Intended for

AmerenEnergy Medina Valley CoGen, LLC

Date

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Project No.

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2020 ANNUAL REPORT

MEREDOSIA POWER STATION

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2020 ANNUAL REPORT
MEREDOSIA POWER STATION

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ACRONYMS AND ABBREVIATIONS

Ameren	AmerenEnergy Medina Valley Cogen, LLC
Class I Groundwater Standard	Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620.410)
GMZ	Groundwater Management Zone
GMP	Groundwater Monitoring Plan
HDPE	High-density polyethylene
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
Meredosia	Meredosia Power Station
mg/L	milligrams per liter
TDS	total dissolved solids
Ameren	AmerenEnergy Medina Valley Cogen, LLC

1. INTRODUCTION

1.1 Background

This 2020 Annual Report has been prepared for AmerenEnergy Medina Valley Cogen, LLC (Ameren) for the Meredosia Power Station (Meredosia, Figure 1-1). The Old Ash Pond was decommissioned and capped during the 1970's (Kleinfelder West, Inc., 2011), and is not addressed in this groundwater monitoring program. Ameren completed closure activities for the Fly Ash Pond and Bottom Ash Pond in accordance with the Closure Plan (Geotechnology, Inc., 2018a) and site-specific closure requirements of Title 35 of the Illinois Administrative Code (IAC) Section 840 in December 2018. Closure activities, which included grading, placement of a high-density polyethylene (HDPE) geomembrane covered with ClosureTurf®/ArmorFill® synthetic turf, and construction of surface water control structures, began in March 2018 and were completed as of December 5, 2018.

The current groundwater monitoring network comprises 12 monitoring wells, including five installed in October 2010 (APW-1 through APW-5), four installed in October 2015 (APW-6 through APW-9), and three installed in August 2018 (APW-10 through APW-12). From 2010 to 2012, monitoring wells APW-1 through APW-5 were sampled. Beginning in June 2017 and in accordance with the Groundwater Monitoring Plan (GMP) dated December 14, 2016 (Geotechnology, Inc.), groundwater sampling was restarted and conducted quarterly at monitoring wells APW-1 through APW-9. Beginning in September 2018 and in accordance with the GMP, monitoring wells APW-10, APW-11, and APW-12 were incorporated into the well network and were sampled quarterly along with wells APW-1 through APW-9. The monitoring wells were installed to define the lateral extent of impacts on site, as well as to assist in future groundwater monitoring of remedial actions. Locations of all monitoring wells are shown on Figure 1-2.

In conjunction with Ameren's request for approval of the Closure Plan, Ameren submitted a Groundwater Management Zone Plan, Fly Ash and Bottom Ash Pond, Meredosia Power Station (Geotechnology, Inc., 2016b) and a request to establish the Groundwater Management Zone (GMZ) pursuant to 35 IAC 620.250(a)(2): Ash Ponds Closure, Groundwater Management Zone Application, dated October 17, 2017, which was approved by the Illinois Environmental Protection Agency (IEPA) on November 1, 2017.

The GMP, in accordance with 35 IAC 840.114 and 35 IAC 840.116, outlines groundwater monitoring and sampling procedures, establishes the parameters and methods to be used for analyzing the groundwater samples, and describes evaluation methods to assess post-closure groundwater quality and trends to demonstrate compliance with the applicable groundwater standards. The Groundwater Monitoring Program Schedule is provided in Table 1-1.

Monitoring well locations, installation dates, construction information, and the groundwater zone they monitor are provided in Table 1-2. Field and laboratory parameters for evaluating groundwater quality are shown in Table 1-3.

Seven rounds of pre-closure groundwater data and eight rounds of post-closure data have been collected between June 2017 and December 2020 to satisfy requirements of the GMP

(Geotechnology, Inc., 2016a). This is the fourth annual report for Meredosia since groundwater monitoring was restarted in 2017. This annual report includes the following elements:

- Monitoring well boring and installation logs for the 12 currently installed wells, APW-1 through APW-12 (Appendix A).
- A summary of post-closure groundwater monitoring data in 2019 and 2020. Data tables are included in Appendix B.
- Annual trend and statistical analysis results per Section 5.2 of the GMP (Geotechnology, Inc., 2016a), including an assessment of any statistically significant increasing trends (Appendix C).
- Quarterly Site Inspection Forms, including observations and descriptions of any maintenance activities performed on the pond cap, embankment, roadway, and remaining basin (Appendix D).

1.2 Groundwater Quality Overview – 2019 to 2020

1.2.1 Summary of Cover System Construction and Maintenance

Closure activities, which included grading, placement of an HDPE geomembrane covered with ClosureTurf®/ArmorFill® synthetic turf, and construction of surface water control structures, began in March 2018 and were completed as of December 5, 2018.

Inspections of the cover system are performed on a quarterly schedule. Routine maintenance activities are performed at the Fly Ash Pond and Bottom Ash Pond, as needed and as soon as practicable after issues are identified, and may include recontouring the ground surface, repairing drainage channels, repairing and replacing lining material, revegetating areas, and removing woody vegetation. Maintenance activities can be found in more detail in the Post-Closure Care Plan (Geotechnology, Inc., 2018b).

1.2.2 Summary of 2019 to 2020 Groundwater Quality Data

Groundwater quality data since completion of closure in December 2018 were reviewed to assess the overall condition of the groundwater and the performance of the cover system. This review was performed independently from the compliance evaluations required by the GMP (Geotechnology, Inc., 2016a), which are focused on specific compliance criteria and proposed mitigation actions. This review is intended as a big-picture view of groundwater quality over time since closure.

Boron was identified as the primary indicator constituent for coal ash leachate impacts to groundwater at the Fly Ash Pond and Bottom Ash Pond in the Closure Plan (Geotechnology, Inc., 2018a). As such, boron was selected for this groundwater quality data review. Boron concentrations over time since 2019 are presented in Figures 1-3 through 1-14. On the figures, the lines through the concentration data represent the best fit linear regressions for boron concentrations in each well. Best fit linear regression lines are included in the figures to provide a convenient means of evaluating general concentration “trends” over time. It should be noted that the regression lines are not equivalent to the statistical trends discussed in the groundwater compliance section of this report. Generally, boron concentrations in most compliance monitoring wells have been stable or decreasing since 2019 and are currently below the Class I Groundwater Standard. As further explained in Section 3, no statistically significant increasing trends that were above the Class I Groundwater Standard for boron were identified during the post-closure period.

Arsenic was also identified as an indicator constituent for coal ash at the Fly Ash Pond and Bottom Ash Pond in the Closure Plan (Geotechnology, Inc., 2018a). Arsenic concentrations over time since 2019 are presented in Figures 1-15 through 1-26. Similar to boron, arsenic concentrations have generally been stable or decreasing since the closure completion. As further explained in Section 3, no statistically significant increasing trends that were above the Class I Groundwater Standard for arsenic were identified during the post-closure period.

1.2.3 Conclusion

The stable or decreasing indicator constituent concentrations (boron and arsenic) in the majority of compliance monitoring wells across the site is a strong indication that the cover system is functioning to improve overall groundwater quality beneath the pond. This observation is consistent with the results of groundwater modeling performed to simulate changes in groundwater quality resulting from pond closure. Modeling results suggested that the closure of the ash ponds will reduce the concentrations of boron and arsenic to levels below the Illinois Class I Groundwater Standards in approximately three years and six years after dewatering and closure, respectively (Geotechnology, Inc., 2016b).

2. GROUNDWATER MONITORING PLAN COMPLIANCE

2.1 Applicable Groundwater Quality Standards

2.1.1 On-Site Groundwater Standards

Pursuant to 35 IAC 620.450(a), the on-site groundwater quality shall be restored to the Groundwater Quality Standards for Class I: Potable Resource Groundwater (Class I Groundwater Standard) (35 IAC 620.410). Based on modeling results, it is anticipated that compliance with Class I Groundwater Standards will be achieved approximately six years after closure activities are complete (December 2024).

If upon completion of the 30-year post-closure care period the observed concentrations in the site groundwater still exceed a Class I Groundwater Standard, the on-site standard may be adjusted, provided criteria are addressed to the satisfaction of the IEPA.

2.1.2 Off-Site Groundwater Standards

For off-site groundwater compliance, the Class I Groundwater Standards are used (35 IAC 620.410). A GMZ was requested and approved for Meredosia as part of the Closure Plan.

2.2 Demonstration of Compliance

Compliance will be based on attainment of post-closure groundwater quality that meets the Class I Groundwater Standards, as set forth in 35 IAC 620.410. Groundwater quality shall be in compliance when groundwater concentrations are below the Class I Groundwater Standards and there are no statistically significant increasing trends at the compliance GMZ boundary. The trend analysis shall be performed on a minimum of eight (8) consecutive post-closure groundwater samples and use Sen's Estimate of Slope for assessing groundwater concentration trends as discussed in Section 5.2 of the GMP (Geotechnology, Inc., 2016a). Ameren completed closure of the inactive Fly Ash and Bottom Ash Ponds at Meredosia Power Station and the closure project was deemed complete December 5, 2018 in accordance with the Closure Plan (Ameren letter to IEPA dated January 31, 2019). As of the 2020 Annual Report, there are eight rounds of post-closure groundwater data available for wells APW-1, APW-5, APW-6, APW-8, APW-10, and APW-11. Analysis is included in this 2020 Annual Report for these wells. Wells APW-2, APW-3, APW-4, APW-7, APW-9, and APW-12 were not sampled during the second quarter sampling event of 2019 due to flooding in the area, thus they only have seven rounds of post-closure data and are therefore are not included in the demonstration of compliance for 2020. It is anticipated that eight rounds of post-closure data will be available for analysis in the 2021 Annual Report.

2.2.1 Compliance Determination

As described in Section 5.2 of the GMP:

- GMZ compliance is demonstrated by performing an annual trend analysis for each monitoring well located at the downgradient boundaries of the Meredosia Power Station (Table 1-2) for all constituents listed in Table 1-3. The analysis shall use Sen's Estimate of Slope and be performed on a minimum of eight consecutive samples.
- If the results of sampling and analysis show a positive slope at any compliance monitoring well located at the downgradient boundaries of the Meredosia Power Station, a Mann-Kendall test will be performed at 95 percent confidence to determine whether or not the positive slope

represents a statistically significant increasing trend. Ameren will investigate the cause of a statistically significant increasing trend as described below.

- Notification of statistically significant increasing trends and revision to the sampling frequency must be reported to the IEPA within 30 days of making the determinations.
- If the investigation attributes a statistically significant increasing trend to a superseding cause, Ameren will notify the IEPA in writing, stating the cause of the increasing trend and providing the rationale used in such a determination.
- If there is no superseding cause and the statistically significant increasing trend continues to be observed over two or more consecutive years, a hydrogeologic investigation (and additional site investigation(s), if necessary) will be performed.

Based on the outcome of the investigation above, Ameren will take action to mitigate statistically significant increasing trends that are causing, threatening or allowing exceedances of off-site groundwater quality standards. Such actions will be proposed as a modification to the post-closure care plan within 180 days after completion of the investigation activities described above.

The point of compliance wells for the subject property will be APW-2 and APW-3. These wells are located adjacent to the Illinois River, and are located downgradient relative to the site. If remedial activities do not reduce the contaminant concentrations to levels below the Class I groundwater standards, a plan for post-remediation monitoring will be submitted to the IEPA (Geotechnology, Inc., 2016b). As mentioned above, wells APW-2 and APW-3 only have seven rounds of post-closure data. Compliance analysis on these wells will be included in the 2021 Annual Report.

3. DATA ANALYSIS

3.1 Groundwater Flow

Groundwater flow for 2020 is represented using groundwater elevation contour maps for each quarterly sampling event (Figures 3-1 through 3-4). Groundwater in the uppermost aquifer generally flowed from east to west and northwest towards the Illinois River during 2020, which is consistent with past evaluations.

An inflection in groundwater elevation contour lines was observed in the vicinity of APW-3 during the February 2020 sampling event (Figure 3-1). The inflection in groundwater elevation contour lines is a result of the APW-3 groundwater elevation being higher than groundwater elevations in nearby monitoring well APW-2 and upland monitoring wells APW-4 and APW-7. This observation is consistent with previous monitoring events (e.g., January 2019) as illustrated in the groundwater elevation timeseries plot provided in Figure 3-5. APW-2 is screened predominantly in low permeability materials (clay), while APW-3 is screened mostly in high permeability materials (sand) as indicated in monitoring well boring and installation logs provided in Appendix A, making it likely that APW-2 is slower to react to changes in river stage than APW-3. In addition, APW-3 is closer in proximity to the river than upland monitoring wells APW-4 and APW-7, making it likely that APW-4 and APW-7 are also slower to react to changes in river stage than APW-3.

According to the Post-Closure Care Plan (Geotechnology, Inc., 2018b), two years after the ash ponds have been closed, the groundwater monitoring network will be re-evaluated for effectiveness (December 2020). Consistent with previous groundwater monitoring events, groundwater continues to flow generally from east to west and northwest towards the Illinois River, with exception to a flow reversal observed in the second quarter sampling event of 2019 caused by an episodic flooding event. Based on static groundwater surface elevations and flow directions in 2019 and 2020, there were no significant changes in groundwater flow directions since approval of the GMP and therefore no need to modify the number, location or depth of the monitoring wells in the existing monitoring network at this time.

3.2 Review of Analytical Data (2019-2020)

Groundwater samples from the most recent eight post-closure monitoring events were collected on January 29, 2019; June 4, 2019; August 26, 2019; December 9, 2019; February 17, 2020; April 27, 2020; July 29, 2020; and December 4, 2020. All field and laboratory analytical results are tabulated in Appendix B. Sampling anomalies, such as wells that were dry, had water levels too low for sampling, or were not sampled during a sampling event for other reasons, are noted below:

- Wells APW-2, APW-3, APW-4, APW-7, APW-9, and APW-12 were not sampled during the second quarter sampling event of 2019 due to flooding in the area.
- Total dissolved solids (TDS) was resampled on December 20, 2019 for the fourth quarter sampling event of 2019 because the original samples were analyzed two days past hold time.

As discussed in Section 1.2, and according to the GMP, eight post-closure samples are required to conduct trend analyses for compliance. Since only seven rounds of post-closure data are currently available for wells APW-2, APW-3, APW-4, APW-7, APW-9, and APW-12 due to the sampling anomalies described above, trend analysis on those wells will begin in the 2021 Annual Report. For the remaining wells (APW-1, APW-5, APW-6, APW-8, APW-10, and APW-11), trend analysis was completed and is presented in this 2020 Annual Report.

Results of groundwater monitoring for constituents that exceeded the Class I Groundwater Standard when the GMZ was established (boron, arsenic, iron, manganese, and sulfate) are discussed below. Wells with only seven rounds of post-closure data (*i.e.*, APW-2, APW-3, APW-4, APW-7, APW-9, and APW-12) are not included in this data review.

- Boron has been identified as the primary indicator constituent for coal ash impacts to groundwater at the Fly Ash Pond and Bottom Ash Pond (see Section 1.2.2). In the 2019-2020 monitoring period, dissolved boron concentrations ranged from 0.0486 to 4.58 mg/L and total boron concentrations ranged from 0.0629 to 5.56 milligrams per liter (mg/L) in upgradient monitoring wells. In midgradient monitoring wells, dissolved boron concentrations ranged from 0.241 to 7.94 mg/L and total boron concentrations ranged from 0.26 to 8.61 mg/L (Figures 3-6 through 3-9). As discussed in Sections 1.2.2-1.2.3, boron concentrations have been stable or decreasing in the majority of compliance monitoring wells across the site since closure which indicates that the cover system is functioning to improve overall groundwater quality beneath the ponds.
- Arsenic has also been identified as an indicator for coal ash impacts to groundwater at the Fly Ash Pond and Bottom Ash Pond (see Section 1.2.2). In the 2019-2020 monitoring period, dissolved arsenic ranged from 0.0004 to 0.0007 mg/L and total arsenic concentrations ranged from 0.0005 to 0.0371 mg/L in upgradient monitoring wells. In midgradient monitoring wells, dissolved arsenic concentrations ranged from 0.0005 to 0.0019 mg/L and total arsenic concentrations ranged from 0.0007 to 0.0301 mg/L (Figures 3-10 through 3-13). As discussed in Sections 1.2.2-1.2.3, arsenic concentrations have generally been stable or decreasing in the majority of compliance monitoring wells across the site since closure which indicates that the cover system is functioning to improve overall groundwater quality beneath the ponds.
- For sulfate, a non-indicator constituent, box-whisker plots and timeseries plots illustrating concentrations for the most recent eight monitoring events (2019-2020) were developed (Figures 3-14 and 3-15). Similar to the identified indicator parameters, sulfate showed generally stable trends during this reporting period.
- Changes of oxidation/reduction (redox) potential in the subsurface due to fluctuations in pH make evaluation of manganese and iron concentrations unreliable at this facility (Geotechnology, Inc., 2016b).

3.3 Statistical Analyses

Analytical data were evaluated to identify short-term (compliance) data trends in the 2019-2020 dataset. Trends were evaluated according to the procedure outlined in the GMP (Geotechnology, Inc., 2016a).

3.3.1 Outlier Analysis

The Grubbs outlier test determines whether there is statistical evidence of a high or low observation that differs significantly from the other data and provides statistical evidence of potential outliers. The test methodology and results are listed in Appendix C1. Outliers identified during the compliance period (2019-2020) by the Grubbs outlier test based on the date range of 2010-2020 were not eliminated from further statistical analysis due the lack of documentation indicating that the results don’t represent actual field conditions.

3.3.2 Sen's Estimate of Slope

Sen's estimate of slope is a non-parametric estimator of trend. It is the median of all slopes between all possible unique pairs of individual data points in the time period being analyzed. The slopes represent the rate of change of the measured parameter, with the y-axis being the parameter value and the x-axis being calendar time. The method is robust, and fairly insensitive to the presence of a small fraction of outliers and non-detect data values. The test methodology and results are listed in Appendix C2.

Data collected in 2019-2020 show 14 cases with positive slopes, 14 cases with negative slopes, and 242 cases with no slope (Table 3-1). The 14 cases with positive slopes were tested using the Mann-Kendall test to determine if the positive slopes represented increasing trends.

3.3.3 Mann-Kendall Trend Analysis

The Mann-Kendall test is a non-parametric, one-tailed test to determine whether a dataset has a statistically significant increasing or decreasing trend. The test methodology is in Appendix C2. Increasing short-term (compliance) trends are identified in Table 3-1.

The Mann-Kendall test did not detect any cases of increasing trends in the 2019-2020 dataset.

3.4 Site Inspection

The Post-Closure Maintenance Program requires quarterly inspection for the first five years after closure (i.e. through 2023). After five years, the inspection frequency can be reduced to semi-annually provided that semi-annual groundwater monitoring has been approved by IEPA. After five years of semiannual monitoring, the inspection frequency can be reduced to annually pending approval of annual groundwater monitoring. Discontinuance of site inspections will occur after IEPA approval of the certified Post-Closure Care Report.

Site inspections include assessment of the condition and need for repair of final cover and vegetation, as wells as fencing, monitoring points, and surface water control features. Following completion of closure activities in December 2018, the initial inspection occurred in December 2018 and quarterly inspections were done in 2019 and 2020. The inspection reports from 2020 are included in Appendix D. The November 2020 inspection report noted advancing erosion at Northeast Outlet beyond the toe of the berm. Repairs are planned prior to the spring floods. Based on these reports, all the components of the ClosureTurf®/ArmorFill® synthetic turf cover system are in good condition and/or are being addressed.

4. EVALUATION OF COMPLIANCE

No parameter/well combinations included in the trend analysis had both a concentration above the Class I Groundwater Standard and an increasing short-term trend during the compliance period (2019-2020); as such, no further action is required at this time.

5. CONCLUSIONS

Cover system construction and maintenance, as well as stable or decreasing boron and arsenic concentrations in the majority of compliance monitoring wells across the site is a strong indication that the cover system is functioning to improve overall groundwater quality beneath the pond.

Statistical analyses of analytical results for the most recent eight rounds of groundwater samples collected for 2019 to 2020 compliance period at the Meredosia Fly Ash Pond and Bottom Ash Pond identified no increasing short-term trends above the Class I Groundwater Standard for the locations included in the analysis; as such, no further action is required at this time. Analysis for the wells that did not have enough data as of this report will be included in the 2021 Annual Report.

6. REFERENCES

Geotechnology, Inc., 2016a. *Groundwater Monitoring Plan, Fly Ash Pond and Bottom Ash Pond, Meredosia Power Station*. December 14, 2016.

Geotechnology, Inc., 2016b. *Groundwater Management Zone Plan, Fly Ash Bottom Ash Pond, Meredosia Power Station, 800 South Washington Street, Meredosia, Illinois*. December 22, 2016.

Geotechnology, Inc., 2018a. *Closure Plan, Meredosia Power Station*. March 12, 2018.

Geotechnology, Inc., 2018b. *Post-Closure Care Plan, Meredosia Power Station*. March 12, 2018.

Illinois Environmental Protection Agency (IEPA), 1991. *Groundwater Quality Standards for Class I: Potable Resource Groundwater*, Title 35 of the Illinois Administrative Code Part 620: Groundwater Quality, amended 2013.

Kleinfelder West, Inc., 2011. *Coal Ash Impoundment Site Assessment Final Report, Meredosia Power Station, Ameren Energy Generating Company, Meredosia, Illinois.* May 10, 2011.

TABLES

Table 1-1. Groundwater Monitoring Program Schedule
2020 Annual Report
Meredosia Power Station - Fly Ash Pond and Bottom Ash Pond

Frequency	Duration	Sampling Quarter
Quarterly	Begins: June 2017	January- March (1) April - June (2) July - September (3) October - December (4)
	Ends: After successful completion of the post-closure activities required and approval of the Illinois EPA; or Acceptance of reduced frequency by IEPA based on successful demonstration under Semi-Annual or Annual Frequency	
Semi-Annual or Annual	Begins: Upon demonstration that monitoring effectiveness will not be compromised by reduced frequency, adequate data has been collected to characterize groundwater, and concentration of constituents monitored at downgradient boundaries do not demonstrate statistically significant increasing trends that can be attributed to the former ash ponds	April - June (2)
	Ends: After successful completion of the post-closure activities required and approval of the Illinois EPA	October - December (4)

[O: YD/SJC, C: YD/SJC]

Table 1-2. Groundwater Monitoring System Wells
2020 Annual Report
Meredosia Power Station - Fly Ash Pond and Bottom Ash Pond

Monitoring Well Number	Installation Date	Surface Elevation (ft, MSL)	TOC Elevation (ft, MSL)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Total Well Depth (ft, BGS)	Objective	Position	Monitoring Zone
APW-1	10/26/2010	446.1	449.26	431.4	421.4	24.7	Compliance	Upgradient	Uppermost Aquifer
APW-2	10/25/2010	434.0	436.87	421.1	411.1	22.9	Compliance	Downgradient	Uppermost Aquifer
APW-3	10/25/2010	433.4	436.28	420.8	410.8	22.6	Compliance	Downgradient	Uppermost Aquifer
APW-4	10/26/2010	431.9	434.86	415.8	409.3	26.1	Compliance	Downgradient	Uppermost Aquifer
APW-5	10/26/2010	450.5	453.20	431.0	421.0	29.5	Compliance	Upgradient	Uppermost Aquifer
APW-6	10/1/2015	448.6	451.90	431.1	421.1	28.0	Compliance	Midgradient	Uppermost Aquifer
APW-7	10/1/2015	435.0	438.7	429.0	419.0	16.5	Compliance	Midgradient	Uppermost Aquifer
APW-8	10/1/2015	460.5	463.9	431.9	421.9	39.1	Compliance	Midgradient	Uppermost Aquifer
APW-9	10/1/2015	445.0	448.1	426.2	416.2	29.3	Compliance	Downgradient	Uppermost Aquifer
APW-10	8/20/2018	454.1	457.5	424.9	414.9	39.4	Compliance	Midgradient	Uppermost Aquifer
APW-11	8/22/2018	461.9	465.4	427.64	417.64	44.45	Compliance	Upgradient	Uppermost Aquifer
APW-12	8/21/2018	431.9	435.5	422.1	412.1	20.04	Compliance	Downgradient	Uppermost Aquifer

[U: RSD 3/12/2020, C: RAB 3/13/2020]

Notes:

TOC = top of casing (i.e. top of riser pipe)

MSL = mean sea level

BGS = below ground surface

ft = feet

Table 1-3. Groundwater Monitoring Program Parameters
2020 Annual Report
Meredosia Power Station - Fly Ash Pond and Bottom Ash Pond

Field Parameters	STORET Code
pH[2]	00400
Specific Conductance[2]	00094
Temperature (Fahrenheit)	00011
Depth to Water (from TOC)	72109
Elevation of GW Surface[2]	71993
Depth of Well (BGS)[2]	72008
Elevation of Measuring Point	72110

Laboratory Parameters[1]	STORET Code-Diss	STORET Code-Total
Boron[2]	01020	01022
Iron[2]	01046	01045
Manganese[2]	01056	01055
Sulfate[2]	00946	- -
Total Dissolved Solids (TDS)[2]	70300	- -
Antimony	01095	01097
Arsenic	01000	01002
Barium	01005	01007
Beryllium	01010	01012
Cadmium	01025	01027
Chloride	00941	- -
Chromium	01030	01034
Cobalt	01035	01037
Copper	01040	01042
Cyanide	- -	00720
Fluoride	00950	- -
Lead	01049	01051
Mercury	71890	71900
Nickel	01065	01067
Nitrate as N	00613	- -
Nitrite as N	00618	- -
Selenium	01145	01147
Silver	01075	01077
Thallium	01057	01059
Vanadium	01085	01087
Zinc	01090	01092

[O: YD/SJC, C: YD/SJC]

Notes:

[1] Reported as dissolved (filtered) concentrations.

[2] Mandatory monitoring parameter per 35 IAC 840.114(a).

BGS: Below Ground Surface

TOC: Top of Casing

Table 3-1. Trend Analysis Results
2020 Annual Report
Meredosia Power Station - Fly Ash Pond and Bottom Ash Pond

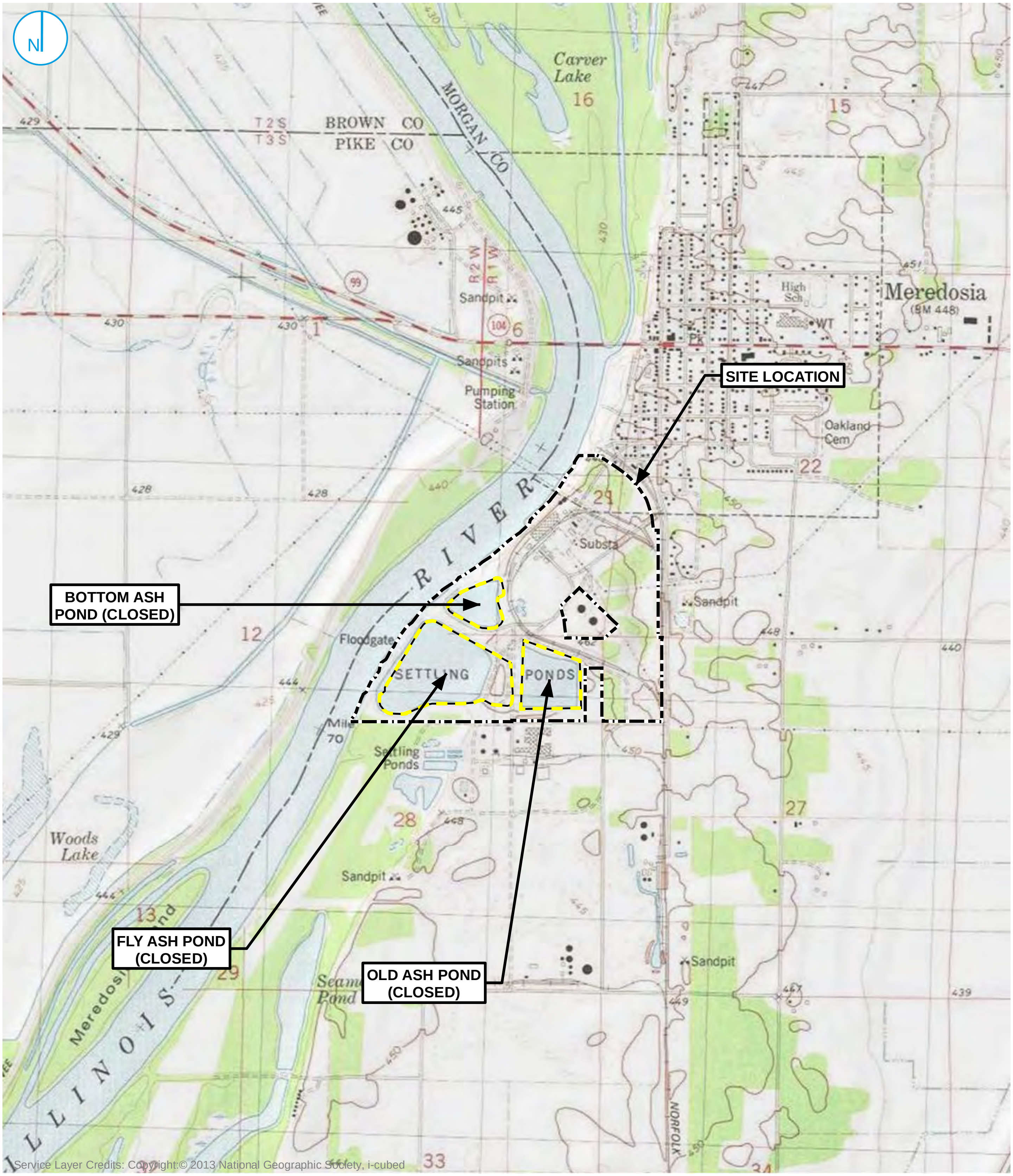
	APW-1	APW-2	APW-3	APW-4	APW-5	APW-6	APW-7	APW-8	APW-9	APW-10	APW-11	APW-12
Number of Samples	8	7	7	7	8	8	7	8	7	8	8	7
Antimony, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Antimony, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Arsenic, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Arsenic, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Barium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Barium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Beryllium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Beryllium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Boron, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	-	ID	DNE	+	ID
Boron, total	DNE	ID	ID	ID	DNE	DNE	ID	-	ID	DNE	+	ID
Cadmium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Cadmium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Chloride, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Chromium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Chromium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Cobalt, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Cobalt, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Copper, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Copper, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Cyanide, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Fluoride, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Iron, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Iron, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	+	ID
Lead, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Lead, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	None	ID
Manganese, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Manganese, total	None	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	None	ID
Mercury, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Mercury, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Nickel, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Nickel, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Nitrate (as N), dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Nitrite (as N), dissolved*	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Selenium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	None	ID	DNE	DNE	ID
Selenium, total	DNE	ID	ID	ID	DNE	DNE	ID	None	ID	DNE	DNE	ID
Silver, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Silver, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Sulfate, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Thallium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Thallium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Total Dissolved Solids	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Vanadium, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Vanadium, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Zinc, dissolved	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID
Zinc, total	DNE	ID	ID	ID	DNE	DNE	ID	DNE	ID	DNE	DNE	ID

[O: RAB 2/24/21, C: RSD 2/26/2021, U: RAB 3/10/21, C: RSD 3/10/21, U: RAB 3/24/21, C: RSD 3/25/21]

Notes:
- "+" indicates that the Sen's non-parametric estimate of the median slope is positive but insufficient evidence of an increasing trend as determined using the Mann-Kendall test at 95% confidence with maximum concentration higher than the Class I groundwater quality standard.
- "-" indicates that the Sen's non-parametric estimate of the median slope is negative but insufficient evidence of a decreasing trend as determined using the Mann-Kendall test at 95% confidence with maximum concentration higher than the Class I groundwater quality standard.
- DNE indicates constituents that did not exceed the Class I groundwater quality standard.
- ID indicates that there was insufficient data to perform Sen's Estimate of Slope.
- * indicates No Class 1 Standard
- "None" indicates insufficent evidence of a trend as determined using the Mann-Kendall test at 95% confidence for constituents with maximum concentration higher than the Class I groundwater quality standard.
- Green shading indicates decreasing trends as determined using the Mann-Kendall test at 95% confidence for constituents with maximum concentration higher than the Class I groundwater quality standard.
- Yellow shading indicates increasing trends as determined using the Mann-Kendall test at 95% confidence for constituents with maximum concentration higher than the Class I groundwater quality standard.
- Mann Kendall Trend analysis done with non-detects at one half the detection limit.
- Date range for the Sen's non-parametric estimate of the median slope and trend analysis is 1/1/2019-12/31/2020; Comparisons to the Class I groundwater quality standard is for 2020.

FIGURES

Y:\Mapping\Projects\6\67815\mxd\2020\Figure 1-1_Site Location Map.mxd



Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

DATED: 2/14/2020 | DESIGNER: STOLZSD

KEY MAP

Map Scale: 1:1:24,000;
Map Center: 90°34'10"W 39°49'15"N

0 1,000 2,000 Feet

▭ APPROXIMATE PROPERTY BOUNDARY

▭ LIMITS OF CCP MANAGEMENT

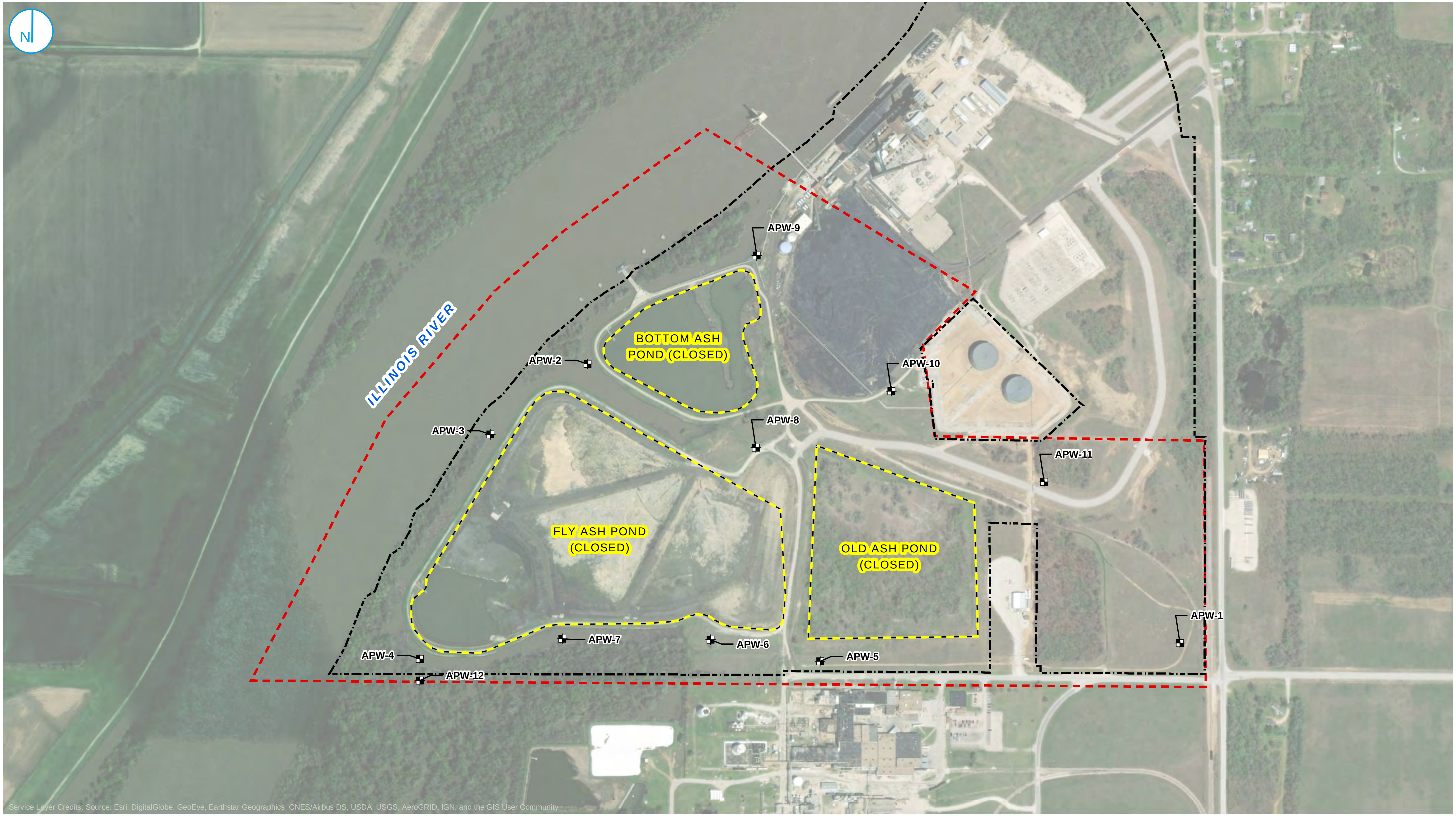
SITE LOCATION MAP

2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 1-1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

Y:\Mapping\Projects\6\67815\mxd\2020\Figure 1-2_Site_Base_Map.mxd



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT: 72694 | DATED: 2/14/2020 | DESIGNER: STOLZSD

- ⊞ MONITORING WELL LOCATION
- ▭ APPROXIMATE PROPERTY BOUNDARY
- 🟨 LIMITS OF CCP MANAGEMENT
- 🟥 APPROXIMATE GROUNDWATER MONITORING ZONE

0 240 480
Feet

SITE BASE MAP

2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 1-2

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

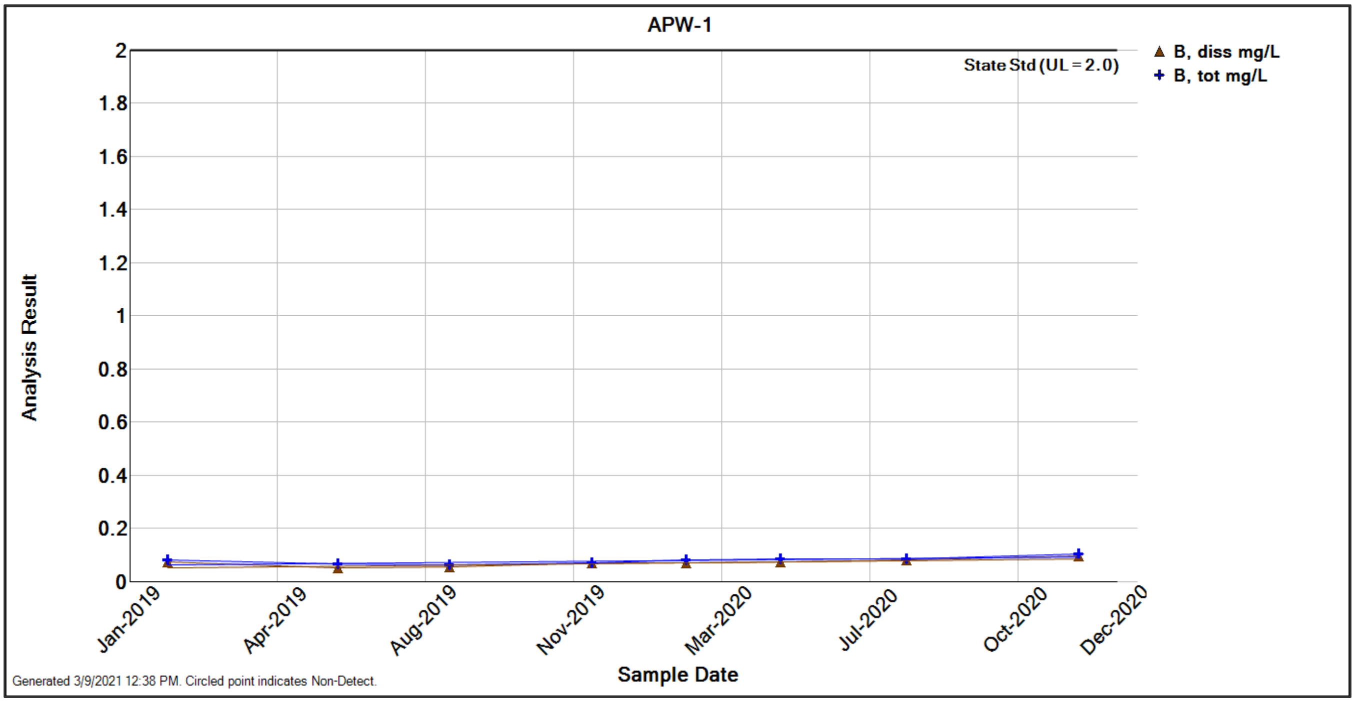


Figure 1-3. Boron (dissolved and total) concentrations since 2019 at upgradient well APW-1. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

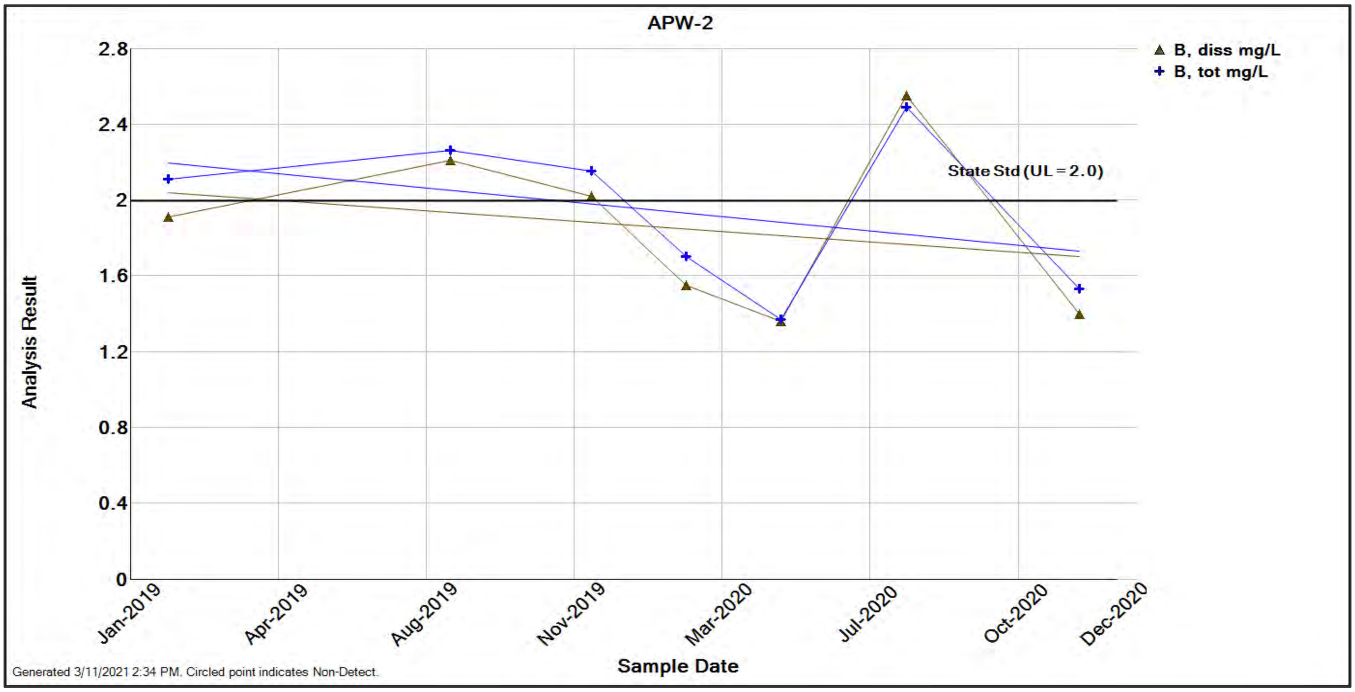


Figure 1-4. Boron (dissolved and total) concentrations since 2019 at downgradient well APW-2. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

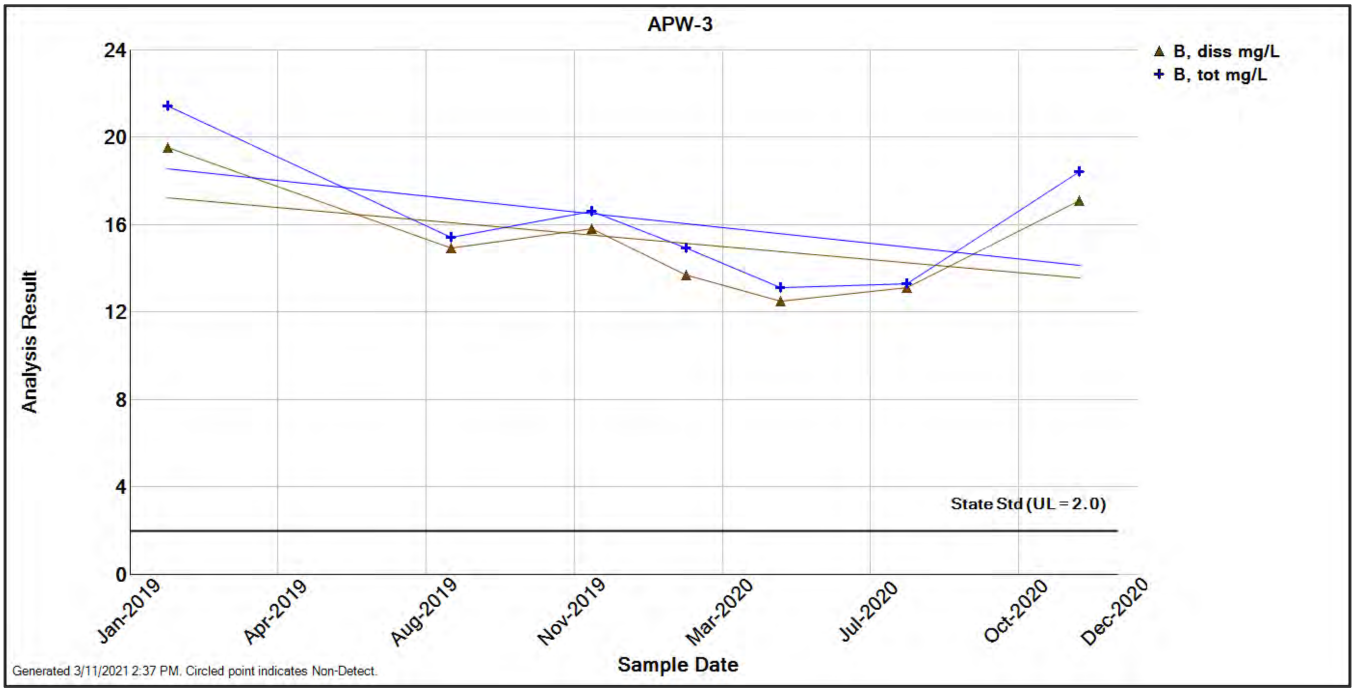


Figure 1-5. Boron (dissolved and total) concentrations since 2019 at downgradient well APW-3. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

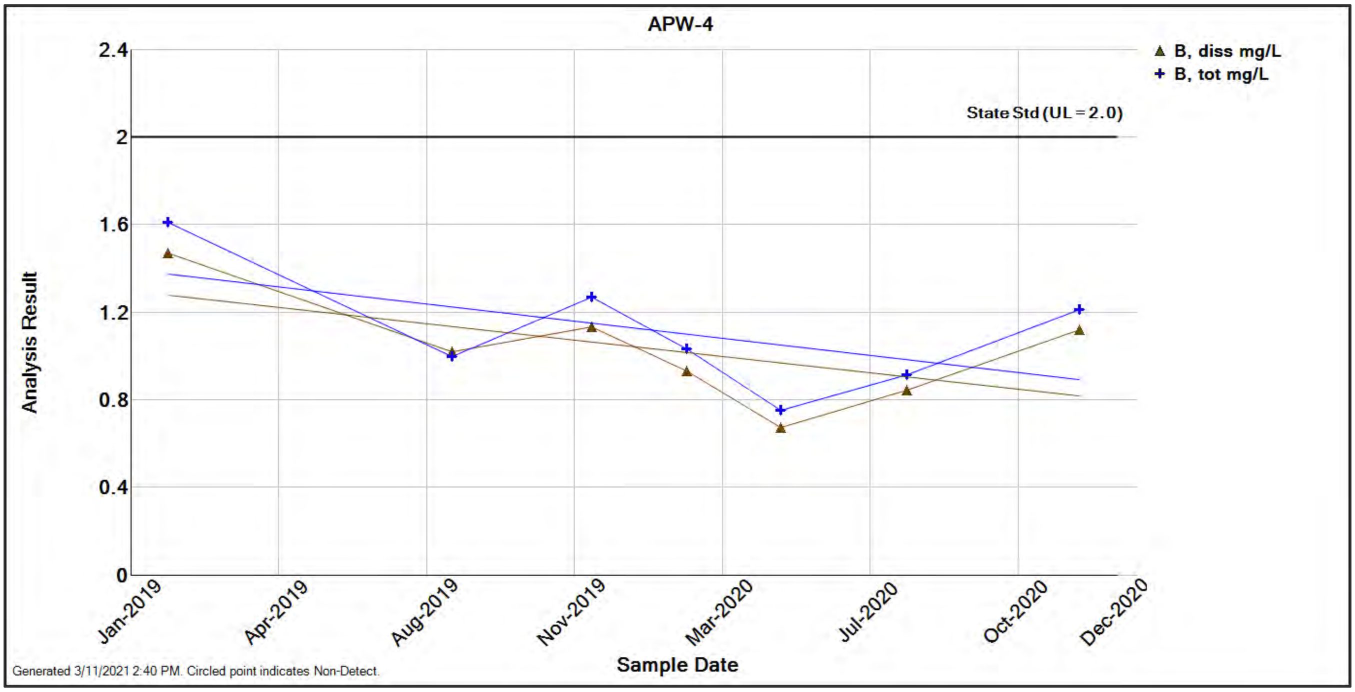


Figure 1-6. Boron (dissolved and total) concentrations since 2019 at downgradient well APW-4. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

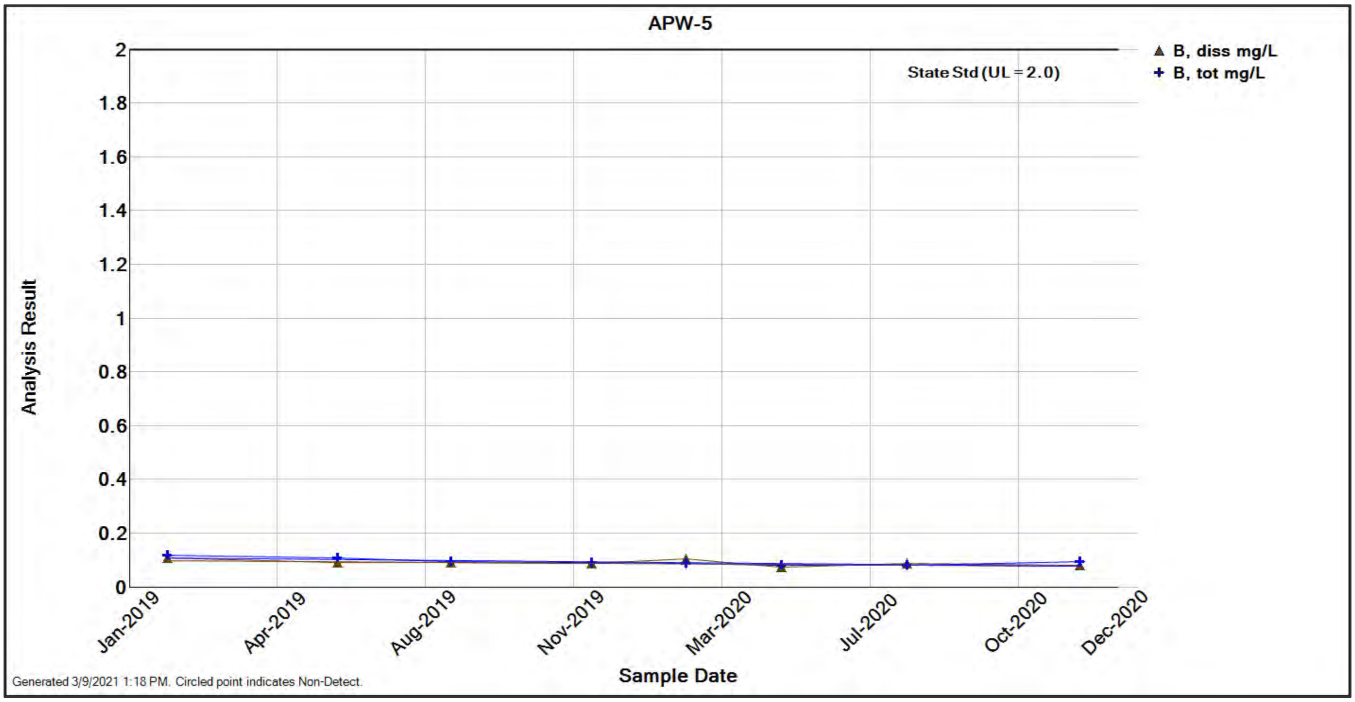


Figure 1-7. Boron (dissolved and total) concentrations since 2019 at upgradient well APW-5. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

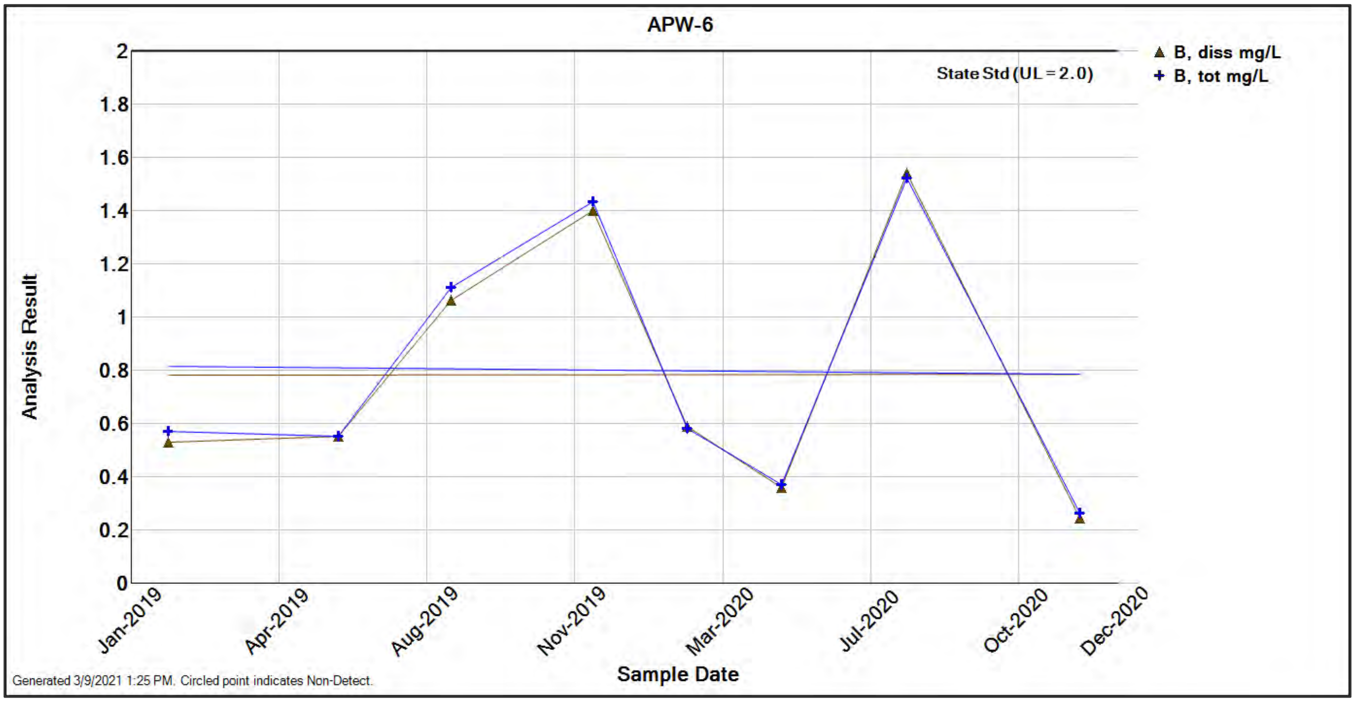


Figure 1-8. Boron (dissolved and total) concentrations since 2019 at midgradient well APW-6. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

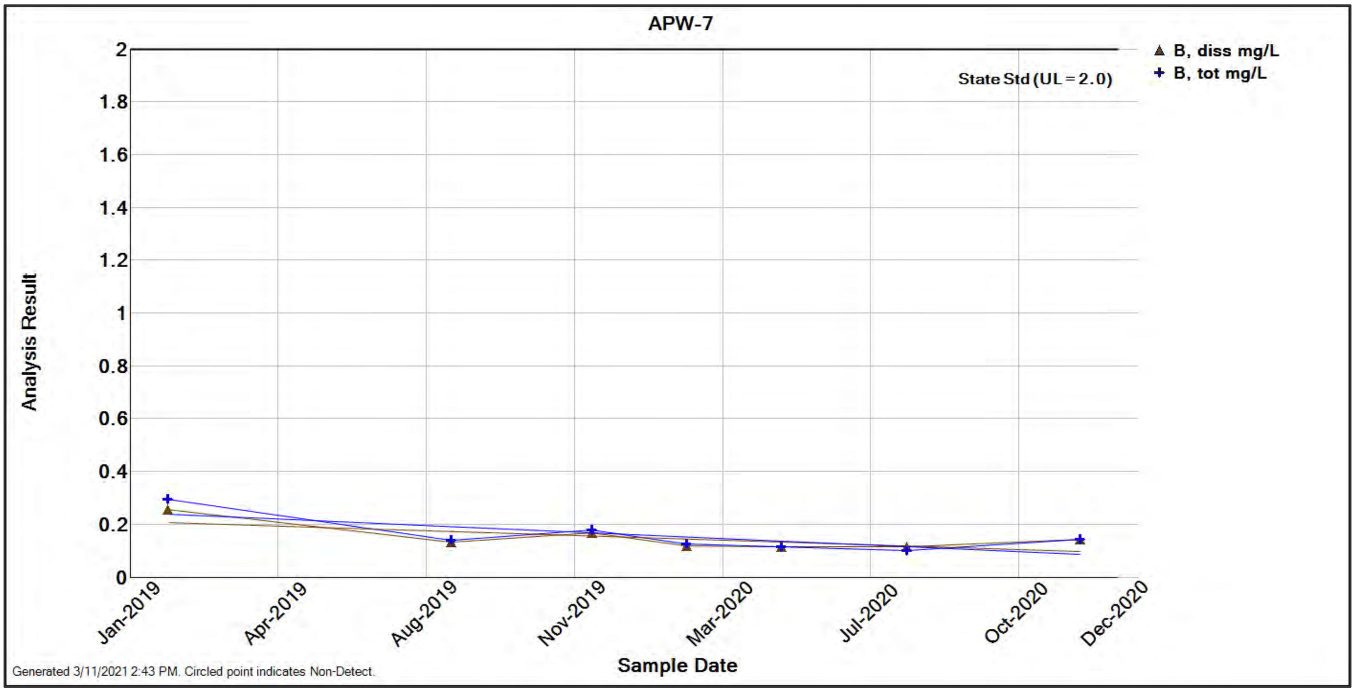


Figure 1-9. Boron (dissolved and total) concentrations since 2019 at midgradient well APW-7. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

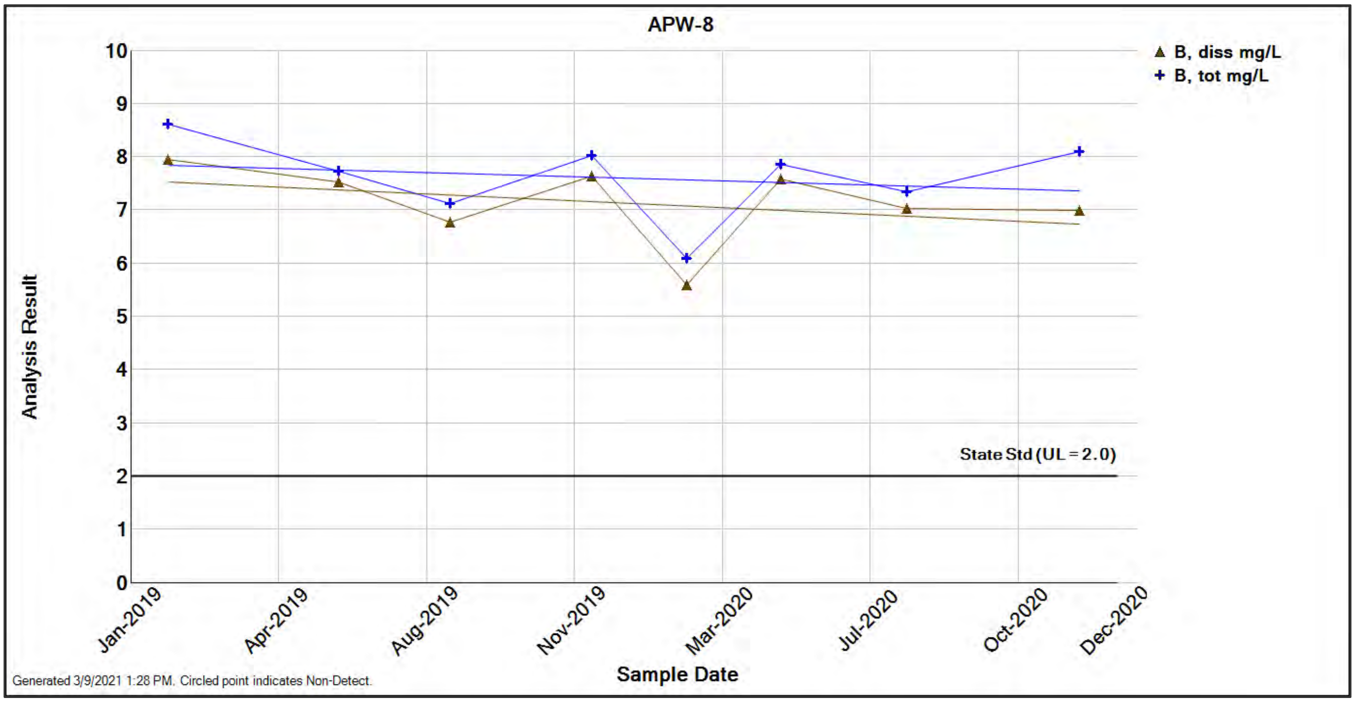


Figure 1-10. Boron (dissolved and total) concentrations since 2019 at midgradient well APW-8. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

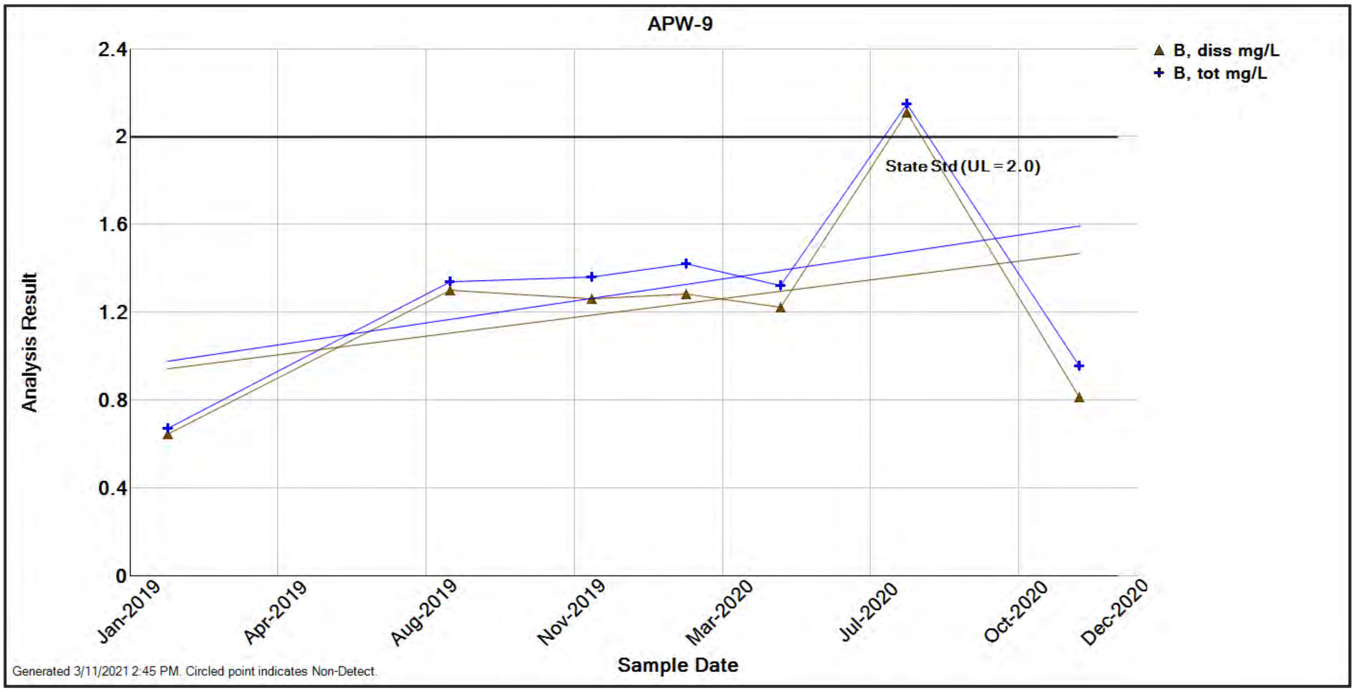


Figure 1-11. Boron (dissolved and total) concentrations since 2019 at downgradient well APW-9. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

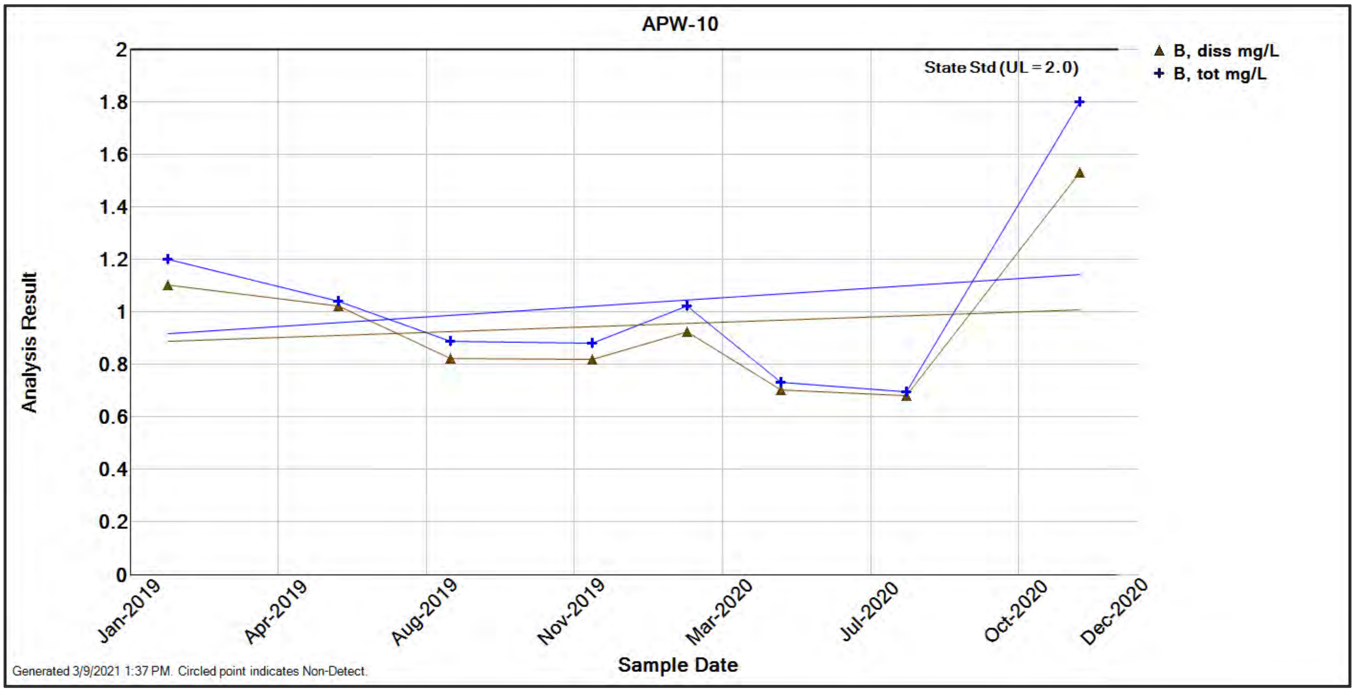


Figure 1-12. Boron (dissolved and total) concentrations since 2019 at midgradient well APW-10. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

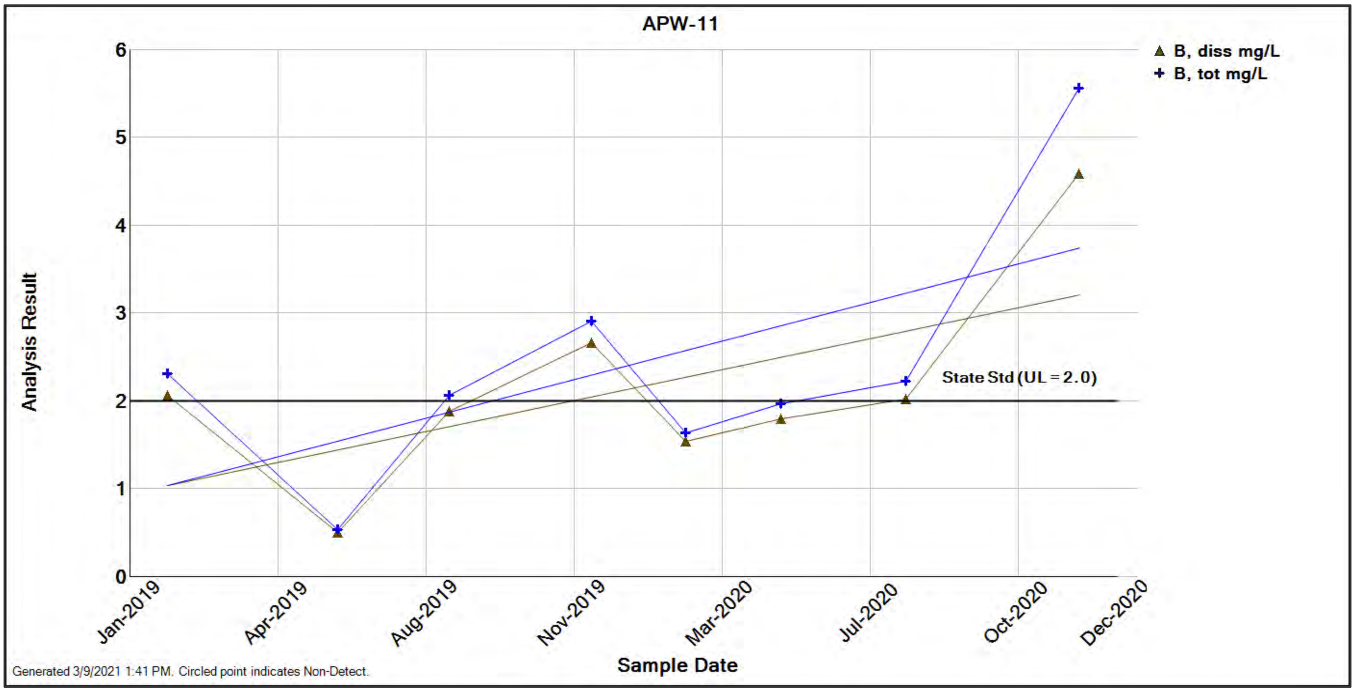


Figure 1-13. Boron (dissolved and total) concentrations since 2019 at upgradient well APW-11. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

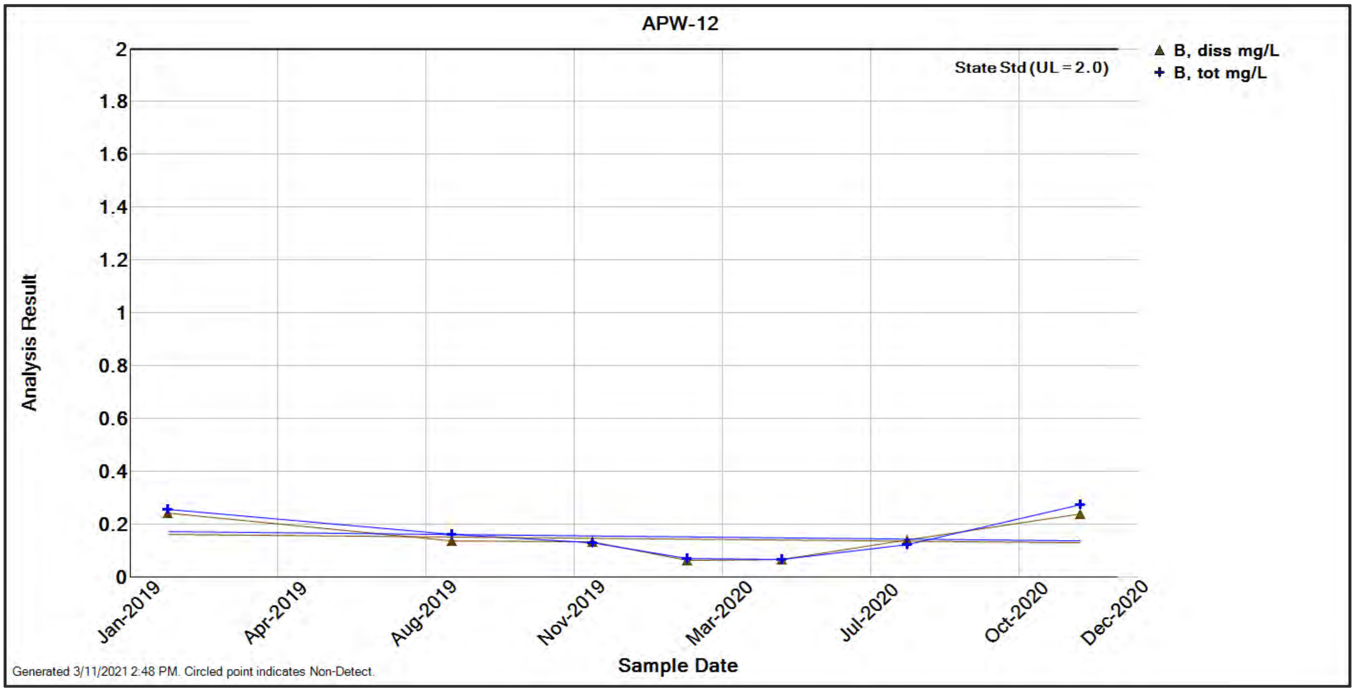


Figure 1-14. Boron (dissolved and total) concentrations since 2019 at downgradient well APW-12. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

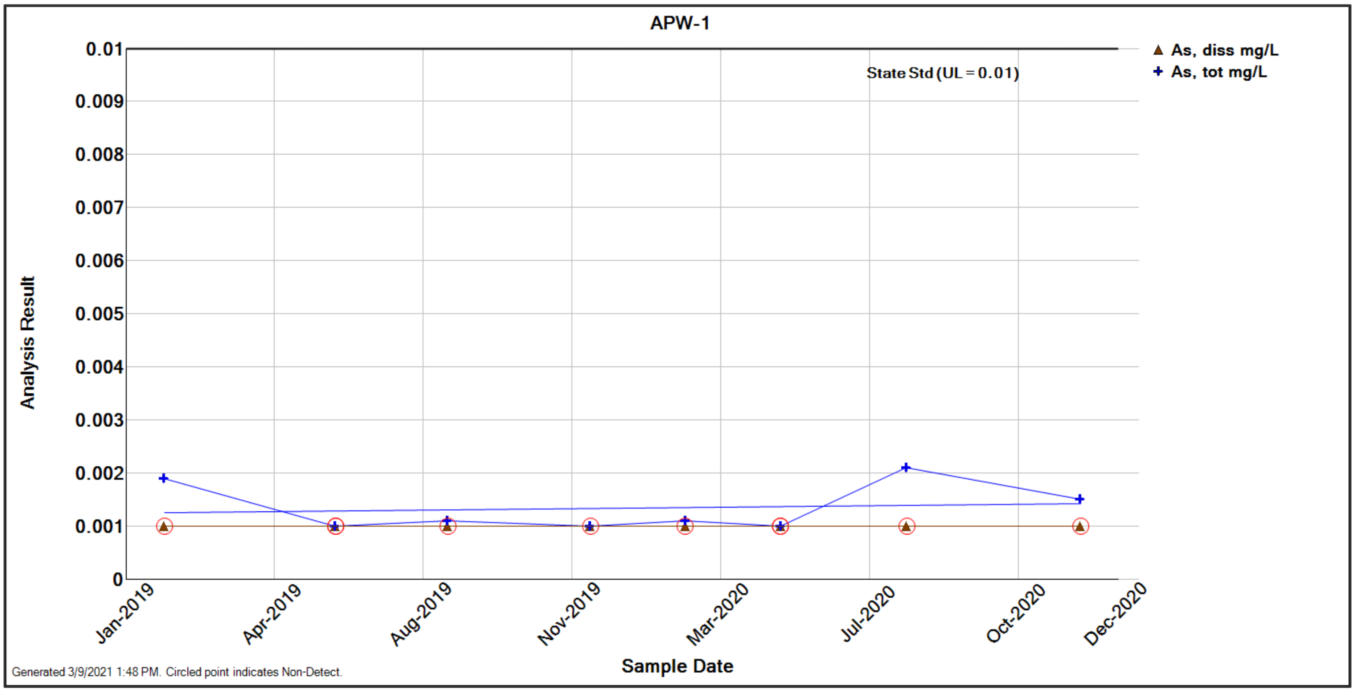


Figure 1-15. Arsenic (dissolved and total) concentrations since 2019 at upgradient well APW-1. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

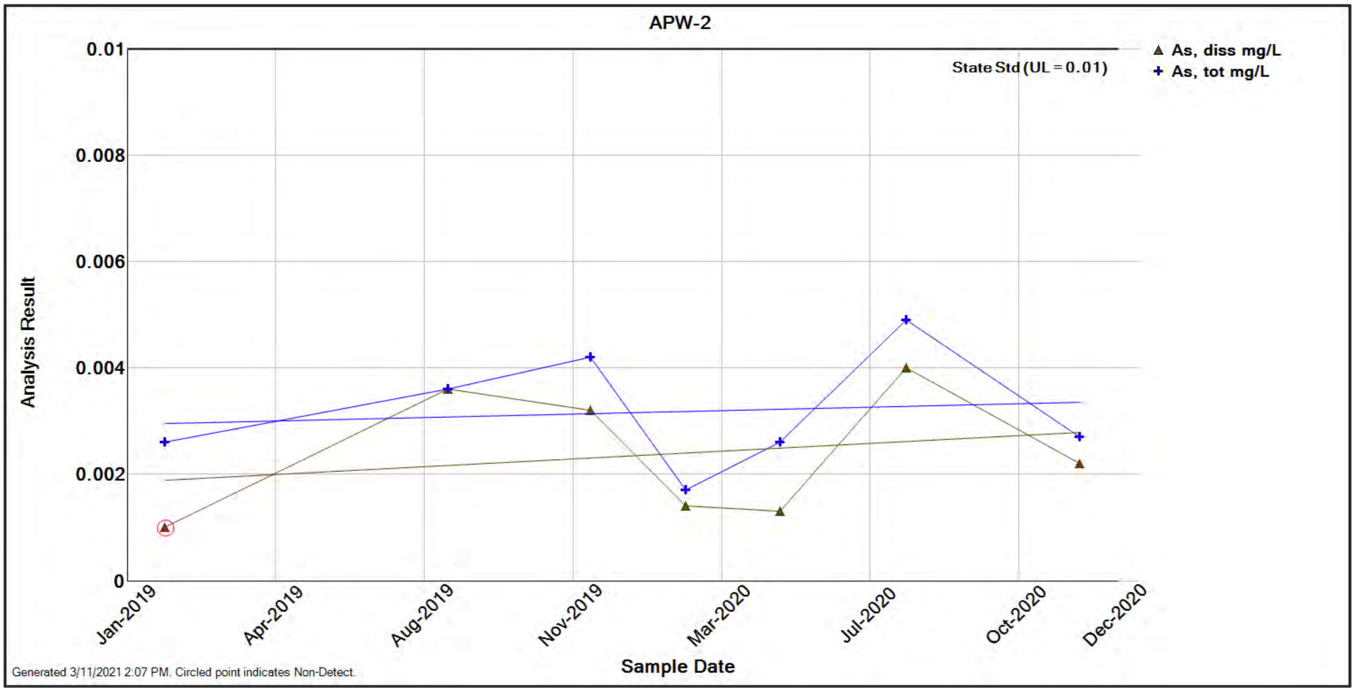


Figure 1-16. Arsenic (dissolved and total) concentrations since 2019 at downgradient well APW-2. The Class Groundwater Standard is not applicable within the GMZ and is shown for reference only.

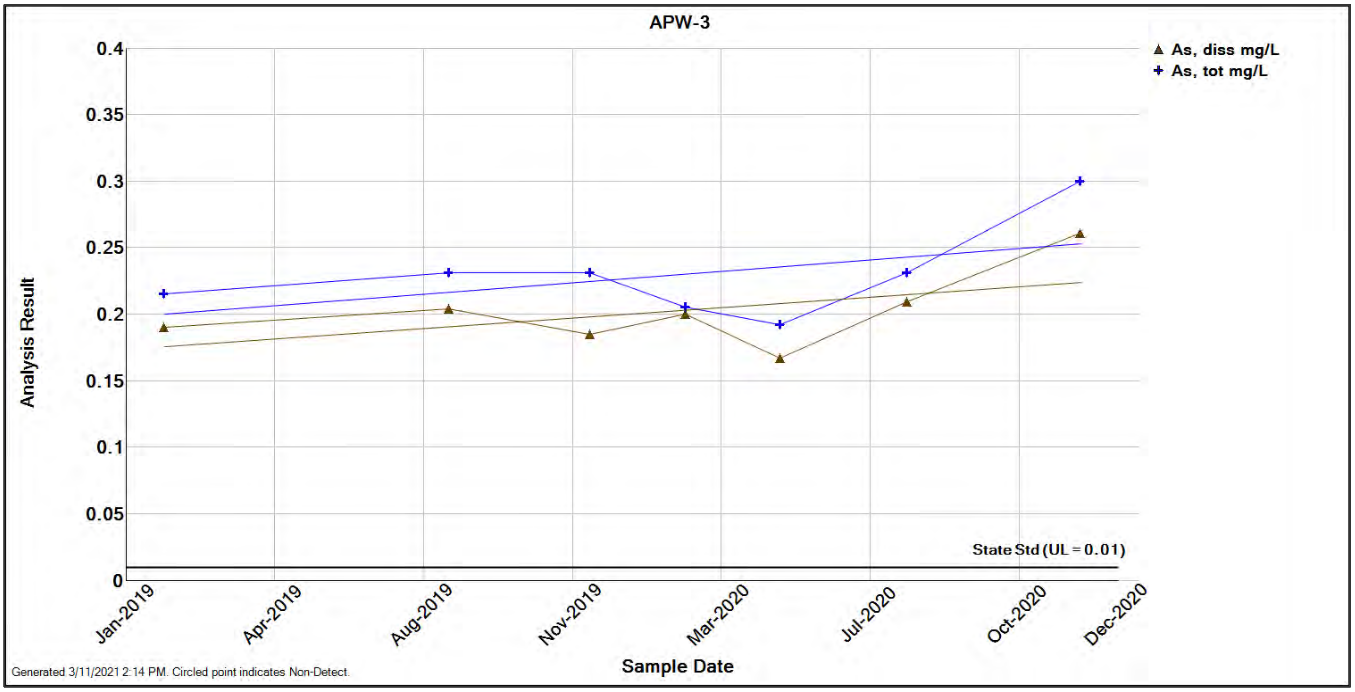


Figure 1-17. Arsenic (dissolved and total) concentrations since 2019 at downgradient well APW-3. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

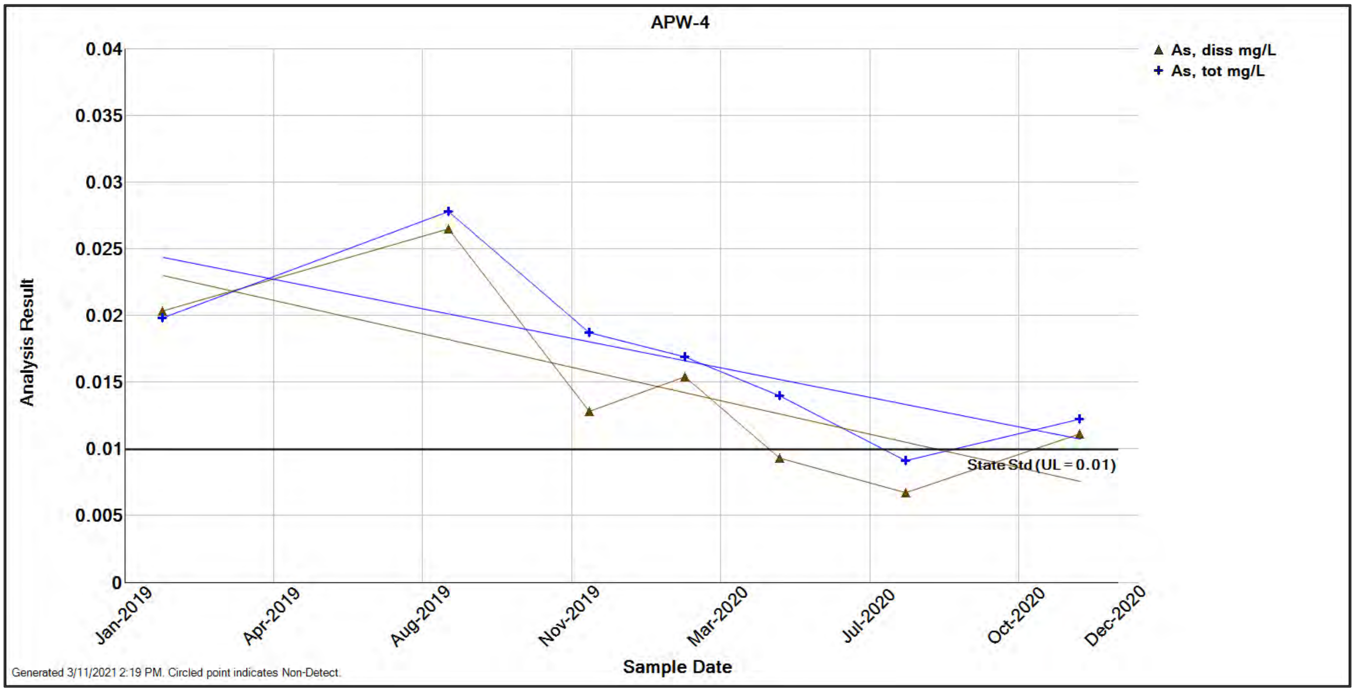


Figure 1-18. Arsenic (dissolved and total) concentrations since 2019 at downgradient well APW-4. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

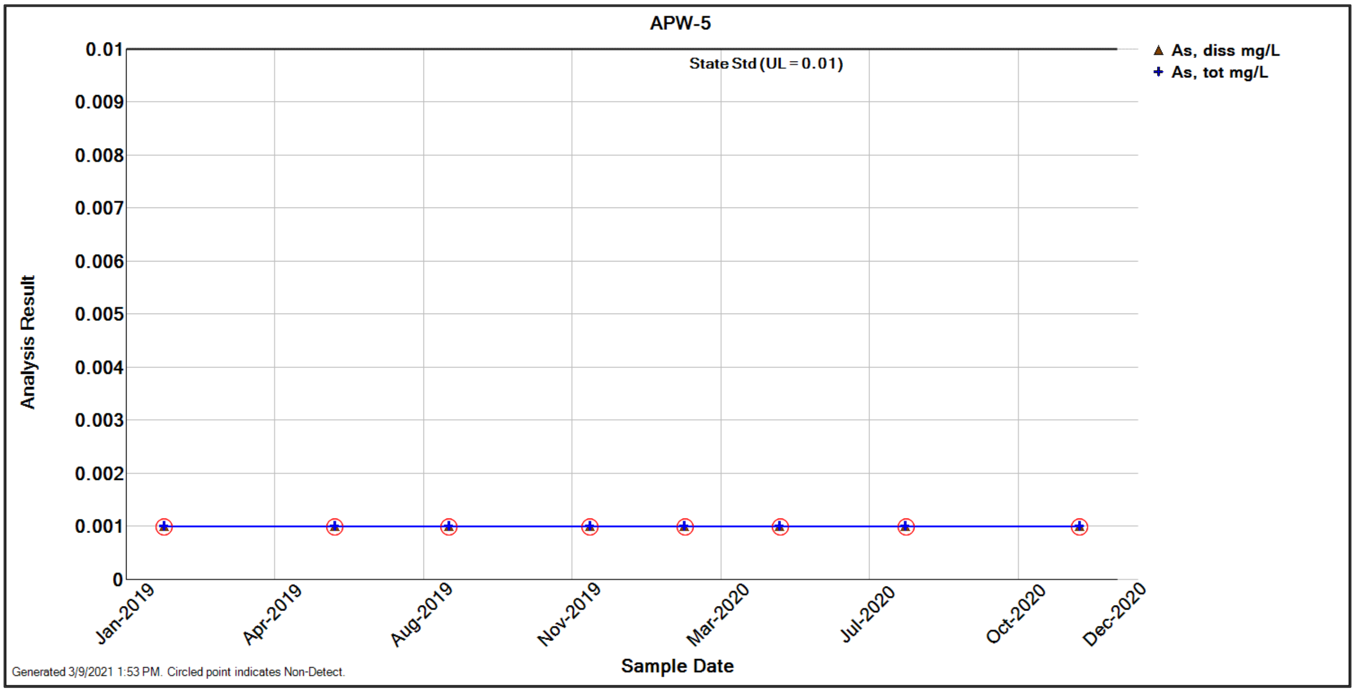


Figure 1-19. Arsenic (dissolved and total) concentrations since 2019 at upgradient well APW-5. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

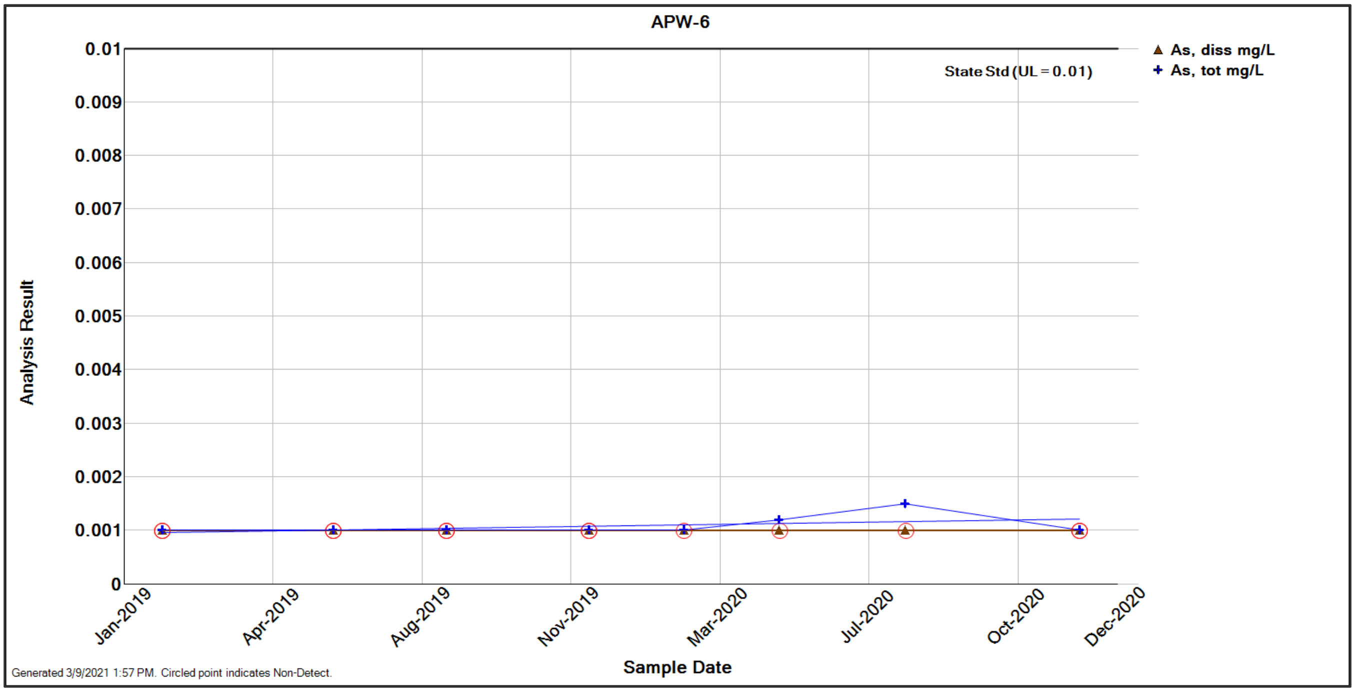


Figure 1-20. Arsenic (dissolved and total) concentrations since 2019 at midgradient well APW-6. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

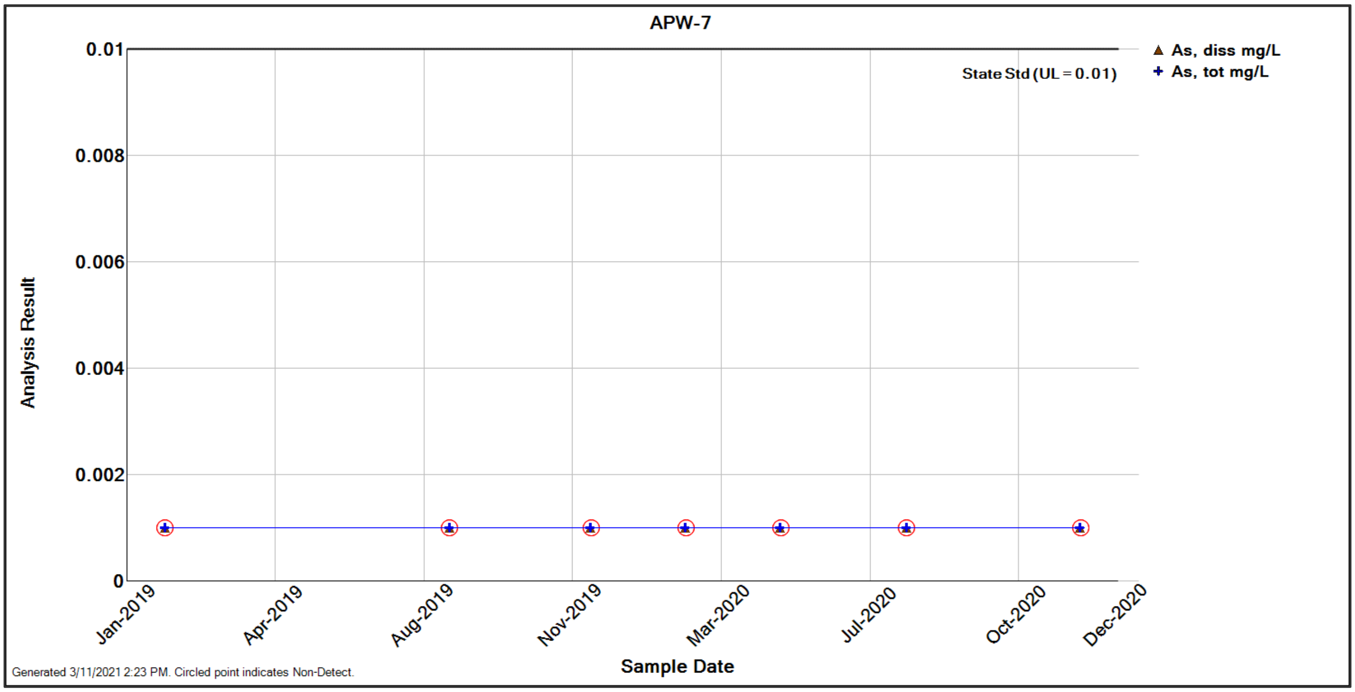


Figure 1-21. Arsenic (dissolved and total) concentrations since 2019 at midgradient well APW-7. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

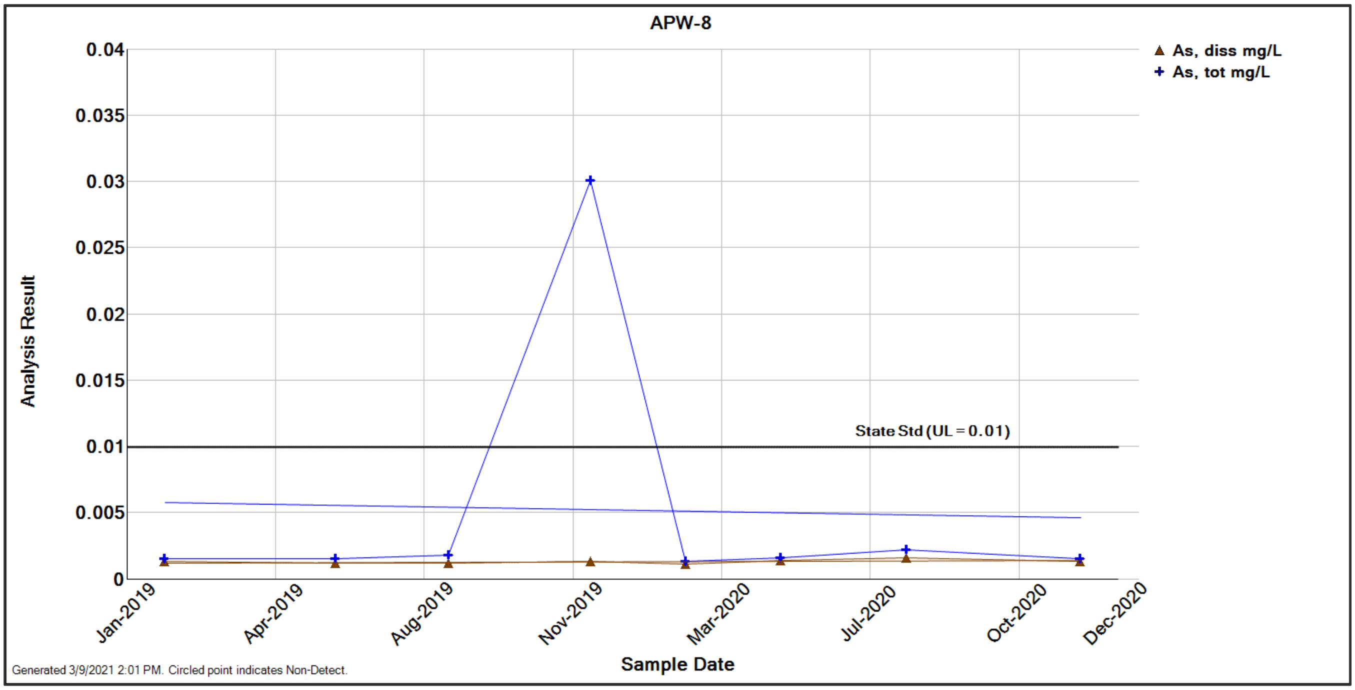


Figure 1-22. Arsenic (dissolved and total) concentrations since 2019 at midgradient well APW-8. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

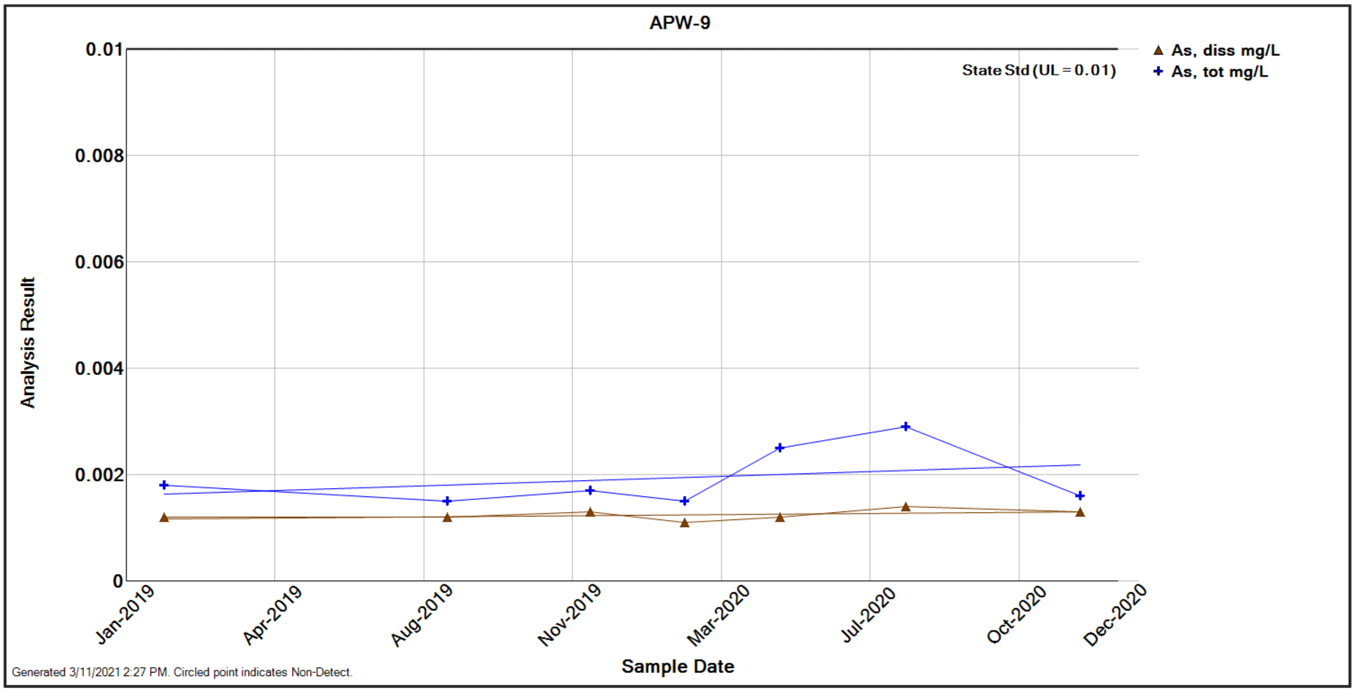


Figure 1-23. Arsenic (dissolved and total) concentrations since 2019 at downgradient well APW-9. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

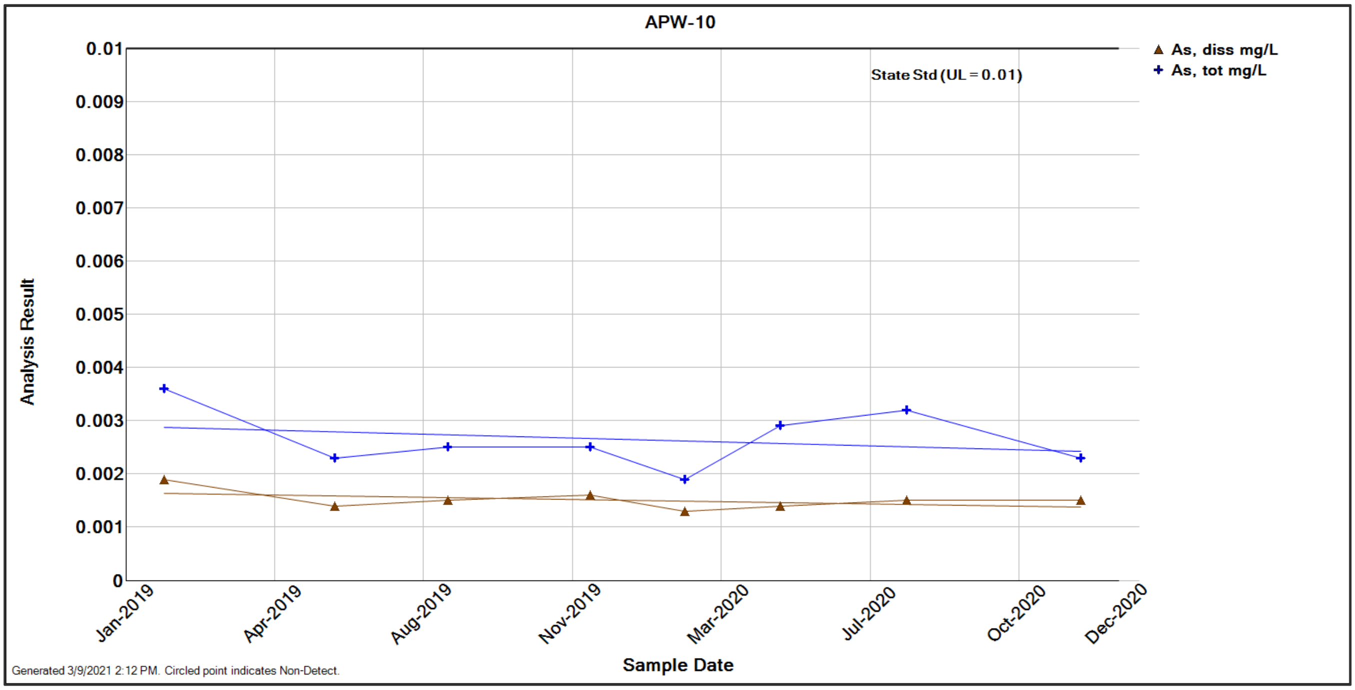


Figure 1-24. Arsenic (dissolved and total) concentrations since 2019 at midgradient well APW-10. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

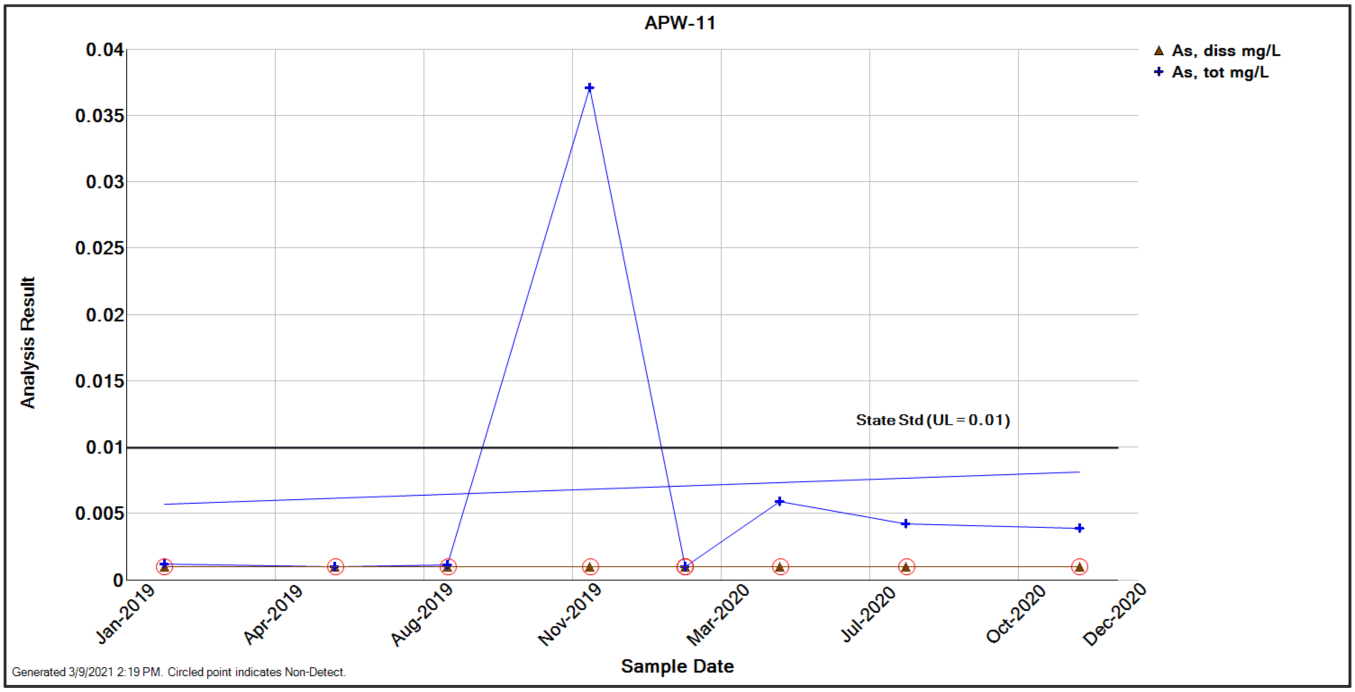


Figure 1-25. Arsenic (dissolved and total) concentrations since 2019 at upgradient APW-11. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

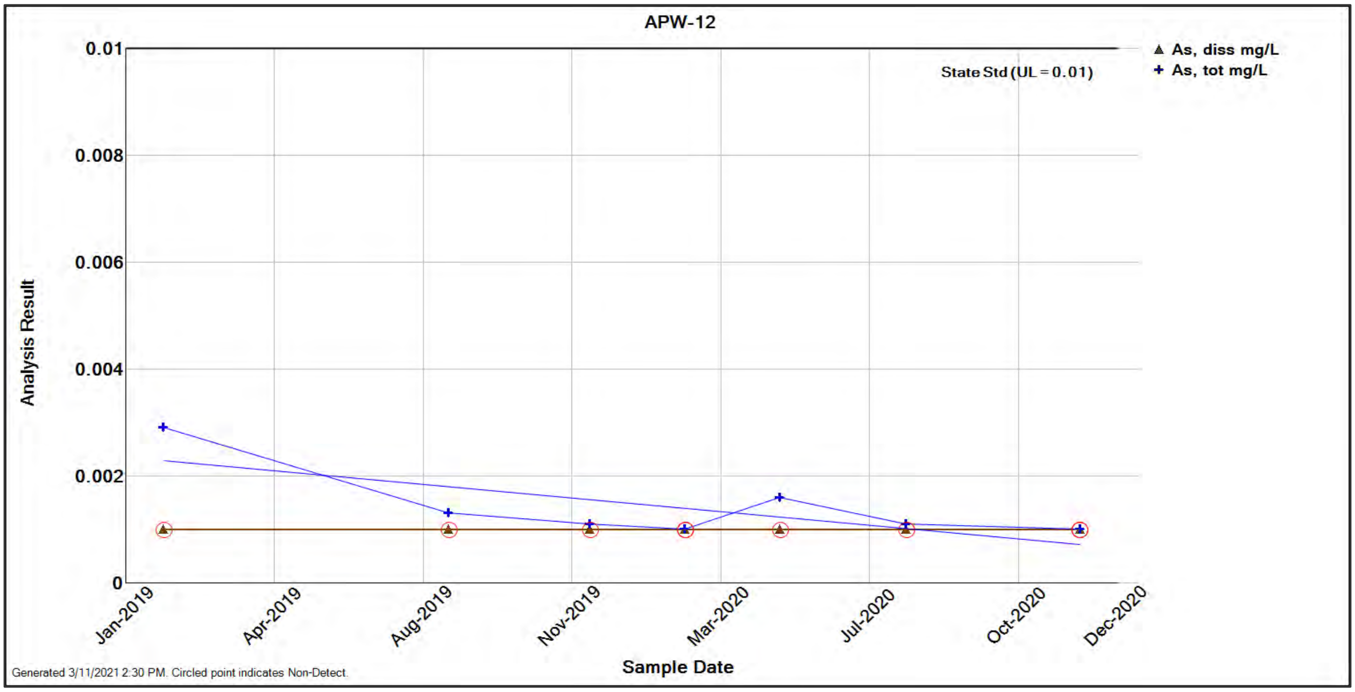
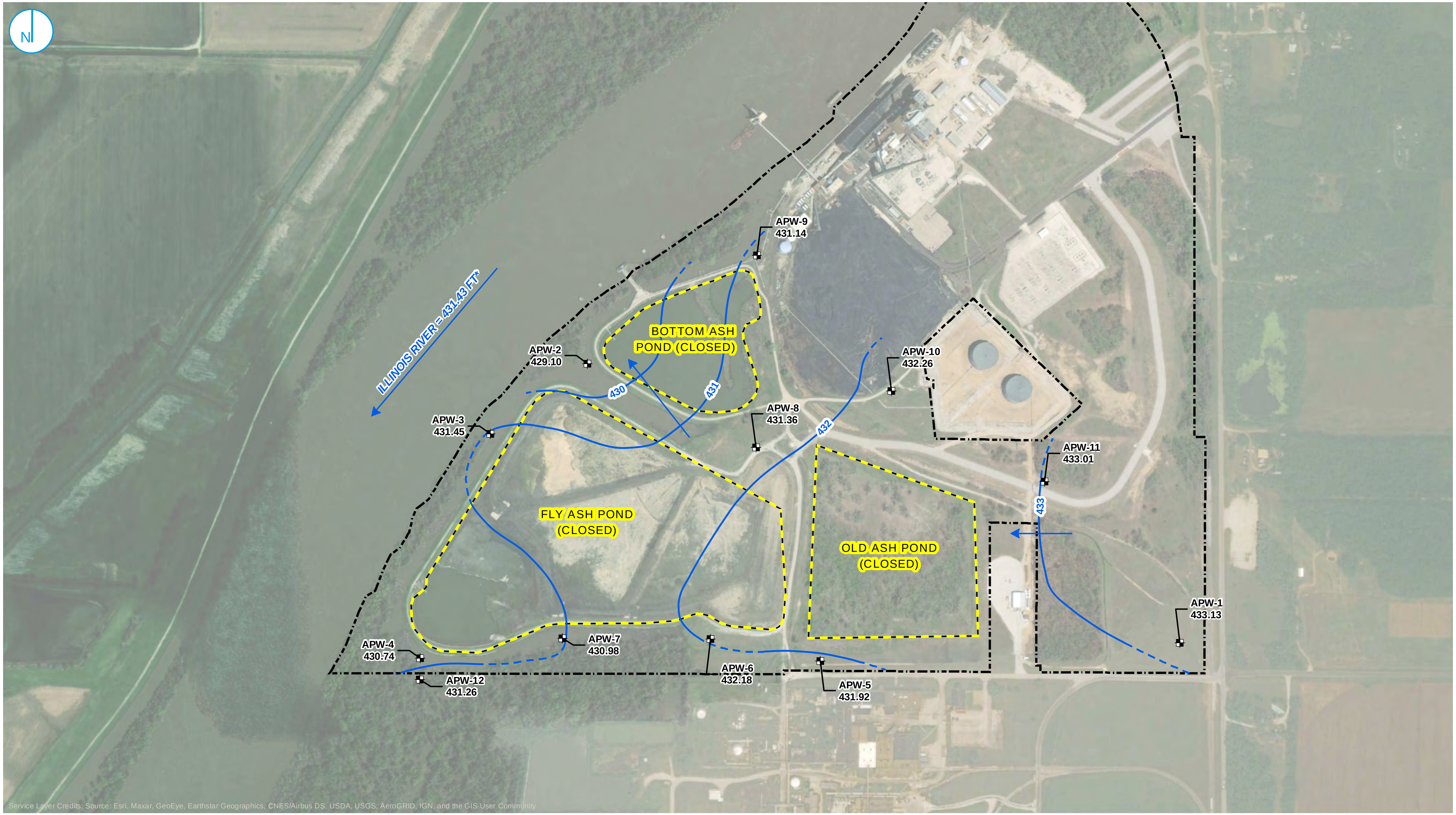


Figure 1-26. Arsenic (dissolved and total) concentrations since 2019 at downgradient APW-12. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

■	MONITORING WELL LOCATION
──	GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD88)
- - -	INFERRED GROUNDWATER ELEVATION CONTOUR
→	GROUNDWATER FLOW DIRECTION
▭	APPROXIMATE PROPERTY BOUNDARY
▭	LIMITS OF CCP MANAGEMENT

0 240 480 Feet

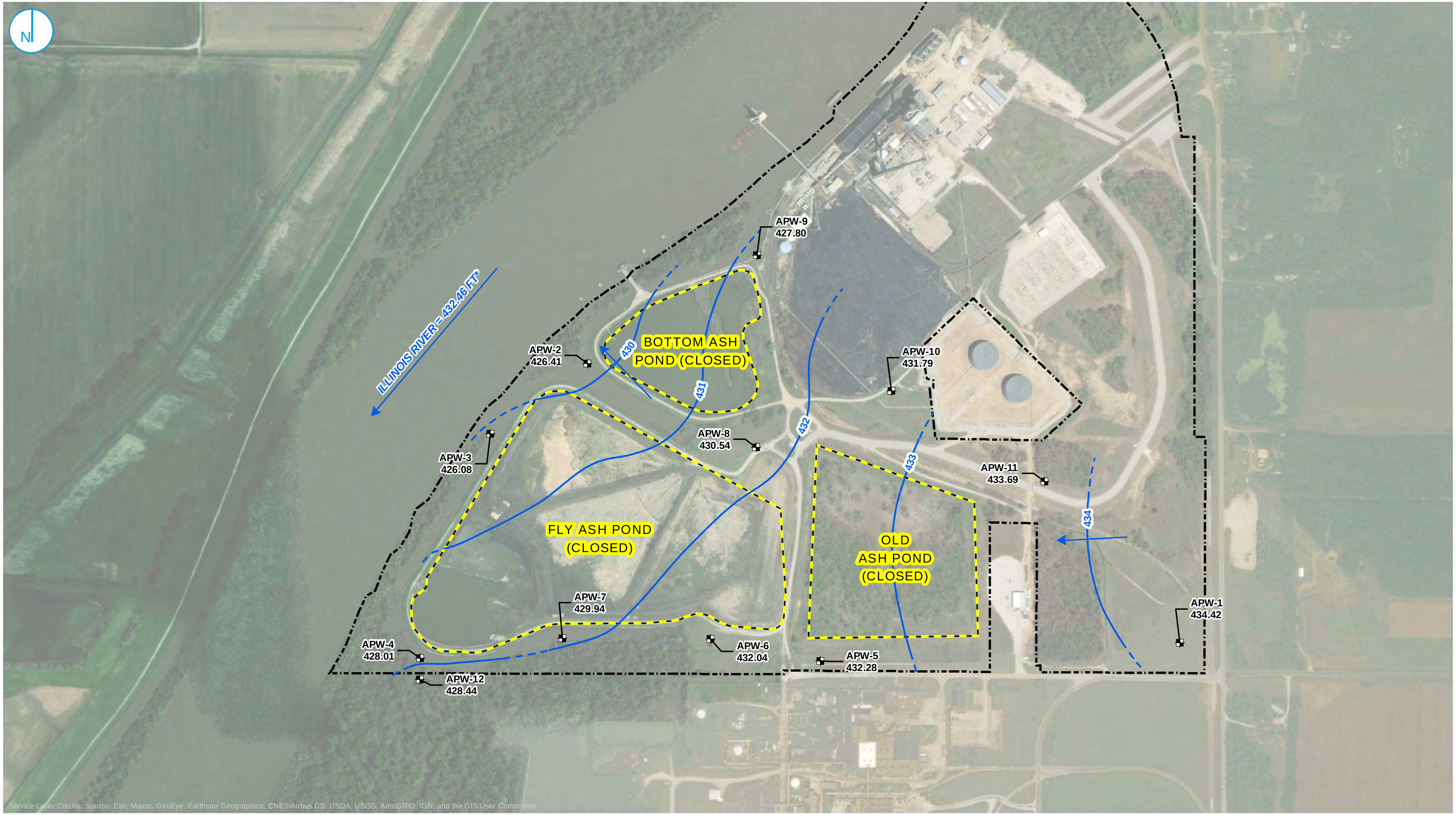
*River Elevation obtained from United States Geological Survey 05585500 Meredosia, IL gaging station. The elevation was reported in NGVD29 and then converted to NAVD88 at the time of this drawing.
NGVD29 = National Geodetic Vertical Datum of 1929
NAVD88 = North American Vertical Datum of 1988

GROUNDWATER ELEVATIONS - FEBRUARY 17, 2020

2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 3-1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

MONITORING WELL LOCATION
GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

0 240 480
Feet

APPROXIMATE PROPERTY BOUNDARY
LIMITS OF CCP MANAGEMENT

*River Elevation obtained from United States Geological Survey 05585500 Meredosia, IL gaging station. The elevation was reported in NGVD29 and then converted to NAVD88 at the time of this drawing.
NGVD29 = National Geodetic Vertical Datum of 1929
NAVD88 = North American Vertical Datum of 1988

GROUNDWATER ELEVATIONS - APRIL 27, 2020

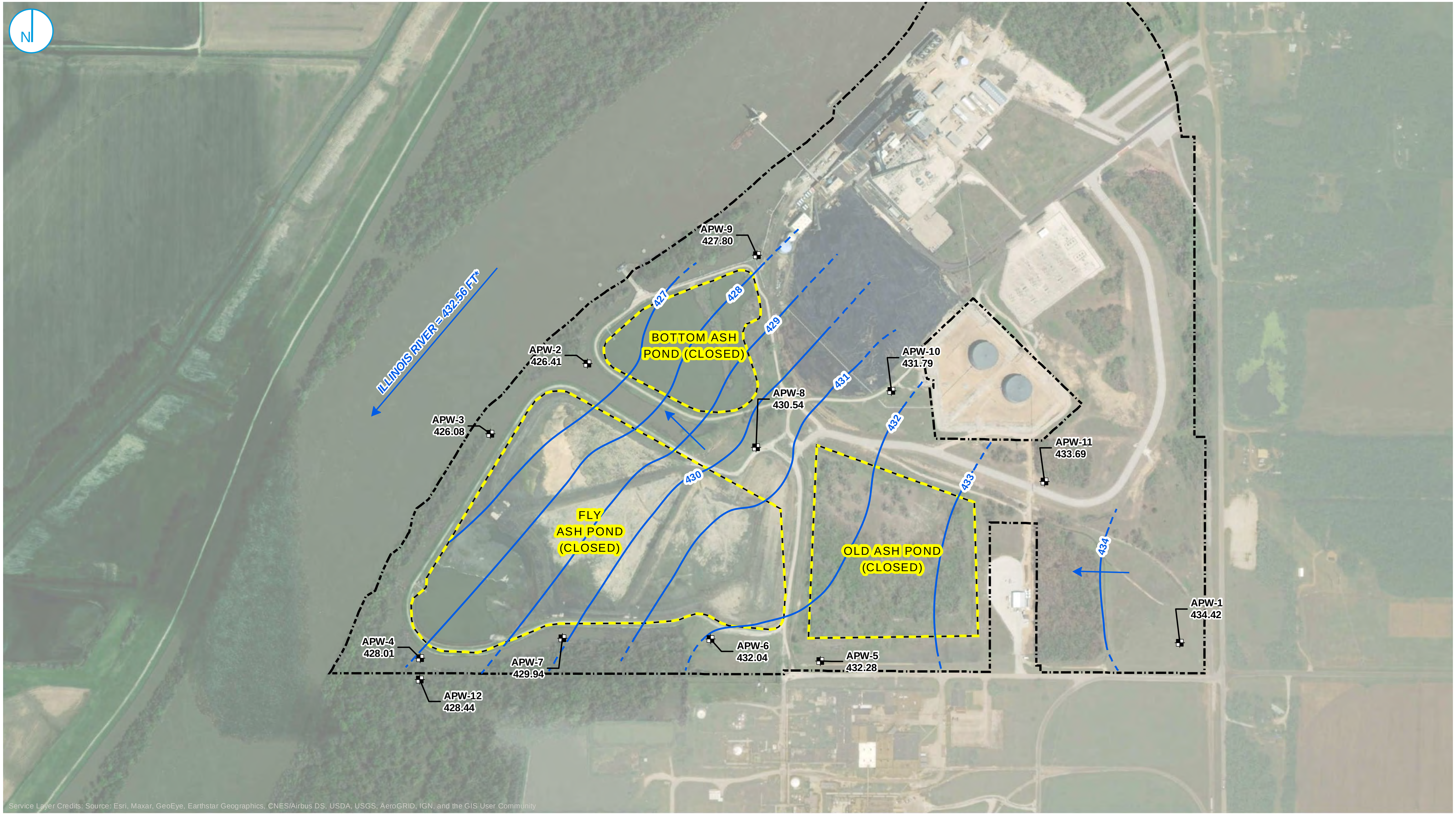
2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 3-2

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

Y:\Mapping\Projects\6\67815\mxd\2020\Figure 3-3_MW GWEs_2007.mxd



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT: 72694 | DATED: 3/10/2021 | DESIGNER: MARRAMJ

- ⊞ MONITORING WELL LOCATION
- ─ GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD88)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- → GROUNDWATER FLOW DIRECTION
- ▭ APPROXIMATE PROPERTY BOUNDARY
- ▭ LIMITS OF CCP MANAGEMENT

0 240 480 Feet

*River Elevation obtained from United States Geological Survey 05585500 Meredosia, IL gaging station. The elevation was reported in NGVD29 and then converted to NAVD88 at the time of this drawing.
NGVD29 = National Geodetic Vertical Datum of 1929
NAVD88 = North American Vertical Datum of 1988

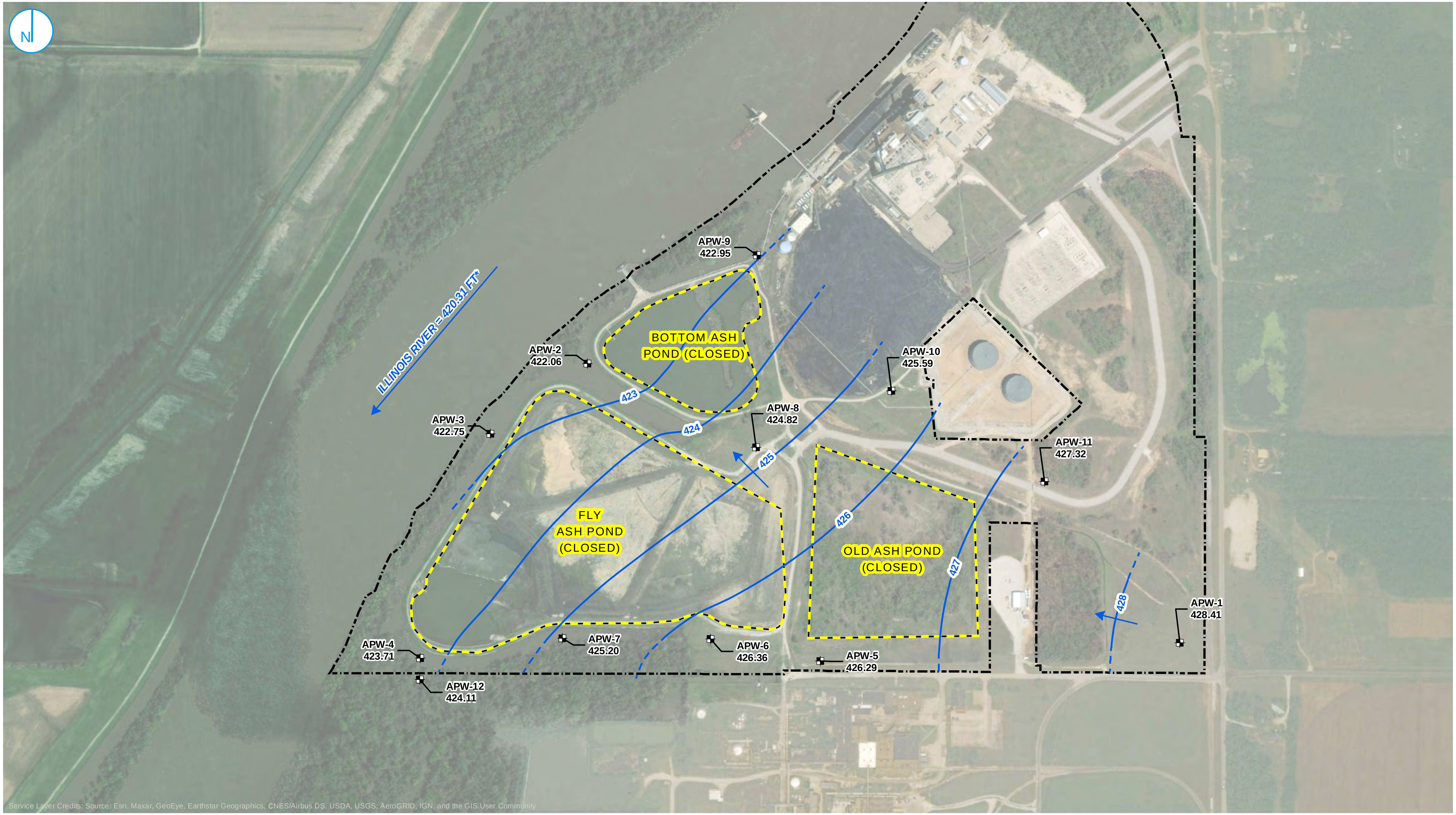
GROUNDWATER ELEVATIONS - JULY 29, 2020

2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 3-3

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

Y:\Mapping\Projects\6\67815\mxd\2020\Figure 3-4_MW GWEs_2012.mxd



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT: 72694 | DATED: 3/10/2021 | DESIGNER: MARRAMJ

⊞ MONITORING WELL LOCATION

— GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD88)

- - INFERRED GROUNDWATER ELEVATION CONTOUR

→ GROUNDWATER FLOW DIRECTION

0 240 480 Feet

▭ APPROXIMATE PROPERTY BOUNDARY

▭ LIMITS OF CCP MANAGEMENT

*River Elevation obtained from United States Geological Survey 05585500 Meredosia, IL gaging station. The elevation was reported in NGVD29 and then converted to NAVD88 at the time of this drawing.
NGVD29 = National Geodetic Vertical Datum of 1929
NAVD88 = North American Vertical Datum of 1988

GROUNDWATER ELEVATIONS - DECEMBER 4, 2020

2020 ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

FIGURE 3-4

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

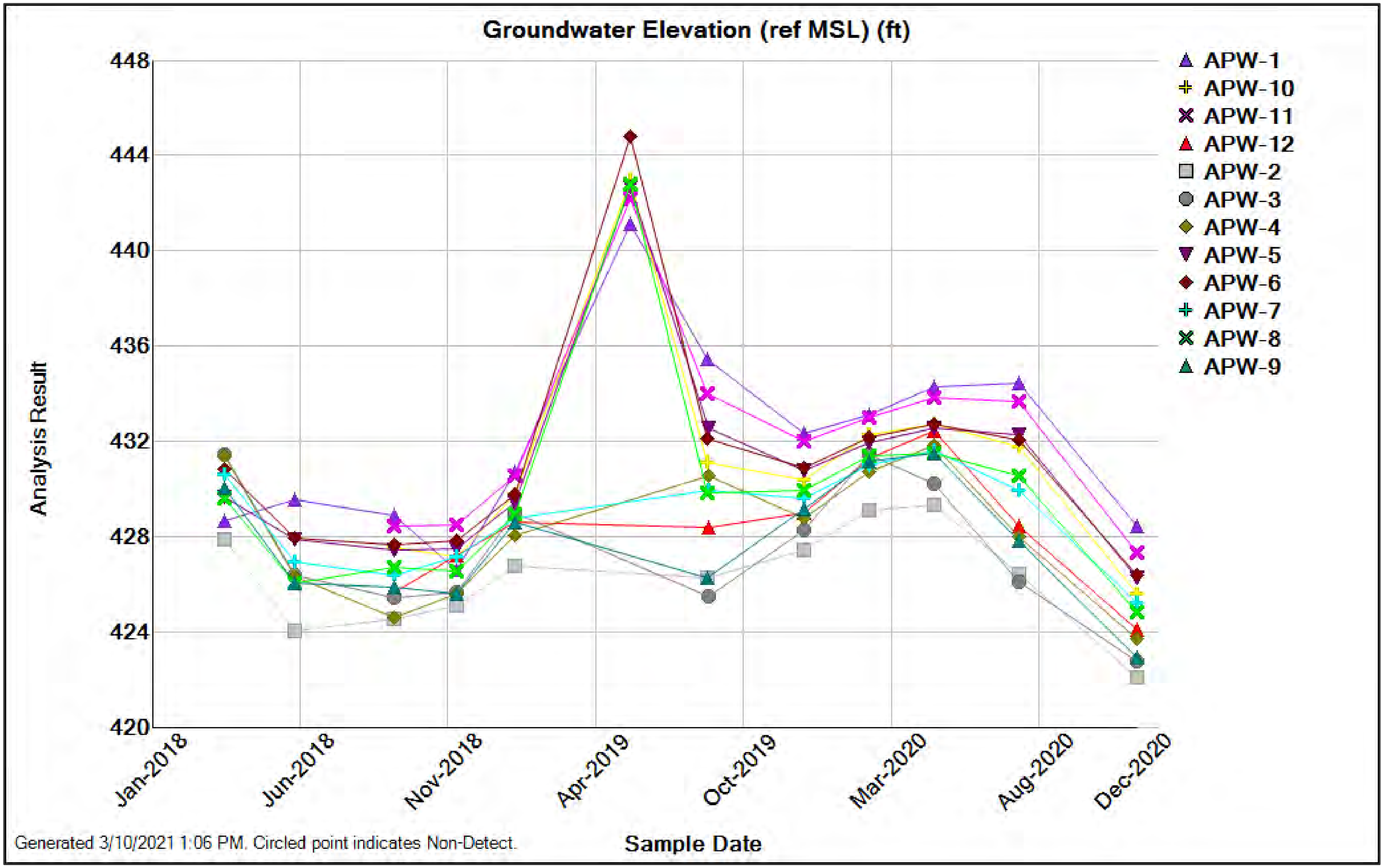


Figure 3-5. Groundwater elevations timeseries plot

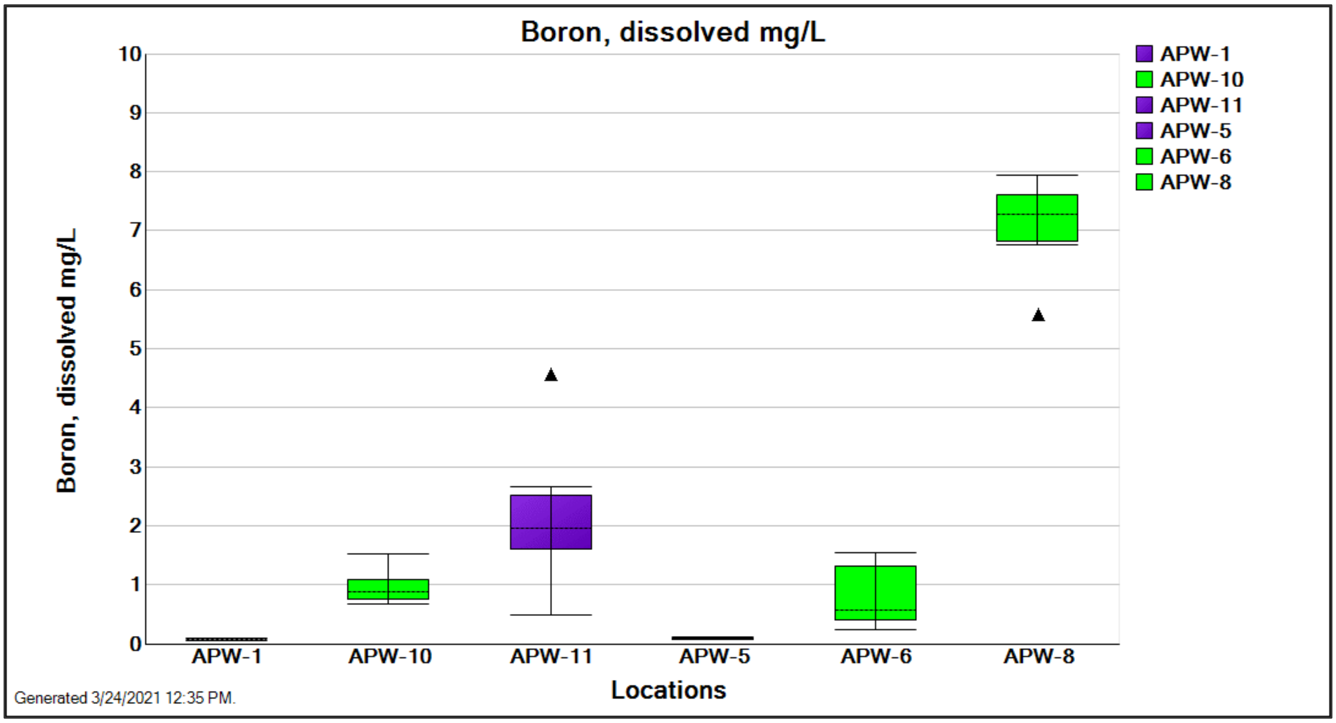


Figure 3-6. Box-whisker plot showing distribution of **dissolved boron** concentration by monitoring well for data collected in 2019 and 2020

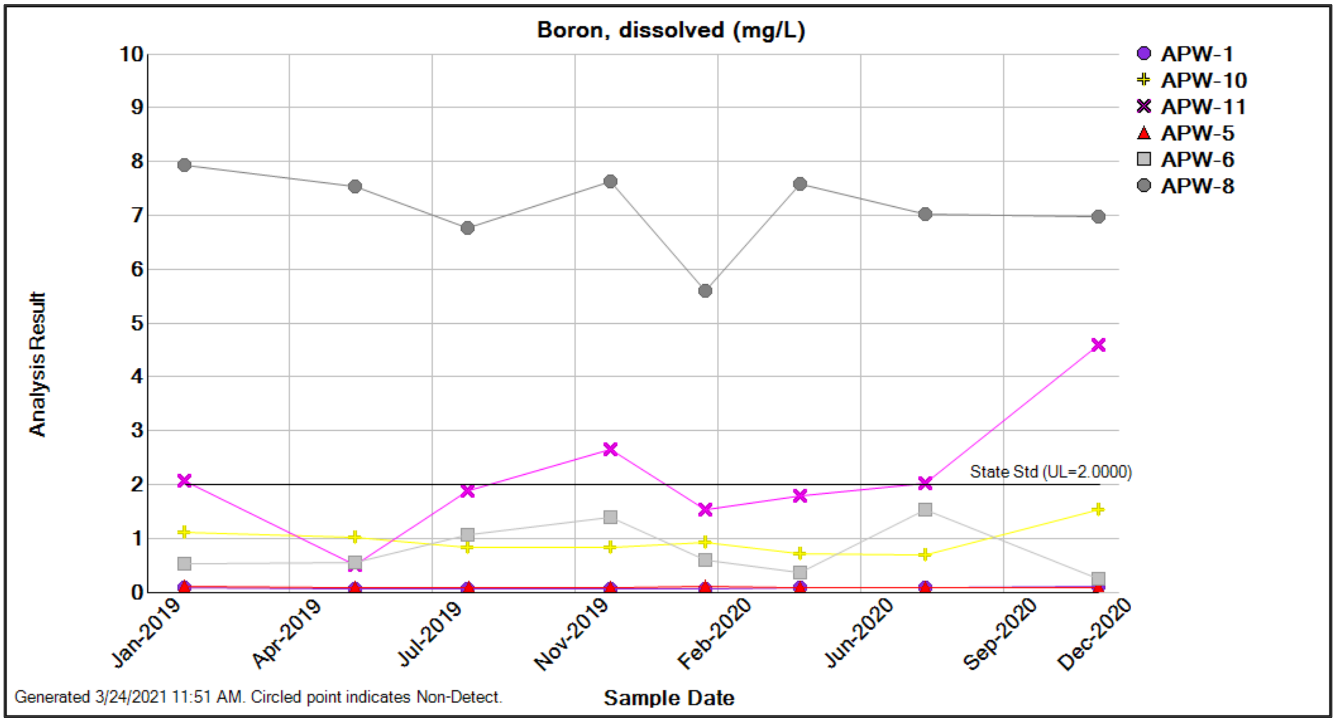


Figure 3-7. Dissolved boron concentrations during the reporting period (2019-2020) at all compliance wells. Circled results indicate non-detects.

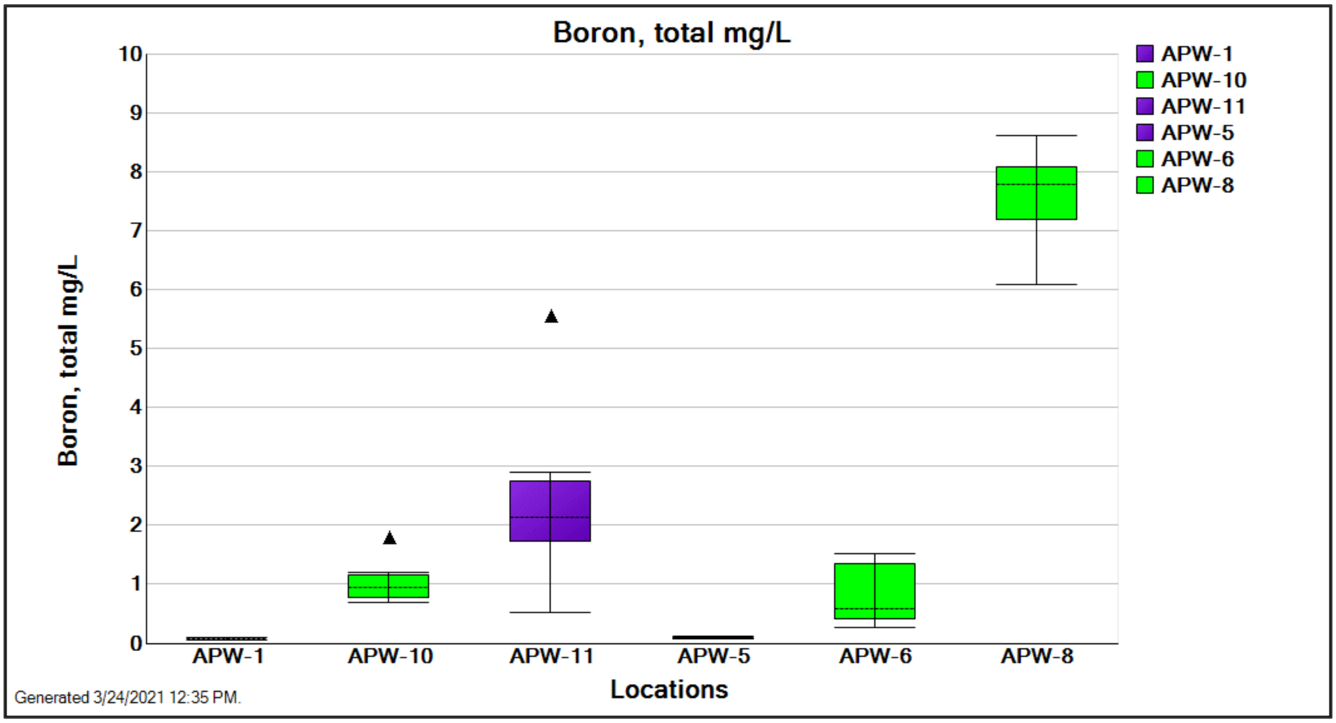


Figure 3-8. Box-whisker plot showing distribution of **total boron** concentration by monitoring well for data collected in 2019 and 2020.

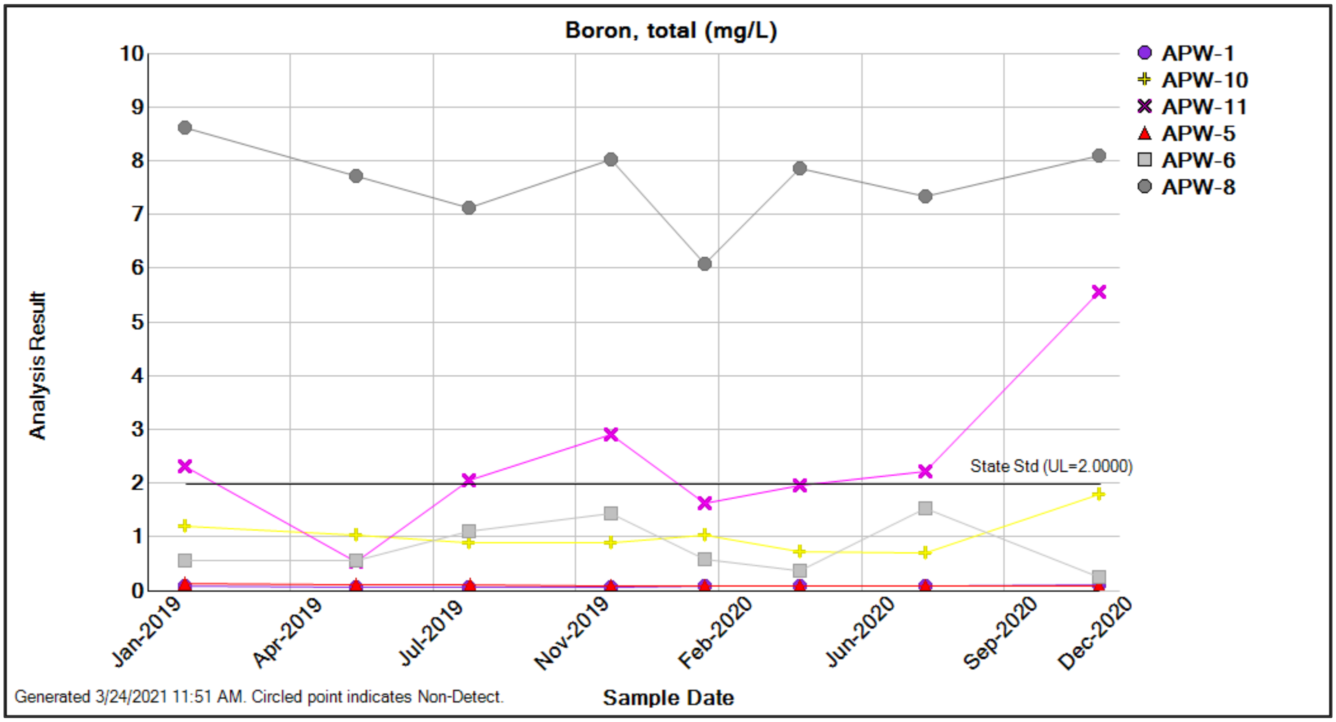


Figure 3-9. Total boron concentrations during the reporting period (2019-2020) at all compliance wells.

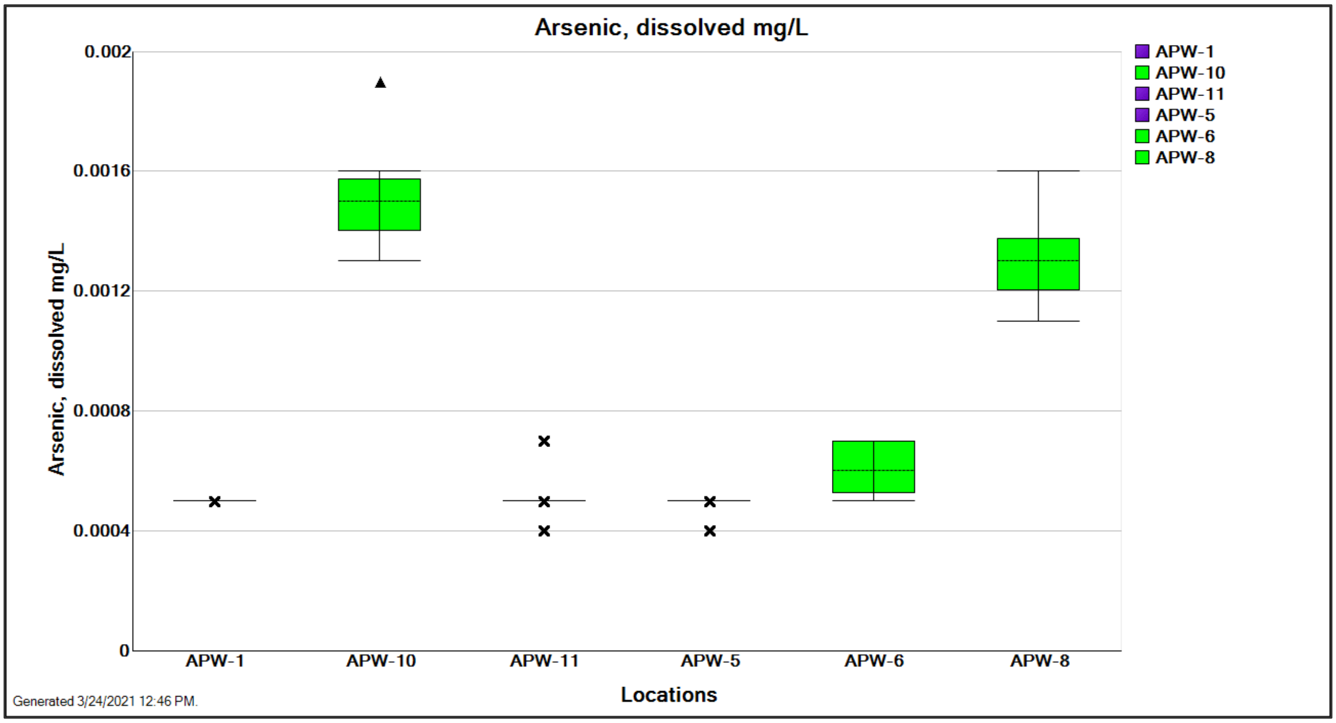


Figure 3-10. Box-whisker plot showing distribution of **dissolved arsenic** concentration by monitoring well for data collected in 2019 and 2020.

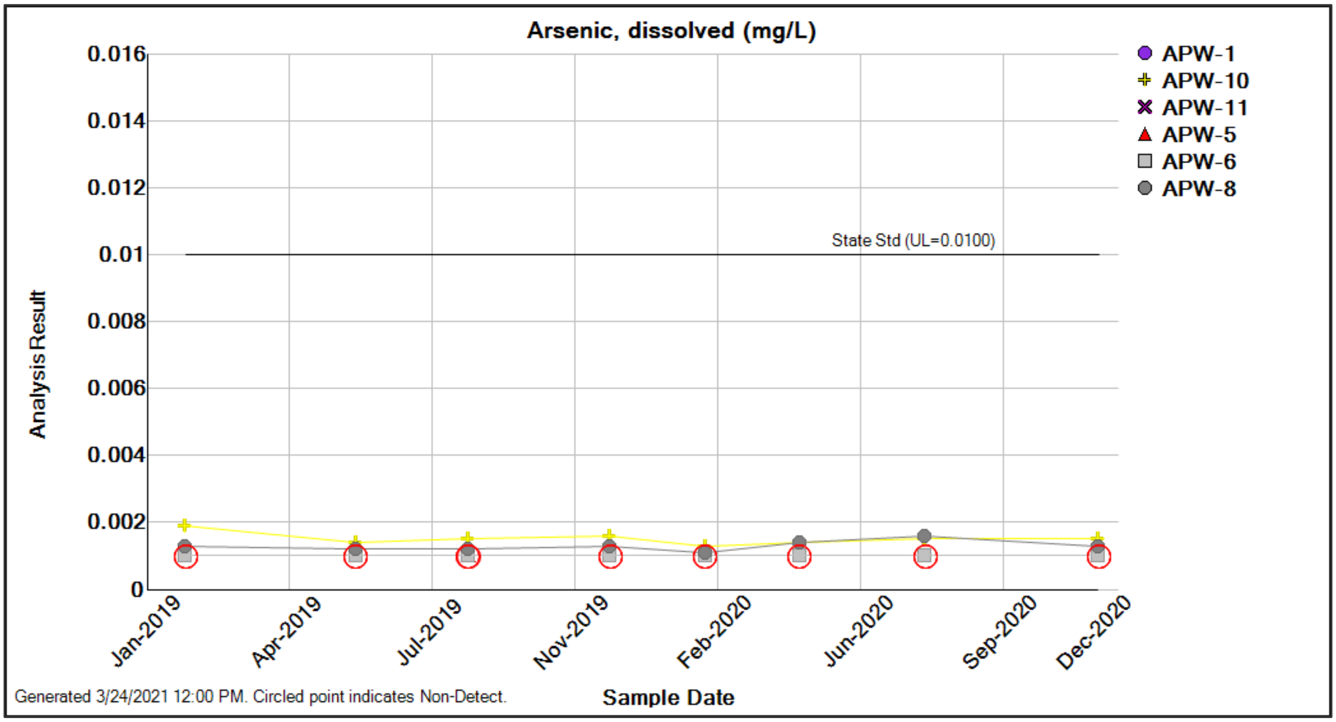


Figure 3-11. Dissolved arsenic concentrations during the reporting period (2019-2020) at all compliance wells.

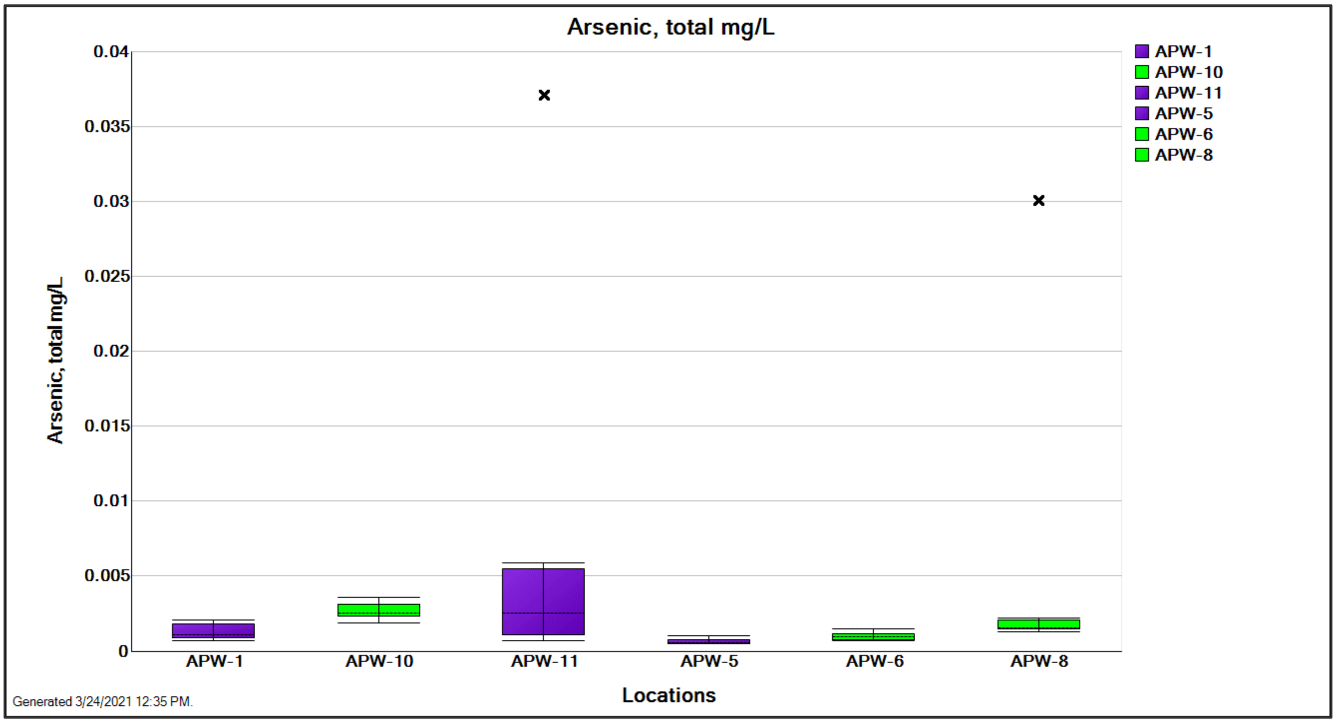


Figure 3-12. Box-whisker plot showing distribution of **total arsenic** concentration by monitoring well for data collected in 2019 and 2020.

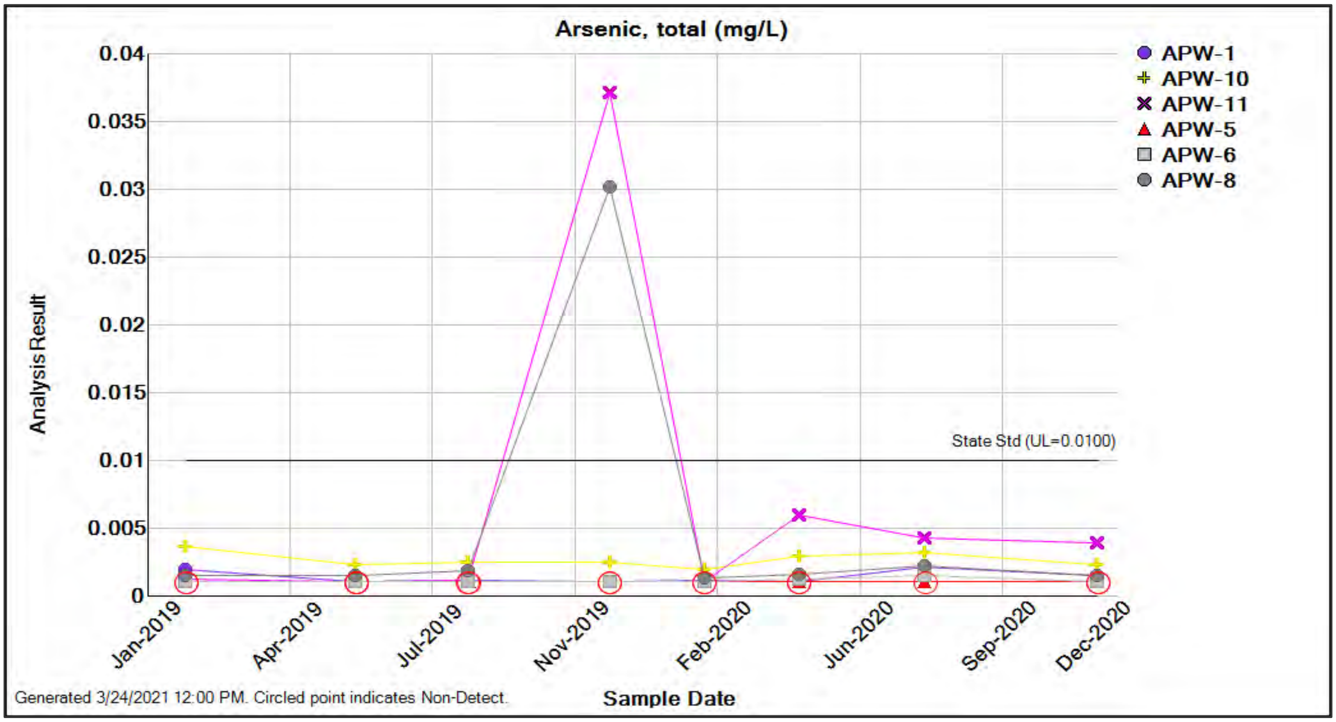


Figure 3-13. Total arsenic concentrations during the reporting period (2019-2020) at all compliance wells.

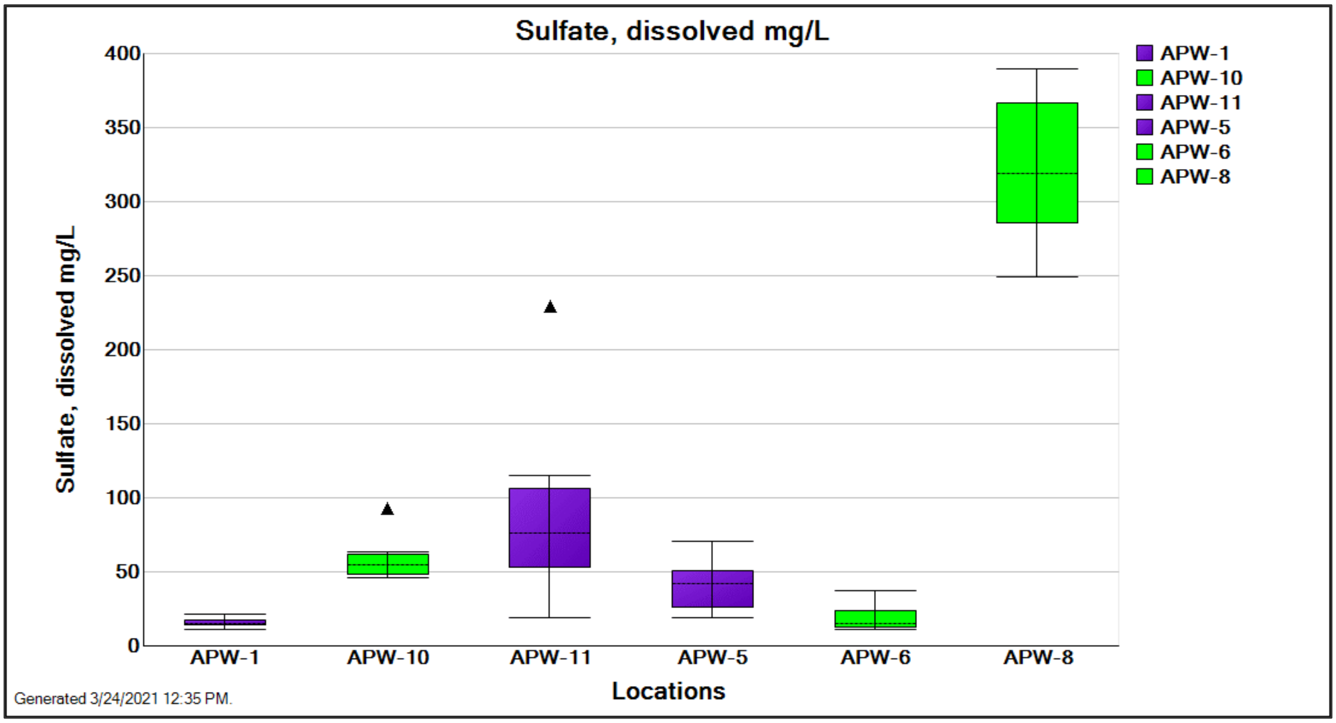


Figure 3-14. Box-whisker plot showing distribution of **dissolved sulfate** concentration by monitoring well for data collected in 2019 and 2020.

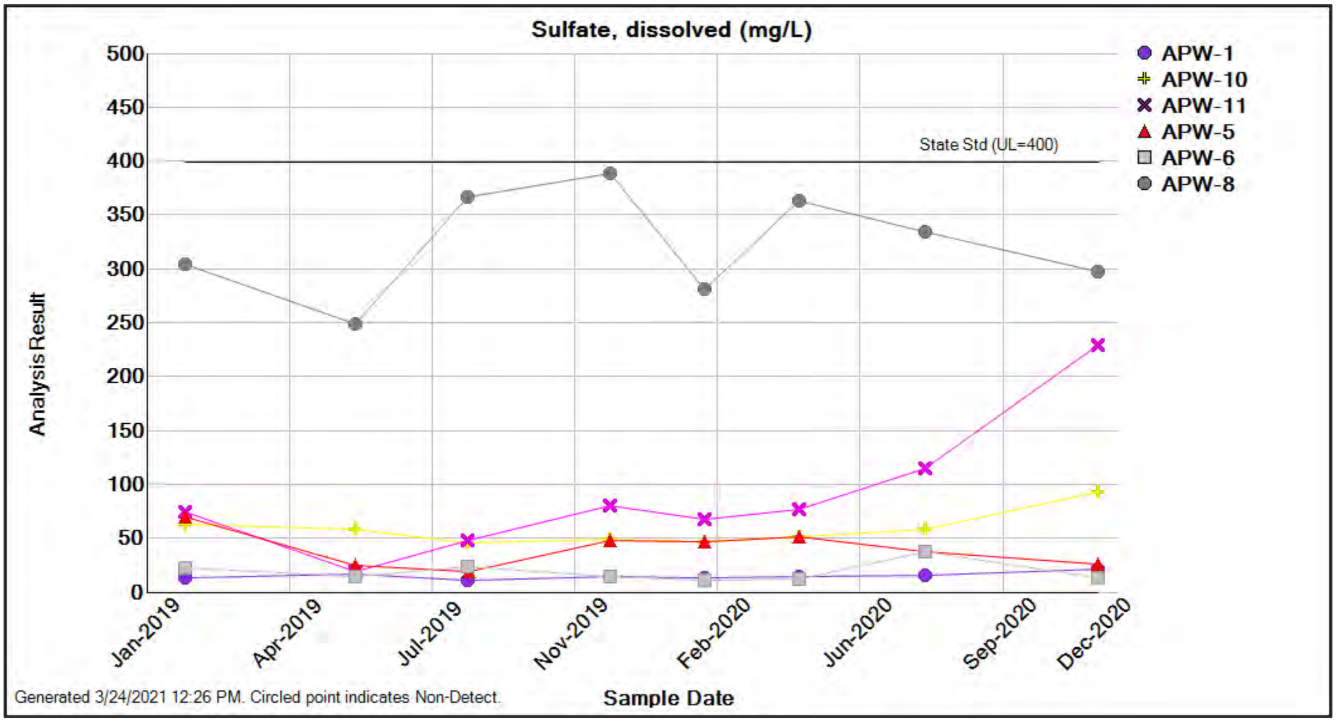


Figure 3-15. Dissolved sulfate concentrations during the reporting period (2019-2020) at all compliance wells.

APPENDIX A
MONITORING WELL BORING AND CONSTRUCTION LOGS

Surface Elevation: 446.06

Datum msl

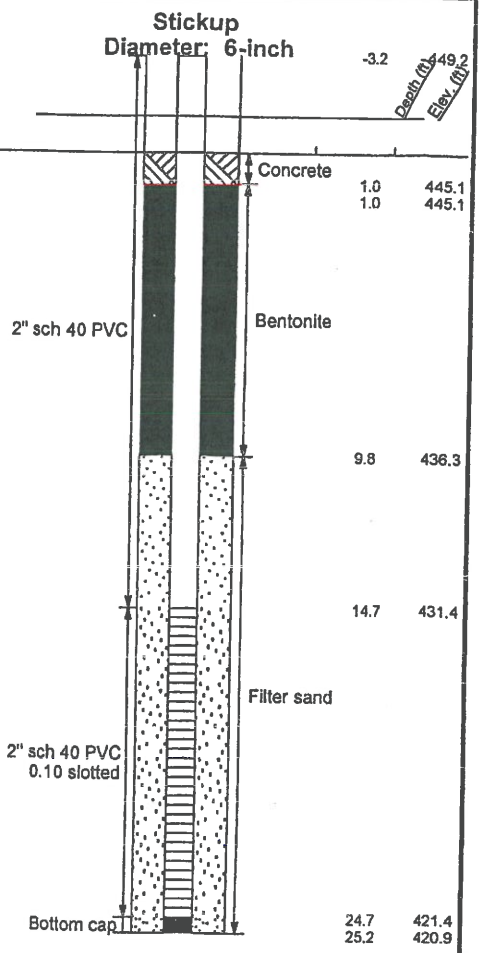
Completion Date: 10/26/10

Northing: 1147018.68

Easting: 2185605.2

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Loose, brown, fine SAND - SP			
			1-1-1	SS1
5			2-2-1	SS2
			2-4-4	SS3
10			3-3-3	SS4
	Loose, brown fine to coarse SAND, trace gravel - SP ▽			
15			1-1-2	SS5
20			1-1-2	SS6
	Loose, brown, fine SAND - SP			
			0-1-2	SS7
25	Boring terminated at 25 feet.			
30				
35				

WELL DIAGRAM



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

LOG OF BORING 2002 WL J017150.01 - MEREDOSIA.GPJ GTINC 0638301.GPJ 1/11/11

GROUNDWATER DATA

ENCOUNTERED AT 13 FEET ▽

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
MB DRILLER LAH LOGGER
CME 550X DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: KA	Checked by: DTK	App'vd. by: KBP
Date: 11/3/10	Date: 2-17-11	Date: 2/17/11

GEOTECHNOLOGY INC
FROM THE GROUND UP

Ameren Power Generating Facility
Meredosia, Illinois

LOG OF BORING: APW-1

Project No. J017150.01

Surface Elevation: 433.97

Datum msl

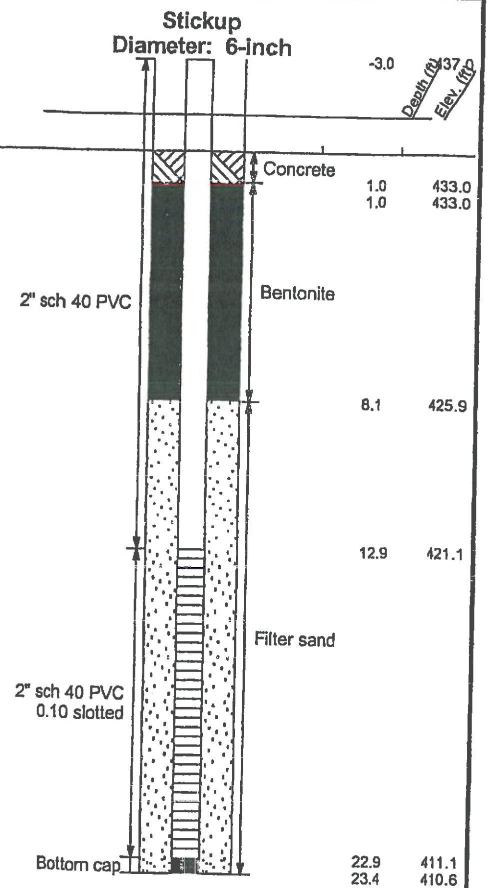
Completion Date: 10/25/10

Northing: 1148489.69

Easting: 2182485.19

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
0	Soft to medium stiff, brown and gray CLAY, trace sand - CH			
			2-2-2	SS1
5			2-2-2	SS2
			2-2-4	SS3
10			0-2-3	SS4
15			2-2-3	SS5
	Soft, gray, silty CLAY with shells, trace to some sand - CL			
20			0-1-1	SS6
	Very loose, brown, fine to medium SAND - SP			
			0-0-1	SS7
25	Boring terminated at 25 feet.			
30				
35				

WELL DIAGRAM



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

X FREE WATER NOT ENCOUNTERED DURING DRILLING

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM

WASHBORING FROM __ FEET

MB DRILLER LAH LOGGER

CME 550X DRILL RIG

HAMMER TYPE Auto

REMARKS:

Drawn by: KA	Checked by: DTK	App'vd. by: KGR
Date: 11/3/10	Date: 2-17-11	Date: 2/17/11

GEOTECHNOLOGY INC
FROM THE GROUND UP

Ameren Power Generating Facility
Meredosia, Illinois

LOG OF BORING: APW-2/MW-2

Project No. J017150.01

Surface Elevation: 433.35

Datum msl

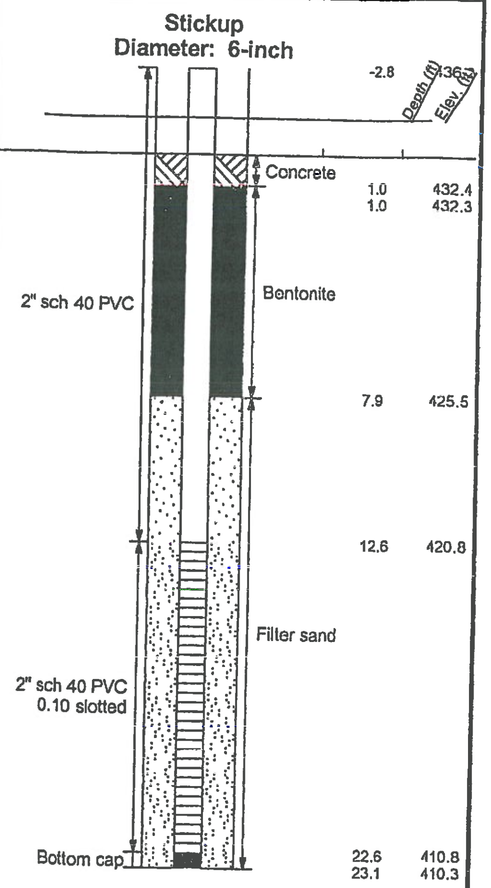
Completion Date: 10/25/10

Northing: 1148118.6

Easting: 2181973.76

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Medium stiff, brown and gray CLAY, trace sand and wood - CH			
			2-3-3	SS1
5			2-2-3	SS2
			0-2-3	SS3
10			0-1-2	SS4
	▽			
	Gray, silty CLAY, trace sand - CL			
15			95	ST5
	Soft, gray, silty SAND with shells and silty clay seams - SM			
20			0-1-1	SS6
	Wood		8-11-7	SS7
25	Boring terminated at 25 feet.			
30				
35				

WELL DIAGRAM



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 12 FEET ∇

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
MB DRILLER LAH LOGGER
CME 550X DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: KA	Checked by: DTK	App'vd. by: MSP
Date: 11/3/10	Date: 2-17-11	Date: 2/17/11

GEOTECHNOLOGY INC
FROM THE GROUND UP

Ameren Power Generating Facility
Meredosia, Illinois

LOG OF BORING: APW-3/B-10

Project No. J017150.01

Surface Elevation: 431.90

Datum msl

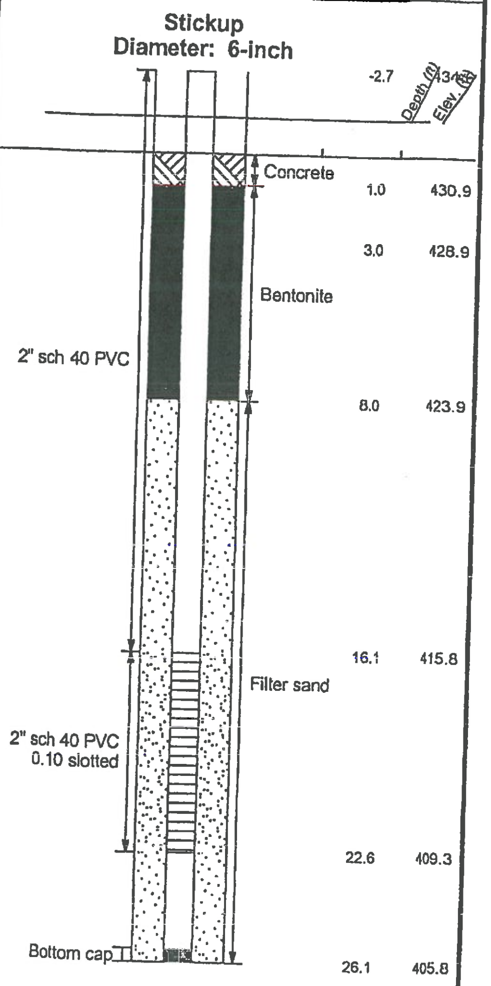
Completion Date: 10/26/10

Northing: 1146935.94

Easting: 2181602.97

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Medium stiff to soft, brown and gray CLAY, trace sand and wood - CH		0-0-4	SS1
5			2-4-4	SS2
			1-1-1	SS3
10			1-1-2	SS4
	Loose, brown, fine SAND - SP	∇		
15			3-6-7	SS5
20			0-2-2	SS6
25			0-0-0	SS7
	Boring terminated at 25 feet.			
30				
35				

WELL DIAGRAM



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

LOG OF BORING 2002 WL J017150.01 - MEREDOSIA.GPJ GTINC 0638301.GPJ 12/22/10

GROUNDWATER DATA

ENCOUNTERED AT 11.5 FEET ∇

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
MB DRILLER LAH LOGGER
CME 550X DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: KA	Checked by: DTK	App'vd. by: MBE
Date: 11/3/10	Date: 2-17-11	Date: 2/17/11

GEOTECHNOLOGY INC
FROM THE GROUND UP

Ameren Power Generating Facility
Meredosia, Illinois

LOG OF BORING: APW-4

Project No. J017150.01

Surface Elevation: 450.48

Datum msl

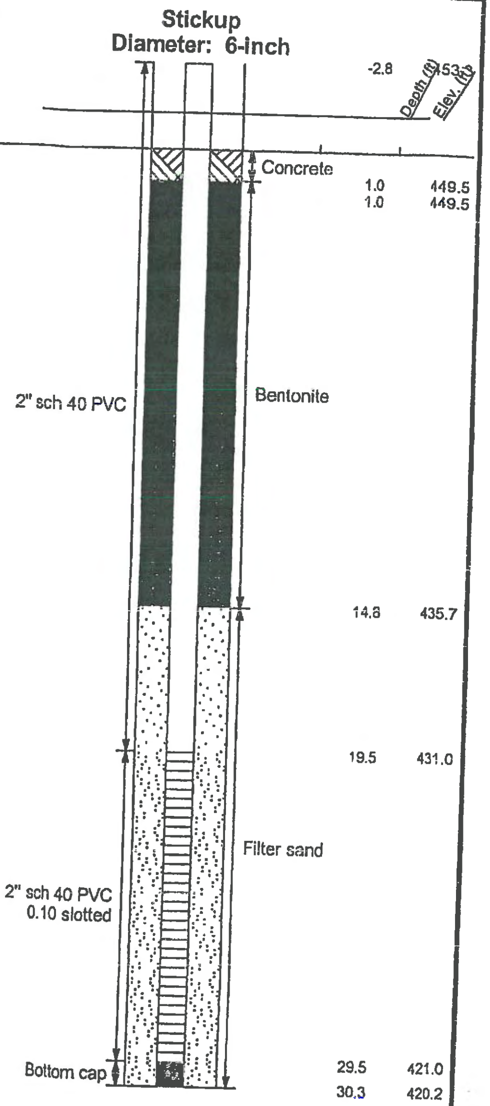
Completion Date: 10/26/10

Northing: 1146922.64

Easting: 2183711.11

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Loose, brown, fine SAND - SP	▨		
			3-3-3	SS1
5			2-2-2	SS2
			1-3-4	SS3
10			2-3-3	SS4
15			2-3-4	SS5
20	▽		2-1-2	SS6
	Loose, brown, fine to coarse SAND, trace to some gravel - SP	▨		
25			3-3-3	SS7
			1-1-1	SS8
30	Boring terminated at 30 feet.			
35				

WELL DIAGRAM



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

LOG OF BORING 2002 WL J017150.01 - MEREDOSIA.GPJ GTINC 0638301.GPJ 12/22/10

GROUNDWATER DATA

ENCOUNTERED AT 19.5 FEET ▽

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM

WASHBORING FROM __ FEET

MB DRILLER LAH LOGGER

CME 550X DRILL RIG

HAMMER TYPE Auto

REMARKS:

Drawn by: KA	Checked by: DJK	App'vd. by: ABP
Date: 11/3/10	Date: 2-17-11	Date: 2/17/11

GEOTECHNOLOGY INC
FROM THE GROUND UP

Ameren Power Generating Facility
Meredosia, Illinois

LOG OF BORING: APW-5

Project No. J017150.01

Surface Elevation: 448.55

Datum: ____________

Completion Date: 10/1/2015

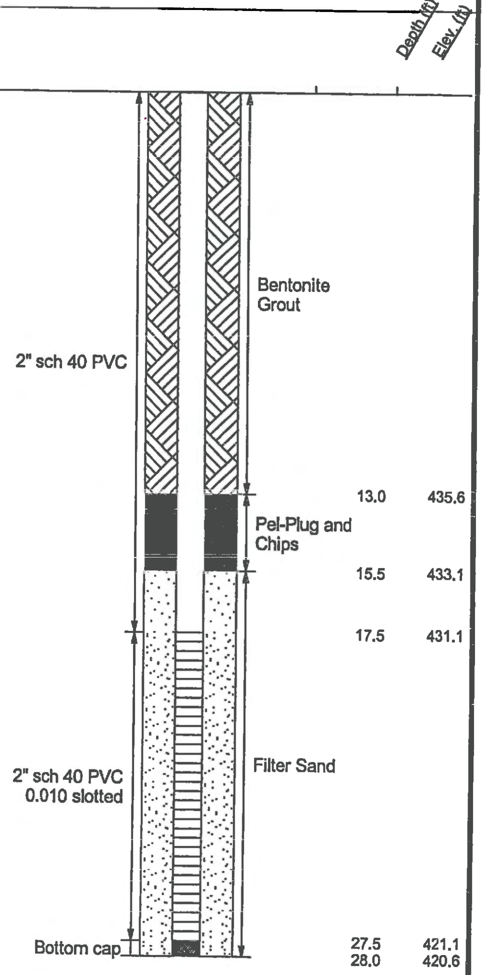
Latitude: 39.815833

Longitude: -90.570556

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Brown, fine grained SAND - SP		0-3-4	SS1
			3-4-6	SS2
5			2-3-1	SS3
			2-2-2	SS4
			3-3-5	SS5
10				
			4-5-6	SS6
			1-3-3	SS7
15			1-2-3	SS8
	Brown, medium grained SAND - SP ∇		4-6-7	SS9
			4-3-4	SS10
20				
			1-2-2	SS11
	Blind drilled - heaving sands			
25				
	Boring terminated at 28 feet.			
30				
35				

WELL DIAGRAM

Stickup = 3.3 ft
Diameter: 8 1/2 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 18 FEET ∇

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
SMP DRILLER SJK LOGGER
CME 550 DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: ne	App'vd. by: Ams
Date: 10/9/2015	Date: 8/5/16	Date: 8/5/16

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Plant
Ameren Missouri

LOG OF BORING: APW-6

Project No. J024917.01

Surface Elevation: 435.03

Datum: ______

Completion Date: 10/1/2015

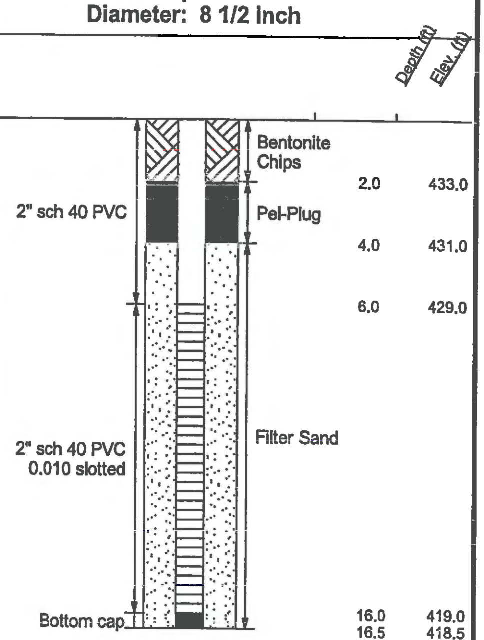
Latitude: 39.815833

Longitude: -90.573333

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Black, silty CLAY - CL	▨	2-4-3	SS1
	Brown, silty CLAY - CL	▨	2-3-4	SS2
5		▨	1-2-1	SS3
	Brown, fine grained SAND - SP ∇		1-1-1	SS4
			0-0-1	SS5
10	Blind drilled - heaving sands			
15				
	Boring terminated at 17 feet.			
20				
25				
30				
35				

WELL DIAGRAM

Stickup = 3.7 ft
Diameter: 8 1/2 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 6 FEET ∇

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
SMP DRILLER SJK LOGGER
CME 550 DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: the	App'vd. by: AHS
Date: 10/9/2015	Date: 8/5/16	Date: 8/5/16

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Plant
Ameren Missouri

LOG OF BORING: APW-7

Project No. J024917.01

Surface Elevation: 460.54

Datum: __________

Completion Date: 10/1/2015

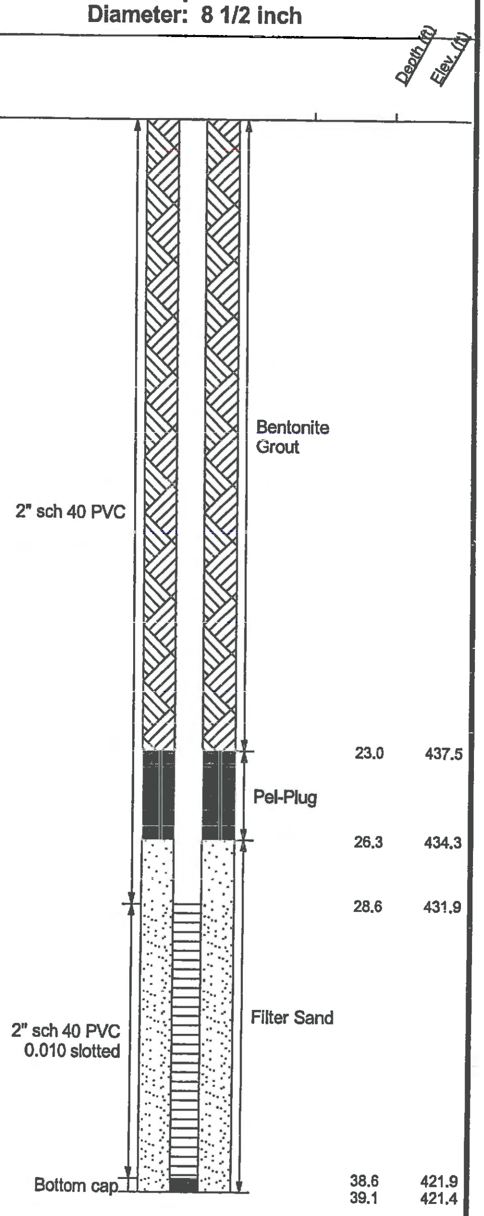
Latitude: 39.818611

Longitude: -90.5697222

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Brown, fine grained, poorly graded SAND - SP		3-9-9	SS1
			7-11-12	SS2
5			3-4-5	SS3
			2-3-3	SS4
			2-3-4	SS5
10				
			2-3-5	SS6
			3-5-9	SS7
15			5-7-7	SS8
			5-7-8	SS9
			5-7-8	SS10
20				
			9-15-16	SS11
			7-12-13	SS12
25			8-13-14	SS13
			9-10-11	SS14
	Brown, medium grained, poorly graded SAND - SP		6-6-9	SS15
30				
	▽		5-8-9	SS16
			4-5-6	SS17
	Blind drilled - heaving sands			
35				
40	Boring terminated at 40 feet.			

WELL DIAGRAM

Stickup = 3.4 ft
Diameter: 8 1/2 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 32 FEET ▽

DRILLING DATA

__ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM __ FEET
SMP DRILLER SJK LOGGER
CME 550 DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: mc	App'vd. by: AHS
Date: 10/9/2015	Date: 8/5/16	Date: 8/5/16

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Plant
Ameren Missouri

LOG OF BORING: APW-8

Project No. J024917.01

Surface Elevation: 444.97

Datum: ______

Completion Date: 10/1/2015

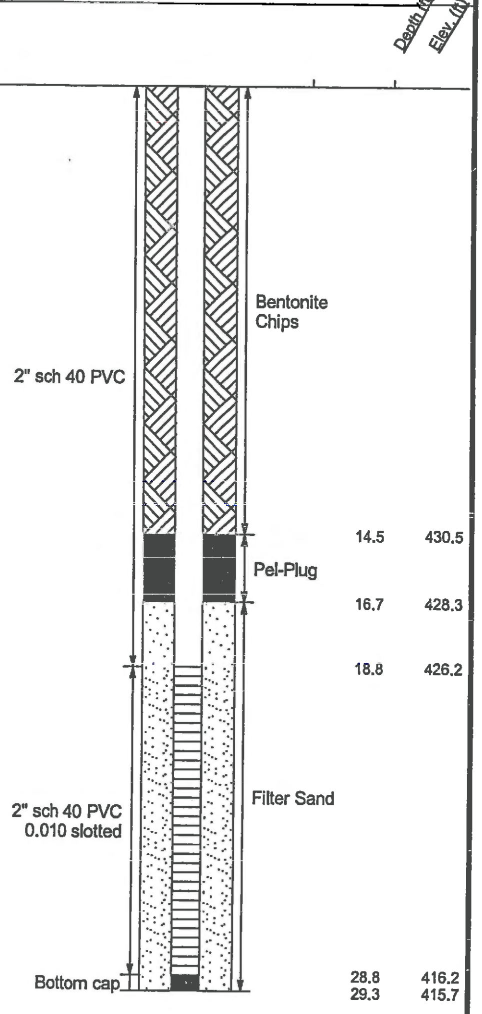
Latitude: 39.821388

Longitude: -90.569722

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	FILL: black, silty sand with coal CCR	▩	4-3-2	SS1
		▩	2-3-3	SS2
5		▩	3-8-8	SS3
		▩	2-4-1	SS4
		▩	2-3-10	SS5
10	Gray SILT - ML	▥	4-3-2	SS6
	Brown, fine grained SAND - SP	⁘	5-6-5	SS7
15		⁘	3-4-3	SS8
		⁘	3-3-4	SS9
	Brown, medium grained SAND - SP	⁘	3-3-4	SS10
20	∇	⁘	1-2-1	SS11
		⁘	2-2-4	SS12
25	Blind drilled - heaving sands			
30	Boring terminated at 30 feet.			
35				

WELL DIAGRAM

Stickup = 3.1 ft
Diameter: 8 1/2 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 20 FEET ∇

DRILLING DATA

___ AUGER 4 1/4" HOLLOW STEM
WASHBORING FROM ___ FEET
SMP DRILLER SJK LOGGER
CME 550 DRILL RIG
HAMMER TYPE Auto

REMARKS:
CCR = Coal Combustion Residuals

Drawn by: AGB	Checked by:	App'vd. by: AMS
Date: 10/9/2015	Date: 8/5/16	Date: 8/5/16

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Plant
Ameren Missouri

LOG OF BORING: APW-9

Project No. J024917.01

Surface Elevation: 454.1

Datum: NAVD88

Completion Date: 8/20/18

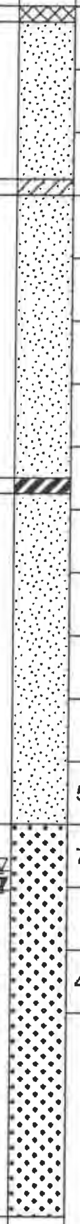
Northing: 1148344.9

Easting: 2184086

DESCRIPTION OF MATERIAL

DEPTH IN FEET	DESCRIPTION OF MATERIAL	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	FILL: coal residuals		
	Brown, fine SAND - SP	2-4-3-3	SS1
		4-5-4-4	SS2
5		3-2-2-1	SS3
	Brown, clayey SAND - SC Brown, fine SAND - SP	2-3-3-4	SS4
		2-3-3-3	SS5
10		2-2-3-3	SS6
		2-5-7-7	SS7
15	Gray, brown, FAT CLAY - CH Brown, fine to medium SAND - SP	3-5-5-5	SS8
		1-2-3-3	SS9
20		2-3-3-3	SS10
		2-2-3-2	SS11
		3-6-6-4	SS12
25		5-7-8-10	SS13
	Medium to coarse SAND - SW	7-10-7-6	SS14
		5-6-7-5	SS15
30		4-6-9-10	SS16
35			
	Boring terminated at 38.5 feet.		

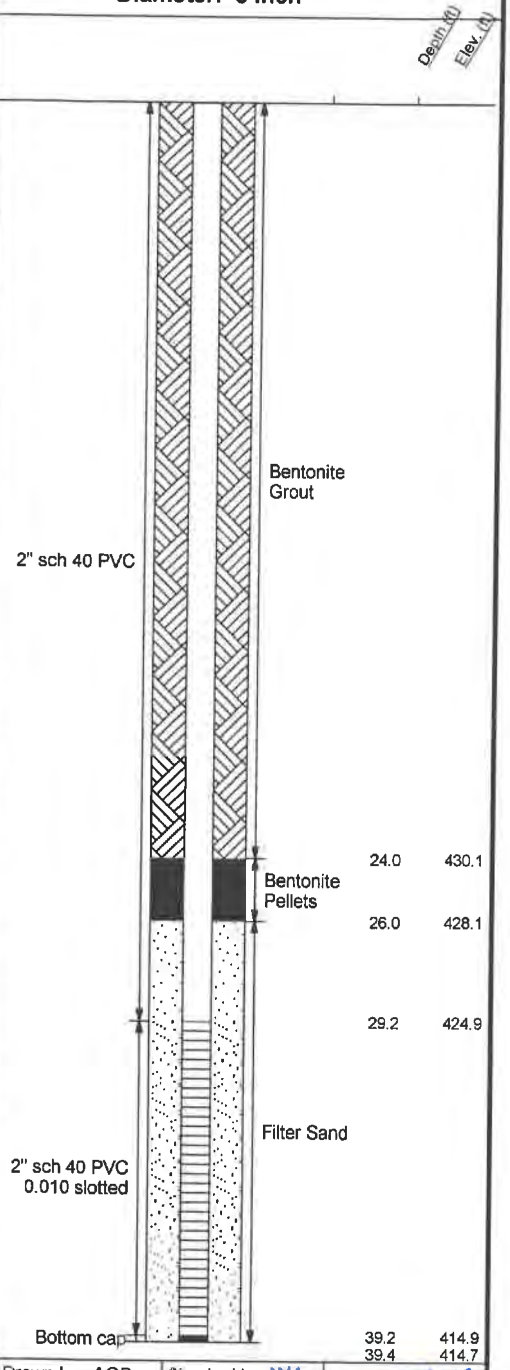
GRAPHIC LOG



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY

WELL DIAGRAM

Aboveground = 3.35 feet
Diameter: 8 inch



GROUNDWATER DATA

ENCOUNTERED AT 27.5 FEET ⊻

AT 28.11 FEET AFTER 360 HOURS ⊻

DRILLING DATA

4 1/4" HOLLOW STEM FROM 0 TO 38.5 FEET

WASHBORING FROM __ FEET

TPD DRILLER JYG LOGGER

CME 55LC DRILL RIG

HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: JYG	App'vd. by: AMS
Date: 12/28/18	Date: 1-7-2019	Date: 1/7/2019

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Station

LOG OF BORING: APW-10

Project No. J024917.05

Surface Elevation: **461.89**
Datum: **NAVD88**

Completion Date: **8/22/18**
Northing: **1147868**
Easting: **2184891**

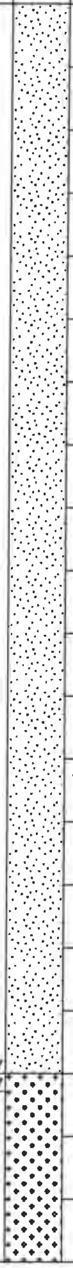
DESCRIPTION OF MATERIAL

DEPTH IN FEET: 5, 10, 15, 20, 25, 30, 35

Brown, fine SAND - SP

light gray, lean clay seam

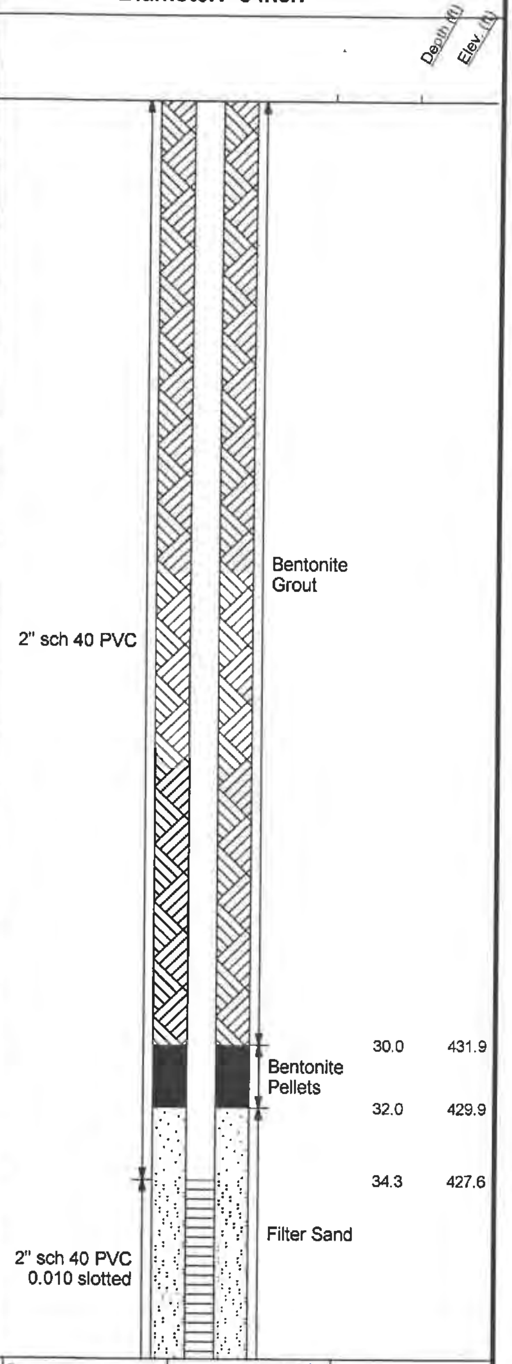
Brown, medium to coarse SAND, trace gravel - SW



DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
1-2-4-4	SS1
2-2-2-2	SS2
2-2-3-3	SS3
1-2-3-3	SS4
1-2-4-2	SS5
1-2-4-3	SS6
2-2-2-2	SS7
2-2-3-3	SS8
2-2-3-5	SS9
5-4-5-6	SS10
4-6-6-4	SS11
2-4-7-11	SS12
10-12-14 -12	SS13
7-9-9-9	SS14
2-4-2-5	SS15
2-4-8-6	SS16
3-6-6-6	SS17
3-5-6-8	SS18
2-4-6-8	SS19

WELL DIAGRAM

Aboveground = 3.50 feet
Diameter: 8 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

GROUNDWATER DATA

ENCOUNTERED AT 34 FEET ⊻
AT 34.58 FEET AFTER 360 HOURS ⊻

DRILLING DATA

4 1/4" HOLLOW STEM FROM 0 TO 44 FEET
WASHBORING FROM __ FEET
TPD DRILLER JYG LOGGER
CME 55LC DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: AGB
Date: 12/28/18
Checked by: JYG
Date: 1-7-2019
App'vd. by: AMS
Date: 1/7/2019

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Station

LOG OF BORING: APW-11

Project No. J024917.05

Surface Elevation: **461.89**

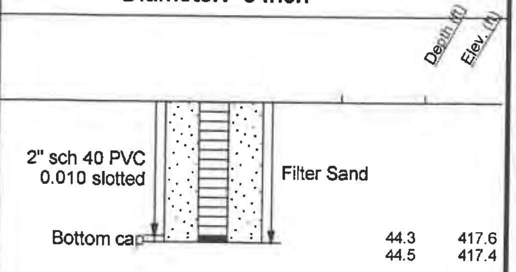
Datum: **NAVD88**

Completion Date: **8/22/18**
Northing: **1147868**
Easting: **2184891**

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Brown, medium to coarse SAND, trace gravel - SW *(continued)*			
45	Boring terminated at 44 feet.			
50				
55				
60				
65				
70				
75				

WELL DIAGRAM

Aboveground = 3.50 feet
Diameter: 8 inch



NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY

GROUNDWATER DATA

ENCOUNTERED AT 34 FEET ⊻
AT 34.58 FEET AFTER 360 HOURS ⊻

DRILLING DATA

4 1/4" HOLLOW STEM FROM 0 TO 44 FEET
WASHBORING FROM __ FEET
TPD DRILLER JYG LOGGER
CME 55LC DRILL RIG
HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: JYG	App'vd. by: AMS
Date: 12/28/18	Date: 1-7-2019	Date: 1/7/2019

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Station

CONTINUATION OF
LOG OF BORING: APW-11

Project No. J024917.05

Surface Elevation: 431.94

Datum: NAVD88

Completion Date: 8/21/18

Northing: 1146822.6

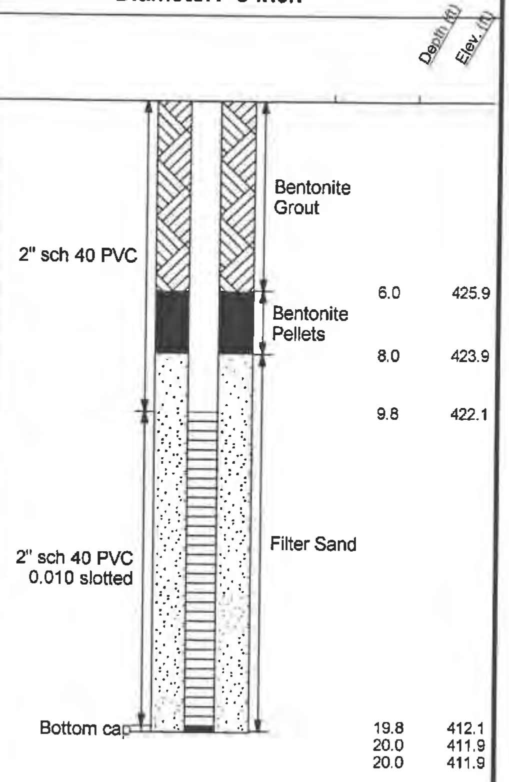
Easting: 2181602

DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/RQD	SAMPLES
	Dark brown. LEAN CLAY - CL		1-1-4-3	SS1
			2-2-2-2	SS2
5			3-3-4-4	SS3
	Brown, clayey SAND - SC	▼	3-2-1-2	SS4
	Brown, fine SAND - SP		1-1-3-2	SS5
10	Brown, medium SAND - SW		1-1-2-1	SS6
			1-1-2-2	SS7
15			1-0-1-1	SS8
20	Boring terminated at 20 feet.			
25				
30				
35				

NOTE: STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL. GRAPHIC LOG FOR ILLUSTRATION PURPOSES ONLY.

WELL DIAGRAM

Aboveground = 3.62 feet
Diameter: 8 inch



Depth (ft)	Elev. (ft)
6.0	425.9
8.0	423.9
9.8	422.1
19.8	412.1
20.0	411.9
20.0	411.9

GROUNDWATER DATA

ENCOUNTERED AT 8 FEET ▽

AT 7.71 FEET AFTER 360 HOURS ▼

DRILLING DATA

4 1/4" HOLLOW STEM FROM 0 TO 20 FEET

WASHBORING FROM __ FEET

TPD DRILLER JYG LOGGER

CME 55LC DRILL RIG

HAMMER TYPE Auto

REMARKS:

Drawn by: AGB	Checked by: JYG	App'vd. by: AMS
Date: 12/28/18	Date: 1-7-2019	Date: 1/7/2019

GEOTECHNOLOGY INC
FROM THE GROUND UP

Meredosia Power Station

LOG OF BORING: APW-12

Project No. J024917.05

Illinois Environmental Protection Agency **Well Completion Report**

Site Number:
County: Morgan

Site Name: Meredosia Power Station, Meredosia, Illinois
Well #: APW-6

State Plane Coordinate: X ____ Y ____ (or) Latitude: 39° 48' 57" Longitude: -90° 34' 14"
Borehole #: APW-6

Surveyed by: Gateway Land Services, Inc.
IL Registration #:

Drilling Contractor: Geotechnology, Inc.
Driller: Steven Parker, Geotechnology, Inc.

Consulting Firm: Geotechnology, Inc.
Geologist: Stephanie Kline-Tissi, Geotechnology, Inc.

Drilling Method: Hollow Stem Auger
Drilling Fluid (Type): N/A

Logged By: Stephanie Kline-Tissi, Geotechnology, Inc.
Date Started: Oct. 1, 2015
Date Finished: Oct. 1, 2015

Report Form Completed By:
Date: December 29, 2015

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremmie

Setting Time: 72 Hours

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry
(Choose One)

Installation Method: Tremmie

Setting Time: 72 Hours

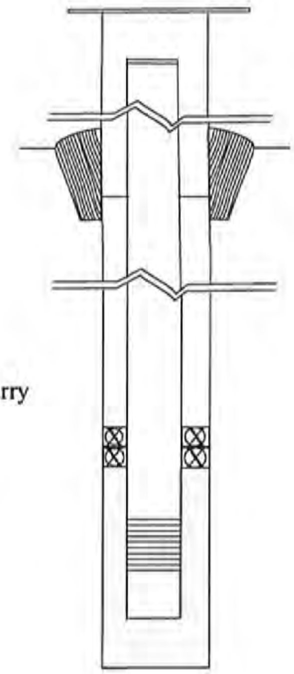
Type of Sand Pack: Silica

Grain Size: 0.010 (Sieve Size)

Installation Method: Tremmie

Type of Backfill Material: N/A
(if applicable)

Installation Method: N/A



Elevations (MSL)*	Depths (BGS)	(.01ft.)
452.3	3.7	Top of Protective Casing
451.9	3.3	Top of Riser Pipe
448.6	0.0	Ground Surface
448.6	0.0	Top of Annular Sealant
		Static Water Level (After Completion)
435.6	13.0	Top of Seal
433.1	15.5	Top of Sand Pack
431.1	17.5	Top of Screen
421.1	27.5	Bottom of Screen
420.6	28.0	Bottom of Well
420.6	28.0	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.5"
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	20.6
Bottom of Screen to End Cap (feet)	0.5
Screen Length (1st slot to last slot) (feet)	9.68
Total Length of Casing (feet)	20.6
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

State of Illinois
Department of Public Health

WATER WELL CONSTRUCTION REPORT

Complete within 30 days of well completion and send to the appropriate Health Department

Print Form

1. Type of Well

a. **Driven Well**: Casing Diameter (in.) ______ Depth (ft.) ______

b. **Bored Well**: Casing Diameter (in.) ______ Buried Slab? ______

c. **Drilled Well**: PVC Casing Formation Packer Set at Depth of (ft.) ______

d. **Drilled Well**: Steel Casing Mechanically Driven No

e. Hole Diameter (in.) 8.5 to (ft.) 28 ; (in.) ___ to (ft.) ___ ; (in.) ___ to (ft.) ___

f. Type of Grout

Type of Grout	# of bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)
Bentonite Grout	3		13	0	13
Pel-Plug	1.5		15.5	13	15.5

g. Well Finished within Unconsolidated Materials

h.

Kind of Gravel/Sand Pack	Grain Size/Supplier #	From (ft.)	To (ft.)
Silica	0.010 Unimum	28	15.5

2. Well Use: Monitoring Well Disinfected? No

3. Date Well Completed: Oct 1, 2015 Driller's Estimated Well Yield (gpm): ______

4. Date Permanent Pump Installed: ______ Set at Depth (ft.): ______

5. Pump Capacity (gpm): ______

6. Pitless Adapter Model and Manufacturer: ______ Attachment to Casing: ______

7. Well Cap Type & Manufacturer: ______

8. Pressure Tank Working Cycle (gals.): ______ Captive Air? ______ **9.** Pump System Disinfected: ______

10. Name of Pump Company ______

11. Pump Installer: ______ License # ______

12. ______ Date ______
Licensed Pump Installation Contractor Signature

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson Street
Springfield, IL 62761

IMPORTANCE NOTICE: This state agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act-0863. Disclosure of this information is Mandatory. This form has been approved by the Forms Management Center.

IL 482-0126
Revised 6/09

13. Property Owner: Medina Valley Cogen LLC Well # APW-6

14. Driller: Steven Parker License # ______

15. Name of Drilling Company : Geotechnology, Inc. **16.** Permit Number: ______

Date Issued: ______ **17.** Date Drilling Started Oct 1, 2015

18. Well Site Address: 800 SOUTH WASHINGTON STREET

19. Township Name: ______ Land I.D. # ______

20. Subdivision Name: ______ Lot # ______

21. Location: a. County Moran b. Site Elevation ______ ft. (above msl)

c. Township: ______ Range: ______ Section: ______

d. ______ Quarter of the ______ Quarter of the ______ Quarter

e. GPS: Lat: Degrees 39 Minutes 48 Seconds 57 N

Lon: Degrees -90 Minutes 34 Seconds 14 W

Survey use only

22. Casing and Liner Information

Diameter (in.)	Material, Joint Type	From (ft.)	To (ft.)
2	PVC, threaded	28	0

23. Is the well screened? Yes If yes

Diameter (in.)	Length (ft.)	Slot Size (in.)	From (ft.)	To (ft.)
2	10	0.01	28	18

24. Water from ______ at a depth of (ft.) ______ To (ft.) ______

a. Static water level (ft.) below top of casing ______ which is (in.) above ground ______

b. pumping level is (ft.) ______ pumping (gpm) ______ for (hours) ______

25.

Earth Materials Passed Through	From (ft.)	To (ft.)
Brown, fine-grained SAND - SP	0	17
Brown, medium-grained SAND - SP	17	22
Blind drilled - heaving sands	22	28

(Attach 2nd page, if necessary) (If DRY HOLE, fill out log & indicate how hole was sealed)

______ License # ______
Licensed Water Well Contractor Signature

Illinois Environmental Protection Agency **Well Completion Report**

Site Number: ______ County: Morgan

Site Name: Meredosia Power Station, Meredosia, Illinois

Well #: APW-7

State Plane Coordinate: X ____ Y ____ (or) Latitude: 39° 48' 57" Longitude: -90° 34' 24"

Borehole #: APW-7

Surveyed by: Gateway Land Services, Inc.

IL Registration #: ______

Drilling Contractor: Geotechnology, Inc.

Driller: Steven Parker, Geotechnology, Inc.

Consulting Firm: Geotechnology, Inc.

Geologist: Stephanie Kline-Tissi, Geotechnology, Inc.

Drilling Method: Hollow Stem Auger

Drilling Fluid (Type): N/A

Logged By: Stephanie Kline-Tissi, Geotechnology, Inc.

Date Started: Oct. 1, 2015 Date Finished: Oct. 1, 2015

Report Form Completed By: Anna Saindon, Geotechnology, Inc.

Date: December 29, 2015

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Chips

Installation Method: Gravity

Setting Time: 72 Hours

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry (Choose One)

Installation Method: Tremmie

Setting Time: 72 Hours

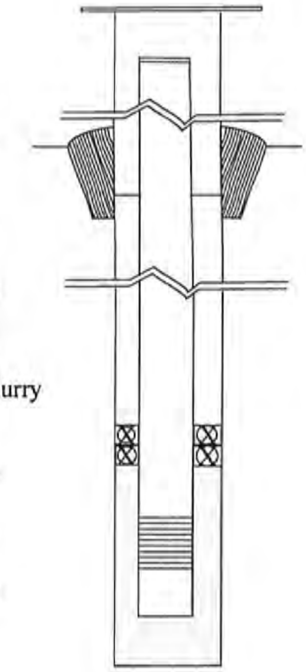
Type of Sand Pack: Silica

Grain Size: 0.010 (Sieve Size)

Installation Method: Tremmie

Type of Backfill Material: N/A (if applicable)

Installation Method: N/A



Elevations (MSL)*	Depths (BGS)	(.01ft.)
439.1	4.1	Top of Protective Casing
438.7	3.7	Top of Riser Pipe
435	0.0	Ground Surface
435	0.0	Top of Annular Sealant
		Static Water Level (After Completion)
433	2.0	Top of Seal
431	4.0	Top of Sand Pack
429	6.0	Top of Screen
419	16.0	Bottom of Screen
418.5	16.5	Bottom of Well
418.5	16.5	Bottom of Borehole

* Referenced to a National Geodetic Datum

CASING MEASURMENTS

Diameter of Borehole (inches)	8.5"
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	9.7
Bottom of Screen to End Cap (feet)	0.5
Screen Length (1st slot to last slot) (feet)	9.68
Total Length of Casing (feet)	9.7
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

State of Illinois
Department of Public Health

WATER WELL CONSTRUCTION REPORT

Complete within 30 days of well completion and send to the appropriate Health Department

Print Form

1. Type of Well

a. **Driven Well**: Casing Diameter (in.) ______ Depth (ft.) ______

b. **Bored Well**: Casing Diameter (in.) ______ Buried Slab? ______

c. **Drilled Well**: PVC Casing Formation Packer Set at Depth of (ft.) ______

d. **Drilled Well**: Steel Casing Mechanically Driven No

e. Hole Diameter (in.) 8.5 to (ft.) 16.5 ; (in.) ___ to (ft.) ___ ; (in.) ___ to (ft.) ___

f. Type of Grout

Type of Grout	# of bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)
Bentonite Grout	3		2	0	
Pel-Plug	1		4	2	4

g. Well Finished within Unconsolidated Materials

h.

Kind of Gravel/Sand Pack	Grain Size/Supplier #	From (ft.)	To (ft.)
Silica	0.010 Unimum	16.5	14

2. Well Use: Monitoring Well Disinfected? No

3. Date Well Completed: Oct 1, 2015 Driller's Estimated Well Yield (gpm): ______

4. Date Permanent Pump Installed: ______ Set at Depth (ft.): ______

5. Pump Capacity (gpm): ______

6. Pitless Adapter Model and Manufacturer: ______ Attachment to Casing: ______

7. Well Cap Type & Manufacturer: ______

8. Pressure Tank Working Cycle (gals.): ______ Captive Air? ______ **9.** Pump System Disinfected: ______

10. Name of Pump Company ______

11. Pump Installer: ______ License # ______

12. ______ Date ______
Licensed Pump Installation Contractor Signature

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson Street
Springfield, IL 62761

IMPORTANCE NOTICE: This state agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act-0863. Disclosure of this information is Mandatory. This form has been approved by the Forms Management Center.

IL 482-0126
Revised 6/09

13. Property Owner: Medina Valley Cogen LLC Well # APW-7

14. Driller: Steven Parker License # ______

15. Name of Drilling Company : Geotechnology, Inc. **16.** Permit Number: ______

Date Issued: ______ **17.** Date Drilling Started Oct 1, 2015

18. Well Site Address: 800 SOUTH WASHINGTON STREET

19. Township Name: ______ Land I.D. # ______

20. Subdivision Name: ______ Lot # ______

21. Location: a. County Moran b. Site Elevation ______ ft. (above msl)

c. Township: ______ Range: ______ Section: ______

d. ______ Quarter of the ______ Quarter of the ______ Quarter

e. GPS: Lat: Degrees 39 Minutes 48 Seconds 57 N

Lon: Degrees -90 Minutes 34 Seconds 14 W

Survey use only

22. Casing and Liner Information

Diameter (in.)	Material, Joint Type	From (ft.)	To (ft.)
2	PVC, threaded	16.5	0

23. Is the well screened? Yes If yes

Diameter (in.)	Length (ft.)	Slot Size (in.)	From (ft.)	To (ft.)
2	10	0.01	16.5	6.5

24. Water from ______ at a depth of (ft.) ______ To (ft.) ______

a. Static water level (ft.) below top of casing ______ which is (in.) above ground ______

b. pumping level is (ft.) ______ pumping (gpm) ______ for (hours) ______

25.

Earth Materials Passed Through	From (ft.)	To (ft.)
Black, silty CLAY - CL	0	2
Brown, silty CLAY - CL	2	6
Brown, fine-grained SAND - SP	6	10
Blind drilled - heaving sands	10	16.5

(Attach 2nd page, if necessary) (If DRY HOLE, fill out log & indicate how hole was sealed)

______ License # ______
Licensed Water Well Contractor Signature

Illinois Environmental Protection Agency **Well Completion Report**

Site Number: ______ County: Morgan

Site Name: Meredosia Power Station, Meredosia, Illinois

Well #: APW-8

State Plane Coordinate: X ____ Y ____ (or) Latitude: 39° 49' 07" Longitude: -90° 34' 11"

Borehole #: APW-8

Surveyed by: Gateway Land Services, Inc.

IL Registration #: ______

Drilling Contractor: Geotechnology, Inc.

Driller: Steven Parker, Geotechnology, Inc.

Consulting Firm: Geotechnology, Inc.

Geologist: Stephanie Kline-Tissi, Geotechnology, Inc.

Drilling Method: Hollow Stem Auger

Drilling Fluid (Type): N/A

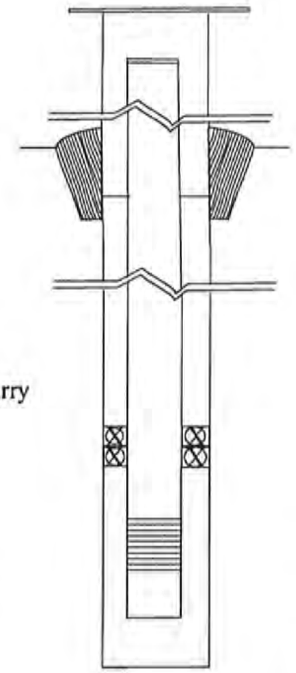
Logged By: Stephanie Kline-Tissi, Geotechnology, Inc.

Date Started: Oct. 1, 2015 Date Finished: Oct. 1, 2015

Report Form Completed By: Anna Saindon, Geotechnology, Inc.

Date: December 29, 2015

ANNULAR SPACE DETAILS



Elevations (MSL)*	Depths (BGS)	(.01ft.)
464.4	3.9	Top of Protective Casing
463.9	3.4	Top of Riser Pipe
460.5	0.0	Ground Surface
460.5	0.0	Top of Annular Sealant
		Static Water Level (After Completion)
437.5	23	Top of Seal
434.3	26.3	Top of Sand Pack
431.9	28.6	Top of Screen
421.9	38.6	Bottom of Screen
421.4	39.1	Bottom of Well
421.4	39.1	Bottom of Borehole

* Referenced to a National Geodetic Datum

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremmie

Setting Time: 72 Hours

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry
(Choose One)

Installation Method: Tremmie

Setting Time: 72 Hours

Type of Sand Pack: Silica

Grain Size: 0.010 (Sieve Size)

Installation Method: Tremmie

Type of Backfill Material: N/A
(if applicable)

Installation Method: N/A

CASING MEASURMENTS

Diameter of Borehole (inches)	8.5"
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	32.7
Bottom of Screen to End Cap (feet)	0.5
Screen Length (1st slot to last slot) (feet)	9.68
Total Length of Casing (feet)	32.7
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

State of Illinois
Department of Public Health

WATER WELL CONSTRUCTION REPORT

Complete within 30 days of well completion and send to the appropriate Health Department

Print Form

1. Type of Well

a. **Driven Well**: Casing Diameter (in.) ______ Depth (ft.) ______

b. **Bored Well**: Casing Diameter (in.) ______ Buried Slab? ______

c. **Drilled Well**: PVC Casing Formation Packer Set at Depth of (ft.) ______

d. **Drilled Well**: Steel Casing Mechanically Driven No

e. Hole Diameter (in.) 8.5 to (ft.) 39.1 ; (in.) ___ to (ft.) ___ ; (in.) ___ to (ft.) ___

f.

Type of Grout	# of bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)
Bentonite Grout	3		23	0	23
Pel-Plug	1		26.3	23	26.3

g. Well Finished within Unconsolidated Materials

h.

Kind of Gravel/Sand Pack	Grain Size/Supplier #	From (ft.)	To (ft.)
Silica	0.010 Unimum	39.1	23

2. Well Use: Monitoring Well Disinfected? No

3. Date Well Completed: Oct 1, 2015 Driller's Estimated Well Yield (gpm): ______

4. Date Permanent Pump Installed: ______ Set at Depth (ft.): ______

5. Pump Capacity (gpm): ______

6. Pitless Adapter Model and Manufacturer: ______ Attachment to Casing: ______

7. Well Cap Type & Manufacturer: ______

8. Pressure Tank Working Cycle (gals.): ______ Captive Air? ______ 9. Pump System Disinfected: ______

10. Name of Pump Company ______

11. Pump Installer: ______ License # ______

12. ______ Date ______
Licensed Pump Installation Contractor Signature

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson Street
Springfield, IL 62761

IMPORTANCE NOTICE: This state agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act-0863. Disclosure of this information is Mandatory. This form has been approved by the Forms Management Center.

IL 482-0126
Revised 6/09

13. Property Owner: Medina Valley Cogen LLC Well # APW-8

14. Driller: Steven Parker License # ______

15. Name of Drilling Company : Geotechnology, Inc. 16. Permit Number: ______

Date Issued: ______ 17. Date Drilling Started Oct 1, 2015

18. Well Site Address: 800 SOUTH WASHINGTON STREET

19. Township Name: ______ Land I.D. # ______

20. Subdivision Name: ______ Lot # ______

21. Location: a. County Moran b. Site Elevation ______ ft. (above msl)

c. Township: ______ Range: ______ Section: ______

d. ______ Quarter of the ______ Quarter of the ______ Quarter

e. GPS: Lat: Degrees 39 Minutes 48 Seconds 57 N

Lon: Degrees -90 Minutes 34 Seconds 14 W

Survey use only

22. Casing and Liner Information

Diameter (in.)	Material, Joint Type	From (ft.)	To (ft.)
2	PVC, threaded	39.1	0

23. Is the well screened? Yes

If yes	Diameter (in.)	Length (ft.)	Slot Size (in.)	From (ft.)	To (ft.)
	2	10	0.01	39.1	29.1

24. Water from ______ at a depth of (ft.) ______ To (ft.) ______

a. Static water level (ft.) below top of casing ______ which is (in.) above ground ______

b. pumping level is (ft.) ______ pumping (gpm) ______ for (hours) ______

25.

Earth Materials Passed Through	From (ft.)	To (ft.)
Brown, fine-grained, poorly graded SAND -SP	0	23
Brown, medium-grained, poorly graded - SP	23	34
Blind drilled - heaving sands	34	39.1

(Attach 2nd page, if necessary) (If DRY HOLE, fill out log & indicate how hole was sealed)

______ License # ______
Licensed Water Well Contractor Signature

Illinois Environmental Protection Agency **Well Completion Report**

Site Number: ______ County: Morgan

Site Name: Meredosia Power Station, Meredosia, Illinois

Well #: APW-9

State Plane Coordinate: X ____ Y ____ (or) Latitude: 39° 49' 17" Longitude: -90° 34' 11"

Borehole #: APW-9

Surveyed by: Gateway Land Services, Inc.

IL Registration #: ______

Drilling Contractor: Geotechnology, Inc.

Driller: Steven Parker, Geotechnology, Inc.

Consulting Firm: Geotechnology, Inc.

Geologist: Stephanie Kline-Tissi, Geotechnology, Inc.

Drilling Method: Hollow Stem Auger

Drilling Fluid (Type): N/A

Logged By: Stephanie Kline-Tissi, Geotechnology, Inc.

Date Started: Oct. 1, 2015 Date Finished: Oct. 1, 2015

Report Form Completed By: Anna Saindon, Geotechnology, Inc.

Date: December 29, 2015

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Chips

Installation Method: Trermmie

Setting Time: 72 Hours

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry
(Choose One)

Installation Method: Tremmie

Setting Time: 72 Hours

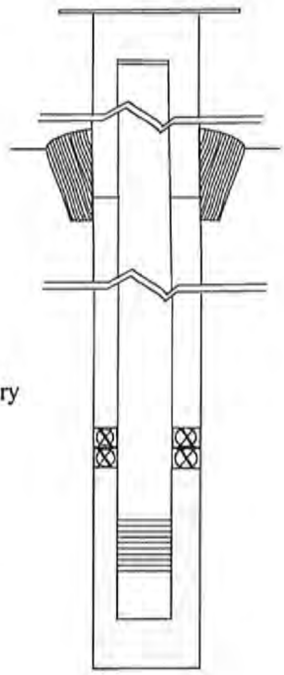
Type of Sand Pack: Silica

Grain Size: 0.010 (Sieve Size)

Installation Method: Tremmie

Type of Backfill Material: N/A
(if applicable)

Installation Method: N/A



Elevations (MSL)*	Depths (BGS)	(.01ft.)
448.6	3.6	Top of Protective Casing
448.1	3.1	Top of Riser Pipe
445.0	0.0	Ground Surface
445.0	0.0	Top of Annular Sealant
		Static Water Level (After Completion)
430.5	14.5	Top of Seal
428.3	16.7	Top of Sand Pack
426.2	18.8	Top of Screen
416.2	28.8	Bottom of Screen
415.7	29.3	Bottom of Well
415.7	29.3	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.5"
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	22.1
Bottom of Screen to End Cap (feet)	0.5
Screen Length (1st slot to last slot) (feet)	9.68
Total Length of Casing (feet)	22.1
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

State of Illinois
Department of Public Health

WATER WELL CONSTRUCTION REPORT

Complete within 30 days of well completion and send to the appropriate Health Department

Print Form

1. Type of Well

a. **Driven Well**: Casing Diameter (in.) ______ Depth (ft.) ______

b. **Bored Well**: Casing Diameter (in.) ______ Buried Slab? ______

c. **Drilled Well**: PVC Casing Formation Packer Set at Depth of (ft.) ______

d. **Drilled Well**: Steel Casing Mechanically Driven No

e. Hole Diameter (in.) 8.5 to (ft.) 39.1 ; (in.) ___ to (ft.) ___ ; (in.) ___ to (ft.) ___

f.

Type of Grout	# of bags	Grout Weight	From (ft.)	To (ft.)	Tremie Depth (ft.)
Bentonite Grout	3		14.5	0	14.5
Pel-Plug	1		16.7	14.5	16.7

g. Well Finished within Unconsolidated Materials

h.

Kind of Gravel/Sand Pack	Grain Size/Supplier #	From (ft.)	To (ft.)
Silica	0.010 Unimum	29.3	16.7

2. Well Use: Monitoring Well Disinfected? No

3. Date Well Completed: Oct 1, 2015 Driller's Estimated Well Yield (gpm): ______

4. Date Permanent Pump Installed: ______ Set at Depth (ft.): ______

5. Pump Capacity (gpm): ______

6. Pitless Adapter Model and Manufacturer: ______ Attachment to Casing: ______

7. Well Cap Type & Manufacturer: ______

8. Pressure Tank Working Cycle (gals.): ______ Captive Air? ______ **9.** Pump System Disinfected: ______

10. Name of Pump Company ______

11. Pump Installer: ______ License # ______

12. ______ Date ______
Licensed Pump Installation Contractor Signature

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson Street
Springfield, IL 62761

IL 482-0126
Revised 6/09

IMPORTANCE NOTICE: This state agency is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under Public Act-0863. Disclosure of this information is Mandatory. This form has been approved by the Forms Management Center.

13. Property Owner: Medina Valley Cogen LLC Well # APW-9

14. Driller: Steven Parker License # ______

15. Name of Drilling Company : Geotechnology, Inc. **16.** Permit Number: ______

Date Issued: ______ **17.** Date Drilling Started Oct 1, 2015

18. Well Site Address: 800 SOUTH WASHINGTON STREET

19. Township Name: ______ Land I.D. # ______

20. Subdivision Name: ______ Lot # ______

21. Location: a. County Moran b. Site Elevation ______ ft. (above msl)

c. Township: ______ Range: ______ Section: ______

d. ______ Quarter of the ______ Quarter of the ______ Quarter

e. GPS: Lat: Degrees 39 Minutes 48 Seconds 57 N

Lon: Degrees -90 Minutes 34 Seconds 14 W

Survey use only

22. Casing and Liner Information

Diameter (in.)	Material, Joint Type	From (ft.)	To (ft.)
2	PVC, threaded	29.3	0

23. Is the well screened? Yes If yes

Diameter (in.)	Length (ft.)	Slot Size (in.)	From (ft.)	To (ft.)
2	10	0.01	29.3	19.3

24. Water from ______ at a depth of (ft.) ______ To (ft.) ______

a. Static water level (ft.) below top of casing ______ which is (in.) above ground ______

b. pumping level is (ft.) ______ pumping (gpm) ______ for (hours) ______

25.

Earth Materials Passed Through	From (ft.)	To (ft.)
FILL: black, silty sand with coal CCR	0	10
Gray SILT - ML	10	12.7
Brown, fine-grained SAND - SP	12.7	18
Brown, medium-grained SAND - SP	18	24
Blind drilled - heaving sands	24	29.3

(Attach 2nd page, if necessary) (If DRY HOLE, fill out log & indicate how hole was sealed)

______ License # ______
Licensed Water Well Contractor Signature

Illinois Environmental Protection Agency **Well Completion Report**

Site Number: ______

County: Morgan

Site Name: Meredosia Power Station

Well #: APW-10

State Plane Coordinate: X 2184086.395 Y 1148344.943 (or) Latitude: ___ ° ___ ' ___ " Longitude: ___ ° ___ ' ___ "

Borehole #: ______

Surveyed by: David Mason & Associates

IL Registration #: ______

Drilling Contractor: Geotechnology, Inc.

Driller: Thomas Dwyer

Consulting Firm: Geotechnology, Inc.

Geologist: Anna Saindon

Drilling Method: Hollow Stem Auger

Drilling Fluid (Type): None

Logged By: Jessie Goodwin

Date Started: 8/20/2018

Date Finished: 8/20/2018

Report Form Completed By: Jessie Goodwin

Date: 12/26/2018

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Grout Slurry

Installation Method: Tremie

Setting Time: N/A

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry (Choose One)

Installation Method: Gravity

Setting Time: N/A

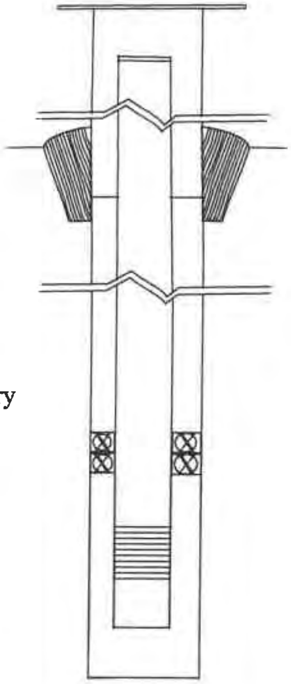
Type of Sand Pack: Silica

Grain Size: 10-20 Mesh (Sieve Size)

Installation Method: Gravity

Type of Backfill Material: N/A (if applicable)

Installation Method: ______



Elevations (MSL)*	Depths (BGS)	(.01ft.)
457.93	-3.83	Top of Protective Casing
457.45	-3.35	Top of Riser Pipe
454.10	0.00	Ground Surface
453.60	0.50	Top of Annular Sealant
425.99	28.11	Static Water Level (After Completion)
430.10	24.00	Top of Seal
428.10	26.00	Top of Sand Pack
424.90	29.20	Top of Screen
414.90	39.20	Bottom of Screen
414.70	39.40	Bottom of Well
414.70	39.40	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or [✓ Other]
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8
ID of Riser Pipe (inches)	2.0
Protective Casing Length (feet)	5.0
Riser Pipe Length (feet)	32.55
Bottom of Screen to End Cap (feet)	0.40
Screen Length (1st slot to last slot) (feet)	10.0
Total Length of Casing (feet)	42.75
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency

Well Completion Report

Site Number: ______
County: Morgan

Site Name: Meredosia Power Station
Well #: APW-11

State Plane Coordinate: X 2184890.914 Y 1147868.023 (or) Latitude: ___ ° ___ ' ___ " Longitude: ___ ° ___ ' ___ "
Borehole #: ______

Surveyed by: David Mason & Associates
IL Registration #: ______

Drilling Contractor: Geotechnology, Inc.
Driller: Thomas Dwyer

Consulting Firm: Geotechnology, Inc.
Geologist: Anna Saindon

Drilling Method: Hollow Stem Auger
Drilling Fluid (Type): None

Logged By: Jessie Goodwin
Date Started: 8/22/2018
Date Finished: 8/22/2018

Report Form Completed By: Jessie Goodwin
Date: 12/26/2018

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Grout Slurry

Installation Method: Tremie

Setting Time: N/A

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry
(Choose One)

Installation Method: Gravity

Setting Time: N/A

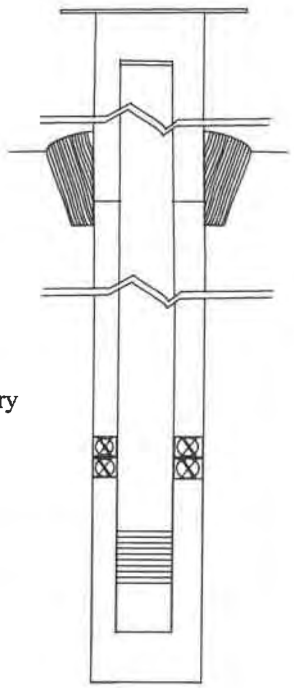
Type of Sand Pack: Silica

Grain Size: 10-20 Mesh (Sieve Size)

Installation Method: Gravity

Type of Backfill Material: N/A
(if applicable)

Installation Method: ______



Elevations (MSL)*	Depths (BGS)	(.01ft.)
465.94	-4.05	Top of Protective Casing
465.40	-3.51	Top of Riser Pipe
461.89	0.00	Ground Surface
461.39	0.50	Top of Annular Sealant
427.31	34.58	Static Water Level (After Completion)
431.89	30.00	Top of Seal
429.89	32.00	Top of Sand Pack
427.64	34.25	Top of Screen
417.64	44.25	Bottom of Screen
417.44	44.45	Bottom of Well
417.44	44.45	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or [✓ Other]
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8
ID of Riser Pipe (inches)	2.0
Protective Casing Length (feet)	5.0
Riser Pipe Length (feet)	37.76
Bottom of Screen to End Cap (feet)	0.40
Screen Length (1st slot to last slot) (feet)	10.0
Total Length of Casing (feet)	47.96
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency

Well Completion Report

Site Number:

County: Morgan

Site Name: Meredosia Power Station

Well #: APW-12

State Plane Coordinate: X 2181601.52 Y 1146822.618 (or) Latitude: ___ ° ___ ' ___ " Longitude: ___ ° ___ ' ___ "

Borehole #:

Surveyed by: David Mason & Associates

IL Registration #:

Drilling Contractor: Geotechnology, Inc.

Driller: Thomas Dwyer

Consulting Firm: Geotechnology, Inc.

Geologist: Anna Saindon

Drilling Method: Hollow Stem Auger

Drilling Fluid (Type): None

Logged By: Jessie Goodwin

Date Started: 8/21/2018

Date Finished: 8/21/2018

Report Form Completed By: Jessie Goodwin

Date: 12/26/2018

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Grout Slurry

Installation Method: Tremie

Setting Time: N/A

Type of Bentonite Seal - - Granular, [✓ Pellet], Slurry
(Choose One)

Installation Method: Gravity

Setting Time: N/A

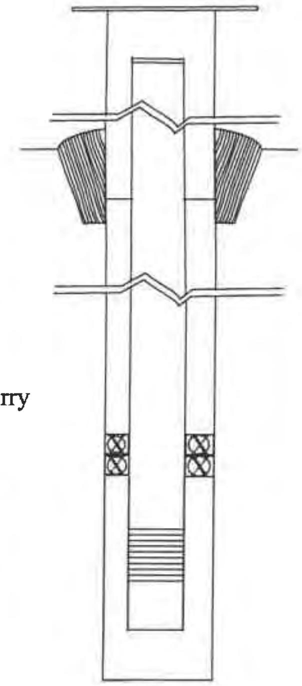
Type of Sand Pack: Silica

Grain Size: 10-20 Mesh (Sieve Size)

Installation Method: Gravity

Type of Backfill Material: N/A
(if applicable)

Installation Method:



Elevations (MSL)*	Depths (BGS)	(.01ft.)
436.02	-4.08	Top of Protective Casing
435.52	-3.58	Top of Riser Pipe
431.94	0.00	Ground Surface
431.44	0.50	Top of Annular Sealant
424.23	7.71	Static Water Level (After Completion)
425.94	6.00	Top of Seal
493.94	8.00	Top of Sand Pack
422.10	9.84	Top of Screen
412.10	19.84	Bottom of Screen
411.90	20.04	Bottom of Well
411.90	20.04	Bottom of Borehole

* Referenced to a National Geodetic Datum

CASING MEASURMENTS

Diameter of Borehole (inches)	8
ID of Riser Pipe (inches)	2.0
Protective Casing Length (feet)	5.0
Riser Pipe Length (feet)	13.42
Bottom of Screen to End Cap (feet)	0.40
Screen Length (1st slot to last slot) (feet)	10.0
Total Length of Casing (feet)	23.62
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or [✓ Other]
Riser Pipe Above W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, [✓ PVC], or Other
Screen	SS304, SS316, PTFE, [✓ PVC], or Other

APPENDIX B
GROUNDWATER MONITORING RESULTS 2019-2020

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-1

	1/29/2019	**6/4/2019**	**8/26/2019**	**12/9/2019**	**12/20/2019**	**2/17/2020**	**4/27/2020**	**7/29/2020**	**12/4/2020**
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	0.0019	<0.0010	0.0011	0.0010		0.0011	<0.0010	0.0021	0.0015
B, diss, mg/L	0.0730	0.0486	0.0559	0.0679		0.0691	0.0746	0.0809	0.0970
B, tot, mg/L	0.0787	0.0644	0.0629	0.0692		0.0816	0.0830	0.0852	0.1030
Ba, diss, mg/L	0.0120	0.0142	0.0122	0.0075		0.0089	0.0114	0.0122	0.0103
Ba, tot, mg/L	0.0221	0.0171	0.0181	0.0125		0.0163	0.0161	0.0234	0.0158
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	28.0	26.0	27.0	11.0		15.0	16.0	17.0	59.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	0.0059	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.15	0.16	0.14	0.18		0.18	0.13	0.12	0.18
Fe, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	2.3600	0.8820	1.3000	1.3000		1.9100	1.0200	3.1100	1.4600
GW Elv, ft	430.69	441.12	435.46	432.34		433.13	434.26	434.42	428.41
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	<0.0070	<0.0070	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.2010	0.0884	0.1050	0.0947		0.1280	0.0828	0.2750	0.1250
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	0.0081	<0.0050	0.0058	<0.0050		0.0057	<0.0050	0.0116	0.0066
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	4.060	4.150	3.340	3.890		4.630	6.610	4.840	2.360
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	0.0030	0.0011	0.0015	0.0015		0.0022	0.0011	0.0039	0.0051
pH (field), STD	6.86	6.87	6.63	7.04		7.10	7.05	6.85	6.98
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020

Well: APW-1

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	13	17	11	15		13	15	16	21
Spec. Cond. (field), micromho	326	378	326	248		266	320	266	462
TDS, mg/L	202	200	168		130	162	160	178	238
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	0.0162		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	0.0126	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-2

	1/29/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	0.0036	0.0032		0.0014	0.0013	0.0040	0.0022
As, tot, mg/L	0.0026	0.0036	0.0042		0.0017	0.0026	0.0049	0.0027
B, diss, mg/L	1.9100	2.2100	2.0200		1.5500	1.3600	2.5500	1.4000
B, tot, mg/L	2.1100	2.2600	2.1500		1.7000	1.3700	2.4900	1.5300
Ba, diss, mg/L	0.0626	0.0574	0.0552		0.0482	0.0433	0.0603	0.0494
Ba, tot, mg/L	0.0902	0.0659	0.0631		0.0577	0.0647	0.0754	0.0466
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	19.0	25.0	20.0		16.0	14.0	23.0	10.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.24	0.26	0.26		0.26	0.24	0.26	0.30
Fe, diss, mg/L	0.7400	0.3400	0.1180		0.0748	0.4340	0.5060	0.1020
Fe, tot, mg/L	3.4100	1.0700	0.8540		0.7790	4.5000	2.3500	0.2880
GW Elv, ft	426.79	426.27	427.42		429.10	429.35	426.41	422.06
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	0.2700	0.5090	0.3700		0.2210	0.2360	0.5130	0.1850
Mn, tot, mg/L	0.5000	0.5120	0.4080		0.2480	0.2460	0.5330	0.2150
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	<0.050	0.077	<0.050		<0.100	<0.050	<0.050	<0.050
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
pH (field), STD	6.66	6.95	6.85		6.87	7.08	6.91	6.90
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-2

	1/29/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	49	26	24		33	28	28	21
Spec. Cond. (field), micromho	866	904	815		676	630	899	601
TDS, mg/L	542	526		508	466	390	544	388
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-3

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	0.1900	0.2040	0.1850		0.2000	0.1670	0.2090	0.2610
As, tot, mg/L	0.2150	0.2310	0.2310		0.2050	0.1920	0.2310	0.3000
B, diss, mg/L	19.5000	14.9000	15.8000		13.7000	12.5000	13.1000	17.1000
B, tot, mg/L	21.4000	15.4000	16.6000		14.9000	13.1000	13.3000	18.4000
Ba, diss, mg/L	0.0686	0.0764	0.0370		0.0685	0.0359	0.0790	0.0800
Ba, tot, mg/L	0.0847	0.0978	0.0845		0.0797	0.0856	0.0905	0.0988
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	20.0	29.0	28.0		28.0	27.0	27.0	22.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.23	0.21	0.20		0.22	0.21	0.23	0.19
Fe, diss, mg/L	1.9800	2.6200	<0.0400		2.8300	0.0404	2.7400	2.3300
Fe, tot, mg/L	2.7500	3.8500	3.2500		3.6700	4.4100	3.7300	3.9800
GW Elv, ft	428.97	425.49	428.25		431.45	430.20	426.08	422.75
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	0.6990	0.6130	0.7040		0.8250	0.8010	0.7840	0.8020
Mn, tot, mg/L	0.7620	0.6910	0.7830		0.9030	0.9270	0.8250	0.8820
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	<0.050	<0.050	<0.050		<0.100	<0.050	<0.050	<0.050
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	0.0014
pH (field), STD	7.41	7.51	7.45		7.38	7.46	7.45	7.41
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020

Well: APW-3

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	141	68	65		62	71	53	34
Spec. Cond. (field), micromho	993	949	985		928	965	955	999
TDS, mg/L	716	598		604	642	584	628	702
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-4

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	0.0203	0.0265	0.0128		0.0154	0.0093	0.0067	0.0111
As, tot, mg/L	0.0198	0.0278	0.0187		0.0169	0.0140	0.0091	0.0122
B, diss, mg/L	1.4700	1.0200	1.1300		0.9320	0.6730	0.8420	1.1200
B, tot, mg/L	1.6100	0.9950	1.2700		1.0300	0.7510	0.9120	1.2100
Ba, diss, mg/L	0.0432	0.0382	0.0202		0.0362	0.0368	0.0405	0.0427
Ba, tot, mg/L	0.0502	0.0612	0.0496		0.0560	0.0741	0.0476	0.0535
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	23.0	42.0	36.0		37.0	38.0	34.0	29.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.40	0.44	0.43		0.43	0.38	0.41	0.41
Fe, diss, mg/L	11.3000	9.4800	4.9300		10.2000	9.4800	7.8000	10.6000
Fe, tot, mg/L	12.4000	14.7000	11.4000		14.7000	17.5000	10.1000	13.4000
GW Elv, ft	428.04	430.55	428.74		430.74	431.81	428.01	423.71
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	2.1200	1.4300	1.8000		1.5100	1.3400	1.5000	1.5200
Mn, tot, mg/L	2.2800	1.6100	1.9400		1.6800	1.4700	1.7100	1.6600
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	0.0051	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	<0.050	<0.050	<0.050		<0.100	0.059	<0.050	<0.050
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	0.0022	<0.0010		<0.0010	0.0016	<0.0010	0.0010
pH (field), STD	6.82	6.91	6.89		6.93	7.05	7.02	6.87
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-4

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	37	20	27		32	33	21	11
Spec. Cond. (field), micromho	869	746	816		693	691	708	721
TDS, mg/L	558	402		468	454	388	430	424
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	0.0132	<0.0100		<0.0100	0.0116	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-5

	1/29/2019	6/4/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
B, diss, mg/L	0.1060	0.0912	0.0897	0.0856		0.1050	0.0748	0.0865	0.0788
B, tot, mg/L	0.1190	0.1070	0.0950	0.0893		0.0856	0.0814	0.0790	0.0937
Ba, diss, mg/L	0.0091	0.0108	0.0066	0.0079		0.0085	0.0088	0.0069	0.0060
Ba, tot, mg/L	0.0109	0.0118	0.0075	0.0090		0.0110	0.0107	0.0089	0.0067
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	8.0	22.0	5.0	<5.0		16.0	9.0	10.0	16.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	<0.10	0.12	0.10	0.11		0.11	0.10	0.13	0.14
Fe, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	0.2730	0.2140	0.1600	0.2610		0.5990	0.4720	0.9510	0.0583
GW Elv, ft	429.45	442.67	432.55	430.75		431.92	432.55	432.28	426.29
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	<0.0070	<0.0070	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.0336	0.0312	0.0202	0.0259		0.0703	0.0577	0.1190	0.0074
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	0.0054	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	2.290	1.070	1.580	1.870		2.090	2.660	2.130	3.350
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	0.0013	<0.0010
pH (field), STD	7.20	7.19	7.17	7.41		7.35	7.45	7.59	7.32
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-5

	1/29/2019	6/4/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	70	25	19	48		47	51	37	26
Spec. Cond. (field), micromho	535	707	454	513		536	560	472	465
TDS, mg/L	330	382	224		282	342	316	280	268
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-6

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		0.0010	0.0012	0.0015	<0.0010
B, diss, mg/L	0.5280	0.5500	1.0600	1.4000		0.5860	0.3570	1.5400	0.2410
B, tot, mg/L	0.5680	0.5510	1.1100	1.4300		0.5810	0.3690	1.5200	0.2600
Ba, diss, mg/L	0.0157	0.0198	0.0188	0.0152		0.0110	0.0124	0.0156	0.0092
Ba, tot, mg/L	0.0179	0.0211	0.0214	0.0162		0.0138	0.0157	0.0174	0.0102
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	8.0	25.0	8.0	8.0		<5.0	<5.0	<5.0	<5.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.15	0.17	0.13	0.15		0.19	0.18	0.25	0.15
Fe, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	0.0735	0.3100	0.0744	0.1520		0.7650	0.7310	1.0600	0.1020
GW Elv, ft	429.75	444.80	432.08	430.90		432.18	432.71	432.04	426.36
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	<0.0070	<0.0070	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	<0.0070	0.0220	<0.0070	0.0071		0.0382	0.0413	0.0622	0.0083
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	0.442	0.824	0.184	2.130		0.358	0.149	0.175	0.212
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	0.0015	<0.0010
pH (field), STD	7.09	7.13	7.05	7.27		7.31	7.45	7.53	7.20
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020

Well: APW-6

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	23	15	24	15		11	12	37	13
Spec. Cond. (field), micromho	568	729	650	557		433	474	510	461
TDS, mg/L	356	398	354		256	282	252	304	268
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-7

	1/29/2019	**8/27/2019**	**12/9/2019**	**12/20/2019**	**2/17/2020**	**4/27/2020**	**7/29/2020**	**12/4/2020**
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
B, diss, mg/L	0.2540	0.1330	0.1680		0.1180	0.1130	0.1140	0.1430
B, tot, mg/L	0.2950	0.1400	0.1780		0.1240	0.1150	0.1010	0.1440
Ba, diss, mg/L	0.0295	0.0373	0.0337		0.0303	0.0300	0.0343	0.0260
Ba, tot, mg/L	0.0343	0.0405	0.0356		0.0348	0.0322	0.0376	0.0281
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	40.0	39.0	39.0		30.0	29.0	32.0	31.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.20	0.31	0.24		0.22	0.24	0.38	0.25
Fe, diss, mg/L	<0.0400	0.0486	<0.0400		<0.0400	<0.0400	0.1130	<0.0400
Fe, tot, mg/L	0.2490	0.0982	0.0540		0.0915	0.0547	0.2410	0.0896
GW Elv, ft	428.75	429.96	429.61		430.98	431.62	429.94	425.20
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	0.1130	0.0730		0.0091	<0.0070	0.1990	0.0809
Mn, tot, mg/L	0.0098	0.1240	0.1010		0.0206	0.0090	0.2280	0.1220
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	4.400	<0.050	0.055		1.780	2.380	0.345	0.124
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
pH (field), STD	6.75	7.08	7.01		7.04	7.10	7.11	6.97
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-7

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	41	24	17		38	35	31	27
Spec. Cond. (field), micromho	779	641	694		639	608	579	574
TDS, mg/L	464	330		370	382	324	346	322
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-8

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	0.0013	0.0012	0.0012	0.0013		0.0011	0.0014	0.0016	0.0013
As, tot, mg/L	0.0015	0.0015	0.0018	0.0301		0.0013	0.0016	0.0022	0.0015
B, diss, mg/L	7.9400	7.5300	6.7600	7.6300		5.5900	7.5800	7.0300	6.9800
B, tot, mg/L	8.6100	7.7200	7.1200	8.0200		6.0800	7.8500	7.3400	8.1000
Ba, diss, mg/L	0.0692	0.0662	0.0696	0.0629		0.0586	0.0662	0.0573	0.0684
Ba, tot, mg/L	0.0753	0.0680	0.0784	0.1850		0.0645	0.0723	0.0639	0.0740
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	0.0009		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	<5.0	5.0	10.0	18.0		10.0	9.0	8.0	13.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050	0.0771		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	0.0126	0.0117	0.0085	0.0117		0.0067	0.0079	0.0080	0.0105
Cr, tot, mg/L	0.0142	0.0124	0.0102	0.0438		0.0080	0.0092	0.0097	0.0112
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	0.0815		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.11	0.15	0.15	0.19		0.14	0.16	0.24	<0.10
Fe, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	0.1420	0.1350	0.9010	41.7000		0.1120	0.1640	0.5980	0.1060
GW Elv, ft	428.94	442.82	429.84	429.94		431.36	431.49	430.54	424.82
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	<0.0070	<0.0070	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.0151	0.0140	0.0556	2.7100		0.0124	0.0197	0.0608	0.0175
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050	0.1200		<0.0050	<0.0050	<0.0050	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	3.860	3.890	4.070	5.390		3.780	3.900	3.730	4.910
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	0.0016	0.0484		<0.0010	<0.0010	<0.0010	<0.0010
pH (field), STD	7.23	7.36	7.36	7.56		7.46	7.39	7.50	7.38
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-8

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	0.0011	0.0057		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	0.0809	0.0524	0.0616	0.0839		0.0582	0.0753	0.0677	0.0930
Se, tot, mg/L	0.0822	0.0517	0.0672	0.0815		0.0643	0.0717	0.0689	0.1010
SO4, diss, mg/L	304	249	367	389		281	363	334	297
Spec. Cond. (field), micromho	888	891	1110	1140		848	1040	964	971
TDS, mg/L	678	600	766		760	622	736	624	724
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	0.0522		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100	0.1450		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-9

	1/29/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	0.0012	0.0012	0.0013		0.0011	0.0012	0.0014	0.0013
As, tot, mg/L	0.0018	0.0015	0.0017		0.0015	0.0025	0.0029	0.0016
B, diss, mg/L	0.6460	1.3000	1.2600		1.2800	1.2200	2.1100	0.8140
B, tot, mg/L	0.6680	1.3400	1.3600		1.4200	1.3200	2.1500	0.9530
Ba, diss, mg/L	0.0190	0.0348	0.0339		0.0380	0.0362	0.0490	0.0180
Ba, tot, mg/L	0.0224	0.0371	0.0380		0.0432	0.0466	0.0606	0.0211
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	22.0	19.0	43.0		38.0	36.0	22.0	<5.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	0.0052		0.0057	0.0058	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	0.0068		0.0072	0.0099	0.0080	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.31	0.22	0.24		0.26	0.29	0.18	0.28
Fe, diss, mg/L	<0.0400	0.0565	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	0.3320	0.3590	0.4460		0.2870	1.4300	1.7400	0.2470
GW Elv, ft	428.62	426.24	429.18		431.14	431.52	427.80	422.95
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	0.0080	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.0316	0.0291	0.0378		0.0245	0.1350	0.1620	0.0240
Ni, diss, mg/L	<0.0050	<0.0050	0.0119		0.0108	0.0117	0.0078	<0.0050
Ni, tot, mg/L	<0.0050	0.0059	0.0138		0.0133	0.0194	0.0137	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	2.580	3.970	3.140		3.620	5.100	8.330	2.200
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	0.0017	0.0021	<0.0010
pH (field), STD	7.02	6.79	7.00		6.86	6.91	6.66	6.97
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-9

	1/29/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	0.0012	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	229	468	600		717	682	757	580
Spec. Cond. (field), micromho	988	1520	1520		1620	1730	1740	1100
TDS, mg/L	722	1130		1330	1430	1330	1420	884
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-10

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	0.0019	0.0014	0.0015	0.0016		0.0013	0.0014	0.0015	0.0015
As, tot, mg/L	0.0036	0.0023	0.0025	0.0025		0.0019	0.0029	0.0032	0.0023
B, diss, mg/L	1.1000	1.0200	0.8210	0.8190		0.9240	0.7020	0.6800	1.5300
B, tot, mg/L	1.2000	1.0400	0.8890	0.8790		1.0200	0.7300	0.6950	1.8000
Ba, diss, mg/L	0.0217	0.0189	0.0158	0.0156		0.0160	0.0166	0.0171	0.0179
Ba, tot, mg/L	0.0261	0.0221	0.0199	0.0200		0.0211	0.0242	0.0241	0.0223
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	2.0	<5.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	0.0063	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	0.0051
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	<0.10	<0.10	<0.10	<0.10		<0.10	<0.10	<0.10	<0.10
Fe, diss, mg/L	0.5350	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	2.1500	1.0600	1.0400	1.0700		0.9030	1.6300	1.6600	0.6530
GW Elv, ft	429.79	442.98	431.09	430.40		432.26	432.71	431.79	425.59
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	0.0452	<0.0070	<0.0070	<0.0070		<0.0070	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.1640	0.0985	0.0773	0.0722		0.0685	0.1430	0.1440	0.0606
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	0.0067	<0.0050	<0.0050	<0.0050		<0.0050	0.0066	0.0075	<0.0050
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	4.300	3.030	2.500	3.800		3.200	3.240	3.340	2.490
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	0.0028	0.0018	0.0013	0.0013		0.0010	0.0021	0.0021	0.0012
pH (field), STD	7.44	7.55	7.61	7.74		7.66	7.68	7.75	7.52
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-10

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	63	58	46	49		47	51	58	93
Spec. Cond. (field), micromho	482	539	479	445		444	470	491	520
TDS, mg/L	336	304	256		264	288	264	274	336
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-11

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	0.0012	0.0010	0.0011	0.0371		<0.0010	0.0059	0.0042	0.0039
B, diss, mg/L	2.0600	0.4960	1.8800	2.6600		1.5300	1.7900	2.0200	4.5800
B, tot, mg/L	2.3000	0.5270	2.0600	2.9000		1.6300	1.9600	2.2200	5.5600
Ba, diss, mg/L	0.0147	0.0130	0.0132	0.0115		0.0143	0.0155	0.0178	0.0195
Ba, tot, mg/L	0.0181	0.0147	0.0161	0.0970		0.0166	0.0320	0.0282	0.0279
Be, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005	0.0014		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0	5.0	7.0
CN, total, mg/L	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	<0.0050	<0.0050	<0.0050	0.0860		<0.0050	0.0140	0.0089	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050	0.0465		<0.0050	0.0069	0.0056	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050	0.1070		<0.0050	0.0167	0.0115	0.0052
F, diss, mg/L	<0.10	0.13	<0.10	<0.10		<0.10	<0.10	<0.10	<0.10
Fe, diss, mg/L	<0.0400	0.1440	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	0.6330	0.5680	0.8710	56.8000		0.4130	7.7900	5.2400	1.9000
GW Elv, ft	430.55	442.19	434.01	431.97		433.01	433.86	433.69	427.32
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	<0.0070	0.0900	<0.0070	<0.0070		0.0215	<0.0070	<0.0070	<0.0070
Mn, tot, mg/L	0.0572	0.2260	0.1820	3.6900		0.0533	0.3670	0.3230	0.1130
Ni, diss, mg/L	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Ni, tot, mg/L	<0.0050	<0.0050	<0.0050	0.1520		<0.0050	0.0225	0.0155	0.0065
NO2, diss, mg/L	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
NO3, diss, mg/L	3.140	1.870	2.590	2.470		3.250	3.450	3.530	3.760
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	<0.0010	<0.0010	<0.0010	0.0605		<0.0010	0.0078	0.0055	0.0045
pH (field), STD	7.37	7.50	7.42	7.48		7.50	7.57	7.57	7.30
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-11

	1/29/2019	6/4/2019	8/26/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010	0.0026		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	74	19	48	80		68	77	115	229
Spec. Cond. (field), micromho	558	412	568	622		524	580	656	900
TDS, mg/L	362	238	304		406	344	342	396	634
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100	0.0790		<0.0100	0.0135	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100	0.1890		<0.0100	0.0282	0.0199	<0.0100

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-12

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Ag, diss, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
Ag, tot, mg/L	<0.007	<0.007	<0.007		<0.007	<0.007	<0.007	<0.007
As, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
As, tot, mg/L	0.0029	0.0013	0.0011		<0.0010	0.0016	0.0011	<0.0010
B, diss, mg/L	0.2410	0.1370	0.1310		0.0616	0.0661	0.1380	0.2360
B, tot, mg/L	0.2540	0.1610	0.1270		0.0668	0.0645	0.1210	0.2730
Ba, diss, mg/L	0.2460	0.1190	0.1680		0.1200	0.1080	0.1170	0.1540
Ba, tot, mg/L	0.2850	0.1210	0.1840		0.1310	0.1320	0.1300	0.1680
Be, diss, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Be, tot, mg/L	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
Cd, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cd,tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Cl, diss, mg/L	75.0	39.0	44.0		41.0	52.0	37.0	37.0
CN, total, mg/L	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Co, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Co, tot, mg/L	0.0054	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cr, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, diss, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
Cu, tot, mg/L	<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050
F, diss, mg/L	0.25	0.40	0.33		0.33	0.29	0.42	0.32
Fe, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Fe, tot, mg/L	2.2000	0.7910	0.6220		0.4160	1.2800	0.5120	0.2680
GW Elv, ft	428.61	428.35	428.98		431.26	432.45	428.44	424.11
Hg, diss, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Hg, tot, mg/L	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Mn, diss, mg/L	1.1200	1.0000	1.1800		0.7850	0.5740	0.9030	1.4000
Mn, tot, mg/L	1.3800	1.1100	1.3500		0.9320	0.7020	1.0700	1.8200
Ni, diss, mg/L	<0.0050	0.0058	0.0085		<0.0050	<0.0050	0.0071	0.0100
Ni, tot, mg/L	0.0129	0.0086	0.0099		0.0068	0.0081	0.0083	0.0123
NO2, diss, mg/L	<0.05	<0.05	<0.05		0.07	<0.05	<0.05	<0.05
NO3, diss, mg/L	5.500	<0.050	0.107		1.930	0.614	<0.050	<0.050
Pb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Pb, tot, mg/L	0.0023	<0.0010	<0.0010		<0.0010	0.0043	<0.0010	<0.0010
pH (field), STD	6.73	7.02	7.00		7.23	7.24	7.07	6.83
Sb, diss, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010

Meredosia Power Station
Groundwater Monitoring Results 2019-2020

Date Range: 01/01/2019 to 12/31/2020
Well: APW-12

	1/29/2019	8/27/2019	12/9/2019	12/20/2019	2/17/2020	4/27/2020	7/29/2020	12/4/2020
Sb, tot, mg/L	<0.0010	<0.0010	<0.0010		<0.0010	<0.0010	<0.0010	<0.0010
Se, diss, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
Se, tot, mg/L	<0.0400	<0.0400	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400
SO4, diss, mg/L	96	25	70		46	41	29	55
Spec. Cond. (field), micromho	1138	640	853		658	684	604	874
TDS, mg/L	730	326		516	400	350	314	538
Tl, diss, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
Tl, tot, mg/L	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020
V, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
V, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, diss, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100
Zn, tot, mg/L	<0.0100	<0.0100	<0.0100		<0.0100	<0.0100	<0.0100	<0.0100

APPENDIX C

STATISTICAL OUTPUT

APPENDIX C1
OUTLIER TEST

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, dissolved, mg/L
Location: APW-1

Mean of all data: 0.000326
Standard Deviation of all data: 0.000243
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-10

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-11

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, dissolved, mg/L
Location: APW-12

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-2

Mean of all data: 0.000333
Standard Deviation of all data: 0.000242
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-3

Mean of all data: 0.000333
Standard Deviation of all data: 0.000242
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, dissolved, mg/L
Location: APW-4

Mean of all data: 0.000350
Standard Deviation of all data: 0.000235
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-5

Mean of all data: 0.000326
Standard Deviation of all data: 0.000243
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L
Location: APW-6

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, dissolved, mg/L

Location: APW-7

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L

Location: APW-8

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, dissolved, mg/L

Location: APW-9

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, total, mg/L
Location: APW-1

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L
Location: APW-10

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L
Location: APW-11

Mean of all data: 0.000710
Standard Deviation of all data: 0.000664
Largest Observation Concentration of all data: Xn = 0.00260
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.00260	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Antimony, total, mg/L
Location: APW-12

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L
Location: APW-2

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L
Location: APW-3

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Antimony, total, mg/L

Location: APW-4

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L

Location: APW-5

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L

Location: APW-6

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Antimony, total, mg/L

Location: APW-7

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Antimony, total, mg/L

Location: APW-8

Mean of all data: 0.000887
Standard Deviation of all data: 0.00134
Largest Observation Concentration of all data: Xn = 0.00570
Test Statistic, high extreme of all data: Tn = 3.59
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.00570	False		1

Antimony, total, mg/L

Location: APW-9

Mean of all data: 0.000636
Standard Deviation of all data: 0.000273
Largest Observation Concentration of all data: Xn = 0.00120
Test Statistic, high extreme of all data: Tn = 2.06
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Arsenic, dissolved, mg/L
Location: APW-1

Mean of all data: 0.000326
Standard Deviation of all data: 0.000243
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L
Location: APW-10

Mean of all data: 0.00147
Standard Deviation of all data: 0.000189
Largest Observation Concentration of all data: Xn = 0.00190
Test Statistic, high extreme of all data: Tn = 2.28
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.00190	False		1

Arsenic, dissolved, mg/L
Location: APW-11

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Arsenic, dissolved, mg/L

Location: APW-12

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L

Location: APW-2

Mean of all data: 0.00230
Standard Deviation of all data: 0.00154
Largest Observation Concentration of all data: Xn = 0.00440
Test Statistic, high extreme of all data: Tn = 1.36
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L

Location: APW-3

Mean of all data: 0.203
Standard Deviation of all data: 0.0504
Largest Observation Concentration of all data: Xn = 0.310
Test Statistic, high extreme of all data: Tn = 2.12
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Arsenic, dissolved, mg/L

Location: APW-4

Mean of all data: 0.0333
Standard Deviation of all data: 0.0468
Largest Observation Concentration of all data: Xn = 0.180
Test Statistic, high extreme of all data: Tn = 3.13
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	0.180	False		1

Arsenic, dissolved, mg/L

Location: APW-5

Mean of all data: 0.000417
Standard Deviation of all data: 0.000298
Largest Observation Concentration of all data: Xn = 0.00110
Test Statistic, high extreme of all data: Tn = 2.29
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L

Location: APW-6

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Arsenic, dissolved, mg/L

Location: APW-7

Mean of all data: 0.000536
Standard Deviation of all data: 0.000134
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/28/2017	0.00100	False		1

Arsenic, dissolved, mg/L

Location: APW-8

Mean of all data: 0.00128
Standard Deviation of all data: 0.000157
Largest Observation Concentration of all data: Xn = 0.00160
Test Statistic, high extreme of all data: Tn = 2.04
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L

Location: APW-9

Mean of all data: 0.000964
Standard Deviation of all data: 0.000367
Largest Observation Concentration of all data: Xn = 0.00140
Test Statistic, high extreme of all data: Tn = 1.19
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Arsenic, total, mg/L
Location: APW-1

Mean of all data: 0.00196
Standard Deviation of all data: 0.00200
Largest Observation Concentration of all data: Xn = 0.00890
Test Statistic, high extreme of all data: Tn = 3.46
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00890	False		1

Arsenic, total, mg/L
Location: APW-10

Mean of all data: 0.00292
Standard Deviation of all data: 0.000884
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 2.35
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.00500	False		1

Arsenic, total, mg/L
Location: APW-11

Mean of all data: 0.00567
Standard Deviation of all data: 0.0112
Largest Observation Concentration of all data: Xn = 0.0371
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0371	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Arsenic, total, mg/L
Location: APW-12

Mean of all data: 0.00164
Standard Deviation of all data: 0.00101
Largest Observation Concentration of all data: Xn = 0.00300
Test Statistic, high extreme of all data: Tn = 1.35
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, total, mg/L
Location: APW-2

Mean of all data: 0.00303
Standard Deviation of all data: 0.00164
Largest Observation Concentration of all data: Xn = 0.00670
Test Statistic, high extreme of all data: Tn = 2.24
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, total, mg/L
Location: APW-3

Mean of all data: 0.232
Standard Deviation of all data: 0.0484
Largest Observation Concentration of all data: Xn = 0.300
Test Statistic, high extreme of all data: Tn = 1.40
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/28/2017	0.110	False	-1	

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Arsenic, total, mg/L
Location: APW-4

Mean of all data: 0.0150
Standard Deviation of all data: 0.00555
Largest Observation Concentration of all data: Xn = 0.0278
Test Statistic, high extreme of all data: Tn = 2.31
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, total, mg/L
Location: APW-5

Mean of all data: 0.00105
Standard Deviation of all data: 0.00102
Largest Observation Concentration of all data: Xn = 0.00390
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00390	False		1

Arsenic, total, mg/L
Location: APW-6

Mean of all data: 0.00114
Standard Deviation of all data: 0.000657
Largest Observation Concentration of all data: Xn = 0.00270
Test Statistic, high extreme of all data: Tn = 2.38
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Arsenic, total, mg/L
Location: APW-7

Mean of all data: 0.00230
Standard Deviation of all data: 0.00583
Largest Observation Concentration of all data: Xn = 0.0225
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0225	False		1

Arsenic, total, mg/L
Location: APW-8

Mean of all data: 0.00369
Standard Deviation of all data: 0.00733
Largest Observation Concentration of all data: Xn = 0.0301
Test Statistic, high extreme of all data: Tn = 3.60
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0301	False		1

Arsenic, total, mg/L
Location: APW-9

Mean of all data: 0.00209
Standard Deviation of all data: 0.000763
Largest Observation Concentration of all data: Xn = 0.00420
Test Statistic, high extreme of all data: Tn = 2.77
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00420	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Barium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.0121
Standard Deviation of all data: 0.00402
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 1.96
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Barium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.0179
Standard Deviation of all data: 0.00204
Largest Observation Concentration of all data: Xn = 0.0217
Test Statistic, high extreme of all data: Tn = 1.87
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.0154
Standard Deviation of all data: 0.00270
Largest Observation Concentration of all data: Xn = 0.0195
Test Statistic, high extreme of all data: Tn = 1.54
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Barium, dissolved, mg/L
Location: APW-12

Mean of all data: 0.138
Standard Deviation of all data: 0.0461
Largest Observation Concentration of all data: Xn = 0.246
Test Statistic, high extreme of all data: Tn = 2.34
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.246	False		1

Barium, dissolved, mg/L
Location: APW-2

Mean of all data: 0.0531
Standard Deviation of all data: 0.0151
Largest Observation Concentration of all data: Xn = 0.0718
Test Statistic, high extreme of all data: Tn = 1.24
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Barium, dissolved, mg/L
Location: APW-3

Mean of all data: 0.0621
Standard Deviation of all data: 0.0232
Largest Observation Concentration of all data: Xn = 0.110
Test Statistic, high extreme of all data: Tn = 2.06
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Barium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.0554
Standard Deviation of all data: 0.0184
Largest Observation Concentration of all data: Xn = 0.0950
Test Statistic, high extreme of all data: Tn = 2.16
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.00803
Standard Deviation of all data: 0.00226
Largest Observation Concentration of all data: Xn = 0.0108
Test Statistic, high extreme of all data: Tn = 1.22
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Barium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.0144
Standard Deviation of all data: 0.00277
Largest Observation Concentration of all data: Xn = 0.0198
Test Statistic, high extreme of all data: Tn = 1.94
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Barium, dissolved, mg/L
Location: APW-7

Mean of all data: 0.0303
Standard Deviation of all data: 0.00569
Largest Observation Concentration of all data: Xn = 0.0435
Test Statistic, high extreme of all data: Tn = 2.32
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: APW-8

Mean of all data: 0.0651
Standard Deviation of all data: 0.00715
Largest Observation Concentration of all data: Xn = 0.0754
Test Statistic, high extreme of all data: Tn = 1.44
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: APW-9

Mean of all data: 0.0276
Standard Deviation of all data: 0.0103
Largest Observation Concentration of all data: Xn = 0.0490
Test Statistic, high extreme of all data: Tn = 2.07
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Barium, total, mg/L
Location: APW-1

Mean of all data: 0.0226
Standard Deviation of all data: 0.0124
Largest Observation Concentration of all data: Xn = 0.0650
Test Statistic, high extreme of all data: Tn = 3.42
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0650	False		1

Barium, total, mg/L
Location: APW-10

Mean of all data: 0.0237
Standard Deviation of all data: 0.00376
Largest Observation Concentration of all data: Xn = 0.0327
Test Statistic, high extreme of all data: Tn = 2.39
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.0327	False		1

Barium, total, mg/L
Location: APW-11

Mean of all data: 0.0292
Standard Deviation of all data: 0.0245
Largest Observation Concentration of all data: Xn = 0.0970
Test Statistic, high extreme of all data: Tn = 2.76
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0970	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Barium, total, mg/L
Location: APW-12

Mean of all data: 0.156
Standard Deviation of all data: 0.0531
Largest Observation Concentration of all data: Xn = 0.285
Test Statistic, high extreme of all data: Tn = 2.43
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.285	False		1

Barium, total, mg/L
Location: APW-2

Mean of all data: 0.0819
Standard Deviation of all data: 0.0284
Largest Observation Concentration of all data: Xn = 0.165
Test Statistic, high extreme of all data: Tn = 2.93
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.165	False		1

Barium, total, mg/L
Location: APW-3

Mean of all data: 0.0941
Standard Deviation of all data: 0.0198
Largest Observation Concentration of all data: Xn = 0.148
Test Statistic, high extreme of all data: Tn = 2.72
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.148	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Barium, total, mg/L
Location: APW-4

Mean of all data: 0.0694
Standard Deviation of all data: 0.0220
Largest Observation Concentration of all data: Xn = 0.111
Test Statistic, high extreme of all data: Tn = 1.89
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, total, mg/L
Location: APW-5

Mean of all data: 0.0122
Standard Deviation of all data: 0.00563
Largest Observation Concentration of all data: Xn = 0.0304
Test Statistic, high extreme of all data: Tn = 3.23
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0304	False		1

Barium, total, mg/L
Location: APW-6

Mean of all data: 0.0175
Standard Deviation of all data: 0.00384
Largest Observation Concentration of all data: Xn = 0.0270
Test Statistic, high extreme of all data: Tn = 2.48
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0270	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Barium, total, mg/L

Location: APW-7

Mean of all data: 0.0443
Standard Deviation of all data: 0.0337
Largest Observation Concentration of all data: Xn = 0.160
Test Statistic, high extreme of all data: Tn = 3.43
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.160	False		1

Barium, total, mg/L

Location: APW-8

Mean of all data: 0.0791
Standard Deviation of all data: 0.0309
Largest Observation Concentration of all data: Xn = 0.185
Test Statistic, high extreme of all data: Tn = 3.42
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.185	False		1

Barium, total, mg/L

Location: APW-9

Mean of all data: 0.0357
Standard Deviation of all data: 0.0122
Largest Observation Concentration of all data: Xn = 0.0606
Test Statistic, high extreme of all data: Tn = 2.04
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Beryllium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.000163
Standard Deviation of all data: 0.000122
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Beryllium, dissolved, mg/L
Location: APW-12

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: APW-2

Mean of all data: 0.000167
Standard Deviation of all data: 0.000121
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: APW-3

Mean of all data: 0.000407
Standard Deviation of all data: 0.000899
Largest Observation Concentration of all data: Xn = 0.00420
Test Statistic, high extreme of all data: Tn = 4.22
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00420	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Beryllium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.000340
Standard Deviation of all data: 0.000462
Largest Observation Concentration of all data: Xn = 0.00180
Test Statistic, high extreme of all data: Tn = 3.16
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	0.00180	False		1

Beryllium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.000163
Standard Deviation of all data: 0.000122
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Beryllium, dissolved, mg/L

Location: APW-7

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L

Location: APW-8

Mean of all data: 0.000347
Standard Deviation of all data: 0.000374
Largest Observation Concentration of all data: Xn = 0.00170
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00170	False		1

Beryllium, dissolved, mg/L

Location: APW-9

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**

Confidence Level: 95% **Number of Outliers: One Outlier**

Transform: None

Beryllium, total, mg/L

Location: APW-1

Mean of all data: 0.000273
Standard Deviation of all data: 0.0000904
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.000600	False		1

Beryllium, total, mg/L

Location: APW-10

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, total, mg/L

Location: APW-11

Mean of all data: 0.000365
Standard Deviation of all data: 0.000364
Largest Observation Concentration of all data: Xn = 0.00140
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.00140	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 | **LT Multiplier: x 0.50**
Confidence Level: 95% | **Number of Outliers: One Outlier**
Transform: None

Beryllium, total, mg/L

Location: APW-12

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, total, mg/L

Location: APW-2

Mean of all data: 0.000275
Standard Deviation of all data: 0.0000935
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.000600	False		1

Beryllium, total, mg/L

Location: APW-3

Mean of all data: 0.000582
Standard Deviation of all data: 0.00124
Largest Observation Concentration of all data: Xn = 0.00490
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00490	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Beryllium, total, mg/L
Location: APW-4

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, total, mg/L
Location: APW-5

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, total, mg/L
Location: APW-6

Mean of all data: 0.000273
Standard Deviation of all data: 0.0000904
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.000600	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Beryllium, total, mg/L
Location: APW-7

Mean of all data: 0.000296
Standard Deviation of all data: 0.000174
Largest Observation Concentration of all data: Xn = 0.000900
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.000900	False		1

Beryllium, total, mg/L
Location: APW-8

Mean of all data: 0.000403
Standard Deviation of all data: 0.000447
Largest Observation Concentration of all data: Xn = 0.00190
Test Statistic, high extreme of all data: Tn = 3.35
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00190	False		1

Beryllium, total, mg/L
Location: APW-9

Mean of all data: 0.000250
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Boron, dissolved, mg/L
Location: APW-1

Mean of all data: 0.0852
Standard Deviation of all data: 0.0237
Largest Observation Concentration of all data: Xn = 0.140
Test Statistic, high extreme of all data: Tn = 2.31
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-10

Mean of all data: 0.999
Standard Deviation of all data: 0.267
Largest Observation Concentration of all data: Xn = 1.53
Test Statistic, high extreme of all data: Tn = 1.99
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-11

Mean of all data: 2.15
Standard Deviation of all data: 1.03
Largest Observation Concentration of all data: Xn = 4.58
Test Statistic, high extreme of all data: Tn = 2.36
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	4.58	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Boron, dissolved, mg/L
Location: APW-12

Mean of all data: 0.148
Standard Deviation of all data: 0.0680
Largest Observation Concentration of all data: Xn = 0.241
Test Statistic, high extreme of all data: Tn = 1.37
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-2

Mean of all data: 2.47
Standard Deviation of all data: 0.716
Largest Observation Concentration of all data: Xn = 3.90
Test Statistic, high extreme of all data: Tn = 2.00
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-3

Mean of all data: 22.9
Standard Deviation of all data: 8.72
Largest Observation Concentration of all data: Xn = 46.0
Test Statistic, high extreme of all data: Tn = 2.65
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/18/2012	46.0	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Boron, dissolved, mg/L
Location: APW-4

Mean of all data: 2.25
Standard Deviation of all data: 1.66
Largest Observation Concentration of all data: Xn = 6.30
Test Statistic, high extreme of all data: Tn = 2.44
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-5

Mean of all data: 0.155
Standard Deviation of all data: 0.104
Largest Observation Concentration of all data: Xn = 0.410
Test Statistic, high extreme of all data: Tn = 2.44
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-6

Mean of all data: 0.767
Standard Deviation of all data: 0.571
Largest Observation Concentration of all data: Xn = 1.81
Test Statistic, high extreme of all data: Tn = 1.83
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Boron, dissolved, mg/L
Location: APW-7

Mean of all data: 0.166
Standard Deviation of all data: 0.0798
Largest Observation Concentration of all data: Xn = 0.378
Test Statistic, high extreme of all data: Tn = 2.65
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.378	False		1

Boron, dissolved, mg/L
Location: APW-8

Mean of all data: 7.50
Standard Deviation of all data: 0.802
Largest Observation Concentration of all data: Xn = 8.88
Test Statistic, high extreme of all data: Tn = 1.72
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: APW-9

Mean of all data: 1.11
Standard Deviation of all data: 0.553
Largest Observation Concentration of all data: Xn = 2.11
Test Statistic, high extreme of all data: Tn = 1.82
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Boron, total, mg/L
Location: APW-1

Mean of all data: 0.0805
Standard Deviation of all data: 0.0130
Largest Observation Concentration of all data: Xn = 0.110
Test Statistic, high extreme of all data: Tn = 2.26
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, total, mg/L
Location: APW-10

Mean of all data: 1.07
Standard Deviation of all data: 0.326
Largest Observation Concentration of all data: Xn = 1.80
Test Statistic, high extreme of all data: Tn = 2.23
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	1.80	False		1

Boron, total, mg/L
Location: APW-11

Mean of all data: 2.38
Standard Deviation of all data: 1.28
Largest Observation Concentration of all data: Xn = 5.56
Test Statistic, high extreme of all data: Tn = 2.49
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	5.56	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Boron, total, mg/L

Location: APW-12

Mean of all data: 0.155
Standard Deviation of all data: 0.0740
Largest Observation Concentration of all data: Xn = 0.273
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, total, mg/L

Location: APW-2

Mean of all data: 2.21
Standard Deviation of all data: 0.459
Largest Observation Concentration of all data: Xn = 2.94
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, total, mg/L

Location: APW-3

Mean of all data: 19.6
Standard Deviation of all data: 5.23
Largest Observation Concentration of all data: Xn = 28.7
Test Statistic, high extreme of all data: Tn = 1.74
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Boron, total, mg/L

Location: APW-4

Mean of all data: 1.40
Standard Deviation of all data: 0.427
Largest Observation Concentration of all data: Xn = 2.14
Test Statistic, high extreme of all data: Tn = 1.73
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, total, mg/L

Location: APW-5

Mean of all data: 0.101
Standard Deviation of all data: 0.0188
Largest Observation Concentration of all data: Xn = 0.154
Test Statistic, high extreme of all data: Tn = 2.83
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/20/2018	0.154	False		1

Boron, total, mg/L

Location: APW-6

Mean of all data: 0.800
Standard Deviation of all data: 0.593
Largest Observation Concentration of all data: Xn = 1.91
Test Statistic, high extreme of all data: Tn = 1.87
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**

Confidence Level: 95% **Number of Outliers: One Outlier**

Transform: None

Boron, total, mg/L

Location: APW-7

Mean of all data: 0.171
Standard Deviation of all data: 0.0804
Largest Observation Concentration of all data: Xn = 0.363
Test Statistic, high extreme of all data: Tn = 2.38
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.363	False		1

Boron, total, mg/L

Location: APW-8

Mean of all data: 7.91
Standard Deviation of all data: 0.859
Largest Observation Concentration of all data: Xn = 9.40
Test Statistic, high extreme of all data: Tn = 1.73
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, total, mg/L

Location: APW-9

Mean of all data: 1.22
Standard Deviation of all data: 0.627
Largest Observation Concentration of all data: Xn = 2.30
Test Statistic, high extreme of all data: Tn = 1.73
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Cadmium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.000652
Standard Deviation of all data: 0.000487
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cadmium, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: APW-2

Mean of all data: 0.000667
Standard Deviation of all data: 0.000483
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: APW-3

Mean of all data: 0.000924
Standard Deviation of all data: 0.000437
Largest Observation Concentration of all data: Xn = 0.00190
Test Statistic, high extreme of all data: Tn = 2.23
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Cadmium, dissolved, mg/L

Location: APW-4

Mean of all data: 0.000700
Standard Deviation of all data: 0.000470
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L

Location: APW-5

Mean of all data: 0.000652
Standard Deviation of all data: 0.000487
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L

Location: APW-6

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cadmium, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cadmium,total, mg/L

Location: APW-1

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L

Location: APW-10

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L

Location: APW-11

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cadmium,total, mg/L
Location: APW-12

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-2

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-3

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cadmium,total, mg/L
Location: APW-4

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-5

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-6

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cadmium,total, mg/L
Location: APW-7

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-8

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium,total, mg/L
Location: APW-9

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chloride, dissolved, mg/L
Location: APW-1

Mean of all data: 23.6
Standard Deviation of all data: 14.3
Largest Observation Concentration of all data: Xn = 59.0
Test Statistic, high extreme of all data: Tn = 2.48
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: APW-10

Mean of all data: 2.45
Standard Deviation of all data: 0.158
Largest Observation Concentration of all data: Xn = 2.50
Test Statistic, high extreme of all data: Tn = 0.316
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/29/2020	2.00	False	-1	

Chloride, dissolved, mg/L
Location: APW-11

Mean of all data: 3.20
Standard Deviation of all data: 1.55
Largest Observation Concentration of all data: Xn = 7.00
Test Statistic, high extreme of all data: Tn = 2.45
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	7.00	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chloride, dissolved, mg/L
Location: APW-12

Mean of all data: 50.6
Standard Deviation of all data: 14.4
Largest Observation Concentration of all data: Xn = 75.0
Test Statistic, high extreme of all data: Tn = 1.70
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: APW-2

Mean of all data: 29.6
Standard Deviation of all data: 12.0
Largest Observation Concentration of all data: Xn = 50.0
Test Statistic, high extreme of all data: Tn = 1.70
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: APW-3

Mean of all data: 34.3
Standard Deviation of all data: 13.0
Largest Observation Concentration of all data: Xn = 58.0
Test Statistic, high extreme of all data: Tn = 1.82
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Chloride, dissolved, mg/L

Location: APW-4

Mean of all data: 39.4
Standard Deviation of all data: 10.4
Largest Observation Concentration of all data: Xn = 63.0
Test Statistic, high extreme of all data: Tn = 2.27
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L

Location: APW-5

Mean of all data: 6.00
Standard Deviation of all data: 5.56
Largest Observation Concentration of all data: Xn = 22.0
Test Statistic, high extreme of all data: Tn = 2.88
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/04/2019	22.0	False		1

Chloride, dissolved, mg/L

Location: APW-6

Mean of all data: 7.30
Standard Deviation of all data: 5.71
Largest Observation Concentration of all data: Xn = 25.0
Test Statistic, high extreme of all data: Tn = 3.10
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/04/2019	25.0	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Chloride, dissolved, mg/L
Location: APW-7

Mean of all data: 40.4
Standard Deviation of all data: 11.5
Largest Observation Concentration of all data: Xn = 67.0
Test Statistic, high extreme of all data: Tn = 2.31
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: APW-8

Mean of all data: 9.77
Standard Deviation of all data: 4.56
Largest Observation Concentration of all data: Xn = 18.0
Test Statistic, high extreme of all data: Tn = 1.80
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: APW-9

Mean of all data: 23.4
Standard Deviation of all data: 10.9
Largest Observation Concentration of all data: Xn = 43.0
Test Statistic, high extreme of all data: Tn = 1.80
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Chromium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L
Location: APW-2

Mean of all data: 0.00167
Standard Deviation of all data: 0.00121
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L
Location: APW-3

Mean of all data: 0.00167
Standard Deviation of all data: 0.00121
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.00210
Standard Deviation of all data: 0.00158
Largest Observation Concentration of all data: Xn = 0.00690
Test Statistic, high extreme of all data: Tn = 3.04
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/15/2011	0.00690	False		1

Chromium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00974
Standard Deviation of all data: 0.00227
Largest Observation Concentration of all data: Xn = 0.0136
Test Statistic, high extreme of all data: Tn = 1.70
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chromium, total, mg/L
Location: APW-1

Mean of all data: 0.00307
Standard Deviation of all data: 0.00222
Largest Observation Concentration of all data: Xn = 0.0111
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0111	False		1

Chromium, total, mg/L
Location: APW-10

Mean of all data: 0.00325
Standard Deviation of all data: 0.00167
Largest Observation Concentration of all data: Xn = 0.00740
Test Statistic, high extreme of all data: Tn = 2.48
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.00740	False		1

Chromium, total, mg/L
Location: APW-11

Mean of all data: 0.00765
Standard Deviation of all data: 0.0137
Largest Observation Concentration of all data: Xn = 0.0465
Test Statistic, high extreme of all data: Tn = 2.83
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0465	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, total, mg/L
Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, total, mg/L
Location: APW-2

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chromium, total, mg/L
Location: APW-3

Mean of all data: 0.00294
Standard Deviation of all data: 0.00166
Largest Observation Concentration of all data: Xn = 0.00870
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.00870	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, total, mg/L
Location: APW-4

Mean of all data: 0.00357
Standard Deviation of all data: 0.00273
Largest Observation Concentration of all data: Xn = 0.0105
Test Statistic, high extreme of all data: Tn = 2.54
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/21/2017	0.0105	False		1

Chromium, total, mg/L
Location: APW-5

Mean of all data: 0.00274
Standard Deviation of all data: 0.000930
Largest Observation Concentration of all data: Xn = 0.00610
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00610	False		1

Chromium, total, mg/L
Location: APW-6

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Chromium, total, mg/L
Location: APW-7

Mean of all data: 0.00404
Standard Deviation of all data: 0.00577
Largest Observation Concentration of all data: Xn = 0.0241
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0241	False		1

Chromium, total, mg/L
Location: APW-8

Mean of all data: 0.0131
Standard Deviation of all data: 0.00888
Largest Observation Concentration of all data: Xn = 0.0438
Test Statistic, high extreme of all data: Tn = 3.46
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0438	False		1

Chromium, total, mg/L
Location: APW-9

Mean of all data: 0.00270
Standard Deviation of all data: 0.000748
Largest Observation Concentration of all data: Xn = 0.00530
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00530	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Cobalt, Dis, mg/L
Location: APW-1

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L
Location: APW-10

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L
Location: APW-11

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cobalt, Dis, mg/L
Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L
Location: APW-2

Mean of all data: 0.00254
Standard Deviation of all data: 0.000672
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.43
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Cobalt, Dis, mg/L
Location: APW-3

Mean of all data: 0.00167
Standard Deviation of all data: 0.00121
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cobalt, Dis, mg/L

Location: APW-4

Mean of all data: 0.00175
Standard Deviation of all data: 0.00118
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L

Location: APW-5

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L

Location: APW-6

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cobalt, Dis, mg/L
Location: APW-7

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L
Location: APW-8

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, Dis, mg/L
Location: APW-9

Mean of all data: 0.00316
Standard Deviation of all data: 0.00131
Largest Observation Concentration of all data: Xn = 0.00580
Test Statistic, high extreme of all data: Tn = 2.01
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cobalt, total, mg/L
Location: APW-1

Mean of all data: 0.00569
Standard Deviation of all data: 0.00835
Largest Observation Concentration of all data: Xn = 0.0352
Test Statistic, high extreme of all data: Tn = 3.54
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0352	False		1

Cobalt, total, mg/L
Location: APW-10

Mean of all data: 0.00403
Standard Deviation of all data: 0.00295
Largest Observation Concentration of all data: Xn = 0.0115
Test Statistic, high extreme of all data: Tn = 2.53
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.0115	False		1

Cobalt, total, mg/L
Location: APW-11

Mean of all data: 0.0126
Standard Deviation of all data: 0.0261
Largest Observation Concentration of all data: Xn = 0.0860
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0860	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cobalt, total, mg/L

Location: APW-12

Mean of all data: 0.00282
Standard Deviation of all data: 0.000967
Largest Observation Concentration of all data: Xn = 0.00540
Test Statistic, high extreme of all data: Tn = 2.67
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.00540	False		1

Cobalt, total, mg/L

Location: APW-2

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, total, mg/L

Location: APW-3

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Cobalt, total, mg/L

Location: APW-4

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, total, mg/L

Location: APW-5

Mean of all data: 0.00519
Standard Deviation of all data: 0.00640
Largest Observation Concentration of all data: Xn = 0.0265
Test Statistic, high extreme of all data: Tn = 3.33
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0265	False		1

Cobalt, total, mg/L

Location: APW-6

Mean of all data: 0.00285
Standard Deviation of all data: 0.00134
Largest Observation Concentration of all data: Xn = 0.00770
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00770	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Cobalt, total, mg/L
Location: APW-7

Mean of all data: 0.00380
Standard Deviation of all data: 0.00486
Largest Observation Concentration of all data: Xn = 0.0207
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0207	False		1

Cobalt, total, mg/L
Location: APW-8

Mean of all data: 0.00805
Standard Deviation of all data: 0.0192
Largest Observation Concentration of all data: Xn = 0.0771
Test Statistic, high extreme of all data: Tn = 3.60
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0771	False		1

Cobalt, total, mg/L
Location: APW-9

Mean of all data: 0.00499
Standard Deviation of all data: 0.00313
Largest Observation Concentration of all data: Xn = 0.0105
Test Statistic, high extreme of all data: Tn = 1.76
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Copper, dissolved, mg/L
Location: APW-1

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L
Location: APW-10

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L
Location: APW-11

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Copper, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L
Location: APW-2

Mean of all data: 0.00167
Standard Deviation of all data: 0.00121
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L
Location: APW-3

Mean of all data: 0.00167
Standard Deviation of all data: 0.00121
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, dissolved, mg/L

Location: APW-4

Mean of all data: 0.00175
Standard Deviation of all data: 0.00118
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L

Location: APW-5

Mean of all data: 0.00163
Standard Deviation of all data: 0.00122
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L

Location: APW-6

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Copper, dissolved, mg/L

Location: APW-7

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L

Location: APW-8

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, dissolved, mg/L

Location: APW-9

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, total, mg/L
Location: APW-1

Mean of all data: 0.00384
Standard Deviation of all data: 0.00519
Largest Observation Concentration of all data: Xn = 0.0226
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0226	False		1

Copper, total, mg/L
Location: APW-10

Mean of all data: 0.00317
Standard Deviation of all data: 0.00212
Largest Observation Concentration of all data: Xn = 0.00920
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.00920	False		1

Copper, total, mg/L
Location: APW-11

Mean of all data: 0.0155
Standard Deviation of all data: 0.0325
Largest Observation Concentration of all data: Xn = 0.107
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.107	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Copper, total, mg/L
Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, total, mg/L
Location: APW-2

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Copper, total, mg/L
Location: APW-3

Mean of all data: 0.00285
Standard Deviation of all data: 0.00131
Largest Observation Concentration of all data: Xn = 0.00740
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.00740	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Copper, total, mg/L
Location: APW-4

Mean of all data: 0.00349
Standard Deviation of all data: 0.00251
Largest Observation Concentration of all data: Xn = 0.00950
Test Statistic, high extreme of all data: Tn = 2.40
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/21/2017	0.00950	False		1

Copper, total, mg/L
Location: APW-5

Mean of all data: 0.00345
Standard Deviation of all data: 0.00281
Largest Observation Concentration of all data: Xn = 0.0130
Test Statistic, high extreme of all data: Tn = 3.40
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0130	False		1

Copper, total, mg/L
Location: APW-6

Mean of all data: 0.00291
Standard Deviation of all data: 0.00158
Largest Observation Concentration of all data: Xn = 0.00860
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00860	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Copper, total, mg/L
Location: APW-7

Mean of all data: 0.00420
Standard Deviation of all data: 0.00636
Largest Observation Concentration of all data: Xn = 0.0263
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0263	False		1

Copper, total, mg/L
Location: APW-8

Mean of all data: 0.00814
Standard Deviation of all data: 0.0203
Largest Observation Concentration of all data: Xn = 0.0815
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0815	False		1

Copper, total, mg/L
Location: APW-9

Mean of all data: 0.00299
Standard Deviation of all data: 0.00182
Largest Observation Concentration of all data: Xn = 0.00930
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00930	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cyanide, total, mg/L
Location: APW-1

Mean of all data: 0.00180
Standard Deviation of all data: 0.00140
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.21
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-10

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-11

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Cyanide, total, mg/L

Location: APW-12

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L

Location: APW-2

Mean of all data: 0.00186
Standard Deviation of all data: 0.00140
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.18
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L

Location: APW-3

Mean of all data: 0.00188
Standard Deviation of all data: 0.00143
Largest Observation Concentration of all data: Xn = 0.00400
Test Statistic, high extreme of all data: Tn = 1.48
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cyanide, total, mg/L
Location: APW-4

Mean of all data: 0.00195
Standard Deviation of all data: 0.00137
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.13
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-5

Mean of all data: 0.00180
Standard Deviation of all data: 0.00140
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.21
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-6

Mean of all data: 0.00277
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Cyanide, total, mg/L
Location: APW-7

Mean of all data: 0.00282
Standard Deviation of all data: 0.000541
Largest Observation Concentration of all data: Xn = 0.00400
Test Statistic, high extreme of all data: Tn = 2.18
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-8

Mean of all data: 0.00277
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: APW-9

Mean of all data: 0.00279
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 1.52
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Fluoride, dissolved, mg/L
Location: APW-1

Mean of all data: 0.130
Standard Deviation of all data: 0.0987
Largest Observation Concentration of all data: Xn = 0.350
Test Statistic, high extreme of all data: Tn = 2.23
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: APW-10

Mean of all data: 0.0500
Standard Deviation of all data: 0.00000000124
Largest Observation Concentration of all data: Xn = 0.0500
Test Statistic, high extreme of all data: Tn = 0.00000000559
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: APW-11

Mean of all data: 0.0580
Standard Deviation of all data: 0.0253
Largest Observation Concentration of all data: Xn = 0.130
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/04/2019	0.130	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Fluoride, dissolved, mg/L
Location: APW-12

Mean of all data: 0.339
Standard Deviation of all data: 0.0521
Largest Observation Concentration of all data: Xn = 0.420
Test Statistic, high extreme of all data: Tn = 1.56
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: APW-2

Mean of all data: 0.279
Standard Deviation of all data: 0.0902
Largest Observation Concentration of all data: Xn = 0.460
Test Statistic, high extreme of all data: Tn = 2.01
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/24/2011	<0.0	True	-1	

Fluoride, dissolved, mg/L
Location: APW-3

Mean of all data: 0.268
Standard Deviation of all data: 0.0953
Largest Observation Concentration of all data: Xn = 0.540
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	0.540	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Fluoride, dissolved, mg/L

Location: APW-4

Mean of all data: 0.456
Standard Deviation of all data: 0.117
Largest Observation Concentration of all data: Xn = 0.790
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	0.790	False		1

Fluoride, dissolved, mg/L

Location: APW-5

Mean of all data: 0.0874
Standard Deviation of all data: 0.0910
Largest Observation Concentration of all data: Xn = 0.360
Test Statistic, high extreme of all data: Tn = 3.00
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	0.360	False		1

Fluoride, dissolved, mg/L

Location: APW-6

Mean of all data: 0.162
Standard Deviation of all data: 0.0397
Largest Observation Concentration of all data: Xn = 0.250
Test Statistic, high extreme of all data: Tn = 2.22
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Fluoride, dissolved, mg/L

Location: APW-7

Mean of all data: 0.273
Standard Deviation of all data: 0.0593
Largest Observation Concentration of all data: Xn = 0.400
Test Statistic, high extreme of all data: Tn = 2.14
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L

Location: APW-8

Mean of all data: 0.121
Standard Deviation of all data: 0.0562
Largest Observation Concentration of all data: Xn = 0.240
Test Statistic, high extreme of all data: Tn = 2.11
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L

Location: APW-9

Mean of all data: 0.306
Standard Deviation of all data: 0.0976
Largest Observation Concentration of all data: Xn = 0.570
Test Statistic, high extreme of all data: Tn = 2.70
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.570	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Iron, dissolved, mg/L
Location: APW-1

Mean of all data: 0.0197
Standard Deviation of all data: 0.0324
Largest Observation Concentration of all data: Xn = 0.162
Test Statistic, high extreme of all data: Tn = 4.40
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	0.162	False		1

Iron, dissolved, mg/L
Location: APW-10

Mean of all data: 0.0715
Standard Deviation of all data: 0.163
Largest Observation Concentration of all data: Xn = 0.535
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.535	False		1

Iron, dissolved, mg/L
Location: APW-11

Mean of all data: 0.0324
Standard Deviation of all data: 0.0392
Largest Observation Concentration of all data: Xn = 0.144
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/04/2019	0.144	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Iron, dissolved, mg/L
Location: APW-12

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000329
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, dissolved, mg/L
Location: APW-2

Mean of all data: 0.287
Standard Deviation of all data: 0.280
Largest Observation Concentration of all data: Xn = 1.10
Test Statistic, high extreme of all data: Tn = 2.91
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/24/2011	1.10	False		1

Iron, dissolved, mg/L
Location: APW-3

Mean of all data: 1.39
Standard Deviation of all data: 1.33
Largest Observation Concentration of all data: Xn = 5.40
Test Statistic, high extreme of all data: Tn = 3.01
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/17/2012	5.40	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Iron, dissolved, mg/L
Location: APW-4

Mean of all data: 8.38
Standard Deviation of all data: 4.22
Largest Observation Concentration of all data: Xn = 16.0
Test Statistic, high extreme of all data: Tn = 1.81
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, dissolved, mg/L
Location: APW-5

Mean of all data: 0.0118
Standard Deviation of all data: 0.00886
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.922
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, dissolved, mg/L
Location: APW-6

Mean of all data: 0.0173
Standard Deviation of all data: 0.00458
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Iron, dissolved, mg/L
Location: APW-7

Mean of all data: 0.0319
Standard Deviation of all data: 0.0277
Largest Observation Concentration of all data: Xn = 0.113
Test Statistic, high extreme of all data: Tn = 2.93
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/29/2020	0.113	False		1

Iron, dissolved, mg/L
Location: APW-8

Mean of all data: 0.0173
Standard Deviation of all data: 0.00458
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, dissolved, mg/L
Location: APW-9

Mean of all data: 0.0198
Standard Deviation of all data: 0.0115
Largest Observation Concentration of all data: Xn = 0.0565
Test Statistic, high extreme of all data: Tn = 3.18
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	0.0565	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Iron, total, mg/L
Location: APW-1

Mean of all data: 3.12
Standard Deviation of all data: 4.07
Largest Observation Concentration of all data: Xn = 17.4
Test Statistic, high extreme of all data: Tn = 3.51
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	17.4	False		1

Iron, total, mg/L
Location: APW-10

Mean of all data: 1.66
Standard Deviation of all data: 1.15
Largest Observation Concentration of all data: Xn = 4.66
Test Statistic, high extreme of all data: Tn = 2.60
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	4.66	False		1

Iron, total, mg/L
Location: APW-11

Mean of all data: 7.55
Standard Deviation of all data: 17.5
Largest Observation Concentration of all data: Xn = 56.8
Test Statistic, high extreme of all data: Tn = 2.82
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	56.8	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Iron, total, mg/L

Location: APW-12

Mean of all data: 1.27
Standard Deviation of all data: 0.984
Largest Observation Concentration of all data: Xn = 2.84
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, total, mg/L

Location: APW-2

Mean of all data: 3.82
Standard Deviation of all data: 4.54
Largest Observation Concentration of all data: Xn = 17.8
Test Statistic, high extreme of all data: Tn = 3.08
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	17.8	False		1

Iron, total, mg/L

Location: APW-3

Mean of all data: 4.10
Standard Deviation of all data: 2.52
Largest Observation Concentration of all data: Xn = 11.5
Test Statistic, high extreme of all data: Tn = 2.94
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	11.5	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Iron, total, mg/L

Location: APW-4

Mean of all data: 12.0
Standard Deviation of all data: 4.77
Largest Observation Concentration of all data: Xn = 20.4
Test Statistic, high extreme of all data: Tn = 1.77
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Iron, total, mg/L

Location: APW-5

Mean of all data: 1.06
Standard Deviation of all data: 1.51
Largest Observation Concentration of all data: Xn = 5.80
Test Statistic, high extreme of all data: Tn = 3.14
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	5.80	False		1

Iron, total, mg/L

Location: APW-6

Mean of all data: 0.899
Standard Deviation of all data: 0.956
Largest Observation Concentration of all data: Xn = 3.82
Test Statistic, high extreme of all data: Tn = 3.05
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	3.82	False		1

03/10/2021

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Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Iron, total, mg/L

Location: APW-7

Mean of all data: 3.09
Standard Deviation of all data: 9.21
Largest Observation Concentration of all data: Xn = 35.0
Test Statistic, high extreme of all data: Tn = 3.46
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	35.0	False		1

Iron, total, mg/L

Location: APW-8

Mean of all data: 3.30
Standard Deviation of all data: 10.6
Largest Observation Concentration of all data: Xn = 41.7
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	41.7	False		1

Iron, total, mg/L

Location: APW-9

Mean of all data: 1.23
Standard Deviation of all data: 1.31
Largest Observation Concentration of all data: Xn = 5.06
Test Statistic, high extreme of all data: Tn = 2.93
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	5.06	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Lead, dissolved, mg/L
Location: APW-1

Mean of all data: 0.000326
Standard Deviation of all data: 0.000243
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: APW-10

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: APW-11

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, dissolved, mg/L
Location: APW-12

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: APW-2

Mean of all data: 0.000386
Standard Deviation of all data: 0.000282
Largest Observation Concentration of all data: Xn = 0.00110
Test Statistic, high extreme of all data: Tn = 2.54
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: APW-3

Mean of all data: 0.000386
Standard Deviation of all data: 0.000282
Largest Observation Concentration of all data: Xn = 0.00110
Test Statistic, high extreme of all data: Tn = 2.54
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, dissolved, mg/L
Location: APW-4

Mean of all data: 0.000350
Standard Deviation of all data: 0.000235
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: APW-5

Mean of all data: 0.000378
Standard Deviation of all data: 0.000375
Largest Observation Concentration of all data: Xn = 0.00170
Test Statistic, high extreme of all data: Tn = 3.52
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00170	False		1

Lead, dissolved, mg/L
Location: APW-6

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, dissolved, mg/L

Location: APW-7

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L

Location: APW-8

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L

Location: APW-9

Mean of all data: 0.000500
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, total, mg/L
Location: APW-1

Mean of all data: 0.00379
Standard Deviation of all data: 0.00411
Largest Observation Concentration of all data: Xn = 0.0179
Test Statistic, high extreme of all data: Tn = 3.43
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0179	False		1

Lead, total, mg/L
Location: APW-10

Mean of all data: 0.00213
Standard Deviation of all data: 0.00126
Largest Observation Concentration of all data: Xn = 0.00530
Test Statistic, high extreme of all data: Tn = 2.52
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.00530	False		1

Lead, total, mg/L
Location: APW-11

Mean of all data: 0.00819
Standard Deviation of all data: 0.0186
Largest Observation Concentration of all data: Xn = 0.0605
Test Statistic, high extreme of all data: Tn = 2.82
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0605	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Lead, total, mg/L

Location: APW-12

Mean of all data: 0.00154
Standard Deviation of all data: 0.00137
Largest Observation Concentration of all data: Xn = 0.00430
Test Statistic, high extreme of all data: Tn = 2.01
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, total, mg/L

Location: APW-2

Mean of all data: 0.000750
Standard Deviation of all data: 0.000503
Largest Observation Concentration of all data: Xn = 0.00190
Test Statistic, high extreme of all data: Tn = 2.28
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, total, mg/L

Location: APW-3

Mean of all data: 0.000964
Standard Deviation of all data: 0.00136
Largest Observation Concentration of all data: Xn = 0.00560
Test Statistic, high extreme of all data: Tn = 3.41
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.00560	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, total, mg/L
Location: APW-4

Mean of all data: 0.00151
Standard Deviation of all data: 0.00179
Largest Observation Concentration of all data: Xn = 0.00580
Test Statistic, high extreme of all data: Tn = 2.39
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.00580	False		1

Lead, total, mg/L
Location: APW-5

Mean of all data: 0.00164
Standard Deviation of all data: 0.00218
Largest Observation Concentration of all data: Xn = 0.00780
Test Statistic, high extreme of all data: Tn = 2.82
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00780	False		1

Lead, total, mg/L
Location: APW-6

Mean of all data: 0.00119
Standard Deviation of all data: 0.000977
Largest Observation Concentration of all data: Xn = 0.00400
Test Statistic, high extreme of all data: Tn = 2.88
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00400	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Lead, total, mg/L
Location: APW-7

Mean of all data: 0.00256
Standard Deviation of all data: 0.00721
Largest Observation Concentration of all data: Xn = 0.0276
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0276	False		1

Lead, total, mg/L
Location: APW-8

Mean of all data: 0.00411
Standard Deviation of all data: 0.0123
Largest Observation Concentration of all data: Xn = 0.0484
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0484	False		1

Lead, total, mg/L
Location: APW-9

Mean of all data: 0.00146
Standard Deviation of all data: 0.00129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 2.75
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.00500	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Manganese, dissolved, mg/L

Location: APW-1

Mean of all data: 0.00307
Standard Deviation of all data: 0.00234
Largest Observation Concentration of all data: Xn = 0.00910
Test Statistic, high extreme of all data: Tn = 2.58
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00767
Standard Deviation of all data: 0.0132
Largest Observation Concentration of all data: Xn = 0.0452
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	0.0452	False		1

Manganese, dissolved, mg/L

Location: APW-11

Mean of all data: 0.0182
Standard Deviation of all data: 0.0288
Largest Observation Concentration of all data: Xn = 0.0900
Test Statistic, high extreme of all data: Tn = 2.50
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/04/2019	0.0900	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Manganese, dissolved, mg/L

Location: APW-12

Mean of all data: 1.12
Standard Deviation of all data: 0.356
Largest Observation Concentration of all data: Xn = 1.74
Test Statistic, high extreme of all data: Tn = 1.73
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L

Location: APW-2

Mean of all data: 0.593
Standard Deviation of all data: 0.291
Largest Observation Concentration of all data: Xn = 1.07
Test Statistic, high extreme of all data: Tn = 1.64
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L

Location: APW-3

Mean of all data: 0.619
Standard Deviation of all data: 0.239
Largest Observation Concentration of all data: Xn = 1.20
Test Statistic, high extreme of all data: Tn = 2.42
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Manganese, dissolved, mg/L
Location: APW-4

Mean of all data: 2.26
Standard Deviation of all data: 0.983
Largest Observation Concentration of all data: Xn = 5.40
Test Statistic, high extreme of all data: Tn = 3.19
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2011	5.40	False		1

Manganese, dissolved, mg/L
Location: APW-5

Mean of all data: 0.00435
Standard Deviation of all data: 0.00814
Largest Observation Concentration of all data: Xn = 0.0400
Test Statistic, high extreme of all data: Tn = 4.38
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/18/2012	0.0400	False		1

Manganese, dissolved, mg/L
Location: APW-6

Mean of all data: 0.00297
Standard Deviation of all data: 0.000915
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None
LT Multiplier: x 0.50
Number of Outliers: One Outlier

Manganese, dissolved, mg/L
Location: APW-7

Mean of all data: 0.0839
Standard Deviation of all data: 0.162
Largest Observation Concentration of all data: Xn = 0.611
Test Statistic, high extreme of all data: Tn = 3.25
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/28/2017	0.611	False		1

Manganese, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00297
Standard Deviation of all data: 0.000915
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00325
Standard Deviation of all data: 0.00165
Largest Observation Concentration of all data: Xn = 0.00800
Test Statistic, high extreme of all data: Tn = 2.88
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	0.00800	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Manganese, total, mg/L
Location: APW-1

Mean of all data: 0.295
Standard Deviation of all data: 0.424
Largest Observation Concentration of all data: Xn = 1.79
Test Statistic, high extreme of all data: Tn = 3.52
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	1.79	False		1

Manganese, total, mg/L
Location: APW-10

Mean of all data: 0.136
Standard Deviation of all data: 0.0961
Largest Observation Concentration of all data: Xn = 0.387
Test Statistic, high extreme of all data: Tn = 2.62
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.387	False		1

Manganese, total, mg/L
Location: APW-11

Mean of all data: 0.515
Standard Deviation of all data: 1.12
Largest Observation Concentration of all data: Xn = 3.69
Test Statistic, high extreme of all data: Tn = 2.83
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	3.69	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Manganese, total, mg/L
Location: APW-12

Mean of all data: 1.33
Standard Deviation of all data: 0.423
Largest Observation Concentration of all data: Xn = 2.01
Test Statistic, high extreme of all data: Tn = 1.61
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, total, mg/L
Location: APW-2

Mean of all data: 0.526
Standard Deviation of all data: 0.283
Largest Observation Concentration of all data: Xn = 1.10
Test Statistic, high extreme of all data: Tn = 2.03
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, total, mg/L
Location: APW-3

Mean of all data: 0.793
Standard Deviation of all data: 0.0926
Largest Observation Concentration of all data: Xn = 0.953
Test Statistic, high extreme of all data: Tn = 1.73
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Manganese, total, mg/L
Location: APW-4

Mean of all data: 1.85
Standard Deviation of all data: 0.330
Largest Observation Concentration of all data: Xn = 2.35
Test Statistic, high extreme of all data: Tn = 1.52
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, total, mg/L
Location: APW-5

Mean of all data: 0.184
Standard Deviation of all data: 0.299
Largest Observation Concentration of all data: Xn = 1.15
Test Statistic, high extreme of all data: Tn = 3.23
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	1.15	False		1

Manganese, total, mg/L
Location: APW-6

Mean of all data: 0.0593
Standard Deviation of all data: 0.0611
Largest Observation Concentration of all data: Xn = 0.233
Test Statistic, high extreme of all data: Tn = 2.84
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.233	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Manganese, total, mg/L
Location: APW-7

Mean of all data: 0.267
Standard Deviation of all data: 0.503
Largest Observation Concentration of all data: Xn = 1.92
Test Statistic, high extreme of all data: Tn = 3.29
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	1.92	False		1

Manganese, total, mg/L
Location: APW-8

Mean of all data: 0.245
Standard Deviation of all data: 0.687
Largest Observation Concentration of all data: Xn = 2.71
Test Statistic, high extreme of all data: Tn = 3.59
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	2.71	False		1

Manganese, total, mg/L
Location: APW-9

Mean of all data: 0.124
Standard Deviation of all data: 0.136
Largest Observation Concentration of all data: Xn = 0.525
Test Statistic, high extreme of all data: Tn = 2.95
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.525	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Mercury, dissolved, mg/L
Location: APW-1

Mean of all data: 0.0000652
Standard Deviation of all data: 0.0000487
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-10

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-11

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Mercury, dissolved, mg/L

Location: APW-12

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L

Location: APW-2

Mean of all data: 0.0000667
Standard Deviation of all data: 0.0000483
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L

Location: APW-3

Mean of all data: 0.0000667
Standard Deviation of all data: 0.0000483
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.690
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Mercury, dissolved, mg/L
Location: APW-4

Mean of all data: 0.0000700
Standard Deviation of all data: 0.0000470
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.638
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-5

Mean of all data: 0.0000652
Standard Deviation of all data: 0.0000487
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-6

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Mercury, dissolved, mg/L
Location: APW-7

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-8

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: APW-9

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Mercury, total, mg/L
Location: APW-1

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-10

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-11

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Mercury, total, mg/L
Location: APW-12

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-2

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-3

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None
LT Multiplier: x 0.50
Number of Outliers: One Outlier

Mercury, total, mg/L
Location: APW-4

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-5

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-6

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Mercury, total, mg/L
Location: APW-7

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-8

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, total, mg/L
Location: APW-9

Mean of all data: 0.000100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Nickel, dissolved, mg/L

Location: APW-1

Mean of all data: 0.00247
Standard Deviation of all data: 0.00285
Largest Observation Concentration of all data: Xn = 0.0140
Test Statistic, high extreme of all data: Tn = 4.05
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/24/2011	0.0140	False		1

Nickel, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L

Location: APW-11

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000672
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00566
Standard Deviation of all data: 0.00272
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 1.60
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: APW-2

Mean of all data: 0.00435
Standard Deviation of all data: 0.00351
Largest Observation Concentration of all data: Xn = 0.0120
Test Statistic, high extreme of all data: Tn = 2.18
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: APW-3

Mean of all data: 0.00381
Standard Deviation of all data: 0.00332
Largest Observation Concentration of all data: Xn = 0.0120
Test Statistic, high extreme of all data: Tn = 2.47
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, dissolved, mg/L
Location: APW-4

Mean of all data: 0.00444
Standard Deviation of all data: 0.00438
Largest Observation Concentration of all data: Xn = 0.0190
Test Statistic, high extreme of all data: Tn = 3.32
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/15/2011	0.0190	False		1

Nickel, dissolved, mg/L
Location: APW-5

Mean of all data: 0.00267
Standard Deviation of all data: 0.00240
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 3.06
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/24/2011	0.0100	False		1

Nickel, dissolved, mg/L
Location: APW-6

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000646
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00250
Standard Deviation of all data: 0.0000000000440
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00480
Standard Deviation of all data: 0.00388
Largest Observation Concentration of all data: Xn = 0.0119
Test Statistic, high extreme of all data: Tn = 1.83
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, total, mg/L
Location: APW-1

Mean of all data: 0.0109
Standard Deviation of all data: 0.0137
Largest Observation Concentration of all data: Xn = 0.0583
Test Statistic, high extreme of all data: Tn = 3.46
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0583	False		1

Nickel, total, mg/L
Location: APW-10

Mean of all data: 0.00561
Standard Deviation of all data: 0.00436
Largest Observation Concentration of all data: Xn = 0.0164
Test Statistic, high extreme of all data: Tn = 2.47
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.0164	False		1

Nickel, total, mg/L
Location: APW-11

Mean of all data: 0.0212
Standard Deviation of all data: 0.0465
Largest Observation Concentration of all data: Xn = 0.152
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.152	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, total, mg/L
Location: APW-12

Mean of all data: 0.00966
Standard Deviation of all data: 0.00200
Largest Observation Concentration of all data: Xn = 0.0129
Test Statistic, high extreme of all data: Tn = 1.63
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, total, mg/L
Location: APW-2

Mean of all data: 0.00337
Standard Deviation of all data: 0.00174
Largest Observation Concentration of all data: Xn = 0.00700
Test Statistic, high extreme of all data: Tn = 2.08
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, total, mg/L
Location: APW-3

Mean of all data: 0.00297
Standard Deviation of all data: 0.00176
Largest Observation Concentration of all data: Xn = 0.00910
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.00910	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nickel, total, mg/L
Location: APW-4

Mean of all data: 0.00380
Standard Deviation of all data: 0.00284
Largest Observation Concentration of all data: Xn = 0.0107
Test Statistic, high extreme of all data: Tn = 2.43
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/21/2017	0.0107	False		1

Nickel, total, mg/L
Location: APW-5

Mean of all data: 0.00647
Standard Deviation of all data: 0.00835
Largest Observation Concentration of all data: Xn = 0.0332
Test Statistic, high extreme of all data: Tn = 3.20
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0332	False		1

Nickel, total, mg/L
Location: APW-6

Mean of all data: 0.00363
Standard Deviation of all data: 0.00224
Largest Observation Concentration of all data: Xn = 0.0103
Test Statistic, high extreme of all data: Tn = 2.98
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0103	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nickel, total, mg/L
Location: APW-7

Mean of all data: 0.00530
Standard Deviation of all data: 0.0105
Largest Observation Concentration of all data: Xn = 0.0417
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0417	False		1

Nickel, total, mg/L
Location: APW-8

Mean of all data: 0.0113
Standard Deviation of all data: 0.0302
Largest Observation Concentration of all data: Xn = 0.120
Test Statistic, high extreme of all data: Tn = 3.60
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.120	False		1

Nickel, total, mg/L
Location: APW-9

Mean of all data: 0.00828
Standard Deviation of all data: 0.00586
Largest Observation Concentration of all data: Xn = 0.0194
Test Statistic, high extreme of all data: Tn = 1.90
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None
LT Multiplier: x 0.50
Number of Outliers: One Outlier

Nitrate nitrogen, dissolved, mg/L
Location: APW-1

Mean of all data: 3.97
Standard Deviation of all data: 1.57
Largest Observation Concentration of all data: Xn = 8.24
Test Statistic, high extreme of all data: Tn = 2.72
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/05/2018	8.24	False		1

Nitrate nitrogen, dissolved, mg/L
Location: APW-10

Mean of all data: 3.48
Standard Deviation of all data: 0.739
Largest Observation Concentration of all data: Xn = 4.53
Test Statistic, high extreme of all data: Tn = 1.42
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrate nitrogen, dissolved, mg/L
Location: APW-11

Mean of all data: 2.98
Standard Deviation of all data: 0.571
Largest Observation Concentration of all data: Xn = 3.76
Test Statistic, high extreme of all data: Tn = 1.37
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nitrate nitrogen, dissolved, mg/L
Location: APW-12

Mean of all data: 1.23
Standard Deviation of all data: 1.76
Largest Observation Concentration of all data: Xn = 5.50
Test Statistic, high extreme of all data: Tn = 2.42
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	5.50	False		1

Nitrate nitrogen, dissolved, mg/L
Location: APW-2

Mean of all data: 0.0584
Standard Deviation of all data: 0.102
Largest Observation Concentration of all data: Xn = 0.400
Test Statistic, high extreme of all data: Tn = 3.34
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	0.400	False		1

Nitrate nitrogen, dissolved, mg/L
Location: APW-3

Mean of all data: 0.0412
Standard Deviation of all data: 0.104
Largest Observation Concentration of all data: Xn = 0.490
Test Statistic, high extreme of all data: Tn = 4.33
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	0.490	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nitrate nitrogen, dissolved, mg/L
Location: APW-4

Mean of all data: 0.0621
Standard Deviation of all data: 0.0908
Largest Observation Concentration of all data: Xn = 0.310
Test Statistic, high extreme of all data: Tn = 2.73
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	0.310	False		1

Nitrate nitrogen, dissolved, mg/L
Location: APW-5

Mean of all data: 2.05
Standard Deviation of all data: 0.658
Largest Observation Concentration of all data: Xn = 4.10
Test Statistic, high extreme of all data: Tn = 3.11
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/18/2012	4.10	False		1

Nitrate nitrogen, dissolved, mg/L
Location: APW-6

Mean of all data: 0.471
Standard Deviation of all data: 0.507
Largest Observation Concentration of all data: Xn = 2.13
Test Statistic, high extreme of all data: Tn = 3.27
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	2.13	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Nitrate nitrogen, dissolved, mg/L

Location: APW-7

Mean of all data: 2.04
Standard Deviation of all data: 2.05
Largest Observation Concentration of all data: Xn = 5.47
Test Statistic, high extreme of all data: Tn = 1.67
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrate nitrogen, dissolved, mg/L

Location: APW-8

Mean of all data: 4.32
Standard Deviation of all data: 0.673
Largest Observation Concentration of all data: Xn = 5.59
Test Statistic, high extreme of all data: Tn = 1.89
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrate nitrogen, dissolved, mg/L

Location: APW-9

Mean of all data: 3.45
Standard Deviation of all data: 1.62
Largest Observation Concentration of all data: Xn = 8.33
Test Statistic, high extreme of all data: Tn = 3.02
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/29/2020	8.33	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Nitrite nitrogen, dissolved, mg/L

Location: APW-1

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = -.00000000986
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L

Location: APW-10

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000621
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.00000000559
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L

Location: APW-11

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000621
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.00000000559
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nitrite nitrogen, dissolved, mg/L
Location: APW-12

Mean of all data: 0.0339
Standard Deviation of all data: 0.0178
Largest Observation Concentration of all data: Xn = 0.0700
Test Statistic, high extreme of all data: Tn = 2.03
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-2

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-3

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Nitrite nitrogen, dissolved, mg/L
Location: APW-4

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-5

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = -.00000000986
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-6

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = -.00000000986
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nitrite nitrogen, dissolved, mg/L
Location: APW-7

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-8

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = -.00000000986
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrite nitrogen, dissolved, mg/L
Location: APW-9

Mean of all data: 0.0250
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0250
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Selenium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.0135
Standard Deviation of all data: 0.00912
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.713
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000538
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000538
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None
LT Multiplier: x 0.50
Number of Outliers: One Outlier

Selenium, dissolved, mg/L
Location: APW-12

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000329
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L
Location: APW-2

Mean of all data: 0.0138
Standard Deviation of all data: 0.00899
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.687
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L
Location: APW-3

Mean of all data: 0.0137
Standard Deviation of all data: 0.00912
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.688
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Selenium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.0186
Standard Deviation of all data: 0.00561
Largest Observation Concentration of all data: Xn = 0.0300
Test Statistic, high extreme of all data: Tn = 2.04
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/13/2010	<0.0	True	-1	

Selenium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.0136
Standard Deviation of all data: 0.00893
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.712
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Selenium, dissolved, mg/L

Location: APW-7

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L

Location: APW-8

Mean of all data: 0.0760
Standard Deviation of all data: 0.0151
Largest Observation Concentration of all data: Xn = 0.0963
Test Statistic, high extreme of all data: Tn = 1.35
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L

Location: APW-9

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Selenium, total, mg/L

Location: APW-1

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L

Location: APW-10

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000538
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L

Location: APW-11

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000538
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Selenium, total, mg/L
Location: APW-12

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000329
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L
Location: APW-2

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L
Location: APW-3

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Selenium, total, mg/L
Location: APW-4

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L
Location: APW-5

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L
Location: APW-6

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000352
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Selenium, total, mg/L

Location: APW-7

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L

Location: APW-8

Mean of all data: 0.0785
Standard Deviation of all data: 0.0156
Largest Observation Concentration of all data: Xn = 0.111
Test Statistic, high extreme of all data: Tn = 2.08
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, total, mg/L

Location: APW-9

Mean of all data: 0.0200
Standard Deviation of all data: 0.000000000517
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Silver, dissolved, mg/L
Location: APW-1

Mean of all data: 0.00211
Standard Deviation of all data: 0.00162
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.861
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-10

Mean of all data: 0.00350
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-11

Mean of all data: 0.00350
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Silver, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00350
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-2

Mean of all data: 0.00214
Standard Deviation of all data: 0.00160
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.849
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-3

Mean of all data: 0.00214
Standard Deviation of all data: 0.00160
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.849
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Silver, dissolved, mg/L

Location: APW-4

Mean of all data: 0.00225
Standard Deviation of all data: 0.00156
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.801
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L

Location: APW-5

Mean of all data: 0.00211
Standard Deviation of all data: 0.00162
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.861
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L

Location: APW-6

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Silver, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Silver, total, mg/L
Location: APW-1

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-10

Mean of all data: 0.00350
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-11

Mean of all data: 0.00350
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Silver, total, mg/L
Location: APW-12

Mean of all data: 0.00350
Standard Deviation of all data: 0.0000000000412
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-2

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-3

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Silver, total, mg/L
Location: APW-4

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-5

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L
Location: APW-6

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Silver, total, mg/L

Location: APW-7

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L

Location: APW-8

Mean of all data: 0.00323
Standard Deviation of all data: 0.000458
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, total, mg/L

Location: APW-9

Mean of all data: 0.00321
Standard Deviation of all data: 0.000469
Largest Observation Concentration of all data: Xn = 0.00350
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Sulfate, dissolved, mg/L

Location: APW-1

Mean of all data: 17.1
Standard Deviation of all data: 5.29
Largest Observation Concentration of all data: Xn = 33.0
Test Statistic, high extreme of all data: Tn = 3.01
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/24/2011	33.0	False		1

Sulfate, dissolved, mg/L

Location: APW-10

Mean of all data: 64.4
Standard Deviation of all data: 18.9
Largest Observation Concentration of all data: Xn = 93.0
Test Statistic, high extreme of all data: Tn = 1.51
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L

Location: APW-11

Mean of all data: 89.3
Standard Deviation of all data: 55.9
Largest Observation Concentration of all data: Xn = 229.
Test Statistic, high extreme of all data: Tn = 2.50
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	229.	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Sulfate, dissolved, mg/L
Location: APW-12

Mean of all data: 51.9
Standard Deviation of all data: 21.7
Largest Observation Concentration of all data: Xn = 96.0
Test Statistic, high extreme of all data: Tn = 2.03
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: APW-2

Mean of all data: 26.6
Standard Deviation of all data: 15.9
Largest Observation Concentration of all data: Xn = 67.0
Test Statistic, high extreme of all data: Tn = 2.54
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: APW-3

Mean of all data: 181.
Standard Deviation of all data: 95.5
Largest Observation Concentration of all data: Xn = 310.
Test Statistic, high extreme of all data: Tn = 1.35
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Sulfate, dissolved, mg/L
Location: APW-4

Mean of all data: 27.6
Standard Deviation of all data: 11.9
Largest Observation Concentration of all data: Xn = 53.0
Test Statistic, high extreme of all data: Tn = 2.14
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: APW-5

Mean of all data: 32.2
Standard Deviation of all data: 22.0
Largest Observation Concentration of all data: Xn = 83.0
Test Statistic, high extreme of all data: Tn = 2.30
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: APW-6

Mean of all data: 20.6
Standard Deviation of all data: 8.53
Largest Observation Concentration of all data: Xn = 38.0
Test Statistic, high extreme of all data: Tn = 2.04
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Sulfate, dissolved, mg/L
Location: APW-7

Mean of all data: 33.6
Standard Deviation of all data: 6.90
Largest Observation Concentration of all data: Xn = 41.0
Test Statistic, high extreme of all data: Tn = 1.08
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	17.0	False	-1	

Sulfate, dissolved, mg/L
Location: APW-8

Mean of all data: 327.
Standard Deviation of all data: 60.9
Largest Observation Concentration of all data: Xn = 421.
Test Statistic, high extreme of all data: Tn = 1.54
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: APW-9

Mean of all data: 462.
Standard Deviation of all data: 182.
Largest Observation Concentration of all data: Xn = 757.
Test Statistic, high extreme of all data: Tn = 1.62
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**

Confidence Level: 95% **Number of Outliers: One Outlier**

Transform: None

Thallium, dissolved, mg/L

Location: APW-1

Mean of all data: 0.000565
Standard Deviation of all data: 0.000460
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.945
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-11

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Thallium, dissolved, mg/L

Location: APW-12

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-2

Mean of all data: 0.000571
Standard Deviation of all data: 0.000455
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.942
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-3

Mean of all data: 0.000619
Standard Deviation of all data: 0.000445
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.857
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Thallium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.000600
Standard Deviation of all data: 0.000447
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.894
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.000565
Standard Deviation of all data: 0.000460
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.945
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Thallium, dissolved, mg/L

Location: APW-7

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-8

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, dissolved, mg/L

Location: APW-9

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Thallium, total, mg/L
Location: APW-1

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-10

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-11

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Thallium, total, mg/L
Location: APW-12

Mean of all data: 0.00100
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-2

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-3

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Thallium, total, mg/L
Location: APW-4

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-5

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L
Location: APW-6

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Thallium, total, mg/L

Location: APW-7

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L

Location: APW-8

Mean of all data: 0.000867
Standard Deviation of all data: 0.000229
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.583
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Thallium, total, mg/L

Location: APW-9

Mean of all data: 0.000857
Standard Deviation of all data: 0.000234
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.609
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Total Dissolved Solids, mg/L
Location: APW-1

Mean of all data: 191.
Standard Deviation of all data: 42.0
Largest Observation Concentration of all data: Xn = 280.
Test Statistic, high extreme of all data: Tn = 2.13
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: APW-10

Mean of all data: 299.
Standard Deviation of all data: 34.6
Largest Observation Concentration of all data: Xn = 346.
Test Statistic, high extreme of all data: Tn = 1.35
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: APW-11

Mean of all data: 376.
Standard Deviation of all data: 103.
Largest Observation Concentration of all data: Xn = 634.
Test Statistic, high extreme of all data: Tn = 2.50
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/04/2020	634.	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Total Dissolved Solids, mg/L

Location: APW-12

Mean of all data: 445.
Standard Deviation of all data: 132.
Largest Observation Concentration of all data: Xn = 730.
Test Statistic, high extreme of all data: Tn = 2.16
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/29/2019	730.	False		1

Total Dissolved Solids, mg/L

Location: APW-2

Mean of all data: 503.
Standard Deviation of all data: 81.2
Largest Observation Concentration of all data: Xn = 630.
Test Statistic, high extreme of all data: Tn = 1.56
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L

Location: APW-3

Mean of all data: 705.
Standard Deviation of all data: 93.4
Largest Observation Concentration of all data: Xn = 970.
Test Statistic, high extreme of all data: Tn = 2.83
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/17/2012	970.	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Total Dissolved Solids, mg/L
Location: APW-4

Mean of all data: 470.
Standard Deviation of all data: 82.4
Largest Observation Concentration of all data: Xn = 690.
Test Statistic, high extreme of all data: Tn = 2.67
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/18/2012	690.	False		1

Total Dissolved Solids, mg/L
Location: APW-5

Mean of all data: 279.
Standard Deviation of all data: 61.5
Largest Observation Concentration of all data: Xn = 382.
Test Statistic, high extreme of all data: Tn = 1.67
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: APW-6

Mean of all data: 324.
Standard Deviation of all data: 44.3
Largest Observation Concentration of all data: Xn = 398.
Test Statistic, high extreme of all data: Tn = 1.66
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Total Dissolved Solids, mg/L
Location: APW-7

Mean of all data: 365.
Standard Deviation of all data: 47.8
Largest Observation Concentration of all data: Xn = 464.
Test Statistic, high extreme of all data: Tn = 2.07
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: APW-8

Mean of all data: 699.
Standard Deviation of all data: 83.9
Largest Observation Concentration of all data: Xn = 832.
Test Statistic, high extreme of all data: Tn = 1.59
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: APW-9

Mean of all data: 1020.
Standard Deviation of all data: 281.
Largest Observation Concentration of all data: Xn = 1430.
Test Statistic, high extreme of all data: Tn = 1.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Vanadium, dissolved, mg/L
Location: APW-1

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-10

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000134
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-11

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000134
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station

Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**

Confidence Level: 95% **Number of Outliers: One Outlier**

Transform: None

Vanadium, dissolved, mg/L

Location: APW-12

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000823
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L

Location: APW-2

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L

Location: APW-3

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Vanadium, dissolved, mg/L
Location: APW-4

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-5

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-6

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Vanadium, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Vanadium, total, mg/L
Location: APW-1

Mean of all data: 0.00603
Standard Deviation of all data: 0.00400
Largest Observation Concentration of all data: Xn = 0.0205
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0205	False		1

Vanadium, total, mg/L
Location: APW-10

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000134
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, total, mg/L
Location: APW-11

Mean of all data: 0.0133
Standard Deviation of all data: 0.0233
Largest Observation Concentration of all data: Xn = 0.0790
Test Statistic, high extreme of all data: Tn = 2.83
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0790	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 | **LT Multiplier: x 0.50**
Confidence Level: 95% | **Number of Outliers: One Outlier**
Transform: None

Vanadium, total, mg/L

Location: APW-12

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000823
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, total, mg/L

Location: APW-2

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, total, mg/L

Location: APW-3

Mean of all data: 0.00559
Standard Deviation of all data: 0.00219
Largest Observation Concentration of all data: Xn = 0.0132
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0132	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Vanadium, total, mg/L

Location: APW-4

Mean of all data: 0.00631
Standard Deviation of all data: 0.00335
Largest Observation Concentration of all data: Xn = 0.0152
Test Statistic, high extreme of all data: Tn = 2.66
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0152	False		1

Vanadium, total, mg/L

Location: APW-5

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Vanadium, total, mg/L

Location: APW-6

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020	**LT Multiplier: x 0.50**
Confidence Level: 95%	**Number of Outliers: One Outlier**
Transform: None	

Vanadium, total, mg/L

Location: APW-7

Mean of all data: 0.00906
Standard Deviation of all data: 0.0152
Largest Observation Concentration of all data: Xn = 0.0618
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0618	False		1

Vanadium, total, mg/L

Location: APW-8

Mean of all data: 0.00815
Standard Deviation of all data: 0.0122
Largest Observation Concentration of all data: Xn = 0.0522
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0522	False		1

Vanadium, total, mg/L

Location: APW-9

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station

Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Zinc, dissolved, mg/L

Location: APW-1

Mean of all data: 0.00375
Standard Deviation of all data: 0.00363
Largest Observation Concentration of all data: Xn = 0.0162
Test Statistic, high extreme of all data: Tn = 3.43
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.0162	False		1

Zinc, dissolved, mg/L

Location: APW-10

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000134
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L

Location: APW-11

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000134
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000645
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Zinc, dissolved, mg/L
Location: APW-12

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000823
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L
Location: APW-2

Mean of all data: 0.00364
Standard Deviation of all data: 0.00238
Largest Observation Concentration of all data: Xn = 0.00640
Test Statistic, high extreme of all data: Tn = 1.16
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L
Location: APW-3

Mean of all data: 0.00390
Standard Deviation of all data: 0.00295
Largest Observation Concentration of all data: Xn = 0.0120
Test Statistic, high extreme of all data: Tn = 2.75
T Critical of all data: Tcr = 2.58

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/18/2012	0.0120	False		1

Based on Grubbs one-sided outlier test

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Zinc, dissolved, mg/L

Location: APW-4

Mean of all data: 0.00386
Standard Deviation of all data: 0.00234
Largest Observation Concentration of all data: Xn = 0.00720
Test Statistic, high extreme of all data: Tn = 1.43
T Critical of all data: Tcr = 2.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L

Location: APW-5

Mean of all data: 0.00326
Standard Deviation of all data: 0.00243
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.714
T Critical of all data: Tcr = 2.62

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L

Location: APW-6

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020 **LT Multiplier: x 0.50**
Confidence Level: 95% **Number of Outliers: One Outlier**
Transform: None

Zinc, dissolved, mg/L
Location: APW-7

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L
Location: APW-8

Mean of all data: 0.00500
Standard Deviation of all data: 0.0000000000880
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.0
T Critical of all data: Tcr = 0.0

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L
Location: APW-9

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Zinc, total, mg/L
Location: APW-1

Mean of all data: 0.0109
Standard Deviation of all data: 0.0117
Largest Observation Concentration of all data: Xn = 0.0510
Test Statistic, high extreme of all data: Tn = 3.45
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0510	False		1

Zinc, total, mg/L
Location: APW-10

Mean of all data: 0.00675
Standard Deviation of all data: 0.00553
Largest Observation Concentration of all data: Xn = 0.0225
Test Statistic, high extreme of all data: Tn = 2.85
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.0225	False		1

Zinc, total, mg/L
Location: APW-11

Mean of all data: 0.0272
Standard Deviation of all data: 0.0574
Largest Observation Concentration of all data: Xn = 0.189
Test Statistic, high extreme of all data: Tn = 2.82
T Critical of all data: Tcr = 2.18

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.189	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Zinc, total, mg/L

Location: APW-12

Mean of all data: 0.00563
Standard Deviation of all data: 0.00190
Largest Observation Concentration of all data: Xn = 0.0107
Test Statistic, high extreme of all data: Tn = 2.67
T Critical of all data: Tcr = 2.11

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/27/2018	0.0107	False		1

Zinc, total, mg/L

Location: APW-2

Mean of all data: 0.00500
Standard Deviation of all data: 0.000000000129
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 0.00000000672
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, total, mg/L

Location: APW-3

Mean of all data: 0.00661
Standard Deviation of all data: 0.00601
Largest Observation Concentration of all data: Xn = 0.0275
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0275	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
Confidence Level: 95%
Transform: None

LT Multiplier: x 0.50
Number of Outliers: One Outlier

Zinc, total, mg/L

Location: APW-4

Mean of all data: 0.00954
Standard Deviation of all data: 0.00883
Largest Observation Concentration of all data: Xn = 0.0308
Test Statistic, high extreme of all data: Tn = 2.41
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0308	False		1

Zinc, total, mg/L

Location: APW-5

Mean of all data: 0.00623
Standard Deviation of all data: 0.00344
Largest Observation Concentration of all data: Xn = 0.0173
Test Statistic, high extreme of all data: Tn = 3.22
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0173	False		1

Zinc, total, mg/L

Location: APW-6

Mean of all data: 0.00555
Standard Deviation of all data: 0.00214
Largest Observation Concentration of all data: Xn = 0.0133
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0133	False		1

Meredosia Power Station
Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Zinc, total, mg/L
Location: APW-7

Mean of all data: 0.0115
Standard Deviation of all data: 0.0241
Largest Observation Concentration of all data: Xn = 0.0953
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/19/2017	0.0953	False		1

Zinc, total, mg/L
Location: APW-8

Mean of all data: 0.0151
Standard Deviation of all data: 0.0360
Largest Observation Concentration of all data: Xn = 0.145
Test Statistic, high extreme of all data: Tn = 3.61
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/2019	0.145	False		1

Zinc, total, mg/L
Location: APW-9

Mean of all data: 0.00574
Standard Deviation of all data: 0.00278
Largest Observation Concentration of all data: Xn = 0.0154
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2018	0.0154	False		1

Meredosia Power Station

Outlier Analysis Results

User Supplied Information

Date Range: 12/13/2010 to 12/04/2020

LT Multiplier: x 0.50

Confidence Level: 95%

Number of Outliers: One Outlier

Transform: None

Based on Grubbs one-sided outlier test

APPENDIX C2
TEST DESCRIPTIONS

MANAGES

Groundwater Data Management and Evaluation Software

Software Manual Product ID #1012581

Software Manual, February 2010

EPRI Project Manager
K. Ladwig

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10
STATISTICAL ANALYSIS

Stand-Alone Statistical Tests

Statistical Evaluation Report

The Statistical Evaluation Report is comprised of a series of subreports as described below.

User Selections:

- One location.
- Sample date range for data selection.
- Interval length: the length of the averaging period in months (1,2,3,4, or 6).
- One parameter.
- Non-detect processing: multiplier between 0 and 1.
- One-sided confidence $(1-\alpha)$ level – 0.90, 0.95 or 0.99.
- Limit type: used in the statistical overview to determine exceedances.

Mann-Kendall Trend and Seasonal Analysis Tests

The Mann-Kendall test for trend is insensitive to the presence or absence of seasonality. The test is non-parametric and does not assume any type of data distribution. Nonetheless, two forms of the test are provided in MANAGES, one ignoring data seasonality even if it is present, and one considering data seasonality. In the test, the null hypothesis, H_0, is that the Sen trend is zero, and the alternate hypothesis, H_a, is that the trend is non-zero.

In general, the Mann-Kendall test considering seasonality indicates a larger range for allowable Sen estimate of trend when seasonality is actually present than the range indicated by the test performed ignoring seasonality.

In the Mann-Kendall Trend Analysis, available in under the Statistical Evaluation Report and in the Statistical Procedure for Detection Monitoring, and Mann-Kendall Seasonal Analysis, found under the Statistical Evaluation Report, MANAGES first calculates the Sen slope and the upper and lower confidence limits of the Sen slope, and then determines whether the Sen slope is statistically significant. Slope is statistically significant if it is non-zero.

Mann-Kendall Test for Sen Slope Significance – a two-sided, non-parametric method for data sets as small as 10, unless there are many tied (e.g., equal, NDs are treated as tieds) values (Gilbert, 1987; p. 208)	
Indicator Function $\mathrm{sgn}(x_{ij} - x_{jk})$	$= 1$ if $(x_{ij} - x_{jk}) > 0$ $= 0$ if $(x_{ij} - x_{jk}) = 0$ $= -1$ if $(x_{ij} - x_{jk}) < 0$ where $x_{i1}, x_{i2}, ..., x_{in}$ are the time ordered data (n_i is total of data in the i-th season).
Mann-Kendall Statistic, S_i	$= \sum_{k=1}^{n_i-1} \sum_{j=k+1}^{n_i} \mathrm{sgn}(x_{ij} - x_{jk})$
Variance of S_i $VAR(S_i)$	$VAR(S_i) =$ $\frac{1}{18}\left\{n_i(n_i - 1)(2n_i + 5) - \sum_{p=1}^{g_i} t_{ip}(t_{ip} - 1)(2t_{ip} + 5) - \sum_{\mathrm{q}=1}^{\mathrm{h_i}} \mathrm{u_{iq}}(\mathrm{u_{iq}} - 1)(2\mathrm{u_{iq}} + 5)\right\}$ $+\frac{\sum_{p=1}^{g_i} t_{ip}(t_{ip} - 1)(t_{ip} - 2)\sum_{q=1}^{h_i} u_{iq}(u_{iq} - 1)(u_{iq} - 2)}{9n_i(n_i - 1)(n_i - 2)}$ $+\frac{\sum_{p=1}^{g_i} t_{ip}(t_{ip} - 1)\sum_{q=1}^{h_i} u_{iq}(u_{iq} - 1)}{2n_i(n_i - 1)}.$ The variable g_i is the number of tied groups (equal-valued) data in the i-th season, t_{ip} is the number of tied data in the p-th group for the i-th season, h_i is the number of sampling times (or time periods) in the i-th season that contain multiple data, u_{iq} is the number of multiple data in the q-th time period in the i-th season, and n_i is the number of data values in the i-th season.

Test Statistic, Z	If $S' = \sum_{i=1}^{K} S_i$, where K is the number of seasons, then the test statistic Z is computed as: $Z = \begin{cases} \dfrac{S'-1}{[VAR(S')]^{1/2}} & \text{iff } S' > 0 \\ 0 & \text{iff } S' = 0 \\ \dfrac{S'+1}{[VAR(S')]^{1/2}} & \text{iff } S' < 0 \end{cases}$ Where “iff” is an acroym meaning: if-and-only-if. A positive Z value means an upward trend and a negative Z value means a negative trend.
Hypothesis Test: H_0 = no trend H_a = trend present This is a two-sided test at the α significance level.	Accept the null hypothesis H_0 of no trend if $\lvert Z \rvert \leq Z_{1-\alpha/2}$ Reject the null hypothesis H_0 if $\lvert Z \rvert > Z_{1-\alpha/2}$ where $Z_{1-\alpha/2}$ is obtained from Table A1 in Gilbert (1987; p. 254).

Kruskal-Wallis Analysis (Test for Seasonality)

To perform the Kruskal-Wallis test for data seasonality, data points are first segmented according to season (Gilbert, 1987). The null hypothesis, H_0, is that all seasons have the same mean value. The alternative hypothesis, H_a ,is that at least one season has a mean larger or smaller than the mean of at least one other season. Montgomery et al. (1987) provide additional information on groundwater data seasonality. This is a two-sided, non-parametric test.

In MANAGES, the Kruskal-Wallis Test for Seasonality is found under Data Review // Non-Parametric Methods // Kruskal-Wallis Analysis. It determines whether the seasonal means for the specified parameter at the specified location are statistically the same.

	or $Z_i \geq SCL$.

Outlier Tests

Outlier tests are useful in detecting inconsistencies of measurement within a data set. An outlier is defined as an observation that appears to deviate markedly from other values of a sample set. There are many possible reasons for the presence of an outlier, including 1) the presence of a true but extreme value from a single population, resulting from random variability inherent in the data; 2) an improper identification of the underlying distribution describing the population from which the sample set comes from; 3) the occurrence of some unknown event(s) such as a spill, creating a mixture of two or more populations; 4) a gross deviation from prescribed sampling procedures or laboratory analysis; 5) a transcription error in the data value or data unit of measurement.

USEPA (1989; p. 8-11) states that the purpose of a test for outliers is to determine whether or not there is statistical evidence that an observation that appears extreme does not fit the distribution of the rest of the data. If an observation is identified as an outlier, then steps need to be taken to determine whether it is the result of an error or a valid extreme observation. If a true error, such as in transcription, dilution, or analytical procedure, can be identified, then the suspect value should be replaced with its corrected value. If the source of the error can be determined but no correction is possible, then the observation is deleted and the reason for deletion is reported along with any statistical analysis. If no source of error can be documented, then it must be assumed that the observation is a true but extreme value of the data set. If this is the case, the outlier observation(s) must not be altered or excluded from any statistical analysis. Identification of an observation as an outlier but with no error documented could be used to suggest resampling to confirm the value (USEPA, 1989; p. 8-13).

The outlier tests provided in MANAGES are based on either the single outlier test of Grubbs (1969), which is used by USEPA (1989; pp. 8-10 to 8-13) or the single outlier test of Dixon (1951, 1953), which is used by USEPA (2000; pp. 4-24) and by ASTM (1998). The outlier tests assume the data come from a normal distribution. Only one outlier, either an extreme low or an extreme high, can be detected during a single analysis of a data set. Additional outliers can be detected by temporarily removing a previously detected outlier from a data set and then repeating the test on the remaining, reduced, data set. During each pass of the outlier test, the sample mean, standard deviation, and sample size used in the test statistics are computed using only the data remaining in the set. The process can be continued until there is either an insufficient amount of data remaining (a minimum of 3 values) or when no additional outliers are found. When using MANAGES, the user will be asked how many outliers are to be checked and it will then automatically perform all of the recursive calls and data reductions with the Grubbs or Dixon routine. When done, a report can be generated that will show each outlier marked with a flag indicating the sequential order in which the outliers were identified.

Critical values used in the one-sided Grubbs test are taken directly from those in Grubbs and Beck (1972) for sample sizes smaller than 147 observations. Critical values for sample sizes larger than 147 were generated numerically using a Monte Carlo routine, where each sampling event was simulated 100,000 times. Sample sizes ranging from 148 to 5,000 where used and then their resultant test statistic T_n curve fitted at specific significance levels. By this method, it was possible to match Grubbs results to at least four significant digits for corresponding tabulated values.

Critical values used in the one-sided Dixon outlier test are taken directly from tables given in Dixon (1951), Dixon (1953; page 89), and USEPA (2000; p. A-5, Table A-3). The critical values were then curve fitted for every sample size between 3 and 25 as a function of the significance level. By this method, it was possible to match Dixon's results to at least four significant digits for corresponding tabulated values. Note that the Dixon test assumes the data are either normally or lognormally distributed. Hence, sample sizes can only range between 3 and 25, inclusive. Dixon never developed an outlier test for sample sizes larger than 25.

User Selections:

- One or up to 100 locations: a separate test is performed for each location.
- One or up to 100 parameters: a separate test is performed for each parameter.
- Evaluation date range.
- Confidence $(1-\alpha)$ level: 0.90, 0.95 or 0.99.
- Non-detect processing: multiplier between 0 and 1.
- Data transformation option: none and log (base e).
- Number of outliers: one, two, first 5%, first 10%. Selecting any option other than one causes MANAGES to rerun the test, with outliers from prior tests removed, until either no outliers are detected or the specified number of outliers are detected.

Technical Details

Grubbs Outlier Test – The Grubbs outlier test determines whether there is statistical evidence that an observation does not fit the remaining data (USEPA, 1989; p. 8-11). This significance test looks at either the highest or the lowest observation in normal samples.	
The number of observations taken during a specified scoping period; n	n

Mean of the observed data during the scoping period; $\bar{X}$	$\bar{X} = \frac{1}{n}\sum_{i=1}^{n} X_i$ where X_i is the i-th observation.
Standard deviation of observed data; S_x.	$S_x = \sqrt{\frac{1}{(n-1)}\sum_{i=1}^{n}(X_i - \bar{X})^2}$
Test statistics: T_l & T_n	Sort the data into ascending order, then compute the statistics $T_l = (\bar{X} - X_l)/S_x$ $T_n = (X_n - \bar{X})/S_x$ where X_l is the smallest value of the n observations and X_n is the largest value of the n observations.
One-sided test with a (1-α) confidence level that there is a single extreme outlier within the n observations.	Grubbs single, one-sided test of either an extreme low outlier : X_l *is an outlier if* $T_l \geq T_{cr(1-\alpha,n)}$ or an extreme high outlier: X_n *is an outlier if* $T_n \geq T_{cr(1-\alpha,n)}$. The function $T_{cr(1-\alpha,n)}$ is the critical value, given in Grubbs and Beck (1972; Table 1) and USEPA (1989; p. B-11, Table 8) . Note that the critical value assumes that the mean and standard deviation are computed from the sample being tested.

Dixon Outlier Test – The Dixon outlier test determines whether there is statistical evidence that an extreme observation does not fit the remaining data (USEPA, 2000; p. 4-24 and ASTM D6312, 1998). This significance test looks at both the highest and the

lowest observations in a sample data set. However, the routine will only perform the outlier tests if several conditions are first satisfied. For example, the Dixon outlier algorithm checks the distribution of the sample data for both normality and lognormality using the Shapiro-Wilk W-test. The outlier routine will not proceed with a data set if the W-test fails. In addition, the Dixon outlier test is limited to a minimum of 3 and a maximum sample size n of 25 data values.	
The number of observations taken during a specified scoping period; n	Number of observations, n, where $3 \le n \le 25$.
Sorting the sample data	Sort the data into ascending order, with the minimum data value $X_{(1)}$ first and the maximum data value $X_{(n)}$ last. Use the natural log of the data values if data are lognormally distributed, i.e., $X_{(j)} = \mathrm{Ln}[X_{(j)}]$.
Goodness-of fit tests	After temporarily excluding either the minimum or maximum value of the data set, the Shapiro-Wilk's W-test is used to determine if the remaining $n-1$ values are normally or lognormally distributed. If not, the Dixon outlier test can't be used.
Test statistic, T_s, for the minimum data value	Compute the T_s test statistic for $X_{(1)}$ as an outlier: $T_s = \dfrac{X_{(2)} - X_{(1)}}{X_{(n)} - X_{(1)}} \quad for \quad 3 \le n \le 7$ $T_s = \dfrac{X_{(2)} - X_{(1)}}{X_{(n-1)} - X_{(1)}} \quad for \quad 8 \le n \le 10$ $T_s = \dfrac{X_{(3)} - X_{(1)}}{X_{(n-1)} - X_{(1)}} \quad for \quad 11 \le n \le 13$ $T_s = \dfrac{X_{(3)} - X_{(1)}}{X_{(n-2)} - X_{(1)}} \quad for \quad 14 \le n \le 25.$
Test statistic, T_s, for the maximum data value	Compute the T_s test statistic for $X_{(n)}$ as an outlier:

	$T_s = \frac{X_{(n)} - X_{(n-1)}}{X_{(n)} - X_{(1)}} \quad for \quad 3 \le n \le 7$ $T_s = \frac{X_{(n)} - X_{(n-1)}}{X_{(n)} - X_{(2)}} \quad for \quad 8 \le n \le 10$ $T_s = \frac{X_{(n)} - X_{(n-2)}}{X_{(n)} - X_{(2)}} \quad for \quad 11 \le n \le 13$ $T_s = \frac{X_{(n)} - X_{(n-2)}}{X_{(n)} - X_{(3)}} \quad for \quad 14 \le n \le 25.$
Critical value T_c	USEPA (2000; p. A-5, Table A-3) lists the critical values of the Dixon test as a function of sample size for a one-sided extreme value test at the significance levels α of 0.1, 0.05, and 0.01.
One-sided test with a (1-α) confidence level that there is a single extreme outlier within the n observations.	Dixon's single, one-sided test for statistical evidence of either an extreme low-valued outlier: $X_{(1)}$ *is an outlier if* $T_s \ge T_c$ or an extreme high-valued outlier: $X_{(n)}$ *is an outlier if* $T_s \ge T_c$. The function T_c is the critical value, given in Dixon (1953; page 89) and USEPA (2000; p. A-5, Table A-3). Note that the critical value assumes that the data are either normally or lognormally distributed.

Other Statistical Calculations Used in MANAGES

Sen Estimate of Slope

The Sen estimate of slope is the median of all slopes between all possible unique pairs of individual data points in the time period being analyzed (Gilbert, 1987). The slopes represent the rate of change of the measured parameter, with the y-axis being the parameter value and the x-axis being calendar days. Sen's estimate of slope is a non-parametric estimator of trend. The method is robust, and fairly insensitive to the presence of a small fraction of outliers and non-detect data values. In contrast, linear regression and other least squares estimators of slope are significantly more sensitive, and more likely to give erroneous slope indications, even when only a few outlier values are present.

When data averaging is not activated, the Sen slope is calculated using individual data points and actual sampling dates. When data averaging is activated, multiple data points within each specified season period are reduced to one data point by arithmetic averaging over each of the season periods. These averaged values are then assigned to the day that corresponds to the middle of that season's period.

The approximate lower and upper confidence limits for the Sen slope can also be calculated using normal theory (Gilbert, 1987). It should be noted that confidence limits for the Sen slope are not necessarily symmetrical about the estimated slope since ranked values of slope are used in the calculation.

MANAGES calculates Sen slope in the Sen Slope Overlay Graph, Statistical Summary reports and in the two Mann-Kendall tests performed under the Statistical Evaluation Report.

<table>
<tr><td colspan="2">Sen's Estimate of Slope – two-sided, non-parametric method that calculates the trend of a single data series. It is less sensitive to outliers and non-detect values than linear regression (Gilbert, 1987; p. 217).</td></tr>
<tr><td>Slope, Q</td><td>$= \frac{x_{i'} - x_i}{i' - i}$
where $X_{i'}$ and x_i are data values at times <i>i'</i> and <i>i</i>, respectively, and where $i' > i$. Typically, i' and i are expressed in units of either days for trend analysis or years for seasonal analysis.</td></tr>
<tr><td>N′</td><td>Number of unique data point pairs that can be made for the observations in the data set, for $i' > i$. For n monitoring events, N′ is given as:
N′ = n(n-1)/2</td></tr>
</table>

Sen’s Slope Estimate	Sen’s slope estimator = median slope $= Q_{[(N'+1)/2]}$ if N' is odd $= \frac{1}{2}(Q_{[N'/2]} + Q_{[(N'+2)/2]})$ if N' is even where the Q values have first been ranked from smallest to largest.
$Z_{1-\alpha/2}$	Statistic for the cumulative normal distribution (Gilbert, 1987; p. 254) for the two-sided, α significance level.
Variance estimate of the Mann-Kendall S Statistic, VAR(S)	VAR(S) $= \frac{1}{18}\left[n(n-1)(2n+5) - \sum_{p=1}^{g} t_p(t_p-1)(2t_p+5)\right]$ where g is the number of tied groups, t_p is the number of data in the pth group, and n is the number of data values.
C_α	$= Z_{1-\alpha/2}\sqrt{VAR(S)}$
Sen’s Slope , a two-sided test at the α significance level	$M_1 = \frac{(N'-C_\alpha)}{2}$ $M_2 = \frac{(N'+C_\alpha)}{2}$ Lower limit of confidence interval is the M_1-th largest slope, and upper limit of confidence interval is the (M_2+1)-th largest of the N′ ordered slope estimates.

Coefficient of Skewness for Normality

The coefficient of skewness is another measure for data normality (Gilbert, 1987). MANAGES provides the value of the coefficient of skewness in the Statistical Evalueation Report, Statistical Overview. Additional information on data normality is given by Montgomery, et al. (1987).

APPENDIX D
SITE INSPECTION REPORTS

Inspection Form for Closed Ponds at Ameren Facilities

Projcet Name: Quarterly Ash Pond Cap Inspection

Location: Meredosia Power Plant

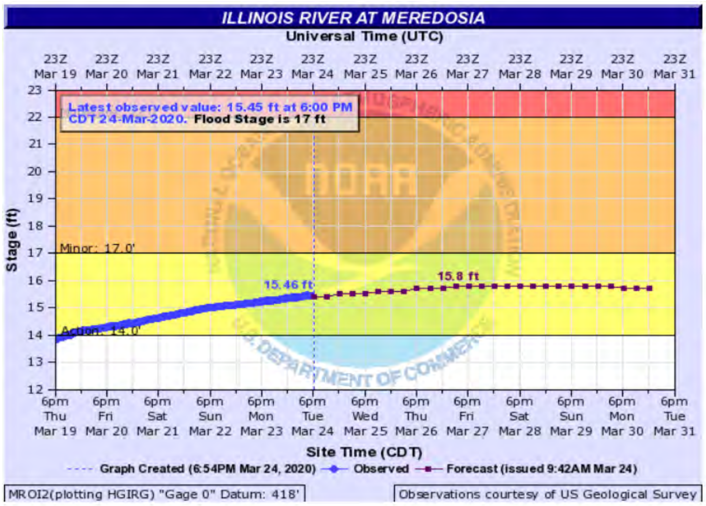
System Description: Fly Ash Pond
Bottom Ash Embankment

Engineer/Inspectors: Mike Wagstaff

Owner Representative: n/a

Inspection Date: 03/25/2020
Temperature: 35-50 F
Weather: cloudy

River Level 433.46
at Meredosia
Gage 0' = 418.00' MSL
Bottom Ash Pond bottom
is at 430.00' MSL



Overall System Rating: **Acceptable**

System Rating Codes

Acceptable System: Nearly all items or components are rated as GC or NE.

Minimally Acceptable System: One or more items are rated as MM or one or more items are rated as IM or EC and an engineering determination concludes that the IM or EC items would not prevent the system from performing as intended.

Unacceptable System: One or more items are rated as IM or EC and would prevent the system from performing as intended, or a serious deficiency noted in past inspections (which had previously resulted in a minimally acceptable system rating) has not been corrected within the established timeframe, not to exceed two years.

Condition Codes

EC = Emergency Condition. A serious dam safety condition exists that needs immediate action. Emergency measures implemented as instructed by Supervising Engineer, Dam Safety; i.e. pool draw down, work stoppage, or plant stoppage.

IM = Item needing Immediate Maintenance to restore or ensure its safety or integrity. Remediation should be completed within an appropriate timeframe as determined by the Supervising Engineer, Dam Safety.

MM = Item needing Minor Maintenance and/or repairs within the year. The safety or integrity of the item is not yet imperiled.

OB = Condition requires regular Observation to ensure that the condition does not become worse.

GC = Good Condition.

NE = No Evidence of a problem.

NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Fly Ash Pond Cap - ClosureTurf

Quarterly Site Inspection Checksheet

Date	03/25/2020
Inspector	Mike Wagstaff
Temperature	35-50 F
Weather	cloudy

	Item	Condition Code *	Comments
Closure Cap	**Drainage Ditch/ArmorFill**	**GC**	ArmorFill in good condition in ditches. No change in locations/quantity of puddles in ditches.
	Sand on Cap	**GC**	Sand is in good condition. No need to place additional sand or sweep existing sand.
	ClosureTurf	**GC**	No damage or degradation evident.
	Riprap Outlet Flumes	**MM**	Flumes are in good condiiton. Weeds require spraying.
	Other	**--**	
Embankment	**Riprap**	**GC**	Riprap is in good condition.
	Vegetation in riprap	**MM**	Weeds in riprap should be sprayed.
	Vegetation at Toe	**MM**	Logs have floated onto the vegetated area at toe of berm.
	Debris/Logs	**MM**	Some debris on embankment and at toe of embankment. This needs to be removed prior to mowing in 2020.
	Erosion	**GC**	Erosion not evident.
	Other	**--**	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.
MM = Item needing Minor Maintenance and/or repairs within the year.
OB = Condition requires regular observation to ensure that the condition does not become worse.
GC = Good Condition. Working properly.
NE = No Evidence of a problem.
NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Bottom Ash Embankment - ClosureTurf
Quarterly Site Inspection Checksheet

Date	03/25/2020
Inspector	Mike Wagstaff
Temperature	35-50 F
Weather	cloudy

	Item	Condition Code *	Comments
Roadway	**Gravel Road**	GC	Roadway gravel is compacted and smooth.
	Drainage	GC	No drainage problems at this time.
	Other	GC	No issues.
Embankment	**Vegetation at Toe**	GC	Vegetation at toe looks good. Mow in Fall of 2020.
	ClosureTurf	GC	Turf is in good condition. Sand has been re-swept and Polyurethane sealer has been applied and is in good condition - sand is locked in-place. Water approximately 3 feet deep on side slopes of east side of berm. Minimal debris on berm at this time.
	ArmorFill	GC	Polyurethane has been applied and sand is locked in-place. No disintegration of polyurethane material is evident at this time.
	Riprap at Toe	GC	Riprap at toe looks is in good condition and has minimal weeds.
	Riprap Outlet Flumes	GC	Flumes are in good condition.
	Other	--	
Remaining Basin	**Side Slopes**	GC	Sedimentation logs are in good condition. Vegetation trying to get established on the slopes.
	Bottom	NI	Bottom of the basin is submerged, approximately 3 feet of water. Minimal debris along slopes of basin.
	Outlet Riprap	GC	Riprap that is exposed looks good. Mostly submerged, approx. 3 feet of water in basin outlet channel.
	Toe Riprap	GC	Riprap in good condition.
	Other	--	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.

MM = Item needing Minor Maintenance and/or repairs within the year.

OB = Condition requires regular observation to ensure that the condition does not become worse.

GC = Good Condition. Working properly.

NE = No Evidence of a problem.

NI = Not Inspected. Reason should be stated in comment

Cap – SE Berm looking SW

Cap – South ditch looking W

Cap – SE Stormwater Outlet #1 looking S

Cap – South berm looking West

Cap – SW Stormwater Outlet #2 looking South

Cap – W Stormwater Outlet #3 looking North

Cap – W Stormwater Outlet #3 looking West

Cap – West perimeter ditch looking South

Cap – West Berm looking NorthWest

Cap – West perimeter ditch looking North

Cap – West Stormwater Outlet #4 looking West

Cap – North Stormwater Outlet #5 looking North

Cap – North Stormwater Outlet #6 looking Northwest

Cap – North Stormwater Outlet #6 looking Northeast

E. Stockpile Area – Culvert Pipe looking Southeast

E. Stockpile Area – South end looking Northeast

Bottom Ash Berm – North Riprap Flume looking Northeast

Bottom Ash Berm – East Slope looking South

Bottom Ash Berm – West Slope looking North

Bottom Ash Berm – West Slope looking South

Bottom Ash Berm – South Slope looking South

Inspection Form for Closed Ponds at Ameren Facilities

Projcet Name: Quarterly Ash Pond Cap Inspection

Location: Meredosia Power Plant

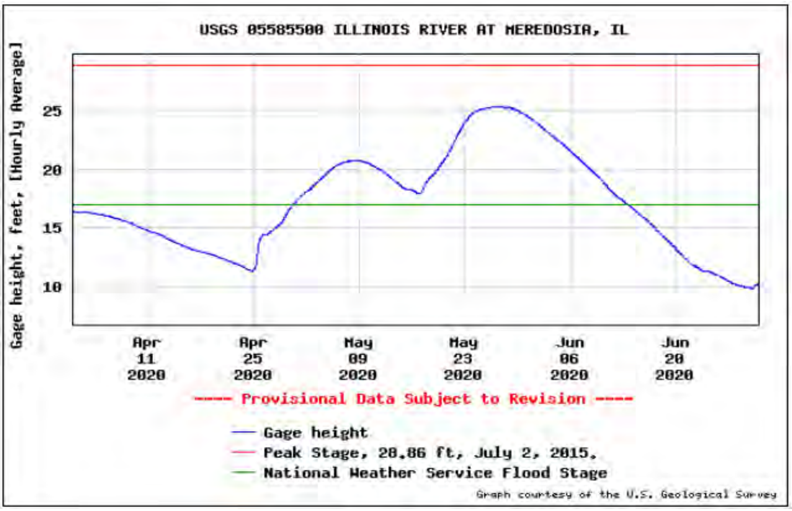
System Description: Fly Ash Pond
Bottom Ash Embankment

Engineer/Inspectors: Mike Wagstaff

Owner Representative: n/a

Inspection Date: 06/29/2020
Temperature: 80 F
Weather: sunny/cloudy

River Level 427.83'
at Meredosia 9.83 gage
Gage 0' = 418.00' MSL
Bottom Ash Pond bottom
is at 430.00' MSL



Overall System Rating: **Acceptable**

System Rating Codes

Acceptable System: Nearly all items or components are rated as GC or NE.

Minimally Acceptable System: One or more items are rated as MM or one or more items are rated as IM or EC and an engineering determination concludes that the IM or EC items would not prevent the system from performing as intended.

Unacceptable System: One or more items are rated as IM or EC and would prevent the system from performing as intended, or a serious deficiency noted in past inspections (which had previously resulted in a minimally acceptable system rating) has not been corrected within the established timeframe, not to exceed two years.

Condition Codes

EC = Emergency Condition. A serious dam safety condition exists that needs immediate action. Emergency measures implemented as instructed by Supervising Engineer, Dam Safety; i.e. pool draw down, work stoppage, or plant stoppage.

IM = Item needing Immediate Maintenance to restore or ensure its safety or integrity. Remediation should be completed within an appropriate timeframe as determined by the Supervising Engineer, Dam Safety.

MM = Item needing Minor Maintenance and/or repairs within the year. The safety or integrity of the item is not yet imperiled.

OB = Condition requires regular Observation to ensure that the condition does not become worse.

GC = Good Condition.

NE = No Evidence of a problem.

NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Fly Ash Pond Cap - ClosureTurf
Quarterly Site Inspection Checksheet

Date	06/29/2020
Inspector	Mike Wagstaff
Temperature	80 F
Weather	sunny/cloudy

	Item	Condition Code *	Comments
Closure Cap	**Drainage Ditch/ArmorFill**	**GC**	ArmorFill in good condition in ditches. No change in locations/quantity of puddles in ditches.
	Sand on Cap	**GC**	Sand is in good condition. No need to place additional sand or sweep existing sand.
	ClosureTurf	**GC**	No damage or degradation evident.
	Riprap Outlet Flumes	**GC**	Flumes are in good condiiton. Weeds sprayed 2 weeks prior to inspection.
	Other	**--**	
Embankment	**Riprap**	**GC**	Riprap is in good condition.
	Vegetation in riprap	**GC**	Weeds sprayed 2 weeks prior to inspection.
	Vegetation at Toe	**MM**	Logs have floated onto the vegetated area at toe of berm.
	Debris/Logs	**MM**	Some debris on embankment and at toe of embankment. This needs to be removed prior to mowing in the fall of 2020.
	Erosion	**GC**	Erosion not evident.
	Other	**--**	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.

MM = Item needing Minor Maintenance and/or repairs within the year.

OB = Condition requires regular observation to ensure that the condition does not become worse.

GC = Good Condition. Working properly.

NE = No Evidence of a problem.

NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Bottom Ash Embankment - ClosureTurf
Quarterly Site Inspection Checksheet

Date	06/29/2020
Inspector	Mike Wagstaff
Temperature	80 F
Weather	sunny/cloudy

	Item	Condition Code *	Comments
Roadway	**Gravel Road**	**GC**	Roadway gravel is compacted and smooth.
	Drainage	**GC**	No drainage problems at this time.
	Other	**GC**	No issues.
Embankment	**Vegetation at Toe**	**GC**	Vegetation at toe looks good. Mow in Fall of 2020.
	ClosureTurf	**GC**	Turf is in good condition. Sand on cap does not require sweeping.
	ArmorFill	**GC**	Polyurethane has been applied and sand is locked in-place. No disintegration of polyurethane material is evident at this time.
	Riprap at Toe	**GC**	Riprap at toe is in good condition and has minimal weeds. Weeds sprayed 2 weeks prior to inspection.
	Riprap Outlet Flumes	**GC**	Flumes are in good condition.
	Other	**--**	
Remaining Basin	**Side Slopes**	**GC**	Sedimentation logs are in good condition. Vegetation becoming established on the slopes.
	Bottom	**NI**	Bottom of the basin was recently submerged under approximately 12 feet of water. Vegetation is re-establishing. Minimal debris along slopes of basin.
	Outlet Riprap	**GC**	Riprap is in good condtion. Weeds sprayed 2 weeks prior to inspection.
	Toe Riprap	**GC**	Riprap in good condition. Weeds sprayed 2 weeks prior to inspection.
	Other	**--**	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.
MM = Item needing Minor Maintenance and/or repairs within the year.
OB = Condition requires regular observation to ensure that the condition does not become worse.
GC = Good Condition. Working properly.
NE = No Evidence of a problem.
NI = Not Inspected. Reason should be stated in comment

Cap – SE Berm looking SW

Cap – South ditch looking E

Cap – SE Berm looking SW

Cap – SW Stormwater Outlet #2 looking West

Cap – SW Berm W of Outlet #2 looking Southwest

Cap – W Stormwater Outlet #3 looking West

Cap – W Stormwater Outlet #4 looking North

Cap – West berm looking Southwest

Cap – West Berm looking NorthWest

Cap – Northwest perimeter ditch looking Northeast

Cap – North Stormwater Outlet #5 looking North

Cap – North perimeter ditch looking East

Cap – North Stormwater Outlet #6 looking Northeast

Cap – North Stormwater Outlet #6 looking Northwest

Bottom Ash Berm – East Slope looking South

Bottom Ash Berm – West Slope looking South

Bottom Ash Berm – East slope looking North

Bottom Ash Berm – West Slope looking South

Bottom Ash Berm – South Slope looking South

Bottom Ash Berm – Southwest slope looking north

Inspection Form for Closed Ponds at Ameren Facilities

Projcet Name: Quarterly Ash Pond Cap Inspection

Location: Meredosia Power Plant

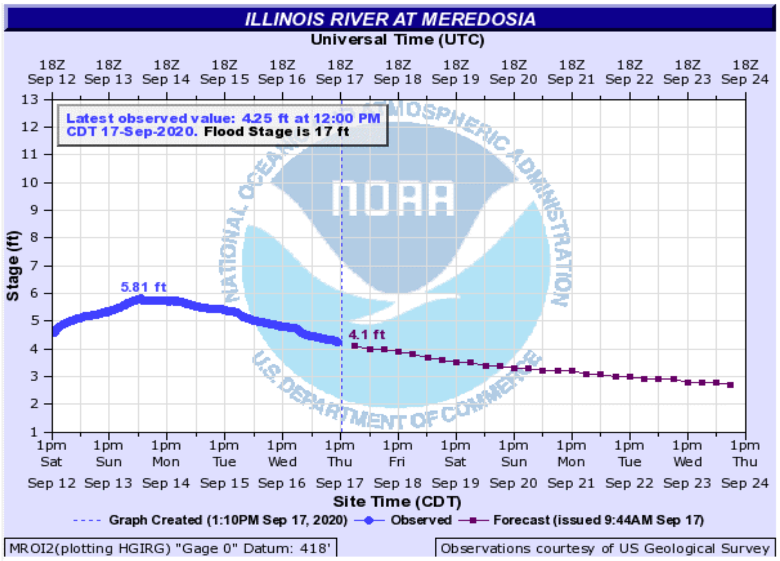
System Description: Fly Ash Pond
Bottom Ash Embankment

Engineer/Inspectors: Mike Wagstaff

Owner Representative: n/a

Inspection Date: 09/18/2020
Temperature: 60 F
Weather: sunny/hazy

River Level 422.1
at Meredosia 4.1 gage
Gage 0' = 418.00' MSL
Bottom Ash Pond bottom
is at 430.00' MSL



Overall System Rating: **Acceptable**

System Rating Codes

Acceptable System: Nearly all items or components are rated as GC or NE.

Minimally Acceptable System: One or more items are rated as MM or one or more items are rated as IM or EC and an engineering determination concludes that the IM or EC items would not prevent the system from performing as intended.

Unacceptable System: One or more items are rated as IM or EC and would prevent the system from performing as intended, or a serious deficiency noted in past inspections (which had previously resulted in a minimally acceptable system rating) has not been corrected within the established timeframe, not to exceed two years.

Condition Codes

EC = Emergency Condition. A serious dam safety condition exists that needs immediate action. Emergency measures implemented as instructed by Supervising Engineer, Dam Safety; i.e. pool draw down, work stoppage, or plant stoppage.

IM = Item needing Immediate Maintenance to restore or ensure its safety or integrity. Remediation should be completed within an appropriate timeframe as determined by the Supervising Engineer, Dam Safety.

MM = Item needing Minor Maintenance and/or repairs within the year. The safety or integrity of the item is not yet imperiled.

OB = Condition requires regular Observation to ensure that the condition does not become worse.

GC = Good Condition.

NE = No Evidence of a problem.

NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Fly Ash Pond Cap - ClosureTurf
Quarterly Site Inspection Checksheet

Date	09/18/2020
Inspector	Mike Wagstaff
Temperature	60 F
Weather	sunny/hazy

	Item	Condition Code *	Comments
Closure Cap	**Drainage Ditch/ArmorFill**	GC	ArmorFill in good condition in ditches. No change in locations/quantity of puddles in ditches.
	Sand on Cap	GC	Sand is in good condition. No need to place additional sand or sweep existing sand.
	ClosureTurf	GC	No damage or degradation evident.
	Riprap Outlet Flumes	GC	Flumes are in good condiiton. Weeds sprayed 3 weeks prior to inspection.
	Other	--	
Embankment	**Riprap**	GC	Riprap is in good condition.
	Vegetation in riprap	GC	Weeds sprayed 3 weeks prior to inspection.
	Vegetation at Toe	MM	Several logs have floated onto the vegetated area at toe of berm.
	Debris/Logs	MM	Some debris on embankment and at toe of embankment. This needs to be removed prior to mowing in the fall of 2020.
	Erosion	GC	Erosion not evident.
	Other	--	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.
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OB = Condition requires regular observation to ensure that the condition does not become worse.
GC = Good Condition. Working properly.
NE = No Evidence of a problem.
NI = Not Inspected. Reason should be stated in comment

Meredosia Power Station
Bottom Ash Embankment - ClosureTurf
Quarterly Site Inspection Checksheet

Date	09/18/2020
Inspector	Mike Wagstaff
Temperature	60 F
Weather	sunny/hazy

	Item	Condition Code *	Comments
Roadway	**Gravel Road**	**GC**	Roadway gravel is compacted and smooth.
	Drainage	**GC**	No drainage problems at this time.
	Other	**GC**	No issues.
Embankment	**Vegetation at Toe**	**GC**	Vegetation at toe looks good. Mow in Fall of 2020.
	ClosureTurf	**GC**	Turf is in good condition. Sand on slopes does not require sweeping.
	ArmorFill	**GC**	Polyurethane has been applied and sand is locked in-place. No disintegration of polyurethane material is evident at this time.
	Riprap at Toe	**GC**	Riprap at toe is in good condition and has minimal weeds. Weeds sprayed 3 weeks prior to inspection.
	Riprap Outlet Flumes	**GC**	Flumes are in good condition.
	Other	**--**	
Remaining Basin	**Side Slopes**	**GC**	Sedimentation logs are in good condition. Vegetation becoming established on the slopes.
	Bottom	**NI**	Bottom of the basin was recently submerged under approximately 10 feet of water. Vegetation is re-establishing. Some shallow ponding (<6" water) in the bottom of the pond. Minimal debris along slopes of basin.
	Outlet Riprap	**GC**	Riprap is in good condtion. Weeds sprayed 3 weeks prior to inspection.
	Toe Riprap	**GC**	Riprap in good condition. Weeds sprayed 3 weeks prior to inspection.
	Other	**--**	

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Cap – SE Berm looking SW

Cap – South berm looking West

Cap – SE Stormwater Outlet #1 looking Southeast

Cap – South berm looking Southwest

Cap – SW Perimeter Ditch W of Outlet #1 looking West

Cap – South perimeter berm at Outlet #2 looking West

Cap – Southwest Outlet #2 looking Southeast

Cap – South berm west of Outlet #2 looking Southwest

Cap – West Berm at Outlet #3 looking North

Cap – West berm Outlet #3 looking southwest

Cap – West berm north of Outlet #3 looking northwest

Cap – North perimeter ditch at Outlet #5 looking East

Bottom Ash Berm – South berm looking northeast from Ash Pond Cap

Cap – North Stormwater Outlet #6 looking Northwest

Bottom Ash Berm – East Slope looking South

Bottom Ash Berm – West Slope looking South

Bottom Ash Berm – West slope south of docking facility looking Northwest

Bottom Ash Berm – East Slope looking North

Bottom Ash Berm – East Slope looking South

Bottom Ash Berm – East slope looking north

Inspection Form for Closed Ponds at Ameren Facilities

Projcet Name: Quarterly Ash Pond Cap Inspection

Location: Meredosia Power Plant

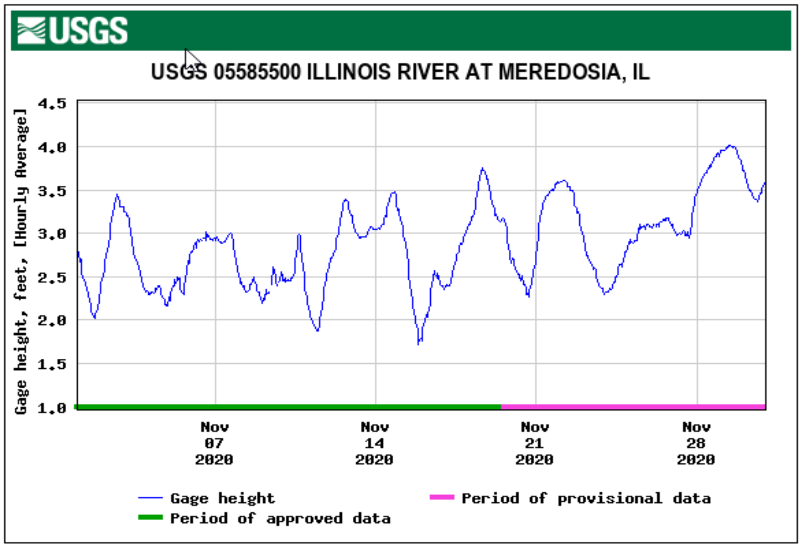
System Description: Fly Ash Pond
Bottom Ash Embankment

Engineer/Inspectors: Mike Wagstaff

Owner Representative: n/a

Inspection Date: 11/12/2020
Temperature: 50 F
Weather: sunny/hazy

River Level 420.99
gage at Meredosia 2.99
Gage 0' = 418.00' MSL
Bottom Ash Pond bottom
is at 430.00' MSL



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Unacceptable System: One or more items are rated as IM or EC and would prevent the system from performing as intended, or a serious deficiency noted in past inspections (which had previously resulted in a minimally acceptable system rating) has not been corrected within the established timeframe, not to exceed two years.

Condition Codes

EC = Emergency Condition. A serious dam safety condition exists that needs immediate action. Emergency measures implemented as instructed by Supervising Engineer, Dam Safety; i.e. pool draw down, work stoppage, or plant stoppage.

IM = Item needing Immediate Maintenance to restore or ensure its safety or integrity. Remediation should be completed within an appropriate timeframe as determined by the Supervising Engineer, Dam Safety.

MM = Item needing Minor Maintenance and/or repairs within the year. The safety or integrity of the item is not yet imperiled.

OB = Condition requires regular Observation to ensure that the condition does not become worse.

GC = Good Condition.

NE = No Evidence of a problem.

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Meredosia Power Station
Fly Ash Pond Cap - ClosureTurf
Quarterly Site Inspection Checksheet

Date	11/12/2020
Inspector	Mike Wagstaff
Temperature	50 F
Weather	sunny/hazy

	Item	Condition Code *	Comments
Closure Cap	**Drainage Ditch/ArmorFill**	**GC**	ArmorFill in good condition in ditches. No change in locations/quantity of puddles in ditches.
	Sand on Cap	**GC**	Sand is in good condition. No need to place additional sand or sweep existing sand.
	ClosureTurf	**GC**	No damage or degradation evident.
	Riprap Outlet Flumes	**GC**	Flumes are in good condiiton. Minimal weeds in outlet flumes.
	Other	**--**	
Embankment	**Riprap**	**GC**	Riprap is in good condition.
	Vegetation in riprap	**GC**	Minimal weeds on berm.
	Vegetation at Toe	**GC**	Vegetation at toe has recently been mowed and is dormant.
	Debris/Logs	**GC**	Minimal debris on embankment and at toe of embankment.
	Erosion	**MM**	Erosion at Northeast Outlet beyond toe of berm is advancing. Repair prior to spring floods.
	Other	**--**	

Condition Codes

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Meredosia Power Station
Bottom Ash Embankment - ClosureTurf
Quarterly Site Inspection Checksheet

Date	11/12/2020
Inspector	Mike Wagstaff
Temperature	50 F
Weather	sunny/hazy

	Item	Condition Code *	Comments
Roadway	**Gravel Road**	**GC**	Roadway gravel is compacted and smooth.
	Drainage	**GC**	No drainage problems at this time.
	Other	**GC**	No issues.
Embankment	**Vegetation at Toe**	**GC**	Vegetation at toe looks good. Mow in Fall of 2020.
	ClosureTurf	**GC**	Turf is in good condition. Sand on slopes does not require sweeping.
	ArmorFill	**GC**	Polyurethane has been applied and sand is locked in-place. No disintegration of polyurethane material is evident at this time.
	Riprap at Toe	**GC**	Riprap at toe is in good condition and has minimal weeds. Weeds sprayed 3 weeks prior to inspection.
	Riprap Outlet Flumes	**GC**	Flumes are in good condition.
	Other	**--**	
Remaining Basin	**Side Slopes**	**GC**	Sedimentation logs are in good condition. Vegetation becoming established on the slopes.
	Bottom	**NI**	Bottom of the basin was recently submerged under approximately 10 feet of water. Vegetation is re-establishing. Some shallow ponding (<6" water) in the bottom of the pond. Minimal debris along slopes of basin.
	Outlet Riprap	**GC**	Riprap is in good condtion. Minimal weeds in riprap.
	Toe Riprap	**GC**	Riprap in good condition. Minimal weeds in riprap.
	Other	**--**	

Condition Codes

IM = Item needing Immediate Maintenance. Remediation should be completed within 1 month.
MM = Item needing Minor Maintenance and/or repairs within the year.
OB = Condition requires regular observation to ensure that the condition does not become worse.
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Cap – Southeast Berm looking Southwest

Cap – South berm looking West

Cap – SE Stormwater Outlet #1 looking Southeast

Cap – Outlet #2 looking Southeast

Cap – SW Perimeter Ditch W of Outlet #2 looking West

Cap – West perimeter berm at Outlet #3 looking Northwest

Cap – West berm north of Outlet #3 looking Northwest

Cap – West berm south of Outlet #4 looking Northwest

Cap – West Berm at North of Outlet #4 looking Southwest

Cap – West berm North of Outlet #4 looking Northeast

Cap – North berm west of Outlet #5 looking northeast

Cap – North berm at Outlet #5 looking North at Bottom Ash Berm

Cap – North berm looking southeast west of Outlet #6

Cap –At Outlet #6 looking Northwest at erosion in ditch beyond toe of berm

Bottom Ash Berm – North end of East Slope looking South

Bottom Ash Berm – North end of West Slope looking South

Bottom Ash Berm –South slope of docking facility looking east

Bottom Ash Berm – East Slope looking North

Bottom Ash Berm – East Slope looking South

Bottom Ash Berm – East slope looking north