Intended for

AmerenEnergy Medina Valley CoGen, LLC

Date

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Project No.

1940102569

2023 ANNUAL REPORT

FORMER HUTSONVILLE POWER STATION - ASH POND A

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2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A

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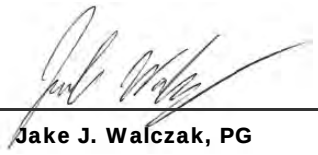

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ACRONYMS AND ABBREVIATIONS

Ameren	AmerenEnergy Medina Valley Cogen, LLC
CCW	Coal Combustion Waste
Collection Trench	Groundwater Collection System
EPA	Environmental Protection Agency
GMZ	Groundwater Management Zone
Hanson	Hanson Professional Services, Inc.
HDPE	High Density Polyethylene
Hutsonville	Former Hutsonville Power Station
IAC	Illinois Administrative Code
ILCS	Illinois Compiled Statutes
mg/L	milligrams per liter
NRT	Natural Resource Technology, Inc.
TDS	Total Dissolved Solids

1. INTRODUCTION

1.1 Background

This report has been prepared for AmerenEnergy Medina Valley Cogen, LLC (Ameren) to summarize 2023 groundwater monitoring results for closed Ash Pond A at the former Hutsonville Power Station (Hutsonville). Ash Pond A, originally constructed with an 80-mil high-density polyethylene (HDPE) liner, received sluiced fly ash between 1986-2011, and is located near the southwest portion of the former power station (**Figure 1-1**).

Closure activities for the Hutsonville coal combustion waste (CCW) ponds, consisting of Ash Ponds A, B, C, and the Bottom Ash Sluice Pond, were completed in June 2016 in accordance with Ash Ponds Closure, Closure Plan, dated September 15, 2014 (Closure Plan) (Hanson Professional Services, Inc. [Hanson], Natural Resource Technology [NRT], 2014a), and the site-specific rule for closure of Ash Pond D, Part 840 of Title 35 of the Illinois Administrative Code (35 IAC 840), to the extent feasible. Closure activities for Ash Pond A included placement of ash transferred from Ash Ponds B, C, the Bottom Ash Sluice Pond, and spoils from clean-up of the coal yard, and capping with a low permeability geomembrane (40-mil high density polyethylene [HDPE]) covered with protective soil. Ash Ponds B, C, and the Bottom Ash Sluice Pond were clean-closed by relocating accumulated ash to Ash Pond A and re-grading the pond areas for proper drainage. The Ash Pond A Closure Completion Report (Ameren, 2017) was approved by the Illinois Environmental Protection Agency (EPA) in March 2017.

Ameren completed closure activities for Ash Pond D in 2013 in accordance with 35 IAC 840. These activities included placement of a 40-mil HDPE geomembrane cap covered with a three -foot thick vegetative soil layer, construction of surface water control structures, and construction of a groundwater collection system (i.e., Collection Trench). Operation of the Collection Trench began in April 2015 following discharge authorization under Hutsonville's renewed National Pollutant Discharge Elimination System (NPDES) permit (IL0004120).

Since Ash Ponds B, C, and the Bottom Ash Sluice Pond were clean-closed, the Ash Ponds Closure, Groundwater Monitoring Plan, dated September 15, 2014 (Groundwater Monitoring Plan) (Hanson, NRT, 2014b) and associated annual reports are for Ash Pond A. The Groundwater Monitoring Plan was prepared in accordance with 35 IAC 840.114 and 35 IAC 840.116 and 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**.

The groundwater monitoring system for Ash Pond A (**Figure 1-2**), as defined by the Groundwater Monitoring Plan, originally consisted of two background monitoring wells, MW-10 and MW-10D, and nine downgradient compliance monitoring wells MW-2R, MW-2D, MW-3, MW-3D, MW-4, MW-5, MW-12, MW-22S, and MW-22D. Background wells MW-10 and MW-10D were destroyed due to construction unrelated to Ameren operations after the first quarter 2016 monitoring period. No trace of the former background wells was found using a metal detector, probes, or digging. As a result, these wells were replaced with background monitoring wells

MW-23S and MW-23D in November 2017. In addition, several other monitoring wells and piezometers located at Hutsonville are measured for groundwater level so that groundwater elevation contour maps can be created for the entire site.

In conjunction with Ameren's request for approval of the Closure Plan, Ameren submitted a request to establish a groundwater management zone (GMZ) pursuant to 35 IAC 620.250(a)(2), Ash Ponds Closure, Groundwater Management Zone Application, dated September 8, 2014 (GMZ Application) (Hanson, NRT, 2014c), which was approved along with the Closure Plan. The GMZ is a three-dimensional region containing groundwater being managed to mitigate impacts from a potential release of leachate from the facility. Impacts observed during groundwater monitoring conducted 2011-2014 included concentrations for dissolved boron, dissolved sulfate, dissolved manganese, and Total Dissolved Solids (TDS) higher than 35 ICA 620.410 Class I groundwater quality standards within the GMZ. The GMZ is shown on **Figure 1-2**.

Post-closure groundwater monitoring began in 2016. Annual reporting according to the Groundwater Monitoring Plan and the Ash Ponds Closure, Post-Closure Care Plan, dated September 8, 2014 (Post-Closure Care Plan) (Hanson, NRT, 2014d), began after the Closure Completion Report was approved by Illinois EPA in March 2017. This sixth annual report includes the following elements:

- A summary of groundwater monitoring data collected in 2022 and 2023 and used for annual trend and statistical analysis; data tables are included in **Appendix A**.
- Quarterly Site Inspection Forms, including observations and descriptions of any maintenance activities performed on the pond cap, embankment, and Collection Trench and discharge system (**Appendix B**).
- Methodology for the outlier and trend analyses, per Section 7.2.1 of the Groundwater Monitoring Plan, along with results for these analyses including an assessment of any statistically significant increasing trends (**Appendix C**).

1.2 Groundwater Quality Overview – 2017 to 2023

1.2.1 Summary of Cover System Construction and Maintenance

Ash Pond A was originally constructed with an 80-mil HDPE liner. Closure activities for Ash Pond A included grading according to the Closure Plan and capping with a low-permeability geomembrane (40-mil HDPE) covered with protective soil.

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

1.2.2 Summary of 2017 to 2023 Groundwater Quality Data Review

Groundwater quality data collected since the approval of the Ash Pond A Closure Completion Report in 2017 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 Groundwater Monitoring Plan, which are focused on specific

compliance criteria and proposed mitigation actions. This review is intended as a holistic view of groundwater quality over time since closure.

Dissolved boron was identified as the primary indicator constituent for coal ash leachate impacts to groundwater at Ash Pond A in the Closure Plan. As such, dissolved boron was selected for this groundwater quality data review. Dissolved boron concentrations since 2017 are presented in **Figures 1-3 through 1-7**. On the figures, the lines through the concentration data represent the best fit linear regressions for dissolved boron concentrations in each well. Best fit linear regression lines are included in the figures to provide a convenient means of evaluating general concentration patterns since closure. 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, dissolved boron concentrations in most compliance monitoring wells have been stable or decreasing since 2017 and are currently below the 35 IAC 620.410 Class I Groundwater Standard for the majority of the compliance groundwater monitoring wells, with the exceptions of MW-3D, MW-22S, and MW-22D.

Dissolved sulfate was also identified as an indicator constituent for coal ash at Ash Pond A in the Closure Plan; however, dissolved sulfate can have other anthropogenic sources for elevated concentrations in groundwater, and dissolved sulfate concentrations can decrease in groundwater under strongly reducing conditions. These caveats make dissolved sulfate a less reliable indicator for coal ash impacts than dissolved boron. Dissolved sulfate concentrations since 2017 are presented in **Figures 1-8 through 1-12**. Similar to dissolved boron, dissolved sulfate concentrations have been stable or decreasing since the closure completion with the exception of MW-22D.

In addition, since 2017, several decreasing trends for various analytical parameters were identified and are discussed in **Section 3.3**, summarized on **Table 3-2**, and detailed in **Appendix C4**.

1.2.3 Conclusion

The stable or decreasing dissolved boron and sulfate 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. 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 dissolved boron concentrations would stabilize shortly after the closure plan is implemented in monitoring wells with low concentrations (wells MW-5 and MW-9), while other wells were predicted to take as long as 40 years to stabilize.

2. GROUNDWATER MONITORING PLAN COMPLIANCE

2.1 Applicable Groundwater Quality Standards

2.1.1 On-Site Groundwater Standards

A GMZ has been established around the maximum predicted area of on-site groundwater impacts associated with Ponds A, B, and C. As described in Section 7.1 of the Groundwater Monitoring Plan and pursuant to 35 IAC 840.16(a):

- Prior to the completion of the post-closure care period, the on-site applicable groundwater quality standards at Ash Pond A are the greater of either the actual groundwater monitoring result, or the Class I Potable Resource Groundwater standard set forth in 35 IAC 620.410.
- After completion of the post-closure care period, if the on-site concentrations of contaminants from Ash Pond A, as determined by groundwater monitoring, exceed the numeric standards for Class I Potable Resource Groundwater set forth in 35 IAC 620.410, the observed concentrations are the applicable groundwater standards at Ash Pond A if the following criteria are addressed to the satisfaction of the IEPA:
  - To the extent practicable, the exceedance has been minimized and beneficial use, as appropriate for the class of groundwater, has been returned on site.
  - Any threat to public health or the environment on site has been minimized.
  - An institutional control prohibiting potable uses of groundwater is placed on Ash Pond A in accordance with the Uniform Environmental Covenants Act (765 Illinois Compiled Statutes (ILCS) 122) or an alternative instrument authorized for environmental uses under Illinois law and approved by the IEPA. Existing potable uses of groundwater may be preserved as long as such uses remain fit for human consumption in accordance with accepted water supply principles.

2.1.2 Off-Site Groundwater Standards

For off-site groundwater compliance, the groundwater quality standards are the Class I potable resource groundwater standards [35 IAC 620.410]. Although the established GMZ does not extend south of the former Hutsonville Power Station's property boundary, an agreement[1] exists between Ameren and the south property owner regarding shallow well drilling. This restriction covers the first 25 feet of the water table and lies within a 500-ft offset south of the southern property boundary of the former Hutsonville Power Station.

2.2 Demonstration of Compliance

Compliance will be based on attainment of groundwater quality that meets the numeric standards for Class I potable resource groundwater as set forth in 35 IAC 620.410. Groundwater quality that does not meet the Class I standard will be considered in compliance when no statistically significant increasing trend can be attributed to the ash ponds at the compliance GMZ boundary for four (4) consecutive years, which must be approved by the IEPA. Post-closure groundwater compliance monitoring will continue for a minimum of ten years from the IEPA's approval of the Closure Plan.

[1] Available at: http://www.ipcb.state.il.us/documents/dsweb/Get/Document-65177 as Chapter 9 of the Rulemaking Technical Support Documents.

2.2.1 Compliance Determination

As described in Section 7.2.1 of the Groundwater Monitoring Plan:

- GMZ compliance is demonstrated by performing an annual trend analysis for each monitoring well located at the downgradient boundaries of the former Hutsonville 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 four consecutive samples.
- If the results of the trend analysis show a positive slope at any compliance monitoring well located at the downgradient boundaries of the former Hutsonville Power Station, a Mann-Kendall test will be performed at 95 percent confidence to determine whether or not the increasing slope represents a statistically significant increasing trend. Ameren will investigate the cause of a statistically significant increasing trend as described below.
  - 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.

3. DATA ANALYSIS

3.1 Groundwater Flow

Groundwater flow for 2023 is represented using groundwater elevation contour maps for each quarterly sampling event (**Figures 3-1 through 3-4**). Groundwater in the upper (shallow) migration zone generally flowed from west to east and northeast towards the Wabash River during 2023, which is consistent with past evaluations. The Collection Trench began operation in April 2015, and following startup, groundwater elevations have exhibited localized flow toward the trench with groundwater elevations generally lower near the trench (**Figure 3-5**). In the depictions of groundwater elevation contours, dashed lines have been used to infer the localized drawdown of groundwater levels resulting from trench operation, which is necessary with limited wells situated laterally along the length of the trench.

The horizontal hydraulic gradient in the upper migration zone beneath the northern extent of Ash Pond A was calculated for each quarterly monitoring event between adjacent contours along the northern boundary of Ash Pond A illustrated in **Figures 3-1 through Figure 3-4** and ranged from approximately 0.004 to 0.005 feet/feet during 2023. Horizontal hydraulic gradient was not calculated near the southern end of the pond due to the potential influence of the Collection Trench on groundwater flow.

Groundwater flow within the lower (deep alluvial) migration zone along the edge of the Wabash River valley was not contoured since all the deep alluvial monitoring wells are within a narrow zone between Ash Pond D and the Wabash River. Groundwater within the lower zone generally flows from southwest to northeast towards the Wabash River.

3.2 Review of Analytical Data (2022-2023)

Groundwater samples from the most recent eight monitoring events were collected on March 21, 2022; June 20, 2022; August 8, 2022; October 24, 2022; February 20, 2023; June 5, 2023; August 28, 2023; and October 23, 2023. All field and laboratory analytical results are tabulated in **Appendix A**. 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:

- MW-3: Not sampled in the second, third, and fourth quarter of 2022 and all quarters in 2023 due to insufficient water level.
- MW-4: Not sampled in the third and fourth quarter of 2023 due to insufficient water level.

Results of groundwater monitoring for constituents that exceeded the 35 IAC 620.410 Class I Groundwater Standard when the GMZ was established (boron, sulfate, manganese, and TDS) are discussed below:

- Dissolved boron has been identified as the primary indicator constituent for coal ash impacts to groundwater at Ash Pond A (see **Section 1.2.2**). In the 2022-2023 monitoring period, dissolved boron concentrations ranged from 0.05 to 6.5 milligrams per liter (mg/L) in compliance monitoring wells (**Figures 3-6 and 3-7**). Dissolved boron concentrations were highest at MW-22D and MW-3D in 2022 and 2023. As discussed in **Sections 1.2.2 and 1.2.3**, dissolved boron concentrations have been stable or decreasing in the majority of compliance monitoring wells across the site since closure. During the current monitoring period, dissolved

boron concentrations continue to be generally stable, indicating the cover system is functioning to improve overall groundwater quality beneath the ponds.

- Dissolved sulfate has also been identified as an indicator for coal ash impacts to groundwater at Ash Pond A (see **Section 1.2.2**). In the 2022-2023 monitoring period, dissolved sulfate concentrations ranged from 1 to 4,000 mg/L in compliance monitoring wells (**Figures 3--8 and 3-9**). Dissolved sulfate concentrations were highest at MW-22S, MW-22D, and MW-3D in 2022 and 2023; dissolved boron concentrations were also highest at MW-22D and MW-3D.
- Box-whisker plots and timeseries plots illustrating concentrations for the most recent eight monitoring events (2022-2023) were also developed for dissolved manganese and TDS (**Figures 3-10 through 3-13**). Similar to the identified indicator parameters, these parameters showed generally stable trends during this reporting period.

3.3 Statistical Analyses

Analytical data were evaluated to identify short-term (compliance) data trends in the 2022-2023 dataset. Trends were evaluated according to the procedure outlined in the Groundwater Monitoring Plan.

3.3.1 Outlier Analysis

The Grubbs outlier test provides statistical evidence of potential outliers by identifying high or low observations that differ significantly from the other data. The test methodology and results are listed in **Appendices C1 and C2**, respectively. Outliers identified during the compliance period (2022-2023) by the Grubbs outlier test based on the date range of 1984-2023 were not eliminated from further statistical analysis due the lack of documentation indicating that they are not representative of actual field conditions. In addition, the identified outliers did not have any influence on the short-term compliance trends.

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 **Appendices C1 and C3**, respectively.

Data collected in 2022-2023 show 23 cases with positive slopes, 22 cases with negative slopes, and 205 cases with no slope (**Table 3-1**). Sen's Estimate of Slope requires a minimum of four consecutive samples. Note that this analysis was not performed for MW-3 since only one sample was collected during 2022-2023.

3.3.3 Mann-Kendall Trend Analysis

The 23 cases of positive Sen's slopes referenced above were tested using the Mann-Kendall test to determine if the positive slopes represented statistically significant increasing trends. The Mann-Kendall test is a non-parametric, one-tailed test to determine whether a dataset has a statistically significant trend (increasing or decreasing). The test methodology and results are described in **Appendices C1** and **Appendix C3**, respectively. Increasing short-term (compliance) trends are identified in **Tables 3-1 and 3-2**.

The Mann-Kendall test detected eight cases of statistically significant increasing trend in the 2022-2023 dataset. These cases occurred for dissolved boron at MW-3D; dissolved sulfate at MW-5 and MW-22D; TDS at MW-3D and MW-5; dissolved nitrate at MW-5; and dissolved zinc and fluoride at MW-22S. During this reporting period, dissolved sulfate, TDS, and dissolved nitrate concentrations at MW-5 and dissolved zinc and fluoride concentrations at MW-22S were below their respective 35 IAC 620.410 Class I Groundwater Standards, whereas dissolved boron and TDS concentrations at MW-3D and dissolved sulfate concentration at MW-22D exceeded their respective Class I Groundwater Standard.

3.4 Site Inspection

The Post-Closure Care Plan requires quarterly inspections for a minimum of 10 years until completion of the post-closure care period. Inspections are also required after storm events defined as a 25-year, 24-hour event, or 5.37 inches of precipitation. Discontinuation of the 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, surface water control features, and the Collection Trench.

For 2023, the site inspections were performed on February 16, June 30, September 11, and December 19. Observations and subsequent actions are summarized in **Table A** below.

Table A. Summary of 2023 Quarterly Site Inspection Observations and Actions.

Inspection Month	Observation	Action Taken
February	Animal borrows in east embankment	Repaired in June 2023
June	Communication from flow totalizer associated with the Collection Trench was interrupted in early spring	The modem for the totalizer was upgraded in fourth quarter of 2023 to restore communications
September	Rip-rap at the North and Southwest Letdowns slid, exposing fabric and dirt	Repaired in September 2023
September	Pump #2 operating intermittently and piping leaks inside pit, High particulate in pit #2	Repaired in September 2023
September	Main gate destroyed by unknown driver	Repairs are scheduled for early 2024

The other components of the closure system were in good condition. The inspection reports for 2023 are included in **Appendix B**.

4. EVALUATION OF COMPLIANCE

The parameters and wells with statistically significant increasing short-term trends and concentrations above the 35 IAC 620.410 Class I Groundwater Standards have been identified in **Section 3.3.3** and in **Table 3-1** for the most recent eight monitoring events (2022-2023). Dissolved boron and TDS at MW-3D and dissolved sulfate at MW-22D had both a statistically significant increasing short-term trend and concentration above the Class I Groundwater Standard during the compliance period (2022-2023). These short-term increasing trends were isolated and not repeated from the 2021-2022 monitoring period; as such, no further action is required at this time.

5. CONCLUSIONS

Cover system construction and maintenance, as well as stable or decreasing dissolved boron and sulfate 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 groundwater samples collected during the 2022-2023 compliance period at the Hutsonville Ash Pond A identified both concentrations above the 35 IAC 620.410 Class I Groundwater Standard and a short-term increasing trend for dissolved boron and TDS at MW-3D and dissolved sulfate at MW-22D. These were isolated and not repeated from the 2021-2022 monitoring period; as such, no further action is required at this time. The concentrations of indicator parameters will continue to be monitored and evaluated in 2024.

6. REFERENCES

Ameren, 2017. *Closure Completion Report*. March 30, 2017.

Hanson Professional Services, Inc. (Hanson), Natural Resource Technology, Inc. (NRT), 2014a. *Ash Ponds Closure, Closure Plan – Hutsonville Power Station*. September 15, 2014.

Hanson Professional Services, Inc. (Hanson), Natural Resource Technology, Inc. (NRT), 2014b. *Ash Ponds Closure, Groundwater Monitoring Plan – Hutsonville Power Station.* September 15, 2014.

Hanson Professional Services, Inc. (Hanson), Natural Resource Technology, Inc. (NRT), 2014c. *Ash Ponds Closure, Groundwater Management Zone Application – Hutsonville Power Station*. September 8, 2014.

Hanson Professional Services, Inc. (Hanson), Natural Resource Technology, Inc. (NRT), 2014d. *Ash Ponds Closure, Post-Closure Care Plan – Hutsonville Power Station*. September 8, 2014.

TABLES

Table 1-1. Groundwater Monitoring Program Schedule
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Former Hutsonville Power Station - Ash Pond A

Frequency	Duration	Sampling Quarter	Report Due Date
Quarterly	Begins: January 2016	January- March (1) April - June (2) July - September (3) October - December (4)	May 31 August 31 November 30 February 28
	Ends: After successful completion of the post-closure activities required and approval of the Illinois EPA.		

Table 1-2. Groundwater Monitoring System Wells
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Former Hutsonville Power Station - Ash Pond A

Well	Installation Date	Surface Elevation[1] (ft, MSL[2])	TOC[1, 3] Elevation (ft, MSL[2])	Top of Screen Elevation[4] (ft, MSL[2])	Bottom of Screen Elevation[4] (ft, MSL[2])	Total Well Depth[5] (ft, BGS[2])	Objective	Position	Monitoring Zone[6]
Ash Pond A Groundwater Monitoring System Wells: Water Quality and Groundwater Elevations									
MW-2R	6/4/2012	453.0	455.37	446.0	435.3	17.8	Compliance	Downgradient	UZ - s&g
MW-2D	10/14/2015	452.9	455.42	435.1	430.4	23.1	Compliance	Downgradient	UZ - ss
MW-3	2/9/1984	453.7	454.84	447.7	442.7	11.0	Compliance	Downgradient	UZ - s&g
MW-3D	10/6/1998	453.57	455.01	433.6	428.6	25.0	Compliance	Downgradient	UZ - ss
MW-4	2/13/1984	454.0	456.76	449.4	441.9	12.1	Compliance	Downgradient	UZ - s&g, ss
MW-5	2/13/1984	452.1	454.67	447.3	434.3	17.8	Compliance	Downgradient	UZ - s&g, ss
MW-10[7]	10/7/1998	452.9	454.23	447.2	442.2	10.7	Background	Upgradient	UZ - si s&g, ss
MW-10D[7]	10/7/1998	452.9	454.65	436.6	431.6	21.3	Background	Upgradient	UZ - ss
MW-23S[7]	11/28/2017	453.4	456.03	444.2	438.9	14.5	Background	Upgradient	UZ - s si, si s, ss
MW-23D[7]	11/28/2017	453.5	455.90	434.0	428.7	24.8	Background	Upgradient	UZ - ss, sh
MW-12	10/8/1998	455.5	456.74	448.6	438.6	16.9	Compliance	Downgradient	UZ - s&g
MW-22S	10/14/2015	449.2	451.48	441.9	437.2	12.7	Compliance	Downgradient	UZ - si s&g, ss
MW-22D	10/14/2015	449.1	451.36	431.7	427.0	22.7	Compliance	Downgradient	UZ - si s&g, ss
Other Monitoring Wells and Piezometers: Groundwater Elevations									
MW-6	2/9/1984	438.7	443.17	433.9	427.5	11.2	- -	- -	UZ - s&g, ss
MW-7	2/8/1984	439.9	442.28	422.9	412.9	27.0	- -	- -	UZ - si s&g
MW-7D	10/5/1998	438.9	442.75	398.2	393.2	45.7	- -	- -	LZ - si s&g
MW-8	2/8/1984	440.0	443.65	422.9	417.9	22.1	- -	- -	UZ - si sand
MW-9	2/14/1984	451.7	454.38	443.5	433.5	18.2	- -	- -	UZ - s&g
MW-11R	10/3/2001	440.4	443.01	435.4	425.4	15.0	- -	- -	UZ - s&g
MW-14	10/3/2001	440.1	442.89	412.9	407.9	32.2	- -	- -	LZ - s&g
MW-115S	5/1/2004	438.7	440.88	408.4	403.4	35.3	- -	- -	LZ - s&g
MW-115D	5/1/2004	439.1	441.39	356.4	351.4	87.7	- -	- -	LZ - s&g
MW-121	10/2/2001	439.2	440.23	403.8	398.8	40.3	- -	- -	LZ - s&g

[O: JJW 4/22/19; C:EDP 4/22/19]

Notes:

1. Well survey data collected by Lamac Engineering November 30, 2017 to December 1, 2017.
2. BGS = below ground surface; MSL = mean sea level.
3. TOC = top of casing
4. Screen elevations presented in the table reflect values provided in boring logs or well construction forms and assume no changes to the screen elevations occurred after well installation.
5. The total well depth is assumed to be equal to the depth to the bottom of screen from ground surface when data is not available in boring logs or well construction forms.
6. UZ = Upper Zone, LZ = Lower Zone (deep alluvial aquifer); s = sand or sandy, s&g = sand and gravel, si = silt or silty, ss = sandstone, sh = shale
7. Background wells MW-10 and MW-10D were damaged and replaced with background wells MW-23D and MW-23S.

- - Not applicable. Wells listed are for development of groundwater elevation contour maps only.

Table 1-3. Groundwater Monitoring Program Parameters
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Field Parameters	STORET Code
pH[2]	00400
Specific Conductance[2]	00094
Temperature (Fahrenheit)	00011
Depth to Water (BMP)	72109
Elevation of GW Surface[2]	71993
Depth of Well (BGS)[2]	72008
Elevation of Measuring Point	72110
Laboratory Parameters[1]	**STORET Code**
Boron[2]	01020
Iron[2]	01046
Manganese[2]	01056
Sulfate[2]	00946
Total Dissolved Solids (TDS)[2]	70300
Antimony	01095
Arsenic	01000
Barium	01005
Beryllium	01010
Cadmium	01025
Chloride	00941
Chromium	01030
Cobalt	01035
Copper	01040
Cyanide	00720
Fluoride	00950
Lead	01049
Mercury	71890
Nickel	01065
Nitrate as N	00618
Selenium	01145
Silver	01075
Thallium	01057
Vanadiium	01085
Zinc	01090

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

Notes:

[1] Reported as dissolved (filtered) concentrations.

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

Table 3-1. Trend Analysis Results
2023 Annual Report
Former Hutsonville Power Station - Ash Pond A

	MW-2R	MW-2D	MW-3	MW-3D	MW-4	MW-5	MW-12	MW-22D	MW-22S	MW-23D	MW-23S
Number of Samples	**8**	**8**	**3**	**8**	**6**	**8**	**8**	**8**	**8**	**8**	**8**
Antimony, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Arsenic, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Barium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Beryllium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Boron, dissolved	Decrease	None	ID	Increase	None	None	None	Decrease	+	None	None
Cadmium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Chloride, dissolved	Decrease	+	ID	+	-	-	+	None	-	Decrease	-
Chromium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Cobalt, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Copper, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Cyanide, total	None	None	ID	None	None	None	None	None	None	None	None
Fluoride, dissolved	None	None	ID	None	None	None	None	None	Increase	None	None
Iron, dissolved	None	None	ID	+	None	None	None	+	-	None	None
Lead, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Manganese, dissolved	None	None	ID	+	None	None	None	+	-	None	None
Mercury, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Nickel, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Nitrate nitrogen, dissolved	+	None	ID	-	-	Increase	None	None	None	None	None
Selenium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Silver, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Sulfate, dissolved	+	+	ID	+	Decrease	Increase	Decrease	Increase	+	-	Decrease
Thallium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Total Dissolved Solids	+	-	ID	Increase	-	Increase	Decrease	+	-	-	-
Vanadium, dissolved	None	None	ID	None	None	None	None	None	None	None	None
Zinc, dissolved	None	None	ID	None	None	None	None	None	Increase	None	None

Notes: [O: RSD 01/08/24 , C: KLT 01/09/24]

- "+" indicates that the Sen's non-parametric estimate of the median slope is positive.
- "-" indicates that the Sen's non-parametric estimate of the median slope is negative.
- "Decrease" indicates a statistically significant decreasing trend
- "Increase" indicates a statistically significant increasing trend
- Mann Kendall Trend analysis done with non-detects at one half the reporting limit.
- The most recent eight sampling events were used for analysis; date range for this analysis is 1/1/2022-12/31/2023.
- Green shading indicates increasing trends as determined using the Mann-Kendall test at 95% confidence for constituents with maximum concentration lower 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.
- ID indicated that there was insufficient data to perform Sen's Estimate of Slope.

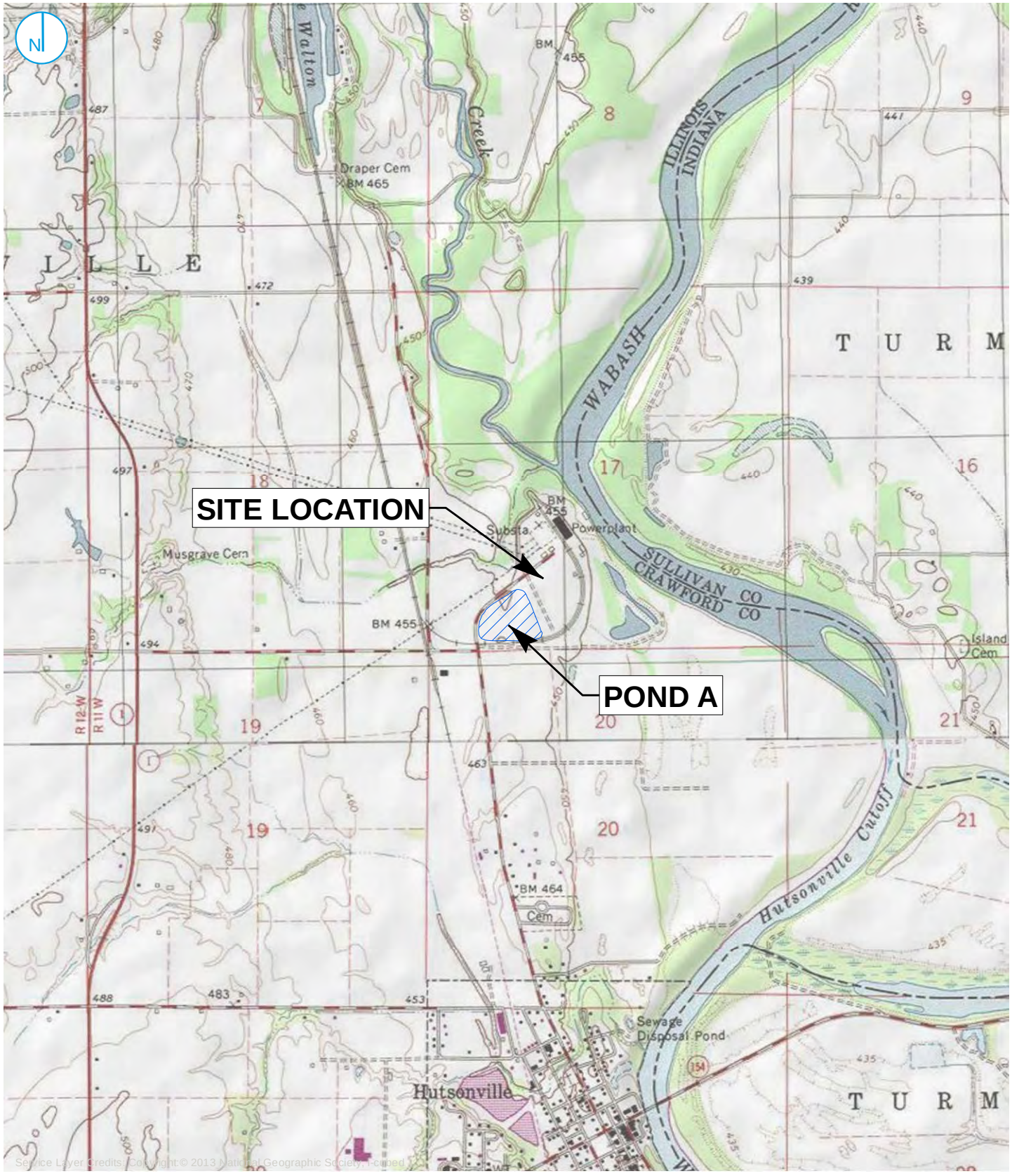
Table 3-2. Summary of Trend Analyses
2023 Annual Report
Former Hutsonville Power Station - Ash Pond A

Time Period	Short-Term Increasing Trends	Long-Term Decreasing Concentration Patterns
2016-2017	8	13
2017-2018	9	
2018-2019	10	
2019-2020	3	
2020-2021	4	
2021-2022	0	
2022-2023	8	

[O: EJT 01/26/24, C: RAB 01/26/24]

Notes:
Trends based on data collected during the specified periods.
The number of samples per well location for short-term trends are noted on Table 3-1.
Long-terms trends were calculated with data since completion of closure in March 2017.

FIGURES



PROJECT: 72971 | DATED: 1/13/2021 | DESIGNER: galammc

Y:\Mapping\Projects\24\2420\MXDs\2020APA\Figure 1-1_Site Location Map Ash Pond D2.mxd

Map Scale: 1:1:24,000;
Map Center: 87°39'45"W 39°7'53"N

0 1,000 2,000 Feet

SITE LOCATION MAP

2023 ANNUAL REPORT
FORMER HUTSONVILLE
POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

FIGURE 1-1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL

Y:\Mapping\Projects\241420\MXDs\2022APA\Figure 1-2_Monitoring Well Location Map.mxd

PROJECT: 169000XXXX | DATED: 1/24/2023 | DESIGNER: galamnc

- ASH POND D MONITORING WELL LOCATION
- NESTED ASH POND D MONITORING WELL LOCATION
- ASH POND A MONITORING WELL LOCATION
- NESTED ASH POND A MONITORING WELL LOCATION
- ABANDONED NESTED MONITORING WELL LOCATION
- PROPERTY LINE
- APPROXIMATE BOUNDARY OF CAPPED ASH POND
- GROUNDWATER COLLECTION TRENCH (BEGAN OPERATION APRIL 2015)
- LIMITS OF GROUNDWATER MANAGEMENT ZONE

0 150 300 Feet

MONITORING WELL LOCATION MAP

2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

FIGURE 1-2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL

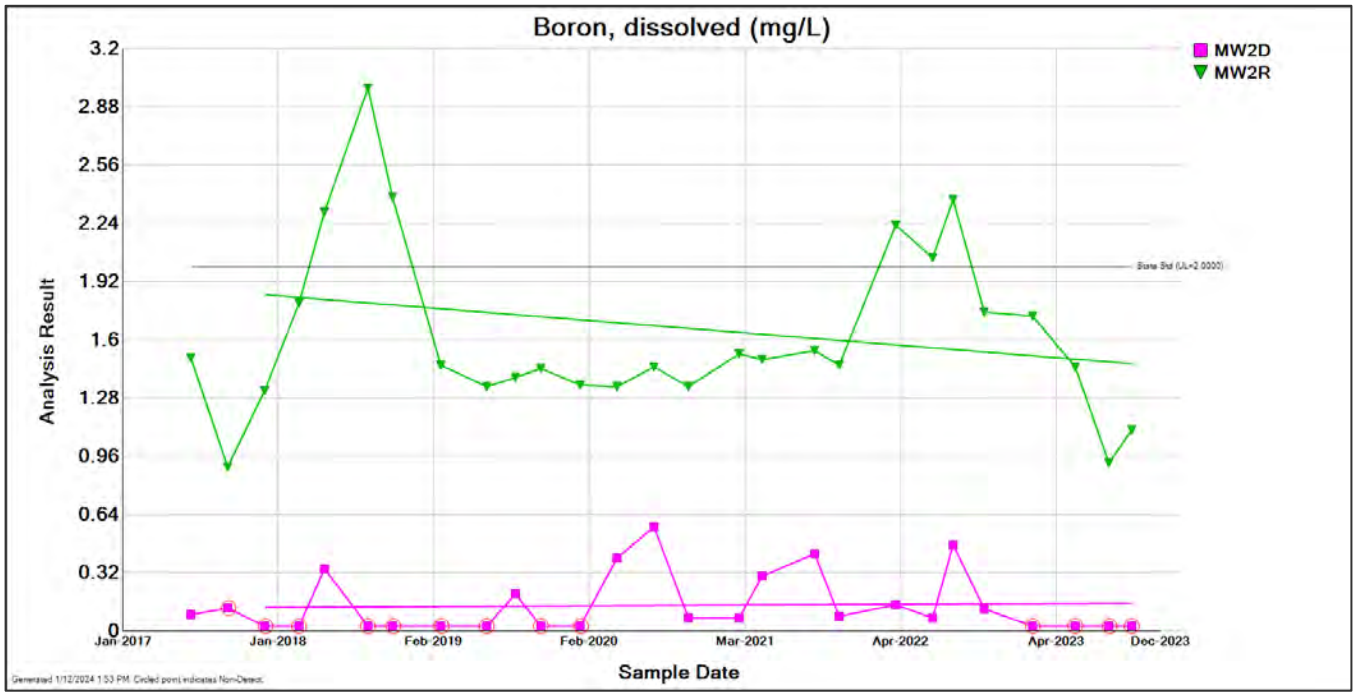


Figure 1-3. Boron concentrations since 2017 at compliance wells MW-2D and MW-2R. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

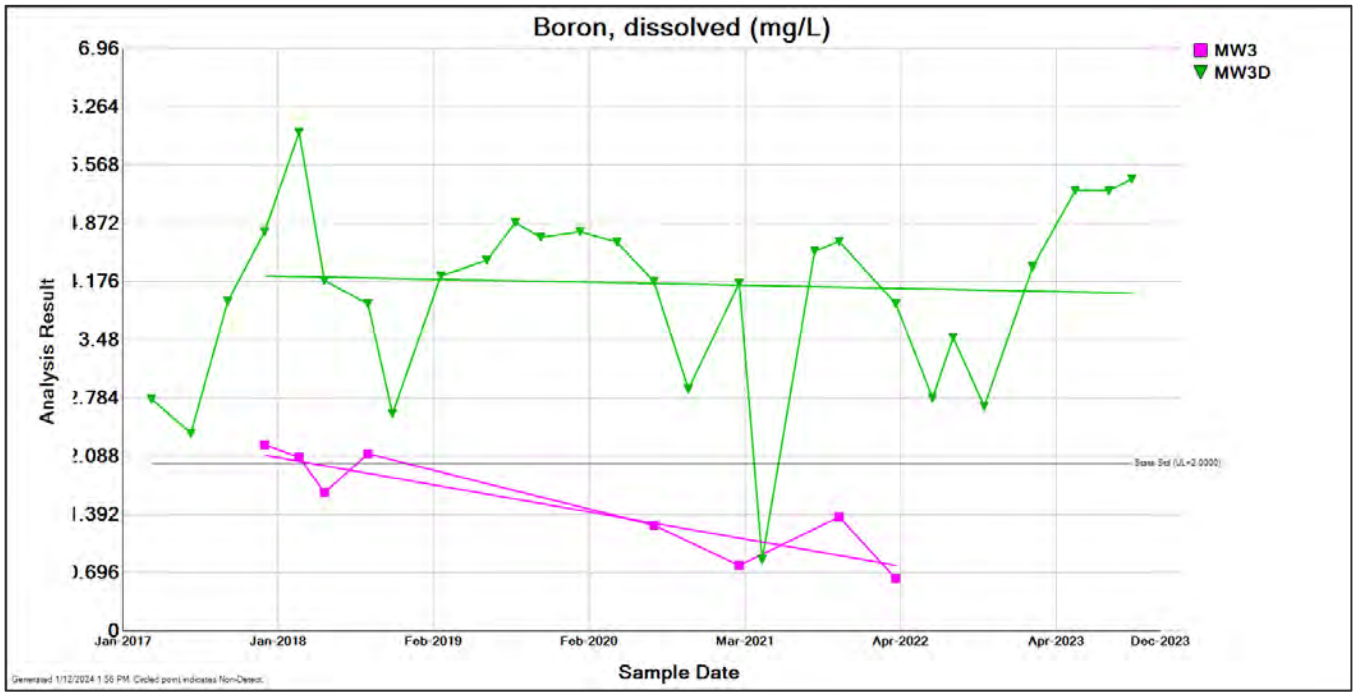


Figure 1-4. Boron concentrations since 2017 at compliance wells MW-3 and MW-3D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

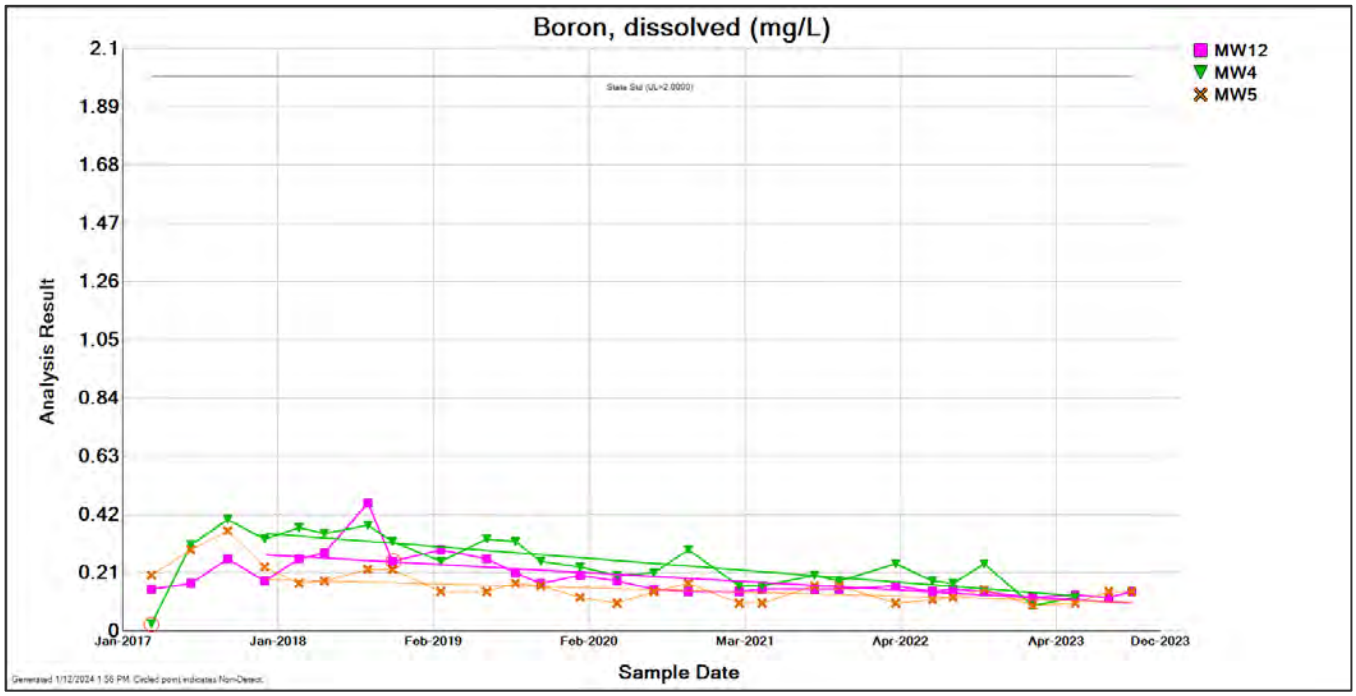


Figure 1-5. Boron concentrations since 2017 at compliance wells MW-4, MW-5, and MW-12. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

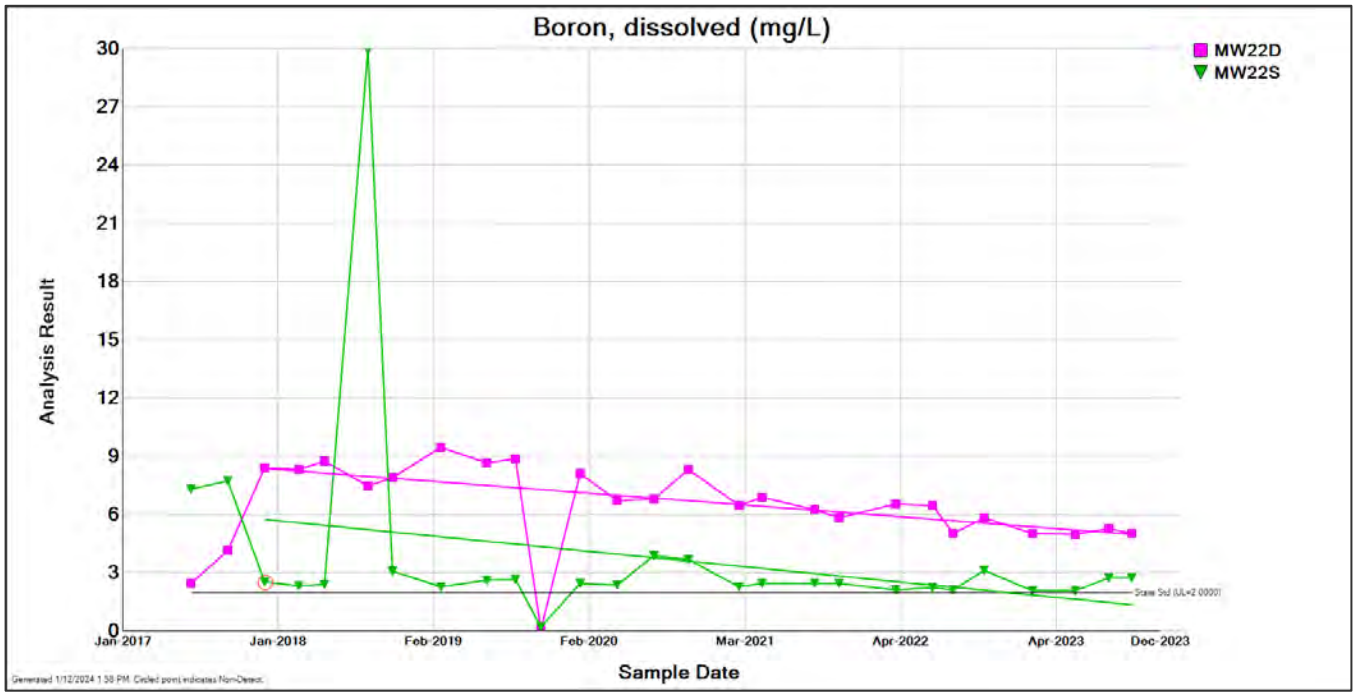


Figure 1-6. Boron concentrations since 2017 at compliance wells MW-22S and MW-22D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

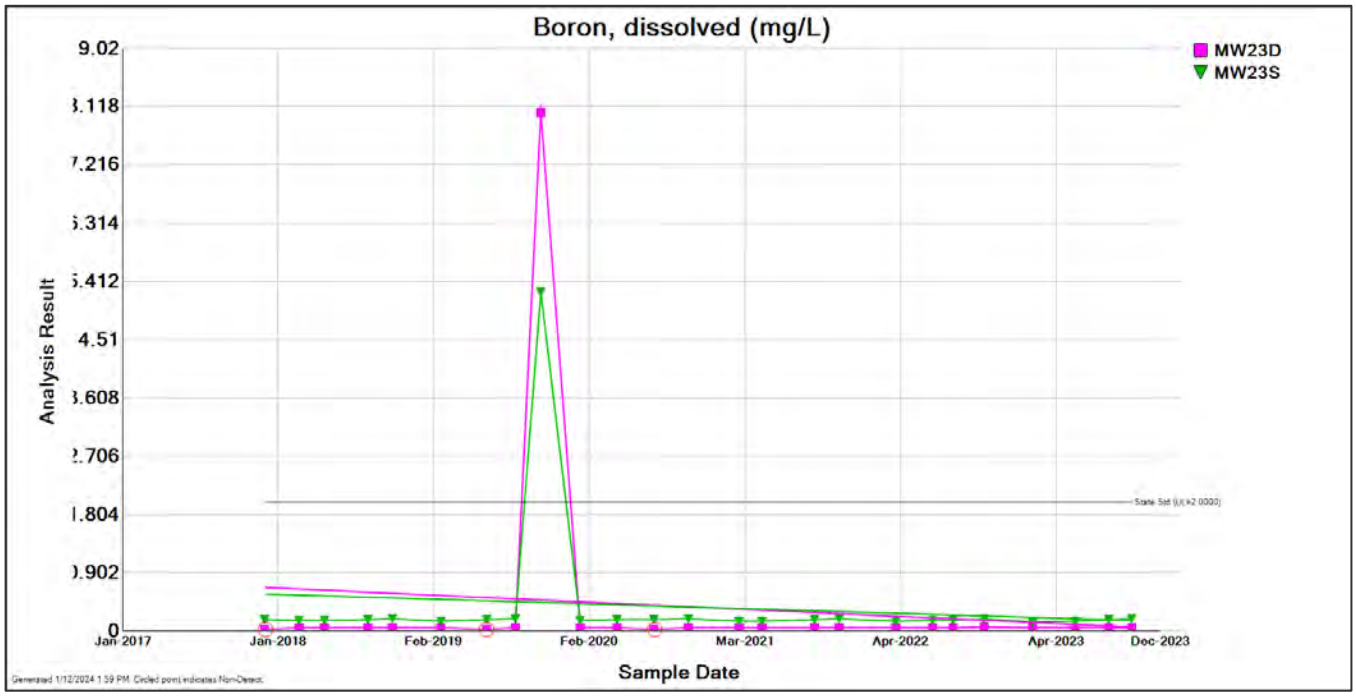


Figure 1-7. Boron concentrations since 2017 at compliance wells MW-23S and MW-23D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

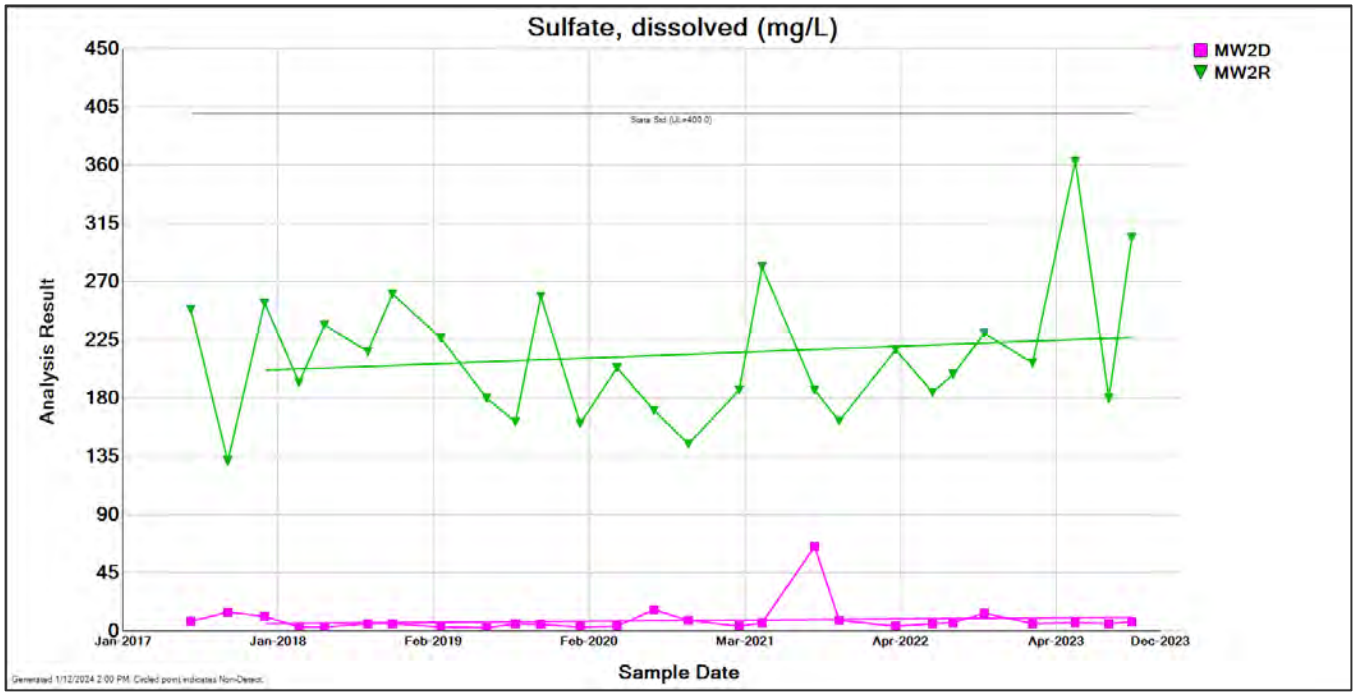


Figure 1-8. Sulfate concentrations since 2017 at compliance wells MW-2D and MW-2R. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

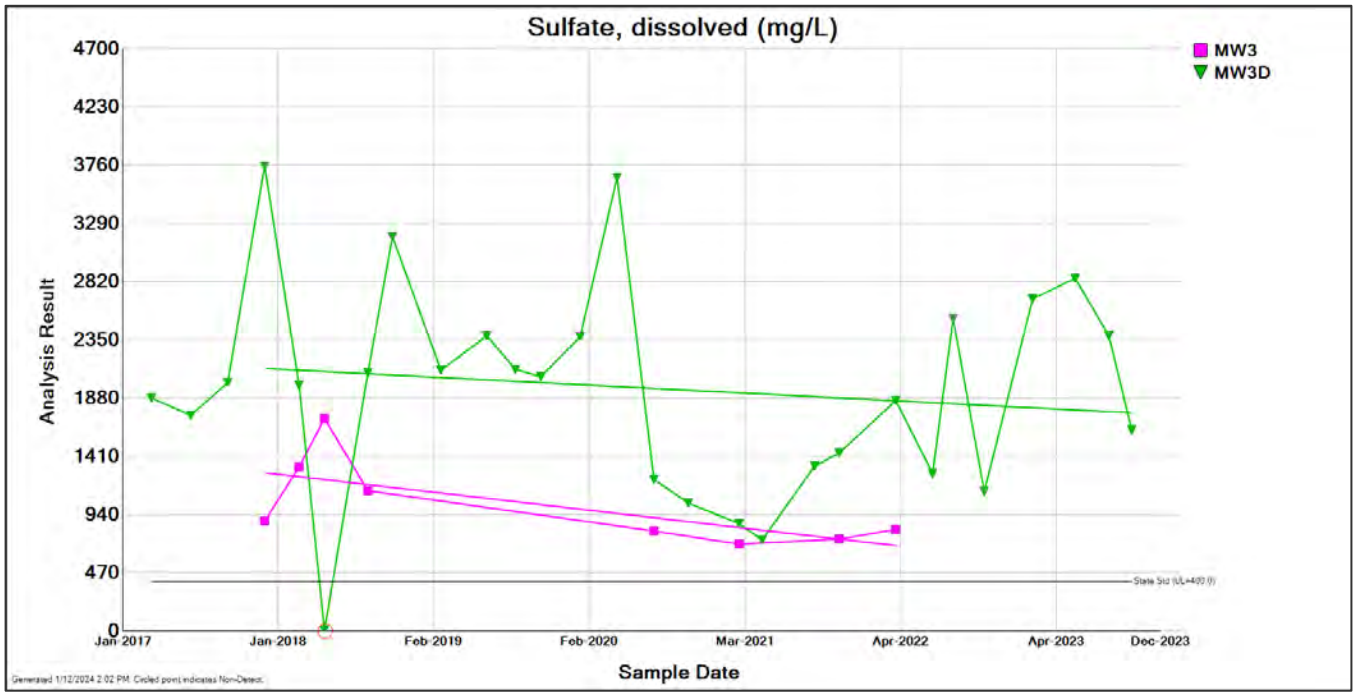


Figure 1-9. Sulfate concentrations since 2017 at compliance wells MW-3 and MW-3D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

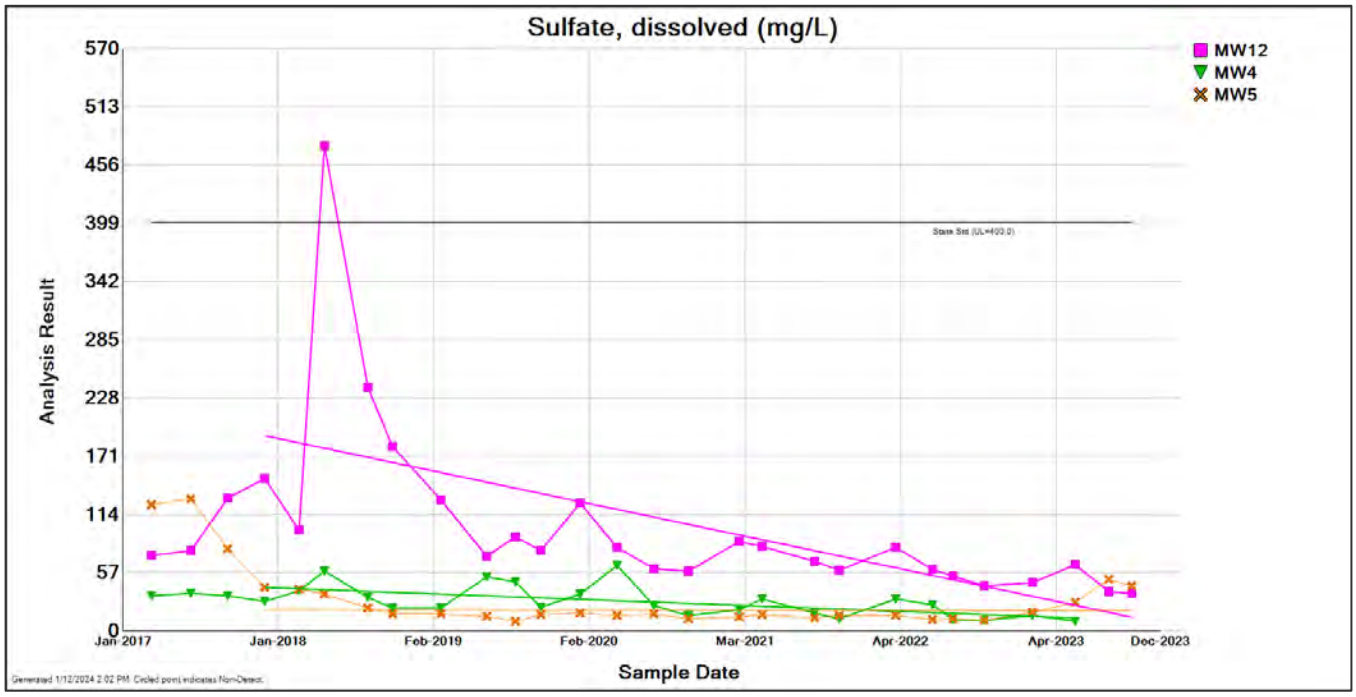


Figure 1-10. Sulfate concentrations since 2017 at compliance wells MW-4, MW-5, and MW-12. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.

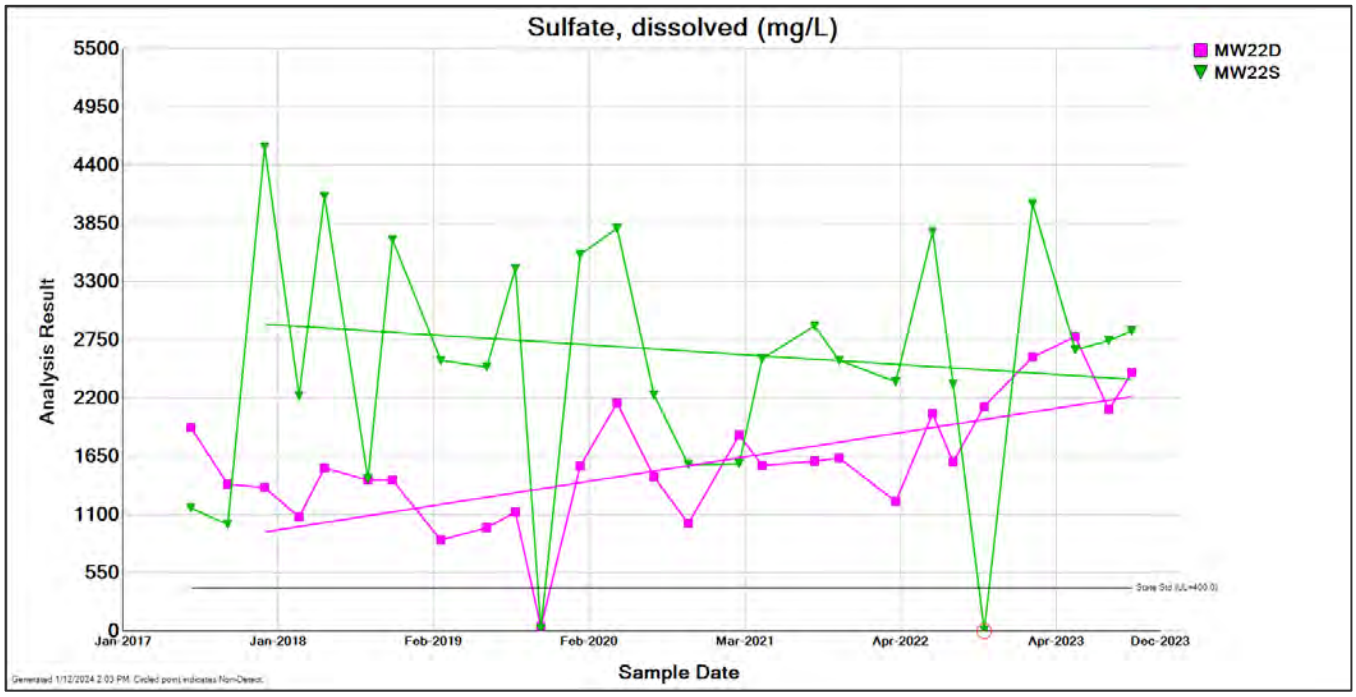


Figure 1-11. Sulfate concentrations since 2017 at compliance wells MW-22S and MW-22D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only. Circled results indicate non-detects.

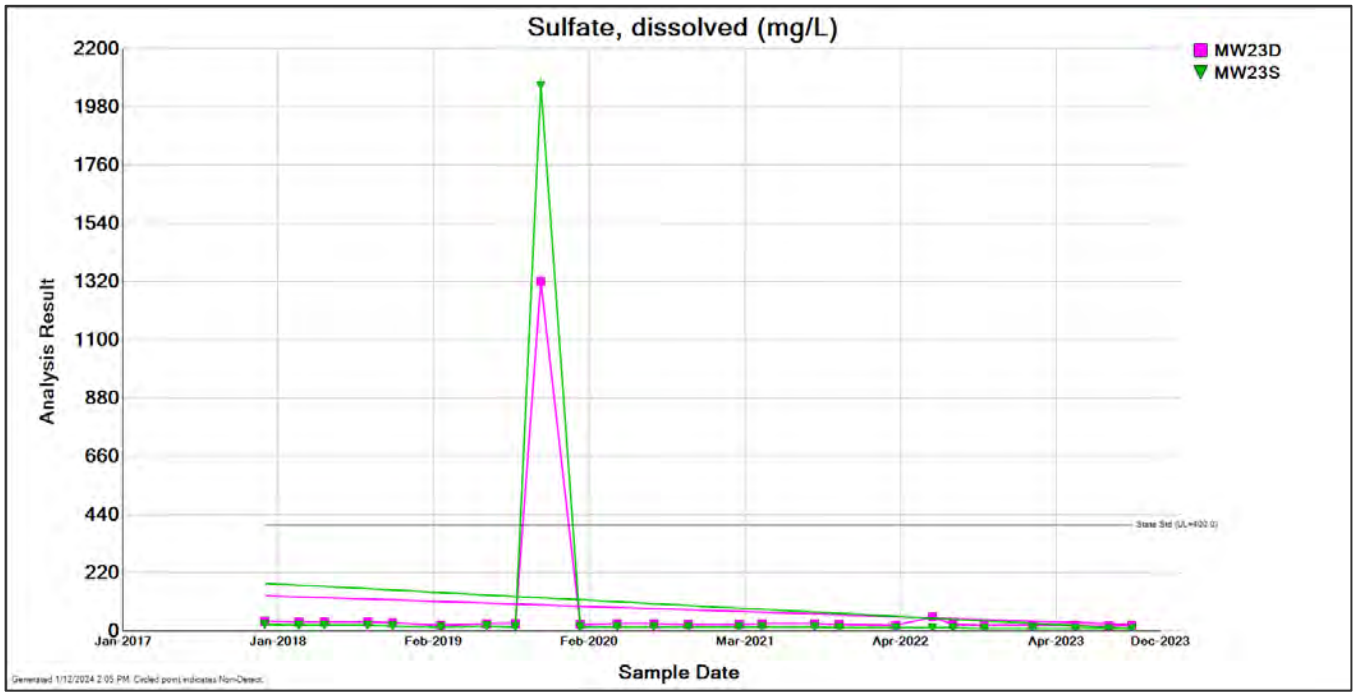
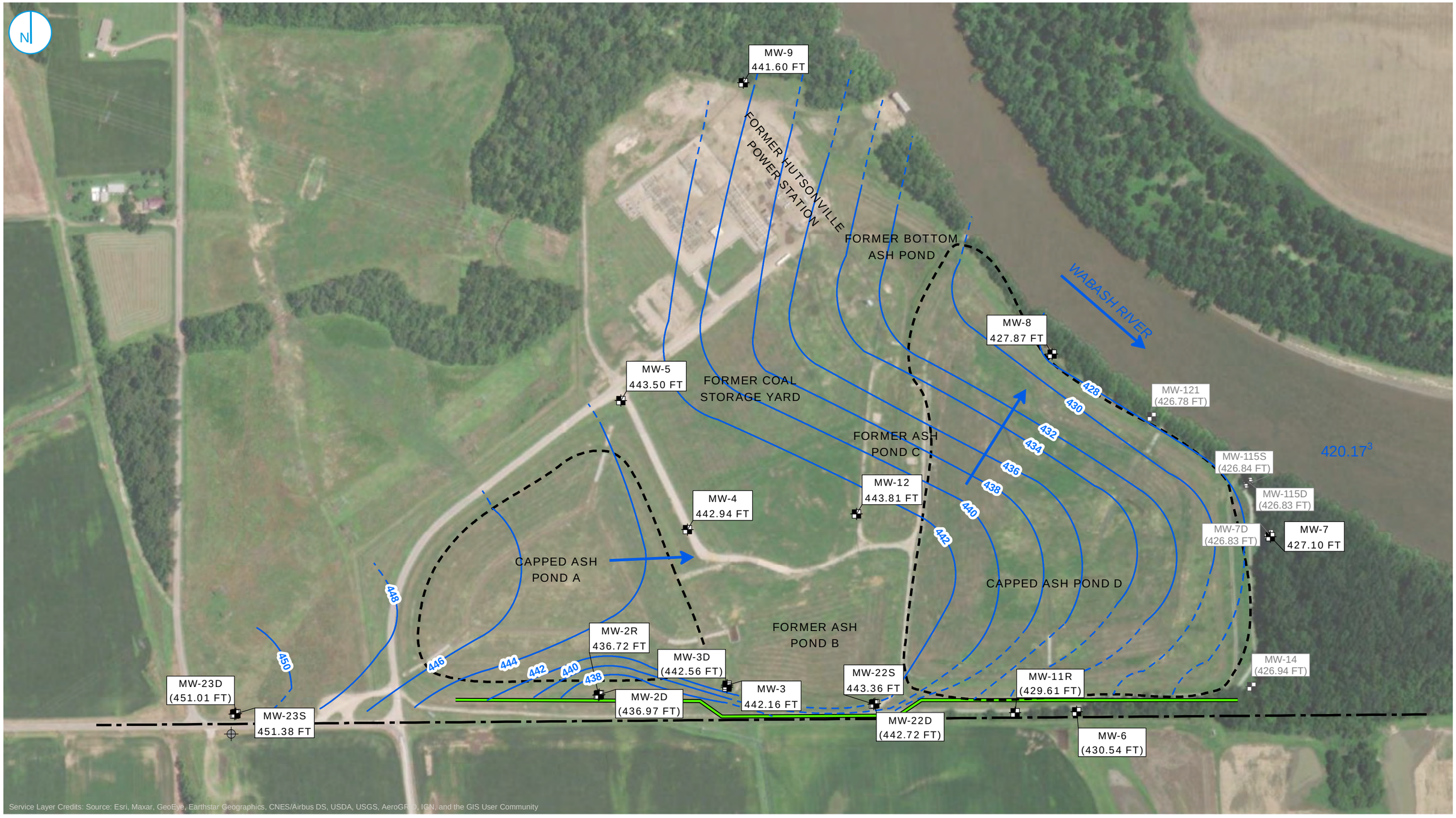


Figure 1-12. Sulfate concentrations since 2017 at compliance wells MW-23S and MW-23D. The Class I Groundwater Standard is not applicable within the GMZ and is shown for reference only.



Y:\Mapping\Projects\6\67815\mxd\2023\Figure 3-1_Q1_2023_GW_Elevation.mxd

PROJECT: 169000XXXX | DATED: 6/1/2023 | DESIGNER: CHURCHKE

- UPPER MIGRATION ZONE MONITORING WELL
- DEEP MIGRATION ZONE MONITORING WELL
- ABANDONED MONITORING WELL LOCATION
- PROPERTY LINE
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL
- GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER ELEVATION CONTOUR
- APPROXIMATE BOUNDARY OF CAPPED ASH POND
- GROUNDWATER COLLECTION TRENCH (BEGAN OPERATION APRIL 2015)

0 150 300 Feet

Notes
1) GROUNDWATER AND RIVER ELEVATIONS REPORTED IN FEET NORTH AMERICAN VERTICAL DATUM OF 1988.
2) GROUNDWATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
3) WABASH RIVER ELEVATIONS AS REPORTED BY USGS FROM USGS 03342000 WABASH RIVER AT RIVERTON, IN LOCATED APPROXIMATELY 12.5 RIVER MILES DOWNSTREAM. RIVER ELEVATION REPORTED IN FEET NATIONAL GEODETIC VERTICAL DATUM OF 1929 AND CONVERTED TO FEET NORTH AMERICAN VERTICAL DATUM OF 1988.

Q1 UPPER MIGRATION ZONE GROUNDWATER ELEVATION CONTOUR MAP FEBRUARY 20, 2023

2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

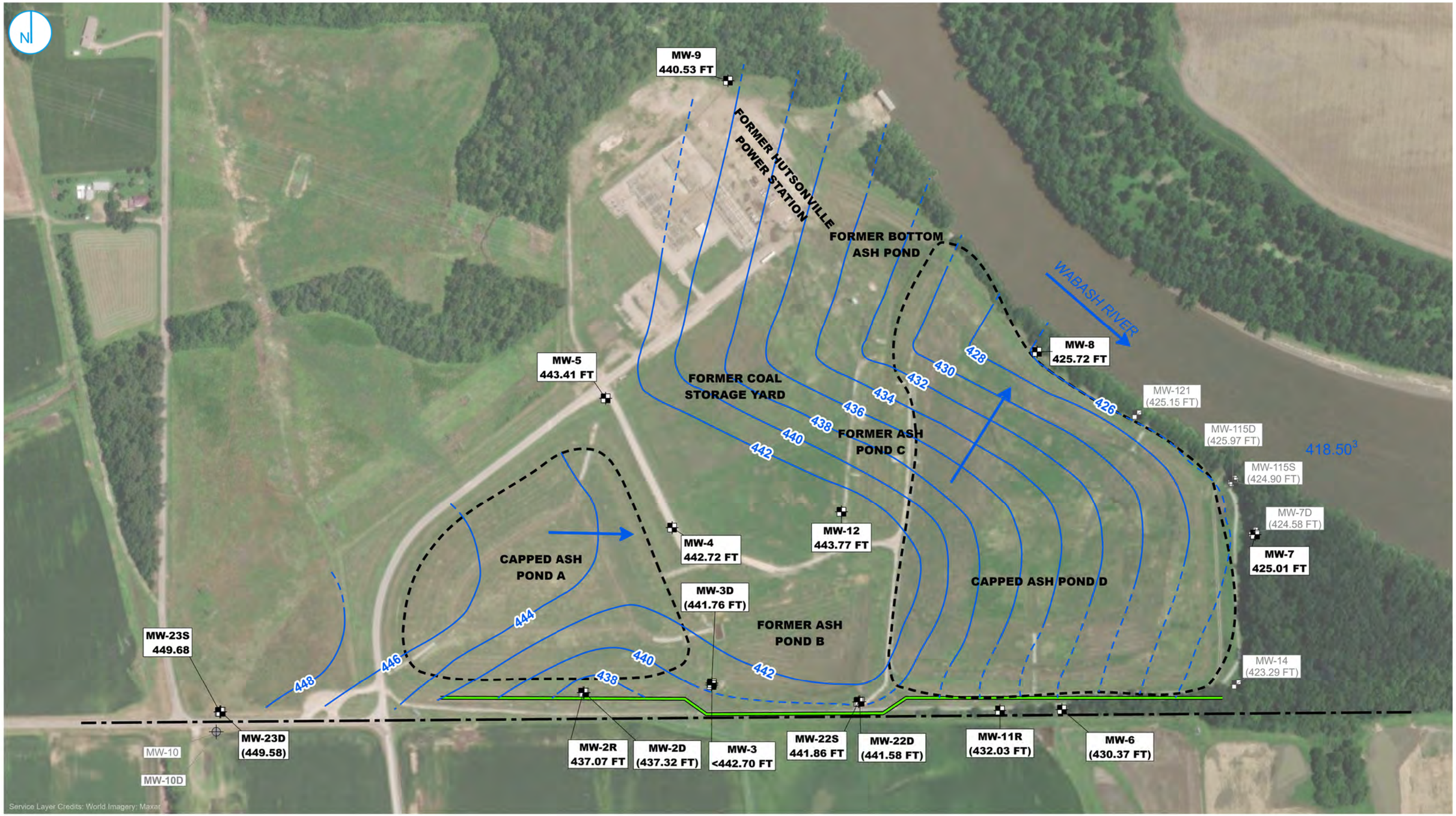
FIGURE 3-1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL

Y:\Mapping\Projects\6\67815\mxd\2023\Figure 3-2 Q2 2023 GW Elevations.aprx

PROJECT: 169000XXXX | DATED: 8/2/2023 | DESIGNER: egreaves



UPPER MIGRATION ZONE MONITORING WELL
DEEP MIGRATION ZONE MONITORING WELL
ABANDONED MONITORING WELL LOCATION
PROPERTY LINE
APPROXIMATE BOUNDARY OF CAPPED ASH POND
GROUNDWATER COLLECTION TRENCH (BEGAN OPERATION APRIL 2015)
GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL)
GROUNDWATER FLOW DIRECTION
INFERRED GROUNDWATER ELEVATION CONTOUR

0 150 300 Feet

Notes
1) GROUNDWATER AND RIVER ELEVATIONS REPORTED IN FEET NORTH AMERICAN VERTICAL DATUM OF 1988.
2) GROUNDWATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
3) WABASH RIVER ELEVATIONS AS REPORTED BY USGS FROM USGS 03342000 WABASH RIVER AT RIVERTON, IN LOCATED APPROXIMATELY 12.5 RIVER MILES DOWNSTREAM.

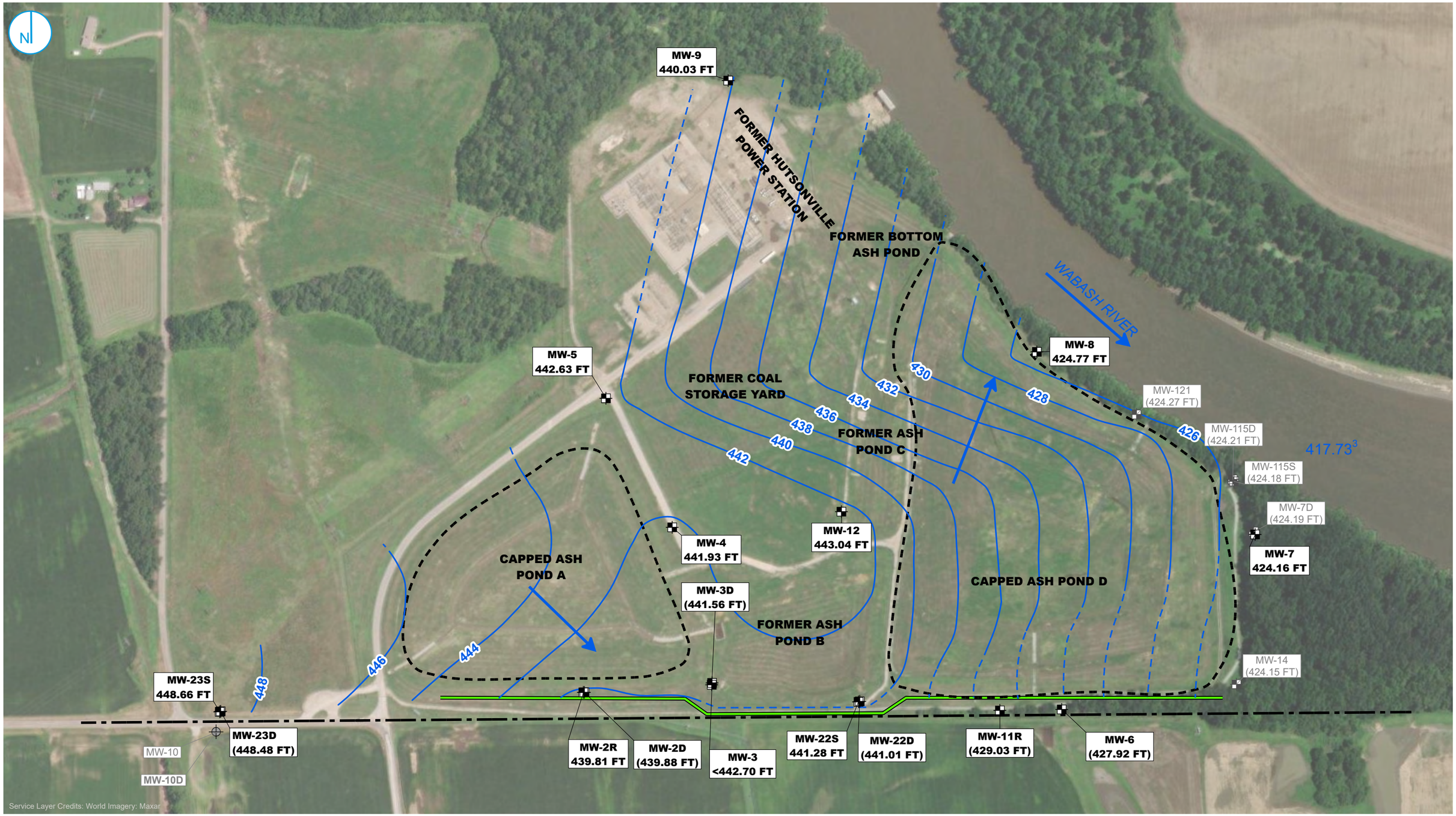
Q2 UPPER MIGRATION ZONE GROUNDWATER ELEVATION CONTOUR MAP JUNE 5, 2023

2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

FIGURE 3-2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL



- UPPER MIGRATION ZONE MONITORING WELL
- DEEP MIGRATION ZONE MONITORING WELL
- ABANDONED MONITORING WELL LOCATION
- PROPERTY LINE
- APPROXIMATE BOUNDARY OF CAPPED ASH POND
- GROUNDWATER COLLECTION TRENCH (BEGAN OPERATION APRIL 2015)
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL)
- GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER ELEVATION CONTOUR

0 150 300 Feet

Notes
1) GROUNDWATER AND RIVER ELEVATIONS REPORTED IN FEET NORTH AMERICAN VERTICAL DATUM OF 1988.
2) GROUNDWATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
3) WABASH RIVER ELEVATIONS AS REPORTED BY USGS FROM USGS 03342000 WABASH RIVER AT RIVERTON, IN LOCATED APPROXIMATELY 12.5 RIVER MILES DOWNSTREAM.

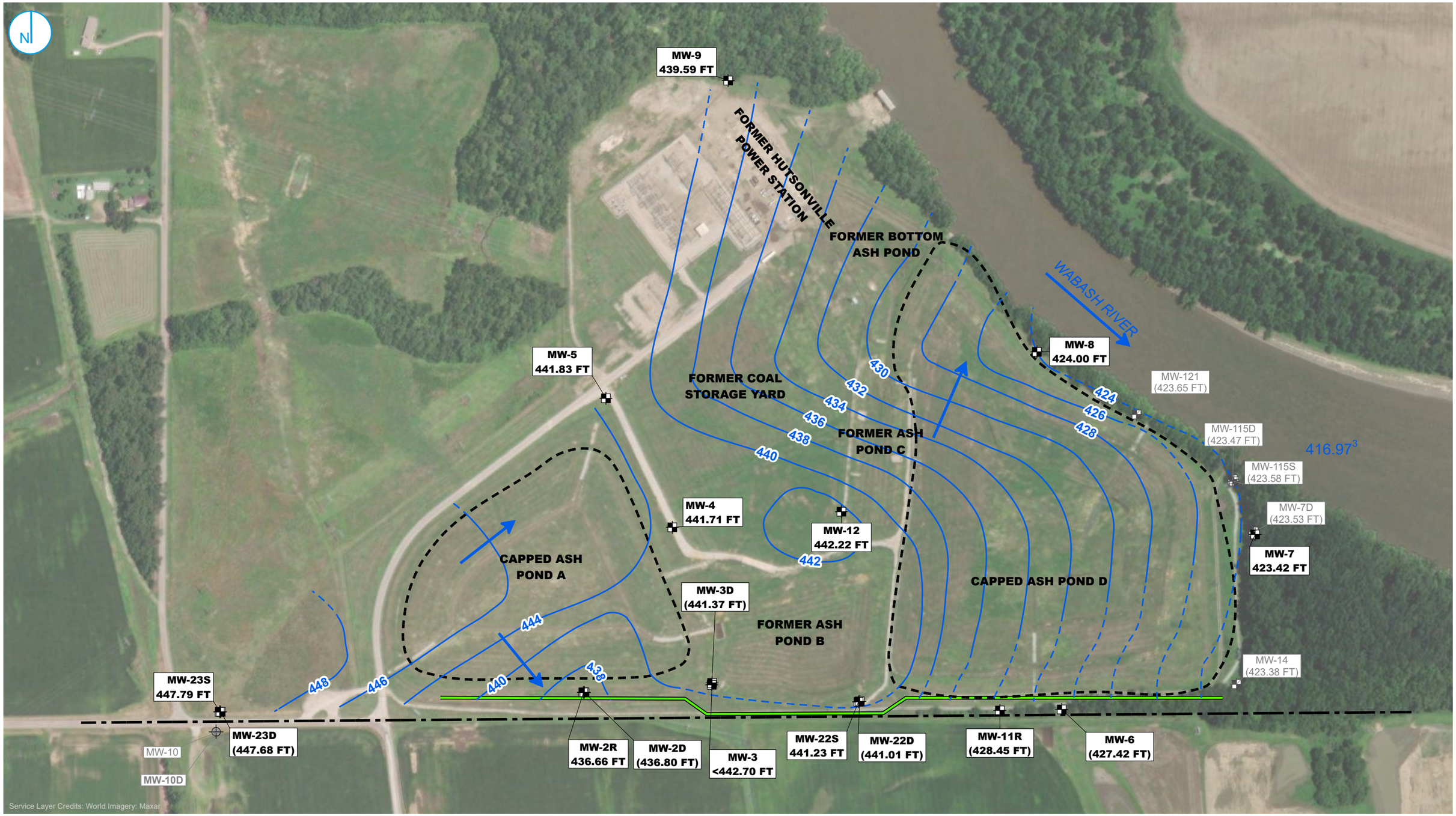
Q3 UPPER MIGRATION ZONE GROUNDWATER ELEVATION CONTOUR MAP AUGUST 28, 2023

2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

FIGURE 3-3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL



- UPPER MIGRATION ZONE MONITORING WELL
- DEEP MIGRATION ZONE MONITORING WELL
- ABANDONED MONITORING WELL LOCATION
- PROPERTY LINE
- APPROXIMATE BOUNDARY OF CAPPED ASH POND
- GROUNDWATER COLLECTION TRENCH (BEGAN OPERATION APRIL 2015)
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL)
- GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER ELEVATION CONTOUR

0 150 300 Feet

Notes
1) GROUNDWATER AND RIVER ELEVATIONS REPORTED IN FEET NORTH AMERICAN VERTICAL DATUM OF 1988.
2) GROUNDWATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
3) WABASH RIVER ELEVATIONS AS REPORTED BY USGS FROM USGS 03342000 WABASH RIVER AT RIVERTON, IN LOCATED APPROXIMATELY 12.5 RIVER MILES DOWNSTREAM.

Q4 UPPER MIGRATION ZONE GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 23, 2023

2023 ANNUAL REPORT
FORMER HUTSONVILLE POWER STATION - ASH POND A
AMEREN ENERGY MEDINA VALLEY COGEN, LLC
HUTSONVILLE, IL

FIGURE 3-4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC
A RAMBOLL COMPANY

RAMBOLL

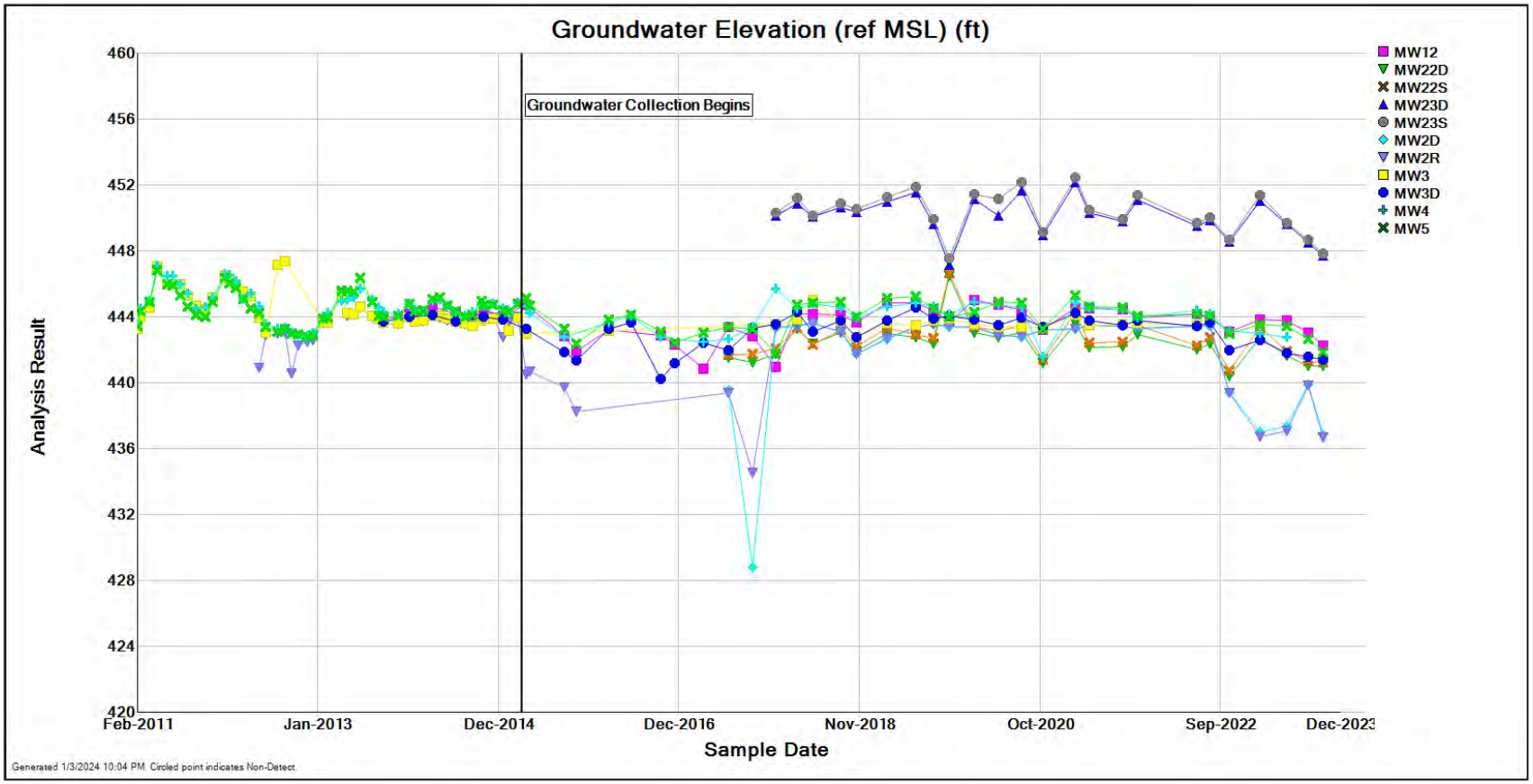


Figure 3-5. Groundwater elevations near groundwater collection trench

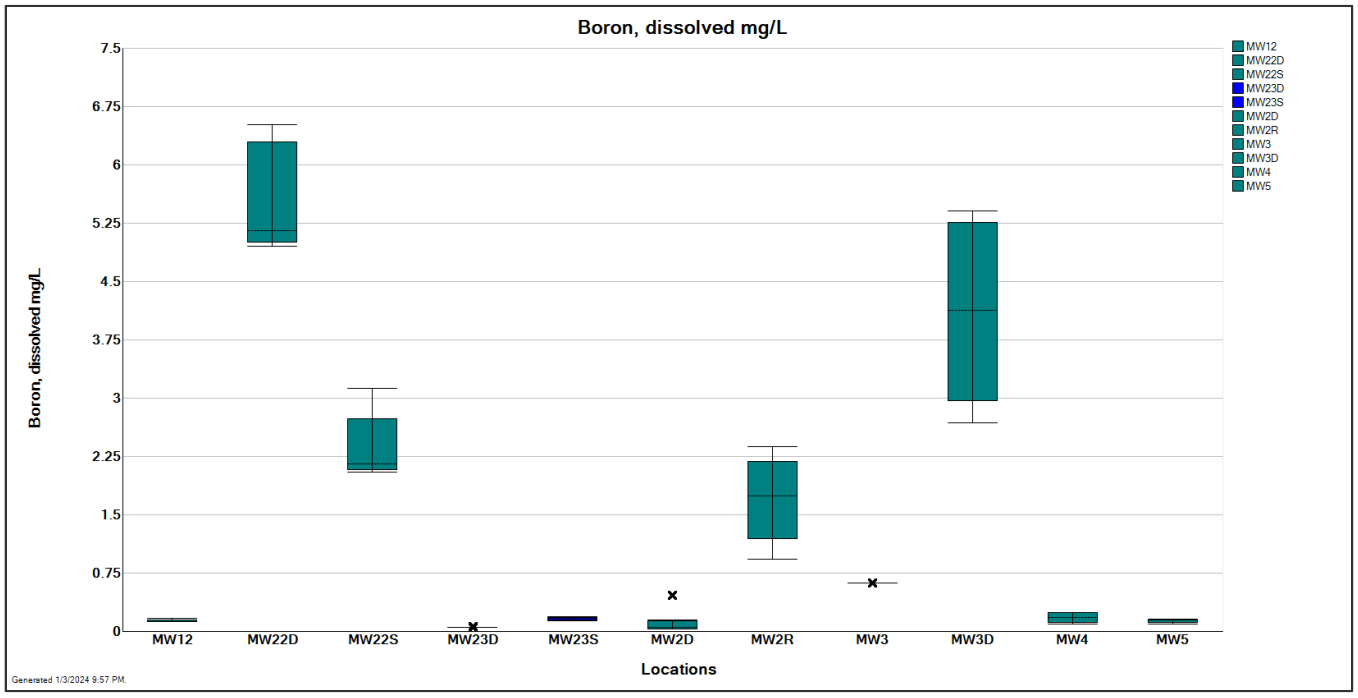


Figure 3-6. Box-whisker plot showing distribution of **boron** concentration by monitoring well for data collected in 2022 and 2023. Note: Box-whisker plots for background wells are blue and box-whisker plots for compliance wells are green.

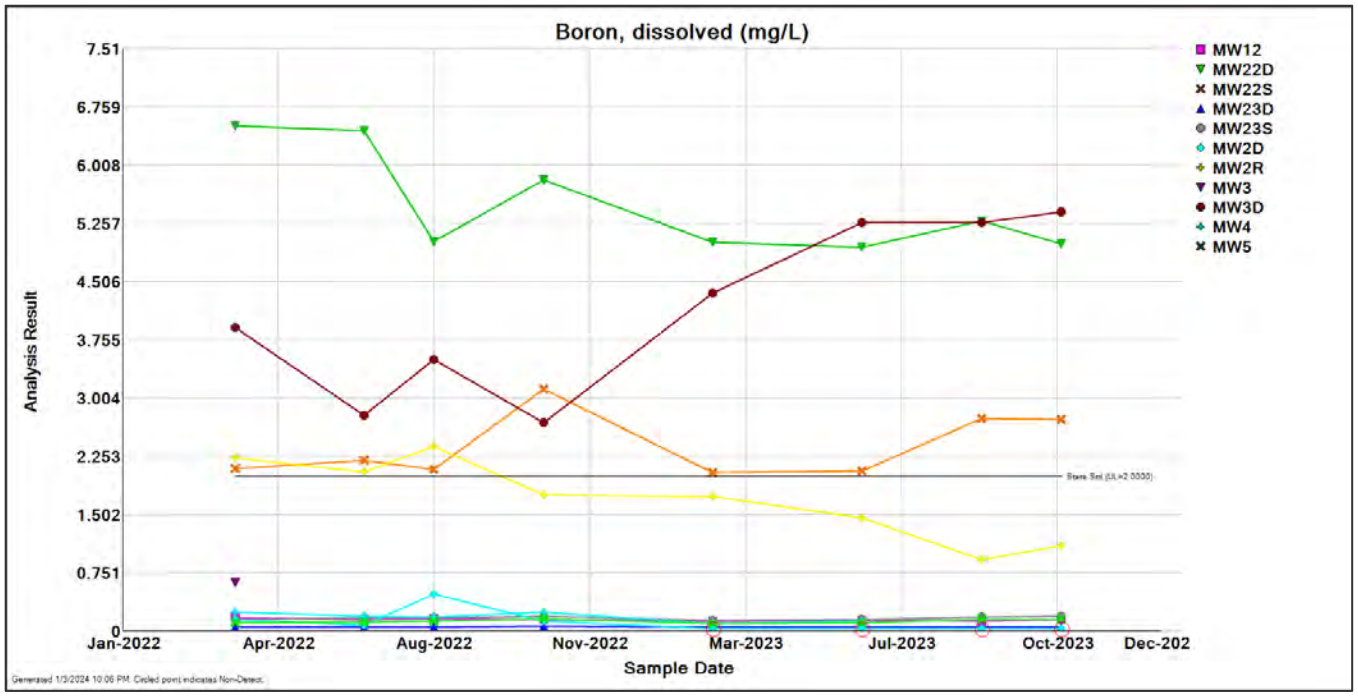


Figure 3-7. Boron concentrations during the reporting period (2022-2023) at all background and compliance wells. Note: Circled results indicate non-detects.

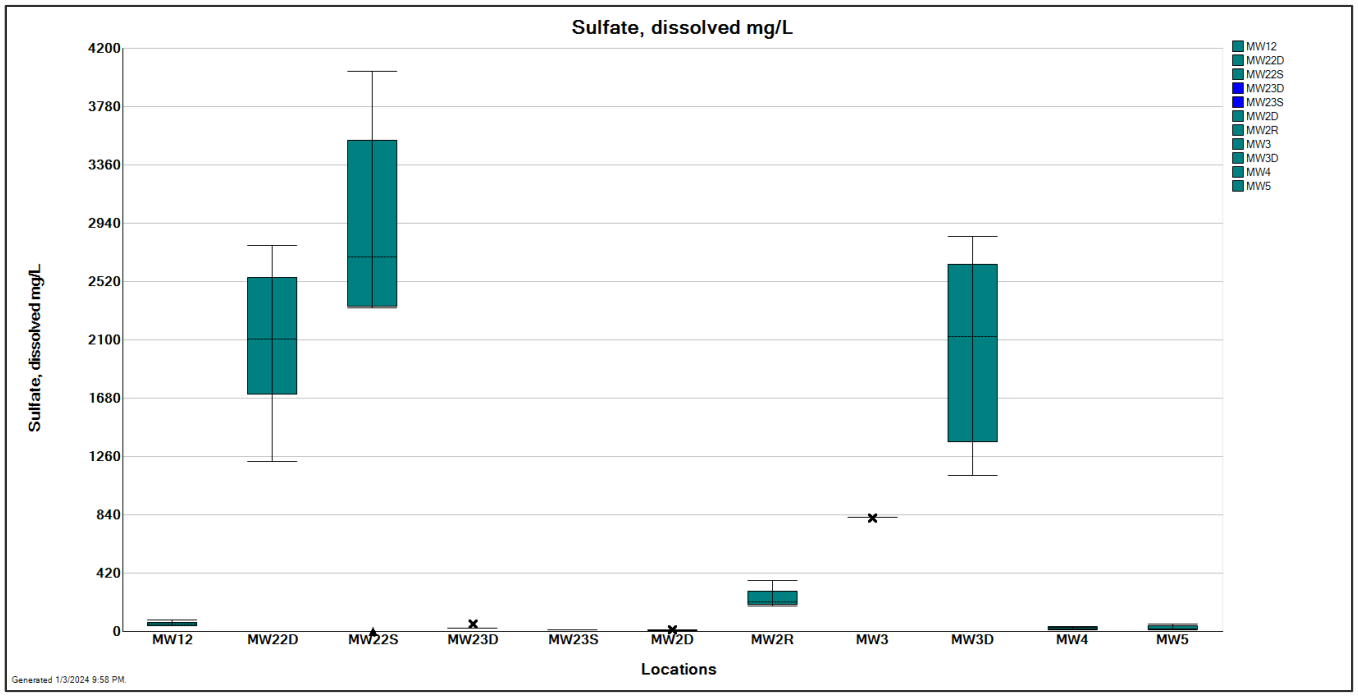


Figure 3-8. Box-whisker plot showing distribution of **sulfate** concentration by monitoring well for data collected in 2022 and 2023. Note: Box-whisker plots for background wells are blue and box-whisker plots for compliance wells are green.

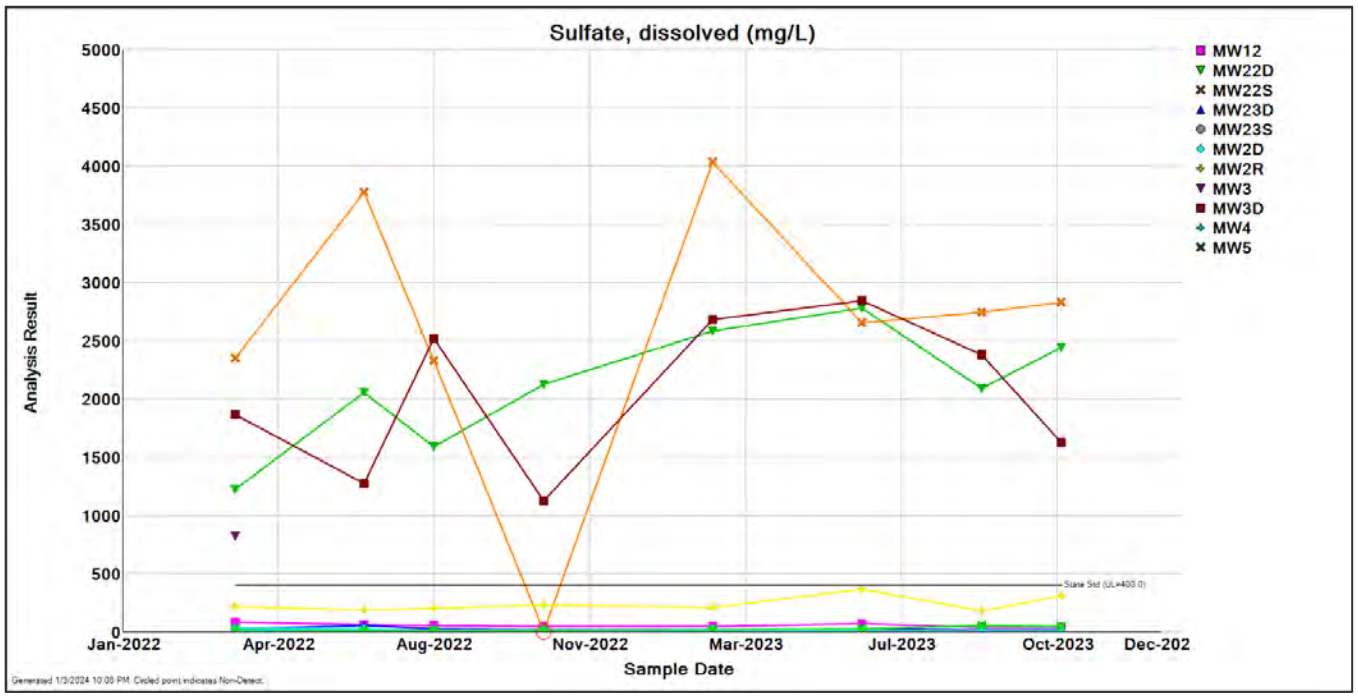


Figure 3-9. Sulfate concentrations during the reporting period (2022-2023) at all background and compliance wells.

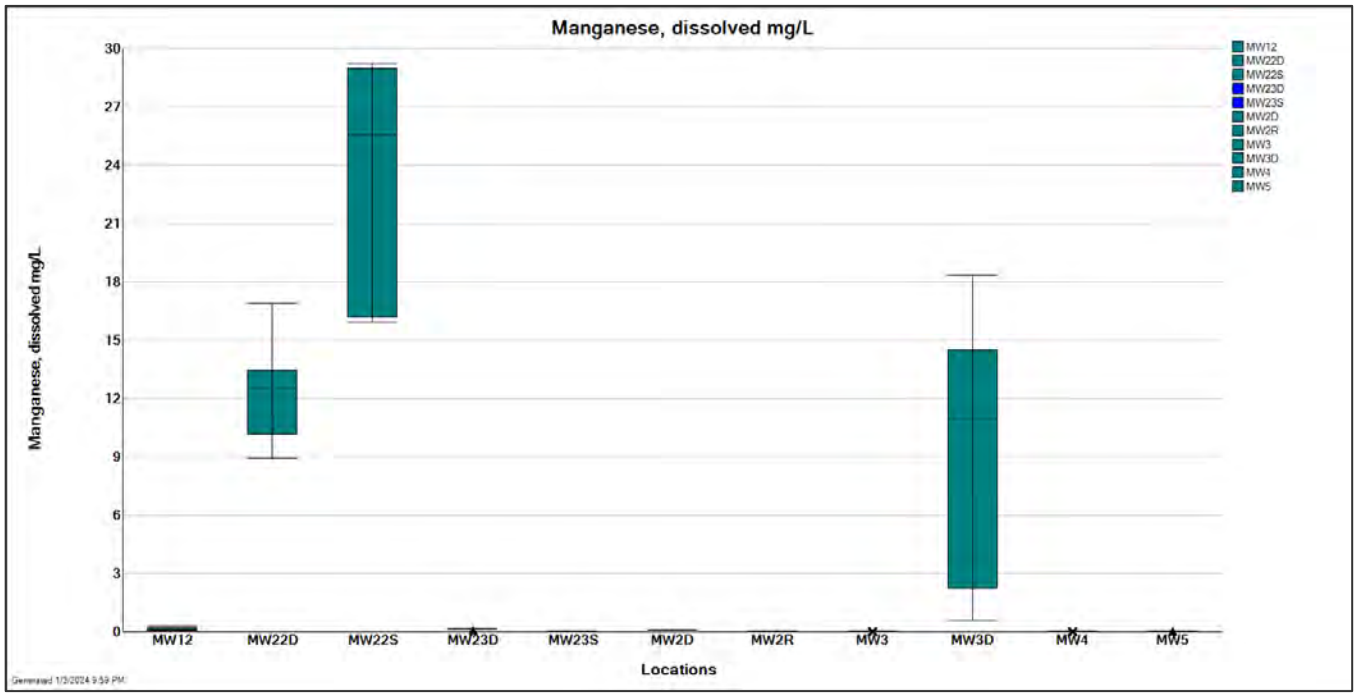


Figure 3-10A. Box-whisker plot showing distribution of **manganese** concentration by monitoring well for data collected in 2022 and 2023. Note: Box-whisker plots for background wells are blue and box-whisker plots for compliance wells are green.

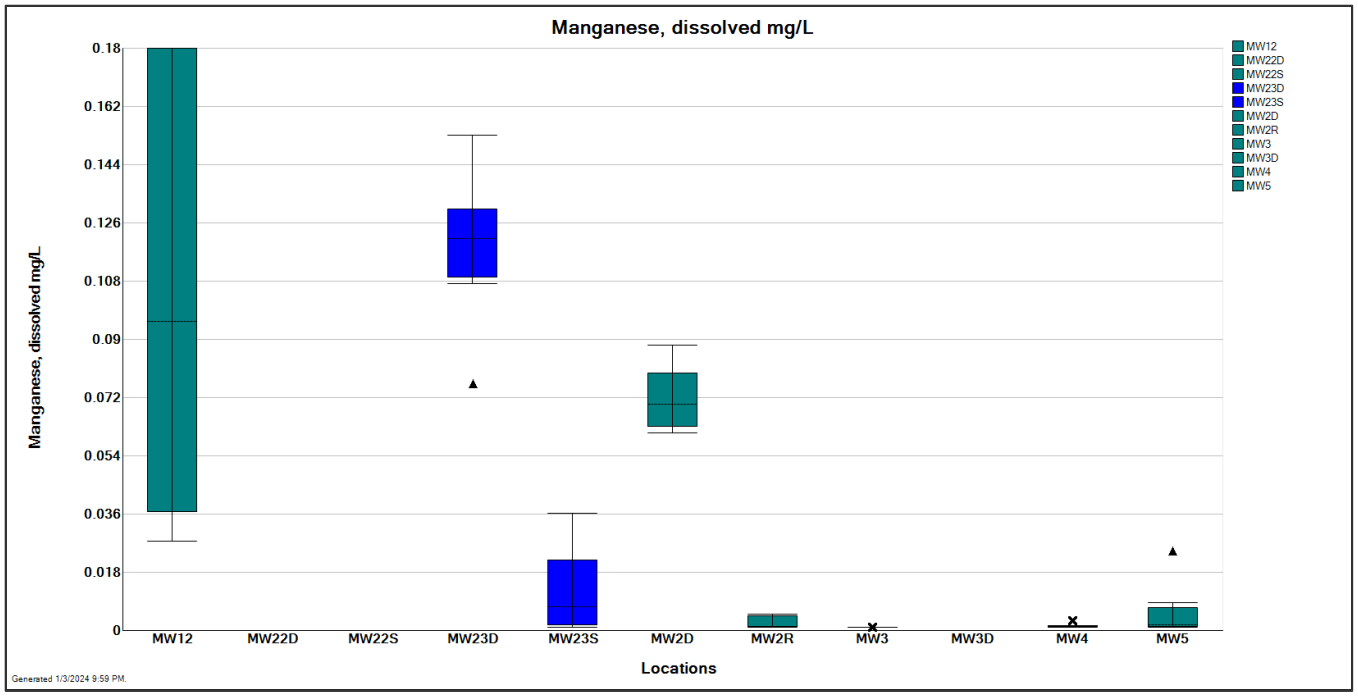


Figure 3-10B. Box-whisker plot showing distribution of **manganese** concentration by monitoring well for data collected in 2022 and 2023 (zoomed in). Note: Box-whisker plots for background wells are blue and box-whisker plots for compliance wells are green.

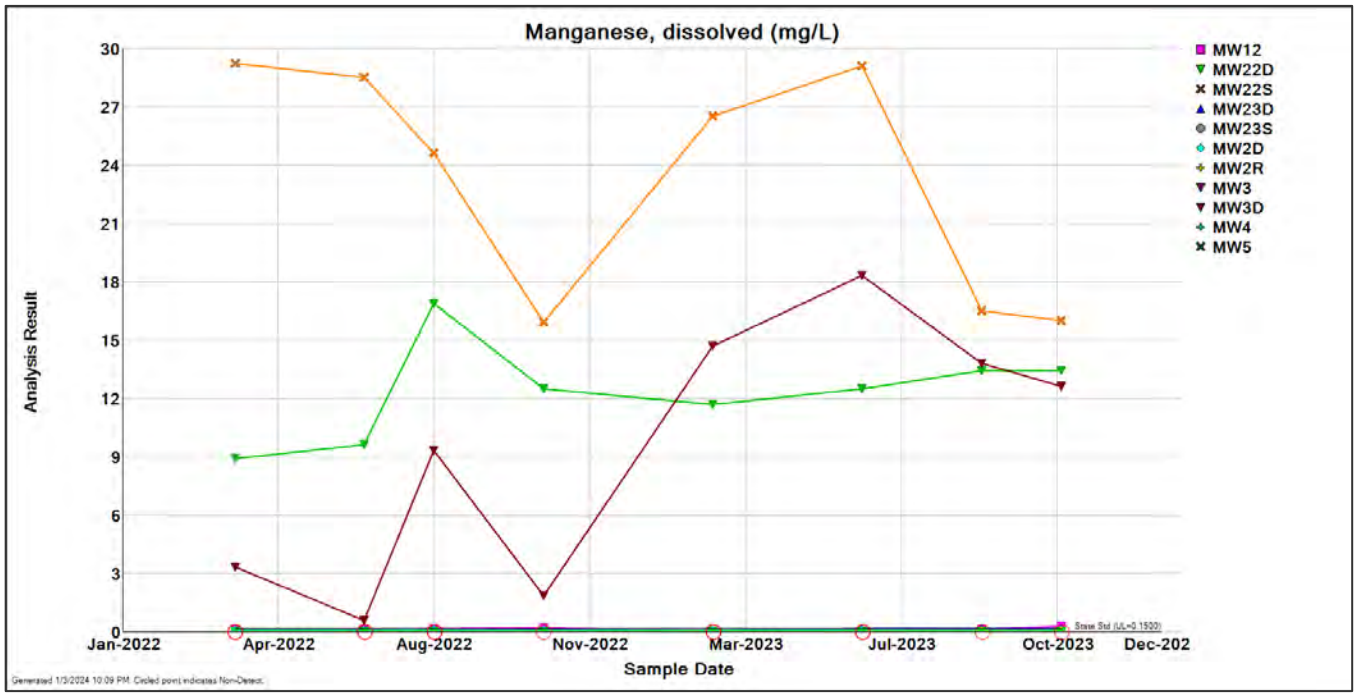


Figure 3-11A. Manganese concentrations during the reporting period (2022-2023) at all background and compliance wells. Note: Circled results indicate non-detects.

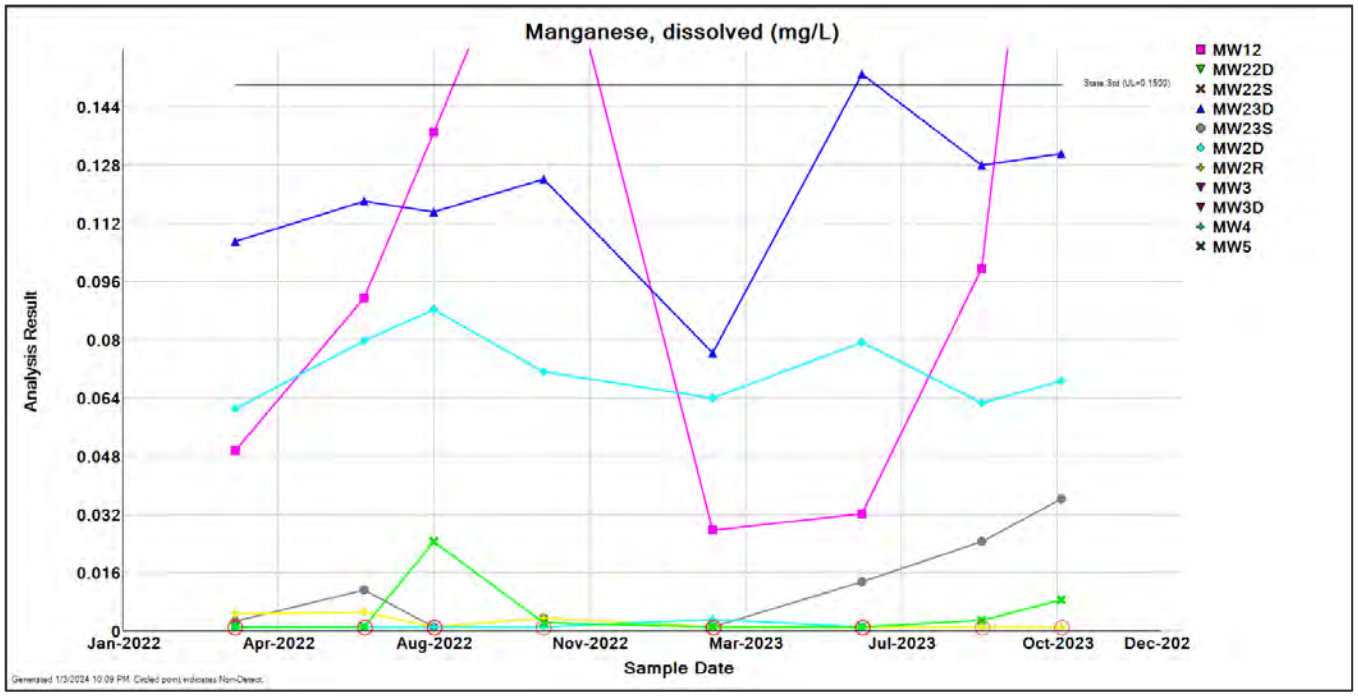


Figure 3-11B. Manganese concentrations during the reporting period (2022-2023) at all background and compliance wells. Zoomed in to show the Class I groundwater standard. Note: Circled results indicate non-detects.

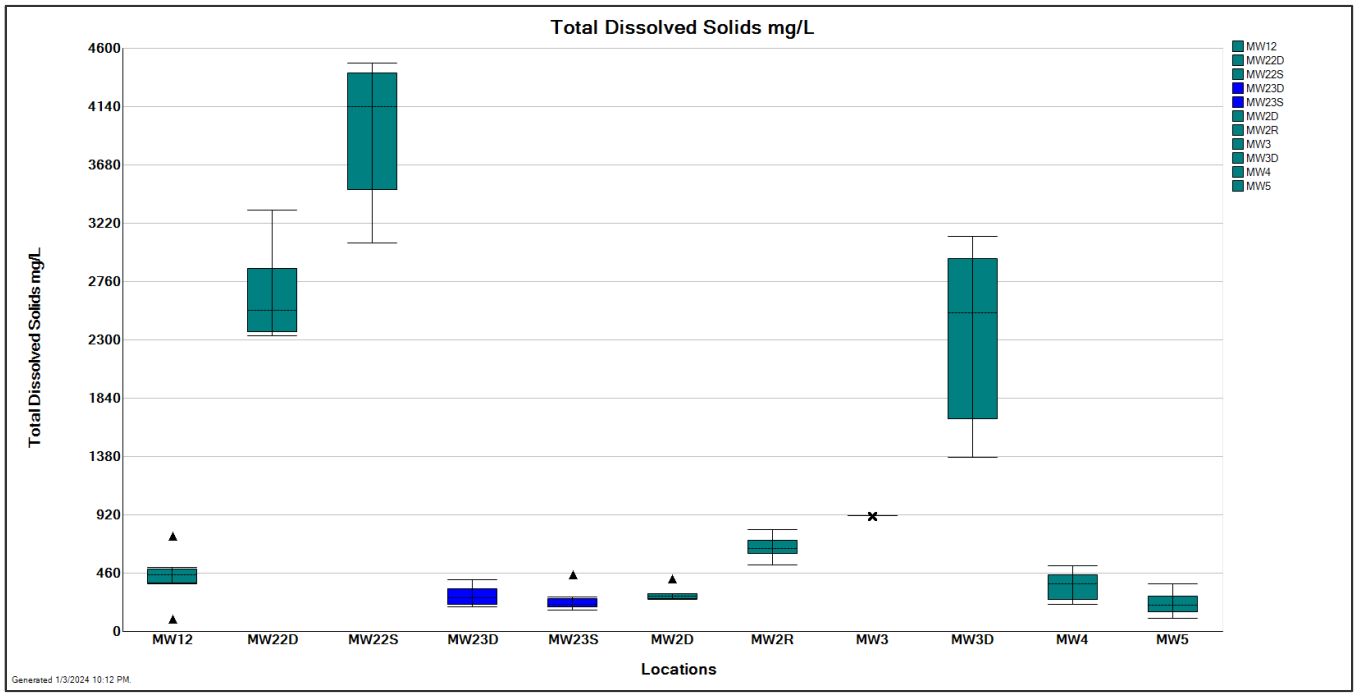


Figure 3-12. Box-whisker plot showing distribution of **total dissolved solids** concentration by monitoring well for data collected in 2022 and 2023. Note: Box-whisker plots for background wells are blue and box-whisker plots for compliance wells are green.

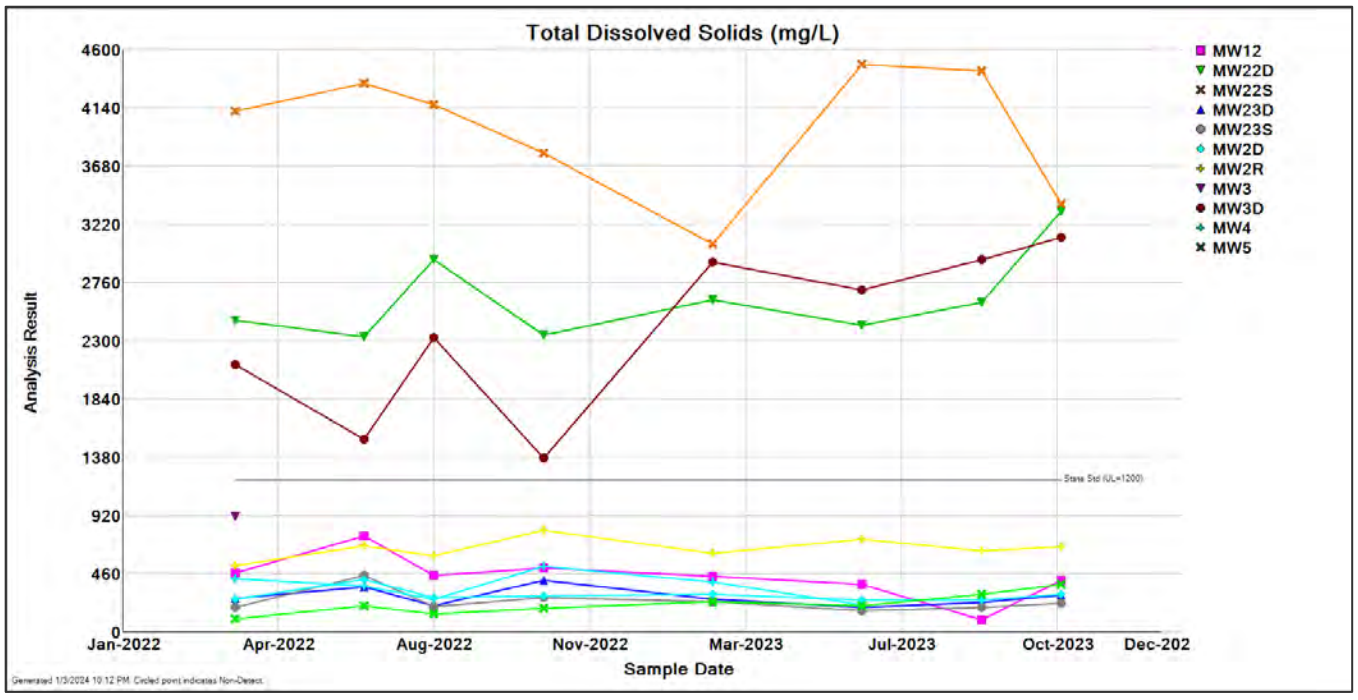


Figure 3-13. Total dissolved solids concentrations during the reporting period (2022-2023) at all background and compliance wells.

APPENDIX A
GROUNDWATER MONITORING RESULTS 2022-2023

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW2D

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	0.0053	0.0096	0.0046	0.0075	0.0086	0.0081	0.0067	0.0076
B, diss, mg/L	0.1400	0.0700	0.4700	0.1200	<0.0250	<0.0250	<0.0250	<0.0250
Ba, diss, mg/L	0.067	0.059	0.069	0.071	0.072	0.060	0.066	0.061
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	11.6	19.5	12.8	14.0	10.9	12.5	12.9	14.2
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	0.0003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	0.2	0.2	<0.1	0.2
Fe, diss, mg/L	0.140	0.416	0.180	0.317	0.774	0.031	0.191	0.086
GW Depth (TOC), ft	11.81	12.03	12.02	16.08	18.45	18.10	15.54	18.62
GW Elv, ft		443.39	443.40	439.34	436.97	437.32	439.88	436.80
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	0.0609	0.0796	0.0882	0.0711	0.0640	0.0793	0.0625	0.0686
Ni, diss, mg/L	0.0002	0.0011	0.0002	0.0002	0.0003	0.0007	<0.0003	0.0002
NO3, diss, mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	6.01	7.20	7.25	7.30	7.21	7.45	7.47	7.41
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
SO4, diss, mg/L	3.6	5.3	5.9	13.8	5.3	6.3	5.3	6.6
Spec. Cond. (field), micromho	498	875	517	476	380	472	539	490
TDS, mg/L	254	412	268	284	292	252	250	296
Temp (Fahrenheit), degrees F	60.1	64.2	72.0	66.6	60.7	64.8	74.8	65.8
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW2R

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
B, diss, mg/L	2.2300	2.0500	2.3700	1.7500	1.7300	1.4500	0.9200	1.1000
Ba, diss, mg/L	0.030	0.026	0.030	0.038	0.041	0.045	0.040	0.044
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	32.1	20.1	22.7	27.0	13.2	12.3	15.0	8.6
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.092	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GW Depth (TOC), ft	11.80	11.97	11.93	16.02	18.65	18.30	15.56	18.71
GW Elv, ft		443.40	443.44	439.35	436.72	437.07	439.81	436.66
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	0.0047	0.0050	<0.0010	0.0036	<0.0010	<0.0010	<0.0010	<0.0010
Ni, diss, mg/L	0.0002	0.0005	0.0005	0.0004	0.0006	<0.0003	<0.0003	0.0007
NO3, diss, mg/L	0.598	0.687	0.581	1.890	3.120	2.040	6.720	1.350
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	8.92	8.51	7.22	7.18	7.01	7.15	7.09	7.20
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	0.0030	0.0035	0.0028	0.0065	0.0106	0.0083	0.0037	0.0054
SO4, diss, mg/L	217.0	184.0	198.0	230.0	207.0	363.0	180.0	304.0
Spec. Cond. (field), micromho	878	768	876	965	776	1030	970	948
TDS, mg/L	522	674	602	800	620	728	638	668
Temp (Fahrenheit), degrees F	60.2	64.2	72.7	67.6	61.4	69.7	71.2	63.8
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW3

	3/21/2022	6/20/2022
Ag, diss, mg/L	<0.0003	
As, diss, mg/L	<0.0003	
B, diss, mg/L	0.6200	
Ba, diss, mg/L	0.002	
Be, diss, mg/L	<0.0010	
Cd, diss, mg/L	<0.0003	
Cl, diss, mg/L	3.6	
CN, total, mg/L	<0.01	
Co, diss, mg/L	<0.001	
Cr, diss, mg/L	0.0004	
Cu, diss, mg/L	<0.0005	
F, diss, mg/L	0.2	
Fe, diss, mg/L	0.096	
GW Depth (TOC), ft	10.87	11.36
GW Elv, ft		443.48
Hg, diss, mg/L	<0.0001	
Mn, diss, mg/L	<0.0010	
Ni, diss, mg/L	0.0002	
NO3, diss, mg/L	0.662	
Pb, diss, mg/L	<0.001	
pH (field), STD	7.30	
Sb, diss, mg/L	<0.002	
Se, diss, mg/L	0.0026	
SO4, diss, mg/L	818.0	
Spec. Cond. (field), micromho	1300	
TDS, mg/L	908	
Temp (Fahrenheit), degrees F	56.0	
Tl, diss, mg/L	<0.0003	
V, diss, mg/L	<0.001	
Zn, diss, mg/L	0.02	

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW3D

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	0.0041	0.0011	0.0014	0.0013	0.0036	0.0006	<0.0003	<0.0003
B, diss, mg/L	3.9100	2.7800	3.5000	2.6800	4.3500	5.2600	5.2600	5.4000
Ba, diss, mg/L	0.012	0.008	0.012	0.010	0.011	0.010	0.013	0.011
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	0.0046	0.0014	0.0056	0.0024	0.0107	0.0033	0.0026	0.0020
Cl, diss, mg/L	21.8	4.8	7.9	8.5	13.9	13.8	17.8	19.0
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	0.103	0.023	0.160	0.078	0.296	0.092	0.039	0.029
Cr, diss, mg/L	0.0003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	0.0010	0.0026	<0.0005	<0.0005	<0.0005
F, diss, mg/L	0.6	0.3	0.3	<0.1	1.4	0.5	<0.1	<0.1
Fe, diss, mg/L	0.100	<0.010	10.600	<0.010	12.300	11.100	7.220	6.460
GW Depth (TOC), ft	10.90	11.58	11.40	13.09	12.45	13.25	13.45	13.64
GW Elv, ft		443.43	443.61	441.92	442.56	441.76	441.56	441.37
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	3.3100	0.5710	9.3300	1.8400	14.7000	18.3000	13.8000	12.6000
Ni, diss, mg/L	0.1420	0.0325	0.1720	0.0840	0.3350	0.1520	0.1230	0.0902
NO3, diss, mg/L	2.050	0.845	0.466	0.846	1.250	1.080	0.294	<0.100
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	4.61	4.58	4.68	4.93	4.60	5.71	5.89	6.04
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0025	0.0040	0.0012	<0.0050	<0.0200	<0.0020	<0.0005	<0.0005
SO4, diss, mg/L	1860.0	1270.0	2520.0	1120.0	2680.0	2840.0	2380.0	1620.0
Spec. Cond. (field), micromho	2520	1400	1920	1380	2210	2080	970	2550
TDS, mg/L	2110	1520	2320	1370	2920	2700	2940	3110
Temp (Fahrenheit), degrees F	58.3	62.2	70.8	66.7	58.7	65.4	75.0	66.2
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	0.04	0.01	0.04	0.02	0.07	0.02	0.01	0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW4

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
B, diss, mg/L	0.2400	0.1800	0.1700	0.2400	0.0900	0.1200
Ba, diss, mg/L	0.020	0.015	0.016	0.018	0.010	0.010
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	10.4	0.6	0.5	7.0	0.5	3.0
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	0.0005	0.0005	0.0005	0.0006	0.0004	0.0005
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.088	<0.010	<0.010	<0.010	<0.010	<0.010
GW Depth (TOC), ft	11.64	12.40	12.64	13.63	13.82	14.04
GW Elv, ft		444.36	444.12	443.13	442.94	442.72
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0030	<0.0010
Ni, diss, mg/L	0.0002	<0.0003	0.0003	0.0008	0.0002	0.0008
NO3, diss, mg/L	6.740	1.270	0.504	0.854	1.220	0.540
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	7.14	7.23	7.21	7.20	7.08	7.27
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	0.0039	0.0021	0.0010	0.0016	0.0017	0.0013
SO4, diss, mg/L	31.1	25.1	10.9	10.3	14.7	9.3
Spec. Cond. (field), micromho	680	414	467	478	251	405
TDS, mg/L	418	358	254	518	390	208
Temp (Fahrenheit), degrees F	50.8	63.5	70.6	65.9	51.7	63.8
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW5

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
B, diss, mg/L	0.1000	0.1100	0.1200	0.1500	0.0900	0.1000	0.1400	0.1400
Ba, diss, mg/L	0.017	0.014	0.024	0.021	0.025	0.031	0.041	0.035
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	6.2	1.5	1.7	4.3	0.5	0.6	10.2	1.6
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	0.0004	<0.0010	<0.0010	<0.0010	0.0003	0.0004	0.0003	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.089	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GW Depth (TOC), ft	9.32	10.54	10.63	11.74	11.17	11.26	12.04	12.84
GW Elv, ft		444.13	444.04	442.93	443.50	443.41	442.63	441.83
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	<0.0010	<0.0010	0.0245	0.0022	<0.0010	<0.0010	0.0028	0.0085
Ni, diss, mg/L	<0.0003	0.0016	<0.0003	0.0004	0.0004	0.0005	<0.0003	0.0009
NO3, diss, mg/L	0.878	0.263	0.507	0.539	0.994	1.160	2.770	1.620
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	6.93	6.71	6.59	6.80	6.76	6.99	6.72	6.64
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	0.0013	0.0011	0.0011	<0.0005	0.0027	0.0035	0.0032	0.0021
SO4, diss, mg/L	14.8	10.5	11.6	9.9	18.3	28.0	50.5	43.9
Spec. Cond. (field), micromho	279	207	323	230	227	341	523	424
TDS, mg/L	100	202	140	182	236	202	292	370
Temp (Fahrenheit), degrees F	50.4	63.1	71.1	66.4	53.0	64.6	70.7	65.9
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW12

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
B, diss, mg/L	0.1600	0.1400	0.1500	0.1400	0.1200	0.1300	0.1200	0.1400
Ba, diss, mg/L	0.016	0.016	0.016	0.018	0.016	0.015	0.017	0.016
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	13.4	1.6	2.3	6.6	4.7	11.9	1.9	13.5
CN, total, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	0.0003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.084	<0.010	<0.010	0.031	<0.010	<0.010	<0.010	<0.010
GW Depth (TOC), ft	11.64	12.62	12.80	13.65	12.93	12.97	13.70	14.52
GW Elv, ft		444.12	443.94	443.09	443.81	443.77	443.04	442.22
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	0.0495	0.0914	0.1370	0.2100	0.0275	0.0321	0.0994	0.2860
Ni, diss, mg/L	0.0005	0.0008	0.0009	0.0021	0.0004	0.0009	<0.0003	0.0012
NO3, diss, mg/L	1.110	1.760	1.900	1.190	0.848	0.807	1.400	2.100
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	6.97	6.86	6.85	7.09	6.96	7.03	6.97	6.93
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	0.0040	0.0017	0.0014	0.0012	0.0015	0.0022	0.0013	0.0010
SO4, diss, mg/L	81.2	59.5	53.5	43.7	46.8	64.7	37.8	36.6
Spec. Cond. (field), micromho	840	723	826	690	566	656	746	661
TDS, mg/L	466	754	446	500	440	372	97	404
Temp (Fahrenheit), degrees F	54.4	62.1	70.6	65.0	55.0	63.5	67.6	57.1
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW22D

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	0.0029	0.0014	0.0018	0.0029	0.0023	0.0026	0.0027	0.0022
B, diss, mg/L	6.5100	6.4500	5.0200	5.8100	5.0100	4.9500	5.2800	4.9900
Ba, diss, mg/L	0.024	0.023	0.025	0.025	0.021	0.023	0.023	0.022
Be, diss, mg/L	<0.0010	<0.0010	0.0030	0.0024	0.0025	<0.0100	0.0027	0.0043
Cd, diss, mg/L	0.0017	0.0015	0.0022	0.0020	0.0018	0.0022	0.0023	0.0025
Cl, diss, mg/L	7.9	7.9	7.5	6.5	10.9	7.5	8.1	8.2
CN, total, mg/L	0.07	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	0.077	0.080	0.106	0.112	0.078	0.105	0.117	0.140
Cr, diss, mg/L	0.0004	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	0.0014	0.0014	0.0027	0.0027	0.0032	0.0029	0.0026	0.0037
F, diss, mg/L	0.6	0.4	0.7	0.6	0.7	0.6	0.6	0.8
Fe, diss, mg/L	112.000	108.000	222.000	153.000	174.000	152.000	160.000	155.000
GW Depth (TOC), ft	5.70	9.38	9.05	10.97	8.64	9.78	10.35	10.35
GW Elv, ft		441.98	442.31	440.39	442.72	441.58	441.01	441.01
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	8.8800	9.6100	16.9000	12.5000	11.7000	12.5000	13.4000	13.4000
Ni, diss, mg/L	0.0557	0.0552	0.0738	0.0700	0.0685	0.0705	0.0764	0.0928
NO3, diss, mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pb, diss, mg/L	0.011	0.006	0.011	0.007	0.012	0.009	0.012	0.015
pH (field), STD	5.03	4.94	4.99	5.22	4.85	4.88	4.81	4.87
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0025	<0.0005	<0.0050	<0.0050	<0.0100	<0.0100	<0.0100	<0.0050
SO4, diss, mg/L	1220.0	2050.0	1590.0	2120.0	2580.0	2780.0	2090.0	2440.0
Spec. Cond. (field), micromho	2580	1860	3030	2150	1900	1850	2290	2270
TDS, mg/L	2460	2330	2940	2340	2620	2420	2600	3320
Temp (Fahrenheit), degrees F	60.6	64.6	71.4	69.0	64.5	67.2	76.0	66.0
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	0.22	0.23	0.31	0.28	0.29	0.30	0.30	0.35

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW22S

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	0.0089	0.0076	0.0042	0.0160	0.0062	0.0103	0.0126	0.0080
B, diss, mg/L	2.0900	2.2000	2.0800	3.1200	2.0400	2.0600	2.7300	2.7200
Ba, diss, mg/L	0.006	0.006	0.007	0.007	0.006	0.006	0.006	0.006
Be, diss, mg/L	0.0093	0.0123	0.0100	<0.0100	0.0074	<0.0100	0.0120	0.0129
Cd, diss, mg/L	0.0034	0.0042	0.0041	0.0067	0.0041	0.0068	0.0077	0.0075
Cl, diss, mg/L	14.6	6.9	7.0	6.3	5.5	9.6	6.3	7.8
CN, total, mg/L	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	0.133	0.144	0.119	0.117	0.127	0.149	0.122	0.113
Cr, diss, mg/L	0.0006	0.0004	0.0005	0.0004	0.0006	0.0008	0.0004	0.0004
Cu, diss, mg/L	0.0075	0.0129	0.0119	0.0137	0.0117	0.0133	0.0140	0.0148
F, diss, mg/L	0.6	0.7	0.6	1.1	0.6	0.8	1.0	1.2
Fe, diss, mg/L	537.000	604.000	535.000	339.000	500.000	620.000	415.000	413.000
GW Depth (TOC), ft	8.02	9.26	8.75	10.76	8.12	9.62	10.20	10.25
GW Elv, ft		442.22	442.73	440.72	443.36	441.86	441.28	441.23
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	29.2000	28.5000	24.6000	15.9000	26.5000	29.1000	16.5000	16.0000
Ni, diss, mg/L	0.1240	0.1670	0.1450	0.1840	0.1390	0.1960	0.2020	0.2020
NO3, diss, mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pb, diss, mg/L	0.006	0.007	0.007	0.008	0.007	0.007	0.007	0.007
pH (field), STD	3.46	3.76	3.69	3.79	3.47	3.68	3.72	3.81
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0050	<0.0010	<0.0050	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
SO4, diss, mg/L	2350.0	3770.0	2330.0	<0.5	4030.0	2650.0	2740.0	2830.0
Spec. Cond. (field), micromho	3800	3020	3740	2890	2670	3010	2990	2700
TDS, mg/L	4110	4330	4160	3780	3060	4480	4430	3380
Temp (Fahrenheit), degrees F	57.7	67.5	73.0	70.6	58.9	70.5	75.3	69.1
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.005	<0.001	0.004	0.002	0.003	0.003	0.003
Zn, diss, mg/L	0.67	0.82	0.87	0.89	0.69	0.99	1.06	1.03

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW23D

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	0.0012	0.0098	0.0023	0.0026	0.0016	0.0014	0.0021	0.0018
B, diss, mg/L	0.0500	0.0500	0.0500	0.0600	0.0500	0.0500	0.0500	0.0500
Ba, diss, mg/L	0.051	0.045	0.048	0.047	0.048	0.047	0.048	0.047
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	4.2	3.7	4.1	7.1	3.2	3.5	2.8	3.2
CN, total, mg/L	0.06	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.123	<0.010	0.059	0.249	<0.010	0.080	0.298	0.080
GW Depth (TOC), ft	5.90	6.38	6.08	7.38	4.89	6.32	7.42	8.22
GW Elv, ft		449.52	449.82	448.52	451.01	449.58	448.48	447.68
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	0.1070	0.1180	0.1150	0.1240	0.0763	0.1530	0.1280	0.1310
Ni, diss, mg/L	0.0002	0.0003	0.0016	0.0005	0.0004	0.0011	<0.0003	0.0006
NO3, diss, mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	7.44	7.01	4.83	7.16	8.40	7.24	7.24	7.26
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
SO4, diss, mg/L	21.2	51.0	22.0	20.7	19.8	21.5	18.1	20.3
Spec. Cond. (field), micromho	495	430	465	442	334	413	473	440
TDS, mg/L	264	350	202	406	256	192	228	288
Temp (Fahrenheit), degrees F	58.9	63.1	82.5	67.5	57.5	64.1	71.6	64.1
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Hutsonville Ash Impoundment
Analysis Results by Date (column) and Parameter (row)

Date Range: 01/01/2022 to 12/31/2023
Well: MW23S

	3/21/2022	6/20/2022	8/8/2022	10/24/2022	2/20/2023	6/5/2023	8/28/2023	10/23/2023
Ag, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
As, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
B, diss, mg/L	0.1400	0.1600	0.1600	0.1800	0.1300	0.1400	0.1700	0.1800
Ba, diss, mg/L	0.039	0.032	0.040	0.037	0.035	0.036	0.039	0.038
Be, diss, mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cd, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cl, diss, mg/L	9.3	1.3	1.9	1.2	1.1	8.0	1.2	1.8
CN, total, mg/L	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Co, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cr, diss, mg/L	0.0003	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cu, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
F, diss, mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fe, diss, mg/L	0.105	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GW Depth (TOC), ft	5.60	6.35	6.02	7.41	4.65	6.35	7.37	8.24
GW Elv, ft		449.68	450.01	448.62	451.38	449.68	448.66	447.79
Hg, diss, mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mn, diss, mg/L	0.0025	0.0111	<0.0010	0.0035	<0.0010	0.0133	0.0244	0.0361
Ni, diss, mg/L	0.0002	0.0004	0.0005	0.0003	0.0004	0.0009	<0.0003	0.0005
NO3, diss, mg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pb, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
pH (field), STD	6.99	6.76	6.87	6.96	6.82	7.00	6.96	6.95
Sb, diss, mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Se, diss, mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
SO4, diss, mg/L	10.7	9.5	11.6	9.2	9.2	9.1	7.5	8.7
Spec. Cond. (field), micromho	488	310	388	349	250	312	349	368
TDS, mg/L	194	444	200	266	236	164	190	226
Temp (Fahrenheit), degrees F	55.5	63.0	69.5	69.5	56.4	62.3	74.3	67.3
Tl, diss, mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
V, diss, mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn, diss, mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

APPENDIX B
SITE INSPECTION REPORTS

Hutsonville Power Station
Ash Pond A Closure Cap - Post-Closure Care Plan
Quarterly Site Inspection Checksheet

Date	02/16/2023
Inspector	LAM
Temperature	54 °F
Weather	Cloudy

	Item	Condition Code *	Comments
Pond Cap	**Vent Pipes**	**GC**	Vent holes clear of pipes inspected, no weed overgrowth inside cement vent barriers.
	Drainage Berms	**GC**	No excessive standing water; no eroded or scoured drainage channels.
	Vegetation	**GC**	No excessive vegetation overgrowth; no bare patches in excess of 100 sq. ft. Last mowing was 8/29/22.
	Erosion on Cap	**GC**	No erosion or gullies 6 inches or deeper on cap.
	Liner	**GC**	No exposed liner; no visual indication of rips, tears, punctures, or other damage to liner.
	Water Control Features (berms, vegetated flumes, etc.)	**GC**	Small amount of dead vegetation in drainage channels but does not affect drainage.
	Other		
Embankment	**Vegetation**	**GC**	No overgrowth or bare patches on embankments.
	Liner	**GC**	No exposure
	Erosion	**GC**	No erosion or gullies 6 inches or deeper on embankments or toe.
	Fencing	**GC**	Fending around site perimeter is secure.
	Drainage Channels (rip-rap, paved flumes, etc.)	**GC**	No overgrowth; rip-rap good condition. Last herbicide application was 9/21/22.
	Other	**MM**	Animals have burrowed two holes in east embankment. Blankenship to repair in May.
Groundwater Collection Trench and Discharge System	**Control Panels**	**GC**	Exterior of panels in good condition.
	Drainage Sumps / Manholes	**GC**	Lids are secure.
	Pumps	**GC**	Pumps replaced Oct 3, 2022.
	Groundwater Monitoring Wells	**GC**	Accessible; no excessive weed growth; no flooding.
	Flow Meter Totalizer	**GC**	Operational.
	Diver-Mate Data Collector (data download)	**GC**	Operational.
	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

Hutsonville Power Station – Ash Pond A

North letdown (facing SW)

East embankment (facing S)

North embankment (facing SW)

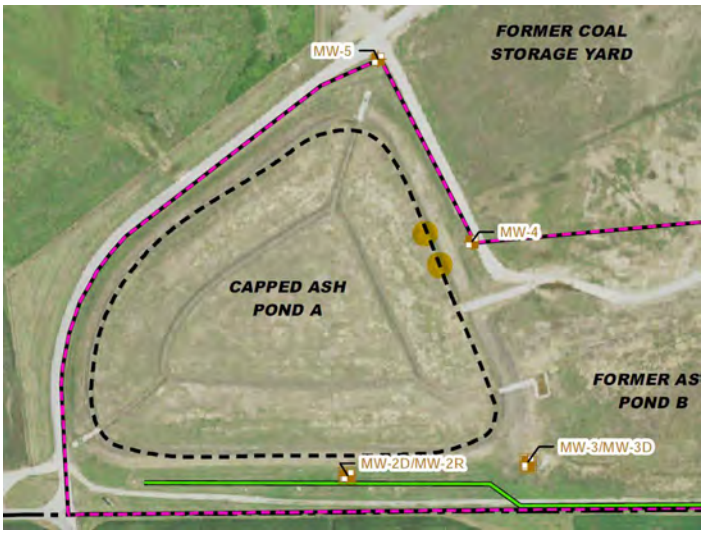
West embankment (facing S)

Southwest letdown (facing NE)

South embankment (facing E)

East Embankment (facing N)

Animal Holes on East Embankment to be filled



Hutsonville Power Station
Ash Pond A Closure Cap - Post-Closure Care Plan
Quarterly Site Inspection Checksheet

Date	06/30/2023
Inspector	LAM
Temperature	83 °F
Weather	Sunny

	Item	Condition Code *	Comments
Pond Cap	**Vent Pipes**	GC	Vent holes clear of pipes inspected, no weed overgrowth inside cement vent barriers.
	Drainage Berms	GC	No excessive standing water; no eroded or scoured drainage channels.
	Vegetation	GC	Inspection occurred during first mowing from 6/28/23 - 7/7/23. Herbicide application scheduled for 7/22/23.
	Erosion on Cap	GC	No erosion or gullies 6 inches or deeper on cap.
	Liner	GC	No exposed liner; no visual indication of rips, tears, punctures, or other damage to liner.
	Water Control Features (berms, vegetated flumes, etc.)	GC	Small amount of dead vegetation in drainage channels but does not affect drainage.
	Other		
Embankment	**Vegetation**	GC	No overgrowth or bare patches on embankments.
	Liner	GC	No exposure
	Erosion	GC	No erosion or gullies 6 inches or deeper on embankments or toe.
	Fencing	GC	Fending around site perimeter is secure.
	Drainage Channels (rip-rap, paved flumes, etc.)	GC	No overgrowth; rip-rap good condition. Last herbicide application was 9/21/22.
	Other	-	Animals borrows in east embankment were repaired during June 2023 mowing event.
Groundwater Collection Trench and Discharge System	**Control Panels**	GC	Exterior of panels in good condition.
	Drainage Sumps / Manholes	GC	Lids are secure.
	Pumps	GC	Pumps replaced Oct 3, 2022.
	Groundwater Monitoring Wells	GC	Accessible; no excessive weed growth; no flooding.
	Flow Meter Totalizer	MM	Communication from flow totalizer stopped communicating early spring. In process of upgrading modem to 5G.
	Diver-Mate Data Collector (data download)	MM	See above.
	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

Hutsonville Power Station – Ash Pond A

North letdown (facing SW)

East embankment (facing S)

North embankment (facing SW)

West embankment (facing S)

Southwest letdown (facing NE)

South embankment (facing E)

East Embankment (facing N)

Cap Top

Facing North

Facing West

Facing South

Facing East

Hutsonville Power Station
Ash Pond A Closure Cap - Post-Closure Care Plan
Quarterly Site Inspection Checksheet

Date	09/11/2023
Inspector	LAM
Temperature	81 °F
Weather	Cloudy

	Item	Condition Code *	Comments
Pond Cap	**Vent Pipes**	**GC**	Vent holes clear of pipes inspected, no weed overgrowth inside cement vent barriers.
	Drainage Berms	**GC**	No excessive standing water; no eroded or scoured drainage channels.
	Vegetation	**GC**	Inspection occurred after second mowing and herbicide application which was completed in early September.
	Erosion on Cap	**GC**	No erosion or gullies 6 inches or deeper on cap.
	Liner	**GC**	No exposed liner; no visual indication of rips, tears, punctures, or other damage to liner.
	Water Control Features (berms, vegetated flumes, etc.)	**GC**	Small amount of dead vegetation in drainage channels but does not affect drainage.
	Other		
Embankment	**Vegetation**	**GC**	No overgrowth or bare patches on embankments.
	Liner	**GC**	No exposure
	Erosion	**GC**	No erosion or gullies 6 inches or deeper on embankments or toe.
	Fencing	**MM**	Main gate destroyed by unknown driver. Repairs scheduled through Tri-State Fence Co. Contacted Crawford County Hwy Dept. to install a "Sharp turn ahead" sign on the road before station.
	Drainage Channels (rip-rap, paved flumes, etc.)	**MM**	No overgrowth; rip-rap at the North and Soutwest Letdowns has slid, exposing fabric and dirt. Blankenship to repair end of September.
	Other	**GC**	Animals borrows in east embankment were repaired during June 2023 mowing event.
Groundwater Collection Trench and Discharge System	**Control Panels**	**GC**	Exterior of panels in good condition.
	Drainage Sumps / Manholes	**GC**	Lids are secure.
	Pumps	**MM**	Pump #2 operating intermittently and piping leaks inside pit. High particulate in pit #2. Repairs scheduled through Freitag-Weihnardt.
	Groundwater Monitoring Wells	**GC**	Accessible; no excessive weed growth; no flooding.
	Flow Meter Totalizer	**MM**	Communication from flow totalizer stopped communicating early spring. In process of upgrading modem.
	Diver-Mate Data Collector (data download)	**MM**	See above.
	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

Hutsonville Power Station – Ash Pond A

North letdown (facing SW)

East embankment (facing S)

North embankment (facing SW)

West embankment (facing S)

Southwest letdown (facing NE)

South embankment (facing E)

East Embankment (facing N)

Cap Top

Facing North

Facing West

Facing South

Facing East

Main Gate Damage

Hutsonville Power Station
Ash Pond A Closure Cap - Post-Closure Care Plan
Quarterly Site Inspection Checksheet

Date	12/19/2023
Inspector	AWN
Temperature	34 °F
Weather	Clear

	Item	Condition Code *	Comments
Pond Cap	**Vent Pipes**	**GC**	Vent holes clear of pipes inspected, no weed overgrowth inside cement vent barriers.
	Drainage Berms	**GC**	No excessive standing water; no eroded or scoured drainage channels.
	Vegetation	**GC**	Inspection occurred after second mowing and herbicide application which was completed in early September 2023.
	Erosion on Cap	**GC**	No erosion or gullies 6 inches or deeper on cap.
	Liner	**GC**	No exposed liner; no visual indication of rips, tears, punctures, or other damage to liner.
	Water Control Features (berms, vegetated flumes, etc.)	**GC**	Small amount of dead vegetation in drainage channels but does not affect drainage.
	Other		
Embankment	**Vegetation**	**GC**	No overgrowth or bare patches on embankments.
	Liner	**GC**	No exposure
	Erosion	**GC**	No erosion or gullies 6 inches or deeper on embankments or toe.
	Fencing	**MM**	Main gate destroyed by unknown driver. Repairs scheduled through Dasenbrock Fence Company, Inc. Contacted Crawford County Hwy Dept. to install a "Sharp turn ahead" sign on the road before station.
	Drainage Channels (rip-rap, paved flumes, etc.)	**GC**	No overgrowth; Exposed fabric and dirt at North and Southwest Letdowns was repaired by Blankenship in September 2023.
	Other	**GC**	Animals borrows in east embankment were repaired during June 2023 mowing event.
Groundwater Collection Trench and Discharge System	**Control Panels**	**GC**	Exterior of panels in good condition.
	Drainage Sumps / Manholes	**GC**	Lids are secure.
	Pumps	**GC**	Operational; Pump repairs completed by Freitag-Weihnardt in September 2023.
	Groundwater Monitoring Wells	**GC**	Accessible; no excessive weed growth; no flooding.
	Flow Meter Totalizer	**GC**	Operational.
	Diver-Mate Data Collector (data download)	**GC**	Operational.
	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

Hutsonville Power Station – Ash Pond A

North letdown (facing SW)

East embankment (facing S)

North embankment (facing SW)

West embankment (facing S)

Southwest letdown (facing NE)

South embankment (facing E)

East Embankment (facing N)

Cap Top

Facing North

Facing West

Facing South

Facing East

APPENDIX C
STATISTICAL OUTPUT

APPENDIX C1
TEST DESCRIPTIONS

ELECTRIC POWER RESEARCH INSTITUTE

MANAGES

Groundwater Data Management and Evaluation Software

Software Manual Product ID #1012581

Software Manual, February 2010

EPRI Project Manager
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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 $x_{i1}, x_{i2}, \ldots, x_{in}$ 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 $VAR(S_i)$	$VAR(S_i) =$ $\frac{1}{18}\left\{ n_i(n_i-1)(2n_i+5) - \sum_{p=1}^{g_i} t_{ip}(t_{ip}-1)(2t_{ip}+5) - \sum_{q=1}^{h_i} u_{iq}(u_{iq}-1)(2u_{iq}+5) \right\}$ $+ \frac{\sum_{p=1}^{g_i} t_{ip}(t_{ip}-1)(t_{ip}-2) \sum_{q=1}^{h_i} u_{iq}(u_{iq}-1)(u_{iq}-2)}{9n_i(n_i-1)(n_i-2)}$ $+ \frac{\sum_{p=1}^{g_i} t_{ip}(t_{ip}-1) \sum_{q=1}^{h_i} u_{iq}(u_{iq}-1)}{2n_i(n_i-1)}.$ 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; $\overline{X}$	$\overline{X} = \frac{1}{n}\sum_{i=1}^{n} X_i$ where X_i is the i-th observation.
Standard deviation of observed data; S_x.	$S_x = \sqrt{\frac{1}{(n-1)}\sum_{i=1}^{n}(X_i - \overline{X})^2}$
Test statistics: T_l & T_n	Sort the data into ascending order, then compute the statistics $T_l = (\overline{X} - X_l)/S_x$ $T_n = (X_n - \overline{X})/S_x$ 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: $T_s = \dfrac{X_{(2)} - X_{(1)}}{X_{(n)} - X_{(1)}}$ *for* $3 \le n \le 7$ $T_s = \dfrac{X_{(2)} - X_{(1)}}{X_{(n-1)} - X_{(1)}}$ *for* $8 \le n \le 10$ $T_s = \dfrac{X_{(3)} - X_{(1)}}{X_{(n-1)} - X_{(1)}}$ *for* $11 \le n \le 13$ $T_s = \dfrac{X_{(3)} - X_{(1)}}{X_{(n-2)} - X_{(1)}}$ *for* $14 \le n \le 25.$
Test statistic, T_s, for the maximum data value	Compute the T_s test statistic for $X_{(n)}$ as an outlier:

	$T_s = \frac{X_{(n)} - X_{(n-1)}}{X_{(n)} - X_{(1)}}$ *for* $3 \le n \le 7$ $T_s = \frac{X_{(n)} - X_{(n-1)}}{X_{(n)} - X_{(2)}}$ *for* $8 \le n \le 10$ $T_s = \frac{X_{(n)} - X_{(n-2)}}{X_{(n)} - X_{(2)}}$ *for* $11 \le n \le 13$ $T_s = \frac{X_{(n)} - X_{(n-2)}}{X_{(n)} - X_{(3)}}$ *for* $14 \le n \le 25.$
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.

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).	
Slope, Q	$= \dfrac{x_{i'} - x_i}{i' - i}$ where $X_{i'}$ and x_i are data values at times i' and 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.
N′	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

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 C2
OUTLIER TEST

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Antimony, dissolved, mg/L
Location: MW12

Mean of all data: 0.00173
Standard Deviation of all data: 0.00164
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 5.03
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	<0.0100	True		1

Antimony, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00200
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00200
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: MW22S

Mean of all data: 0.00207
Standard Deviation of all data: 0.000385
Largest Observation Concentration of all data: Xn = 0.00400
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	<0.00400	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Antimony, dissolved, mg/L
Location: MW23D

Mean of all data: 0.00200
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00200
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: MW23S

Mean of all data: 0.00200
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00200
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: MW2D

Mean of all data: 0.00200
Standard Deviation of all data: 0.0
Largest Observation Concentration of all data: Xn = 0.00200
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

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Antimony, dissolved, mg/L
Location: MW2R

Mean of all data: 0.00215
Standard Deviation of all data: 0.00289
Largest Observation Concentration of all data: Xn = 0.0180
Test Statistic, high extreme of all data: Tn = 5.48
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0180	False		1

Antimony, dissolved, mg/L
Location: MW3

Mean of all data: 0.00186
Standard Deviation of all data: 0.00225
Largest Observation Concentration of all data: Xn = 0.00900
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
04/21/2014	0.00900	False		1

Antimony, dissolved, mg/L
Location: MW3D

Mean of all data: 0.00150
Standard Deviation of all data: 0.000862
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 0.580
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Antimony, dissolved, mg/L
Location: MW4

Mean of all data: 0.00158
Standard Deviation of all data: 0.00105
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 3.25
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00500	False		1

Antimony, dissolved, mg/L
Location: MW5

Mean of all data: 0.00148
Standard Deviation of all data: 0.000933
Largest Observation Concentration of all data: Xn = 0.00300
Test Statistic, high extreme of all data: Tn = 1.63
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L
Location: MW12

Mean of all data: 0.000199
Standard Deviation of all data: 0.000128
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.14
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/13/2017	0.000600	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Arsenic, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00192
Standard Deviation of all data: 0.00140
Largest Observation Concentration of all data: Xn = 0.00650
Test Statistic, high extreme of all data: Tn = 3.27
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	0.00650	False		1

Arsenic, dissolved, mg/L
Location: MW22S

Mean of all data: 0.00686
Standard Deviation of all data: 0.00345
Largest Observation Concentration of all data: Xn = 0.0160
Test Statistic, high extreme of all data: Tn = 2.65
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Arsenic, dissolved, mg/L
Location: MW23D

Mean of all data: 0.00274
Standard Deviation of all data: 0.00172
Largest Observation Concentration of all data: Xn = 0.00980
Test Statistic, high extreme of all data: Tn = 4.12
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/20/2022	0.00980	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Arsenic, dissolved, mg/L
Location: MW23S

Mean of all data: 0.000608
Standard Deviation of all data: 0.00179
Largest Observation Concentration of all data: Xn = 0.00920
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00920	False		1

Arsenic, dissolved, mg/L
Location: MW2D

Mean of all data: 0.00730
Standard Deviation of all data: 0.00232
Largest Observation Concentration of all data: Xn = 0.0138
Test Statistic, high extreme of all data: Tn = 2.80
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/17/2019	0.0138	False		1

Arsenic, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000341
Standard Deviation of all data: 0.000663
Largest Observation Concentration of all data: Xn = 0.00400
Test Statistic, high extreme of all data: Tn = 5.52
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/21/2014	0.00400	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Arsenic, dissolved, mg/L
Location: MW3

Mean of all data: 0.000214
Standard Deviation of all data: 0.000257
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 3.06
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00100	False		1

Arsenic, dissolved, mg/L
Location: MW3D

Mean of all data: 0.00148
Standard Deviation of all data: 0.00216
Largest Observation Concentration of all data: Xn = 0.0112
Test Statistic, high extreme of all data: Tn = 4.50
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	0.0112	False		1

Arsenic, dissolved, mg/L
Location: MW4

Mean of all data: 0.000269
Standard Deviation of all data: 0.000483
Largest Observation Concentration of all data: Xn = 0.00300
Test Statistic, high extreme of all data: Tn = 5.65
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/21/2014	0.00300	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Arsenic, dissolved, mg/L
Location: MW5

Mean of all data: 0.000230
Standard Deviation of all data: 0.000312
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 5.67
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/21/2014	0.00200	False		1

Barium, dissolved, mg/L
Location: MW12

Mean of all data: 0.0179
Standard Deviation of all data: 0.00364
Largest Observation Concentration of all data: Xn = 0.0260
Test Statistic, high extreme of all data: Tn = 2.24
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: MW22D

Mean of all data: 0.0257
Standard Deviation of all data: 0.00741
Largest Observation Concentration of all data: Xn = 0.0490
Test Statistic, high extreme of all data: Tn = 3.15
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0490	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Barium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.0100
Standard Deviation of all data: 0.00858
Largest Observation Concentration of all data: Xn = 0.0420
Test Statistic, high extreme of all data: Tn = 3.72
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0420	False		1

Barium, dissolved, mg/L
Location: MW23D

Mean of all data: 0.0449
Standard Deviation of all data: 0.00569
Largest Observation Concentration of all data: Xn = 0.0560
Test Statistic, high extreme of all data: Tn = 1.95
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0290	False	-1	

Barium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.0349
Standard Deviation of all data: 0.00789
Largest Observation Concentration of all data: Xn = 0.0490
Test Statistic, high extreme of all data: Tn = 1.79
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00900	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Barium, dissolved, mg/L
Location: MW2D

Mean of all data: 0.0711
Standard Deviation of all data: 0.0133
Largest Observation Concentration of all data: Xn = 0.103
Test Statistic, high extreme of all data: Tn = 2.40
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.0351
Standard Deviation of all data: 0.00634
Largest Observation Concentration of all data: Xn = 0.0500
Test Statistic, high extreme of all data: Tn = 2.35
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: MW3

Mean of all data: 0.00743
Standard Deviation of all data: 0.00440
Largest Observation Concentration of all data: Xn = 0.0150
Test Statistic, high extreme of all data: Tn = 1.72
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

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Barium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.0129
Standard Deviation of all data: 0.00366
Largest Observation Concentration of all data: Xn = 0.0210
Test Statistic, high extreme of all data: Tn = 2.20
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: MW4

Mean of all data: 0.0188
Standard Deviation of all data: 0.00436
Largest Observation Concentration of all data: Xn = 0.0270
Test Statistic, high extreme of all data: Tn = 1.88
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Barium, dissolved, mg/L
Location: MW5

Mean of all data: 0.0300
Standard Deviation of all data: 0.0138
Largest Observation Concentration of all data: Xn = 0.0710
Test Statistic, high extreme of all data: Tn = 2.98
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/26/2016	0.0710	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Beryllium, dissolved, mg/L
Location: MW12

Mean of all data: 0.000973
Standard Deviation of all data: 0.00107
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 3.77
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	<0.00500	True		1

Beryllium, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00277
Standard Deviation of all data: 0.00262
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 2.76
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/05/2023	<0.0100	True		1

Beryllium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.00797
Standard Deviation of all data: 0.00293
Largest Observation Concentration of all data: Xn = 0.0129
Test Statistic, high extreme of all data: Tn = 1.69
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Beryllium, dissolved, mg/L
Location: MW23D

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

Beryllium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.00129
Standard Deviation of all data: 0.00144
Largest Observation Concentration of all data: Xn = 0.00820
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00820	False		1

Beryllium, dissolved, mg/L
Location: MW2D

Mean of all data: 0.00115
Standard Deviation of all data: 0.000770
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	<0.00500	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Beryllium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000794
Standard Deviation of all data: 0.000410
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.502
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: MW3

Mean of all data: 0.000571
Standard Deviation of all data: 0.000514
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.835
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.000766
Standard Deviation of all data: 0.000497
Largest Observation Concentration of all data: Xn = 0.00210
Test Statistic, high extreme of all data: Tn = 2.69
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Beryllium, dissolved, mg/L
Location: MW4

Mean of all data: 0.000722
Standard Deviation of all data: 0.000454
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.611
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Beryllium, dissolved, mg/L
Location: MW5

Mean of all data: 0.000700
Standard Deviation of all data: 0.000464
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.646
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: MW12

Mean of all data: 0.176
Standard Deviation of all data: 0.0713
Largest Observation Concentration of all data: Xn = 0.460
Test Statistic, high extreme of all data: Tn = 3.98
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/28/2018	0.460	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Boron, dissolved, mg/L
Location: MW22D

Mean of all data: 6.43
Standard Deviation of all data: 2.10
Largest Observation Concentration of all data: Xn = 9.43
Test Statistic, high extreme of all data: Tn = 1.43
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0500	False	-1	

Boron, dissolved, mg/L
Location: MW22S

Mean of all data: 3.84
Standard Deviation of all data: 5.42
Largest Observation Concentration of all data: Xn = 29.9
Test Statistic, high extreme of all data: Tn = 4.81
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/28/2018	29.9	False		1

Boron, dissolved, mg/L
Location: MW23D

Mean of all data: 0.366
Standard Deviation of all data: 1.59
Largest Observation Concentration of all data: Xn = 8.02
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	8.02	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Boron, dissolved, mg/L
Location: MW23S

Mean of all data: 0.368
Standard Deviation of all data: 1.02
Largest Observation Concentration of all data: Xn = 5.24
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	5.24	False		1

Boron, dissolved, mg/L
Location: MW2D

Mean of all data: 0.139
Standard Deviation of all data: 0.163
Largest Observation Concentration of all data: Xn = 0.570
Test Statistic, high extreme of all data: Tn = 2.64
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: MW2R

Mean of all data: 1.81
Standard Deviation of all data: 0.731
Largest Observation Concentration of all data: Xn = 3.55
Test Statistic, high extreme of all data: Tn = 2.38
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Boron, dissolved, mg/L
Location: MW3

Mean of all data: 3.03
Standard Deviation of all data: 1.95
Largest Observation Concentration of all data: Xn = 7.78
Test Statistic, high extreme of all data: Tn = 2.43
T Critical of all data: Tcr = 3.00

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: MW3D

Mean of all data: 3.65
Standard Deviation of all data: 1.21
Largest Observation Concentration of all data: Xn = 5.96
Test Statistic, high extreme of all data: Tn = 1.90
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Boron, dissolved, mg/L
Location: MW4

Mean of all data: 0.264
Standard Deviation of all data: 0.121
Largest Observation Concentration of all data: Xn = 0.831
Test Statistic, high extreme of all data: Tn = 4.68
T Critical of all data: Tcr = 3.14

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/11/2012	0.831	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Boron, dissolved, mg/L
Location: MW5

Mean of all data: 0.207
Standard Deviation of all data: 0.130
Largest Observation Concentration of all data: Xn = 0.710
Test Statistic, high extreme of all data: Tn = 3.88
T Critical of all data: Tcr = 3.16

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/06/2011	0.710	False		1

Cadmium, dissolved, mg/L
Location: MW12

Mean of all data: 0.000216
Standard Deviation of all data: 0.000205
Largest Observation Concentration of all data: Xn = 0.00125
Test Statistic, high extreme of all data: Tn = 5.03
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	<0.00125	True		1

Cadmium, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00182
Standard Deviation of all data: 0.000901
Largest Observation Concentration of all data: Xn = 0.00450
Test Statistic, high extreme of all data: Tn = 2.97
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	0.00450	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cadmium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.00395
Standard Deviation of all data: 0.00166
Largest Observation Concentration of all data: Xn = 0.00770
Test Statistic, high extreme of all data: Tn = 2.25
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: MW23D

Mean of all data: 0.000304
Standard Deviation of all data: 0.000270
Largest Observation Concentration of all data: Xn = 0.00160
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00160	False		1

Cadmium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.000444
Standard Deviation of all data: 0.000970
Largest Observation Concentration of all data: Xn = 0.00510
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00510	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cadmium, dissolved, mg/L
Location: MW2D

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

Cadmium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000199
Standard Deviation of all data: 0.000103
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.502
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: MW3

Mean of all data: 0.000143
Standard Deviation of all data: 0.000128
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.835
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

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cadmium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.00312
Standard Deviation of all data: 0.00291
Largest Observation Concentration of all data: Xn = 0.0107
Test Statistic, high extreme of all data: Tn = 2.60
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: MW4

Mean of all data: 0.000181
Standard Deviation of all data: 0.000114
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.611
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cadmium, dissolved, mg/L
Location: MW5

Mean of all data: 0.000175
Standard Deviation of all data: 0.000116
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.646
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chloride, dissolved, mg/L
Location: MW12

Mean of all data: 4.88
Standard Deviation of all data: 3.53
Largest Observation Concentration of all data: Xn = 13.5
Test Statistic, high extreme of all data: Tn = 2.44
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: MW22D

Mean of all data: 8.11
Standard Deviation of all data: 1.48
Largest Observation Concentration of all data: Xn = 14.2
Test Statistic, high extreme of all data: Tn = 4.12
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	14.2	False		1

Chloride, dissolved, mg/L
Location: MW22S

Mean of all data: 8.55
Standard Deviation of all data: 3.61
Largest Observation Concentration of all data: Xn = 20.6
Test Statistic, high extreme of all data: Tn = 3.34
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	20.6	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chloride, dissolved, mg/L
Location: MW23D

Mean of all data: 5.07
Standard Deviation of all data: 1.46
Largest Observation Concentration of all data: Xn = 9.70
Test Statistic, high extreme of all data: Tn = 3.17
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	9.70	False		1

Chloride, dissolved, mg/L
Location: MW23S

Mean of all data: 3.30
Standard Deviation of all data: 2.53
Largest Observation Concentration of all data: Xn = 10.1
Test Statistic, high extreme of all data: Tn = 2.69
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	10.1	False		1

Chloride, dissolved, mg/L
Location: MW2D

Mean of all data: 12.3
Standard Deviation of all data: 2.06
Largest Observation Concentration of all data: Xn = 19.5
Test Statistic, high extreme of all data: Tn = 3.49
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/20/2022	19.5	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chloride, dissolved, mg/L
Location: MW2R

Mean of all data: 19.2
Standard Deviation of all data: 5.22
Largest Observation Concentration of all data: Xn = 32.1
Test Statistic, high extreme of all data: Tn = 2.47
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Chloride, dissolved, mg/L
Location: MW3

Mean of all data: 6.60
Standard Deviation of all data: 6.14
Largest Observation Concentration of all data: Xn = 21.9
Test Statistic, high extreme of all data: Tn = 2.49
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/21/2014	21.9	False		1

Chloride, dissolved, mg/L
Location: MW3D

Mean of all data: 12.6
Standard Deviation of all data: 4.62
Largest Observation Concentration of all data: Xn = 21.8
Test Statistic, high extreme of all data: Tn = 1.99
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chloride, dissolved, mg/L
Location: MW4

Mean of all data: 2.58
Standard Deviation of all data: 2.70
Largest Observation Concentration of all data: Xn = 12.4
Test Statistic, high extreme of all data: Tn = 3.63
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	12.4	False		1

Chloride, dissolved, mg/L
Location: MW5

Mean of all data: 3.60
Standard Deviation of all data: 3.25
Largest Observation Concentration of all data: Xn = 16.0
Test Statistic, high extreme of all data: Tn = 3.82
T Critical of all data: Tcr = 2.88

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	16.0	False		1

Chromium, dissolved, mg/L
Location: MW12

Mean of all data: 0.00102
Standard Deviation of all data: 0.00117
Largest Observation Concentration of all data: Xn = 0.00600
Test Statistic, high extreme of all data: Tn = 4.27
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/22/2014	0.00600	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chromium, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00121
Standard Deviation of all data: 0.00124
Largest Observation Concentration of all data: Xn = 0.00590
Test Statistic, high extreme of all data: Tn = 3.78
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	0.00590	False		1

Chromium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.000837
Standard Deviation of all data: 0.000738
Largest Observation Concentration of all data: Xn = 0.00410
Test Statistic, high extreme of all data: Tn = 4.42
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	0.00410	False		1

Chromium, dissolved, mg/L
Location: MW23D

Mean of all data: 0.000972
Standard Deviation of all data: 0.000140
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.200
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/01/2021	0.000300	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chromium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.000944
Standard Deviation of all data: 0.000194
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.289
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	0.000300	False	-1	

Chromium, dissolved, mg/L
Location: MW2D

Mean of all data: 0.000974
Standard Deviation of all data: 0.000135
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.192
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	0.000300	False	-1	

Chromium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.00128
Standard Deviation of all data: 0.00234
Largest Observation Concentration of all data: Xn = 0.0140
Test Statistic, high extreme of all data: Tn = 5.43
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0140	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chromium, dissolved, mg/L
Location: MW3

Mean of all data: 0.00211
Standard Deviation of all data: 0.00388
Largest Observation Concentration of all data: Xn = 0.0140
Test Statistic, high extreme of all data: Tn = 3.06
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0140	False		1

Chromium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.000779
Standard Deviation of all data: 0.000572
Largest Observation Concentration of all data: Xn = 0.00300
Test Statistic, high extreme of all data: Tn = 3.88
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	0.00300	False		1

Chromium, dissolved, mg/L
Location: MW4

Mean of all data: 0.00124
Standard Deviation of all data: 0.00257
Largest Observation Concentration of all data: Xn = 0.0140
Test Statistic, high extreme of all data: Tn = 4.97
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0140	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Chromium, dissolved, mg/L
Location: MW5

Mean of all data: 0.000755
Standard Deviation of all data: 0.00116
Largest Observation Concentration of all data: Xn = 0.00700
Test Statistic, high extreme of all data: Tn = 5.40
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00700	False		1

Cobalt, dissolved, mg/L
Location: MW12

Mean of all data: 0.000757
Standard Deviation of all data: 0.000435
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.559
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, dissolved, mg/L
Location: MW22D

Mean of all data: 0.0881
Standard Deviation of all data: 0.0258
Largest Observation Concentration of all data: Xn = 0.140
Test Statistic, high extreme of all data: Tn = 2.01
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	<0.00100	True	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cobalt, dissolved, mg/L
Location: MW22S

Mean of all data: 0.113
Standard Deviation of all data: 0.0305
Largest Observation Concentration of all data: Xn = 0.180
Test Statistic, high extreme of all data: Tn = 2.21
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	<0.00100	True	-1	

Cobalt, dissolved, mg/L
Location: MW23D

Mean of all data: 0.00564
Standard Deviation of all data: 0.0208
Largest Observation Concentration of all data: Xn = 0.105
Test Statistic, high extreme of all data: Tn = 4.77
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.105	False		1

Cobalt, dissolved, mg/L
Location: MW23S

Mean of all data: 0.00460
Standard Deviation of all data: 0.0180
Largest Observation Concentration of all data: Xn = 0.0910
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0910	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cobalt, dissolved, mg/L
Location: MW2D

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

Cobalt, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000794
Standard Deviation of all data: 0.000410
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.502
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, dissolved, mg/L
Location: MW3

Mean of all data: 0.00121
Standard Deviation of all data: 0.00142
Largest Observation Concentration of all data: Xn = 0.00600
Test Statistic, high extreme of all data: Tn = 3.36
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/20/2015	0.00600	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cobalt, dissolved, mg/L
Location: MW3D

Mean of all data: 0.0987
Standard Deviation of all data: 0.0863
Largest Observation Concentration of all data: Xn = 0.332
Test Statistic, high extreme of all data: Tn = 2.70
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, dissolved, mg/L
Location: MW4

Mean of all data: 0.000722
Standard Deviation of all data: 0.000454
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.611
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cobalt, dissolved, mg/L
Location: MW5

Mean of all data: 0.000700
Standard Deviation of all data: 0.000464
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.646
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, dissolved, mg/L
Location: MW12

Mean of all data: 0.000500
Standard Deviation of all data: 0.000373
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 4.02
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/20/2015	0.00200	False		1

Copper, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00257
Standard Deviation of all data: 0.00527
Largest Observation Concentration of all data: Xn = 0.0273
Test Statistic, high extreme of all data: Tn = 4.70
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	0.0273	False		1

Copper, dissolved, mg/L
Location: MW22S

Mean of all data: 0.00884
Standard Deviation of all data: 0.00426
Largest Observation Concentration of all data: Xn = 0.0148
Test Statistic, high extreme of all data: Tn = 1.40
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, dissolved, mg/L
Location: MW23D

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

Copper, dissolved, mg/L
Location: MW23S

Mean of all data: 0.00103
Standard Deviation of all data: 0.00184
Largest Observation Concentration of all data: Xn = 0.00780
Test Statistic, high extreme of all data: Tn = 3.68
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00780	False		1

Copper, dissolved, mg/L
Location: MW2D

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

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000574
Standard Deviation of all data: 0.000411
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 3.47
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00200	False		1

Copper, dissolved, mg/L
Location: MW3

Mean of all data: 0.00308
Standard Deviation of all data: 0.00468
Largest Observation Concentration of all data: Xn = 0.0170
Test Statistic, high extreme of all data: Tn = 2.97
T Critical of all data: Tcr = 2.50

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/28/1994	0.0170	False		1

Copper, dissolved, mg/L
Location: MW3D

Mean of all data: 0.00115
Standard Deviation of all data: 0.00220
Largest Observation Concentration of all data: Xn = 0.0130
Test Statistic, high extreme of all data: Tn = 5.40
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/07/2016	0.0130	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Copper, dissolved, mg/L
Location: MW4

Mean of all data: 0.00567
Standard Deviation of all data: 0.0308
Largest Observation Concentration of all data: Xn = 0.200
Test Statistic, high extreme of all data: Tn = 6.32
T Critical of all data: Tcr = 2.89

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/27/1991	0.200	False		1

Copper, dissolved, mg/L
Location: MW5

Mean of all data: 0.000625
Standard Deviation of all data: 0.00112
Largest Observation Concentration of all data: Xn = 0.00700
Test Statistic, high extreme of all data: Tn = 5.71
T Critical of all data: Tcr = 2.91

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/28/1994	0.00700	False		1

Cyanide, total, mg/L
Location: MW12

Mean of all data: 0.00878
Standard Deviation of all data: 0.0144
Largest Observation Concentration of all data: Xn = 0.0900
Test Statistic, high extreme of all data: Tn = 5.66
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	0.0900	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cyanide, total, mg/L
Location: MW22D

Mean of all data: 0.0141
Standard Deviation of all data: 0.0158
Largest Observation Concentration of all data: Xn = 0.0700
Test Statistic, high extreme of all data: Tn = 3.54
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	0.0700	False		1

Cyanide, total, mg/L
Location: MW22S

Mean of all data: 0.0106
Standard Deviation of all data: 0.0101
Largest Observation Concentration of all data: Xn = 0.0600
Test Statistic, high extreme of all data: Tn = 4.88
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	0.0600	False		1

Cyanide, total, mg/L
Location: MW23D

Mean of all data: 0.0126
Standard Deviation of all data: 0.0130
Largest Observation Concentration of all data: Xn = 0.0600
Test Statistic, high extreme of all data: Tn = 3.65
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	0.0600	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cyanide, total, mg/L
Location: MW23S

Mean of all data: 0.00980
Standard Deviation of all data: 0.00467
Largest Observation Concentration of all data: Xn = 0.0300
Test Statistic, high extreme of all data: Tn = 4.32
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/20/2022	0.0300	False		1

Cyanide, total, mg/L
Location: MW2D

Mean of all data: 0.00926
Standard Deviation of all data: 0.00301
Largest Observation Concentration of all data: Xn = 0.0200
Test Statistic, high extreme of all data: Tn = 3.57
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/28/2018	0.0200	False		1

Cyanide, total, mg/L
Location: MW2R

Mean of all data: 0.00750
Standard Deviation of all data: 0.00567
Largest Observation Concentration of all data: Xn = 0.0300
Test Statistic, high extreme of all data: Tn = 3.97
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/26/2020	0.0300	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cyanide, total, mg/L
Location: MW3

Mean of all data: 0.00429
Standard Deviation of all data: 0.00432
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 1.32
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: MW3D

Mean of all data: 0.00632
Standard Deviation of all data: 0.00430
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 0.857
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Cyanide, total, mg/L
Location: MW4

Mean of all data: 0.00653
Standard Deviation of all data: 0.00444
Largest Observation Concentration of all data: Xn = 0.0150
Test Statistic, high extreme of all data: Tn = 1.91
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Cyanide, total, mg/L
Location: MW5

Mean of all data: 0.00815
Standard Deviation of all data: 0.0110
Largest Observation Concentration of all data: Xn = 0.0700
Test Statistic, high extreme of all data: Tn = 5.63
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/26/2016	0.0700	False		1

Fluoride, dissolved, mg/L
Location: MW12

Mean of all data: 0.109
Standard Deviation of all data: 0.0828
Largest Observation Concentration of all data: Xn = 0.454
Test Statistic, high extreme of all data: Tn = 4.16
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/02/2015	0.454	False		1

Fluoride, dissolved, mg/L
Location: MW22D

Mean of all data: 0.460
Standard Deviation of all data: 0.237
Largest Observation Concentration of all data: Xn = 0.900
Test Statistic, high extreme of all data: Tn = 1.85
T Critical of all data: Tcr = 2.68

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Fluoride, dissolved, mg/L
Location: MW22S

Mean of all data: 0.653
Standard Deviation of all data: 0.243
Largest Observation Concentration of all data: Xn = 1.17
Test Statistic, high extreme of all data: Tn = 2.13
T Critical of all data: Tcr = 2.68

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: MW23D

Mean of all data: 0.129
Standard Deviation of all data: 0.108
Largest Observation Concentration of all data: Xn = 0.600
Test Statistic, high extreme of all data: Tn = 4.35
T Critical of all data: Tcr = 2.64

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.600	False		1

Fluoride, dissolved, mg/L
Location: MW23S

Mean of all data: 0.161
Standard Deviation of all data: 0.188
Largest Observation Concentration of all data: Xn = 0.900
Test Statistic, high extreme of all data: Tn = 3.93
T Critical of all data: Tcr = 2.64

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.900	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Fluoride, dissolved, mg/L
Location: MW2D

Mean of all data: 0.203
Standard Deviation of all data: 0.0792
Largest Observation Concentration of all data: Xn = 0.400
Test Statistic, high extreme of all data: Tn = 2.49
T Critical of all data: Tcr = 2.68

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: MW2R

Mean of all data: 0.717
Standard Deviation of all data: 3.62
Largest Observation Concentration of all data: Xn = 21.2
Test Statistic, high extreme of all data: Tn = 5.66
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/02/2015	21.2	False		1

Fluoride, dissolved, mg/L
Location: MW3

Mean of all data: 0.252
Standard Deviation of all data: 0.253
Largest Observation Concentration of all data: Xn = 0.984
Test Statistic, high extreme of all data: Tn = 2.89
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/20/2015	0.984	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Fluoride, dissolved, mg/L
Location: MW3D

Mean of all data: 0.353
Standard Deviation of all data: 0.387
Largest Observation Concentration of all data: Xn = 1.41
Test Statistic, high extreme of all data: Tn = 2.73
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: MW4

Mean of all data: 0.205
Standard Deviation of all data: 0.107
Largest Observation Concentration of all data: Xn = 0.484
Test Statistic, high extreme of all data: Tn = 2.61
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Fluoride, dissolved, mg/L
Location: MW5

Mean of all data: 0.132
Standard Deviation of all data: 0.0860
Largest Observation Concentration of all data: Xn = 0.418
Test Statistic, high extreme of all data: Tn = 3.33
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/02/2015	0.418	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Iron, dissolved, mg/L
Location: MW12

Mean of all data: 0.112
Standard Deviation of all data: 0.186
Largest Observation Concentration of all data: Xn = 0.710
Test Statistic, high extreme of all data: Tn = 3.21
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	0.710	False		1

Iron, dissolved, mg/L
Location: MW22D

Mean of all data: 97.7
Standard Deviation of all data: 80.2
Largest Observation Concentration of all data: Xn = 354.
Test Statistic, high extreme of all data: Tn = 3.20
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	354.	False		1

Iron, dissolved, mg/L
Location: MW22S

Mean of all data: 370.
Standard Deviation of all data: 180.
Largest Observation Concentration of all data: Xn = 620.
Test Statistic, high extreme of all data: Tn = 1.39
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Iron, dissolved, mg/L
Location: MW23D

Mean of all data: 3.10
Standard Deviation of all data: 13.9
Largest Observation Concentration of all data: Xn = 70.0
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	70.0	False		1

Iron, dissolved, mg/L
Location: MW23S

Mean of all data: 8.21
Standard Deviation of all data: 40.8
Largest Observation Concentration of all data: Xn = 204.
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	204.	False		1

Iron, dissolved, mg/L
Location: MW2D

Mean of all data: 0.724
Standard Deviation of all data: 0.854
Largest Observation Concentration of all data: Xn = 3.56
Test Statistic, high extreme of all data: Tn = 3.32
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/17/2019	3.56	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Iron, dissolved, mg/L
Location: MW2R

Mean of all data: 0.121
Standard Deviation of all data: 0.164
Largest Observation Concentration of all data: Xn = 0.603
Test Statistic, high extreme of all data: Tn = 2.95
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	0.603	False		1

Iron, dissolved, mg/L
Location: MW3

Mean of all data: 0.276
Standard Deviation of all data: 0.707
Largest Observation Concentration of all data: Xn = 2.89
Test Statistic, high extreme of all data: Tn = 3.70
T Critical of all data: Tcr = 2.92

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	2.89	False		1

Iron, dissolved, mg/L
Location: MW3D

Mean of all data: 4.25
Standard Deviation of all data: 4.62
Largest Observation Concentration of all data: Xn = 15.0
Test Statistic, high extreme of all data: Tn = 2.33
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Iron, dissolved, mg/L
Location: MW4

Mean of all data: 0.0879
Standard Deviation of all data: 0.147
Largest Observation Concentration of all data: Xn = 0.751
Test Statistic, high extreme of all data: Tn = 4.51
T Critical of all data: Tcr = 3.07

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/30/2012	0.751	False		1

Iron, dissolved, mg/L
Location: MW5

Mean of all data: 0.0712
Standard Deviation of all data: 0.135
Largest Observation Concentration of all data: Xn = 0.840
Test Statistic, high extreme of all data: Tn = 5.70
T Critical of all data: Tcr = 3.09

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/22/1991	0.840	False		1

Lead, dissolved, mg/L
Location: MW12

Mean of all data: 0.00111
Standard Deviation of all data: 0.00171
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 5.19
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.0100	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Lead, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00748
Standard Deviation of all data: 0.00432
Largest Observation Concentration of all data: Xn = 0.0160
Test Statistic, high extreme of all data: Tn = 1.97
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: MW22S

Mean of all data: 0.00596
Standard Deviation of all data: 0.00210
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 1.92
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: MW23D

Mean of all data: 0.00104
Standard Deviation of all data: 0.000200
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.00200	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Lead, dissolved, mg/L
Location: MW23S

Mean of all data: 0.00160
Standard Deviation of all data: 0.00212
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 3.96
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.0100	True		1

Lead, dissolved, mg/L
Location: MW2D

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

Lead, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000824
Standard Deviation of all data: 0.000387
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.456
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Lead, dissolved, mg/L
Location: MW3

Mean of all data: 0.000571
Standard Deviation of all data: 0.000514
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.835
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: MW3D

Mean of all data: 0.000737
Standard Deviation of all data: 0.000446
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.590
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Lead, dissolved, mg/L
Location: MW4

Mean of all data: 0.000722
Standard Deviation of all data: 0.000454
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.611
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Lead, dissolved, mg/L
Location: MW5

Mean of all data: 0.000700
Standard Deviation of all data: 0.000464
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 0.646
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L
Location: MW12

Mean of all data: 0.194
Standard Deviation of all data: 0.340
Largest Observation Concentration of all data: Xn = 1.66
Test Statistic, high extreme of all data: Tn = 4.31
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/28/2018	1.66	False		1

Manganese, dissolved, mg/L
Location: MW22D

Mean of all data: 9.45
Standard Deviation of all data: 4.45
Largest Observation Concentration of all data: Xn = 19.6
Test Statistic, high extreme of all data: Tn = 2.28
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Manganese, dissolved, mg/L
Location: MW22S

Mean of all data: 24.5
Standard Deviation of all data: 17.6
Largest Observation Concentration of all data: Xn = 106.
Test Statistic, high extreme of all data: Tn = 4.64
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	106.	False		1

Manganese, dissolved, mg/L
Location: MW23D

Mean of all data: 0.463
Standard Deviation of all data: 1.70
Largest Observation Concentration of all data: Xn = 8.60
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	8.60	False		1

Manganese, dissolved, mg/L
Location: MW23S

Mean of all data: 0.563
Standard Deviation of all data: 2.70
Largest Observation Concentration of all data: Xn = 13.5
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	13.5	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Manganese, dissolved, mg/L

Location: MW2D

Mean of all data: 0.0731
Standard Deviation of all data: 0.0114
Largest Observation Concentration of all data: Xn = 0.0951
Test Statistic, high extreme of all data: Tn = 1.93
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Manganese, dissolved, mg/L

Location: MW2R

Mean of all data: 0.00716
Standard Deviation of all data: 0.0119
Largest Observation Concentration of all data: Xn = 0.0534
Test Statistic, high extreme of all data: Tn = 3.89
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/02/2015	0.0534	False		1

Manganese, dissolved, mg/L

Location: MW3

Mean of all data: 0.0693
Standard Deviation of all data: 0.130
Largest Observation Concentration of all data: Xn = 0.708
Test Statistic, high extreme of all data: Tn = 4.90
T Critical of all data: Tcr = 3.00

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/20/2015	0.708	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Manganese, dissolved, mg/L
Location: MW3D

Mean of all data: 11.3
Standard Deviation of all data: 8.96
Largest Observation Concentration of all data: Xn = 43.7
Test Statistic, high extreme of all data: Tn = 3.62
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/13/2017	43.7	False		1

Manganese, dissolved, mg/L
Location: MW4

Mean of all data: 0.0300
Standard Deviation of all data: 0.151
Largest Observation Concentration of all data: Xn = 1.25
Test Statistic, high extreme of all data: Tn = 8.07
T Critical of all data: Tcr = 3.14

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
07/09/2012	1.25	False		1

Manganese, dissolved, mg/L
Location: MW5

Mean of all data: 0.00375
Standard Deviation of all data: 0.00711
Largest Observation Concentration of all data: Xn = 0.0380
Test Statistic, high extreme of all data: Tn = 4.82
T Critical of all data: Tcr = 3.16

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/27/2014	0.0380	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Mercury, dissolved, mg/L
Location: MW12

Mean of all data: 0.000111
Standard Deviation of all data: 0.000171
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 5.19
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00100	True		1

Mercury, dissolved, mg/L
Location: MW22D

Mean of all data: 0.000100
Standard Deviation of all data: 0.00000000000319
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: MW22S

Mean of all data: 0.000137
Standard Deviation of all data: 0.000174
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 4.97
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00100	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Mercury, dissolved, mg/L
Location: MW23D

Mean of all data: 0.000100
Standard Deviation of all data: 0.00000000000257
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: MW23S

Mean of all data: 0.000136
Standard Deviation of all data: 0.000180
Largest Observation Concentration of all data: Xn = 0.00100
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00100	True		1

Mercury, dissolved, mg/L
Location: MW2D

Mean of all data: 0.000100
Standard Deviation of all data: 0.00000000000319
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

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Mercury, dissolved, mg/L
Location: MW2R

Mean of all data: 0.0000824
Standard Deviation of all data: 0.0000459
Largest Observation Concentration of all data: Xn = 0.000200
Test Statistic, high extreme of all data: Tn = 2.57
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: MW3

Mean of all data: 0.0000533
Standard Deviation of all data: 0.0000516
Largest Observation Concentration of all data: Xn = 0.000100
Test Statistic, high extreme of all data: Tn = 0.904
T Critical of all data: Tcr = 2.41

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: MW3D

Mean of all data: 0.0000763
Standard Deviation of all data: 0.0000490
Largest Observation Concentration of all data: Xn = 0.000200
Test Statistic, high extreme of all data: Tn = 2.53
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Mercury, dissolved, mg/L
Location: MW4

Mean of all data: 0.0000750
Standard Deviation of all data: 0.0000500
Largest Observation Concentration of all data: Xn = 0.000200
Test Statistic, high extreme of all data: Tn = 2.50
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Mercury, dissolved, mg/L
Location: MW5

Mean of all data: 0.0000925
Standard Deviation of all data: 0.000138
Largest Observation Concentration of all data: Xn = 0.000900
Test Statistic, high extreme of all data: Tn = 5.83
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.000900	False		1

Nickel, dissolved, mg/L
Location: MW12

Mean of all data: 0.00206
Standard Deviation of all data: 0.00216
Largest Observation Concentration of all data: Xn = 0.00780
Test Statistic, high extreme of all data: Tn = 2.66
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nickel, dissolved, mg/L
Location: MW22D

Mean of all data: 0.0544
Standard Deviation of all data: 0.0220
Largest Observation Concentration of all data: Xn = 0.105
Test Statistic, high extreme of all data: Tn = 2.30
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: MW22S

Mean of all data: 0.118
Standard Deviation of all data: 0.0466
Largest Observation Concentration of all data: Xn = 0.202
Test Statistic, high extreme of all data: Tn = 1.81
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: MW23D

Mean of all data: 0.00238
Standard Deviation of all data: 0.00922
Largest Observation Concentration of all data: Xn = 0.0465
Test Statistic, high extreme of all data: Tn = 4.78
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.0465	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nickel, dissolved, mg/L
Location: MW23S

Mean of all data: 0.00521
Standard Deviation of all data: 0.0237
Largest Observation Concentration of all data: Xn = 0.119
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.119	False		1

Nickel, dissolved, mg/L
Location: MW2D

Mean of all data: 0.000322
Standard Deviation of all data: 0.000217
Largest Observation Concentration of all data: Xn = 0.00110
Test Statistic, high extreme of all data: Tn = 3.58
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/20/2022	0.00110	False		1

Nickel, dissolved, mg/L
Location: MW2R

Mean of all data: 0.00125
Standard Deviation of all data: 0.00237
Largest Observation Concentration of all data: Xn = 0.0120
Test Statistic, high extreme of all data: Tn = 4.53
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/03/2014	0.0120	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nickel, dissolved, mg/L
Location: MW3

Mean of all data: 0.00959
Standard Deviation of all data: 0.0116
Largest Observation Concentration of all data: Xn = 0.0300
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

Nickel, dissolved, mg/L
Location: MW3D

Mean of all data: 0.154
Standard Deviation of all data: 0.0910
Largest Observation Concentration of all data: Xn = 0.369
Test Statistic, high extreme of all data: Tn = 2.36
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nickel, dissolved, mg/L
Location: MW4

Mean of all data: 0.00193
Standard Deviation of all data: 0.00539
Largest Observation Concentration of all data: Xn = 0.0310
Test Statistic, high extreme of all data: Tn = 5.40
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/30/2012	0.0310	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nickel, dissolved, mg/L
Location: MW5

Mean of all data: 0.00121
Standard Deviation of all data: 0.00180
Largest Observation Concentration of all data: Xn = 0.00800
Test Statistic, high extreme of all data: Tn = 3.77
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00800	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW12

Mean of all data: 1.41
Standard Deviation of all data: 0.592
Largest Observation Concentration of all data: Xn = 3.03
Test Statistic, high extreme of all data: Tn = 2.74
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrate nitrogen, dissolved, mg/L
Location: MW22D

Mean of all data: 0.114
Standard Deviation of all data: 0.0790
Largest Observation Concentration of all data: Xn = 0.450
Test Statistic, high extreme of all data: Tn = 4.25
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/12/2018	0.450	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nitrate nitrogen, dissolved, mg/L
Location: MW22S

Mean of all data: 0.106
Standard Deviation of all data: 0.0621
Largest Observation Concentration of all data: Xn = 0.350
Test Statistic, high extreme of all data: Tn = 3.94
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/12/2018	0.350	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW23D

Mean of all data: 0.0860
Standard Deviation of all data: 0.0229
Largest Observation Concentration of all data: Xn = 0.100
Test Statistic, high extreme of all data: Tn = 0.611
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Nitrate nitrogen, dissolved, mg/L
Location: MW23S

Mean of all data: 0.191
Standard Deviation of all data: 0.116
Largest Observation Concentration of all data: Xn = 0.450
Test Statistic, high extreme of all data: Tn = 2.23
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nitrate nitrogen, dissolved, mg/L
Location: MW2D

Mean of all data: 0.0910
Standard Deviation of all data: 0.0333
Largest Observation Concentration of all data: Xn = 0.200
Test Statistic, high extreme of all data: Tn = 3.27
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/18/2017	0.200	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW2R

Mean of all data: 2.04
Standard Deviation of all data: 2.38
Largest Observation Concentration of all data: Xn = 12.7
Test Statistic, high extreme of all data: Tn = 4.49
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	12.7	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW3

Mean of all data: 1.20
Standard Deviation of all data: 0.987
Largest Observation Concentration of all data: Xn = 3.88
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
03/07/2016	3.88	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Nitrate nitrogen, dissolved, mg/L
Location: MW3D

Mean of all data: 0.644
Standard Deviation of all data: 0.644
Largest Observation Concentration of all data: Xn = 2.56
Test Statistic, high extreme of all data: Tn = 2.98
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	2.56	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW4

Mean of all data: 1.47
Standard Deviation of all data: 1.75
Largest Observation Concentration of all data: Xn = 7.34
Test Statistic, high extreme of all data: Tn = 3.35
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/17/2019	7.34	False		1

Nitrate nitrogen, dissolved, mg/L
Location: MW5

Mean of all data: 1.25
Standard Deviation of all data: 1.25
Largest Observation Concentration of all data: Xn = 5.06
Test Statistic, high extreme of all data: Tn = 3.06
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	5.06	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
Confidence Level: 95%
Transform: None
LT Multiplier: x 0.50
Number of Outliers: One Outlier

pH (field), STD
Location: MW12

Mean of all data: 6.96
Standard Deviation of all data: 0.31
Largest Observation Concentration of all data: Xn = 8.18
Test Statistic, high extreme of all data: Tn = 3.93
T Critical of all data: Tcr = 3.08

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/29/1999	8.18	False		1

pH (field), STD
Location: MW22D

Mean of all data: 5.17
Standard Deviation of all data: 0.57
Largest Observation Concentration of all data: Xn = 7.17
Test Statistic, high extreme of all data: Tn = 3.52
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	7.17	False		1

pH (field), STD
Location: MW22S

Mean of all data: 4.00
Standard Deviation of all data: 0.79
Largest Observation Concentration of all data: Xn = 6.99
Test Statistic, high extreme of all data: Tn = 3.78
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	6.99	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

pH (field), STD
Location: MW23D

Mean of all data: 7.17
Standard Deviation of all data: 0.69
Largest Observation Concentration of all data: Xn = 8.40
Test Statistic, high extreme of all data: Tn = 1.79
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/08/2022	4.83	False	-1	

pH (field), STD
Location: MW23S

Mean of all data: 6.83
Standard Deviation of all data: 0.66
Largest Observation Concentration of all data: Xn = 7.35
Test Statistic, high extreme of all data: Tn = 0.79
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	3.75	False	-1	

pH (field), STD
Location: MW2D

Mean of all data: 7.40
Standard Deviation of all data: 0.30
Largest Observation Concentration of all data: Xn = 7.68
Test Statistic, high extreme of all data: Tn = 0.92
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	6.01	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

pH (field), STD
Location: MW2R

Mean of all data: 7.38
Standard Deviation of all data: 0.29
Largest Observation Concentration of all data: Xn = 8.92
Test Statistic, high extreme of all data: Tn = 5.35
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/21/2022	8.92	False		1

pH (field), STD
Location: MW3

Mean of all data: 9.62
Standard Deviation of all data: 34.80
Largest Observation Concentration of all data: Xn = 440.00
Test Statistic, high extreme of all data: Tn = 12.37
T Critical of all data: Tcr = 3.54

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/14/2010	440.00	False		1

pH (field), STD
Location: MW3D

Mean of all data: 6.01
Standard Deviation of all data: 0.58
Largest Observation Concentration of all data: Xn = 7.50
Test Statistic, high extreme of all data: Tn = 2.55
T Critical of all data: Tcr = 3.10

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

pH (field), STD
Location: MW4

Mean of all data: 9.08
Standard Deviation of all data: 24.30
Largest Observation Concentration of all data: Xn = 320.00
Test Statistic, high extreme of all data: Tn = 12.79
T Critical of all data: Tcr = 3.55

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/17/2010	320.00	False		1

pH (field), STD
Location: MW5

Mean of all data: 7.77
Standard Deviation of all data: 10.17
Largest Observation Concentration of all data: Xn = 150.00
Test Statistic, high extreme of all data: Tn = 13.99
T Critical of all data: Tcr = 3.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/17/2010	150.00	False		1

Selenium, dissolved, mg/L
Location: MW12

Mean of all data: 0.00245
Standard Deviation of all data: 0.00191
Largest Observation Concentration of all data: Xn = 0.0112
Test Statistic, high extreme of all data: Tn = 4.57
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/12/2018	0.0112	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Selenium, dissolved, mg/L
Location: MW22D

Mean of all data: 0.00754
Standard Deviation of all data: 0.00970
Largest Observation Concentration of all data: Xn = 0.0500
Test Statistic, high extreme of all data: Tn = 4.38
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	<0.0500	True		1

Selenium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.0191
Standard Deviation of all data: 0.0196
Largest Observation Concentration of all data: Xn = 0.0504
Test Statistic, high extreme of all data: Tn = 1.59
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Selenium, dissolved, mg/L
Location: MW23D

Mean of all data: 0.000680
Standard Deviation of all data: 0.000900
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	<0.00500	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Selenium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.000680
Standard Deviation of all data: 0.000900
Largest Observation Concentration of all data: Xn = 0.00500
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	<0.00500	True		1

Selenium, dissolved, mg/L
Location: MW2D

Mean of all data: 0.000574
Standard Deviation of all data: 0.000385
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	<0.00250	True		1

Selenium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.00537
Standard Deviation of all data: 0.00322
Largest Observation Concentration of all data: Xn = 0.0156
Test Statistic, high extreme of all data: Tn = 3.17
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/02/2015	0.0156	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Selenium, dissolved, mg/L
Location: MW3

Mean of all data: 0.0119
Standard Deviation of all data: 0.00875
Largest Observation Concentration of all data: Xn = 0.0365
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/07/2016	0.0365	False		1

Selenium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.00553
Standard Deviation of all data: 0.0113
Largest Observation Concentration of all data: Xn = 0.0500
Test Statistic, high extreme of all data: Tn = 3.95
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/01/2021	<0.0500	True		1

Selenium, dissolved, mg/L
Location: MW4

Mean of all data: 0.00241
Standard Deviation of all data: 0.00199
Largest Observation Concentration of all data: Xn = 0.00970
Test Statistic, high extreme of all data: Tn = 3.66
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	0.00970	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Selenium, dissolved, mg/L
Location: MW5

Mean of all data: 0.00196
Standard Deviation of all data: 0.00132
Largest Observation Concentration of all data: Xn = 0.00480
Test Statistic, high extreme of all data: Tn = 2.15
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: MW12

Mean of all data: 0.000216
Standard Deviation of all data: 0.000205
Largest Observation Concentration of all data: Xn = 0.00125
Test Statistic, high extreme of all data: Tn = 5.03
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	<0.00125	True		1

Silver, dissolved, mg/L
Location: MW22D

Mean of all data: 0.000333
Standard Deviation of all data: 0.000433
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/03/2020	<0.00250	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Silver, dissolved, mg/L
Location: MW22S

Mean of all data: 0.000259
Standard Deviation of all data: 0.0000481
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/01/2021	<0.000500	True		1

Silver, dissolved, mg/L
Location: MW23D

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

Silver, dissolved, mg/L
Location: MW23S

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

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Silver, dissolved, mg/L
Location: MW2D

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

Silver, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000522
Standard Deviation of all data: 0.00127
Largest Observation Concentration of all data: Xn = 0.00600
Test Statistic, high extreme of all data: Tn = 4.31
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	0.00600	False		1

Silver, dissolved, mg/L
Location: MW3

Mean of all data: 0.000271
Standard Deviation of all data: 0.000456
Largest Observation Concentration of all data: Xn = 0.00180
Test Statistic, high extreme of all data: Tn = 3.35
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
01/19/2015	0.00180	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Silver, dissolved, mg/L
Location: MW3D

Mean of all data: 0.000184
Standard Deviation of all data: 0.000112
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.590
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Silver, dissolved, mg/L
Location: MW4

Mean of all data: 0.000190
Standard Deviation of all data: 0.000133
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.08
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	0.000600	False		1

Silver, dissolved, mg/L
Location: MW5

Mean of all data: 0.000181
Standard Deviation of all data: 0.000126
Largest Observation Concentration of all data: Xn = 0.000500
Test Statistic, high extreme of all data: Tn = 2.52
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Specific Conductance @ 25C (field), micromhos/cm
Location: MW12

Mean of all data: 819
Standard Deviation of all data: 418
Largest Observation Concentration of all data: Xn = 3090
Test Statistic, high extreme of all data: Tn = 5
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/18/2017	3090	False		1

Specific Conductance @ 25C (field), micromhos/cm
Location: MW22D

Mean of all data: 2029
Standard Deviation of all data: 558
Largest Observation Concentration of all data: Xn = 3030
Test Statistic, high extreme of all data: Tn = 2
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	481	False	-1	

Specific Conductance @ 25C (field), micromhos/cm
Location: MW22S

Mean of all data: 2975
Standard Deviation of all data: 794
Largest Observation Concentration of all data: Xn = 4090
Test Statistic, high extreme of all data: Tn = 1
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	396	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Specific Conductance @ 25C (field), micromhos/cm
Location: MW23D

Mean of all data: 523
Standard Deviation of all data: 350
Largest Observation Concentration of all data: Xn = 2180
Test Statistic, high extreme of all data: Tn = 5
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	2180	False		1

Specific Conductance @ 25C (field), micromhos/cm
Location: MW23S

Mean of all data: 470
Standard Deviation of all data: 496
Largest Observation Concentration of all data: Xn = 2800
Test Statistic, high extreme of all data: Tn = 5
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	2800	False		1

Specific Conductance @ 25C (field), micromhos/cm
Location: MW2D

Mean of all data: 501
Standard Deviation of all data: 91
Largest Observation Concentration of all data: Xn = 875
Test Statistic, high extreme of all data: Tn = 4
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/20/2022	875	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Specific Conductance @ 25C (field), micromhos/cm
Location: MW2R

Mean of all data: 844
Standard Deviation of all data: 120
Largest Observation Concentration of all data: Xn = 1120
Test Statistic, high extreme of all data: Tn = 2
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Specific Conductance @ 25C (field), micromhos/cm
Location: MW3

Mean of all data: 2262
Standard Deviation of all data: 851
Largest Observation Concentration of all data: Xn = 3990
Test Statistic, high extreme of all data: Tn = 2
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Specific Conductance @ 25C (field), micromhos/cm
Location: MW3D

Mean of all data: 2182
Standard Deviation of all data: 781
Largest Observation Concentration of all data: Xn = 3230
Test Statistic, high extreme of all data: Tn = 1
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Specific Conductance @ 25C (field), micromhos/cm
Location: MW4

Mean of all data: 686
Standard Deviation of all data: 230
Largest Observation Concentration of all data: Xn = 1570
Test Statistic, high extreme of all data: Tn = 4
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/1987	1570	False		1

Specific Conductance @ 25C (field), micromhos/cm
Location: MW5

Mean of all data: 434
Standard Deviation of all data: 154
Largest Observation Concentration of all data: Xn = 925
Test Statistic, high extreme of all data: Tn = 3
T Critical of all data: Tcr = 3

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: MW12

Mean of all data: 93.5
Standard Deviation of all data: 75.9
Largest Observation Concentration of all data: Xn = 475.
Test Statistic, high extreme of all data: Tn = 5.03
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
05/14/2018	475.	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Sulfate, dissolved, mg/L
Location: MW22D

Mean of all data: 1580.
Standard Deviation of all data: 583.
Largest Observation Concentration of all data: Xn = 2780.
Test Statistic, high extreme of all data: Tn = 2.05
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: MW22S

Mean of all data: 2520.
Standard Deviation of all data: 1170.
Largest Observation Concentration of all data: Xn = 4570.
Test Statistic, high extreme of all data: Tn = 1.75
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: MW23D

Mean of all data: 78.0
Standard Deviation of all data: 259.
Largest Observation Concentration of all data: Xn = 1320.
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	1320.	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Sulfate, dissolved, mg/L
Location: MW23S

Mean of all data: 95.6
Standard Deviation of all data: 409.
Largest Observation Concentration of all data: Xn = 2060.
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	2060.	False		1

Sulfate, dissolved, mg/L
Location: MW2D

Mean of all data: 8.48
Standard Deviation of all data: 11.8
Largest Observation Concentration of all data: Xn = 64.9
Test Statistic, high extreme of all data: Tn = 4.76
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/01/2021	64.9	False		1

Sulfate, dissolved, mg/L
Location: MW2R

Mean of all data: 190.
Standard Deviation of all data: 61.6
Largest Observation Concentration of all data: Xn = 363.
Test Statistic, high extreme of all data: Tn = 2.81
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Sulfate, dissolved, mg/L
Location: MW3

Mean of all data: 951.
Standard Deviation of all data: 458.
Largest Observation Concentration of all data: Xn = 1930.
Test Statistic, high extreme of all data: Tn = 2.13
T Critical of all data: Tcr = 3.00

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: MW3D

Mean of all data: 1900.
Standard Deviation of all data: 754.
Largest Observation Concentration of all data: Xn = 3750.
Test Statistic, high extreme of all data: Tn = 2.46
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Sulfate, dissolved, mg/L
Location: MW4

Mean of all data: 54.4
Standard Deviation of all data: 47.1
Largest Observation Concentration of all data: Xn = 288.
Test Statistic, high extreme of all data: Tn = 4.96
T Critical of all data: Tcr = 3.14

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/11/2012	288.	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Sulfate, dissolved, mg/L
Location: MW5

Mean of all data: 45.0
Standard Deviation of all data: 35.4
Largest Observation Concentration of all data: Xn = 180.
Test Statistic, high extreme of all data: Tn = 3.81
T Critical of all data: Tcr = 3.16

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
02/22/2011	180.	False		1

Thallium, dissolved, mg/L
Location: MW12

Mean of all data: 0.000277
Standard Deviation of all data: 0.000428
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 5.19
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00250	True		1

Thallium, dissolved, mg/L
Location: MW22D

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

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Thallium, dissolved, mg/L
Location: MW22S

Mean of all data: 0.000343
Standard Deviation of all data: 0.000434
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 4.97
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00250	True		1

Thallium, dissolved, mg/L
Location: MW23D

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

Thallium, dissolved, mg/L
Location: MW23S

Mean of all data: 0.000340
Standard Deviation of all data: 0.000450
Largest Observation Concentration of all data: Xn = 0.00250
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/26/2019	<0.00250	True		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Thallium, dissolved, mg/L
Location: MW2D

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

Thallium, dissolved, mg/L
Location: MW2R

Mean of all data: 0.000257
Standard Deviation of all data: 0.000323
Largest Observation Concentration of all data: Xn = 0.00200
Test Statistic, high extreme of all data: Tn = 5.40
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.00200	False		1

Thallium, dissolved, mg/L
Location: MW3

Mean of all data: 0.000300
Standard Deviation of all data: 0.000359
Largest Observation Concentration of all data: Xn = 0.00120
Test Statistic, high extreme of all data: Tn = 2.50
T Critical of all data: Tcr = 2.37

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/07/2016	0.00120	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Thallium, dissolved, mg/L
Location: MW3D

Mean of all data: 0.000245
Standard Deviation of all data: 0.000242
Largest Observation Concentration of all data: Xn = 0.00130
Test Statistic, high extreme of all data: Tn = 4.36
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/26/2016	0.00130	False		1

Thallium, dissolved, mg/L
Location: MW4

Mean of all data: 0.000197
Standard Deviation of all data: 0.000129
Largest Observation Concentration of all data: Xn = 0.000600
Test Statistic, high extreme of all data: Tn = 3.12
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
09/26/2016	0.000600	False		1

Thallium, dissolved, mg/L
Location: MW5

Mean of all data: 0.000175
Standard Deviation of all data: 0.000116
Largest Observation Concentration of all data: Xn = 0.000250
Test Statistic, high extreme of all data: Tn = 0.646
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Total Dissolved Solids, mg/L
Location: MW12

Mean of all data: 519.
Standard Deviation of all data: 136.
Largest Observation Concentration of all data: Xn = 933.
Test Statistic, high extreme of all data: Tn = 3.04
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
08/28/2023	97.0	False	-1	

Total Dissolved Solids, mg/L
Location: MW22D

Mean of all data: 2110.
Standard Deviation of all data: 690.
Largest Observation Concentration of all data: Xn = 3650.
Test Statistic, high extreme of all data: Tn = 2.23
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	126.	False	-1	

Total Dissolved Solids, mg/L
Location: MW22S

Mean of all data: 3500.
Standard Deviation of all data: 968.
Largest Observation Concentration of all data: Xn = 4480.
Test Statistic, high extreme of all data: Tn = 1.01
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	164.	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Total Dissolved Solids, mg/L
Location: MW23D

Mean of all data: 323.
Standard Deviation of all data: 310.
Largest Observation Concentration of all data: Xn = 1790.
Test Statistic, high extreme of all data: Tn = 4.74
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	1790.	False		1

Total Dissolved Solids, mg/L
Location: MW23S

Mean of all data: 365.
Standard Deviation of all data: 542.
Largest Observation Concentration of all data: Xn = 2800.
Test Statistic, high extreme of all data: Tn = 4.49
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	2800.	False		1

Total Dissolved Solids, mg/L
Location: MW2D

Mean of all data: 230.
Standard Deviation of all data: 98.1
Largest Observation Concentration of all data: Xn = 412.
Test Statistic, high extreme of all data: Tn = 1.86
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Total Dissolved Solids, mg/L
Location: MW2R

Mean of all data: 534.
Standard Deviation of all data: 152.
Largest Observation Concentration of all data: Xn = 1010.
Test Statistic, high extreme of all data: Tn = 3.13
T Critical of all data: Tcr = 3.06

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
11/12/2012	1010.	False		1

Total Dissolved Solids, mg/L
Location: MW3

Mean of all data: 2350.
Standard Deviation of all data: 677.
Largest Observation Concentration of all data: Xn = 4000.
Test Statistic, high extreme of all data: Tn = 2.43
T Critical of all data: Tcr = 3.54

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Total Dissolved Solids, mg/L
Location: MW3D

Mean of all data: 2600.
Standard Deviation of all data: 411.
Largest Observation Concentration of all data: Xn = 3140.
Test Statistic, high extreme of all data: Tn = 1.32
T Critical of all data: Tcr = 3.07

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/26/2021	1180.	False	-1	

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Total Dissolved Solids, mg/L
Location: MW4

Mean of all data: 458.
Standard Deviation of all data: 222.
Largest Observation Concentration of all data: Xn = 1780.
Test Statistic, high extreme of all data: Tn = 5.94
T Critical of all data: Tcr = 3.55

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/09/1987	1780.	False		1

Total Dissolved Solids, mg/L
Location: MW5

Mean of all data: 315.
Standard Deviation of all data: 181.
Largest Observation Concentration of all data: Xn = 1010.
Test Statistic, high extreme of all data: Tn = 3.85
T Critical of all data: Tcr = 3.56

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
12/11/2014	1010.	False		1

Zinc, dissolved, mg/L
Location: MW12

Mean of all data: 0.00511
Standard Deviation of all data: 0.00348
Largest Observation Concentration of all data: Xn = 0.0170
Test Statistic, high extreme of all data: Tn = 3.41
T Critical of all data: Tcr = 2.84

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/07/2016	0.0170	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Zinc, dissolved, mg/L
Location: MW22D

Mean of all data: 0.216
Standard Deviation of all data: 0.101
Largest Observation Concentration of all data: Xn = 0.500
Test Statistic, high extreme of all data: Tn = 2.80
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
06/19/2017	0.500	False		1

Zinc, dissolved, mg/L
Location: MW22S

Mean of all data: 0.605
Standard Deviation of all data: 0.258
Largest Observation Concentration of all data: Xn = 1.06
Test Statistic, high extreme of all data: Tn = 1.76
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side

No Outliers

Zinc, dissolved, mg/L
Location: MW23D

Mean of all data: 0.0124
Standard Deviation of all data: 0.0370
Largest Observation Concentration of all data: Xn = 0.190
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.190	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Zinc, dissolved, mg/L
Location: MW23S

Mean of all data: 0.0288
Standard Deviation of all data: 0.119
Largest Observation Concentration of all data: Xn = 0.600
Test Statistic, high extreme of all data: Tn = 4.80
T Critical of all data: Tcr = 2.66

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/28/2019	0.600	False		1

Zinc, dissolved, mg/L
Location: MW2D

Mean of all data: 0.00519
Standard Deviation of all data: 0.000962
Largest Observation Concentration of all data: Xn = 0.0100
Test Statistic, high extreme of all data: Tn = 5.00
T Critical of all data: Tcr = 2.70

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
10/26/2020	0.0100	False		1

Zinc, dissolved, mg/L
Location: MW2R

Mean of all data: 0.00690
Standard Deviation of all data: 0.00635
Largest Observation Concentration of all data: Xn = 0.0280
Test Statistic, high extreme of all data: Tn = 3.32
T Critical of all data: Tcr = 2.80

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0280	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Zinc, dissolved, mg/L
Location: MW3

Mean of all data: 0.0704
Standard Deviation of all data: 0.0503
Largest Observation Concentration of all data: Xn = 0.172
Test Statistic, high extreme of all data: Tn = 2.02
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: MW3D

Mean of all data: 0.0261
Standard Deviation of all data: 0.0207
Largest Observation Concentration of all data: Xn = 0.0900
Test Statistic, high extreme of all data: Tn = 3.09
T Critical of all data: Tcr = 2.85

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
03/12/2018	0.0900	False		1

Zinc, dissolved, mg/L
Location: MW4

Mean of all data: 0.00578
Standard Deviation of all data: 0.00645
Largest Observation Concentration of all data: Xn = 0.0390
Test Statistic, high extreme of all data: Tn = 5.15
T Critical of all data: Tcr = 2.82

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0390	False		1

Based on Grubbs one-sided outlier test

Hutsonville Ash Impoundment
Outlier Analysis Results

User Supplied Information

Date Range: 01/17/1984 to 10/23/2023
LT Multiplier: x 0.50
Confidence Level: 95%
Number of Outliers: One Outlier
Transform: None

Zinc, dissolved, mg/L
Location: MW5

Mean of all data: 0.00571
Standard Deviation of all data: 0.00561
Largest Observation Concentration of all data: Xn = 0.0330
Test Statistic, high extreme of all data: Tn = 4.86
T Critical of all data: Tcr = 2.87

Sample Date	Value	LT_Value	Outlier Low Side	Outlier High Side
04/21/2014	0.0330	False		1

Based on Grubbs one-sided outlier test

APPENDIX C3
SEN SLOPE AND MANN KENDALL TEST RESULTS – SHORT TERM

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.558	mg/L per period
R-Squared error of fit:	0.436	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.384	mg/L per period
Lower Confidence Limit of Slope, M1:	-1.21	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0837	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000132	mg/L per period
R-Squared error of fit:	0.00332	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000411	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00237	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00290	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00405	mg/L per period
R-Squared error of fit:	0.0273	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0118	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0157	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0280	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0497	mg/L per period
R-Squared error of fit:	0.489	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0472	mg/L per period
Lower Confidence Limit of Slope, M1:	-.124	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0202	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000205	mg/L per period
R-Squared error of fit:	0.00241	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000270	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000220	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000455	mg/L per period
R-Squared error of fit:	0.486	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000555	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000859	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.67
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000645	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000731	mg/L per period
R-Squared error of fit:	0.353	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000938	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.32
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000136	mg/L per period
R-Squared error of fit:	0.100	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000273	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000144	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000779	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.866
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.000000126	mg/L per period
R-Squared error of fit:	0.00213	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.000000483	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000167	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000310	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	0.249
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000259	mg/L per period
R-Squared error of fit:	0.325	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000173	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000585	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000119	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.61
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.775	mg/L per period
R-Squared error of fit:	0.232	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.549	mg/L per period
Lower Confidence Limit of Slope, M1:	-.395	mg/L per period
Upper Confidence Limit of Slope, M2+1:	2.28	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.11
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000806	mg/L per period
R-Squared error of fit:	0.520	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000114	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.97
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00118	mg/L per period
R-Squared error of fit:	0.0391	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000489	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00482	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00485	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.628
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	1.77	mg/L per period
R-Squared error of fit:	0.540	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	2.01	mg/L per period
Lower Confidence Limit of Slope, M1:	0.255	mg/L per period
Upper Confidence Limit of Slope, M2+1:	3.92	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.86
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000187	mg/L per period
R-Squared error of fit:	0.125	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000238	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000263	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000653	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000461	mg/L per period
R-Squared error of fit:	0.0333	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000454	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000161	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000278	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000355	mg/L per period
R-Squared error of fit:	0.295	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000285	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000820	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000166	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.16
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000746	mg/L per period
R-Squared error of fit:	0.302	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000545	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000894	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000179	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.99
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00233	mg/L per period
R-Squared error of fit:	0.556	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00248	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00440	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000728	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000124	mg/L per period
R-Squared error of fit:	0.615	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000130	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000452	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000244	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000553	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000766	mg/L per period
R-Squared error of fit:	0.534	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000775	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000206	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000207	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000303	mg/L per period
R-Squared error of fit:	0.637	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000276	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000302	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000555	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.88
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0427	mg/L per period
R-Squared error of fit:	0.0646	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0484	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0852	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.159	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000770	mg/L per period
R-Squared error of fit:	0.314	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000825	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000203	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.63
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00444	mg/L per period
R-Squared error of fit:	0.145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00776	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00868	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.63
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000464	mg/L per period
R-Squared error of fit:	0.680	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000434	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000111	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000744	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000162	mg/L per period
R-Squared error of fit:	0.661	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000171	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000726	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000245	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000119	mg/L per period
R-Squared error of fit:	0.480	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000136	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000223	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.71
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.491	mg/L per period
R-Squared error of fit:	0.0408	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.847	mg/L per period
Lower Confidence Limit of Slope, M1:	-4.05	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.984	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000461	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00554	mg/L per period
R-Squared error of fit:	0.161	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00329	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0124	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00419	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.499
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.769	mg/L per period
R-Squared error of fit:	0.0180	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.944	mg/L per period
Lower Confidence Limit of Slope, M1:	-4.30	mg/L per period
Upper Confidence Limit of Slope, M2+1:	3.80	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000792	mg/L per period
R-Squared error of fit:	0.517	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000815	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000148	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00207	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.86
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000359	mg/L per period
R-Squared error of fit:	0.0421	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000511	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000157	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000213	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000714	mg/L per period
R-Squared error of fit:	0.107	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.500
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000295	mg/L per period
R-Squared error of fit:	0.120	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000411	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000297	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000117	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.02
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.000721	mg/L per period
R-Squared error of fit:	0.136	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.000626	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000331	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00239	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	0.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000702	mg/L per period
R-Squared error of fit:	0.710	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000757	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000213	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000102	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.0000000147	mg/L per period
R-Squared error of fit:	0.000457	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000728	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000552	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-.268
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000162	mg/L per period
R-Squared error of fit:	0.0702	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000235	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000722	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000292	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.866
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000784	mg/L per period
R-Squared error of fit:	0.543	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000745	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000163	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000130	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.165	mg/L per period
R-Squared error of fit:	0.125	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.223	mg/L per period
Lower Confidence Limit of Slope, M1:	-.445	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.198	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.11
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000686	mg/L per period
R-Squared error of fit:	0.0744	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000172	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.658
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0161	mg/L per period
R-Squared error of fit:	0.314	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0203	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0494	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00121	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000114	mg/L per period
R-Squared error of fit:	0.618	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000106	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000466	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000167	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000116	mg/L per period
R-Squared error of fit:	0.0313	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000149	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000424	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000514	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.385
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000529	mg/L per period
R-Squared error of fit:	0.587	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000523	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000313	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000950	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000940	mg/L per period
R-Squared error of fit:	0.693	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000837	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000128	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.03
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0980	mg/L per period
R-Squared error of fit:	0.0803	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0509	mg/L per period
Lower Confidence Limit of Slope, M1:	-.422	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.375	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000714	mg/L per period
R-Squared error of fit:	0.522	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000110	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.97
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00274	mg/L per period
R-Squared error of fit:	0.187	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00204	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00410	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000231	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.75
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0223	mg/L per period
R-Squared error of fit:	0.191	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00673	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0322	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000533	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.61
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000494	mg/L per period
R-Squared error of fit:	0.136	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000138	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000733	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000232	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00000202	mg/L per period
R-Squared error of fit:	0.0647	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000897	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000451	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-.394
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000235	mg/L per period
R-Squared error of fit:	0.0200	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000126	mg/L per period
R-Squared error of fit:	0.0636	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000106	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000297	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000644	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.628
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000401	mg/L per period
R-Squared error of fit:	0.150	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000407	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000351	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000112	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	1.61
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000532	mg/L per period
R-Squared error of fit:	0.000537	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000502	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000137	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000188	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.160	mg/L per period
R-Squared error of fit:	0.149	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0544	mg/L per period
Lower Confidence Limit of Slope, M1:	-.452	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.163	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000127	mg/L per period
R-Squared error of fit:	0.145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.873
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00411	mg/L per period
R-Squared error of fit:	0.0668	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000805	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0144	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00237	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.748
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00448	mg/L per period
R-Squared error of fit:	0.588	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00354	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00774	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00118	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.49
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000153	mg/L per period
R-Squared error of fit:	0.0154	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000137	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000108	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000122	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000257	mg/L per period
R-Squared error of fit:	0.0821	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000431	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000311	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000181	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.01
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000645	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000875	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000469	mg/L per period
R-Squared error of fit:	0.609	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000427	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000186	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000925	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	1.75
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000377	mg/L per period
R-Squared error of fit:	0.134	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000434	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000435	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000152	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.880
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0739	mg/L per period
R-Squared error of fit:	0.0874	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00608	mg/L per period
Lower Confidence Limit of Slope, M1:	-.232	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.108	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00248	mg/L per period
R-Squared error of fit:	0.0396	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00130	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0104	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0109	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000943	mg/L per period
R-Squared error of fit:	0.00424	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00276	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000714	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0108	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.27
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000167	mg/L per period
R-Squared error of fit:	0.412	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000680	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000301	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.74
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000202	mg/L per period
R-Squared error of fit:	0.0668	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000147	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000459	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000962	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000567	mg/L per period
R-Squared error of fit:	0.0565	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000476	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000290	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000158	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000370	mg/L per period
R-Squared error of fit:	0.268	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000191	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000490	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.99
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000645	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000209	mg/L per period
R-Squared error of fit:	0.0347	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000230	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000989	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00123	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000994	mg/L per period
R-Squared error of fit:	0.0471	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000740	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000623	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000399	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000283	mg/L per period
R-Squared error of fit:	0.0327	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000128	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000338	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.131	mg/L per period
R-Squared error of fit:	0.111	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.152	mg/L per period
Lower Confidence Limit of Slope, M1:	-.286	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.512	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.866
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.00590	mg/L per period
R-Squared error of fit:	0.372	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.00436	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000157	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0125	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	1.61	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0329	mg/L per period
R-Squared error of fit:	0.755	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0301	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0498	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0142	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.147	mg/L per period
R-Squared error of fit:	0.233	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.122	mg/L per period
Lower Confidence Limit of Slope, M1:	-.113	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.385	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000295	mg/L per period
R-Squared error of fit:	0.770	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000320	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000140	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000525	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00228	mg/L per period
R-Squared error of fit:	0.873	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00230	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00281	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00157	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.60
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000755	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00000655	mg/L per period
R-Squared error of fit:	0.586	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00000671	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000105	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-1.86
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000194	mg/L per period
R-Squared error of fit:	0.0519	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000261	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000660	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000894	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.628
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000525	mg/L per period
R-Squared error of fit:	0.157	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000481	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000695	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000211	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.11
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	2.37	mg/L per period
R-Squared error of fit:	0.577	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	2.10	mg/L per period
Lower Confidence Limit of Slope, M1:	0.947	mg/L per period
Upper Confidence Limit of Slope, M2+1:	3.34	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00185	mg/L per period
R-Squared error of fit:	0.405	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00192	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00493	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000438	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0101	mg/L per period
R-Squared error of fit:	0.130	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0244	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00346	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0301	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.975	mg/L per period
R-Squared error of fit:	0.0989	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.903	mg/L per period
Lower Confidence Limit of Slope, M1:	-2.93	mg/L per period
Upper Confidence Limit of Slope, M2+1:	3.55	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000328	mg/L per period
R-Squared error of fit:	0.0246	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000411	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00256	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000249	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.27
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000424	mg/L per period
R-Squared error of fit:	0.373	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000277	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000769	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000135	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.99
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000174	mg/L per period
R-Squared error of fit:	0.0567	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000952	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000481	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000906	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.253
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00426	mg/L per period
R-Squared error of fit:	0.670	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00432	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00112	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00681	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.99
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000155	mg/L per period
R-Squared error of fit:	0.0119	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000338	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000984	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000654	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000645	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000637	mg/L per period
R-Squared error of fit:	0.0224	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000124	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000402	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000333	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.619
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000179	mg/L per period
R-Squared error of fit:	0.00265	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0131	mg/L per period
R-Squared error of fit:	0.276	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00981	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0106	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0290	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.499
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0241	mg/L per period
R-Squared error of fit:	0.597	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0260	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00607	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0372	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000391	mg/L per period
R-Squared error of fit:	0.00855	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00000958	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000408	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000328	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000311	mg/L per period
R-Squared error of fit:	0.0974	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000389	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000829	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000101	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00000199	mg/L per period
R-Squared error of fit:	0.00427	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00000363	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000130	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000101	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-.997
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.263	mg/L per period
R-Squared error of fit:	0.144	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.429	mg/L per period
Lower Confidence Limit of Slope, M1:	-1.36	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.665	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.751
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00947	mg/L per period
R-Squared error of fit:	0.407	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00330	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0258	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00271	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.13	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0103	mg/L per period
R-Squared error of fit:	0.161	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00204	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0496	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0207	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.574
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0425	mg/L per period
R-Squared error of fit:	0.580	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0488	mg/L per period
Lower Confidence Limit of Slope, M1:	-.115	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00457	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.88
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000219	mg/L per period
R-Squared error of fit:	0.744	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000204	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000347	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000163	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.34
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000279	mg/L per period
R-Squared error of fit:	0.550	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000272	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000529	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000229	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.34
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000900	mg/L per period
R-Squared error of fit:	0.0535	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000414	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000510	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000120	mg/L per period
R-Squared error of fit:	0.378	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000194	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000199	mg/L per period
R-Squared error of fit:	0.158	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000184	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.586
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000104	mg/L per period
R-Squared error of fit:	0.335	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000102	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000147	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000392	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00000413	mg/L per period
R-Squared error of fit:	0.422	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00000381	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000187	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000978	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-1.13
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.353	mg/L per period
R-Squared error of fit:	0.780	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.372	mg/L per period
Lower Confidence Limit of Slope, M1:	0.207	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.520	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.49
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.00287	mg/L per period
R-Squared error of fit:	0.582	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.00256	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000864	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00375	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.35	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000867	mg/L per period
R-Squared error of fit:	0.00294	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00140	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0113	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0151	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.124
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0652	mg/L per period
R-Squared error of fit:	0.761	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0612	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0147	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0930	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.86
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000396	mg/L per period
R-Squared error of fit:	0.845	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000418	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000242	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000536	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.60
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000371	mg/L per period
R-Squared error of fit:	0.125	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000650	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000292	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000204	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.880
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000347	mg/L per period
R-Squared error of fit:	0.0445	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000172	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000959	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.406
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000728	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.31
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000333	mg/L per period
R-Squared error of fit:	0.00749	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000269	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000102	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000157	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.930
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000156	mg/L per period
R-Squared error of fit:	0.00499	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000446	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000105	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000122	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.642
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.00000378	mg/L per period
R-Squared error of fit:	0.532	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.00000313	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000235	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000673	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	0.997
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 01/01/2022 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

APPENDIX C4
SEN SLOPE AND MANN KENDALL TEST RESULTS – LONG TERM

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.121	mg/L per period
R-Squared error of fit:	0.341	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.105	mg/L per period
Lower Confidence Limit of Slope, M1:	-.153	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0615	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.75
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000301	mg/L per period
R-Squared error of fit:	0.00117	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000295	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000267	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000302	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0198
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000205	mg/L per period
R-Squared error of fit:	0.00968	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.08
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000340	mg/L per period
R-Squared error of fit:	0.00479	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000953	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00230	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000606	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.09
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0575	mg/L per period
R-Squared error of fit:	0.248	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0371	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0538	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0234	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-4.41
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000229	mg/L per period
R-Squared error of fit:	0.132	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.87
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000284	mg/L per period
R-Squared error of fit:	0.102	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.61
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000284	mg/L per period
R-Squared error of fit:	0.357	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000226	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000389	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000112	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.12
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000145	mg/L per period
R-Squared error of fit:	0.0105	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.491
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000592	mg/L per period
R-Squared error of fit:	0.356	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000515	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000714	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000258	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-4.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000684	mg/L per period
R-Squared error of fit:	0.0726	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000343	mg/L per period
R-Squared error of fit:	0.0194	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.669
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000701	mg/L per period
R-Squared error of fit:	0.00429	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.172
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000464	mg/L per period
R-Squared error of fit:	0.0354	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.25
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000163	mg/L per period
R-Squared error of fit:	0.104	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000196	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000978	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000237	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.494
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000116	mg/L per period
R-Squared error of fit:	0.0354	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.25
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000138	mg/L per period
R-Squared error of fit:	0.240	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000485	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000101	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000000177	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.66
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000684	mg/L per period
R-Squared error of fit:	0.0726	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000181	mg/L per period
R-Squared error of fit:	0.00730	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.371
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000547	mg/L per period
R-Squared error of fit:	0.0726	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000120	mg/L per period
R-Squared error of fit:	0.193	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000887	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000138	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000000455	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.13
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW12**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000464	mg/L per period
R-Squared error of fit:	0.0354	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.25
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.377	mg/L per period
R-Squared error of fit:	0.154	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.491	mg/L per period
Lower Confidence Limit of Slope, M1:	0.260	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.654	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.15
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.0000250	mg/L per period
R-Squared error of fit:	0.0518	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-.260	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000414	mg/L per period
R-Squared error of fit:	0.0354	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000240	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.90
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000464	mg/L per period
R-Squared error of fit:	0.00000510	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000188	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000576	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000544	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.466	mg/L per period
R-Squared error of fit:	0.330	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.426	mg/L per period
Lower Confidence Limit of Slope, M1:	0.191	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.671	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.32
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000214	mg/L per period
R-Squared error of fit:	0.402	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000246	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000157	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000311	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.65
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000214	mg/L per period
R-Squared error of fit:	0.0120	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000876	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000410	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000122	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.55
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000857	mg/L per period
R-Squared error of fit:	0.00692	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000103	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000280	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000106	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.735
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000547	mg/L per period
R-Squared error of fit:	0.0226	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000111	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.40
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000695	mg/L per period
R-Squared error of fit:	0.0566	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00156	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00190	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00103	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.92
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000712	mg/L per period
R-Squared error of fit:	0.00322	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000343	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000000851	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000648	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.82
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000582	mg/L per period
R-Squared error of fit:	0.113	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.872
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000109	mg/L per period
R-Squared error of fit:	0.0919	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000693	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000925	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000179	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.84
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000180	mg/L per period
R-Squared error of fit:	0.0605	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000664	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000128	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.50
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0490	mg/L per period
R-Squared error of fit:	0.193	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0716	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0590	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0873	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	4.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000362	mg/L per period
R-Squared error of fit:	0.362	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000372	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000191	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000549	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.23
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00269	mg/L per period
R-Squared error of fit:	0.188	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00330	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00192	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00462	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.00000947	mg/L per period
R-Squared error of fit:	0.0954	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000161	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000735	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000243	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.67	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000297	mg/L per period
R-Squared error of fit:	0.0000243	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000863	mg/L per period
R-Squared error of fit:	0.104	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.60
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000445	mg/L per period
R-Squared error of fit:	0.0995	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000825	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000527	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000110	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	3.05	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000412	mg/L per period
R-Squared error of fit:	0.0931	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0224
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.567	mg/L per period
R-Squared error of fit:	0.177	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.422	mg/L per period
Lower Confidence Limit of Slope, M1:	0.120	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.726	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.23
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00000856	mg/L per period
R-Squared error of fit:	0.00983	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	0.683	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000450	mg/L per period
R-Squared error of fit:	0.102	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000241	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.80
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000936	mg/L per period
R-Squared error of fit:	0.0347	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00110	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00182	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000370	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.19
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0646	mg/L per period
R-Squared error of fit:	0.00157	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.165	mg/L per period
Lower Confidence Limit of Slope, M1:	-.537	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.699	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.646
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000198	mg/L per period
R-Squared error of fit:	0.330	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000157	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000608	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000284	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.81
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000300	mg/L per period
R-Squared error of fit:	0.392	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000255	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000125	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000391	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.34
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000452	mg/L per period
R-Squared error of fit:	0.143	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000687	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000260	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000302	mg/L per period
R-Squared error of fit:	0.551	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000286	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000208	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000367	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	4.42
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00231	mg/L per period
R-Squared error of fit:	0.0935	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000248	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000634	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000522	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.02
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000169	mg/L per period
R-Squared error of fit:	0.532	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000133	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000000735	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000206	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.96
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000392	mg/L per period
R-Squared error of fit:	0.146	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000243	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000332	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000000998	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.26
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000537	mg/L per period
R-Squared error of fit:	0.0160	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000689	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000193	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000158	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.25
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000345	mg/L per period
R-Squared error of fit:	0.338	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000308	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000140	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000545	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.95
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.130	mg/L per period
R-Squared error of fit:	0.269	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.101	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0318	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.182	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.29
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000136	mg/L per period
R-Squared error of fit:	0.215	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000000887	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000166	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.63
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00526	mg/L per period
R-Squared error of fit:	0.0464	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00138	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00224	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00398	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.647
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000523	mg/L per period
R-Squared error of fit:	0.00751	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000502	mg/L per period
R-Squared error of fit:	0.599	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000473	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0000377	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000632	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	4.49	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000814	mg/L per period
R-Squared error of fit:	0.0148	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.578
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000580	mg/L per period
R-Squared error of fit:	0.167	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000819	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.80
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.000266	mg/L per period
R-Squared error of fit:	0.550	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.000276	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000194	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000357	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	4.25	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000652	mg/L per period
R-Squared error of fit:	0.0148	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.578
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000160	mg/L per period
R-Squared error of fit:	0.343	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.00000595	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000213	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.16	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW22S**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000209	mg/L per period
R-Squared error of fit:	0.00751	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.0527	mg/L per period
R-Squared error of fit:	0.0130	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.0108	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0315	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0200	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-.607	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000264	mg/L per period
R-Squared error of fit:	0.596	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000251	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	3.78	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000654	mg/L per period
R-Squared error of fit:	0.113	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000242	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.29
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00136	mg/L per period
R-Squared error of fit:	0.391	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00141	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00167	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00110	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-4.51
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0510	mg/L per period
R-Squared error of fit:	0.0174	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00609	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00771	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00431	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.90
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000440	mg/L per period
R-Squared error of fit:	0.0687	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.56
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000214	mg/L per period
R-Squared error of fit:	0.0000698	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000430	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000102	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000235	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.08
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000408	mg/L per period
R-Squared error of fit:	0.230	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000298	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000107	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000476	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.54
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000282	mg/L per period
R-Squared error of fit:	0.0140	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000486	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000672	mg/L per period
R-Squared error of fit:	0.00103	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0693
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000493	mg/L per period
R-Squared error of fit:	0.0251	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00265	mg/L per period
R-Squared error of fit:	0.0162	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000135	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000345	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000715	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.38
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000360	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000316	mg/L per period
R-Squared error of fit:	0.0156	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000910	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000200	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000267	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.24
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000183	mg/L per period
R-Squared error of fit:	0.0176	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000111	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.693
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000666	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000162	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.0513	mg/L per period
R-Squared error of fit:	0.00401	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.00107	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0281	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0357	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-.0234	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000823	mg/L per period
R-Squared error of fit:	0.224	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000530	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000126	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000319	mg/L per period
R-Squared error of fit:	0.208	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000336	mg/L per period
R-Squared error of fit:	0.00790	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000824	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00111	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000390	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.64
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0794	mg/L per period
R-Squared error of fit:	0.0168	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00586	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00659	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00496	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-5.70
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000609	mg/L per period
R-Squared error of fit:	0.0437	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000322	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000531	mg/L per period
R-Squared error of fit:	0.203	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000464	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00000109	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000768	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.02
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000259	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000188	mg/L per period
R-Squared error of fit:	0.0154	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000140	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.810
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000175	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000661	mg/L per period
R-Squared error of fit:	0.000520	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0501
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000324	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000510	mg/L per period
R-Squared error of fit:	0.0344	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.800
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00735	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.636
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000593	mg/L per period
R-Squared error of fit:	0.0350	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.900
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000514	mg/L per period
R-Squared error of fit:	0.0163	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000136	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000280	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000190	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.32
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000942	mg/L per period
R-Squared error of fit:	0.0196	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.624
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000448	mg/L per period
R-Squared error of fit:	0.0160	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000140	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000310	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.75
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000214	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000162	mg/L per period
R-Squared error of fit:	0.0145	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.485
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW23S**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000377	mg/L per period
R-Squared error of fit:	0.0196	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.624
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0476	mg/L per period
R-Squared error of fit:	0.121	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00866	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00866	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0592	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.688
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000156	mg/L per period
R-Squared error of fit:	0.113	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.33	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000154	mg/L per period
R-Squared error of fit:	0.136	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.83
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00131	mg/L per period
R-Squared error of fit:	0.211	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00121	mg/L per period
Lower Confidence Limit of Slope, M1:	0.000690	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00172	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.19
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00171	mg/L per period
R-Squared error of fit:	0.0107	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000595	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000560	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00204	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.02
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000735	mg/L per period
R-Squared error of fit:	0.429	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000618	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000947	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.52
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000315	mg/L per period
R-Squared error of fit:	0.00947	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000138	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000120	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000105	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.167
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000247	mg/L per period
R-Squared error of fit:	0.0178	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000104	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000647	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000412	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.502
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000130	mg/L per period
R-Squared error of fit:	0.0148	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.578
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000139	mg/L per period
R-Squared error of fit:	0.00377	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000385	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.241
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000301	mg/L per period
R-Squared error of fit:	0.0258	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.706
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000398	mg/L per period
R-Squared error of fit:	0.112	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000225	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000529	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000222	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.84
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000338	mg/L per period
R-Squared error of fit:	0.0453	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000345	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000268	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000916	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.938
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000530	mg/L per period
R-Squared error of fit:	0.0307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.877
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000247	mg/L per period
R-Squared error of fit:	0.000340	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0642
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000652	mg/L per period
R-Squared error of fit:	0.0148	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.578
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0404	mg/L per period
R-Squared error of fit:	0.113	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0395	mg/L per period
Lower Confidence Limit of Slope, M1:	0.00591	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0799	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	1.75	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	Upward	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.000790	mg/L per period
R-Squared error of fit:	0.0499	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.000405	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000772	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000433	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.61	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000245	mg/L per period
R-Squared error of fit:	0.142	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000228	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.53
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000136	mg/L per period
R-Squared error of fit:	0.000349	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000869	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00219	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00372	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.522
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0131	mg/L per period
R-Squared error of fit:	0.0328	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00736	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0225	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0342	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.334
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000133	mg/L per period
R-Squared error of fit:	0.0617	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.22
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000246	mg/L per period
R-Squared error of fit:	0.0339	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.835
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000305	mg/L per period
R-Squared error of fit:	0.00143	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000725	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000410	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000308	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.461
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000682	mg/L per period
R-Squared error of fit:	0.0104	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000148	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000184	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000177	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.188
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000253	mg/L per period
R-Squared error of fit:	0.0000947	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0463
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000393	mg/L per period
R-Squared error of fit:	0.00133	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0941
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000159	mg/L per period
R-Squared error of fit:	0.00711	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000973	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.584
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000785	mg/L per period
R-Squared error of fit:	0.130	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000000346	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000137	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.82
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000716	mg/L per period
R-Squared error of fit:	0.00286	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.193
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.000000625	mg/L per period
R-Squared error of fit:	0.0573	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.000000257	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000458	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000992	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	0.627
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW2R**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000493	mg/L per period
R-Squared error of fit:	0.0339	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.835
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.559	mg/L per period
R-Squared error of fit:	0.800	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.593	mg/L per period
Lower Confidence Limit of Slope, M1:	-.757	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.289	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000338	mg/L per period
R-Squared error of fit:	0.00260	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000375	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00126	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000514	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000397	mg/L per period
R-Squared error of fit:	0.916	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.00000347	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000430	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.17
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000446	mg/L per period
R-Squared error of fit:	0.0191	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000174	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00472	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00313	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.249
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.379	mg/L per period
R-Squared error of fit:	0.480	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.288	mg/L per period
Lower Confidence Limit of Slope, M1:	-.585	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.120	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.36
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000542	mg/L per period
R-Squared error of fit:	0.491	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000441	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000114	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.15
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000158	mg/L per period
R-Squared error of fit:	0.152	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000161	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000393	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.29
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000849	mg/L per period
R-Squared error of fit:	0.801	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000956	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00122	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000451	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.35
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000484	mg/L per period
R-Squared error of fit:	0.919	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000425	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000575	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.14
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000529	mg/L per period
R-Squared error of fit:	0.148	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.873
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000660	mg/L per period
R-Squared error of fit:	0.641	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0000639	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000100	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.26
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000133	mg/L per period
R-Squared error of fit:	0.231	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000512	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000265	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000106	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.930
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000443	mg/L per period
R-Squared error of fit:	0.870	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000458	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000586	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000000300	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.14
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000176	mg/L per period
R-Squared error of fit:	0.638	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000208	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000397	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000800	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.44
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000525	mg/L per period
R-Squared error of fit:	0.585	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000503	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000105	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000288	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0	mg/L per period
R-Squared error of fit:	0.0	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.333	mg/L per period
R-Squared error of fit:	0.165	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.346	mg/L per period
Lower Confidence Limit of Slope, M1:	-.704	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0588	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.0000214	mg/L per period
R-Squared error of fit:	0.000613	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.0000902	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000164	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000305	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	0.553	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000241	mg/L per period
R-Squared error of fit:	0.608	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000220	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	4.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00147	mg/L per period
R-Squared error of fit:	0.0503	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00179	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00462	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000807	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.13
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.104	mg/L per period
R-Squared error of fit:	0.00816	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0475	mg/L per period
Lower Confidence Limit of Slope, M1:	-.478	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.343	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0790
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000432	mg/L per period
R-Squared error of fit:	0.00686	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000102	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000164	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.403
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000378	mg/L per period
R-Squared error of fit:	0.0147	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000417	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000621	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0796
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000239	mg/L per period
R-Squared error of fit:	0.247	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000227	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000349	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000000885	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.61
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000624	mg/L per period
R-Squared error of fit:	0.0499	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.11
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000188	mg/L per period
R-Squared error of fit:	0.0156	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000261	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000239	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000647	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.830
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000000132	mg/L per period
R-Squared error of fit:	0.00134	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000214	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000115	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000106	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.296
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000429	mg/L per period
R-Squared error of fit:	0.0302	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.847
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000138	mg/L per period
R-Squared error of fit:	0.0133	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000197	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000566	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000181	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.771
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000405	mg/L per period
R-Squared error of fit:	0.00299	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.360
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00197	mg/L per period
R-Squared error of fit:	0.125	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.000111	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000594	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00202	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.810
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00385	mg/L per period
R-Squared error of fit:	0.0994	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00314	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00656	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000892	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.21
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000312	mg/L per period
R-Squared error of fit:	0.0639	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000360	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000728	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000584	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.34
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000282	mg/L per period
R-Squared error of fit:	0.0114	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000104	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000508	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.482
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000914	mg/L per period
R-Squared error of fit:	0.00292	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000176	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.20
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW3D**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000413	mg/L per period
R-Squared error of fit:	0.0264	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.743
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.00939	mg/L per period
R-Squared error of fit:	0.00712	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.0232	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0478	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0285	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-.705	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	0.000276	mg/L per period
R-Squared error of fit:	0.00988	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	0.000189	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000216	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000588	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	1.23	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000271	mg/L per period
R-Squared error of fit:	0.634	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000262	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	3.97
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000895	mg/L per period
R-Squared error of fit:	0.0406	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000215	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000823	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000931	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.442
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0121	mg/L per period
R-Squared error of fit:	0.326	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0116	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0166	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00747	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.53
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000797	mg/L per period
R-Squared error of fit:	0.276	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000553	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000107	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.20
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000212	mg/L per period
R-Squared error of fit:	0.0850	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.577
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000411	mg/L per period
R-Squared error of fit:	0.365	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000392	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000593	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00000193	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.91
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000764	mg/L per period
R-Squared error of fit:	0.313	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000105	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000130	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000719	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.82
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000266	mg/L per period
R-Squared error of fit:	0.528	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000237	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000311	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.71
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000696	mg/L per period
R-Squared error of fit:	0.0498	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.07
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000358	mg/L per period
R-Squared error of fit:	0.00100	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000191	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0000130	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0682
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000466	mg/L per period
R-Squared error of fit:	0.0823	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000952	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000229	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.62
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000481	mg/L per period
R-Squared error of fit:	0.132	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000000932	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.992
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000299	mg/L per period
R-Squared error of fit:	0.0910	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.47
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.0000000842	mg/L per period
R-Squared error of fit:	0.00353	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.267
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.000000563	mg/L per period
R-Squared error of fit:	0.0405	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.000000162	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000593	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000244	mg/L per period

Non-parametric Mann-Kendall Test for Trend	
S Statistic:	-.928
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW4**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000000440	mg/L per period
R-Squared error of fit:	0.0241	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.667
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00515**
Location Class:		**Parameter:**	**Total Dissolved Solids**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0692	mg/L per period
R-Squared error of fit:	0.163	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0492	mg/L per period
Lower Confidence Limit of Slope, M1:	-.122	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00511	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.80
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00618**
Location Class:		**Parameter:**	**Nitrate nitrogen, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line		
Slope (fitted to data):	-.000406	mg/L per period
R-Squared error of fit:	0.0748	
Sen's Non-parametric estimate of the slope (two-tailed test)		
Median Slope:	-.0000711	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000351	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000171	mg/L per period
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-.415	
Z test:	1.64	
At the 95.0 % Confidence Level (two-tailed test):	None	

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00720**
Location Class:		**Parameter:**	**Cyanide, total**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000241	mg/L per period
R-Squared error of fit:	0.608	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00000220	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	4.04
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Upward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00941**
Location Class:		**Parameter:**	**Chloride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.000410	mg/L per period
R-Squared error of fit:	0.00841	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000173	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00111	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.00100	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.396
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00946**
Location Class:		**Parameter:**	**Sulfate, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0208	mg/L per period
R-Squared error of fit:	0.244	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00632	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0162	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.00240	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.67
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**00950**
Location Class:		**Parameter:**	**Fluoride, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000440	mg/L per period
R-Squared error of fit:	0.307	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.02
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01000**
Location Class:		**Parameter:**	**Arsenic, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000182	mg/L per period
R-Squared error of fit:	0.0779	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.535
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01005**
Location Class:		**Parameter:**	**Barium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.00000651	mg/L per period
R-Squared error of fit:	0.180	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.00000498	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000111	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.80
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01010**
Location Class:		**Parameter:**	**Beryllium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01020**
Location Class:		**Parameter:**	**Boron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000576	mg/L per period
R-Squared error of fit:	0.487	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000459	mg/L per period
Lower Confidence Limit of Slope, M1:	-.0000667	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.0000275	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-3.96
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01025**
Location Class:		**Parameter:**	**Cadmium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01030**
Location Class:		**Parameter:**	**Chromium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000119	mg/L per period
R-Squared error of fit:	0.0743	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000107	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.18
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01035**
Location Class:		**Parameter:**	**Cobalt, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01040**
Location Class:		**Parameter:**	**Copper, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000284	mg/L per period
R-Squared error of fit:	0.0499	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.11
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01046**
Location Class:		**Parameter:**	**Iron, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000509	mg/L per period
R-Squared error of fit:	0.00197	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0440
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01049**
Location Class:		**Parameter:**	**Lead, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01056**
Location Class:		**Parameter:**	**Manganese, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000132	mg/L per period
R-Squared error of fit:	0.0390	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.000000823	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.970
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01057**
Location Class:		**Parameter:**	**Thallium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01065**
Location Class:		**Parameter:**	**Nickel, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000415	mg/L per period
R-Squared error of fit:	0.0833	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.0000000562	mg/L per period
Lower Confidence Limit of Slope, M1:	-.000000190	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.10
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01075**
Location Class:		**Parameter:**	**Silver, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000186	mg/L per period
R-Squared error of fit:	0.0861	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.49
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01085**
Location Class:		**Parameter:**	**Vanadium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01090**
Location Class:		**Parameter:**	**Zinc, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000594	mg/L per period
R-Squared error of fit:	0.000788	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-.0743
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01095**
Location Class:		**Parameter:**	**Antimony, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	0.00000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**01145**
Location Class:		**Parameter:**	**Selenium, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.000000618	mg/L per period
R-Squared error of fit:	0.171	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	-.000000726	mg/L per period
Lower Confidence Limit of Slope, M1:	-.00000119	mg/L per period
Upper Confidence Limit of Slope, M2+1:	-.000000174	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.08
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	Downward

Hutsonville Ash Impoundment
Mann-Kendall Trend Analysis

User Supplied Information

Location ID:	**MW5**	**Parameter Code:**	**71890**
Location Class:		**Parameter:**	**Mercury, dissolved**
Location Type:		**Units:**	**mg/L**
Confidence Level:	**95.00%**		

Date Range: 03/01/2017 to 12/31/2023

Trend Analysis

Trend of the least squares straight line

Slope (fitted to data):	-.0000000000000	mg/L per period
R-Squared error of fit:	0.00000000000000	

Sen's Non-parametric estimate of the slope (two-tailed test)

Median Slope:	0.0	mg/L per period
Lower Confidence Limit of Slope, M1:	0.0	mg/L per period
Upper Confidence Limit of Slope, M2+1:	0.0	mg/L per period

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.0
Z test:	1.64
At the 95.0 % Confidence Level (two-tailed test):	None