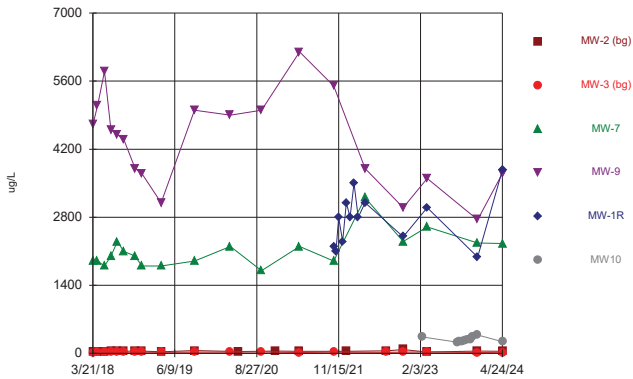
Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium



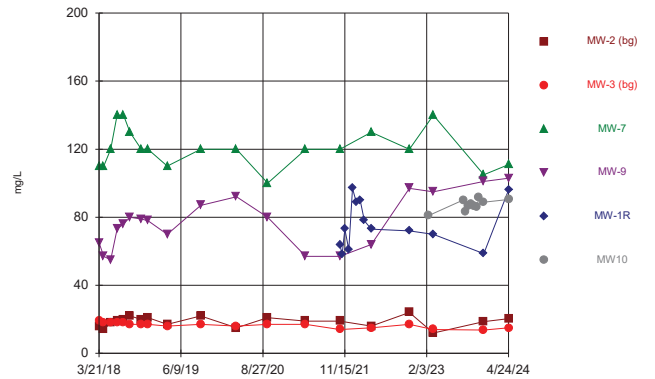
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 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Boron



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

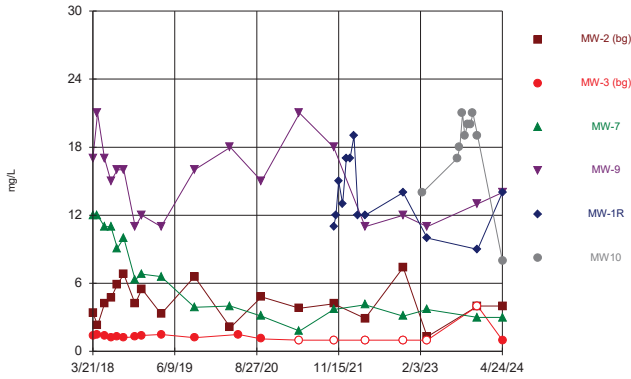
Calcium



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v. 10.0.16 Software licensed to GREDELL Engineering, UG
Hollow symbols indicate censored values.

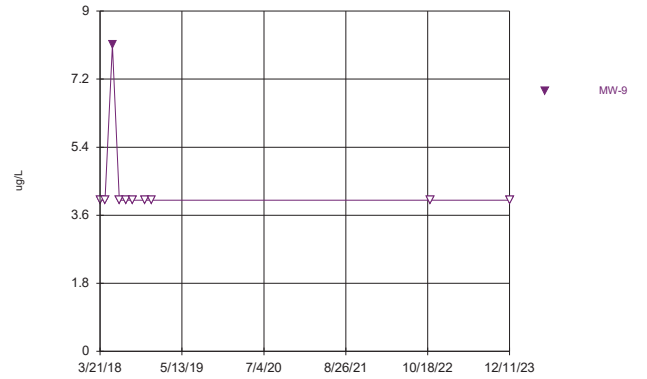
Chloride



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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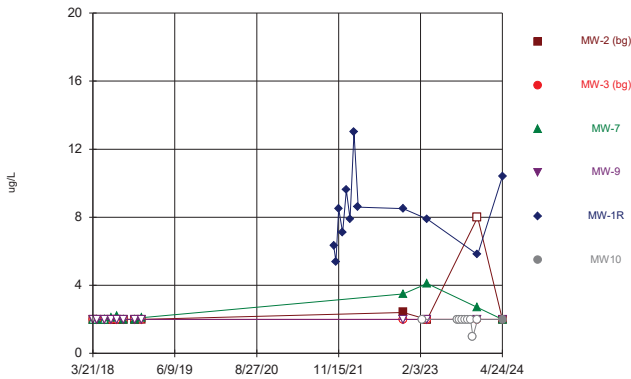
Chromium



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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Hollow symbols indicate censored values.

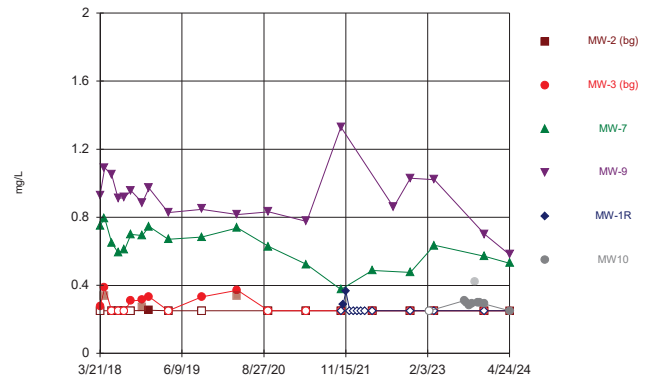
Cobalt



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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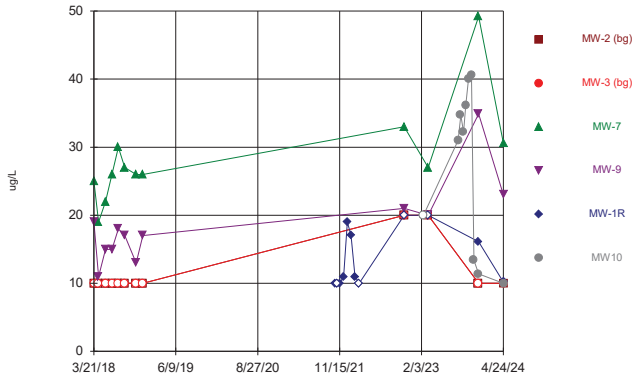
Fluoride



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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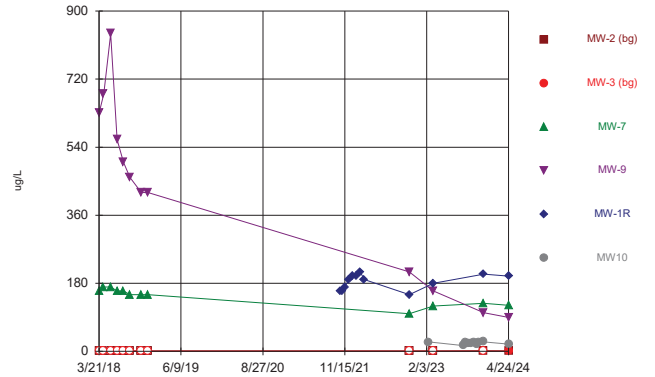
Lithium



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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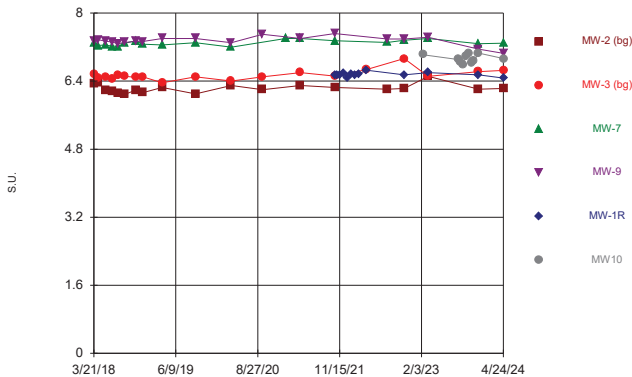
Molybdenum



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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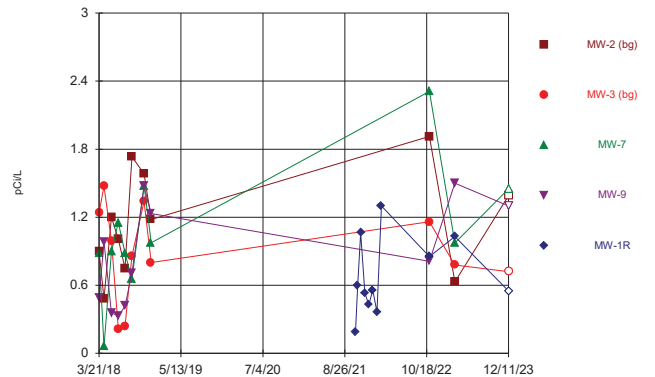
pH



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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

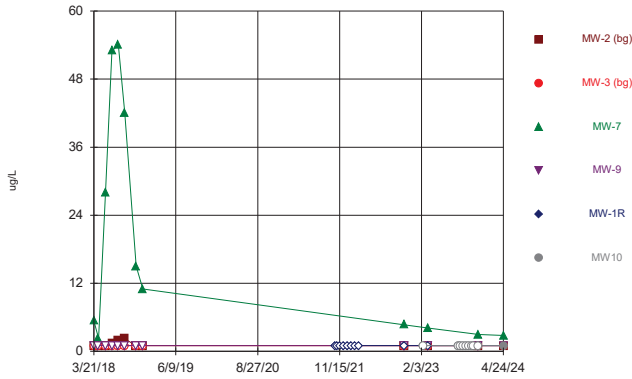
Sanitas™ v. 10.0.16 Software licensed to GREDELL Engineering, UG
Hollow symbols indicate censored values.

Radium



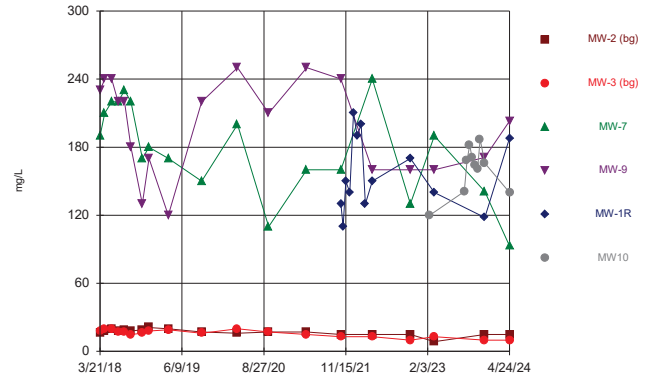
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Selenium



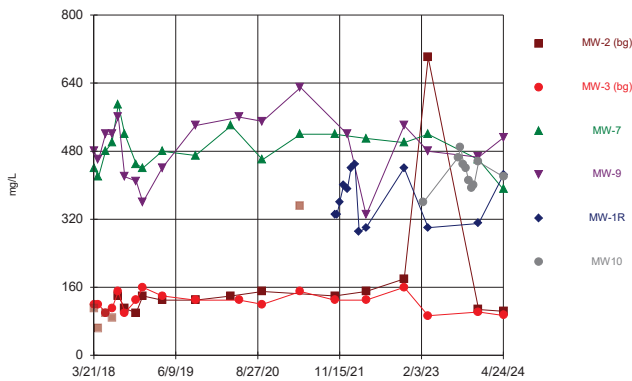
Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sulfate



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Total Dissolved Solids



Time Series Analysis Run 5/15/2024 1:37 PM View: MW237and9 trends and outliers removed 12-27-2023
 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 5/15/2024, 1:39 PM

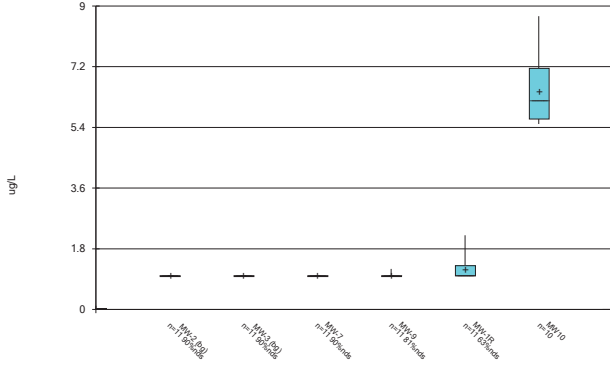
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Arsenic (ug/L)	MW-2 (bg)	11	1	0	0	1	1	1	90.91
Arsenic (ug/L)	MW-3 (bg)	11	1	0	0	1	1	1	90.91
Arsenic (ug/L)	MW-7	11	1	0	0	1	1	1	90.91
Arsenic (ug/L)	MW-9	11	1.018	0.0603	0.01818	1	1	1.2	81.82
Arsenic (ug/L)	MW-1R	11	1.182	0.3763	0.1135	1	1	2.2	63.64
Arsenic (ug/L)	MW10	10	6.47	0.99	0.3131	6.2	5.5	8.7	0
Barium (ug/L)	MW-2 (bg)	12	175.4	39.61	11.44	186	100	220	0
Barium (ug/L)	MW-3 (bg)	12	93.59	11.68	3.372	98.5	71	110	0
Barium (ug/L)	MW-7	12	52.33	12.03	3.472	47	41	77	0
Barium (ug/L)	MW-9	12	61.18	20.1	5.802	49	45	102	0
Barium (ug/L)	MW-1R	12	44.58	7.618	2.199	44.75	30	55.5	0
Barium (ug/L)	MW10	10	143.9	6.999	2.213	141.5	134	157	0
Boron (ug/L)	MW-2 (bg)	19	43.19	12.76	2.927	43	23	81	0
Boron (ug/L)	MW-3 (bg)	19	23.76	5.459	1.252	25	13	31	0
Boron (ug/L)	MW-7	19	2112	351.3	80.6	2000	1700	3200	0
Boron (ug/L)	MW-9	19	4376	963.6	221.1	4500	2750	6200	0
Boron (ug/L)	MW-1R	13	2758	544.7	151.1	2800	1980	3770	0
Boron (ug/L)	MW10	10	285.4	50.87	16.09	273.5	233	378	0
Calcium (mg/L)	MW-2 (bg)	19	18.63	3.033	0.6957	19	12	24	0
Calcium (mg/L)	MW-3 (bg)	19	16.51	1.534	0.3518	17	13.7	19	0
Calcium (mg/L)	MW-7	19	120.3	11.56	2.651	120	100	140	0
Calcium (mg/L)	MW-9	19	77.16	15.61	3.581	78	55	103	0
Calcium (mg/L)	MW-1R	13	75.35	13.74	3.811	73	58	97	0
Calcium (mg/L)	MW10	10	87.23	3.261	1.031	87.05	81	91.7	0
Chloride (mg/L)	MW-2 (bg)	19	4.284	1.627	0.3732	4.2	1.3	7.4	0
Chloride (mg/L)	MW-3 (bg)	19	1.368	0.665	0.1526	1.2	1	4	31.58
Chloride (mg/L)	MW-7	19	6.221	3.518	0.8072	4.1	1.8	12	0
Chloride (mg/L)	MW-9	19	15	3.232	0.7414	15	11	21	0
Chloride (mg/L)	MW-1R	13	13.46	2.933	0.8135	13	9	19	0
Chloride (mg/L)	MW10	10	17.7	4.001	1.265	19	8	21	0
Chromium (ug/L)	MW-9	10	4.41	1.297	0.41	4	4	8.1	90
Cobalt (ug/L)	MW-2 (bg)	12	2.533	1.725	0.4981	2	2	8	75
Cobalt (ug/L)	MW-3 (bg)	12	2	0	0	2	2	2	91.67
Cobalt (ug/L)	MW-7	12	2.392	0.6986	0.2017	2.05	2	4.1	16.67
Cobalt (ug/L)	MW-9	12	2	0	0	2	2	2	91.67
Cobalt (ug/L)	MW-1R	12	8.25	2.105	0.6077	8.2	5.4	13	0
Cobalt (ug/L)	MW10	10	1.9	0.3162	0.1	2	1	2	90
Fluoride (mg/L)	MW-2 (bg)	16	0.2503	0.001	0.00025	0.25	0.25	0.254	87.5
Fluoride (mg/L)	MW-3 (bg)	19	0.2799	0.04585	0.01052	0.25	0.25	0.386	57.89
Fluoride (mg/L)	MW-7	19	0.6237	0.1095	0.02512	0.635	0.375	0.794	0
Fluoride (mg/L)	MW-9	19	0.9119	0.1601	0.03673	0.91	0.58	1.33	0
Fluoride (mg/L)	MW-1R	13	0.2617	0.03288	0.00912	0.25	0.25	0.366	76.92
Fluoride (mg/L)	MW10	9	0.2856	0.02186	0.007286	0.29	0.25	0.31	11.11
Lithium (ug/L)	MW-2 (bg)	12	11.67	3.892	1.124	10	10	20	91.67
Lithium (ug/L)	MW-3 (bg)	12	11.67	3.892	1.124	10	10	20	91.67
Lithium (ug/L)	MW-7	12	28.4	7.527	2.173	26.5	19	49.2	0
Lithium (ug/L)	MW-9	12	18.66	6.13	1.77	17.5	11	34.9	8.333
Lithium (ug/L)	MW-1R	12	13.69	4.324	1.248	11	10	20	33.33
Lithium (ug/L)	MW10	10	26.95	12.05	3.811	31.6	10	40.6	10
Molybdenum (ug/L)	MW-2 (bg)	12	1.033	0.1155	0.03333	1	1	1.4	83.33

Box & Whiskers Plot

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 1:39 PM

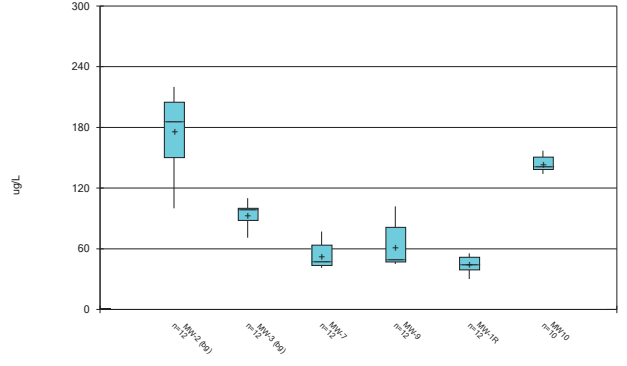
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Molybdenum (ug/L)	MW-3 (bg)	12	1	0	0	1	1	1	91.67
Molybdenum (ug/L)	MW-7	12	144.9	22.37	6.457	150	100	170	0
Molybdenum (ug/L)	MW-9	12	422.7	240.7	69.49	440	89.8	840	0
Molybdenum (ug/L)	MW-1R	12	184.4	20.01	5.775	190	150	210	0
Molybdenum (ug/L)	MW10	10	21.83	3.404	1.076	22.85	15.4	25.2	0
pH (S.U.)	MW-2 (bg)	19	6.229	0.1033	0.02369	6.21	6.09	6.51	0
pH (S.U.)	MW-3 (bg)	19	6.542	0.122	0.02798	6.51	6.36	6.93	0
pH (S.U.)	MW-7	19	7.299	0.06306	0.01447	7.29	7.2	7.4	0
pH (S.U.)	MW-9	19	7.346	0.1078	0.02472	7.35	7.05	7.52	0
pH (S.U.)	MW-1R	13	6.555	0.04754	0.01319	6.55	6.47	6.66	0
pH (S.U.)	MW10	10	6.93	0.09428	0.02981	6.92	6.79	7.06	0
Radium (pCi/L)	MW-2 (bg)	11	1.16	0.4615	0.1392	1.18	0.483	1.913	9.091
Radium (pCi/L)	MW-3 (bg)	11	0.8927	0.41	0.1236	0.86	0.214	1.475	9.091
Radium (pCi/L)	MW-7	11	1.065	0.5625	0.1696	0.973	0.062	2.31	9.091
Radium (pCi/L)	MW-9	11	0.8728	0.4498	0.1356	0.812	0.327	1.5	9.091
Radium (pCi/L)	MW-1R	11	0.6784	0.3398	0.1025	0.556	0.184	1.3	9.091
Selenium (ug/L)	MW-2 (bg)	12	1.217	0.4303	0.1242	1	1	2.2	66.67
Selenium (ug/L)	MW-3 (bg)	12	1	0	0	1	1	1	91.67
Selenium (ug/L)	MW-7	12	18.78	20.18	5.825	8.2	2.3	54	0
Selenium (ug/L)	MW-9	12	1	0	0	1	1	1	91.67
Selenium (ug/L)	MW-1R	12	1	0	0	1	1	1	91.67
Selenium (ug/L)	MW10	10	1	0	0	1	1	1	90
Sulfate (mg/L)	MW-2 (bg)	19	16.83	2.742	0.629	17	8.7	21	0
Sulfate (mg/L)	MW-3 (bg)	19	15.63	3.353	0.7693	16	10	20	0
Sulfate (mg/L)	MW-7	19	178.1	41.31	9.478	180	93	240	0
Sulfate (mg/L)	MW-9	19	198.6	40.97	9.399	210	120	250	0
Sulfate (mg/L)	MW-1R	13	155.8	32.56	9.031	150	110	210	0
Sulfate (mg/L)	MW10	10	160	20.58	6.508	165	120	187	0
Total Dissolved Solids (mg/L)	MW-2 (bg)	14	173	153.2	40.95	140	100	700	0
Total Dissolved Solids (mg/L)	MW-3 (bg)	19	124.7	21.23	4.87	130	93	160	0
Total Dissolved Solids (mg/L)	MW-7	19	484.7	47.18	10.82	480	390	590	0
Total Dissolved Solids (mg/L)	MW-9	19	489.4	74.22	17.03	512	330	630	0
Total Dissolved Solids (mg/L)	MW-1R	13	366.5	60.11	16.67	360	290	450	0
Total Dissolved Solids (mg/L)	MW10	10	428.6	38.66	12.22	430	360	490	0

Arsenic



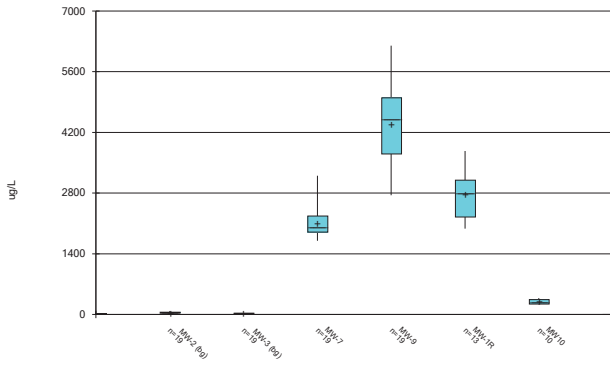
Box & Whiskers Plot Analysis Run 5/15/2024 1:38 PM View: MW23and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Barium



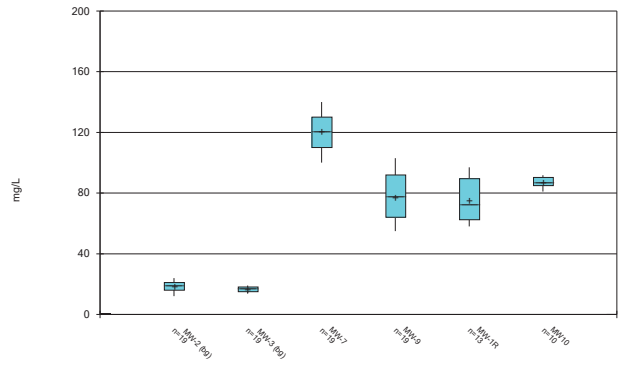
Box & Whiskers Plot Analysis Run 5/15/2024 1:38 PM View: MW23and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Boron



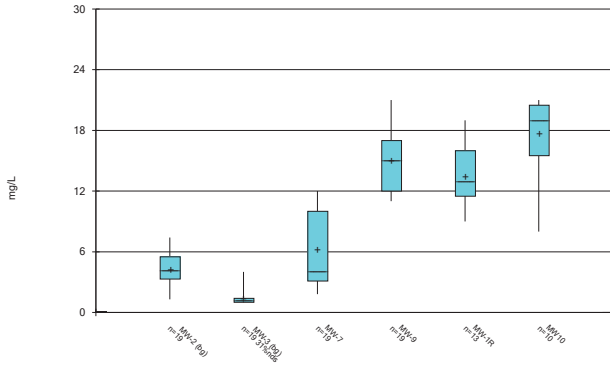
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW23and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Calcium



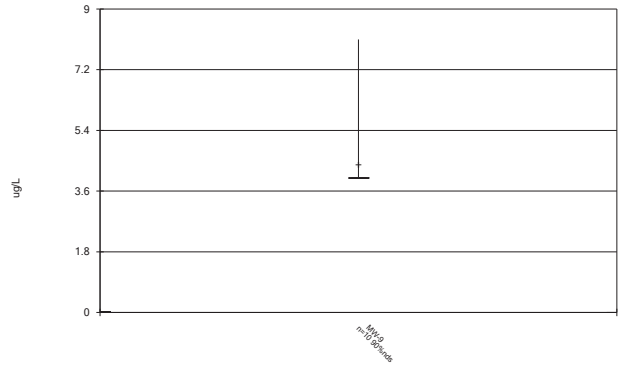
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW23and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chloride



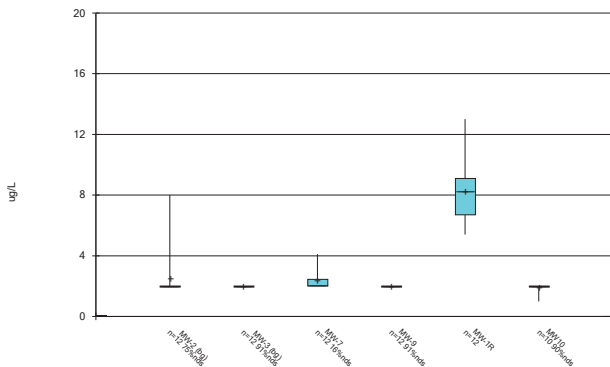
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Chromium



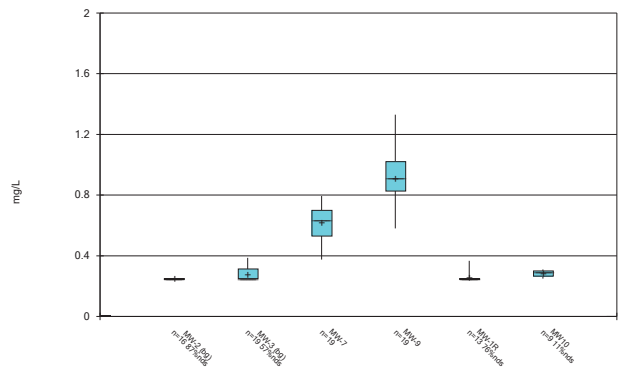
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Cobalt



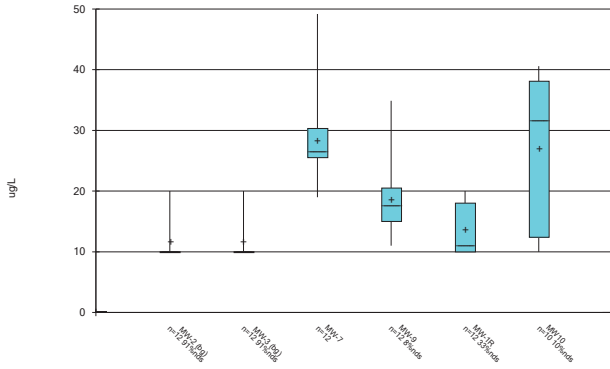
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Fluoride



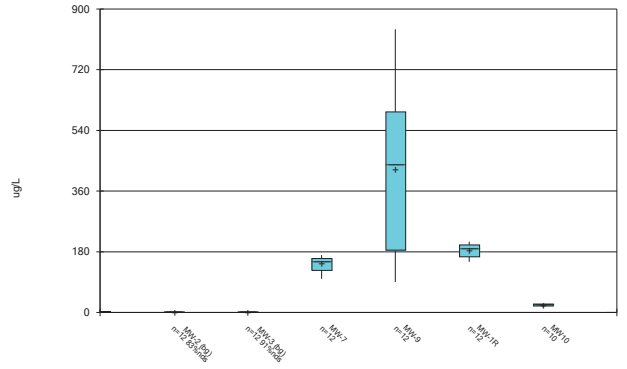
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Lithium



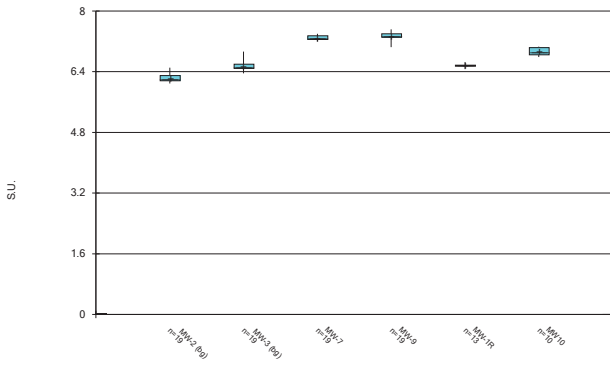
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Molybdenum



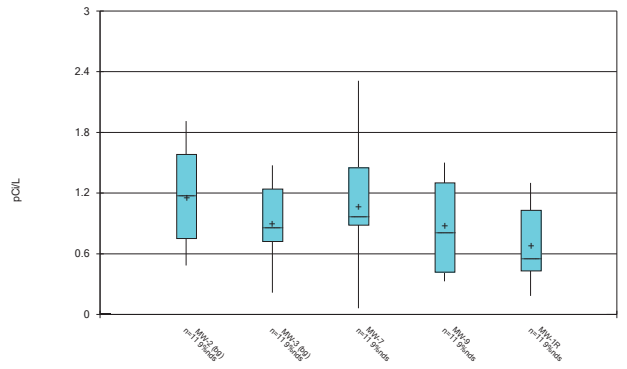
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

pH



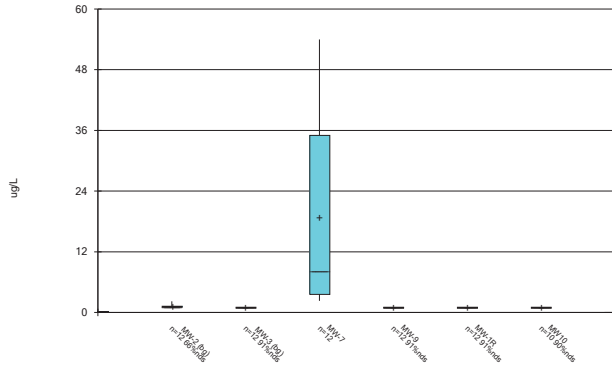
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Radium



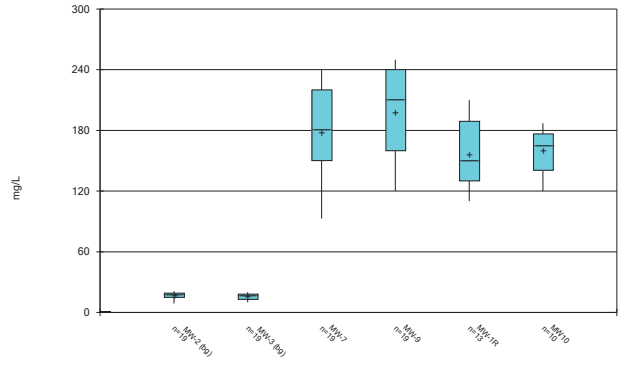
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Selenium



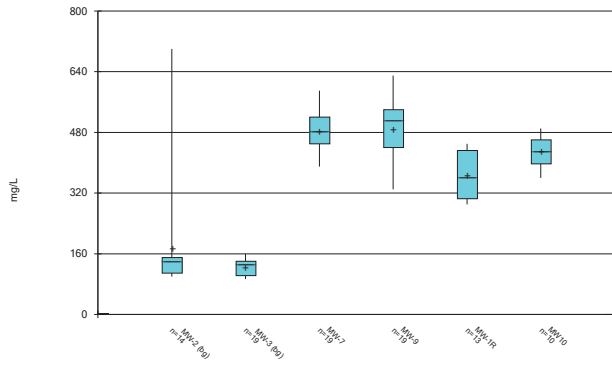
Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sulfate



Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Total Dissolved Solids



Box & Whiskers Plot Analysis Run 5/15/2024 1:39 PM View: MW237and9 trends and outliers removed 12-SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 8

Prediction Limit Charts – Constituents

Appendix 8

Prediction Limit Charts - Constituents
(2nd 2023 Semi-annual Monitoring Event)
December 11, 2023

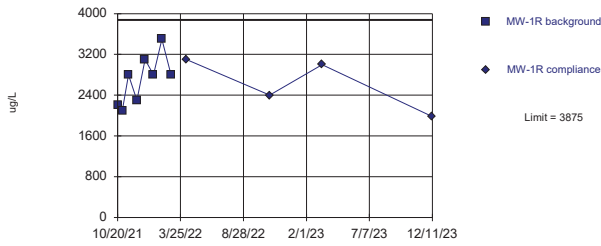
Prediction Limit

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 7/2/2024, 12:05 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-1R	3875	n/a	12/11/2023	1980	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-1R	112.4	n/a	12/11/2023	58.6	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-1R	21.7	n/a	12/11/2023	9	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-1R	0.366	n/a	12/11/2023	0.25ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
pH (S.U.)	MW-1R	6.58	6.48	12/11/2023	6.55	No	8	0	n/a	0.04288	NP Intra (normality) ...
Sulfate (mg/L)	MW-1R	249.2	n/a	12/11/2023	118	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-1R	512.1	n/a	12/11/2023	310	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron
Intrawell Parametric

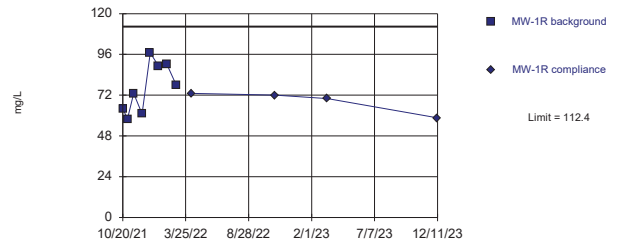


Background Data Summary: Mean=2700, Std. Dev.=478.1, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.929, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:04 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium
Intrawell Parametric

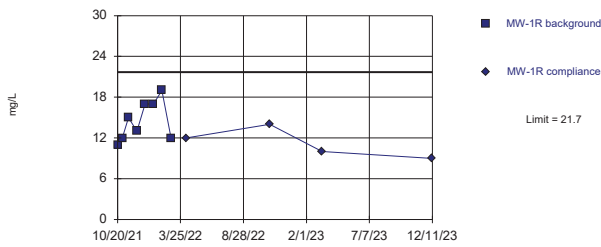


Background Data Summary: Mean=76.25, Std. Dev.=14.69, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9262, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride
Intrawell Parametric

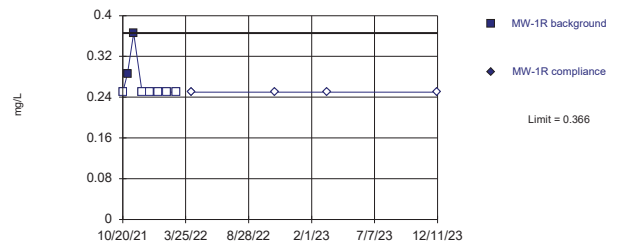


Background Data Summary: Mean=14.5, Std. Dev.=2.928, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9145, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Fluoride
Intrawell Non-parametric



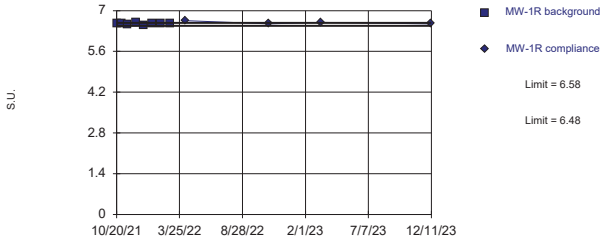
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Prediction Limit Analysis Run 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH

Intrawell Non-parametric



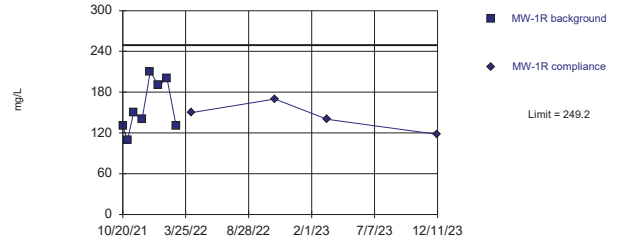
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

Prediction Limit Analysis Run 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate

Intrawell Parametric



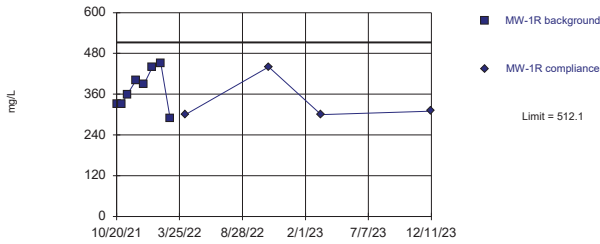
Background Data Summary: Mean=157.5, Std. Dev.=37.32, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9002, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within 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 7/2/2024 12:05 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

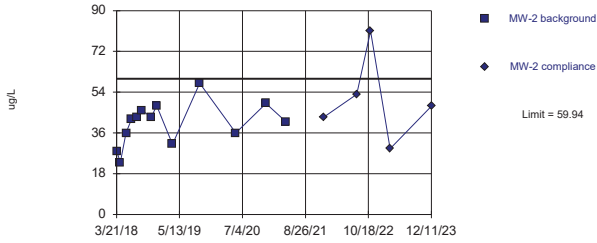
Prediction Limit

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 7/2/2024, 12:08 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-2	59.94	n/a	12/11/2023	47.8	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-3	33.39	n/a	12/11/2023	17.4	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-7	2352	n/a	12/11/2023	2270	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-9	6408	n/a	12/11/2023	2750	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-2	24.21	n/a	12/11/2023	18.6	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-3	19.08	n/a	12/11/2023	13.7	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-7	144	n/a	12/11/2023	105	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-9	97.23	n/a	12/11/2023	101	Yes	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-2	7.525	n/a	12/11/2023	4	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-3	1.641	n/a	12/11/2023	4ND	No	13	7.692	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-7	14.94	n/a	12/11/2023	3J	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-9	22.51	n/a	12/11/2023	13	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.254	n/a	12/11/2023	0.25ND	No	10	90	n/a	0.01476	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-3	0.386	n/a	12/11/2023	0.25ND	No	13	46.15	n/a	0.009692	NP Intra (normality) ...
Fluoride (mg/L)	MW-7	0.831	n/a	12/11/2023	0.57	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-9	1.101	n/a	12/11/2023	0.7	No	13	0	No	0.002505	Param Intra 1 of 2
pH (S.U.)	MW-2	6.405	6.013	12/11/2023	6.21	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-3	6.626	6.359	12/11/2023	6.62	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-7	7.42	7.148	12/11/2023	7.28	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-9	7.477	7.237	12/11/2023	7.15	Yes	13	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	21.42	n/a	12/11/2023	15	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	21.29	n/a	12/11/2023	10	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	259	n/a	12/11/2023	141	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-9	279.2	n/a	12/11/2023	171	No	13	0	x^2	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	171.5	n/a	12/11/2023	108	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	166.7	n/a	12/11/2023	102	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	584.1	n/a	12/11/2023	460	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-9	653	n/a	12/11/2023	466	No	13	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron Intrawell Parametric

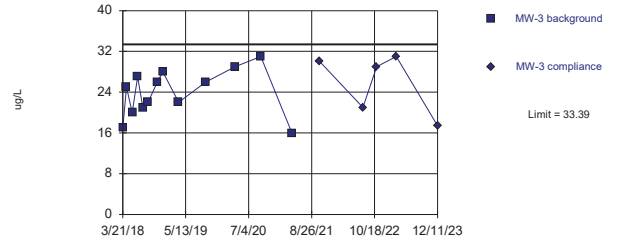


Background Data Summary: Mean=40.31, Std. Dev.=9.455, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.98, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Boron Intrawell Parametric

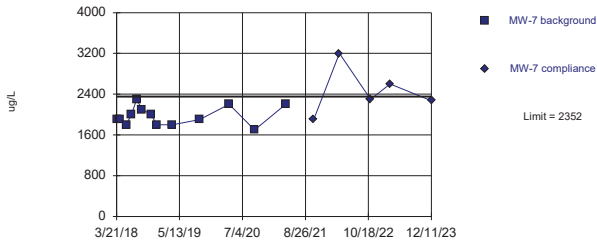


Background Data Summary: Mean=23.85, Std. Dev.=4.598, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9639, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Boron Intrawell Parametric

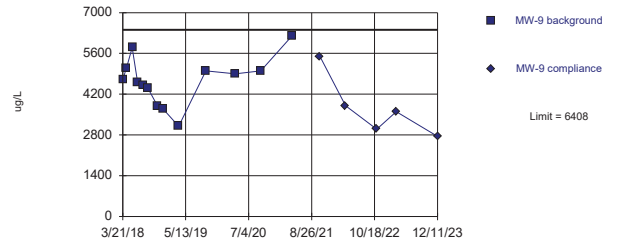


Background Data Summary: Mean=1969, Std. Dev.=184.3, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9386, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Boron Intrawell Parametric

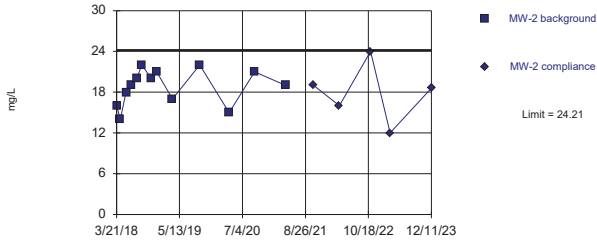


Background Data Summary: Mean=4677, Std. Dev.=833.8, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9713, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

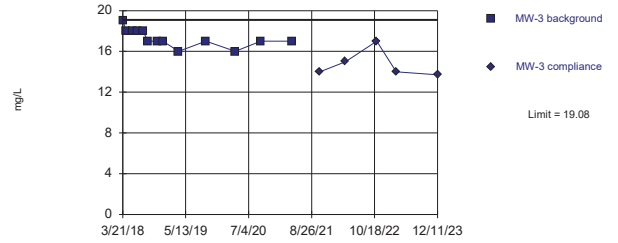


Background Data Summary: Mean=18.77, Std. Dev.=2.619, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.936, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

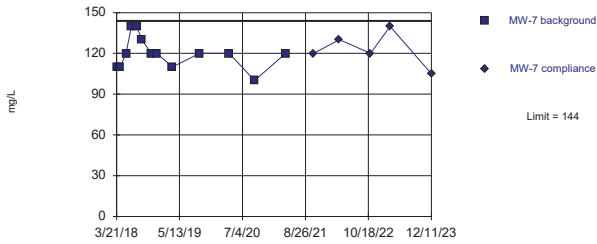


Background Data Summary: Mean=17.31, Std. Dev.=0.8549, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8905, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

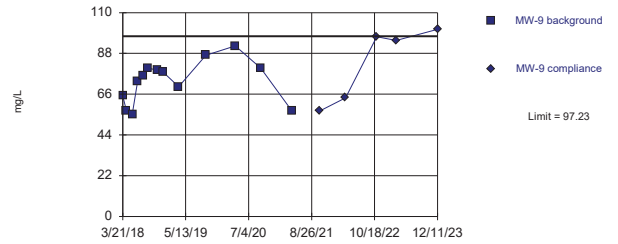


Background Data Summary: Mean=120, Std. Dev.=11.55, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8997, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Calcium Intrawell Parametric

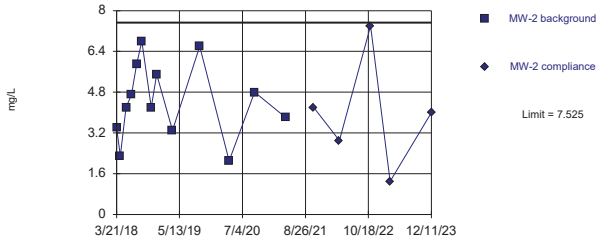


Background Data Summary: Mean=73, Std. Dev.=11.67, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.939, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

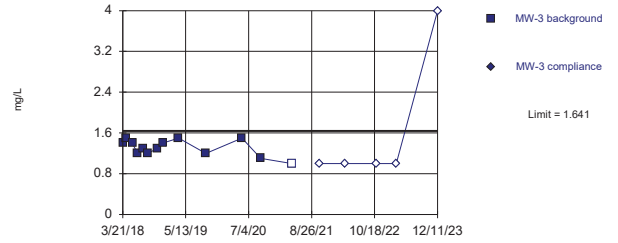


Background Data Summary: Mean=4.431, Std. Dev.=1.49, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.965, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

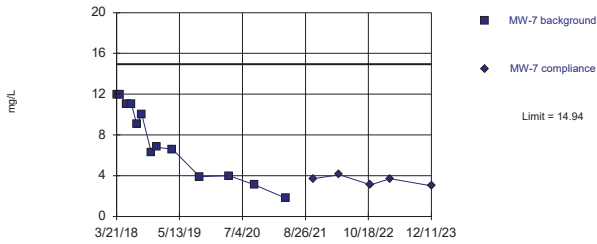


Background Data Summary: Mean=1.308, Std. Dev.=0.1605, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.925, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

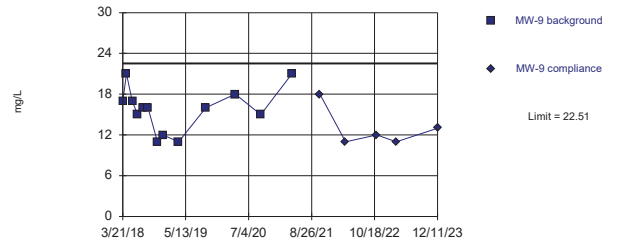


Background Data Summary: Mean=7.508, Std. Dev.=3.578, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9179, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric



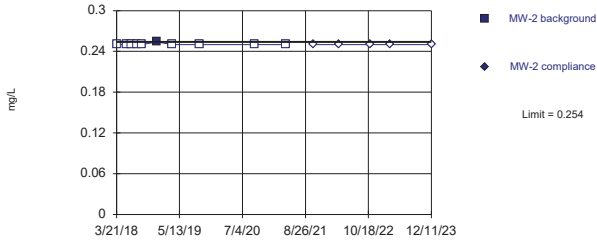
Background Data Summary: Mean=15.85, Std. Dev.=3.211, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9243, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v. 10.0.19 Software licensed to GREDELL Engineering, UG
Hollow symbols indicate censored values.

Within Limit

Fluoride
Intrawell Non-parametric



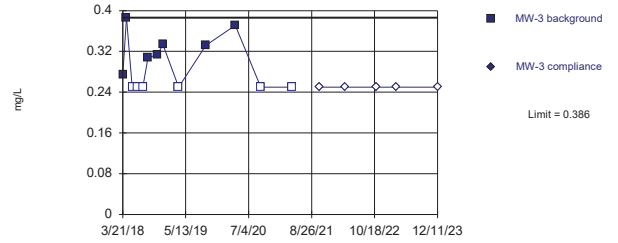
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Well-constituent pair annual alpha = 0.0293. Individual comparison alpha = 0.01476 (1 of 2).

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v. 10.0.19 Software licensed to GREDELL Engineering, UG
Hollow symbols indicate censored values.

Within Limit

Fluoride
Intrawell Non-parametric



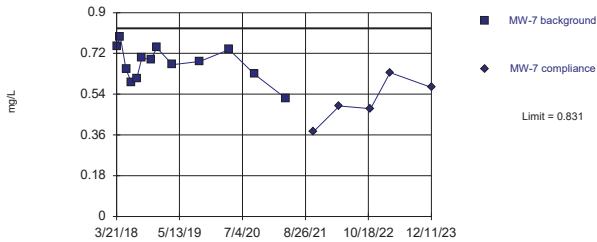
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 13 background values. 46.15% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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Within Limit

Fluoride
Intrawell Parametric



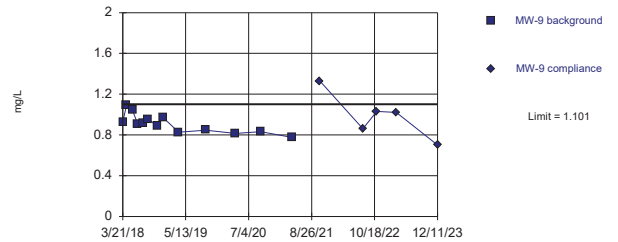
Background Data Summary: Mean=0.6751, Std. Dev.=0.07508, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9808, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002905.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v. 10.0.19 Software licensed to GREDELL Engineering, UG

Within Limit

Fluoride
Intrawell Parametric

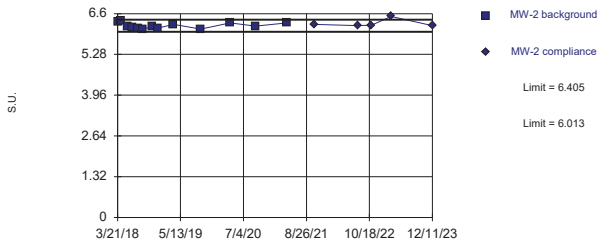


Background Data Summary: Mean=0.9082, Std. Dev.=0.09266, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9545, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002905.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH Intrawell Parametric

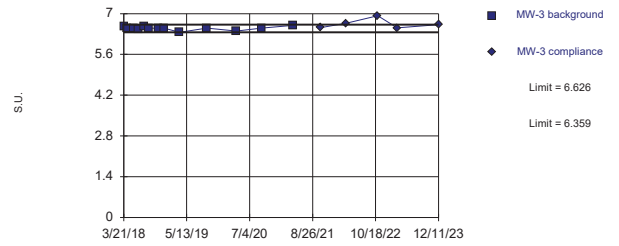


Background Data Summary: Mean=6.209, Std. Dev.=0.09429, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.922, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH Intrawell Parametric

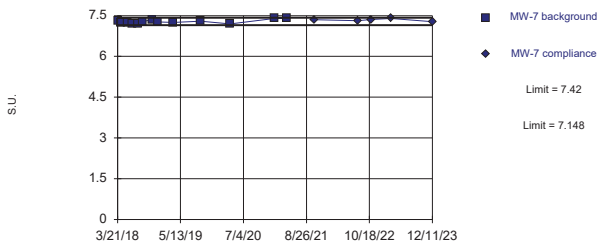


Background Data Summary: Mean=6.492, Std. Dev.=0.06418, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH Intrawell Parametric

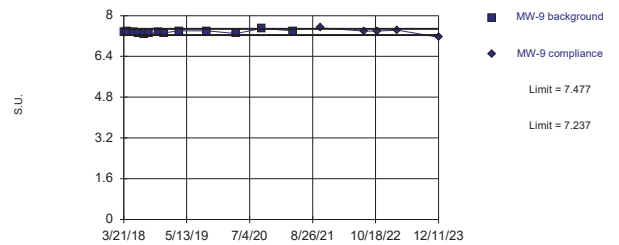


Background Data Summary: Mean=7.284, Std. Dev.=0.06552, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9081, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH Intrawell Parametric

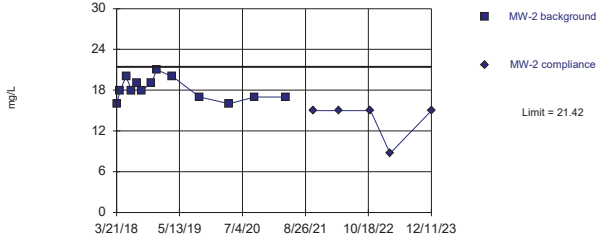


Background Data Summary: Mean=7.357, Std. Dev.=0.05793, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.91, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate Intrawell Parametric

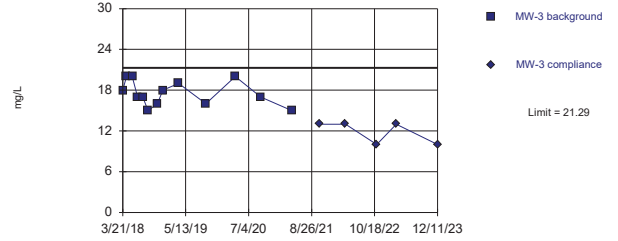


Background Data Summary: Mean=18.15, Std. Dev.=1.573, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:06 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate Intrawell Parametric

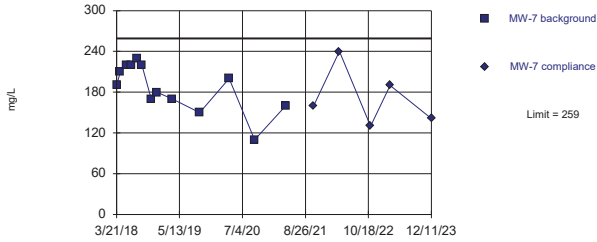


Background Data Summary: Mean=17.54, Std. Dev.=1.808, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9124, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Sulfate Intrawell Parametric

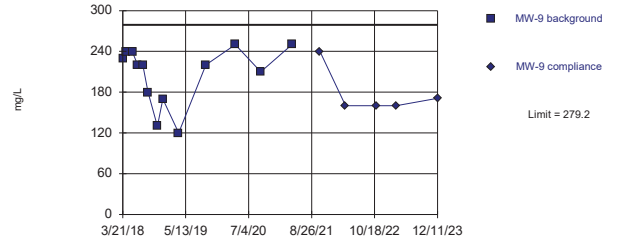


Background Data Summary: Mean=186.9, Std. Dev.=34.73, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9305, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

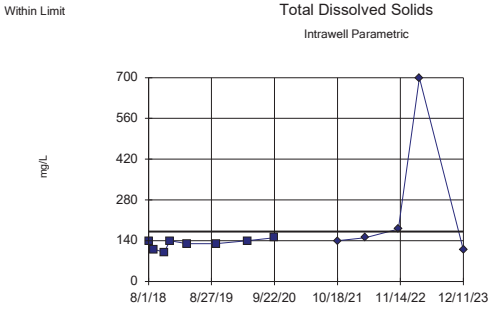
Within Limit

Sulfate Intrawell Parametric



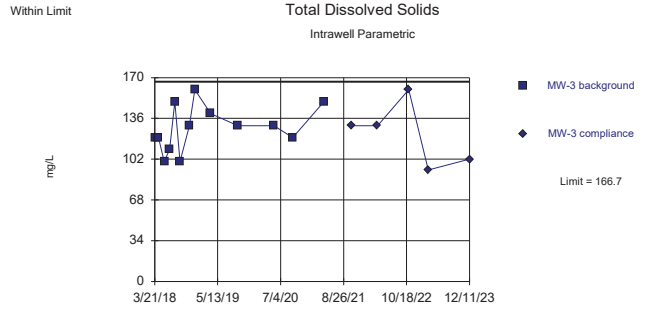
Background Data Summary (based on square transformation): Mean=44231, Std. Dev.=16238, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8921, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



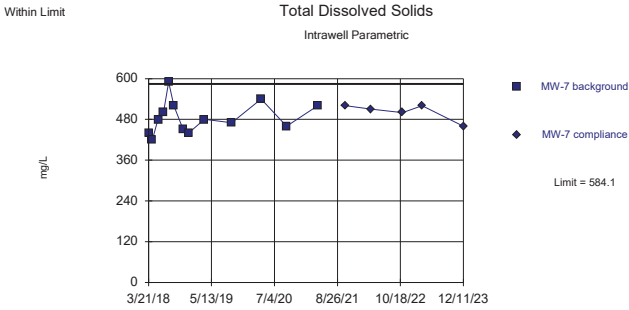
Background Data Summary: Mean=130, Std. Dev.=16.9, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8844, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



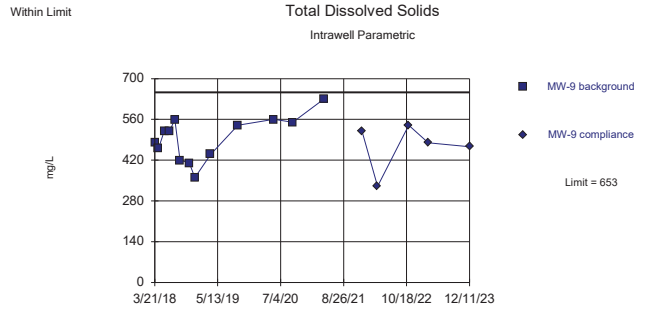
Background Data Summary: Mean=127.7, Std. Dev.=18.78, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9524, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



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 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



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 7/2/2024 12:07 PM View: MW237and9 trends and outliers removed 12-27-2
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Prediction Limit

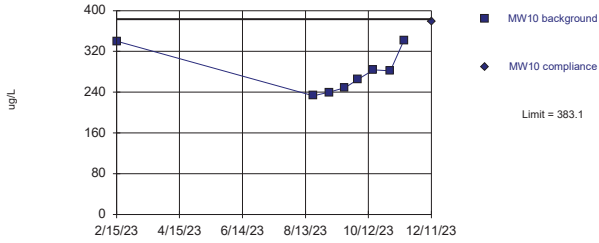
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 7/2/2024, 12:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW10	383.1	n/a	12/11/2023	378	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW10	94.97	n/a	12/11/2023	88.8	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW10	24.59	n/a	12/11/2023	19	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW10	0.42	n/a	12/11/2023	0.29	No	8	12.5	n/a	0.02144	NP Intra (normality) ...
pH (S.U.)	MW10	7.143	6.684	12/11/2023	7.06	No	8	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW10	215.5	n/a	12/11/2023	166	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW10	530.8	n/a	12/11/2023	455	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron

Intrawell Parametric



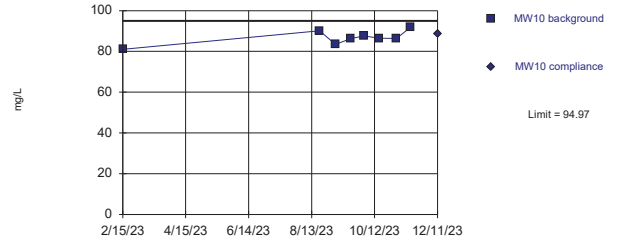
Background Data Summary: Mean=279.4, Std. Dev.=42.18, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8794, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



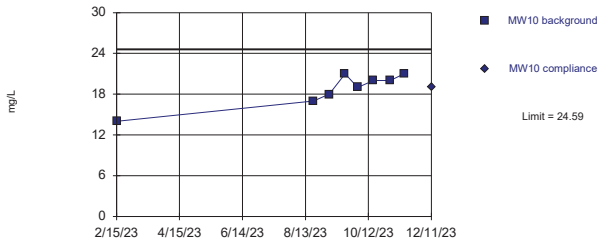
Background Data Summary: Mean=86.64, Std. Dev.=3.388, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9628, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10
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.

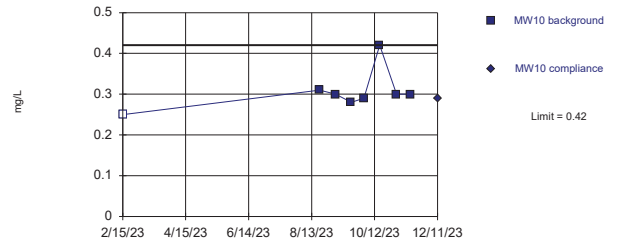
Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride

Intrawell Non-parametric



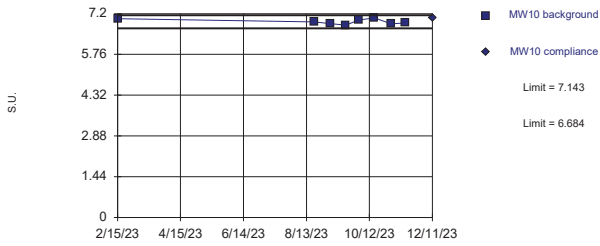
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limit is highest of 8 background values. 12.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10
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.

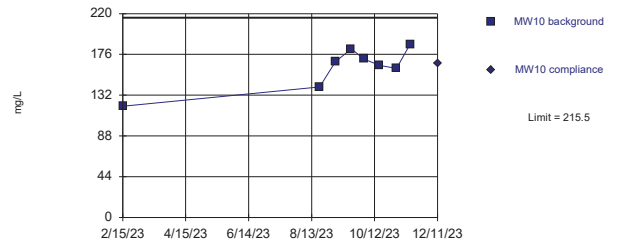
Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10

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.

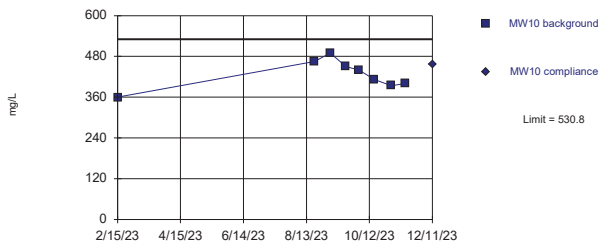
Prediction Limit Analysis Run 7/2/2024 12:01 PM View: MW-10

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 7/2/2024 12:01 PM View: MW-10

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 8

Prediction Limit Charts –Constituents
Field Sampling Notes
(1st 2024 Semi-annual Monitoring Event)
April 23, 2024

Prediction Limit

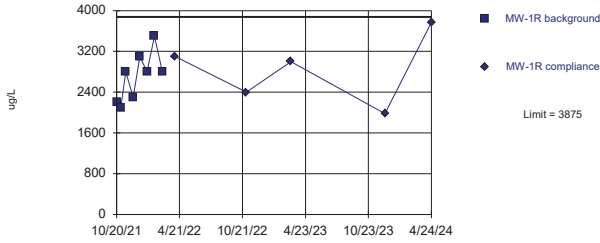
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 1:26 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-1R	3875	n/a	4/24/2024	3770	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-1R	112.4	n/a	4/24/2024	95.9	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-1R	21.7	n/a	4/24/2024	14	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-1R	0.366	n/a	4/24/2024	0.25	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
pH (S.U.)	MW-1R	6.58	6.48	4/24/2024	6.47	Yes	8	0	n/a	0.04288	NP Intra (normality) ...
Sulfate (mg/L)	MW-1R	249.2	n/a	4/24/2024	188	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-1R	512.1	n/a	4/24/2024	424	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron

Intrawell Parametric



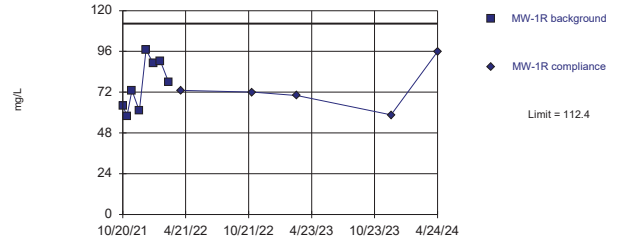
Background Data Summary: Mean=2700, Std. Dev.=478.1, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.929, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:25 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium

Intrawell Parametric



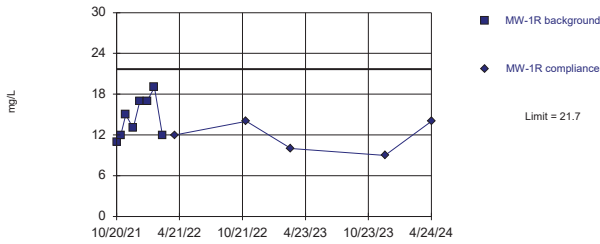
Background Data Summary: Mean=76.25, Std. Dev.=14.69, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9262, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:25 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride

Intrawell Parametric



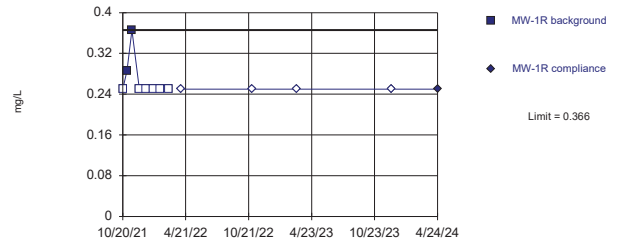
Background Data Summary: Mean=14.5, Std. Dev.=2.928, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9145, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:26 PM View: MW-1R
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Fluoride

Intrawell Non-parametric



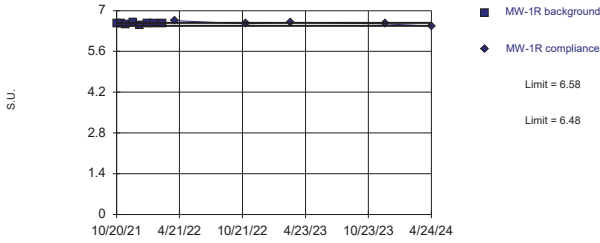
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Prediction Limit Analysis Run 5/15/2024 1:26 PM View: MW-1R
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).

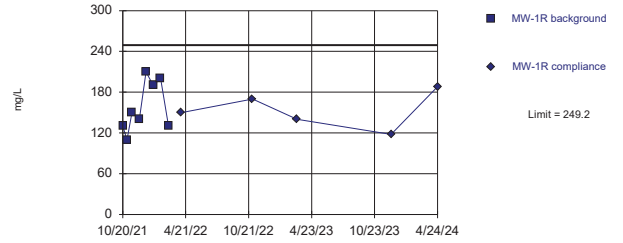
Prediction Limit Analysis Run 5/15/2024 1:26 PM View: MW-1R

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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.

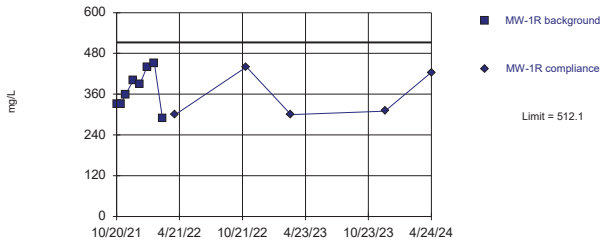
Prediction Limit Analysis Run 5/15/2024 1:26 PM View: MW-1R

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within 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.

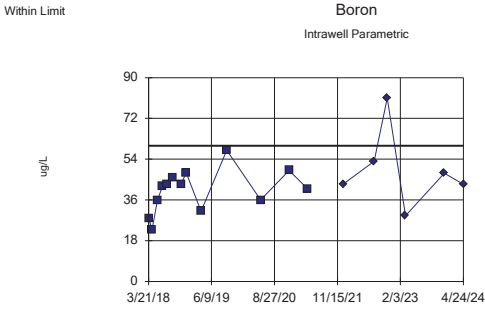
Prediction Limit Analysis Run 5/15/2024 1:26 PM View: MW-1R

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

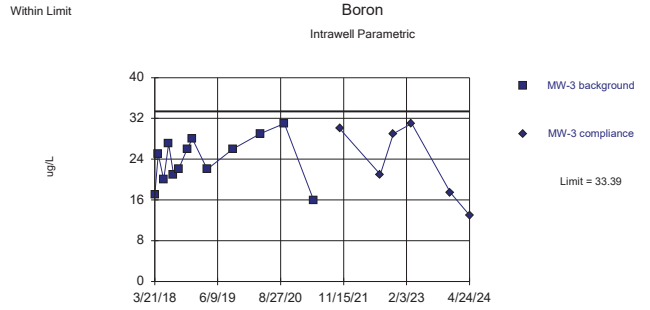
Prediction Limit

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 1:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW-2	59.94	n/a	4/24/2024	42.9	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-3	33.39	n/a	4/24/2024	13	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-7	2352	n/a	4/24/2024	2260	No	13	0	No	0.002505	Param Intra 1 of 2
Boron (ug/L)	MW-9	6408	n/a	4/24/2024	3700	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-2	24.21	n/a	4/24/2024	20.4	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-3	19.08	n/a	4/24/2024	15	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-7	144	n/a	4/24/2024	111	No	13	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW-9	97.23	n/a	4/24/2024	103	Yes	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-2	7.525	n/a	4/24/2024	4	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-3	1.641	n/a	4/24/2024	1	No	13	7.692	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-7	14.94	n/a	4/24/2024	3	No	13	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW-9	22.51	n/a	4/24/2024	14	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-2	0.254	n/a	4/24/2024	0.25	No	10	90	n/a	0.01476	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	MW-3	0.386	n/a	4/24/2024	0.25	No	13	46.15	n/a	0.009692	NP Intra (normality) ...
Fluoride (mg/L)	MW-7	0.831	n/a	4/24/2024	0.53	No	13	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW-9	1.101	n/a	4/24/2024	0.58	No	13	0	No	0.002505	Param Intra 1 of 2
pH (S.U.)	MW-2	6.405	6.013	4/24/2024	6.23	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-3	6.626	6.359	4/24/2024	6.65	Yes	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-7	7.42	7.148	4/24/2024	7.29	No	13	0	No	0.001253	Param Intra 1 of 2
pH (S.U.)	MW-9	7.477	7.237	4/24/2024	7.05	Yes	13	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW-2	21.42	n/a	4/24/2024	15	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-3	21.29	n/a	4/24/2024	10	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-7	259	n/a	4/24/2024	93	No	13	0	No	0.002505	Param Intra 1 of 2
Sulfate (mg/L)	MW-9	279.2	n/a	4/24/2024	203	No	13	0	x^2	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	171.5	n/a	4/24/2024	104	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	166.7	n/a	4/24/2024	94	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-7	584.1	n/a	4/24/2024	390	No	13	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-9	653	n/a	4/24/2024	512	No	13	0	No	0.002505	Param Intra 1 of 2

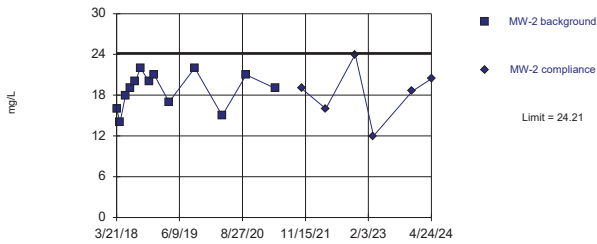


Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Within Limit

Calcium Intrawell Parametric

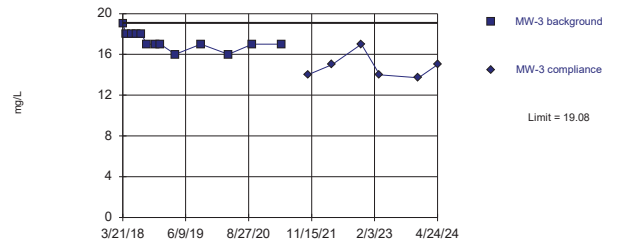


Background Data Summary: Mean=18.77, Std. Dev.=2.619, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.936, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

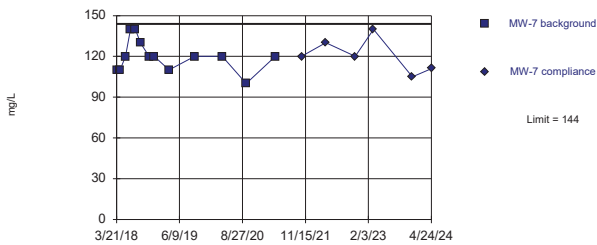


Background Data Summary: Mean=17.31, Std. Dev.=0.8549, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8905, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

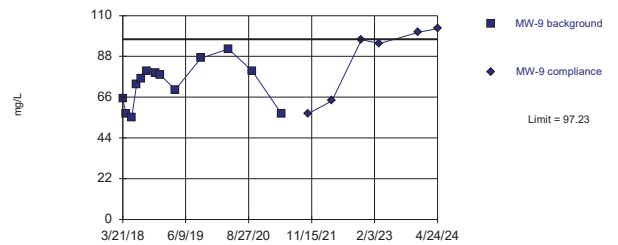


Background Data Summary: Mean=120, Std. Dev.=11.55, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8997, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limit

Calcium Intrawell Parametric

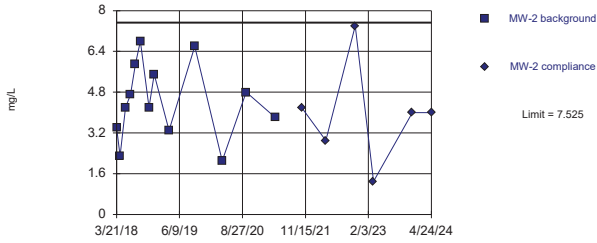


Background Data Summary: Mean=73, Std. Dev.=11.67, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.939, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

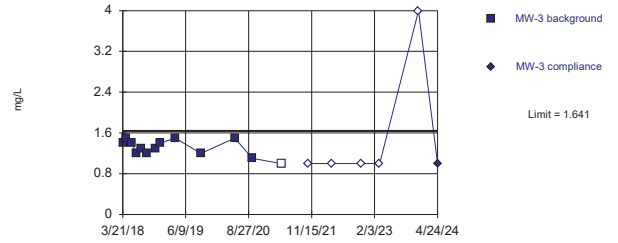


Background Data Summary: Mean=4.431, Std. Dev.=1.49, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.965, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

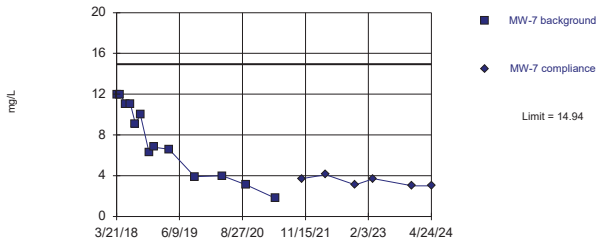


Background Data Summary: Mean=1.308, Std. Dev.=0.1605, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.925, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric

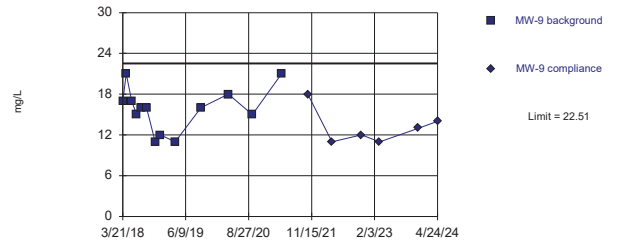


Background Data Summary: Mean=7.508, Std. Dev.=3.578, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9179, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric



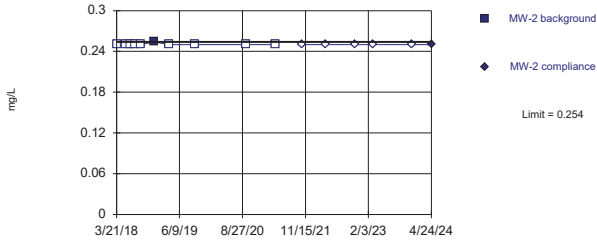
Background Data Summary: Mean=15.85, Std. Dev.=3.211, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9243, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
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



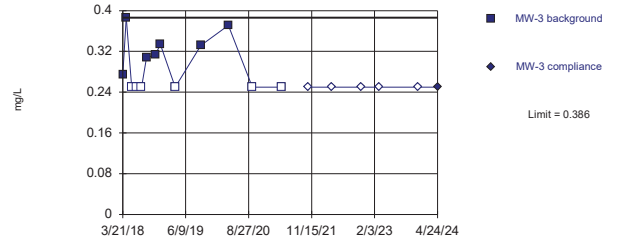
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 90% NDs. Well-constituent pair annual alpha = 0.0293. Individual comparison alpha = 0.01476 (1 of 2).

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Sanitas™ v. 10.0.16 Software licensed to GREDELL Engineering, UG
Hollow symbols indicate censored values.

Within Limit

Fluoride
Intrawell Non-parametric



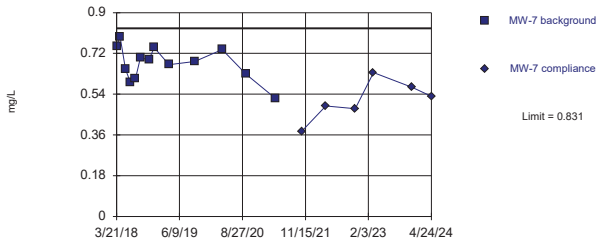
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 13 background values. 46.15% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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Within Limit

Fluoride
Intrawell Parametric



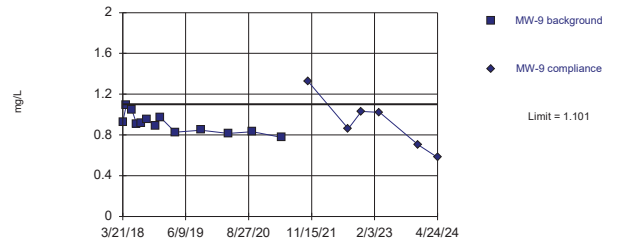
Background Data Summary: Mean=0.6751, Std. Dev.=0.07508, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9808, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002905.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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Within Limit

Fluoride
Intrawell Parametric

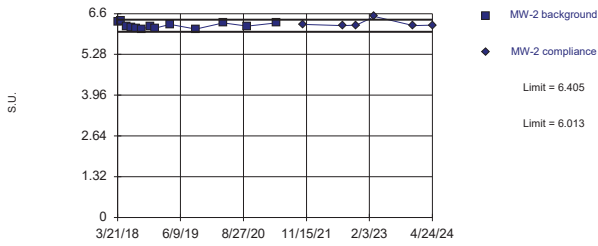


Background Data Summary: Mean=0.9082, Std. Dev.=0.09266, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9545, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002905.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH Intrawell Parametric

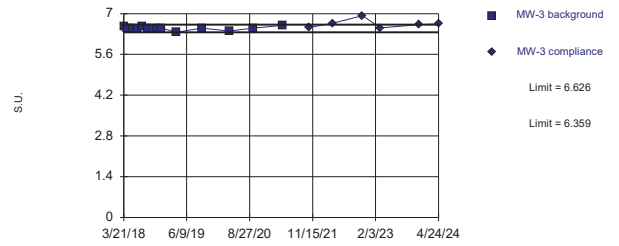


Background Data Summary: Mean=6.209, Std. Dev.=0.09429, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.922, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Exceeds Limits

pH Intrawell Parametric

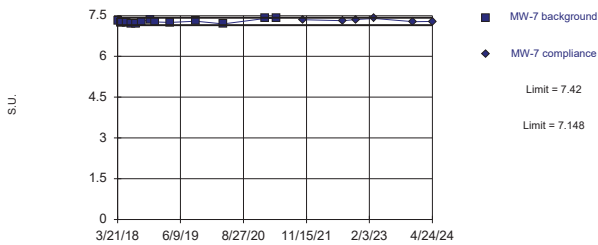


Background Data Summary: Mean=6.492, Std. Dev.=0.06418, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limits

pH Intrawell Parametric

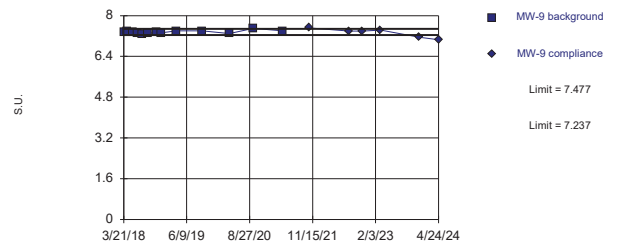


Background Data Summary: Mean=7.284, Std. Dev.=0.06552, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9081, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

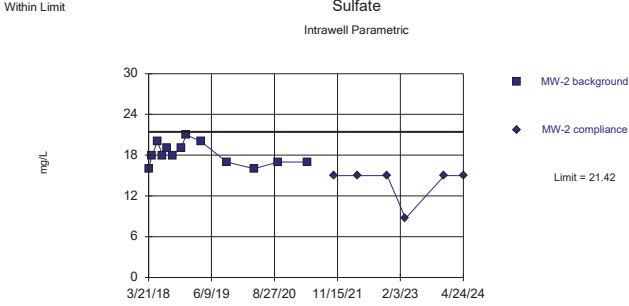
Exceeds Limits

pH Intrawell Parametric



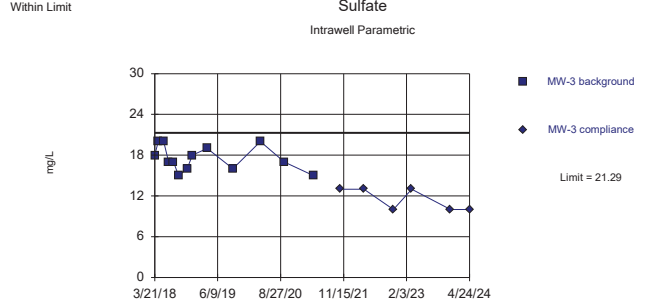
Background Data Summary: Mean=7.357, Std. Dev.=0.05793, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.91, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



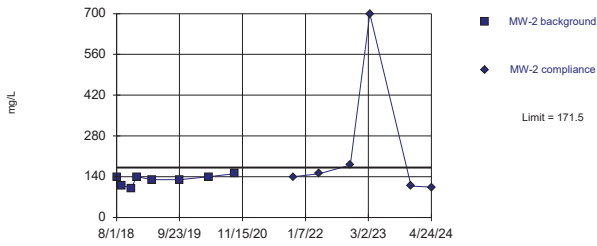
Background Data Summary: Mean=18.15, Std. Dev.=1.573, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.944, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Within Limit

Total Dissolved Solids Intrawell Parametric

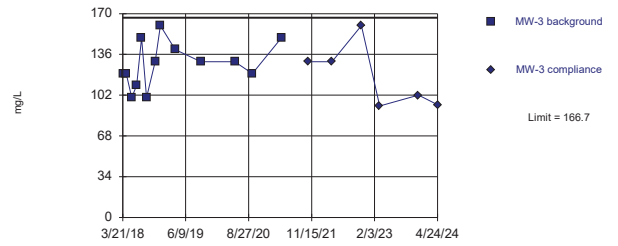


Background Data Summary: Mean=130, Std. Dev.=16.9, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8844, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids Intrawell Parametric

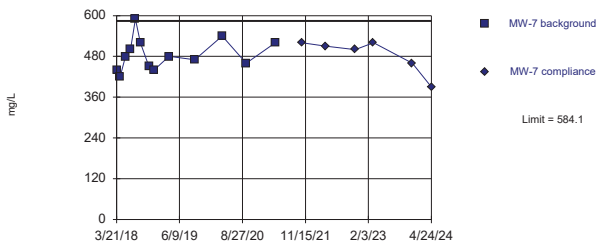


Background Data Summary: Mean=127.7, Std. Dev.=18.78, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9524, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Total Dissolved Solids Intrawell Parametric

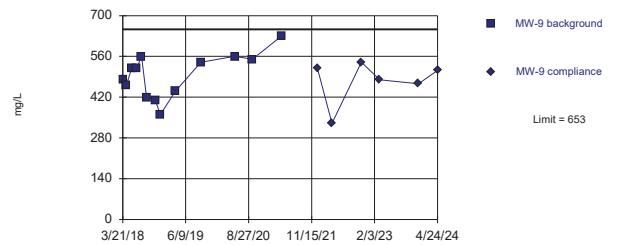


Background Data Summary: Mean=485.4, Std. Dev.=47.54, n=13. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9501, critical = 0.866. Kappa = 2.077 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 1:15 PM View: Detection Params 3-2-2023
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 5/15/2024 1:15 PM View: Detection Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

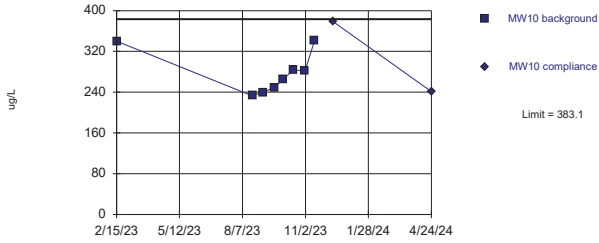
Prediction Limit

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 2:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (ug/L)	MW10	383.1	n/a	4/24/2024	241	No	8	0	No	0.002505	Param Intra 1 of 2
Calcium (mg/L)	MW10	94.97	n/a	4/24/2024	90.4	No	8	0	No	0.002505	Param Intra 1 of 2
Chloride (mg/L)	MW10	24.59	n/a	4/24/2024	8	No	8	0	No	0.002505	Param Intra 1 of 2
Fluoride (mg/L)	MW10	0.42	n/a	4/24/2024	0.25	No	8	12.5	n/a	0.02144	NP Intra (normality) ...
pH (S.U.)	MW10	7.143	6.684	4/24/2024	6.93	No	8	0	No	0.001253	Param Intra 1 of 2
Sulfate (mg/L)	MW10	215.5	n/a	4/24/2024	140	No	8	0	No	0.002505	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW10	530.8	n/a	4/24/2024	420	No	8	0	No	0.002505	Param Intra 1 of 2

Within Limit

Boron Intrawell Parametric

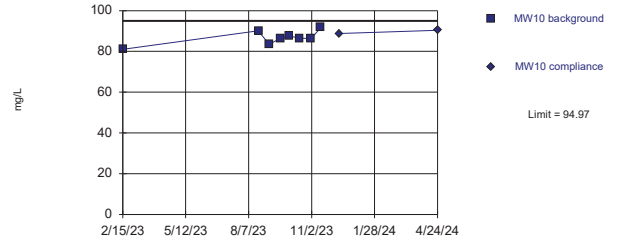


Background Data Summary: Mean=279.4, Std. Dev.=42.18, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8794, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Calcium Intrawell Parametric

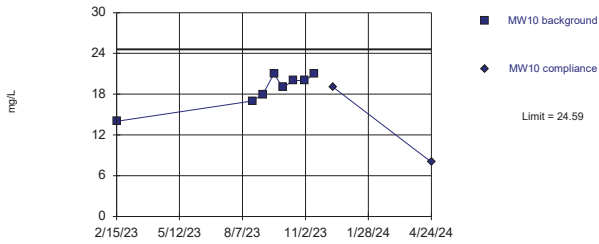


Background Data Summary: Mean=86.64, Std. Dev.=3.388, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.9628, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Within Limit

Chloride Intrawell Parametric



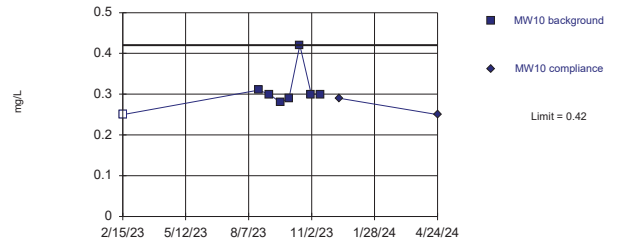
Background Data Summary: Mean=18.75, Std. Dev.=2.375, n=8. Normality test: Shapiro Wilk @alpha = 0.1, calculated = 0.8833, critical = 0.851. Kappa = 2.458 (c=7, w=3, 1 of 2, event alpha = 0.05132). Report alpha = 0.002505.

Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Hollow symbols indicate censored values.

Within Limit

Fluoride Intrawell Non-parametric



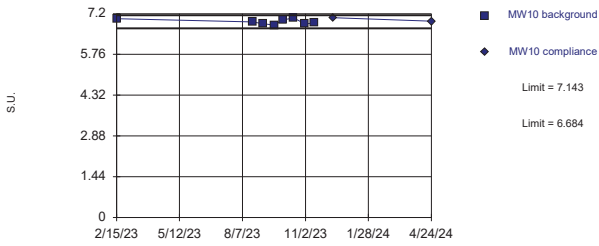
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.1 alpha level. Limit is highest of 8 background values. 12.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10
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.

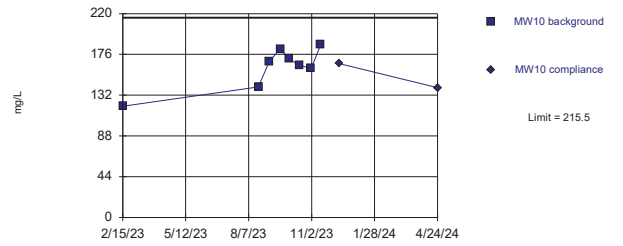
Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10

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.

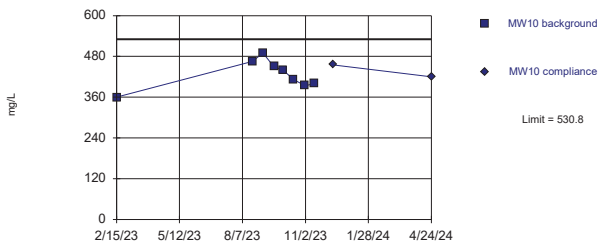
Prediction Limit Analysis Run 5/15/2024 2:02 PM View: MW-10

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 5/15/2024 2:02 PM View: MW-10

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 9

Assessment Monitoring
Statistical Evaluation Summary

Appendix 9

Assessment Monitoring Statistical Evaluation Summary

For SBMU – Sikeston Power Station Fly Ash Pond
December 11, 2023 and April 23, 2024 Monitoring Events

The following summarizes the results of the Assessment Monitoring Statistical Evaluation for the December 11, 2023 and April 23, 2024 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 four outliers (associated with Fluoride (3) in MW-2, and (1) in MW-10) 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 both the December 11, 2023, and April 23, 2024, data and are indicated on Table 9-1. The SSLs reported for these two events were:

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

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:

Note: * = Sanitas© Statistical Software, © 1992-2023 SANITAS TECHNOLOGIES, Alamosa Colorado 81101-0012.

- Molybdenum concentrations at MW-7, and MW-9 are decreasing with statistically significant trends,
- Molybdenum and Cobalt concentrations at MW-1R show no statistically significant trends,
- Barium concentrations at MW-7 and MW-9 are increasing with statistically significant trends,
- Fluoride concentrations at MW-7 are decreasing with a statistically significant trend, and
- Lithium concentrations at MW-7 are increasing 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 2024 (Semi-annual) for:

- All Appendix III Detection and all Appendix IV Assessment Monitoring Constituents.

Table 9-1

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Fly Ash Pond Assessment Monitoring Statistical Evaluation
Sikeston, Missouri**

Table 9-1 - Confidence Interval Summary

40 CFR 257 Appendix IV Constituents for Assessment Monitoring	Units ^{1,2,3}	Monitoring Well ID											
		MW-1R		MW-2		MW-3		MW-7		MW-9		MW-10	
		Upper Confidence Limit ⁵	Lower Confidence Limit ⁴	Upper Confidence Limit ⁵	Lower Confidence Limit ⁴	Upper Confidence Limit ⁵	Lower Confidence Limit ⁴	Upper Confidence Limit ⁵	Lower Confidence Limit ⁴	Upper Confidence Limit ⁵	Lower Confidence Limit ⁴	Upper Confidence Limit ⁵	Lower Confidence Limit ⁴
Antimony	ug/L												
Arsenic	ug/L	1.5	1	1	1	1	1	1	1	1	1	7.353	5.587
Barium	ug/L	50.56	38.61	206.5	144.3	102.5	85.16	66.7	43	85	45	150.1	137.7
Beryllium	ug/L												
Cadmium	ug/L												
Chromium	ug/L									4	4		
Cobalt	ug/L	9.902	6.598	2.4	2	2	2	3.5	2	2	2	2	2
Fluoride	mg/L	0.286	0.25	0.254	0.25	0.332	0.25	0.6878	0.5596	1.006	0.8181	0.3055	0.2657
Lead	ug/L												
Lithium	ug/L	20	10	20	10	20	10	33.52	22.92	22.96	14.09	37.7	16.2
Mercury	ug/L												
Molybdenum	ug/L	200.1	168.7	1.4	1	1	1	162.5	127.4	611.5	233.8	24.87	18.79
Selenium	ug/L	1	1	2	1	1	1	25.92	3.93	1	1	1	1
Thallium	ug/L												
Radium 226/228 (Combined)	pCi/L	1.008	0.3742	1.545	0.7759	1.234	0.551	1.534	0.5963	1.248	0.498		

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.
6. Shaded cells indicate Lower Confidence Limit greater than Groundwater Protection Standards.
7. Blank cells with slash indicate all results for this constituent well pair are "non-detect". The statistical double quantification rule applies per USEPA Unified Guidance in absence of confirmed results. Statistical analysis not required for these constituent well pairs.
8. Confidence Limits based on Background data Assessment Monitoring data through April 24, 2024.

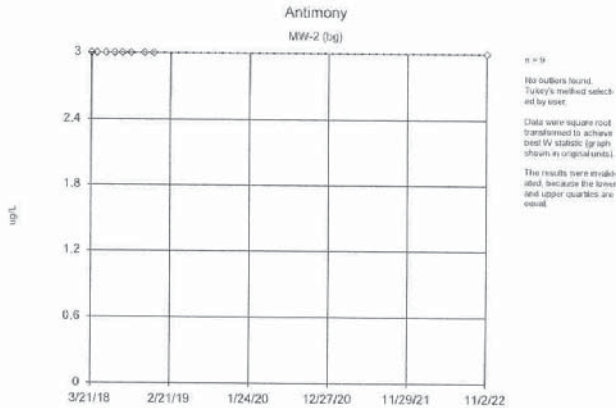
Appendix 9-1

Outlier Analysis
(Sanitas* Output Summary)

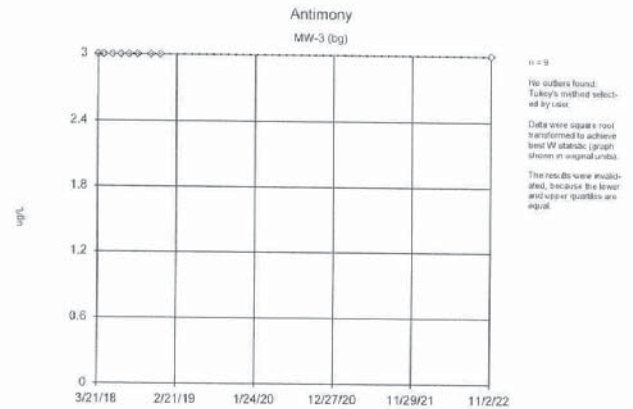
Outlier Analysis

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 12:02 PM

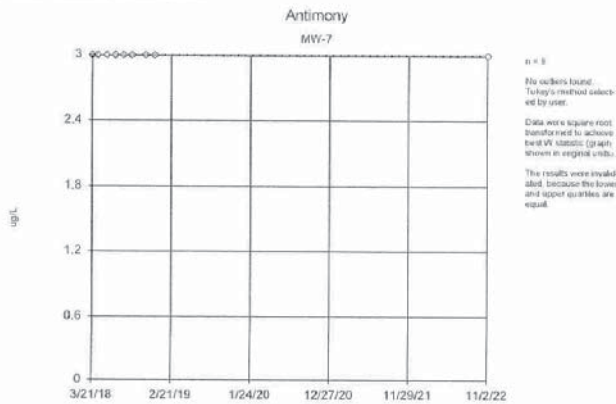
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Fluoride (mg/L)	MW-2 (bg)	Yes	0.335,0.272,0.336	4/15/2018...	NP	NaN	17	0.2616	0.02833	In(x)	ShapiroWilk
Fluoride (mg/L)	MW10	Yes	0.42	10/17/2023	NP	NaN	8	0.3063	0.04955	In(x)	ShapiroWilk



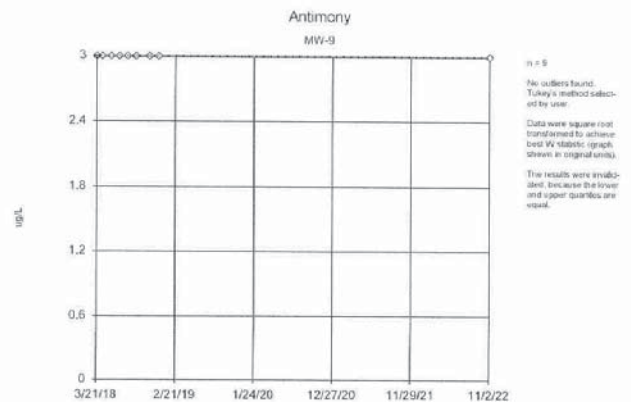
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



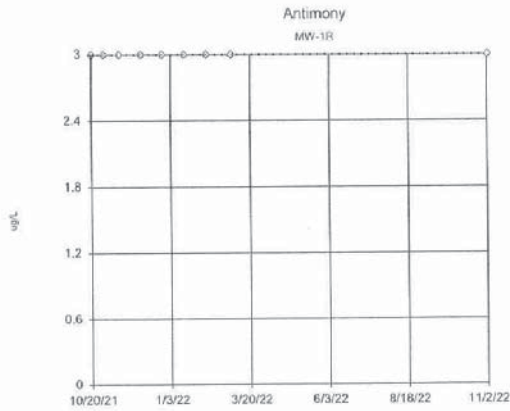
Tukey's Outlier Screening Analysis Run 5/15/2024 11:58 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



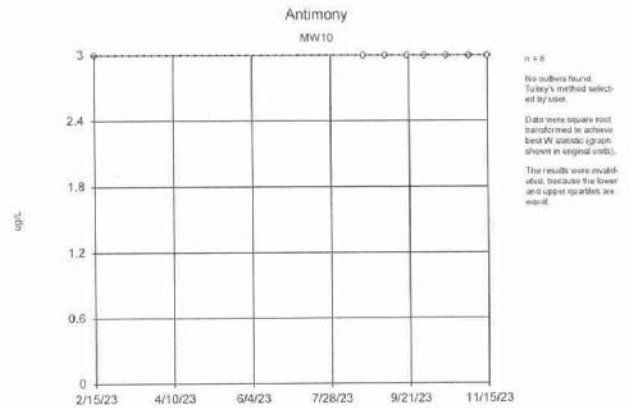
Tukey's Outlier Screening Analysis Run 5/15/2024 11:58 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



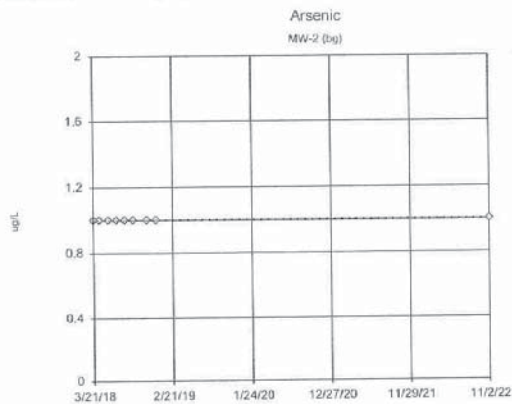
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



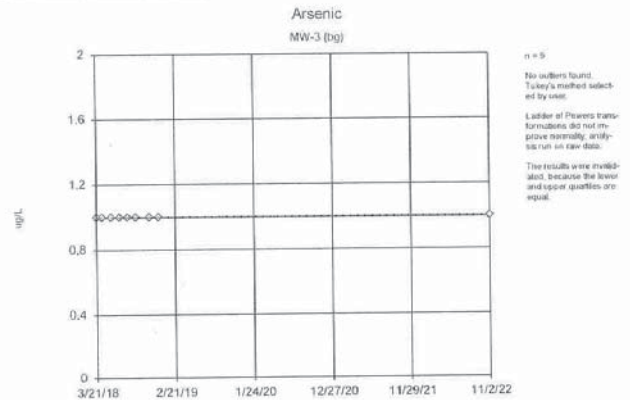
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



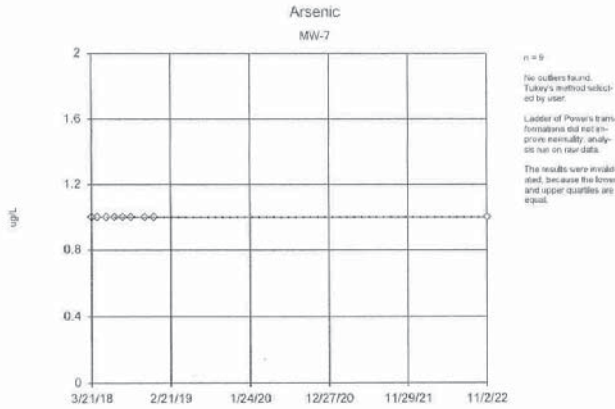
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



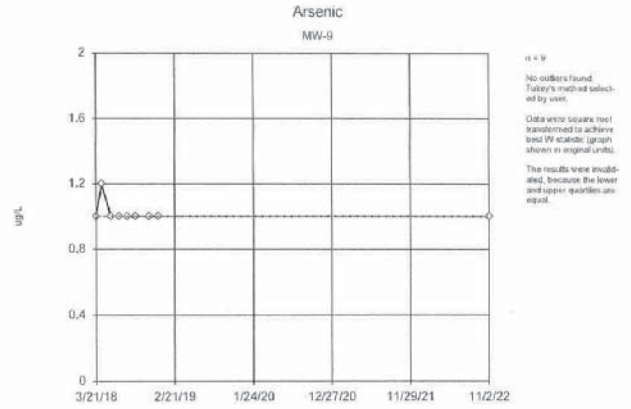
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



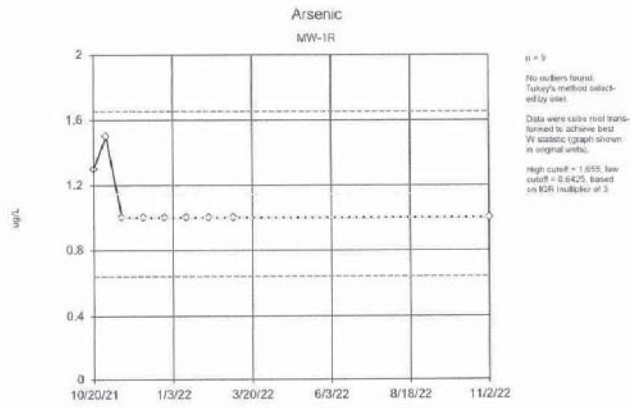
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



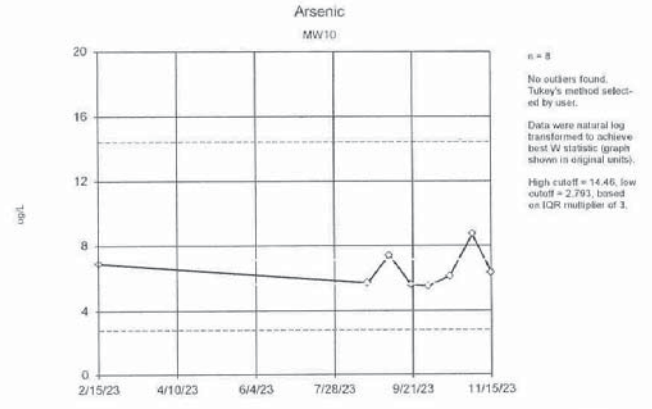
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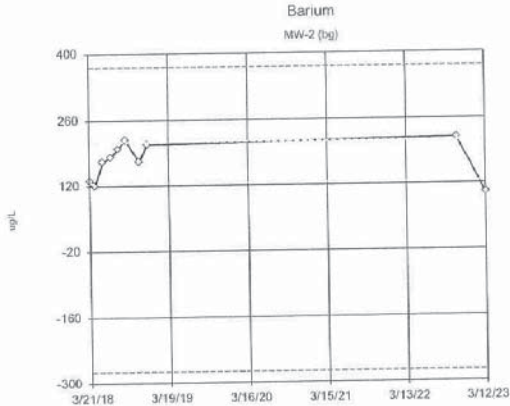
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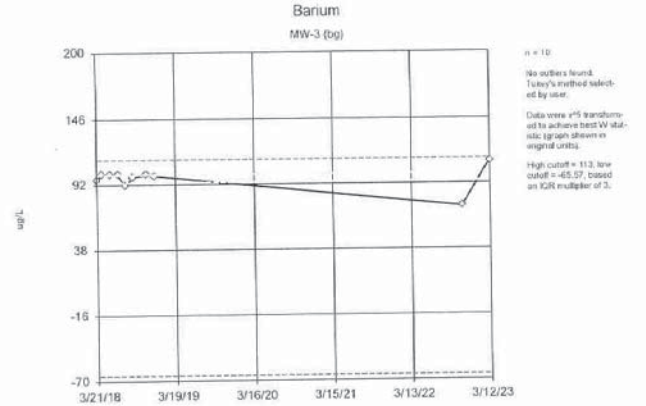
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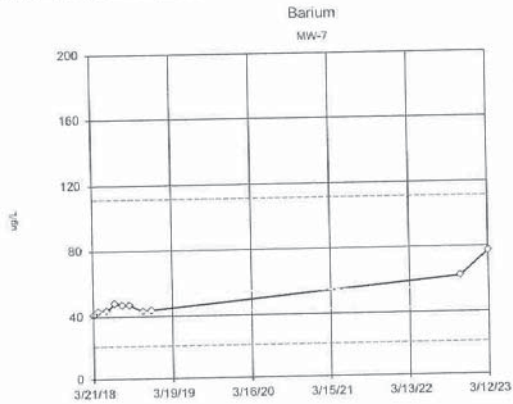
Tukey's Outlier Screening Analysis Run 5/15/2024 11:58 AM View: Assessment Params 3-2-2023 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



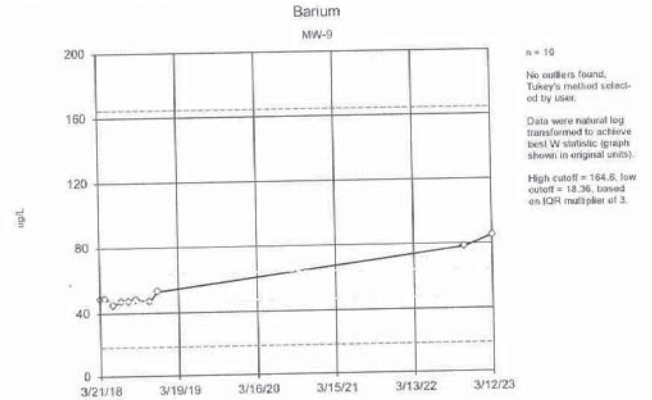
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



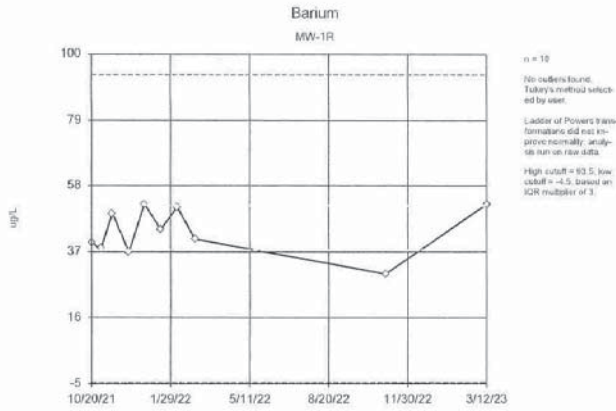
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



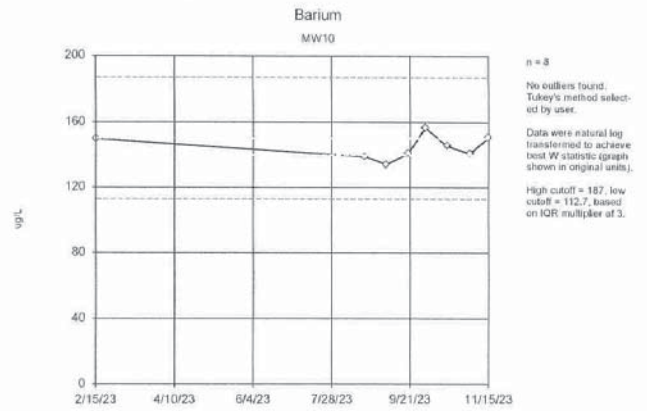
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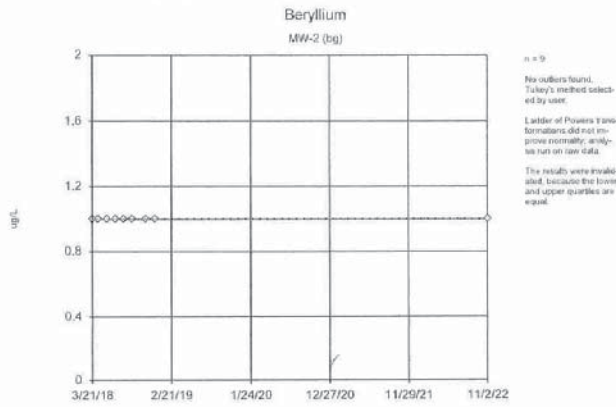
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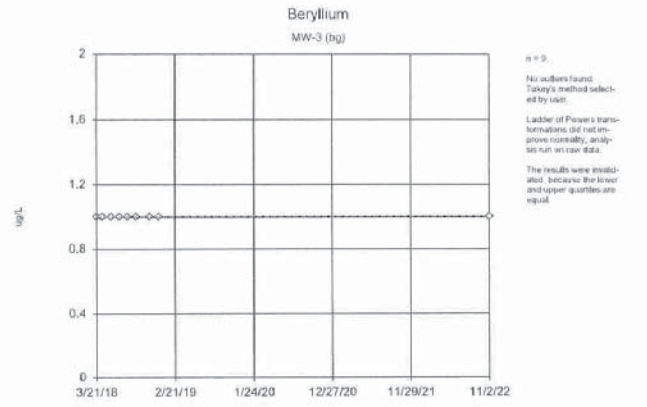
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



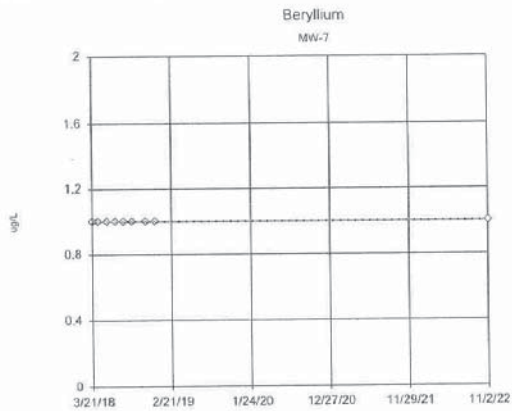
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



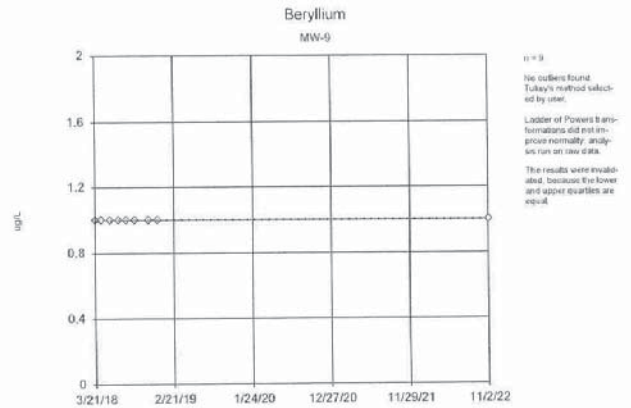
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



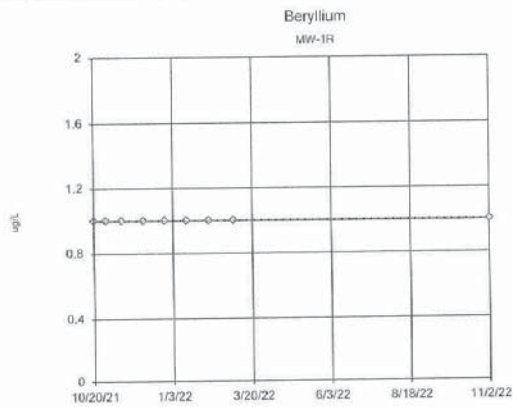
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



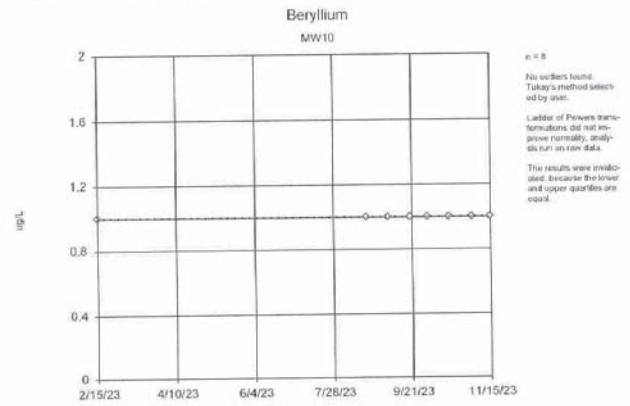
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



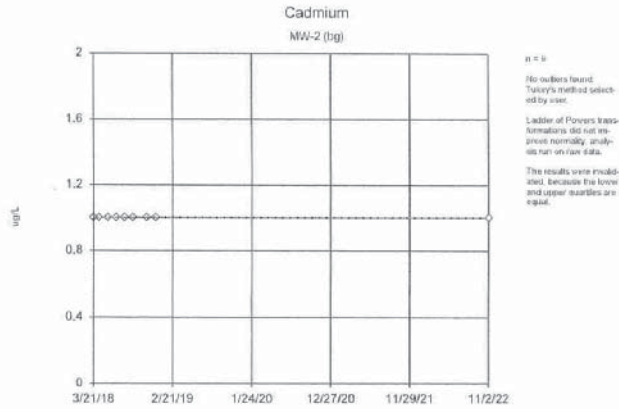
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



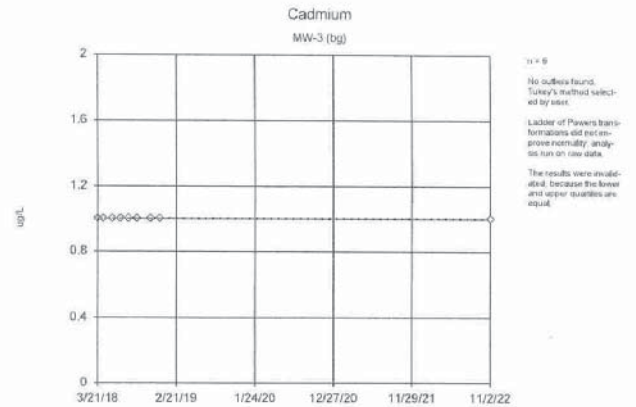
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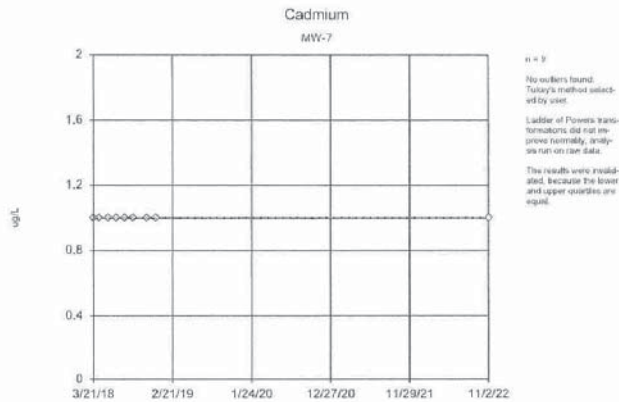
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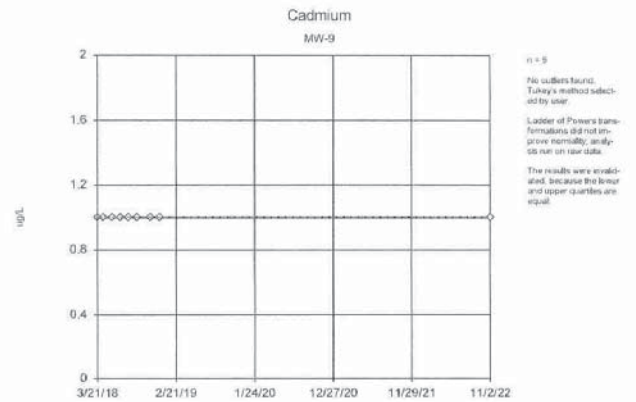
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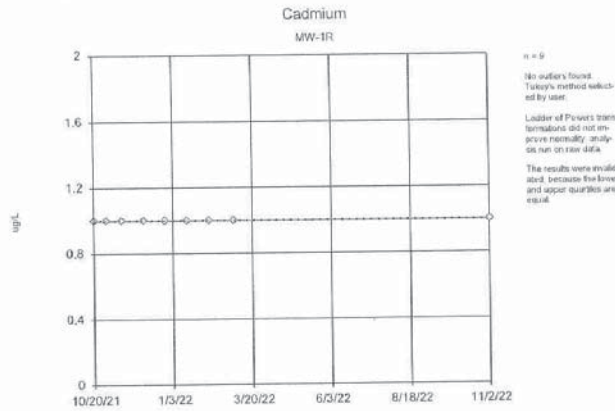
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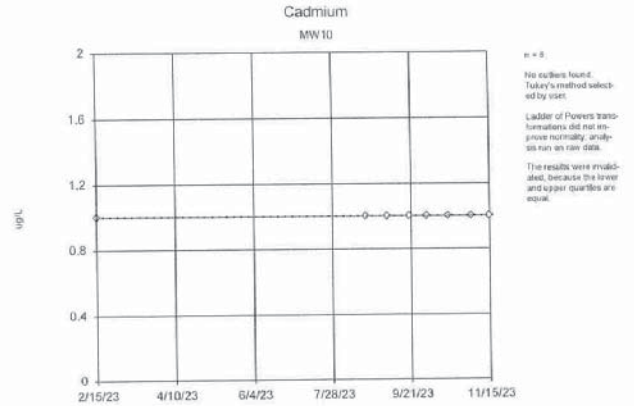
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



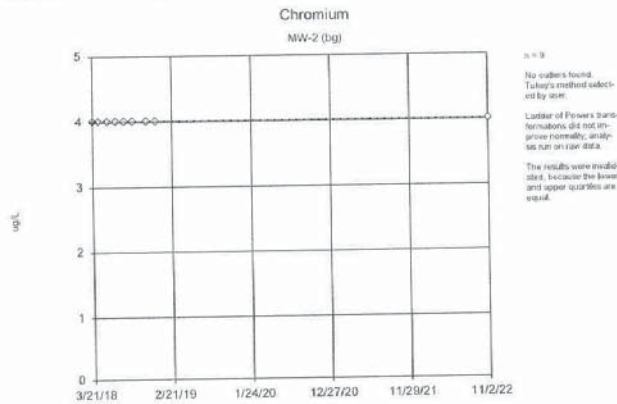
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



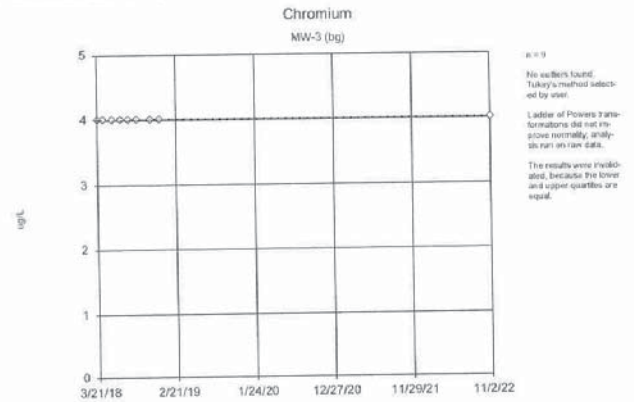
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



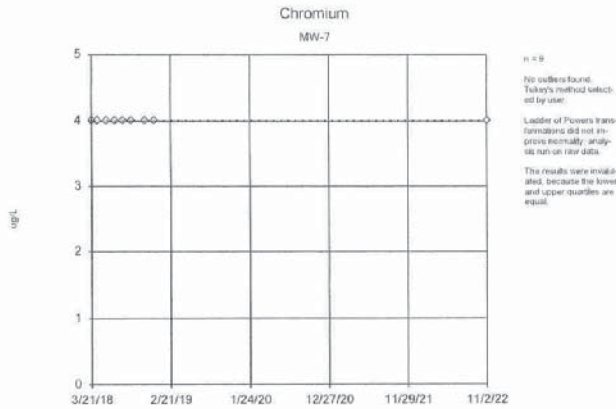
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



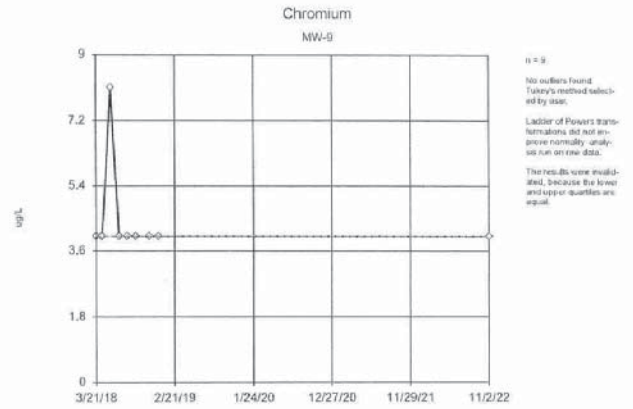
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



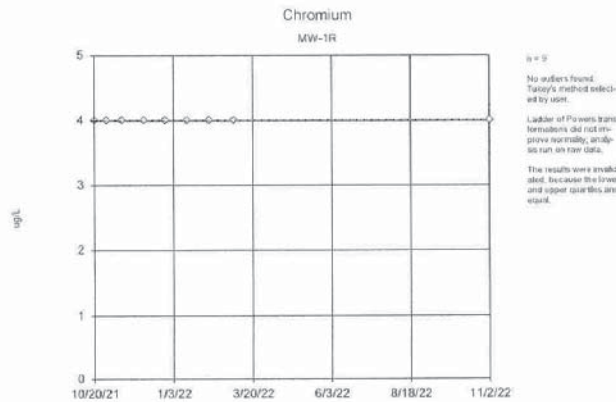
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



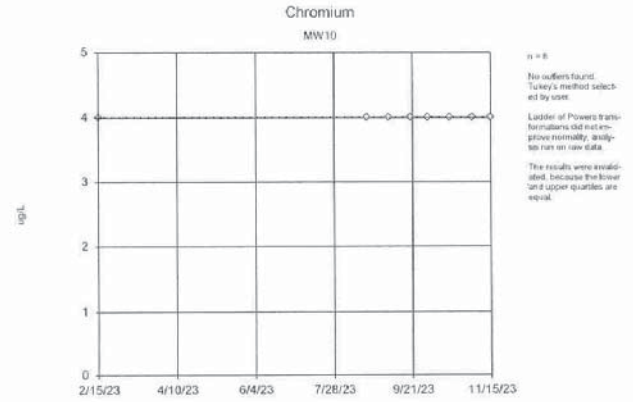
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



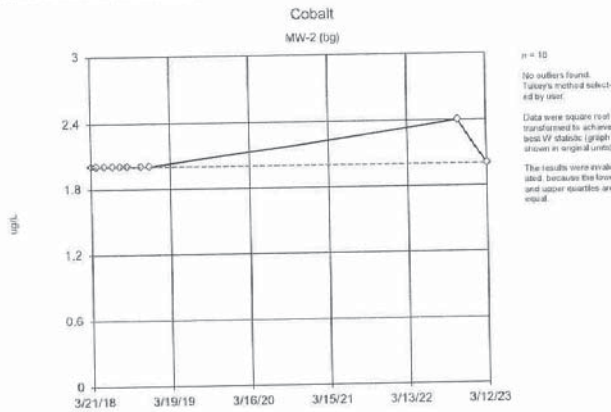
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



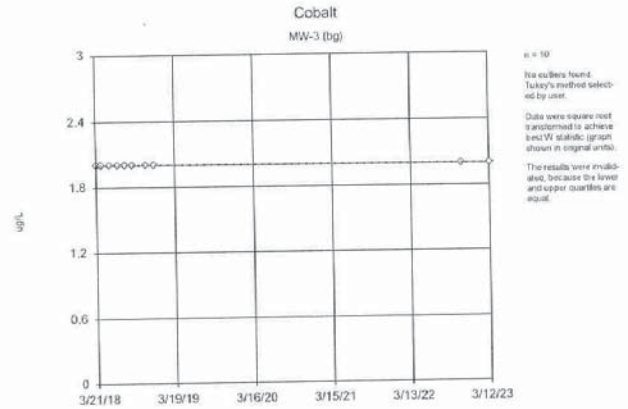
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



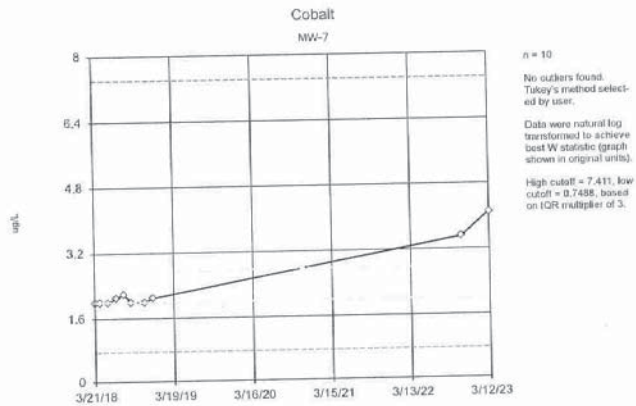
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



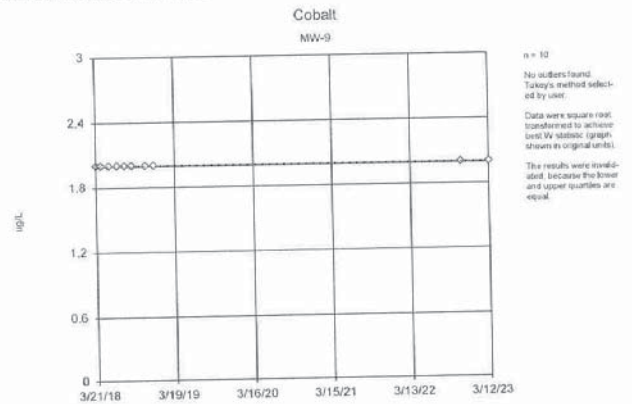
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



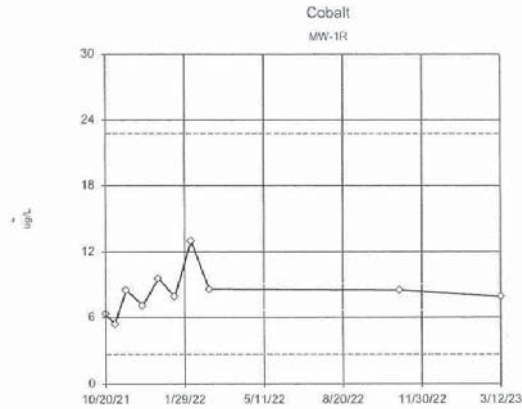
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

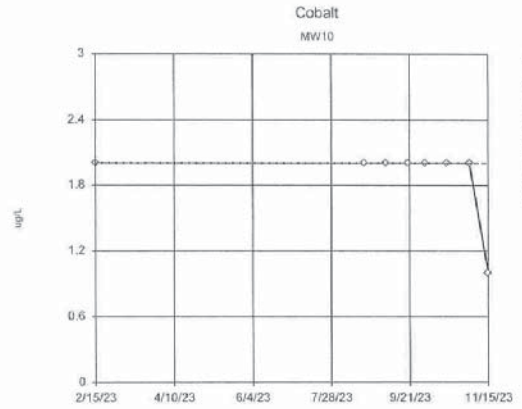


Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



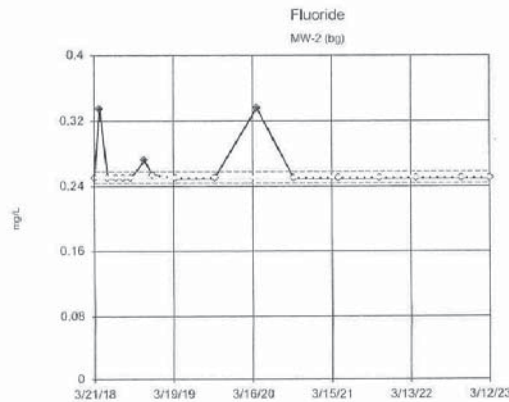
n = 10
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 22.78, low cutoff = 2.697, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



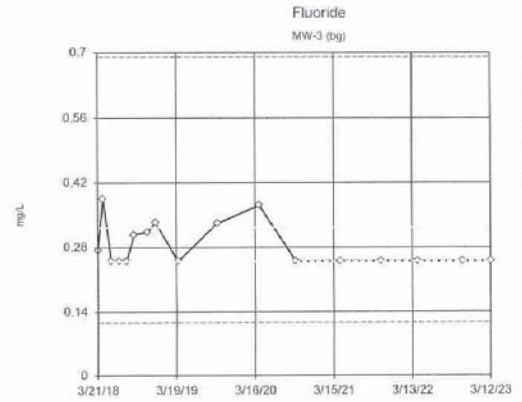
n = 8
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



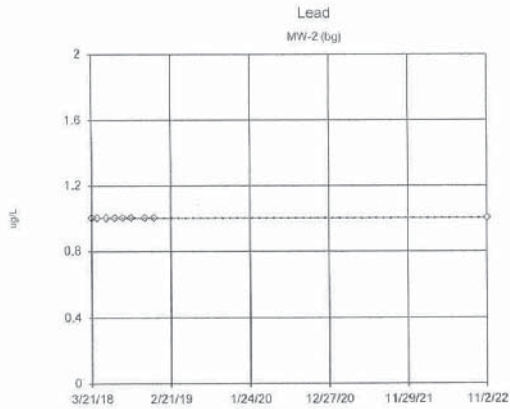
n = 17
 Outliers are drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.2581, low cutoff = 0.2441, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

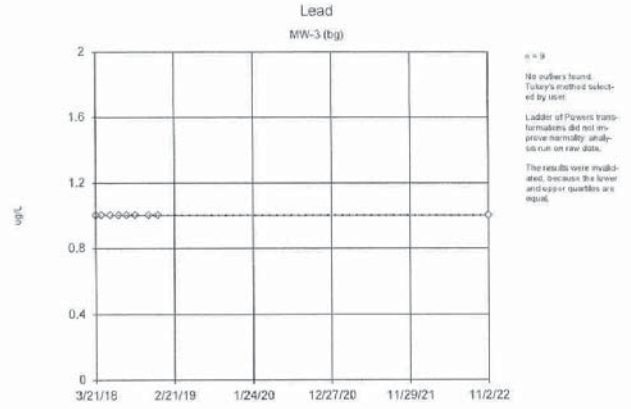


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.6811, low cutoff = 0.1166, based on IQR multiplier of 3.

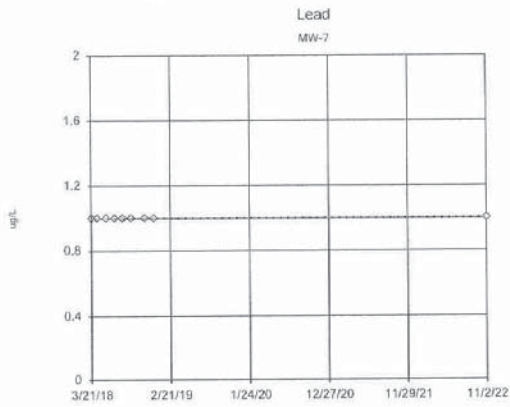
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
 SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



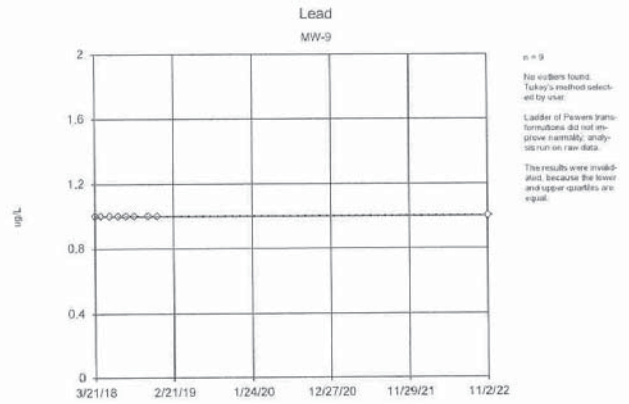
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



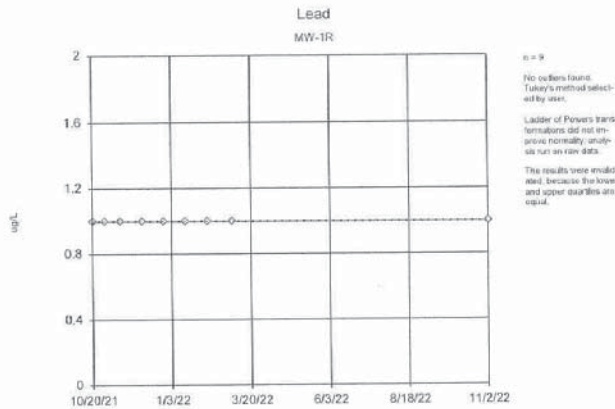
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



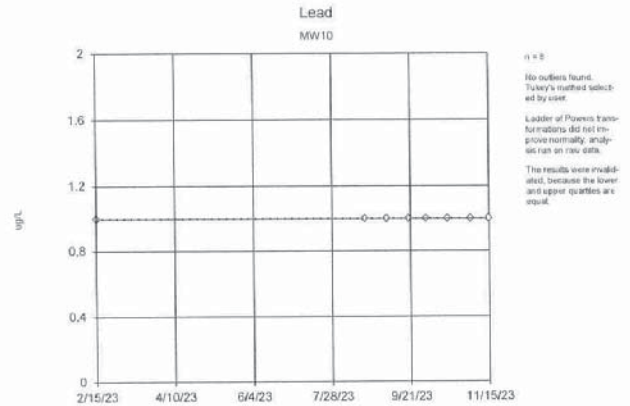
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



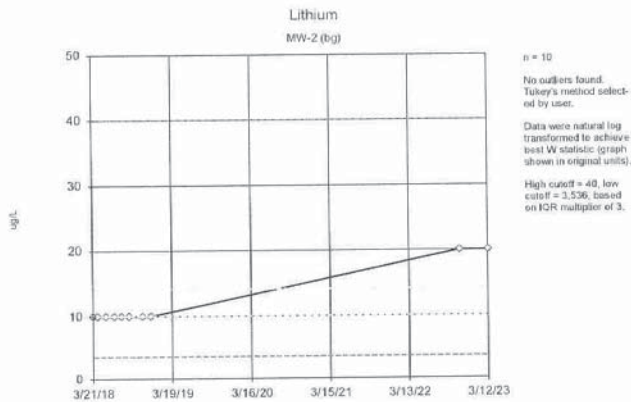
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



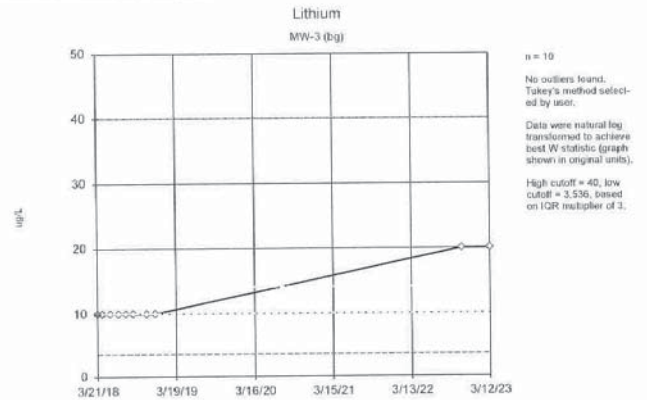
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



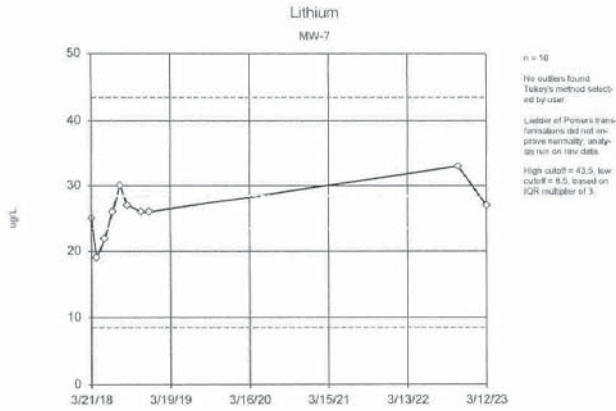
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



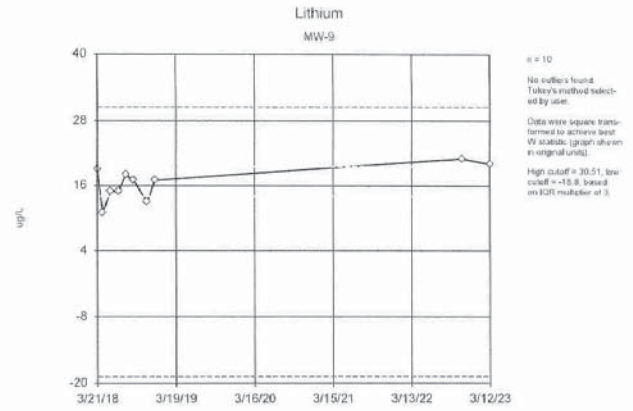
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



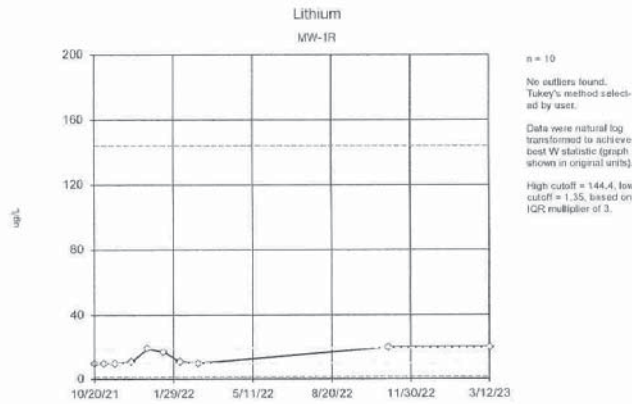
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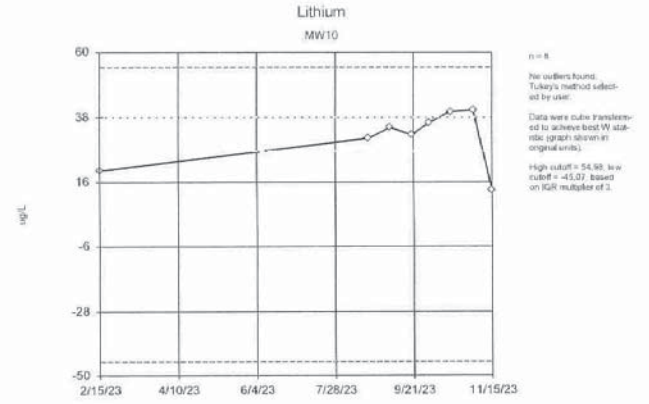
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



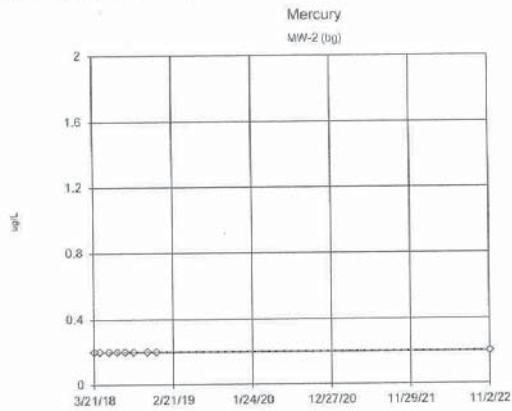
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



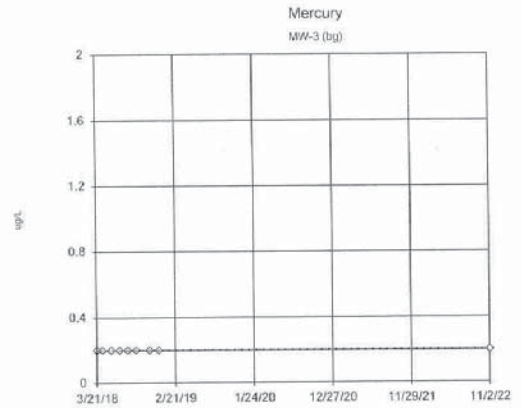
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



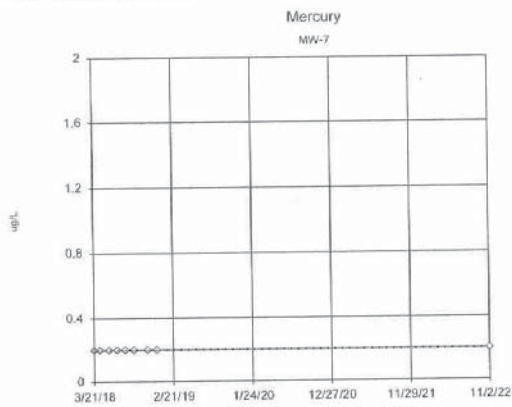
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



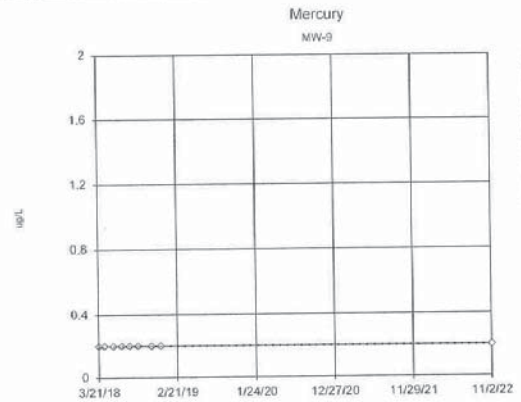
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



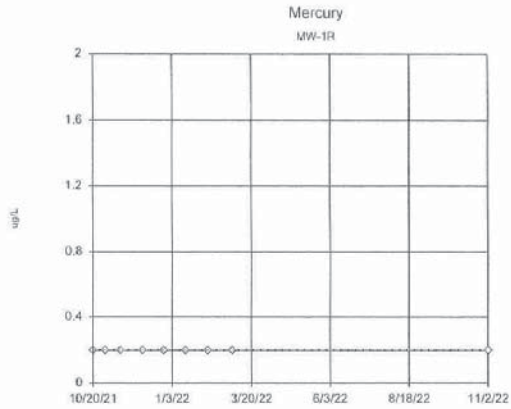
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

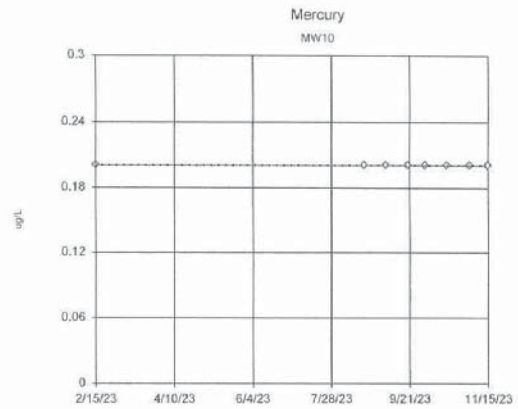


Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



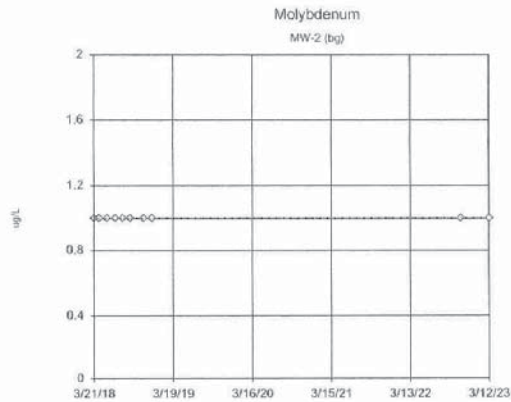
n = 6
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best IV statistic (graph shown in original units).
The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



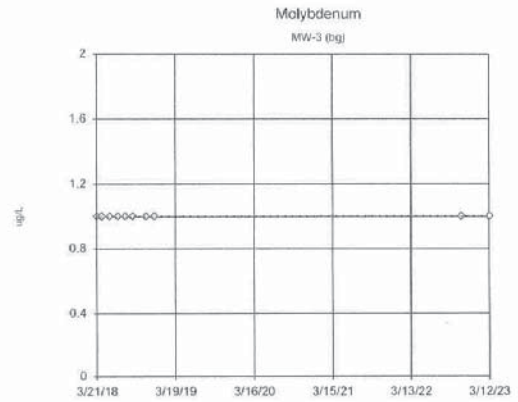
n = 6
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best IV statistic (graph shown in original units).
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Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



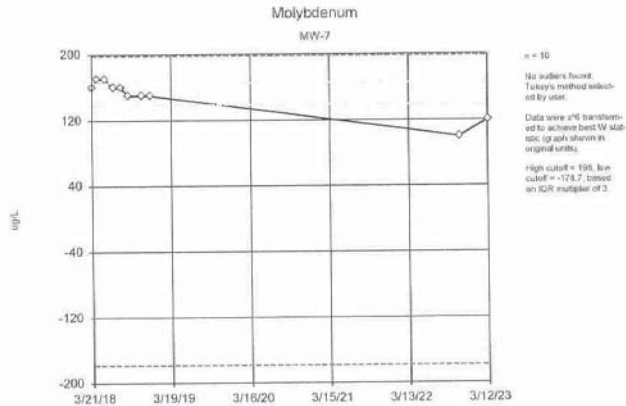
n = 10
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality, analysis run on raw data.
The results were invalidated, because the lower and upper quartiles are equal.

Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

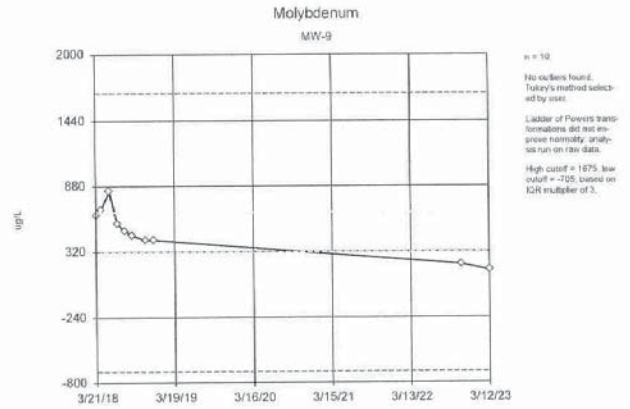


n = 10
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality, analysis run on raw data.
The results were invalidated, because the lower and upper quartiles are equal.

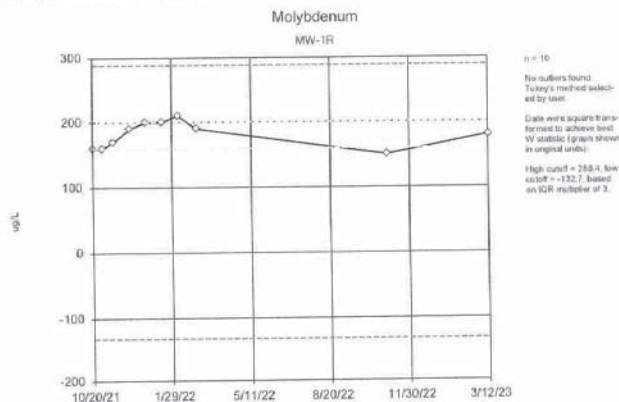
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



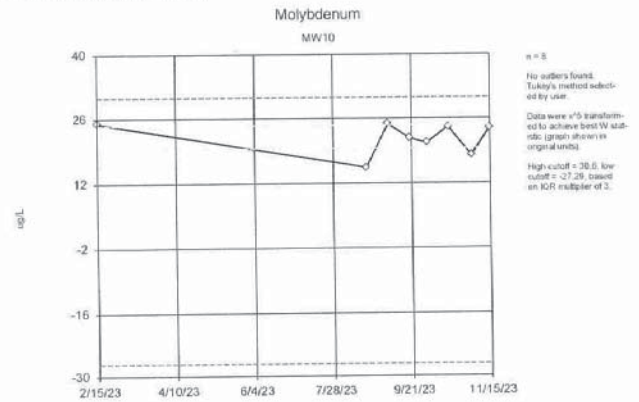
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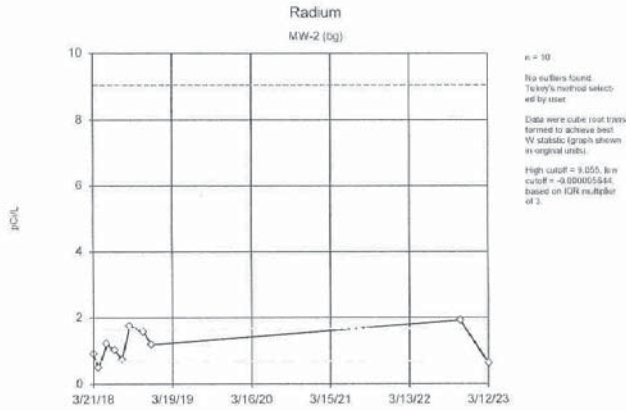
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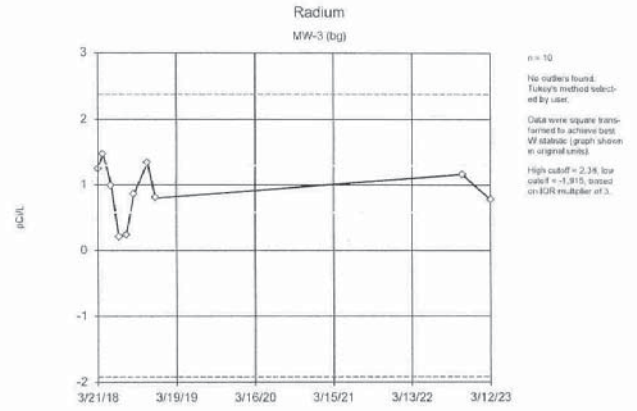
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



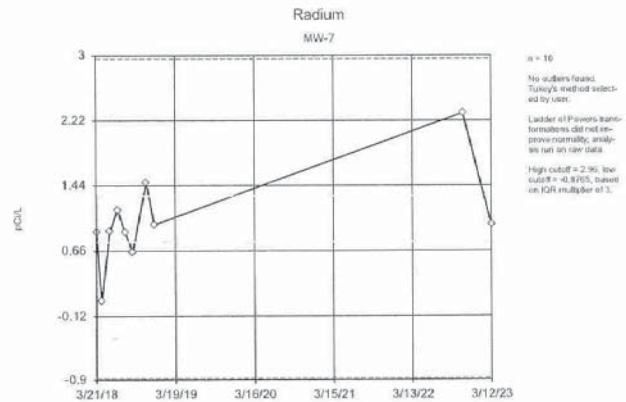
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



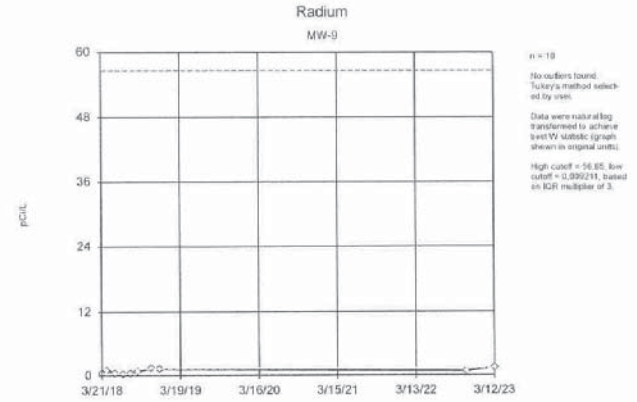
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



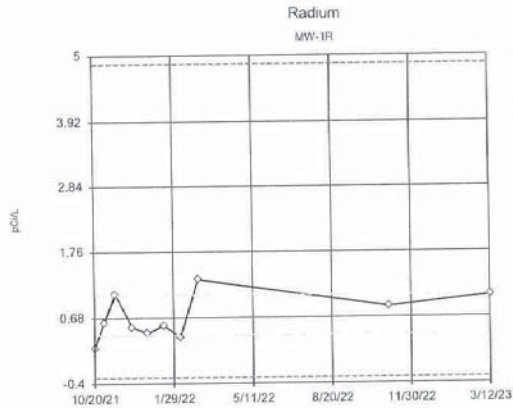
Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

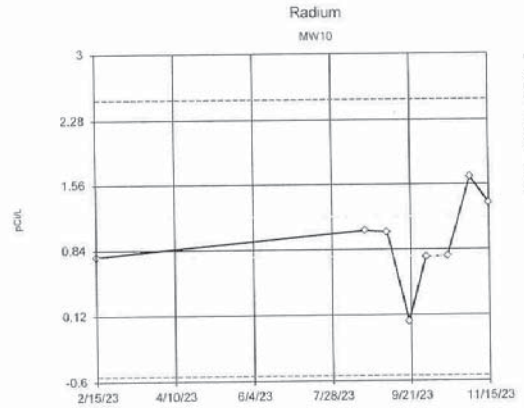


Tukey's Outlier Screening Analysis Run 5/15/2024 11:59 AM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



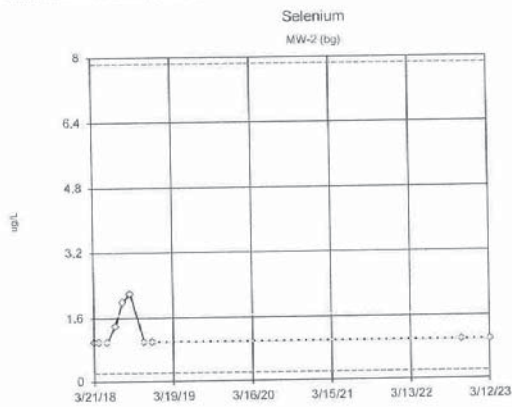
n = 10
No outliers found. Tukey's method selected by user.
Data were square root transformed to achieve best W statistic (graph shown in original units).
High cutoff = 4.853, low cutoff = -0.3049, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



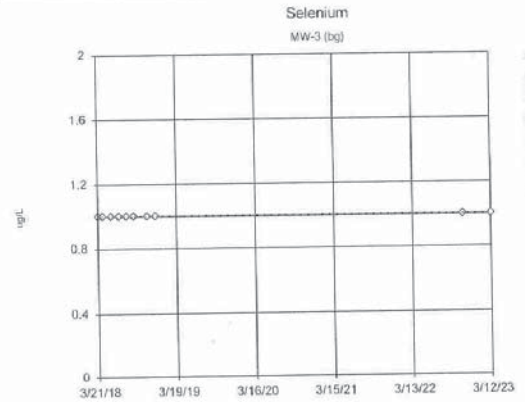
n = 8
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
High cutoff = 2.565, low cutoff = -0.34, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



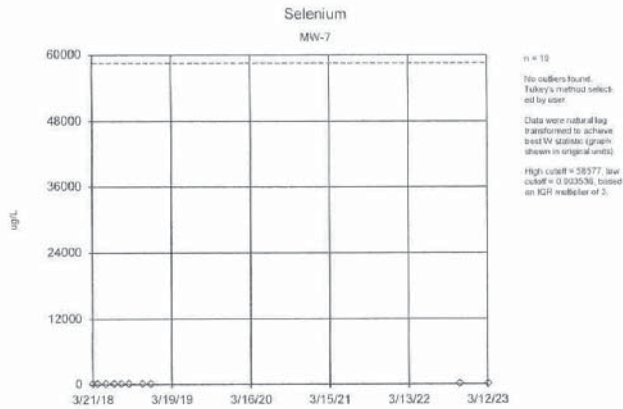
n = 10
No outliers found. Tukey's method selected by user.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 7.84, low cutoff = 0.2134, based on IQR multiplier of 3.

Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

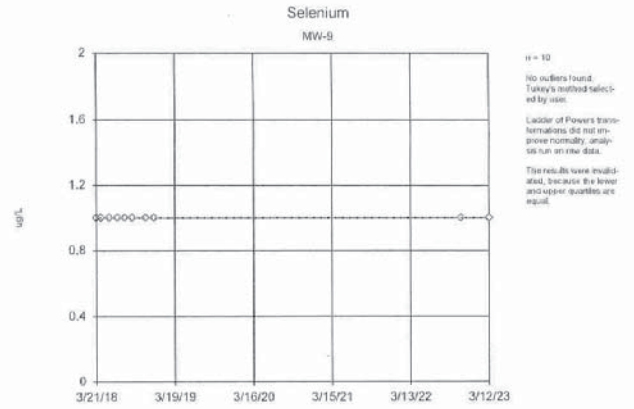


n = 10
No outliers found. Tukey's method selected by user.
Ladder of Powers transformations did not improve normality; analysis run on raw data.
The results were invalidated because the lower and upper quartiles are equal.

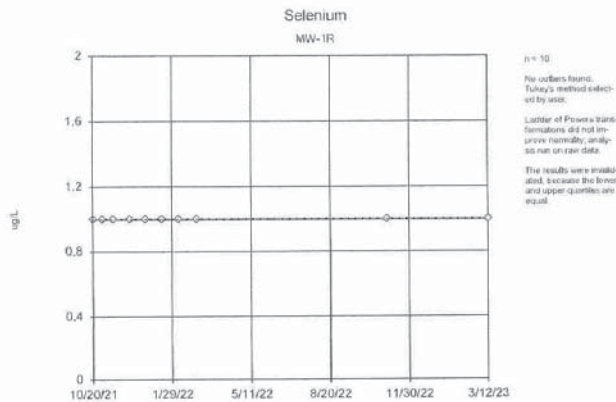
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SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



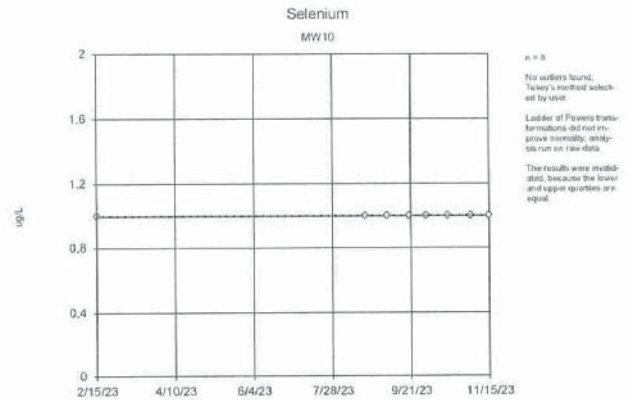
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



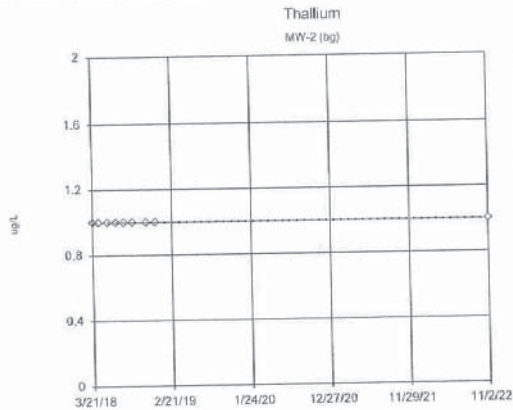
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



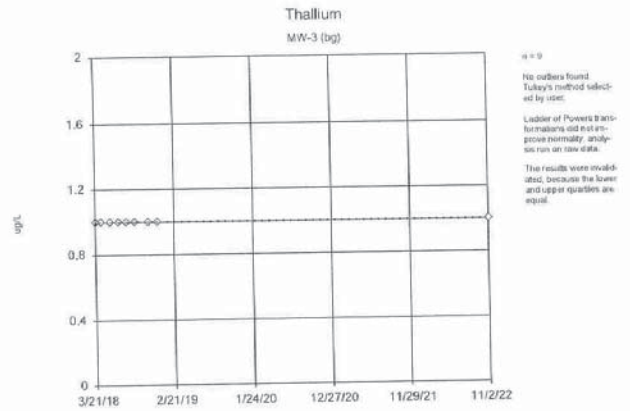
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



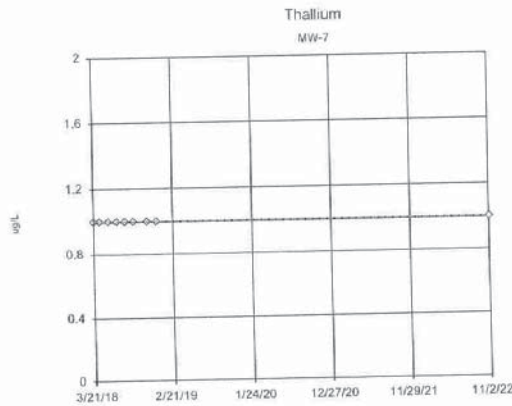
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



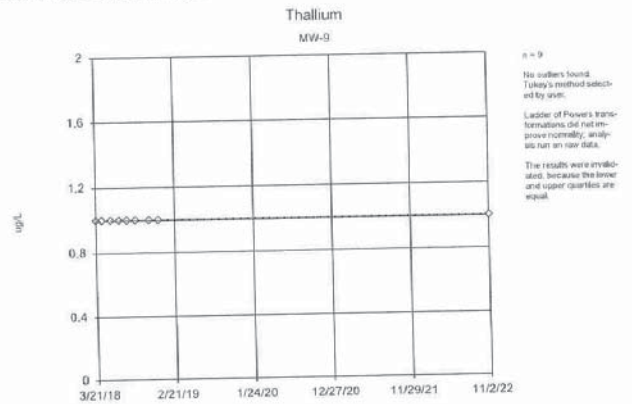
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



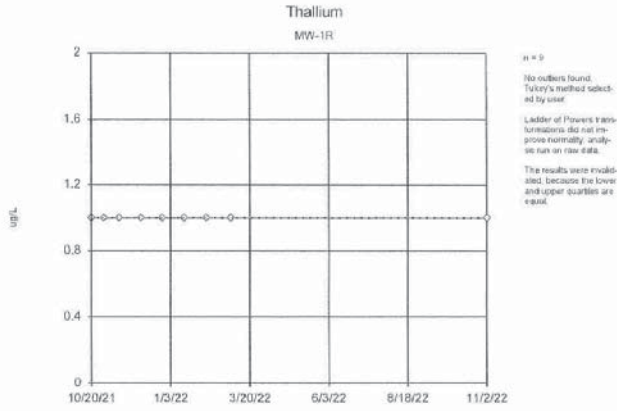
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



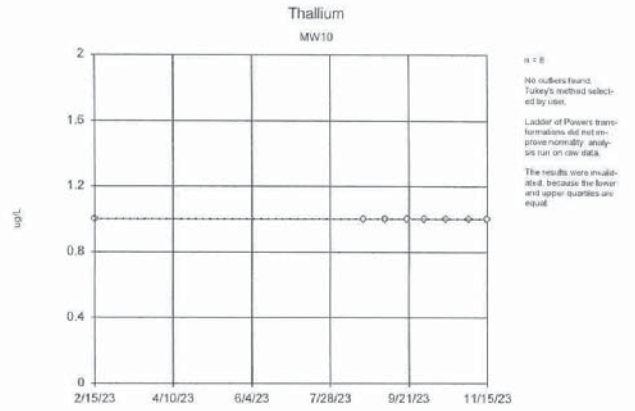
Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

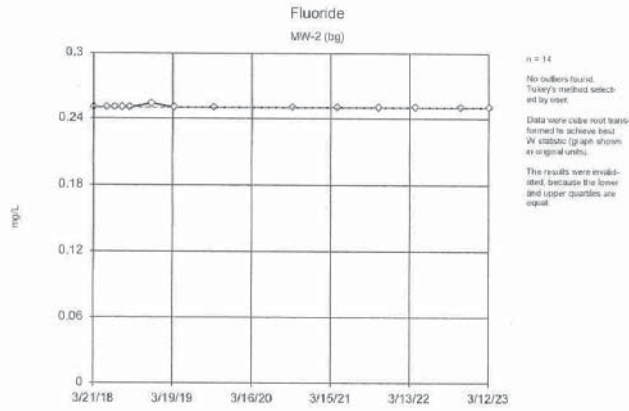


Tukey's Outlier Screening Analysis Run 5/15/2024 12:00 PM View: Assessment Params 3-2-2023
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

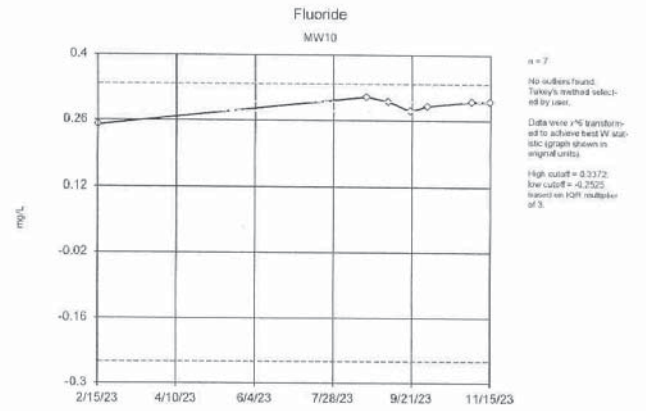
Outlier Analysis

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 12:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Fluoride (mg/L)	MW-2 (bg)	n/a	n/a	n/a	NP	NaN	14	0.2503	0.001069	unknown	ShapiroWilk
Fluoride (mg/L)	MW10	No	n/a	n/a	NP	NaN	7	0.29	0.02	x ⁶	ShapiroWilk



Tukey's Outlier Screening Analysis Run 5/15/2024 12:07 PM View: Fluoride outlier check May 2024
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Tukey's Outlier Screening Analysis Run 5/15/2024 12:07 PM View: Fluoride outlier check May 2024
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 9-2

Confidence Intervals
(Sanitas* Output Summary)

100% Non-Detects

Analysis Run 5/15/2024 12:34 PM View: May 2024 Assessment

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Antimony (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Beryllium (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Cadmium (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Chromium (ug/L)

MW-2, MW-3, MW-7, MW-1R, MW10

Lead (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Mercury (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

Radium (pCi/L)

MW10

Thallium (ug/L)

MW-2, MW-3, MW-7, MW-9, MW-1R, MW10

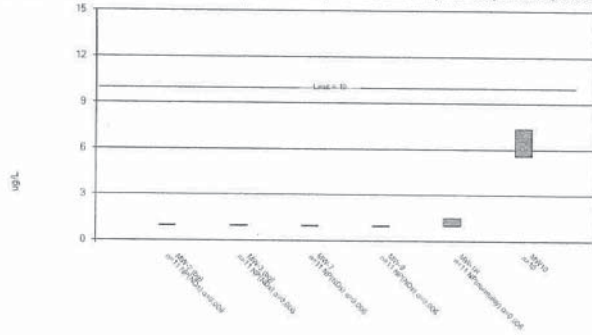
Confidence Interval

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 12:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Arsenic (ug/L)	MW-2 (bg)	1	1	10	No	11	90.91	No	0.006	NP (NDs)
Arsenic (ug/L)	MW-3 (bg)	1	1	10	No	11	90.91	No	0.006	NP (NDs)
Arsenic (ug/L)	MW-7	1	1	10	No	11	90.91	No	0.006	NP (NDs)
Arsenic (ug/L)	MW-9	1	1	10	No	11	81.82	No	0.006	NP (NDs)
Arsenic (ug/L)	MW-1R	1.5	1	10	No	11	63.64	No	0.006	NP (normality)
Arsenic (ug/L)	MW10	7.353	5.587	10	No	10	0	No	0.01	Param.
Barium (ug/L)	MW-2 (bg)	206.5	144.3	2000	No	12	0	No	0.01	Param.
Barium (ug/L)	MW-3 (bg)	102.5	85.19	2000	No	12	0	x^2	0.01	Param.
Barium (ug/L)	MW-7	66.7	43	2000	No	12	0	No	0.01	NP (normality)
Barium (ug/L)	MW-9	85	45	2000	No	12	0	No	0.01	NP (normality)
Barium (ug/L)	MW-1R	50.56	38.61	2000	No	12	0	No	0.01	Param.
Barium (ug/L)	MW10	150.1	137.7	2000	No	10	0	No	0.01	Param.
Chromium (ug/L)	MW-9	4	4	100	No	10	90	No	0.011	NP (NDs)
Cobalt (ug/L)	MW-2 (bg)	2.4	2	6	No	12	75	No	0.01	NP (normality)
Cobalt (ug/L)	MW-3 (bg)	2	2	6	No	12	91.67	No	0.01	NP (NDs)
Cobalt (ug/L)	MW-7	3.5	2	6	No	12	16.67	No	0.01	NP (normality)
Cobalt (ug/L)	MW-9	2	2	6	No	12	91.67	No	0.01	NP (NDs)
Cobalt (ug/L)	MW-1R	9.902	6.598	6	Yes	12	0	No	0.01	Param.
Cobalt (ug/L)	MW10	2	2	6	No	10	90	No	0.011	NP (NDs)
Fluoride (mg/L)	MW-2 (bg)	0.254	0.25	4	No	16	87.5	No	0.01	NP (NDs)
Fluoride (mg/L)	MW-3 (bg)	0.332	0.25	4	No	19	57.89	No	0.01	NP (normality)
Fluoride (mg/L)	MW-7	0.6878	0.5586	4	No	19	0	No	0.01	Param.
Fluoride (mg/L)	MW-9	1.006	0.8181	4	No	19	0	No	0.01	Param.
Fluoride (mg/L)	MW-1R	0.286	0.25	4	No	13	76.92	No	0.01	NP (NDs)
Fluoride (mg/L)	MW10	0.3055	0.2657	4	No	9	11.11	x^3	0.01	Param.
Lithium (ug/L)	MW-2 (bg)	20	10	40	No	12	91.67	No	0.01	NP (NDs)
Lithium (ug/L)	MW-3 (bg)	20	10	40	No	12	91.67	No	0.01	NP (NDs)
Lithium (ug/L)	MW-7	33.52	22.92	40	No	12	0	x^(1/3)	0.01	Param.
Lithium (ug/L)	MW-9	22.96	14.09	40	No	12	8.333	sqrt(x)	0.01	Param.
Lithium (ug/L)	MW-1R	20	10	40	No	12	33.33	No	0.01	NP (normality)
Lithium (ug/L)	MW10	37.7	16.2	40	No	10	10	No	0.01	Param.
Molybdenum (ug/L)	MW-2 (bg)	1.4	1	100	No	12	83.33	No	0.01	NP (NDs)
Molybdenum (ug/L)	MW-3 (bg)	1	1	100	No	12	91.67	No	0.01	NP (NDs)
Molybdenum (ug/L)	MW-7	162.5	127.4	100	Yes	12	0	No	0.01	Param.
Molybdenum (ug/L)	MW-9	611.5	233.8	100	Yes	12	0	No	0.01	Param.
Molybdenum (ug/L)	MW-1R	200.1	168.7	100	Yes	12	0	No	0.01	Param.
Molybdenum (ug/L)	MW10	24.87	18.79	100	No	10	0	No	0.01	Param.
Radium (pCi/L)	MW-2 (bg)	1.545	0.7759	5	No	11	9.091	No	0.01	Param.
Radium (pCi/L)	MW-3 (bg)	1.234	0.551	5	No	11	9.091	No	0.01	Param.
Radium (pCi/L)	MW-7	1.534	0.5963	5	No	11	9.091	No	0.01	Param.
Radium (pCi/L)	MW-9	1.248	0.498	5	No	11	9.091	No	0.01	Param.
Radium (pCi/L)	MW-1R	0.9615	0.3952	5	No	11	9.091	No	0.01	Param.
Selenium (ug/L)	MW-2 (bg)	2	1	50	No	12	66.67	No	0.01	NP (normality)
Selenium (ug/L)	MW-3 (bg)	1	1	50	No	12	91.67	No	0.01	NP (NDs)
Selenium (ug/L)	MW-7	25.92	3.93	50	No	12	0	ln(x)	0.01	Param.
Selenium (ug/L)	MW-9	1	1	50	No	12	91.67	No	0.01	NP (NDs)
Selenium (ug/L)	MW-1R	1	1	50	No	12	91.67	No	0.01	NP (NDs)
Selenium (ug/L)	MW10	1	1	50	No	10	90	No	0.011	NP (NDs)

Parametric and Non-Parametric (NP) Confidence Interval

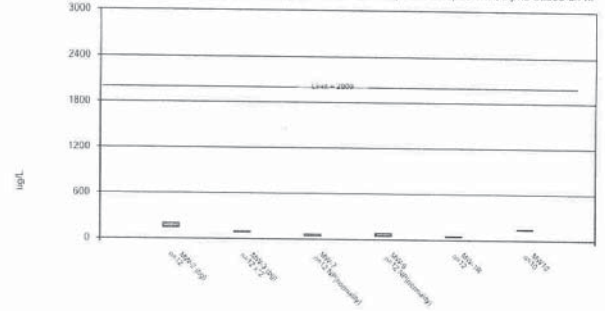
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 5/15/2024 12:34 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

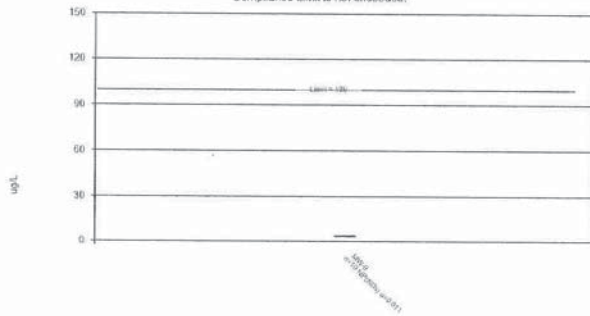
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Constituent: Barium Analysis Run 5/15/2024 12:34 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Non-Parametric Confidence Interval

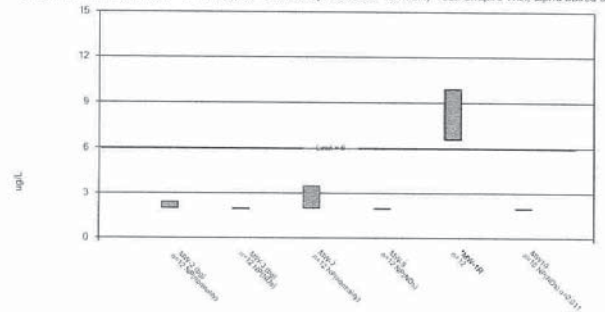
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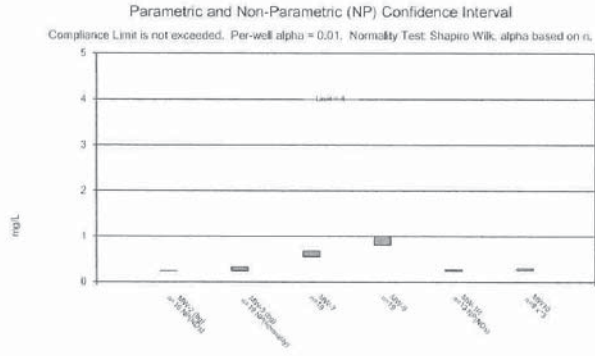
Constituent: Chromium Analysis Run 5/15/2024 12:34 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Parametric and Non-Parametric (NP) Confidence Interval

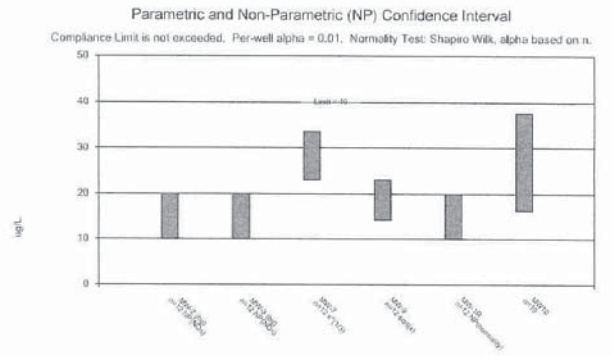
Compliance limit is exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



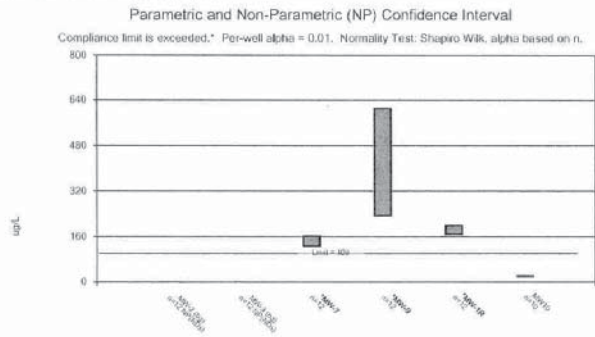
Constituent: Cobalt Analysis Run 5/15/2024 12:34 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



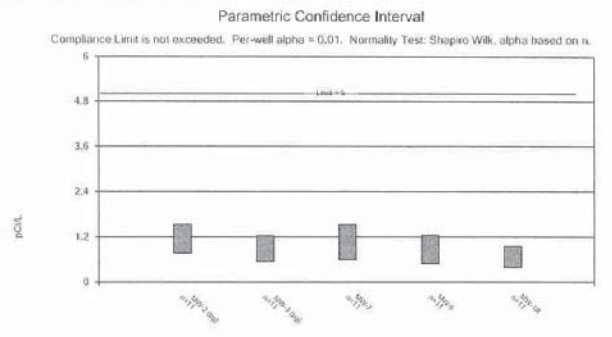
Constituent: Fluoride Analysis Run 5/15/2024 12:35 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



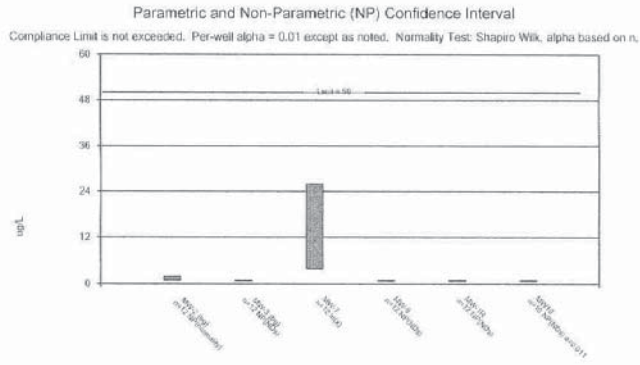
Constituent: Lithium Analysis Run 5/15/2024 12:35 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Constituent: Molybdenum Analysis Run 5/15/2024 12:35 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Constituent: Radium Analysis Run 5/15/2024 12:35 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background



Constituent: Selenium Analysis Run 5/15/2024 12:35 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

Appendix 9-3

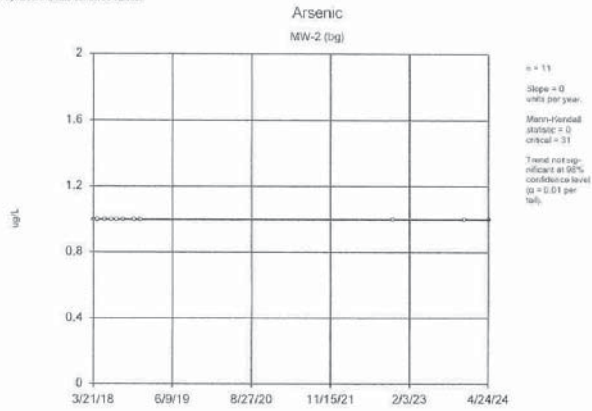
Trend Tests with Confidence Bands
(Sanitas* Output Summary)

Trend Test

SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background Printed 5/15/2024, 12:50 PM

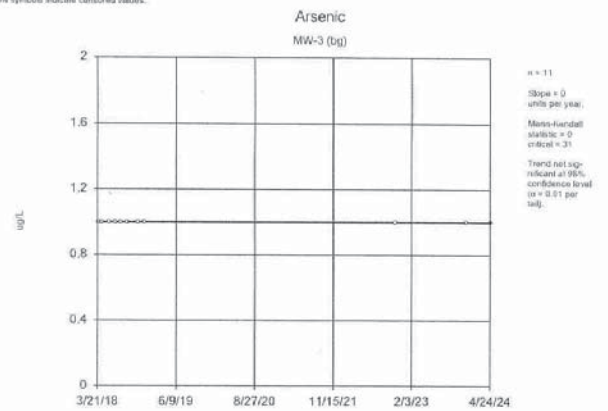
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (ug/L)	MW-2 (bg)	0	0	31	No	11	90.91	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-3 (bg)	0	0	31	No	11	90.91	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-7	0	0	31	No	11	90.91	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-9	0	-8	-31	No	11	81.82	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW-1R	0	-7	-31	No	11	63.64	n/a	n/a	0.02	NP
Arsenic (ug/L)	MW10	0.6801	3	27	No	10	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-2 (bg)	6.943	18	35	No	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-3 (bg)	-1.99	-16	-35	No	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-7	4.073	39	35	Yes	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-9	7.22	38	35	Yes	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW-1R	2.934	19	35	No	12	0	n/a	n/a	0.02	NP
Barium (ug/L)	MW10	0	0	27	No	10	0	n/a	n/a	0.02	NP
Chromium (ug/L)	MW-9	0	-5	-27	No	10	90	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-2 (bg)	0	15	35	No	12	75	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-3 (bg)	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-7	0.1229	24	35	No	12	16.67	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-9	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW-1R	0.97	16	35	No	12	0	n/a	n/a	0.02	NP
Cobalt (ug/L)	MW10	0	-5	-27	No	10	90	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-2 (bg)	0	-5	-53	No	16	87.5	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-3 (bg)	0	-41	-68	No	19	57.89	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-7	-0.03252	-79	-68	Yes	19	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-9	-0.04307	-59	-68	No	19	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW-1R	0	-17	-39	No	13	76.92	n/a	n/a	0.02	NP
Fluoride (mg/L)	MW10	-0.01881	-5	-23	No	9	11.11	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-2 (bg)	0	12	35	No	12	91.67	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-3 (bg)	0	12	35	No	12	91.67	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-7	1.68	40	35	Yes	12	0	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-9	1.352	34	35	No	12	8.333	n/a	n/a	0.02	NP
Lithium (ug/L)	MW-1R	2.575	22	35	No	12	33.33	n/a	n/a	0.02	NP
Lithium (ug/L)	MW10	-8.41	-5	-27	No	10	10	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-2 (bg)	0	9	35	No	12	83.33	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-3 (bg)	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-7	-8.068	-45	-35	Yes	12	0	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-9	-97.72	-59	-35	Yes	12	0	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW-1R	14.54	21	35	No	12	0	n/a	n/a	0.02	NP
Molybdenum (ug/L)	MW10	-1.197	-3	-27	No	10	0	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-2 (bg)	0.1191	15	31	No	11	9.091	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-3 (bg)	-0.04931	-15	-31	No	11	9.091	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-7	0.142	25	31	No	11	9.091	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-9	0.1694	27	31	No	11	9.091	n/a	n/a	0.02	NP
Radium (pCi/L)	MW-1R	0.2523	11	31	No	11	9.091	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-2 (bg)	0	-6	-35	No	12	66.67	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-3 (bg)	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-7	-1.654	-26	-35	No	12	0	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-9	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (ug/L)	MW-1R	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (ug/L)	MW10	0	0	27	No	10	90	n/a	n/a	0.02	NP

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Hollow symbols indicate censored values.



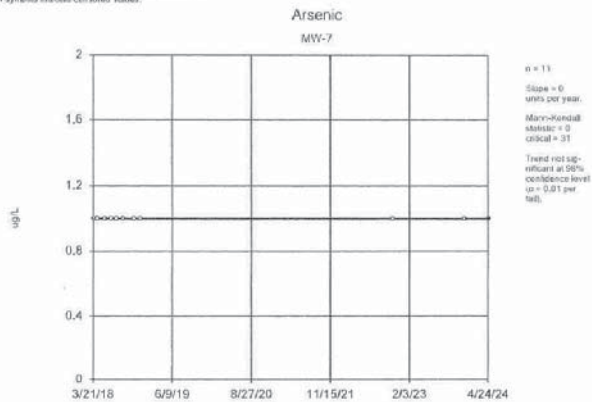
Sen's Slope and 95% Confidence Band Analysis Run 5/15/2024 12:49 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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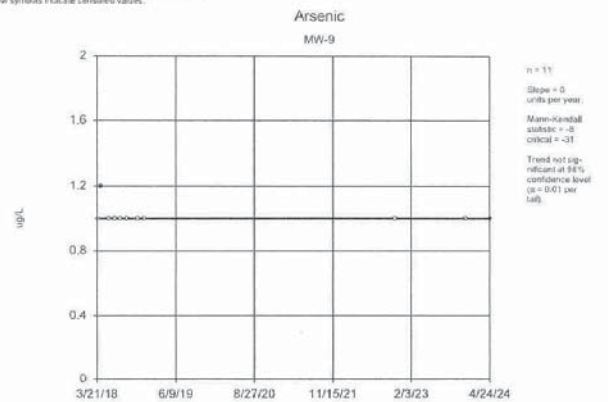
Sen's Slope and 95% Confidence Band Analysis Run 5/15/2024 12:49 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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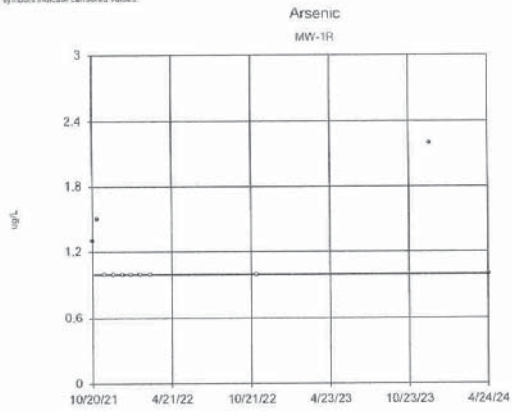
Sen's Slope and 95% Confidence Band Analysis Run 5/15/2024 12:49 PM View: May 2024 Assessment
SBMU-Sikeston Power Station Client: GREDELL Engineering Data: SikestonFAP Background

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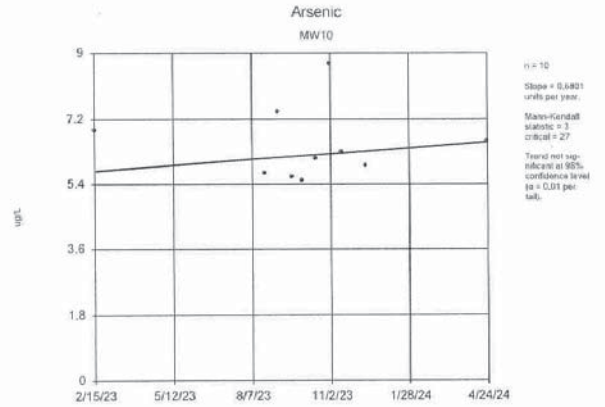
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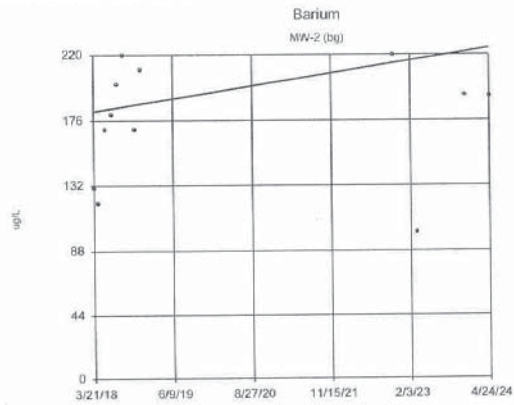
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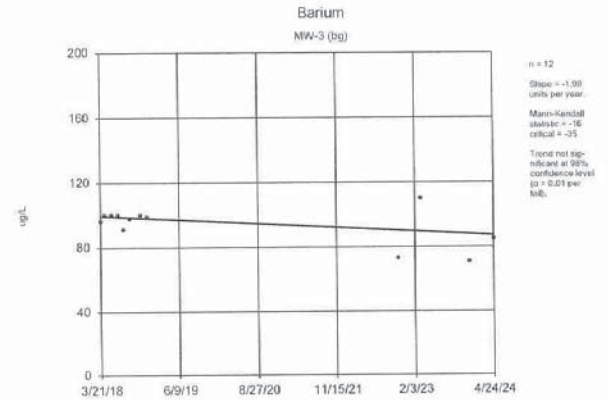
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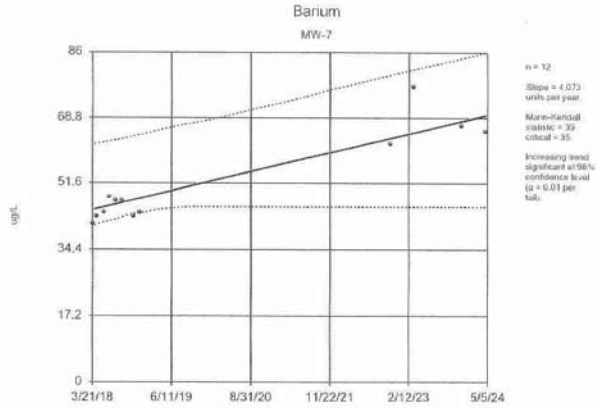


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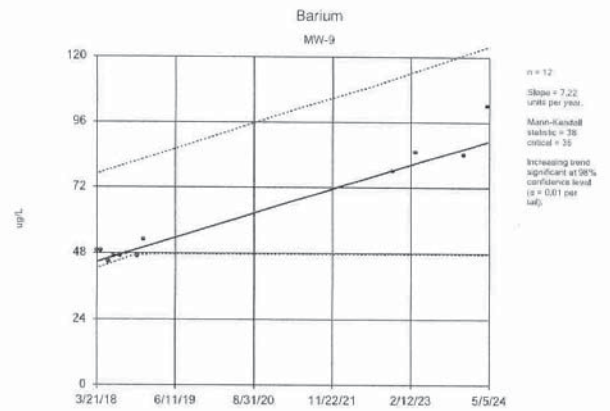
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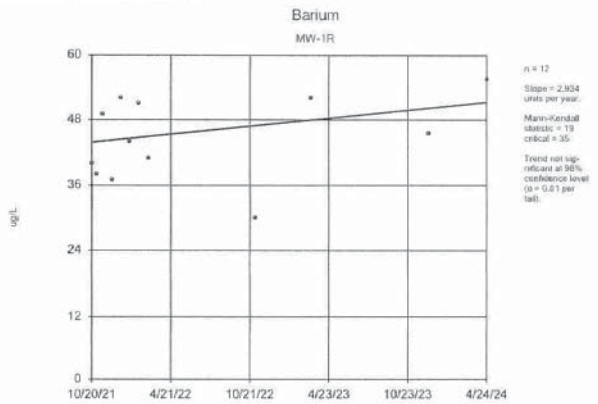
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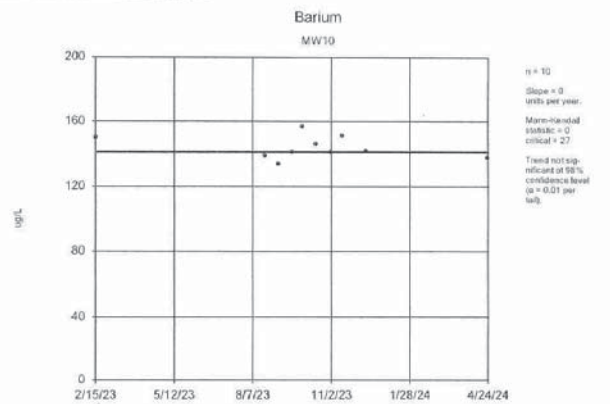
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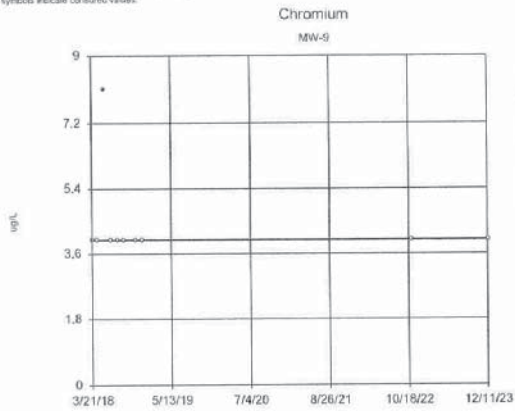


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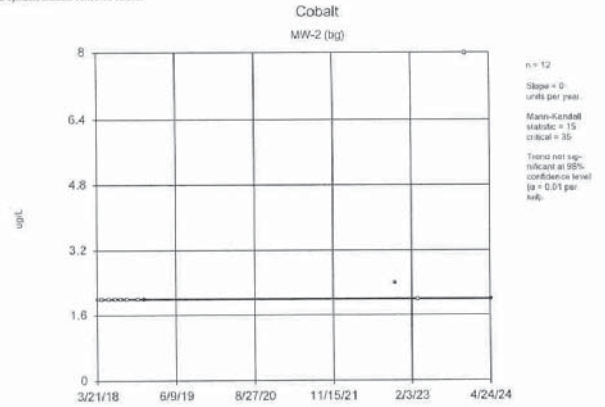
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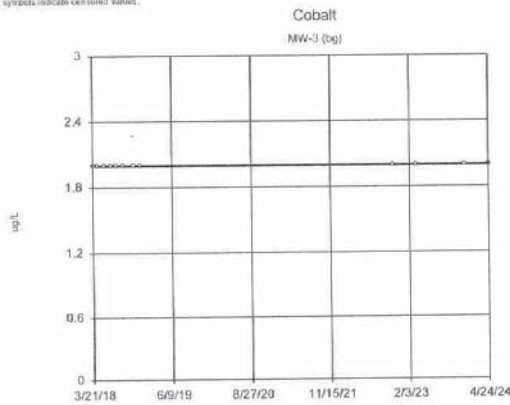
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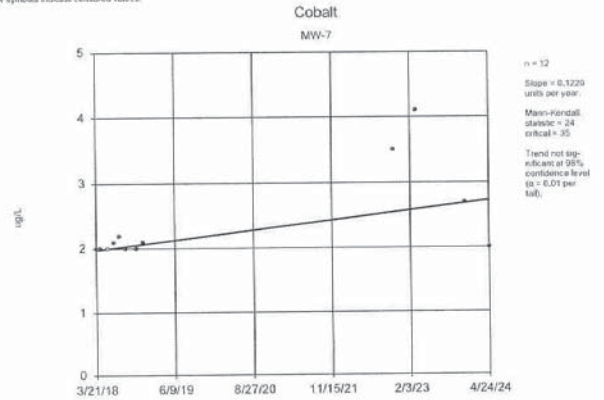
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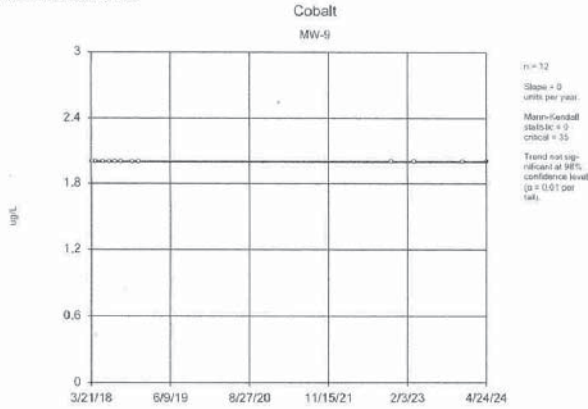
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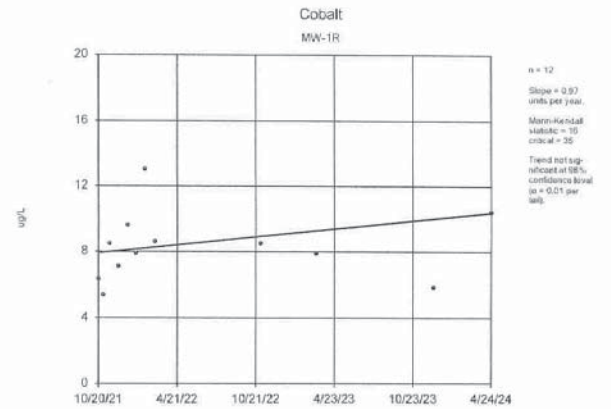
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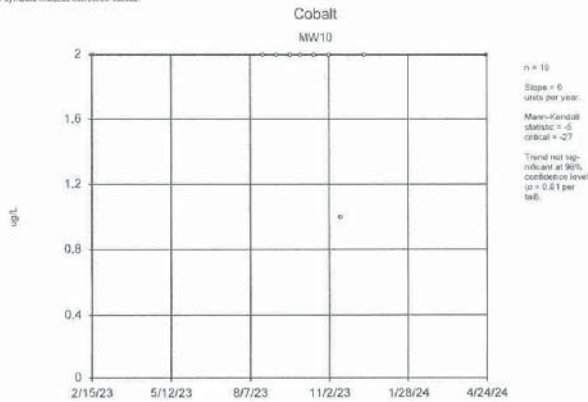
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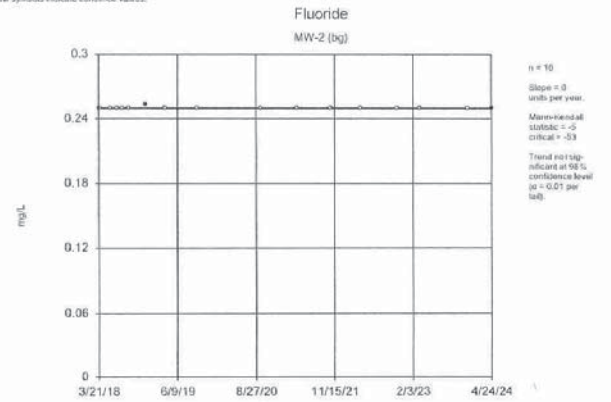
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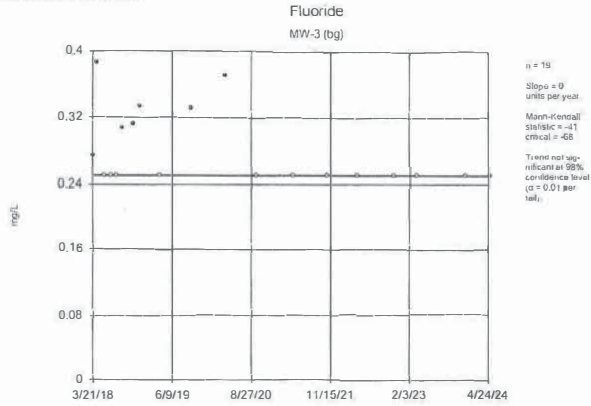
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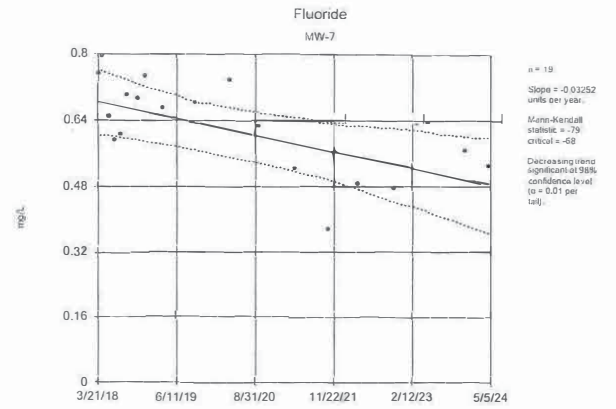
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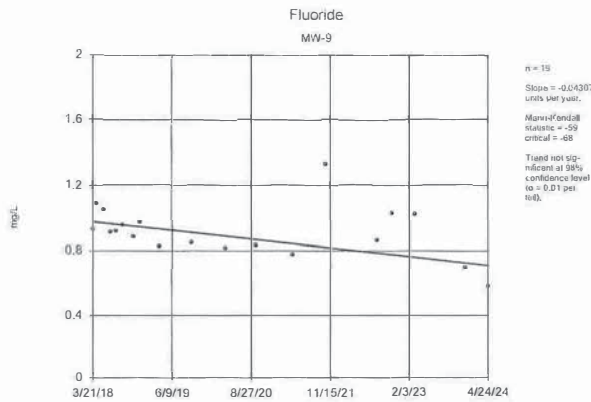
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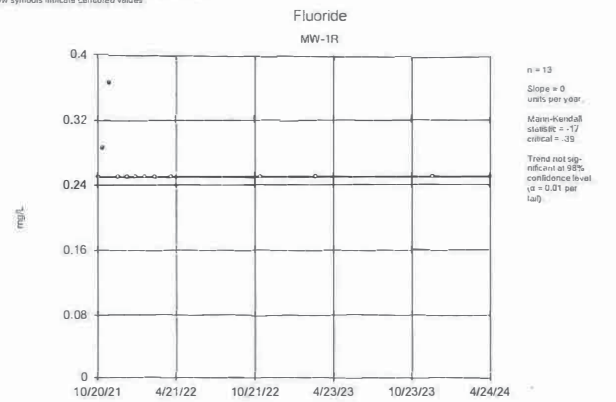
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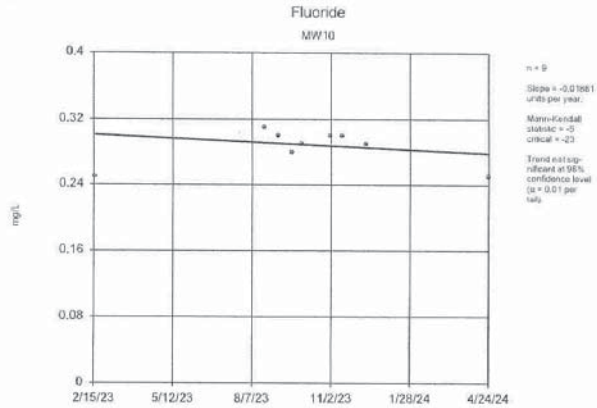
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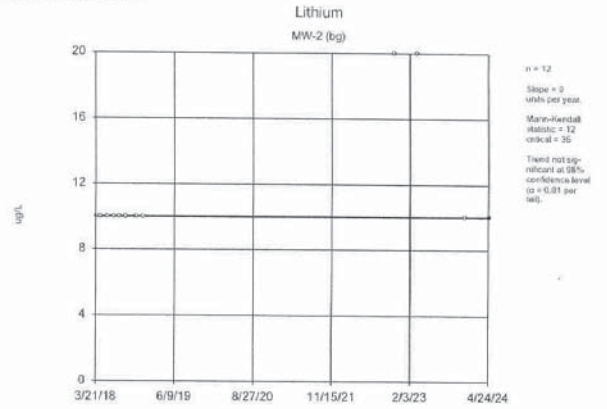
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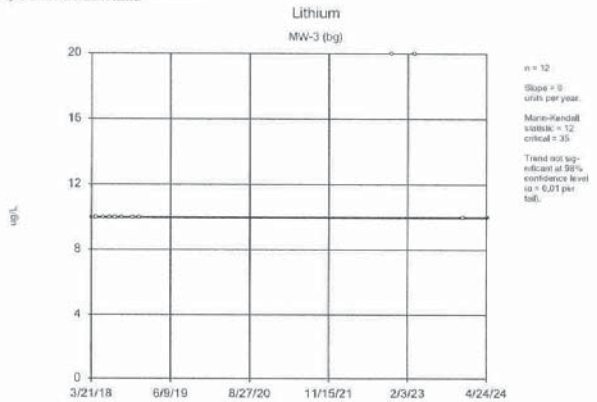
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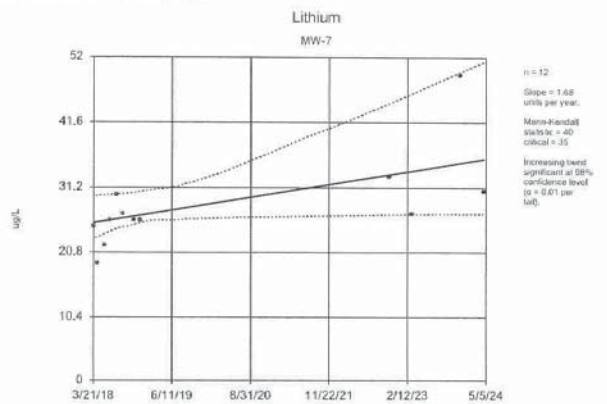
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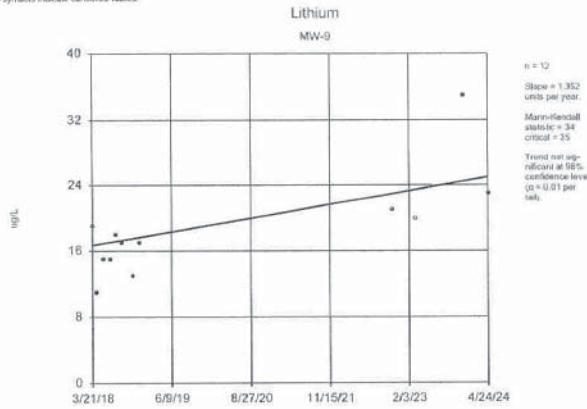
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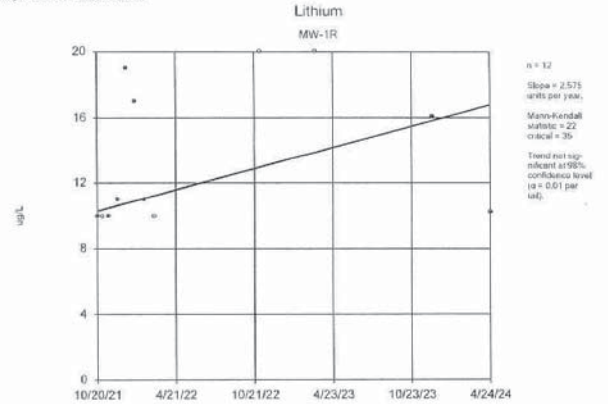
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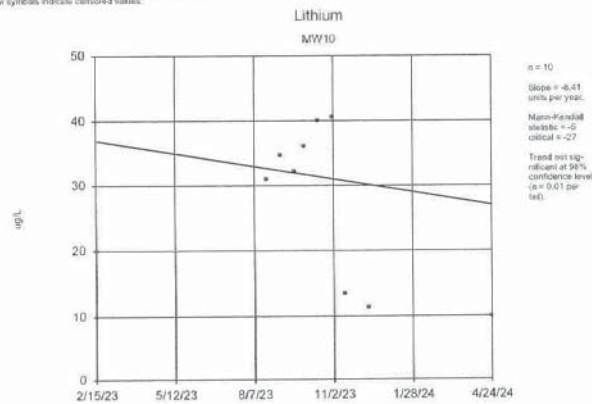
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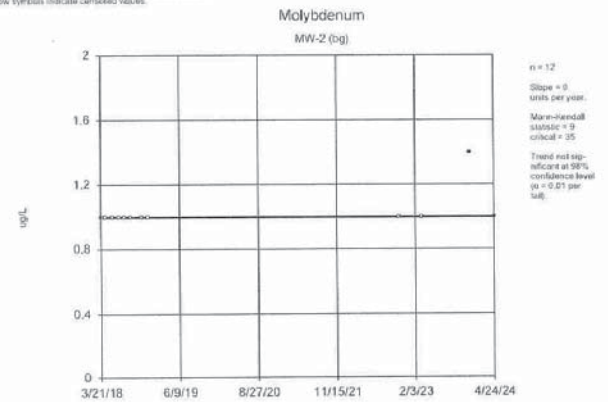
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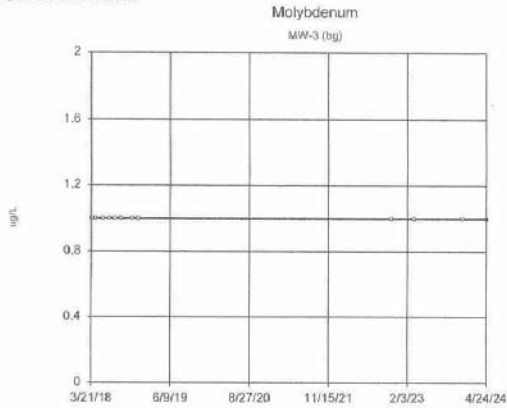
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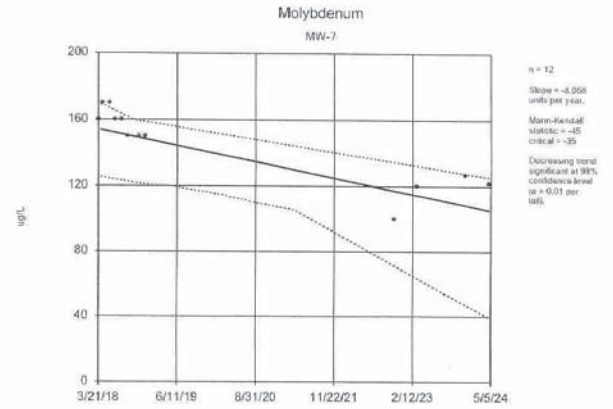
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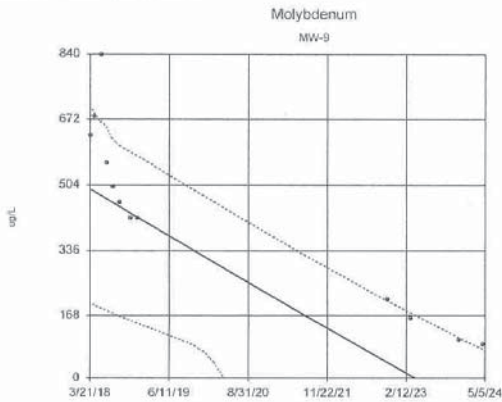
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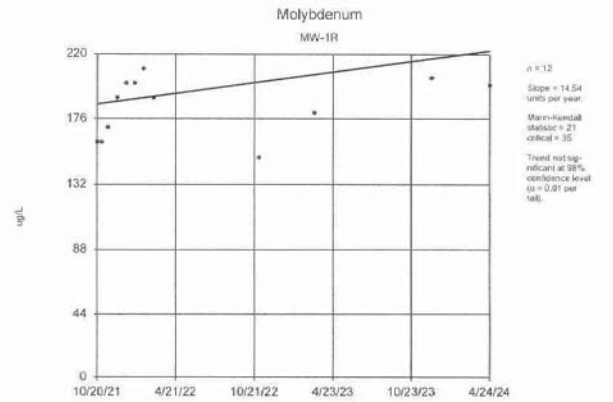
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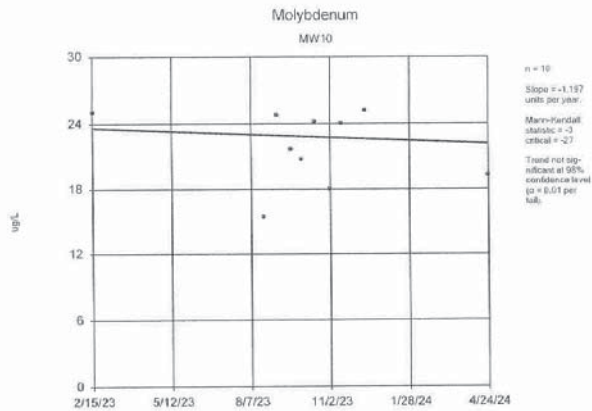


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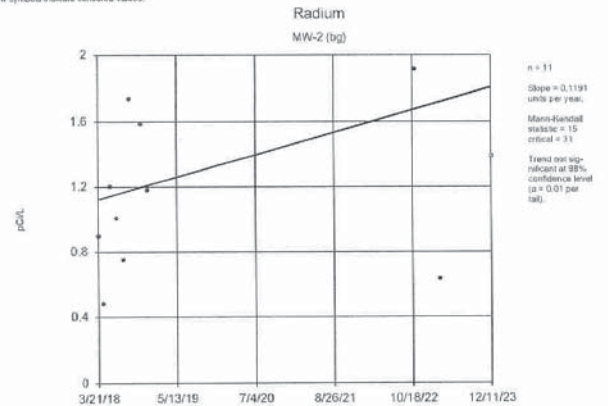
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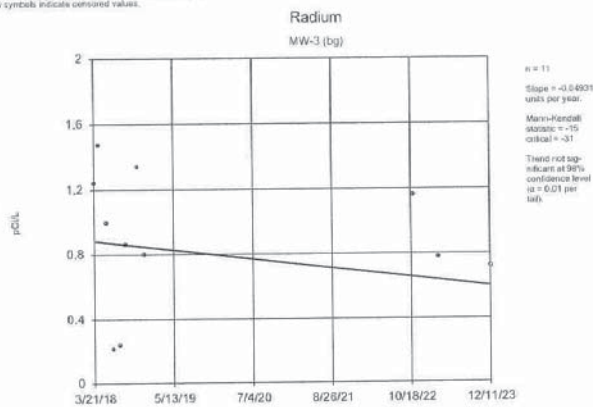
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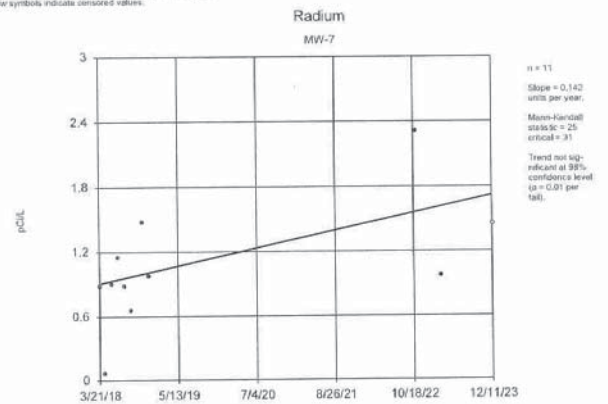
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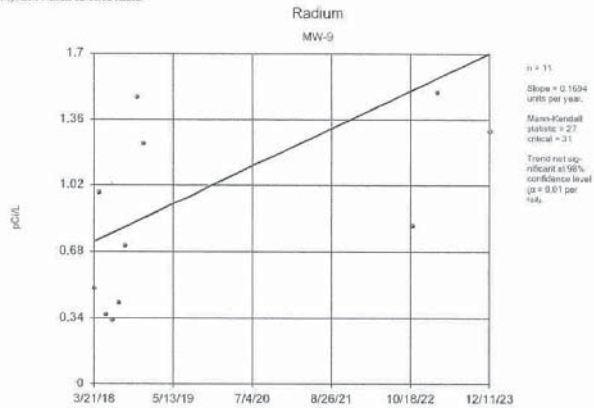


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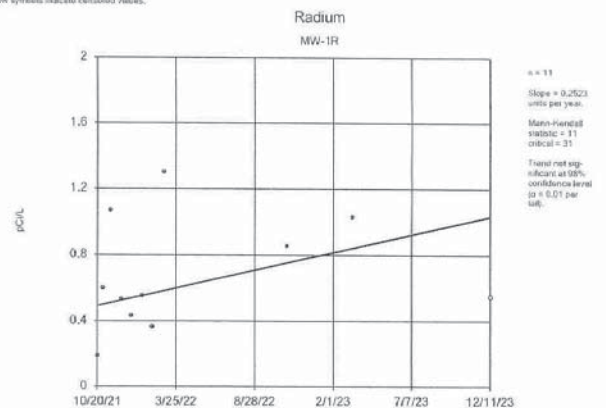
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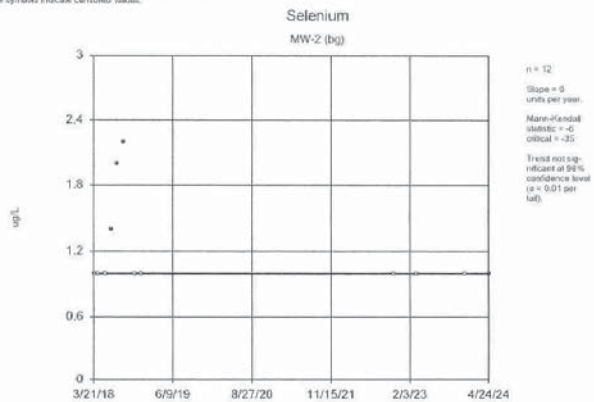
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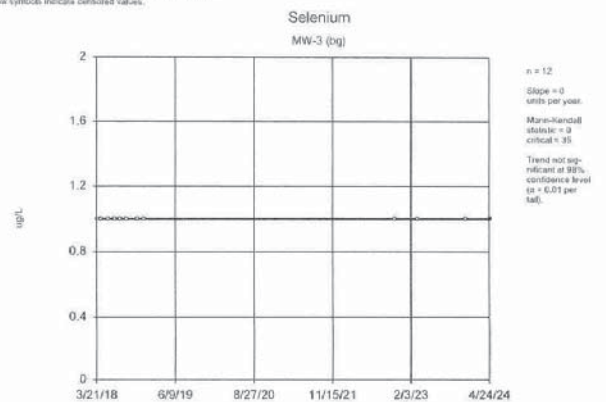
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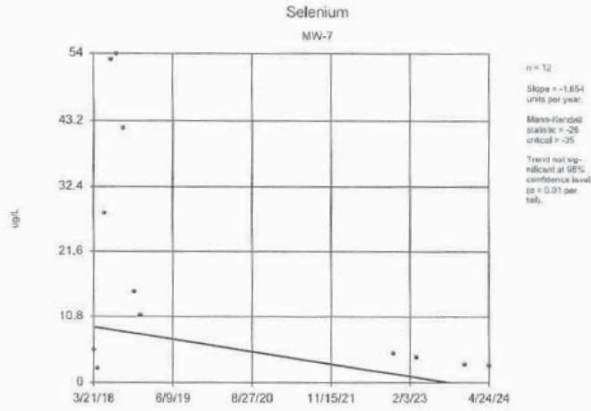
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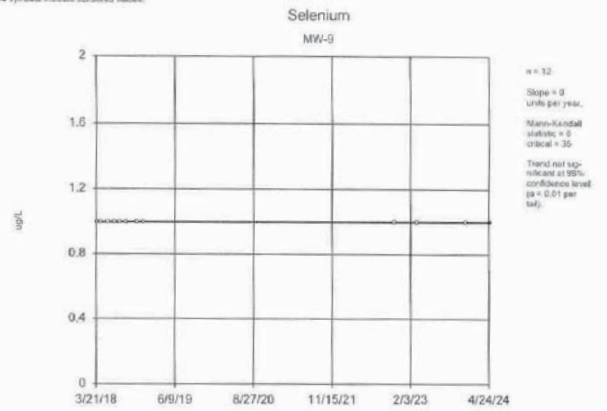
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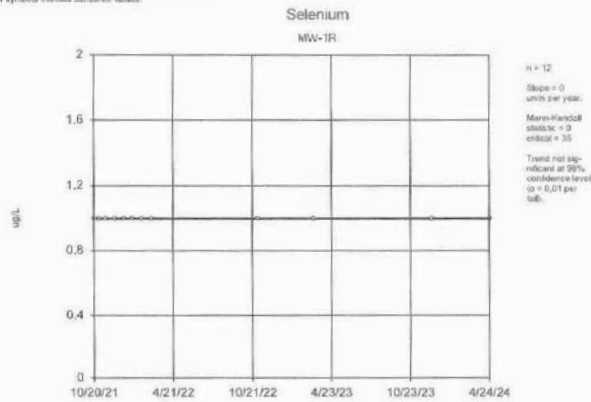
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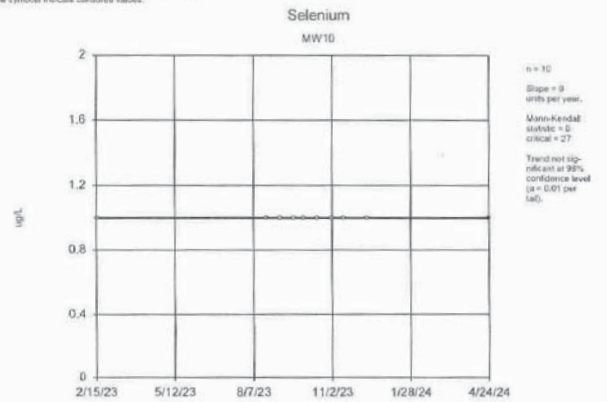
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Appendix 10

Nature and Extent Characterization
Technical Memorandum

Technical Memorandum

To: Luke St. Mary, Results Engineer / Plant Chemist, SBMU-SPS
From: Mikel C. Carlson, R.G., Principal Geologist *McC*
CC: Mark McGill, Plant Manager, SBMU-SPS, Ken Ewers, R.G., Tom Gredell, P.E.
Date: November 29, 2023
Re: Nature and Extent Characterization (NEC), Sikeston Power Station, Scott County, Missouri

GREDELL Engineering Resources, Inc. (GER) presents this Technical Memorandum for future reference detailing groundwater sampling and groundwater elevation monitoring results at the Sikeston Board of Municipal Utilities (SBMU) – Sikeston Power Station (SPS). This Technical Memorandum presents the groundwater analysis results that pertain to the investigation of potential impacts associated with the Fly Ash Pond (FAP). The Nature and Extent Characterization (NEC) activities were conducted in compliance with §257.95(g)(1).

SCOPE OF SERVICES

A figure displaying the locations of the nature and extent monitoring wells, piezometers, and sampling locations that will be discussed further is provided as Figure 1. The scope of services for the data discussed in this memorandum include:

- Install and sample groundwater in piezometers NE-1, NE-2, and NE-3. These piezometers are generally aligned north to south and are located down gradient of the FAP groundwater monitoring system wells MW-1R, MW-9, and MW-7, which are the monitoring wells associated with the Statistically Significant Levels (SSLs) of Molybdenum and/or Cobalt following the March 2023 assessment groundwater monitoring event. The locations of NE-1, NE-2, and NE-3 were established to determine the down gradient spatial limits of Molybdenum and Cobalt concentrations in shallow groundwater above Groundwater Protection Standards (GWPS). These GWPS are summarized in Table 1.
- Install and sample groundwater in one additional down gradient monitoring well (MW-10) located north of the facility property boundary with the adjacent Southwestern Power Administration (SWPA) substation facility and west of Richland Drainage Ditch #4.
- Compile information on naturally occurring sources and exposure risks to human health and the environment regarding Molybdenum and Cobalt in groundwater.

- Collect 25 groundwater and 3 surface water samples in locations listed in Table 2 and shown on Figure 1 for analysis of 40 CFR 257 Appendix III and IV constituents for Detection and Assessment Monitoring. Water quality results are summarized in Table 4.

GROUNDWATER AND SURFACE WATER SAMPLING

Groundwater sampling was conducted on the following dates and locations:

- On February 15, 2023, GER staff collected groundwater samples from MW-10, NE-1, NE-2, and NE-3. On the same date, GER staff also sampled groundwater from the high-capacity wells identified by SPS staff as the “A” Well, “B” Well, “C” Well, and “D” Well to assess deeper groundwater chemistry. Surface water sampling was also conducted at three separate locations along Richland Drainage Ditch #4 (SG-N, located on south side of Wakefield Avenue; SG-OF-50, located approximately 50 feet south of the NPDES outfall; and SG-S located on the north side of Compress Road (County Road 478));
- On February 22, 2023, SBMU staff sampled groundwater from MW-1;
- On March 22, 2023, GER staff sampled groundwater at three different levels (133 feet, 150 feet, and 167 feet) below the rim of the well casing in “B” Well, and;
- On August 1 through 4, 2023, GER staff advanced temporary borings at three locations (DP-1, DP-2, and DP-3 on Figure 1) and sampled groundwater from a depth of approximately 144 feet below ground surface (all three locations) and approximately 74 feet below ground surface (at DP-3) to refine understanding of Molybdenum concentrations at depths deeper than existing piezometers and monitoring wells.

The groundwater samples were collected utilizing low flow sampling procedures detailed in the Groundwater Monitoring Sampling and Analysis Plan (GMSAP) for the facility except the large-diameter production wells. The large-diameter production wells “A”, “B”, and “D” were sampled with passive samplers using standard procedures provided by the sampler manufacturer. Well “C” was sampled directly from the sample port at the well head while the well was operating.

The analytical results for these sampling events are summarized in Table 4.

WATER LEVEL MONITORING

Water level monitoring was performed approximately weekly by SBMU or GER staff beginning in early February following installation of new piezometers NE-1, NE-2, and NE-3 and monitoring well MW-10

To: Luke St Mary
Date: November 29, 2023
Re: Nature and Extent Characterization, Sikeston Power Station, Scott County, Missouri
Page: 3

to characterize flow direction and variation in water table and surface water elevation. Table 3 summarizes water levels measured approximately weekly from February to August 2023.

SUMMARY

This investigation was undertaken in accordance with the requirements in 40 CFR 257.95(g)(1). The resulting data augment existing hydrogeologic data for the site and should be incorporated into a Conceptual Site Model (CSM) that describes groundwater flow and solute migration from beneath the FAP including aquifer recharge and discharge boundaries, and surface water bodies (drainage ditches) and their relationship with the aquifer. The CSM should then be developed into a numerical groundwater flow model utilizing existing aquifer testing data and proposed site conditions to aid design of potential corrective measures to be assessed for an Assessment of Corrective Measures (ACM) in accordance with §257.96. The numerical model will also be used to conduct predictive simulations to address the requirements and objectives described in §257.97, including the performance, reliability, ease of implementation, and time required to complete the remedies being considered for the ACM.

GER appreciates the opportunity to assist you with this project. If you have any questions concerning this technical memorandum or need additional information, please contact us at 573-659-9078.

Attachments:

Figure 1 – Site Location and Monitoring Well and Piezometer Location Map

Table 1 – Groundwater Protection Standards

Table 2 – Drilling, Well, Piezometer, and Sample Location Summary

Table 3 – Groundwater Level and Elevation Data

Table 4 – Groundwater Quality Data

FIGURES



LEGEND

PROPERTY LINE	PL	MW-10
MONITORING WELL	○	NE-3
TEMPORARY PEZZOMETER	⊙	SG-N
RICHLAND DRAINAGE DITCH #4	—	SG-FB
WATER ELEVATION GAGE AND/OR SAMPLE LOCATION	⊗	DP-3
HIGH-CAPACITY WELL	⊙	UG
DIRECT PUSH UP-16 GROUNDWATER SAMPLE LOCATION	⊙	DG
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 & UNDERGROUND CASING ELEVATIONS SURVEYED BY BOWEN ENGINEERING & SURVEYING.
 3. LOCATIONS DP-1, DP-2, AND DP-3 ARE APPROXIMATED WITH GPS.
 4. MW-10, NE-1, NE-2, NE-3, SG-N, SG-FB, SG-S, AND SG-OF-50 INSTALLED DURING FIRST PHASE OF NATURE AND EXTENT CHARACTERIZATION.
 5. DP-1, DP-2, AND DP-3 DRILLED AND SAMPLED DURING SECOND PHASE OF NATURE AND EXTENT CHARACTERIZATION.

MONITORING WELL ID	GROUNDWATER ELEVATION (FEET)	CASING ELEVATION (FEET)	NORTHING	EASTING
MW-1	295.97	312.77	38113.61	4078467.30
MW-2	295.20	314.34	38292.45	4078801.61
MW-3	296.43	308.55	381130.00	4079946.62
MW-4	294.71	305.61	38094.62	4077786.95
MW-5	295.27	305.91	37988.94	4078477.85
MW-6	295.87	307.72	379874.77	4079384.36
MW-7	295.61	315.03	381564.50	4078847.20
MW-8	294.84	304.77	38331.20	4077940.08
MW-9	296.01	314.68	382429.94	4078825.60
MW-10	293.93	304.28	381324.39	4076261.22
NE-1	294.07	306.53	382075.47	4076602.42
NE-2	293.99	306.30	381536.65	4076600.17
NE-3	293.95	303.40	380948.04	4076633.18
SG-N	294.82	305.42	38289.97	4076382.28
SG-FB	293.71	305.00	381861.66	4076421.14
SG-S	293.60	304.80	380661.54	4076458.95
"A"	293.69	311.75	382050.47	4076976.72
"B"	293.56	309.84	381021.18	4076589.61
"D"	293.76	312.22	382309.74	4076654.50
DP-1	NA	+300	+380960	+4075639
DP-2	NA	+303	+380966	+4076682
DP-3	NA	+312	+382471	+4078818

THE GEOLOGIST WHO REVIEWED AND APPROVED THIS REPORT HAS CONDUCTED VISUAL INSPECTIONS OF THE GEOLOGICAL INVESTIGATIONS OF DATA AFFORDING ON THE BASIS OF THE INFORMATION PROVIDED TO HIM. HE HAS NOT CONDUCTED FIELD INVESTIGATIONS OR TESTS. HIS REPORT IS BASED ON THE INFORMATION PROVIDED TO HIM AND IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF GREDDELL ENGINEERING RESOURCES.

FIGURE 1
NATURE & EXTENT CHARACTERIZATION
SAMPLING LOCATIONS

DATE	08/23/2016
SCALE	1" = 600'
PROJECT	SIKESTON POWER STATION
CLIENT	SIKESTON POWER STATION
DRAWN BY	SIKESTON POWER STATION
CHECKED BY	SIKESTON POWER STATION
DATE	08/23/2016
SCALE	1" = 600'
PROJECT	SIKESTON POWER STATION
CLIENT	SIKESTON POWER STATION
DRAWN BY	SIKESTON POWER STATION
CHECKED BY	SIKESTON POWER STATION
DATE	08/23/2016
SCALE	1" = 600'
PROJECT	SIKESTON POWER STATION
CLIENT	SIKESTON POWER STATION
DRAWN BY	SIKESTON POWER STATION
CHECKED BY	SIKESTON POWER STATION

GREDDELL ENGINEERING RESOURCES
 CIVIL, GEOTECHNICAL, ENVIRONMENTAL, GEOLOGY - EARTH SCIENCES
 Telephone: (673) 659-9078
 1505 East High Street
 Jefferson City, Missouri 64504

TABLES

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Fly Ash Pond Nature and Extent Characterization
Sikeston, Missouri**

Table 1 - Groundwater Protection Standards

Constituent	Units^{1, 2, 3}	Groundwater Protection Standards^{4, 5}
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. Groundwater Protection Standards (GWPS) established in accordance with §257.95(h).
GWPS is the Maximum Contaminant Level (MCL) for a constituent with a MCL listed in §§ 141.62 & §§ 141.66. GWPS for Lithium and Molybdenum are provided in §§ 257.95(h)(2).
5. Detected Appendix IV constituents shown in bold.

Prepared by: GREDELL Engineering Resources, Inc.

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

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Scott County, Missouri
FAP Nature and Extent Evaluation**

**Table 2
Drilling, Well, Piezometer, and Sample Location Summary**

Location ID ¹	Boring Type	Date Drilled	Location ⁴		Ground Surface Elev. (feet) ⁵	Total Drilling Depth (feet) ⁶	Sample Collection Depth (feet) ⁵	Approximate Sample Collection Elevation (feet)	Top of Casing Elevation (feet) ^{3,4}	Base of Screen Elevation (feet)	Top of Screen Elevation (feet)
			Northing	Easting							
NE-1	Piezometer	2/8/2023	382075.47	1076602.42	306.0	30	28	276.0	308.53	276.0	286.0
NE-2	Piezometer	2/8/2023	381536.65	1076600.17	303.3	30	28	273.3	306.30	273.3	283.3
NE-3	Piezometer	2/9/2023	380948.04	1076633.18	300.1	29	27	271.1	303.40	271.1	280.1
MW-1	Monitoring Well	4/25/2016	383119.51	1078467.90	310.4	35.5	30	280.4	312.77	274.9	285.1
MW-1R	Monitoring Well	9/3/2021	382926.45	1078801.61	311.4	35	29	282.4	314.34	276.1	286.4
MW-2	Monitoring Well	4/25/2016	383207.42	1079751.30	305.5	35.5	29	276.5	308.01	270.6	280.8
MW-3	Monitoring Well	4/26/2016	381130.00	1079946.62	306.1	35.5	29	277.1	308.55	271.3	281.5
MW-4	Monitoring Well	4/27/2016	380804.62	1077766.95	303.3	35.5	29	274.3	305.61	268.1	278.3
MW-5	Monitoring Well	4/26/2016	379858.94	1078477.85	303.6	35.5	29	274.6	305.91	268.7	278.9
MW-6	Monitoring Well	4/26/2016	379874.77	1079384.36	305.4	35.5	29	276.4	307.72	269.7	279.9
MW-7	Monitoring Well	4/18/2017	381584.50	1078847.00	312.7	35	30	282.7	315.03	277.7	287.9
MW-8	Monitoring Well	4/19/2017	380311.20	1077940.08	302.4	35	30	272.4	304.77	267.4	277.6
MW-9	Monitoring Well	11/14/2017	382429.94	1078825.60	311.9	35	30	281.9	314.68	277.4	287.6
MW-10	Monitoring Well	2/9/2023	381324.39	1076261.22	300.7	30	28	270.7	304.28	270.7	280.7
SG-N	Stream Gauge (Surface Water)	NA	383289.97	1076382.88	NA	NA	Surface Water	-293	NA	NA	NA
SG-OF-50		NA	381881.66	1076423.14	NA	NA		-293	NA	NA	NA
SG-S		NA	380661.54	1076458.95	NA	NA		-293	NA	NA	NA
"A" Well	Inactive Production Well		382010.47	1076576.72	311.75	175	150	162	311.75	140.0	183.0
"B" Well	Inactive Production Well	9/12/1979	381011.18	1076589.61	309.84	179	133	177	309.84	135.8	178.8
"B" Well	Inactive Production Well	9/12/1979	381011.18	1076589.61	309.84	179	150	160	309.84	135.8	178.8
"B" Well	Inactive Production Well	9/12/1979	381011.18	1076589.61	309.84	179	150	160	309.84	135.8	178.8
"B" Well	Inactive Production Well	9/12/1979	381011.18	1076589.61	309.84	179	167	143	309.84	135.8	178.8
"C" Well	Production Well	8/15/1979	381110.52	1077715.49	312.92	181	131-178 ⁷	182 - 135 ⁷	312.92	134.9	181.9
"D" Well	Inactive Production Well	7/13/1993	382309.74	1076564.50	312.22	166	130	182	312.22	151.22	191.2
DP-1-150	Temporary Piezometer	8/2/2023	380960.28	1075639.97	300 ⁶	151	144	156	NA	156 ⁶	160 ⁶
DP-2-150	Temporary Piezometer	8/3/2023	380666.50	1076582.79	303 ⁶	154	144	159	NA	159 ⁶	163 ⁶
DP-3-75	Temporary Piezometer	8/1/2023	382471.55	1078818.14	312 ⁶	79	74	238	NA	238 ⁶	242 ⁶
DP-3-150	Temporary Piezometer	8/4/2023	382471.27	1078854.84	312 ⁶	150	144	168	NA	168 ⁶	172 ⁶

NOTES:

1. Refer to Figure 1 for locations.
2. Refer to Sikeston Power Station On-Site Operating Record for construction diagrams.
3. Monitoring well survey data provided by Bowen Engineering & Surveying, Inc.
4. Horizontal Datum: Missouri State Plane East Zone Coordinates - NAD 83 (Feet), Vertical Datum: NAVD 88 (Feet).
5. Relative to Ground Surface at time of drilling.
6. Temporary Piezometers installed with Direct Push Drilling, Locations Approximated with GPS.
7. Sample taken from sample port of actively pumping well.

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Scott County, Missouri
FAP Nature and Extent Evaluation**

**Table 3
Water Level Data**

Location ID ^{1,2}	Location ³		Ground Elev. (feet) ³	Top Casing Elev. (feet) ³	Total Depth (feet)	Water Level Measurements																							
	Northing	Easting				02/15/23		02/21/23		02/28/23		03/06/23		03/12/23		03/15/23		03/21/23		03/22/23		03/30/23							
			Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴	Depth (feet) ⁴	Elev. (feet) ⁴							
MW-1/TPZ-1	383119.51	1078467.90	310.4	312.77	38.05	16.80	295.97	NM	NM	NM	NM	16.40	296.37	NM	NM	16.24	296.53	NM	NM	15.98	296.79	NM	NM						
MW-1R	382926.45	1078801.61	311.4	314.34	38.10	18.14	296.20	NM	NM	NM	NM	17.80	296.54	17.89	296.45	17.65	296.69	NM	NM	17.38	296.96	NM	NM						
MW-2	383207.42	1079751.30	305.5	308.01	37.18	11.15	296.86	NM	NM	NM	NM	10.76	297.25	10.80	297.21	10.72	297.29	NM	NM	10.50	297.51	NM	NM						
MW-3	381130.00	1079946.62	306.1	308.55	37.00	12.12	296.43	NM	NM	NM	NM	11.68	296.87	11.80	296.75	11.68	296.87	NM	NM	11.43	297.12	NM	NM						
MW-4	380804.62	1077766.95	303.3	305.61	37.25	10.90	294.71	NM	NM	NM	NM	10.40	295.21	NM	NM	10.51	295.10	NM	NM	10.12	295.49	NM	NM						
MW-5	379858.94	1078477.85	303.6	305.91	37.10	10.64	295.27	NM	NM	NM	NM	10.03	295.88	NM	NM	10.44	295.47	NM	NM	10.05	295.86	NM	NM						
MW-6	379874.77	1079384.36	305.4	307.72	37.70	11.85	295.87	NM	NM	NM	NM	11.30	296.42	NM	NM	11.52	296.20	NM	NM	11.22	296.50	NM	NM						
MW-7	381584.50	1078847.00	312.7	315.03	37.21	19.42	295.61	NM	NM	NM	NM	19.04	295.99	19.23	295.80	18.85	296.18	NM	NM	18.56	296.47	NM	NM						
MW-8	380311.20	1077940.08	302.4	304.77	37.02	9.93	294.84	NM	NM	NM	NM	9.40	295.37	NM	NM	9.68	295.09	NM	NM	9.27	295.50	NM	NM						
MW-9	382429.94	1078825.60	311.9	314.68	37.10	18.67	296.01	NM	NM	NM	NM	18.30	296.38	18.41	296.27	18.13	296.55	NM	NM	17.86	296.82	NM	NM						
MW-10	381324.39	1076261.22	300.7	304.28	32.69	10.35	293.93	10.33	293.95	10.50	293.78	9.50	294.78	NM	NM	9.97	294.31	NM	NM	9.66	294.62	9.42	294.86						
NE-1	382075.47	1076602.42	306.0	308.53	32.75	14.46	294.07	14.45	294.08	14.60	293.93	14.07	294.46	NM	NM	13.78	294.75	NM	NM	13.48	295.05	13.25	295.28						
NE-2	381536.65	1076600.17	303.3	306.30	32.13	12.31	293.99	12.30	294.00	12.47	293.83	11.96	294.34	NM	NM	11.80	294.50	NM	NM	11.50	294.80	11.27	295.03						
NE-3	380948.04	1076633.18	300.1	303.40	32.90	9.45	293.95	9.45	293.95	9.60	293.80	9.03	294.37	NM	NM	9.10	294.30	NM	NM	8.81	294.59	8.62	294.78						
SG-N	383289.97	1076382.88	NA	305.42	12.20	10.60	294.82	10.70	294.72	10.65	294.77	10.78	294.64	NM	NM	10.01	295.41	NM	NM	10.60	294.82	10.51	294.91						
SG-FB	381881.66	1076423.14	NA	306.50	13.64	12.77	293.73	12.75	293.75	12.75	293.75	12.65	293.85	NM	NM	12.60	293.90	NM	NM	12.55	293.95	12.48	294.02						
SG-S	380661.54	1076458.95	NA	304.80	12.20	11.20	293.60	12.50	292.30	12.75	292.05	11.16	293.64	NM	NM	11.40	293.40	NM	NM	10.82	293.98	10.85	293.95						
A	382010.47	1076576.72	NA	311.75	17.30	18.06	293.69	17.81	293.94	18.17	293.58	17.55	294.20	NM	NM	17.80	293.95	16.89	294.86	16.78	294.97	16.50	295.25						
B	381011.18	1076589.61	NA	309.84	17.00	16.28	293.56	15.83	294.01	16.47	293.37	16.01	293.83	NM	NM	15.21	294.63	15.04	294.80	14.92	294.92	14.61	295.23						
C	381110.52	1077715.49	NA	312.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.60	295.32	17.53	295.39	17.05	295.87								
D	382309.74	1076564.50	NA	312.22	159.30	18.46	293.76	18.25	293.97	18.56	293.66	17.85	294.37	NM	NM	17.45	294.77	17.23	294.99	17.13	295.09	16.87	295.35						

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 East Zone Coordinates - NAD 83 (Feet), Vertical Datum: NAVD 88 (Feet).
5. Depth measurements relative to surveyed point on top of well casing.
6. NM = Not Measured.
7. * - FAP wells and SG-N remeasured on 3/10/2023 to confirm 3/6/2023 measurements.
8. In conditions of high/turbulent stream flow, average stream elevations were estimated based on multiple field measurements.
9. Elevation inconsistent and believed to result from measurement error.

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Scott County, Missouri
FAP Nature and Extent Evaluation**

**Table 3
Water Level Data**

Location ID ^{1,2}	Water Level Measurements																							
	04/04/23		04/11/23		04/19/23		04/27/23		05/04/23		05/11/23		06/02/23		06/09/23		06/15/23		06/19/23		06/25/23			
	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)		
MW-1/TPZ-1	15.60	297.17	NM	NM	NM	NM	NM	NM	NM	NM	NM	15.80	296.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
MW-1R	16.97	297.37	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.17	297.17	17.70	296.64	NM	NM	NM	NM	NM	NM	NM	NM	
MW-2	10.05	297.96	NM	NM	NM	NM	NM	NM	NM	NM	NM	10.10 ⁹	297.91 ⁹	11.56	296.45	NM	NM	NM	NM	NM	NM	NM	NM	
MW-3	11.00	297.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.10	297.45	11.55	297.00	NM	NM	NM	NM	NM	NM	NM	NM	
MW-4	10.00	295.61	NM	NM	NM	NM	NM	NM	NM	NM	NM	10.90	294.71	10.90	294.71	NM	NM	NM	NM	NM	NM	NM	NM	
MW-5	9.90	296.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	10.80	295.11	10.75	295.16	NM	NM	NM	NM	NM	NM	NM	NM	
MW-6	10.90	296.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.80	295.92	11.68	296.04	NM	NM	NM	NM	NM	NM	NM	NM	
MW-7	18.18	296.85	NM	NM	NM	NM	NM	NM	NM	NM	NM	18.40	296.63	18.95	296.08	NM	NM	NM	NM	NM	NM	NM	NM	
MW-8	9.20	295.57	NM	NM	NM	NM	NM	NM	NM	NM	NM	10.10 ⁹	294.67 ⁹	10.50	294.27	NM	NM	NM	NM	NM	NM	NM	NM	
MW-9	17.45	297.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.65	297.03	18.36	296.32	NM	NM	NM	NM	NM	NM	NM	NM	
MW-10	9.60	294.68	9.68	294.60	9.80	294.48	9.65	294.63	9.87	294.41	10.00	294.28	10.40	293.88	10.88	293.40	11.17	293.11	11.42	292.86	11.73	292.55		
NE-1	13.40	295.13	13.50	295.03	13.60	294.93	13.50	295.03	13.66	294.87	13.80	294.73	14.25	294.28	14.90	293.63	15.15	293.38	16.46	292.07	15.80	292.73		
NE-2	11.46	294.84	11.50	294.80	11.60	294.70	11.50	294.80	11.66	294.64	11.80	294.50	12.25	294.05	12.78	293.52	13.09	293.21	13.29	293.01	13.65	292.65		
NE-3	8.80	294.60	8.86	294.54	8.92	294.48	8.80	294.60	9.00	294.40	9.10	294.30	9.56	293.84	10.04	293.36	10.25	293.15	10.50	292.90	10.85	292.55		
SG-N	10.90	294.52	10.90	294.52	11.80	293.62	10.80	294.62	10.85	294.57	10.85	294.57	10.80	294.62	10.90	294.52	10.90	294.52	11.15	294.27	11.02	294.40		
SG-FB	13.00	293.50	12.60	293.90	12.40	294.10	12.50	294.00	12.62	293.88	12.80	293.70	12.90	293.60	13.00	293.50	13.05	293.45	13.22	293.28	13.40	293.10		
SG-S	11.10	293.70	11.00	293.80	11.23	293.57	11.11	293.69	11.00	293.80	12.05	292.75	11.25	293.55	11.31	293.49	11.40	293.40	11.60	293.20	11.68	293.12		
A	16.65	295.10	16.72	295.03	16.80	294.95	16.70	295.05	16.89	294.86	17.10	294.65	17.52	294.23	18.53	293.22	18.85	292.90	19.08	292.67	19.42	292.33		
B	14.80	295.04	14.85	294.99	14.94	294.90	14.85	294.99	14.90	294.94	15.10	294.74	15.67	294.17	16.80	293.04	17.22	292.62	17.20	292.64	17.80	292.04		
C	17.00	295.92	17.35	295.57	17.20	295.72	17.35	295.57	17.25	295.67	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM		
D	17.30	294.92	17.10	295.12	17.49	294.73	17.10	295.12	17.50	294.72	17.40	294.82	17.89	294.33	18.90	293.32	19.20	293.02	19.50	292.72	19.80	292.42		

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 East Zone Coordinates - NAD 83 (Feet), Vertical Datum: NAVD 88 (Feet).
5. Depth measurements relative to surveyed point on top of well casing.
6. NM = Not Measured.
7. * - FAP wells and SG-N remeasured on 3/10/2023 to confirm 3/6/2023 measurements.
8. In conditions of high/turbulent stream flow, average stream elevations were estimated based on multiple field measurements.
9. Elevation inconsistent and believed to result from measurement error.

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Scott County, Missouri
FAP Nature and Extent Evaluation**

**Table 3
Water Level Data**

Location ID ^{1,2}	Water Level Measurements											
	07/06/23		07/07/23		07/12/23		07/19/23		07/25/23		08/16/23	
	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)	Depth (feet) ⁴	Elev. (feet)
MW-1/TPZ-1	NM	NM	18.15	294.62	NM	NM	NM	NM	NM	NM	16.96	295.81
MW-1R	NM	NM	19.35	294.99	NM	NM	NM	NM	NM	NM	18.31	296.03
MW-2	NM	NM	12.00	296.01	NM	NM	NM	NM	NM	NM	11.00	297.01
MW-3	NM	NM	12.95	295.60	NM	NM	NM	NM	NM	NM	12.20	296.35
MW-4	NM	NM	12.80	292.81	NM	NM	NM	NM	NM	NM	11.35	294.26
MW-5	NM	NM	12.76	293.15	NM	NM	NM	NM	NM	NM	10.98	294.93
MW-6	NM	NM	13.26	294.46	NM	NM	NM	NM	NM	NM	12.10	295.62
MW-7	NM	NM	20.65	294.38	NM	NM	NM	NM	NM	NM	19.51	295.52
MW-8	NM	NM	12.04	292.73	NM	NM	NM	NM	NM	NM	18.81 ⁹	285.96 ⁹
MW-9	NM	NM	19.85	294.83	NM	NM	NM	NM	NM	NM	16.96 ⁹	297.72 ⁹
MW-10	12.20	292.08	12.65	291.63	12.40	291.88	12.65	291.63	12.46	291.82	10.43	293.85
NE-1	16.40	292.13	16.85	291.68	16.60	291.93	16.85	291.68	16.75	291.78	14.89	293.64
NE-2	14.15	292.15	14.50	291.80	14.34	291.96	14.50	291.80	14.45	291.85	12.48	293.82
NE-3	11.28	292.12	11.50	291.90	11.40	292.00	11.50	291.90	11.42	291.98	9.40	294.00
SG-N	11.2	294.2	11.4	294.0	11.3	294.1	11.4	294.0	10.8	294.7	10.7	294.8
SG-FB	13.5	293.0	14.0	292.5	13.4	293.1	14.0	292.5	13.5	293.0	12.6	293.9
SG-S	11.8	293.0	11.8	293.0	11.8	293.0	11.8	293.0	12.0	292.8	11.0	293.8
A	19.99	291.76	20.50	291.25	20.20	291.55	20.50	291.25	20.36	291.39	18.48	293.27
B	18.07	291.77	18.65	291.19	18.40	291.44	18.65	291.19	18.50	291.34	16.58	293.26
C	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
D	20.50	291.72	21.00	291.22	20.20	292.02	21.00	291.22	20.84	291.38	19.02	293.20

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 East Zone Coordinates - NAD 83 (Feet), Vertical Datum: NAVD 88 (Feet).
5. Depth measurements relative to surveyed point on top of well casing.
6. NM = Not Measured.
7. * - FAP wells and SG-N remeasured on 3/10/2023 to confirm 3/6/2023 measurements.
8. In conditions of high/turbulent stream flow, average stream elevations were estimated based on multiple field measurements.
9. Elevation inconsistent and believed to result from measurement error.

Appendix 11

Demonstration of Time Extension
Needed to Complete the Assessment of
Corrective Measures

**Demonstration of Time Extension Needed to Complete
An Assessment of Corrective Measures (ACM) for
Sikeston Power Station Fly Ash Pond in accordance with 40 CFR 257.96(a)**

This document has been prepared as demonstration of the need for an extension for completion of the ACM for the Fly Ash Pond (a CCR unit) at the Sikeston Board of Municipal Utilities – Sikeston Power Station (SBMU-SPS) located at 1551 West Wakefield Avenue in Sikeston, Missouri 63801 as required by 40 CFR 257.96(a). GREDELL Engineering Resources (GER) provides this document that demonstrates, justifies and validates, based on our knowledge of the groundwater monitoring, nature and extent characterization, and ACM activities at the SBMU-SPS, the need for two 30-day extensions of time to complete the ACM.

The site-specific circumstances that demonstrate the need for an extension of time are summarized below:

- Delays in completing the nature and extent characterization due to the need for specialized drilling equipment, and permitted drillers, and SPS personnel demands associated with an extended power plant outage and retrofit.
- Delays in obtaining drilling and hydrogeologic data necessary to begin the groundwater modeling effort that is a critical component of the ACM.

I, Thomas R. Gredell, P.E., a professional engineer licensed in the State of Missouri, hereby certify in accordance with 40 CFR 257.96(a) to the accuracy of the demonstration described above for the Sikeston Board of Municipal Utilities, Sikeston Power Station, Fly Ash Pond. This demonstration successfully meets the requirements of 40 CFR 257.96(a) as found in federal regulation 40 CFR 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments.

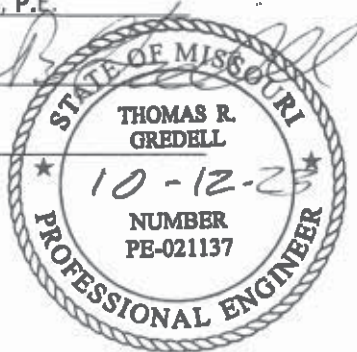
Name: Thomas R. Gredell, P.E.

Signature: 

Date: 10-12-23

Registration Number: PE-021137

State of Registration: Missouri



Appendix 12

Monitoring Well MW-10 Installation Records

GREDELL Engineering Resources, Inc.

BORING LOG MW-10

SPS-SBMU Nature & Extent Evaluation
Sikeston, Missouri

LOCATION: See Plan of Boring Locations

G.S. ELEVATION: 301.0' **T.O.C. ELEVATION:**

CLIENT: SBMU Sikeston Power Station

NORTHING:

EASTING:

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			
0	300						TOPSOIL, SAND, FINE GRAVEL: Dark yellowish brown (10YR 4/4).														
						73	SILTY CLAY: Very dark gray (10YR 3/1), some oxidation, ribbons.														
5	295						GRAVELLY SAND: Brown (10YR 3/4), fine.														
						80	GRAVELLY SAND: Brown (10YR 3/4), fine, some coarsening downwards.														
							GRAVELLY SAND: Dark grayish yellow to brown, very fine, possibly silty.														
10	290						SILTY SAND: Dark gray (10YR 3/1), wet, fine gravel.														
						73	SILTY SAND: Dark gray (10YR 3/1), fine gravel, coarsening downwards, medium to coarse, pebbles throughout.														
15	285						SAND: Dark gray (10YR 3/1), coarsening downwards, medium to coarse gravel, pebbles throughout more frequent.														
						59															
20	280						GRAVELLY SAND: Dark gray (10Y 3\1), medium to coarse.														
						67															
25	275						LIGNITE: Black (10YR 2/1), possibly lens.														
						45	GRAVELLY SAND: Dark gray (10YR 3/1) medium to coarse.														
							SAND: Dark gray to black (10YR 2/1 or 3/1),														

Date Printed: 2/14/2023

DRILLING CO.: Bulldog Drilling
DRILLER: Rob Scharringhausen
LOGGED BY: JZ Upp
DATE DRILLED: 02-09-23
START TIME: 11:32
END TIME:
BOREHOLE DIA.: 8.25"

STRATIFICATION LINES ARE APPROXIMATE LITHOLOGIC BOUNDARIES ONLY.

NOTES:

WATER LEVELS: DURING DRILLING 9.0 FEET
 AFTER DRILLING: _____ FEET
 DATE: 02-09-23
PIEZOMETER: INSTALLED AT +/- _____ FEET

VERTICAL DATUM:
HORIZONTAL DATUM:

WEATHER: Cold, Cloudy and Windy, 45°F

GREDELL Engineering Resources, Inc.

BORING LOG MW-10

SPS-SBMU Nature & Extent Evaluation
Sikeston, Missouri

LOCATION: See Plan of Boring Locations

G.S. ELEVATION: 301.0' **T.O.C. ELEVATION:**

CLIENT: SBMU Sikeston Power Station

NORTHING:

EASTING:

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				
30	270						Fine to medium, coarsening upwards, lignite lenses present. Boring terminated at 30.0 feet in Sand.															
35	265																					
40	260																					
45	255																					
50	250																					
55	245																					

Date Printed: 2/14/2023

DRILLING CO.: Bulldog Drilling
DRILLER: Rob Scharringhausen
LOGGED BY: JZ Upp
DATE DRILLED: 02-09-23
START TIME: 11:32
END TIME:
BOREHOLE DIA.: 8.25"

STRATIFICATION LINES ARE APPROXIMATE LITHOLOGIC BOUNDARIES ONLY.

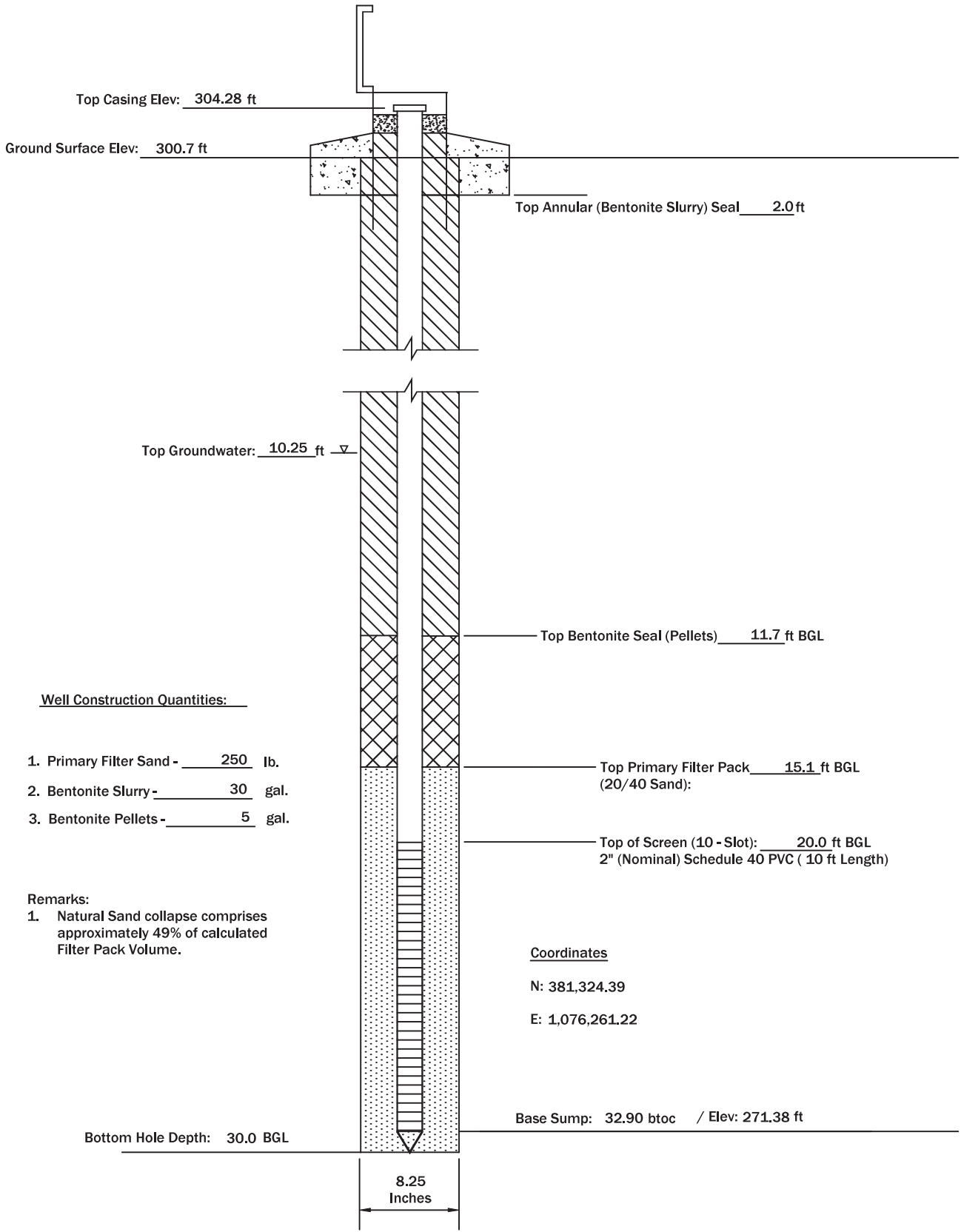
NOTES:

WATER LEVELS: DURING DRILLING 9.0 FEET
 AFTER DRILLING: _____ FEET
 DATE: 02-09-23

PIEZOMETER: INSTALLED AT +/- _____ FEET

VERTICAL DATUM:
HORIZONTAL DATUM:

WEATHER: Cold, Cloudy and Windy, 45°F



Well Construction Quantities:

- 1. Primary Filter Sand - 250 lb.
- 2. Bentonite Slurry - 30 gal.
- 3. Bentonite Pellets - 5 gal.

Remarks:

- 1. Natural Sand collapse comprises approximately 49% of calculated Filter Pack Volume.

Coordinates

N: 381,324.39

E: 1,076,261.22

Base Sump: 32.90 btoc / Elev: 271.38 ft

Bottom Hole Depth: 30.0 BGL

8.25
Inches

MW-10	SIKESTON POWER STATION FLY ASH POND NATURE & EXTENT CHARACTERIZATION		GREDELL Engineering Resources, Inc. ENVIRONMENTAL ENGINEERING		
	MONITORING WELL CONSTRUCTION DIAGRAM		LAND	AIR	WATER
Date Piezometer Installed:	NATURE AND EXTENT		1505 East High Street Jefferson City, Missouri 65101		
2-9-23			DATE 03/2023	SCALE N.T.S.	DRAWN BY: CM
				Telephone: (573) 659-9078 Facsimile: (573) 659-9079	
				APPROVED BY: KE	

Well Development Record

Location: Sikeston Power Station Nature and Extent				Date: 2-9-2023				
Well/Piezometer: MW-10				Initial Depth to Groundwater (ft, btoc):		10.25 ft.		
Borehole Diameter: 8.25 "				Base of Well (ft, btoc):		32.90 ft.		
Casing Diameter: 2 "				Filter Pack Hgt (ft):		14.9 ft.		
Development method: Bailer/ Submersible Pump				Screened Interval Lithology: Alluvium				
Date/Time	Purge Volume (cumulative) (gallons)	Notes	Turbidity (NTU)	pH (s.u.)	Specific Conductance (umhos/cm)	Temperature (° C)	Initial Water Level (ft., btoc)	Ending Water Level (ft., btoc)
2/9	5	Bailed to remove fines					NA	NA
2/14 14:33		Initiate Purge with new 2-stage geosquirt pump					10.25	
2/14 14:37	9		77.69	6.78		17.6	10.31	
2/14 14:46	30	Pump off at 14:48	205.5	7.00		17.7	10.31	10.26
2/14 15:07		Pump on at 14:54	199.8	7.11		17.5		
2/14	55	Pump off at 15:09						
2/14 15:25	80	Pump on at 15:14	8.05	7.10		17.7	10.31	10.26
2/14 15:46	100	Pump on at 15:35	25.56	7.11		17.7	10.33	10.30
2/14 15:50	110			7.13				
2/14 16:03	140	Pump on at 15:55	18.45	7.13		17.7	10.33	10.30
2/14 16:10			5.65	7.12		17.7		
2/14 16:18		Pump on at 16:15	6.56	7.12		17.5	10.35	
2/14 16:19			6.40	7.12		17.8	10.35	
2/14 16:27	170			7.13		17.8		10.30
2/14 16:30	175	Development complete						
Comments: Well volume calculation based on minimum depth to groundwater.								
Developed via bailer, and geosquirt pump						One Well Volume =	15.2	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