Gibbons Creek Environmental Redevelopment Group, LLC

October 6, 2023

Eun Ju Lee, Ph.D., P.E.
Industrial & Hazardous Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Technical NOD4 New CCR Registration
Gibbons Creek Environmental Redevelopment Group, LLC – Anderson, Grimes County
New Coal Combustion Residuals (CCR) Registration No. CCR113
Industrial Solid Waste Registration No. 32271
EPA Identification No. TXD000751073
Tracking No. 27262344; RN100214550/CN6505860162

Dear Ms. Lee,

In response to your review comments dated September 6, 2023 the following includes the clarifications and/or revisions to complete the Permit Application for the Gibbons Creek Environmental Redevelopment Group (GCERG) facility.

30. 2022 Groundwater Report Sections 5 & 6

a) Provide a description how the background evaluation (GWPS) for each constituent was established.

The description for how the background evaluation (GWPS) for each constituent was established can be found in the Response Item 30 Attachment: Groundwater Monitoring Statistical Method Evaluation.

b) Provide a narrative explaining how the constituents in each groundwater monitoring well were evaluated for statistically significant increases (SSIs) for groundwater. Include the specific statistical analysis, charts, graphs, and any other information used to perform the evaluation.

The narrative explaining how the constituents in each groundwater monitoring well were evaluated for statistically significant increases (SSIs) for groundwater can be found in the Response Item 30 Attachment: Groundwater Monitoring Statistical Method Evaluation. Included in this attachment are specific statistical analysis, charts, graphs, and other information used to perform the evaluation.

c) Provide the results for upgradient wells (SSP/AP MW-1 & MNW-18) in Tables 6 and 7 to compare with downgradient wells.

Tables 1-6 in the Response Item 30 Attachment: Groundwater Monitoring Statistical Method Evaluation include the results for upgradient wells (SSP/AP MW-1 & MNW-18).

31. Alternate Source Demonstration (ASD)

a) Provide historical information (form of Table)
- Each well monitoring constituents in chronological order
- Sampling dates, limits for each constituent and SSIs in red font.

Appendix C: Lab Results Summary Tables of the 2022 Annual Groundwater Monitoring and Corrective Action Report provides tables for each well monitoring constituents in chronological order. This includes the sampling dates and limits for each constituent.

Tables 1, 3, 5, and 7 in the previous Response Item 30's "Groundwater Monitoring Statistical Method Evaluation" provide SSIs associated with the 2022 Annual Groundwater Monitoring and Corrective Action Report. This document also provides the graphical representation of the statistical analysis results for each constituent analyzed since 2016.

Earlier Annual Groundwater Monitoring and Corrective Action Reports only identify SSIs through description of well-constituent pairs, not the methodology used to determine an SSI nor the BTVs associated with their determination. Since BTVs can vary over time, the current threshold values cannot be retroactively applied to the legacy data. However, the Appendix C: Lab Results Summary Table of the 2022 Annual Groundwater Monitoring and Corrective Action Report provides the constituent, unit of measurement, MCL, Site BTV, MDL, RDL, and constituent concentrations for each sampling event at each monitoring well for the CCR units at Gibbons Creek.

b) Provide site-specific information to demonstrate "naturally occurring" evidence(s) under the site and not a result of contamination by CCR units, such as but not limited to geotechnical/geological cross-sections in relation to location of CCR units. The cross-sections shall include the thickness of lignites and clay layers, and location of monitoring well including water elevation. Include any available boring logs along with soil core sample analyses. Note that a new ASD should be provided each time there is a possible SSI(s).

The Alternative Source Demonstration can be found in the Response Item 31 Attachment: Alternative Source Demonstration.

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If you have any questions regarding this response, please give Dave Vogt a call at 972-960-4400 or Norman Divers at 704-472-3919. We look forward to continuing to work with you to complete the registration process.

Sincerely,

David C. Vogt, P.E.
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RESPONSE ITEM 30

ATTACHMENT

GROUNDWATER MONITORING STATISTICAL METHOD EVALUATION

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Groundwater Monitoring Statistical Method Evaluation

Gibbons Creek Steam Electric Station

Gibbons Creek Environmental Remediation Group

September 2023

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Table Reference

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1 Introduction

On April 17, 2015, the United States Environmental Protection Agency (EPA) published the final rule for the regulation and management of coal combustion residual (CCR) under Subtitle D of the Resource Conservation and Recovery Act. The CCR rule is formally promulgated in the U.S. Code of Federal Regulations (CFR), Title 40, Part 257. The rule – effective on October 19, 2015 – applies to electric utilities and independent power producers that fall within North American Industry Codes System code 221112, and facilities that produce or store CCR materials in surface impoundments or landfills (EPA, 2015). The CCR rule defines a set of requirements for the disposal and handling of CCR within units (defined as either landfills or surface impoundments).

The former Gibbons Creek Steam Electric Station (GCSES or Site) is the site of a former coal-fired power generation facility located in Anderson, Texas. The Texas Municipal Power Agency (TMPA) operated GCSES between 1982 and 2019. The Gibbons Creek Environmental Redevelopment Group, LLC (GCERG) acquired the TMPA property in 2021. At the GCSES, one CCR landfill identified as the Site F Landfill (SFL), and two CCR surface impoundments, the Scrubber Sludge Pond (SSP) and Ash Ponds (AP) are subject to the regulations under 40 CFR §257 Subpart D and Texas Commission of Environmental Quality's (TCEQ) Title 30, Texas Administrative Code (30 TAC), Chapter 352. On June 1, 2021, the EPA signed a Federal Register notice approving of the state permit program for the management of CCR in the state of Texas.

In accordance with 40 CFR §257.91 and TCEQ TAC 30 Chapter 352, TMPA installed a groundwater monitoring system around both the SFL and the SSP/AP CCR units. GCERG has continued implementation of the federal CCR Rule groundwater monitoring program, as required by 40 CFR §257.90-95, as a continuation of the TMPA monitoring program.

2 Statistical Methodology Summary

This Statistical Method Evaluation describes the method(s) that have been implemented for evaluating the groundwater monitoring data at the GCSES. The method(s) described herein have been implemented in accordance with the EPA's Unified Guidance Document (EPA, 2009). 40 CFR §257.93(f) includes a list of statistical methods from which to choose for evaluating the groundwater monitoring data from CCR management areas. The options include:

- A parametric analysis of variance followed by multiple comparison.
- An analysis of variance based on ranks followed by multiple comparison procedures.
- A tolerance or prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
- A control chart approach that gives control limits for each constituent.

- Another statistical test method that meets the performance of 40 CFR §257.93(g).

The goal of statistical analysis is to provide a quantified means to evaluate whether a CCR management unit has released contaminants into the groundwater. Following the collection of groundwater monitoring data, detected constituents were statistically evaluated to identify if a statistically significant increase (SSI) over background had occurred. The statistical software, SANITAS™ for Groundwater Statistical Software, has and will continue to be used to conduct statistical analysis of groundwater analytical data collected for the GCSES. However, if during the period of the groundwater monitoring program at the GCSES, an updated or more comprehensive statistical software program is available or may become available, GCERG reserves the right to change software packages.

As groundwater monitoring progresses, the use of the selected statistical method will be subject to ongoing review. GCERG reserves the right to use other statistical tests in place of, or in addition to, the methods specified in this Statistical Method Evaluation if such methods are better suited for analysis of future results.

2.1 Data Review & Outliers

Data for each sampling and analysis event was reviewed for outliers and trends. The review included evaluations using time series plots, box-whisker plots, Sen's Slope/Mann-Kendall trend test, and Outlier screening. If the data was determined to be an outlier, the data point may be replaced with a corrected value, discarded from statistical calculations, or left "as is" in the database. In accordance with 40 CFR §257.96(g)(6), data will be evaluated, as necessary, for seasonal and spatial variability using the procedures previously mentioned.

Statistical analysis has been completed in accordance with the data's distribution type, normal/parametric or non-normal/non-parametric. The Shapiro-Wilk (Shapiro-Francia if number of samples if greater than 50) test for normality will be performed for each combination of well and constituent. During the normality test, non-detect values are identified as a function of percent non-detect. If the percentage of non-detects is less than 50%, the data will be evaluated for normal or transformed-normal distribution. If the percent of non-detects is 50% or higher, a non-parametric test will be used in lieu of parametric testing. If the percentage of non-detects is less than 15%, the reporting limit (RL) will be substituted with a value of one-half (1/2) the RL. Analytical results between the reporting limit and method detection limit (i.e., "J-flagged" values) will be entered into the database, if provided by the laboratory, but will not be considered statistically significant detections. Outlier analysis and outlier analysis summary is presented as an attachment (**Attachment A – Statistical Analysis**).

2.2 Assessment Monitoring Program

Under the assessment monitoring program in 40 CFR §257.95, Appendix III and IV monitoring results are statistically compared to background levels, and detected Appendix IV monitoring results are compared to the Groundwater Protection Standards (GWPS) as defined in 40 CFR §257.95(h).

Interwell upper prediction limits (UPLs) are used to compare assessment monitoring data to background to statistically evaluate SSIs over background for the Appendix III and IV constituents. Prediction limits represent a range where a future result is expected to lie. UPLs are calculated from the background dataset, and recent data are then compared to the UPL. As previously discussed, parametric or non-parametric UPLs can be used to compare assessment monitoring data to background. Use of parametric or non-parametric is noted for each constituent within the statistical analysis (**Attachment A**). Comparisons of UPLs and results from the July 2022 and December 2022 sampling events are provided in **Tables 1 & 3** and **Tables 5 & 7**, respectively. Note that the associated most recent sampling result for the background well for each CCR unit (MNW-18 for Site F Landfill and SSP/AP MW-1 for the Ash Ponds & Scrubber Sludge Pond) have been included on the tables but have not been compared to background.

Constituents at monitoring wells which have been determined to be SSIs above background are statistically compared to the GWPS using confidence intervals to identify statistically significant levels (SSLs) above the GWPS. As required in 40 CFR §257.95(h), the CCR owner must establish GWPS for each constituent in Appendix IV detected in the groundwater. The GWPS shall be defined as the following:

- The U.S. EPA Maximum Contaminant Level (MCL) for constituents for which an MCL has been established;
    - Site F Landfill
        - Antimony
        - Arsenic
        - Barium
        - Beryllium
        - Cadmium
        - Chromium
        - Cobalt
        - Fluoride
        - Lead
        - Mercury
        - Molybdenum
        - Selenium
        - Thallium
    - Scrubber Sludge Pond & Ash Ponds
        - Antimony
        - Arsenic
        - Barium
        - Beryllium
        - Cadmium
        - Chromium
        - Cobalt
        - Combined Radium
        - Fluoride
        - Lead
        - Mercury
        - Molybdenum
        - Selenium
        - Thallium
- the background concentration for constituents for which an MCL has not been established, or
- the background concentration for constituents for which the background level is higher than the U.S. EPA MCL established.
    - Site F Landfill
        - Combined Radium
        - Lithium
    - Scrubber Sludge Pond & Ash Ponds
        - Lithium

As stated above, the GWPS is set at the MCL or, if an MCL does not exist for that constituent or if background data are higher than the MCL, a value based on background data. An UPL with 95% confidence and 95% coverage is often used as the representative background concentration when a GWPS is not established. UPLs represent a range where a proportion of the population is expected to lie. In cases where an MCL is not established, a GWPS will be computed from background data (e.g., by calculating the UPL). Prediction limits were last updated for both Site F Landfill and the Scrubber Sludge Pond/Ash Ponds CCR units following the July 2021 sampling event. Based on EPA's Unified Guidance Document (EPA, 2009), background (UPLs) should be updated when enough new measurements have been collected to allow a two-sample statistical comparison between the existing background data and a potential set of newer data, or every 2-3 years with semi-annual sampling. Background (UPLs) is anticipated to be evaluated following the second semi-annual sampling event in 2023.

Groundwater data collected under the assessment monitoring program is statistically compared to the GWPS, using confidence intervals. During the statistical analysis of confidence intervals, if the lower confidence limit (LCL) exceeds the GWPS at the 95% confidence level, then the constituent has been detected at an SSL above the GWPS. In the case of normally distributed data, a normal-based parametric confidence interval is used. If the data are not normally distributed or the non-detects are greater than 50%, a non-parametric confidence interval on the median is used.

The following tables (**Table 1 through Table 8**) provide the sampling results of the July 2022 and December 2022 sampling events compared to the UPLs for both the Site F Landfill CCR unit and the Scrubber Sludge Pond/Ash Ponds CCR unit (**Table 1, Table 3, Table 5 & Table 7**) and the LCL compared to the GWPS for both the Site F Landfill CCR unit and the Scrubber Sludge Pond/Ash Ponds CCR unit (**Table 2, Table 4, Table 6 & Table 8**). For all tables, the most recent sampling results for the background well (MNW-18 for Site F Landfill; SSP/AP MW-1 for SSP/AP) have been included for comparison within the tables. It should be noted that while comparison of most recent background results when comparing most recent results for compliance wells during SSI determination is valid (**Table 1, Table 3, Table 5 & Table 7),** comparison of most recent sampling results of background well to compliance well LCLs should not be conducted since LCLs are statistically derived from the most recent 8 samples and are not intended to be compared to single results. Full statistical analysis from both July 2022 and December 2022 is provided within **Attachment A.** In addition, the statistical analysis from July 2021 has been included within **Attachment A** in order to provide statistically derived UPL results.

Table 1: Evaluation for SSIs over Background – July 2022 (Site F Landfill)

	BTV	Units	SFL MW-2	SFL MW-3	SFL MW-4	SFL MW-5	SFL MW-6	SFL MW-7	MNW-15	MNW-18
Appendix III Constituents – Analytical Detections										
Boron	*0.593*	*mg/L*	**0.945**	**5**	**0.677**	**2.8**	0.32	**0.832**	**12.8**	0.358
Calcium	*542*	*mg/L*	**945**	**615**	48.9	**829**	**1400**	475	337	299
Chloride	*649*	*mg/L*	**3,220**	**829**	19.1	**2,890**	**4,810**	**2,020**	**652**	386
Fluoride*	*0.5*	*mg/L*	0.268	**0.64**	0.484	0.122	**1.08**	0.0599J	**0.738**	0.223J
pH	***6.00-7.60****	*SU*	**5.6**	**3.73**	7.37	**4.3**	**3.7**	6.58	**3.59**	6.89
Sulfate	*2,630*	*mg/L*	2,000	2,430	174	2,250	**2,830**	528	1,450	1,210
TDS	*4,690*	*mg/L*	**8,070**	4,920	411	**7,930**	**12,000**	4,120	3,540	2,750
Appendix IV Constituents – Analytical Detections										
Antimony	*0.002*	*mg/L*	<0.000506	<0.000506	0.000534J	<0.000506	<0.000506	0.000978J	<0.000506	<0.000506
Arsenic	*0.00255*	*mg/L*	0.00161	**0.0061**	0.000786J	0.00157	**0.0214**	0.000479J	**0.0153**	0.00282
Barium	*0.06*	*mg/L*	0.0222	0.014	0.0201	0.0157	0.039	**0.102**	0.0171	0.0432
Beryllium	*0.001*	*mg/L*	**0.00961**	**0.0319**	<0.000274	**0.0103**	**0.0646**	<0.000274	**0.0884**	<0.000274
Cadmium	*0.001*	*mg/L*	**0.00303**	**0.00569**	<0.000217	**0.00426**	**0.0124**	0.00025J	**0.0409**	<0.000217
Chromium	*0.00617*	*mg/L*	<0.00153	<0.00153	0.00379	0.00327	**0.00895**	<0.00153	<0.00153	<0.00153
Cobalt	*0.00226*	*mg/L*	**0.0211**	**0.053**	<0.000261	**0.0493**	**0.173**	<0.000261	**0.336**	0.00135
Lead	*0.01*	*mg/L*	0.00104	**0.0177**	<0.000167	0.000527J	**0.0135**	0.000208J	0.000577J	0.000183J
Lithium	*0.552*	*mg/L*	0.421	0.283	0.02	**0.594**	**0.868**	0.401	0.104	0.333
Mercury	*0.0002*	*mg/L*	<0.000130	**0.00129**	<0.000130	<0.000130	<0.000130	<0.000130	<0.000130	<0.000130
Molybdenum	*0.005*	*mg/L*	<0.000610	<0.000610	0.00196J	<0.000610	<0.000610	0.00173J	<0.000610	<0.000610
Radium 226+228	*10.1*	*pCi/L*	**11**	5.74	0.447	**12.3**	**16**	1.98	1.44	4.44
Selenium	*0.005*	*mg/L*	<0.000739	**0.041**	<0.000739	<0.000739	<0.000739	<0.000739	**0.109**	<0.000739
Thallium	*0.001*	*mg/L*	0.00076J	**0.00581**	<0.000472	**0.00115**	**0.00495**	<0.000472	**0.00101**	<0.000472

Bold and underlined concentration indicates an SSI over background.
MNW-18 is the background well for Site F Landfill. The results shown for MNW-18 are the most recent results and are not compared against background.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CRF Part 257)
** Indicates the lower bound of the range is the lower prediction limit (LPL).
*** Indicates the upper bound is the upper prediction limit (UPL).

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Table 2: Evaluation for SSLs over GWPS – July 2022 (Site F Landfill)

	GWPS[1]	Units	SFL MW-2	SFL MW-3	SFL MW-4	SFL MW-5	SFL MW-6	SFL MW-7	MNW-15	MNW-18
Appendix IV Constituents – Lower Confidence Levels										
Antimony	*0.006*	*mg/L*	0.002	0.002	0.000534	0.002	0.002	0.000579	0.002	<0.000506
Arsenic	*0.01*	*mg/L*	0.00147	0.00303	0.000786	0.00145	0.009368	0.000479	0.005566	0.00282
Barium	*2*	*mg/L*	0.02034	0.013	0.01975	0.0157	0.02769	0.03	0.0159	0.0432
Beryllium	*0.004*	*mg/L*	0.001744	**0.03**	0.001	**0.009204**	**0.04258**	0.001	**0.06885**	<0.000274
Cadmium	*0.005*	*mg/L*	0.000761	**0.005641**	0.001	0.004275	**0.009323**	0.00025	**0.0269**	<0.000217
Chromium	*0.1*	*mg/L*	0.002	0.002	0.002	0.002	0.002	0.002	0.002	<0.00153
Cobalt	*0.006*	*mg/L*	**0.01168**	**0.05589**	0.0005	**0.04577**	**0.102**	0.0005	**0.2924**	0.00135
Fluoride	*4*	*mg/L*	0.06462	0.3688	0.204	0.122	0.527	0.0599	0.5866	0.223J
Lead	*0.015*	*mg/L*	0.000272	**0.01766**	0.001	0.000527	0.006755	0.000208	0.000269	0.000183J
Lithium	*0.552*[2]	*mg/L*	0.4025	0.2376	0.322	**0.6154**	**0.597**	0.3738	0.08597	0.333
Mercury	*0.002*	*mg/L*	0.0002	0.001276	0.0002	0.0002	0.0002	0.0002	0.0002	<0.000130
Molybdenum	*0.1*	*mg/L*	0.00202	0.005	0.00106	0.0018	0.005	0.00173	0.005	<0.000610
Radium 226+228	*10.1*[2]	*pCi/L*	6.69	3.812	1.091	**10.52**	8.738	1.919	0.2149	4.44
Selenium	*0.05*	*mg/L*	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<0.000739
Thallium	*0.002*	*mg/L*	0.000612	**0.005027**	0.001	0.00115	**0.002726**	0.001	0.000739	<0.000472

Bold and underlined concentration indicates an SSL over the GWPS.
MNW-18 is the background well for Site F Landfill. The results shown for MNW-18 are the most recent results and are not Lower Confidence Limits; therefore, these values should not be compared.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in §257.95(h)(2); unless otherwise specified.
[2] GWPS is established as the background threshold value (BTV) when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2).

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Table 3: Evaluation for SSIs over Background – July 2022 (Scrubber and Ash Ponds)

	BTV	Units	SSP MW-2	SSP MW-3	SSP MW-4	AP MW-1D	AP MW-3	AP MW-4	AP MW-5	SSP/AP MW-1
Appendix III Constituents – Analytical Detections										
Boron	*1.5*	*mg/L*	0.689	**2.35**	1.39	**5.19**	**4.26**	0.566	3.25	0.686
Calcium	*716*	*mg/L*	**812**	658	428	93.9	144	545	615	722
Chloride	*1,780*	*mg/L*	**2,150**	1,670	1,140	129	153	524	491	1530
Fluoride*	*0.5*	*mg/L*	**0.563**	0.441	0.103J	**0.801**	0.0634J	0.0488J	**2.66**	0.105J
pH	***5.27-6.36****	*SU*	**4.49**	**4.42**	6.29	6.13	**5.05**	6.1	**3.54**	5.8
Sulfate	*3,340*	*mg/L*	2,230	2,200	1,090	431	596	1,530	2,810	3,060
TDS	*8,180*	*mg/L*	6,700	6,180	3,740	1,150	1,410	3,370	5,030	7,380
Appendix IV (Constituents – Analytical Detections										
Antimony	*0.002*	*mg/L*	<0.000506	0.00128J	<0.000506	<0.000506	<0.000506	<0.000506	<0.000506	0.00157J
Arsenic	*0.00501*	*mg/L*	**0.00551**	**0.00636**	0.00084J	**0.0101**	0.00169	0.00226	**0.0176**	0.00309
Barium	*0.189*	*mg/L*	0.017	0.0221	0.0204	0.0138	0.0211	0.0302	0.0128	0.068
Beryllium	*0.00157*	*mg/L*	**0.0548**	**0.0904**	<0.000274	<0.000274	**0.00291**	<0.000274	**0.112**	0.000706J
Cadmium	*0.001*	*mg/L*	**0.00294**	**0.0698**	<0.000217	0.000498J	**0.00437**	<0.000217	**0.00959**	<0.000217
Chromium	*0.00248*	*mg/L*	<0.00153	0.00235	**0.00284**	<0.00153	<0.00153	<0.00153	<0.00153	<0.00153
Cobalt	*0.00174*	*mg/L*	**0.0788**	**0.495**	<0.000261	**0.0154**	**0.0328**	0.00107	**0.206**	0.000521
Lead	*0.0106*	*mg/L*	0.00107	0.0028	0.000234J	<0.000167	0.000219J	0.000338J	0.00203	0.105J
Lithium	*1.66*	*mg/L*	0.593	0.511	0.767	0.0243	0.0431	0.317	0.522	1.24
Mercury	*0.0002*	*mg/L*	<0.000130	**0.000669**	<0.000130	<0.000130	**0.00158**	<0.000130	**0.0026**	<0.000130
Molybdenum	*0.005*	*mg/L*	<0.000610	0.0011J	0.000864J	**0.0327**	<0.000610	0.000686J	<0.000610	0.00112J
Radium 226+228	*4.02*	*pCi/L*	3.21	**27.3**	2.68	1.17	**5.13**	0.791	**4.38**	2.9
Selenium	*0.005*	*mg/L*	<0.000739	0.000859J	<0.000739	0.00236J	0.00135J	<0.000739	<0.000739	<0.000739
Thallium	*0.001*	*mg/L*	<0.000472	**0.00795**	<0.000472	<0.000472	0.000529J	<0.000472	**0.00228**	<0.000472

Bold and underlined concentration indicates an SSI over background.
SSP/AP MW-1 is the background well for Site F Landfill. The results shown for SSP/AP MW-1 are the most recent results and are not compared against background.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CRF Part 257)
** Indicates the lower bound of the range is the lower prediction limit (LPL).
*** Indicates the upper bound is the upper prediction limit (UPL).

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Table 4: Evaluation for SSLs over GWPS – July 2022 (Scrubber Sludge and Ash Ponds)

	GWPS[1]	Units	SSP MW-2	SSP MW-3	SSP MW-4	AP MW-1D	AP MW-3	AP MW-4	AP MW-5	SSP/AP MW-1
Appendix IV Constituents – Lower Confidence Levels										
Antimony	*0.006*	*mg/L*	0.002	0.00128	0.000415	0.002	0.002	0.002	0.000529	0.00157J
Arsenic	*0.01*	*mg/L*	0.00498	0.003474	0.000344	0.008036	0.001	0.000628	0.007433	0.00309
Barium	*2*	*mg/L*	0.01643	0.01945	0.02	0.009502	0.01956	0.009721	0.009489	0.068
Beryllium	*0.004*	*mg/L*	**0.04632**	**0.09547**	0.001	0.001	0.002253	0.000204	**0.05053**	0.000706J
Cadmium	*0.005*	*mg/L*	0.001	**0.0706**	0.001	0.000343	0.004014	0.001	**0.005849**	<0.000217
Chromium	*0.1*	*mg/L*	0.002	0.002348	0.002	0.002	0.00173	0.002	0.002	<0.00153
Cobalt	*0.006*	*mg/L*	**0.05135**	**0.5087**	0.000336	**0.01353**	**0.02869**	0.0005	**0.1199**	0.000521
Fluoride	*4*	*mg/L*	0.293	0.441	0.103	0.5008	0.0558	0.0488	1.294	0.105J
Lead	*0.015*	*mg/L*	0.001184	0.003855	0.000161	0.000256	0.000219	0.000276	0.00133	0.105J
Lithium	*1.66*[2]	*mg/L*	0.564	0.5118	0.727	0.02477	0.03851	0.5352	0.3587	1.24
Mercury	*0.002*	*mg/L*	0.0002	0.000162	0.0002	0.0002	0.0002	0.0002	0.000174	<0.000130
Molybdenum	*0.1*	*mg/L*	0.005	0.000667	0.000864	0.01443	0.000848	0.000686	0.005	0.00112J
Radium 226+228	*5*	*pCi/L*	1.799	**29.08**	1.745	1.206	1.737	0.8181	1.12	2.9
Selenium	*0.05*	*mg/L*	0.005	0.000859	0.00441	0.00154	0.00135	0.005	0.005	<0.000739
Thallium	*0.002*	*mg/L*	0.000516	**0.008252**	0.001	0.00031	0.000267	0.000172	**0.002029**	<0.000472

Bold and underlined concentration indicates an SSL over the GWPS.

SSP/AP MW-1 is the background well for Site F Landfill. The results shown for SSP/AP MW-1 are the most recent results and are not Lower Confidence Limits; therefore, these values should not be compared.

J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.

[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in §257.95(h)(2); unless otherwise specified.

[2] GWPS is established as the background threshold value (BTV) when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2).

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Table 5: Evaluation for SSIs over Background – December 2022 (Site F Landfill)

	BTV	Units	SFL MW-2	SFL MW-3	SFL MW-4	SFL MW-5	SFL MW-6	SFL MW-7	MNW-15	MNW-18
Appendix III Constituents – Analytical Detections										
Boron	*0.593*	*mg/L*	**0.677**	**4.88**	**0.748**	**4.42**	0.554	**0.916**	**9.76**	0.331
Calcium	*542*	*mg/L*	**711**	**617**	220	**812**	**1,510**	451	328	139
Chloride	*649*	*mg/L*	**2,330**	**794**	556	**2,680**	**6,800**	**1,900**	632	188
Fluoride*	*0.5*	*mg/L*	0.21	**0.58**	0.32	0.13	**1.04**	0.0881J	**0.61**	0.105J
pH	***6.00-7.60****	*SU*	6.42	**3.51**	6.91	**4.45**	**3.89**	6.45	**3.34**	7.27
Sulfate	*2,630*	*mg/L*	1,400	2,260	791	2,010	2,200	662	1,350	648
TDS	*4,690*	*mg/L*	**5,820**	**4,760**	1,110	**7,540**	**14,300**	4,160	3,120	1,560
Appendix IV Constituents – Analytical Detections										
Antimony	*0.002*	*mg/L*	0.000968J	<0.000506	0.000971J	0.00118J	0.00108J	<0.000506	<0.000506	0.00184J
Arsenic	*0.00255*	*mg/L*	0.0017	**0.00367**	0.00106	0.0021	**0.0351**	<0.000282	**0.00977**	0.00129
Barium	*0.06*	*mg/L*	0.0208	0.0147	0.0275	0.0199	0.0487	0.053	0.0179	0.00404J
Beryllium	*0.001*	*mg/L*	**0.00105**	**0.0336**	<0.000274	**0.00942**	**0.0933**	<0.000274	**0.0924**	<0.000274
Cadmium	*0.001*	*mg/L*	0.000649J	**0.00552**	<0.000217	**0.00388**	**0.00497**	<0.000217	**0.0414**	<0.000217
Chromium	*0.00617*	*mg/L*	<0.00153	<0.00153	<0.00153	0.00181J	0.00593	<0.00153	<0.00153	<0.00153
Cobalt	*0.00226*	*mg/L*	**0.0104**	**0.0537**	<0.000261	**0.0458**	**0.242**	<0.000261	**0.313**	<0.000261
Lead	*0.01*	*mg/L*	0.000199J	**0.0186**	<0.000167	0.000606J	**0.0109**	<0.000167	0.000561J	<0.000167
Lithium	*0.552*	*mg/L*	0.487	0.31	0.124	**0.696**	**1.34**	0.437	0.113	0.213
Mercury	*0.0002*	*mg/L*	<0.000130	**0.00192**	<0.000130	<0.000130	<0.000130	<0.000130	<0.000130	<0.000130
Molybdenum	*0.005*	*mg/L*	0.00155J	<0.000610	0.00234J	0.00103J	<0.000610	<0.000610	<0.000610	<0.000610
Radium 226+228	*10.1*	*pCi/L*	6.76	3.04	0.752	9.46	**14.5**	3.14	0.977	0.999
Selenium	*0.005*	*mg/L*	<0.000739	0.00117J	<0.000739	<0.000739	<0.000739	<0.000739	<0.000739	<0.000739
Thallium	*0.001*	*mg/L*	0.000634J	**0.00568**	<0.000472	**0.00125**	**0.00489**	<0.000472	0.000976J	<0.000472

Bold and underlined concentration indicates an SSI over background.
MNW-18 is the background well for Site F Landfill. The results shown for MNW-18 are the most recent results and are not compared against background.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CRF Part 257)
** Indicates the lower bound of the range is the lower prediction limit (LPL).
*** Indicates the upper bound is the upper prediction limit (UPL).

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Table 6: Evaluation for SSLs over GWPS – December 2022 (Site F Landfill)

	GWPS[1]	Units	SFL MW-2	SFL MW-3	SFL MW-4	SFL MW-5	SFL MW-6	SFL MW-7	MNW-15	MNW-18
Appendix IV Constituents – Lower Confidence Levels										
Antimony	*0.006*	*mg/L*	0.000968	0.000506	0.000534	0.00118	0.00108	0.000506	0.000506	0.00184J
Arsenic	*0.01*	*mg/L*	0.00147	0.00303	0.000786	0.00145	0.008452	0.000282	0.006168	0.00129
Barium	*2*	*mg/L*	0.02057	0.013	0.02007	0.0157	0.02965	0.03077	0.0159	0.00404J
Beryllium	*0.004*	*mg/L*	0.000977	**0.03038**	0.000274	**0.00902**	**0.0418**	0.000274	**0.07532**	<0.000274
Cadmium	*0.005*	*mg/L*	0.000649	**0.005479**	0.000217	0.004018	**0.007883**	0.000217	**0.0269**	<0.000217
Chromium	*0.1*	*mg/L*	0.00153	0.00153	0.00153	0.00181	0.00237	0.00153	0.00153	<0.00153
Cobalt	*0.006*	*mg/L*	**0.01034**	**0.05445**	0.000261	**0.04517**	**0.1**	0.000261	**0.3016**	<0.000261
Fluoride	*4*	*mg/L*	0.09153	0.4214	0.204	0.07194	0.527	0.04359	0.6221	0.105J
Lead	*0.015*	*mg/L*	0.000199	**0.01768**	0.000167	0.000527	0.008346	0.000167	0.000316	<0.000167
Lithium	*0.552*[2]	*mg/L*	0.4243	0.2421	0.3003	**0.6215**	**0.614**	0.3811	0.08673	0.213
Mercury	*0.002*	*mg/L*	0.00013	0.001331	0.00013	0.00013	0.00013	0.00013	0.00013	<0.000130
Molybdenum	*0.1*	*mg/L*	0.00155	0.00061	0.00106	0.00103	0.00061	0.00061	0.00061	<0.000610
Radium 226+228	*10.1*[2]	*pCi/L*	6.494	3.436	0.8826	**10.45**	**10.58**	1.916	0.1934	0.999
Selenium	*0.05*	*mg/L*	0.000739	0.00117	0.000739	0.000739	0.000739	0.000739	0.000739	<0.000739
Thallium	*0.002*	*mg/L*	0.000612	**0.005047**	0.000472	0.00115	**0.002825**	0.000472	0.000739	<0.000472

Bold and underlined concentration indicates an SSL over the GWPS.
MNW-18 is the background well for Site F Landfill. The results shown for MNW-18 are the most recent results and are not Lower Confidence Limits; therefore, these values should not be compared.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in §257.95(h)(2); unless otherwise specified.
[2] GWPS is established as the background threshold value (BTV) when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2).

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Table 7: Evaluation for SSIs over Background – December 2022 (Scrubber and Ash Ponds)

	BTV	Units	SSP MW-2	SSP MW-3	SSP MW-4	AP MW-1D	AP MW-3	AP MW-4	AP MW-5	SSP/AP MW-1
Appendix III Constituents – Analytical Detections										
Boron	*1.5*	*mg/L*	0.720	**3.14**	1.160	**5.63**	**4.83**	0.68	**3.79**	0.793
Calcium	*716*	*mg/L*	**846**	673	428	83.7	153	204	578	638
Chloride	*1,780*	*mg/L*	**2,300**	1,480	1,110	120	145	191	494	1560
Fluoride*	*0.5*	*mg/L*	0.295	0.435	0.0585J	**0.869**	0.054J	0.0719J	**2.39**	0.0712J
pH	***5.27-6.36****	*SU*	**4.60**	**4.17**	6.31	6.10	**4.95**	5.85	**3.30**	5.6
Sulfate	*3,340*	*mg/L*	2,120	2,210	1,080	422	583	876	2,730	3,080
TDS	*8,180*	*mg/L*	6,700	6,020	3,660	1,110	1,340	1,790	4,960	7,170
Appendix IV (Constituents – Analytical Detections										
Antimony	*0.002*	*mg/L*	<0.000506	<0.000506	<0.000506	<0.000506	<0.000506	<0.000506	<0.000506	0.000582J
Arsenic	*0.00501*	*mg/L*	**0.00539**	**0.00829**	0.000497J	**0.00949**	0.0014	0.00156	**0.0206**	0.0022
Barium	*0.189*	*mg/L*	0.0201	0.0265	0.0212	0.0129	0.0231	0.0197	0.0126	0.0265
Beryllium	*0.00157*	*mg/L*	**0.0525**	**0.116**	<0.000274	<0.000274	**0.00301**	<0.000274	**0.119**	0.000584J
Cadmium	*0.001*	*mg/L*	**0.00179**	**0.0655**	<0.000217	0.00034J	**0.00438**	<0.000217	**0.0102**	<0.000217
Chromium	*0.00248*	*mg/L*	<0.00153	**0.00319**	**0.00493**	<0.00153	<0.00153	<0.00153	0.00157J	<0.00153
Cobalt	*0.00174*	*mg/L*	**0.0569**	**0.511**	0.000289J	**0.00996**	**0.0331**	**0.00286**	**0.184**	<0.000261
Lead	*0.0106*	*mg/L*	0.000841J	0.00582	<0.000167	<0.000167	<0.000167	<0.000167	0.00239	0.000702J
Lithium	*1.66*	*mg/L*	0.805	0.622	0.875	0.0233	0.0488	0.277	0.585	1.51
Mercury	*0.0002*	*mg/L*	<0.000130	**0.000461**	<0.000130	<0.000130	**0.00141**	<0.000130	**0.000762**	<0.000130
Molybdenum	*0.005*	*mg/L*	<0.000610	<0.000610	**0.00594**	**0.0302**	<0.000610	0.000944J	<0.000610	<0.000610
Radium 226+228	*4.02*	*pCi/L*	2.83	**36.6**	3.08	0.918	2.58	0.743	1.53	1.58
Selenium	*0.005*	*mg/L*	<0.000739	<0.000739	<0.000739	0.00158J	<0.000739	<0.000739	<0.000739	<0.000739
Thallium	*0.001*	*mg/L*	<0.000472	**0.0094**	<0.000472	<0.000472	<0.000472	<0.000472	**0.00248**	<0.000472

Bold and underlined concentration indicates an SSI over background.
SSP/AP MW-1 is the background well for Site F Landfill. The results shown for SSP/AP MW-1 are the most recent results and are not compared against background.
J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.
* Fluoride is listed in both Appendix III and Appendix IV of the CCR Final Rule (40 CRF Part 257)
** Indicates the lower bound of the range is the lower prediction limit (LPL).
*** Indicates the upper bound is the upper prediction limit (UPL).

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Table 8: Evaluation for SSLs over GWPS – December 2022 (Scrubber Sludge and Ash Ponds)

	GWPS[1]	Units	SSP MW-2	SSP MW-3	SSP MW-4	AP MW-1D	AP MW-3	AP MW-4	AP MW-5	SSP/AP MW-1
Appendix IV Constituents – Lower Confidence Levels										
Antimony	*0.006*	*mg/L*	0.000506	0.000506	0.000415	0.000506	0.000506	0.000506	0.000506	0.000582J
Arsenic	*0.01*	*mg/L*	0.00498	0.004589	0.000404	0.008124	0.0009618	0.000628	0.007214	0.0022
Barium	*2*	*mg/L*	0.0148	0.01937	0.02	0.01009	0.01993	0.01052	0.01	0.0265
Beryllium	*0.004*	*mg/L*	**0.04751**	**0.09541**	0.000274	0.000274	0.002466	0.000204	**0.04941**	0.000584J
Cadmium	*0.005*	*mg/L*	0.001	**0.06784**	0.000217	0.00034	0.004018	0.000217	**0.005835**	<0.000217
Chromium	*0.1*	*mg/L*	0.00153	0.002267	0.002	0.00153	0.00153	0.00153	0.00157	<0.00153
Cobalt	*0.006*	*mg/L*	**0.05213**	**0.5102**	0.000289	**0.01235**	**0.0279**	0.0005	**0.1201**	<0.000261
Fluoride	*4*	*mg/L*	0.293	0.4181	0.04707	0.5456	0.054	0.0488	1.322	0.0712J
Lead	*0.015*	*mg/L*	0.000641	0.003762	0.000161	0.000167	0.000167	0.000167	0.001354	0.000702J
Lithium	*1.66*[2]	*mg/L*	0.564	0.5234	0.7347	0.02345	0.04536	0.4661	0.3586	1.51
Mercury	*0.002*	*mg/L*	0.00013	0.000162	0.00013	0.00013	0.0002	0.00013	0.000247	<0.000130
Molybdenum	*0.1*	*mg/L*	0.00061	0.00061	0.000864	0.01667	0.00061	0.000686	0.00061	<0.000610
Radium 226+228	*5*	*pCi/L*	1.888	**30.24**	1.744	1.019	1.8	0.7369	1.12	1.58
Selenium	*0.05*	*mg/L*	0.000739	0.000739	0.000739	0.00154	0.000739	0.000739	0.000739	<0.000739
Thallium	*0.002*	*mg/L*	0.000472	**0.008216**	0.000472	0.00031	0.000267	0.000172	**0.002068**	<0.000472

Bold and underlined concentration indicates an SSL over the GWPS.

SSP/AP MW-1 is the background well for Site F Landfill. The results shown for SSP/AP MW-1 are the most recent results and are not Lower Confidence Limits; therefore, these values should not be compared.

J qualifier indicates that the detection is an estimated concentration above the laboratory's MDL and below the laboratory's RL. J flags concentrations are not considered statistically significant detections.

[1] GWPS is established as the U.S. EPA Maximum Contaminant Level (MCL) or the GWPS specified in §257.95(h)(2); unless otherwise specified.

[2] GWPS is established as the background threshold value (BTV) when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2).

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3 References

EPA, 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance. Environmental Protection Agency Office of Resource Conservation and Recovery. EPA 530/R-09-007. March 2009.

EPA, 2015. 40 CFR parts 257 and 261; Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, Federal Register vol. 80, no. 74. Environmental Protection Agency. April 17, 2015.

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Attachment A

Statistical Analysis

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Attachment A-1

Statistical Analysis

-July 2021

-Site F Landfill

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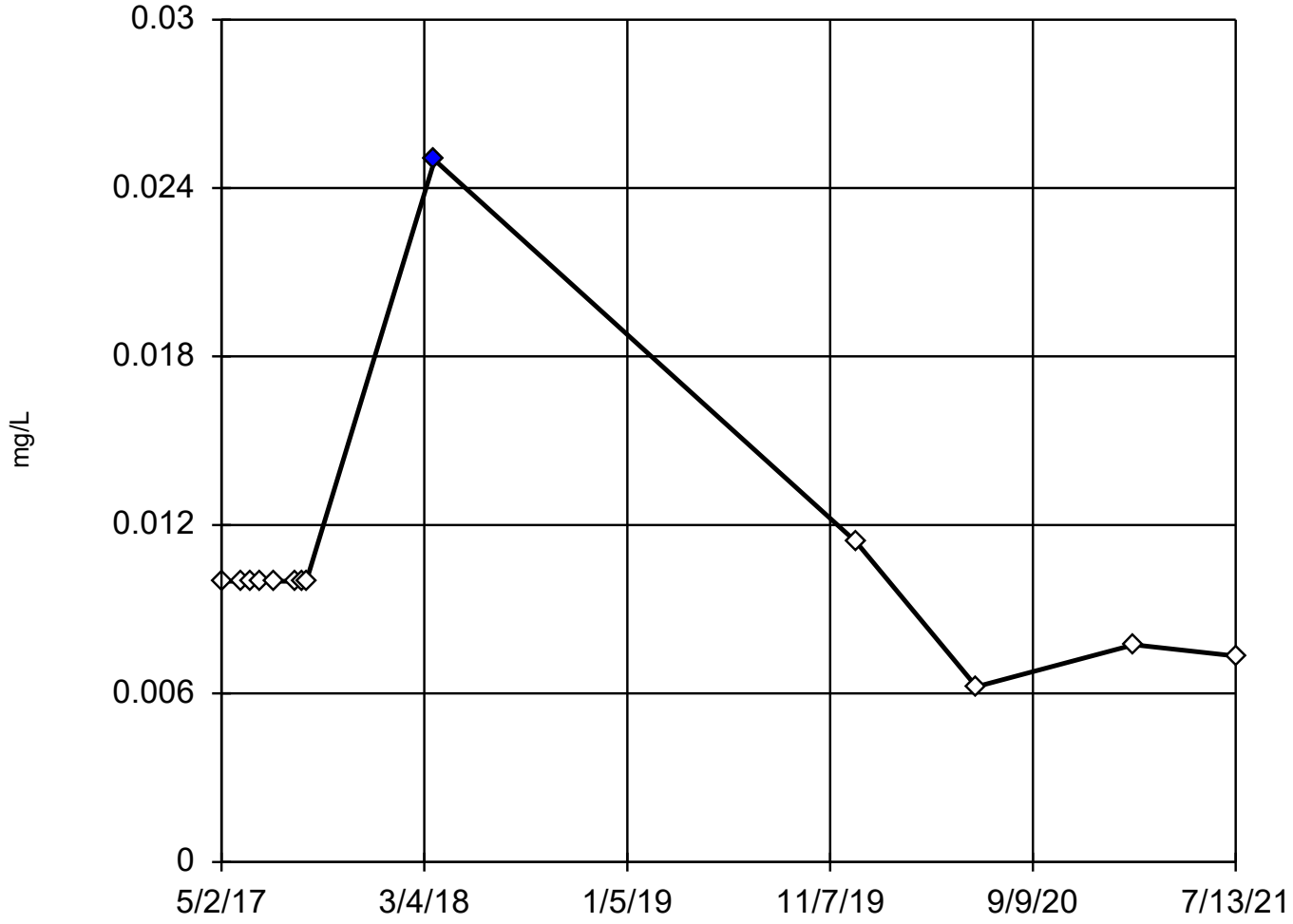
Tukey's Outlier Screening

MNW-15



n = 13

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

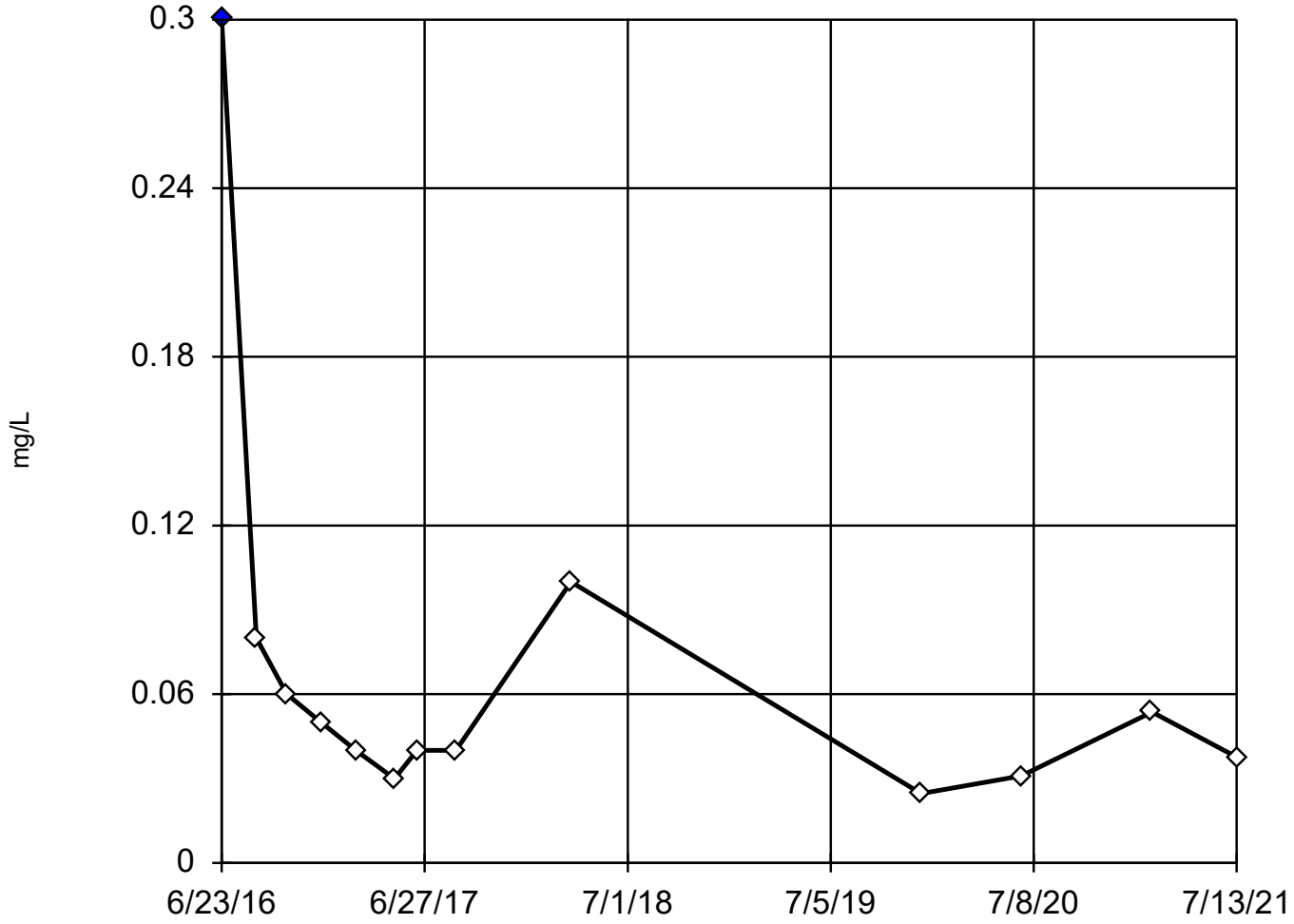
High cutoff = 0.01469, low cutoff = 0.005991, based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 13

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.06822.
Std. Dev. = 0.07278.
0.3: c = 0.8148
tabl = 0.521.
Alpha = 0.05.

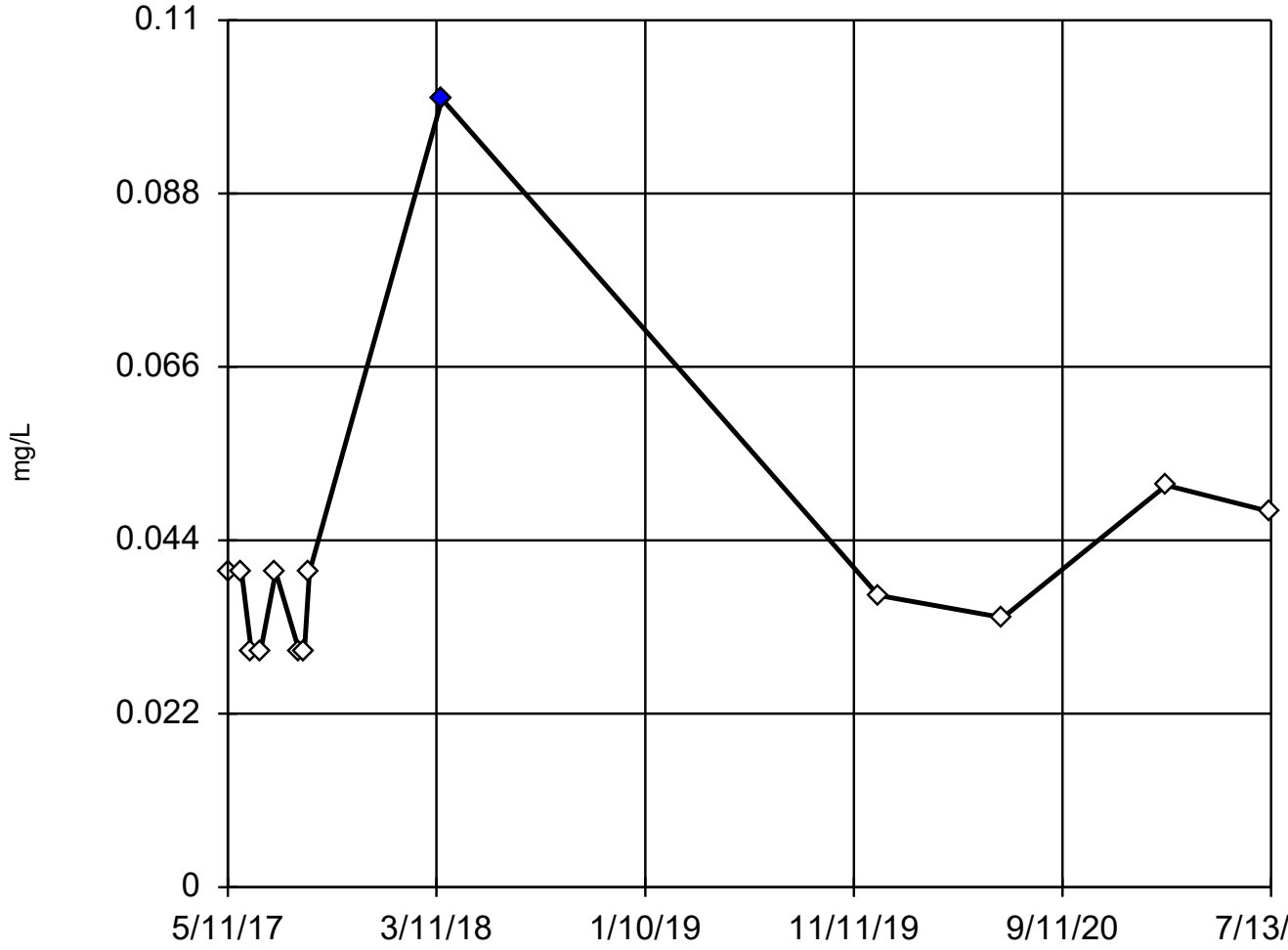
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.867
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-7



n = 13

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.04229.
Std. Dev. = 0.0186.
<0.2: c = 0.7486
tabl = 0.521.
Alpha = 0.05.

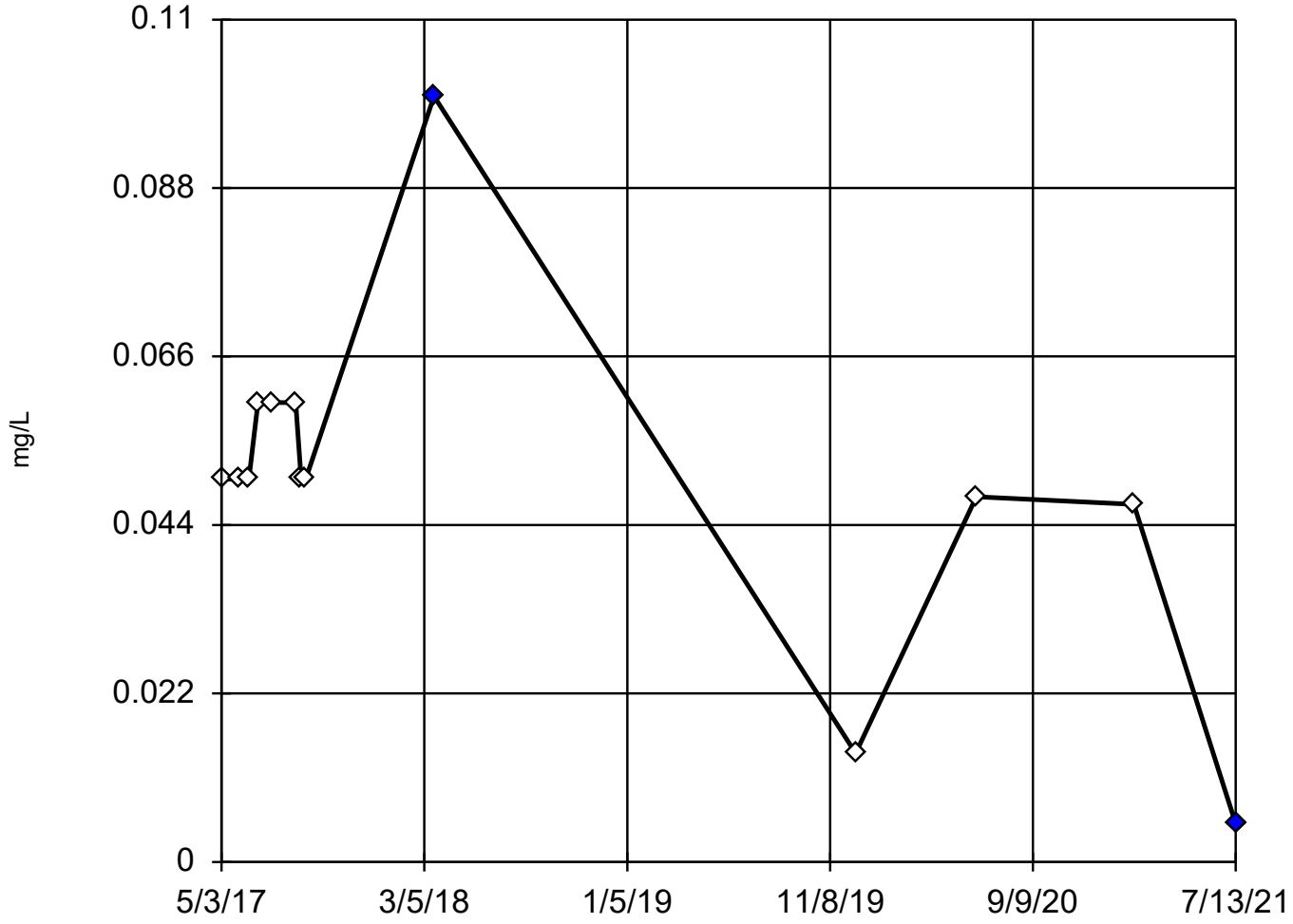
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.88
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-18 (bg)



n = 13

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

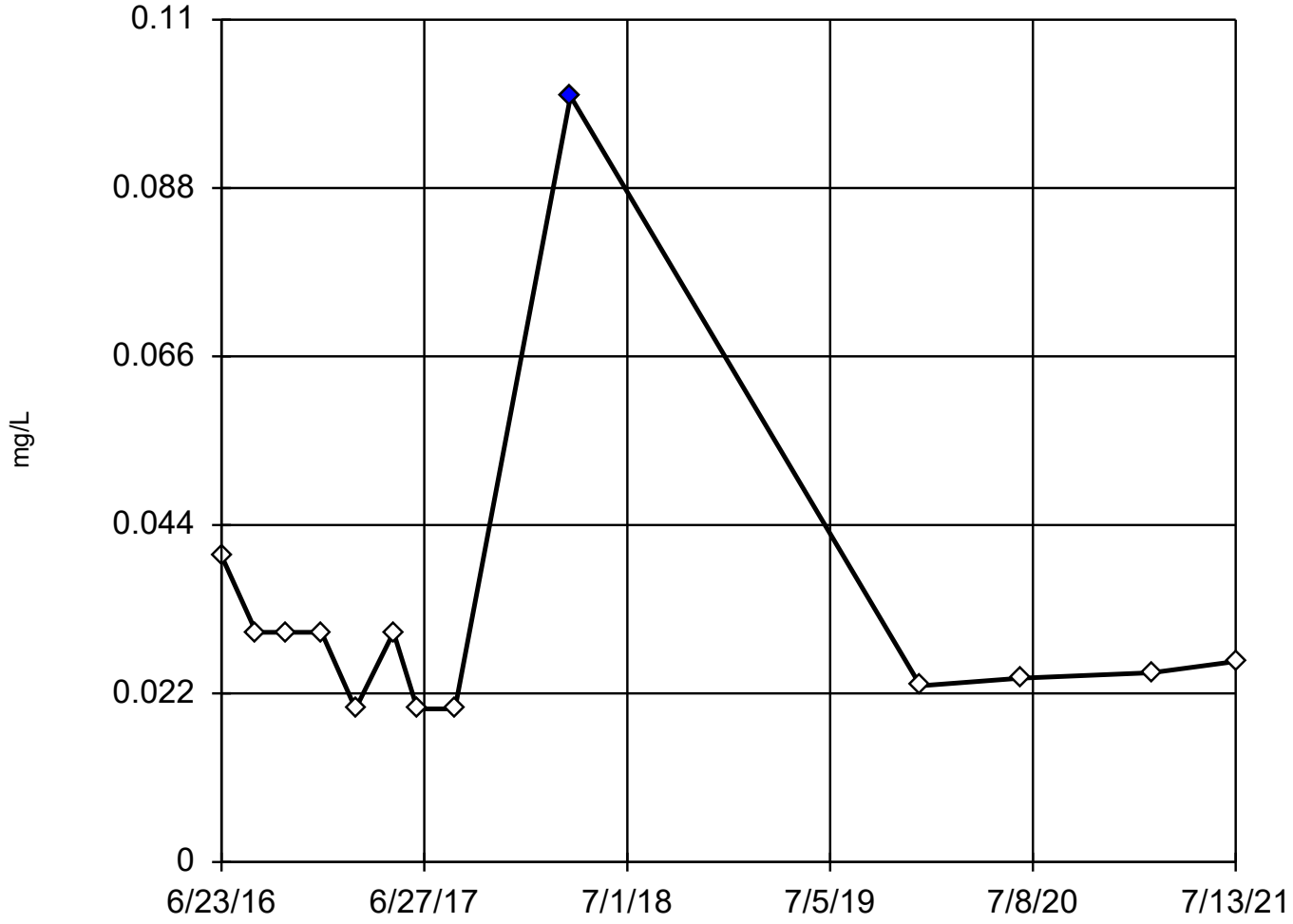
High cutoff = 0.0984, low cutoff = 0.0088, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 13

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.03215.
Std. Dev. = 0.02115.
<0.2: c = 0.875
tabl = 0.521.
Alpha = 0.05.

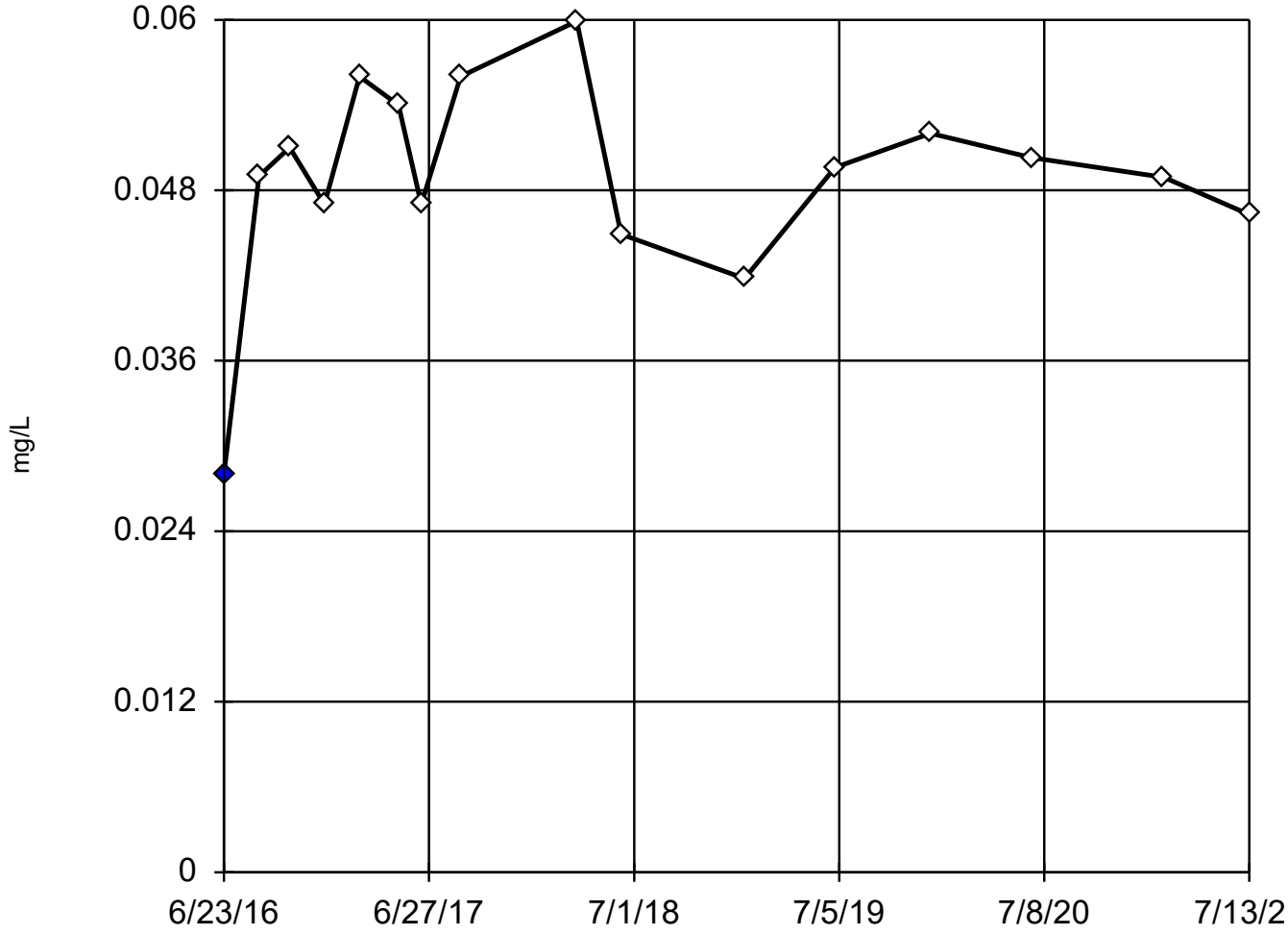
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8847
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.04886.
Std. Dev. = 0.007218.
0.028 (o): c = 0.6036
tabl = 0.507.
Alpha = 0.05.

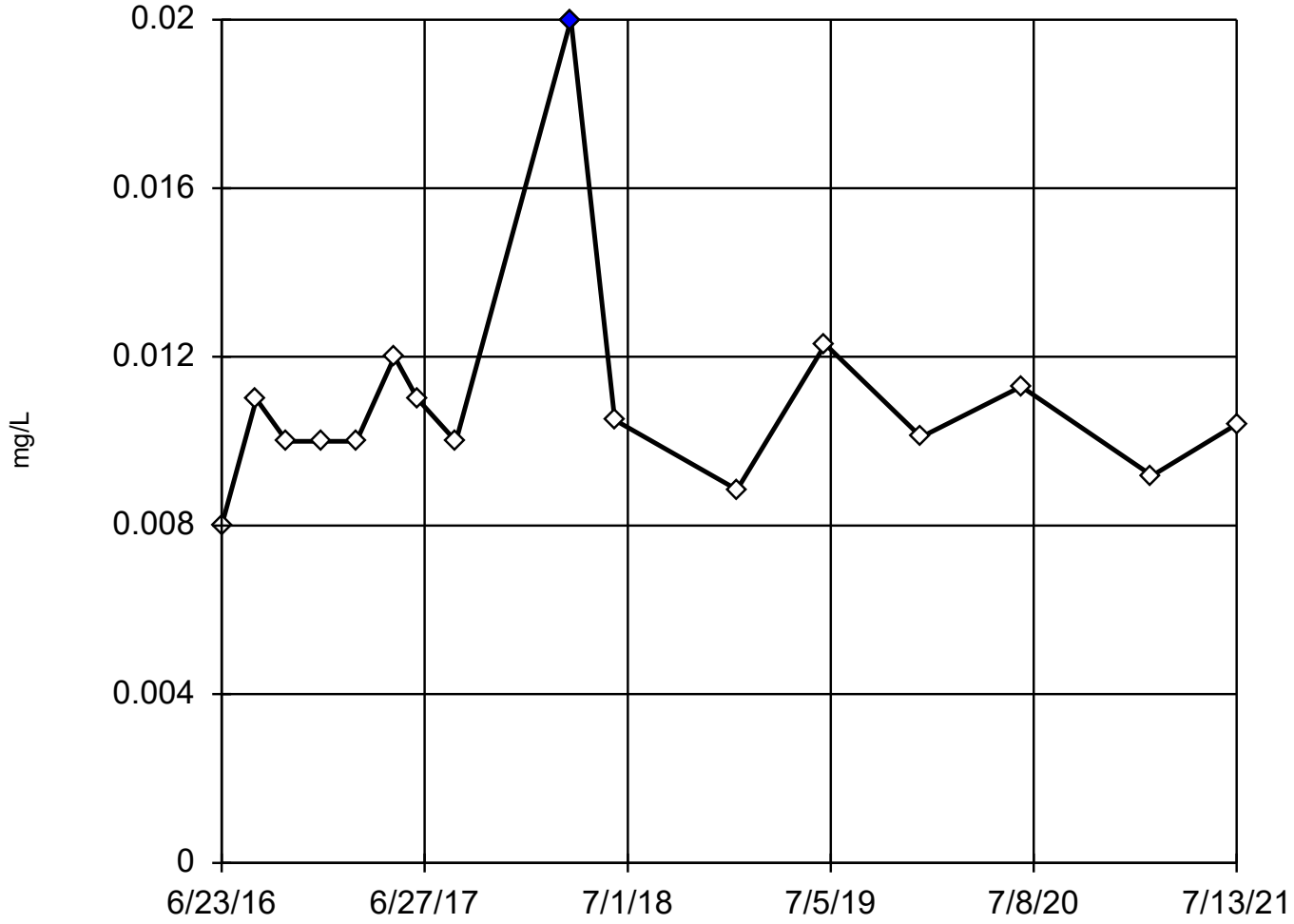
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9805
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Beryllium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.01091.
Std. Dev. = 0.002659.
<0.02: c = 0.7394
tabl = 0.507.
Alpha = 0.05.

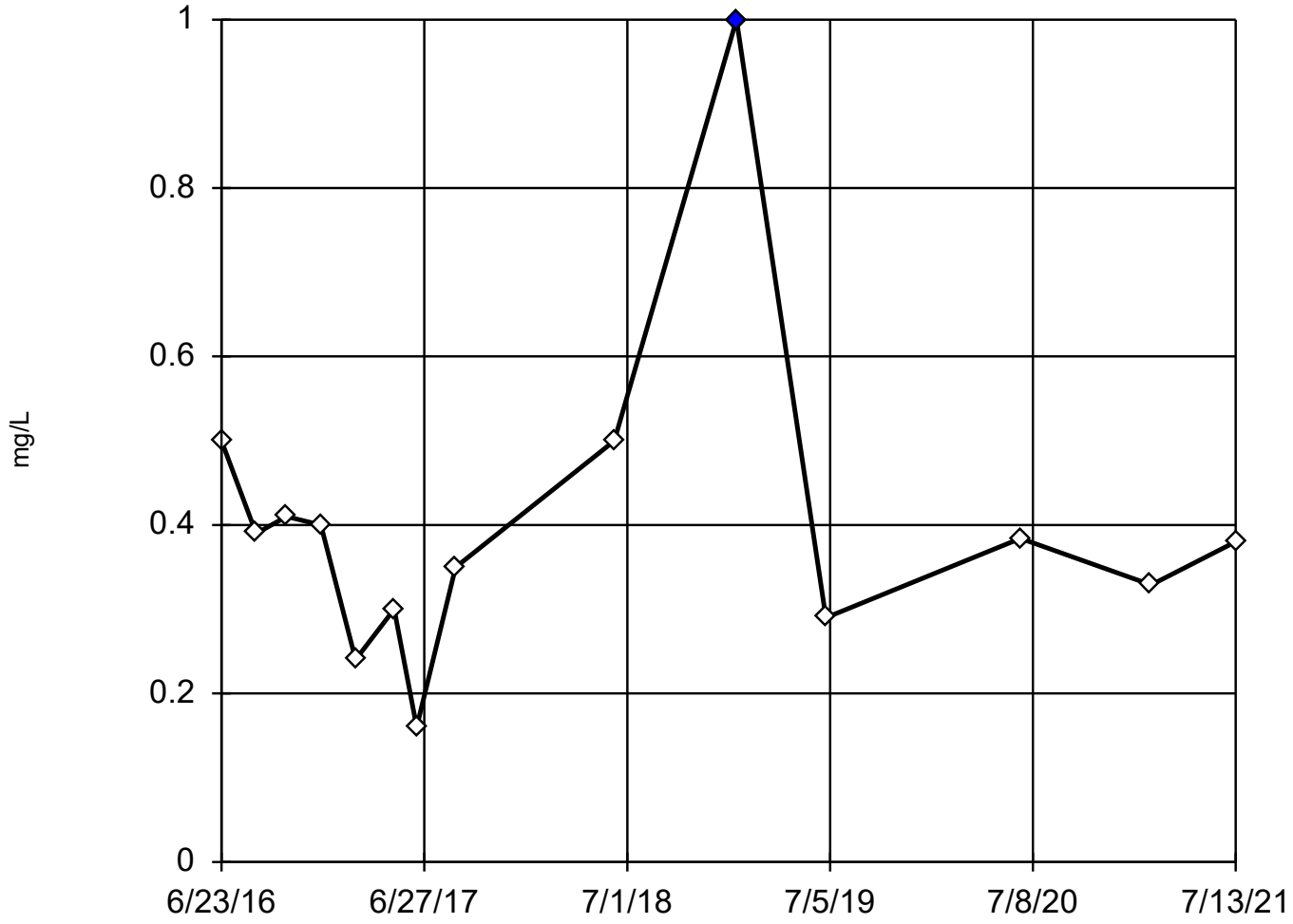
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9675
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Beryllium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 0.4024.
Std. Dev. = 0.1949.
<2: c = 0.7042
tabl = 0.546.
0.16: c = 0.3824
tabl = 0.546.
Alpha = 0.05.

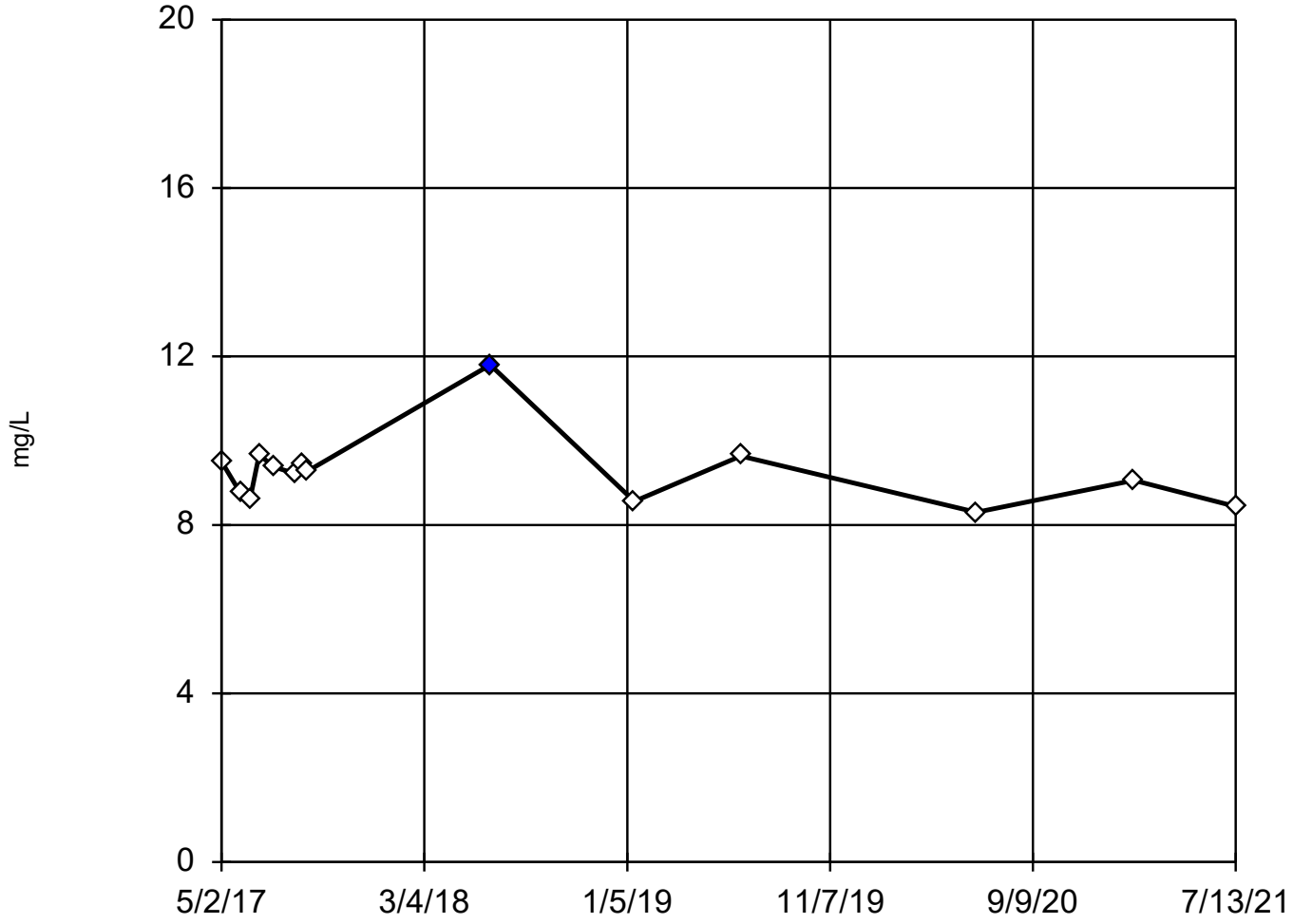
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9532
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 14

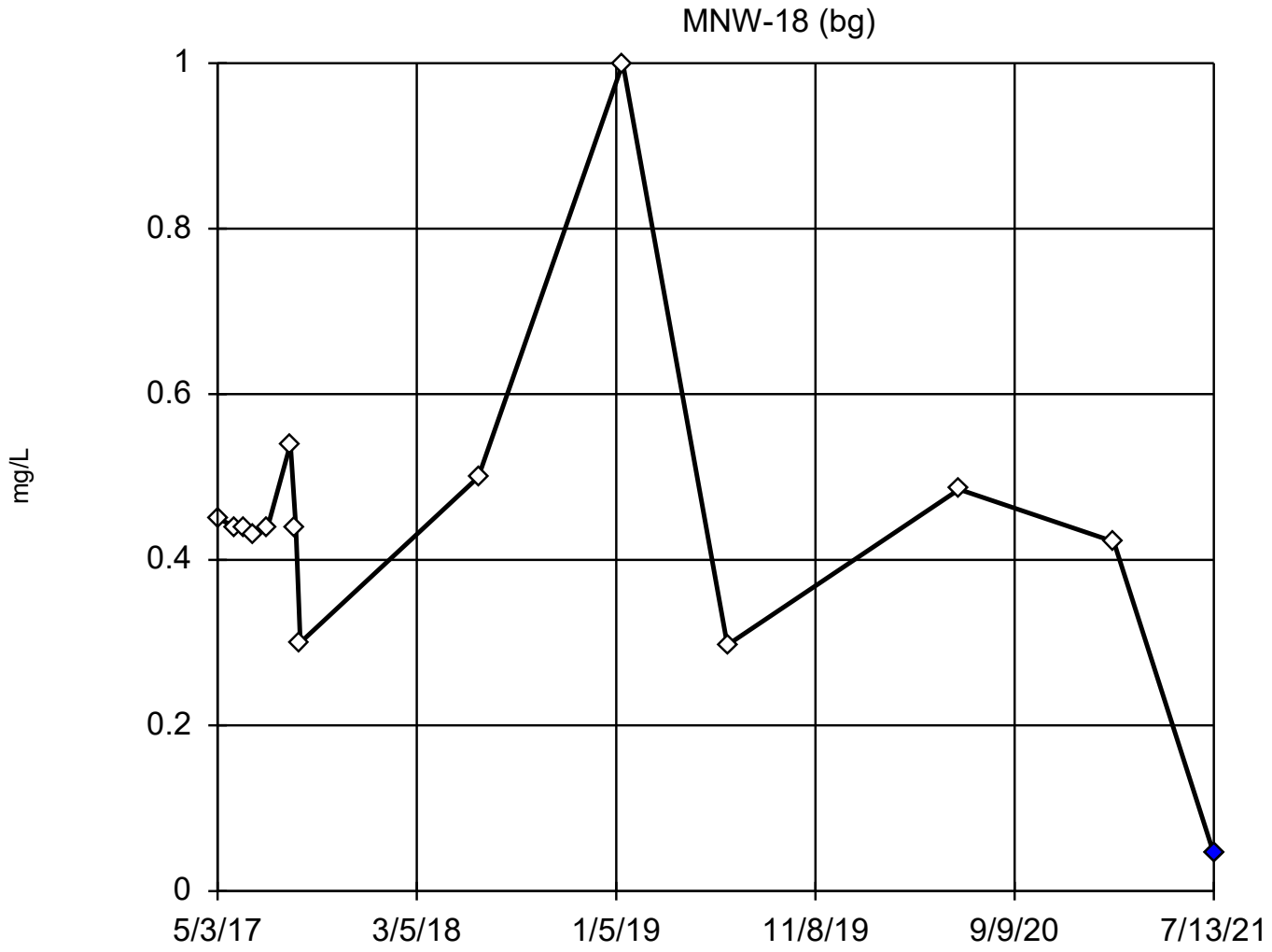
Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 9.26.
Std. Dev. = 0.8623.
11.8: c = 0.6667
tabl = 0.546.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9194
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

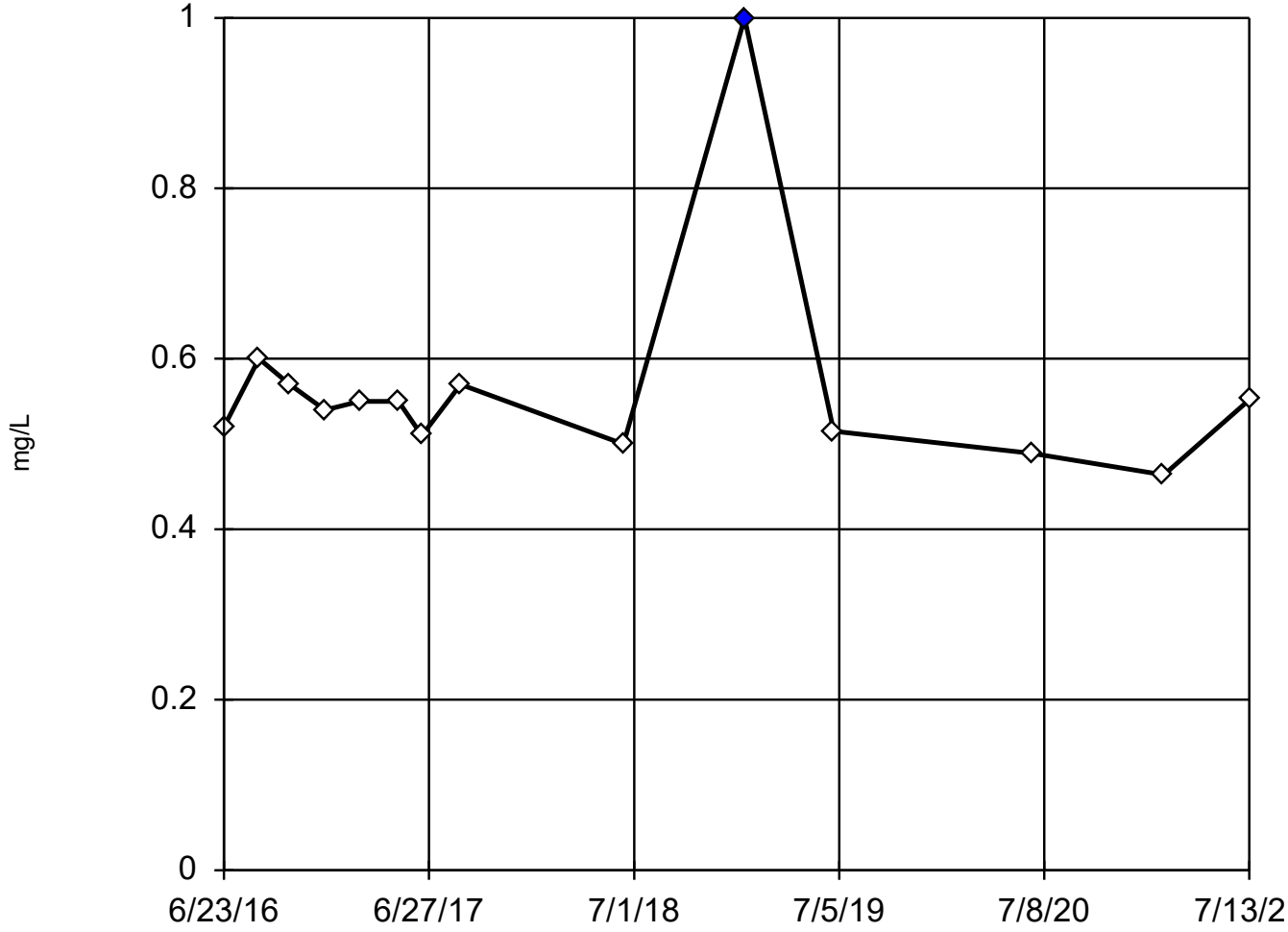
High cutoff = 1.022, low cutoff = 0.08374, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.5664.
Std. Dev. = 0.1299.
<2: c = 0.86
tabl = 0.546.
Alpha = 0.05.

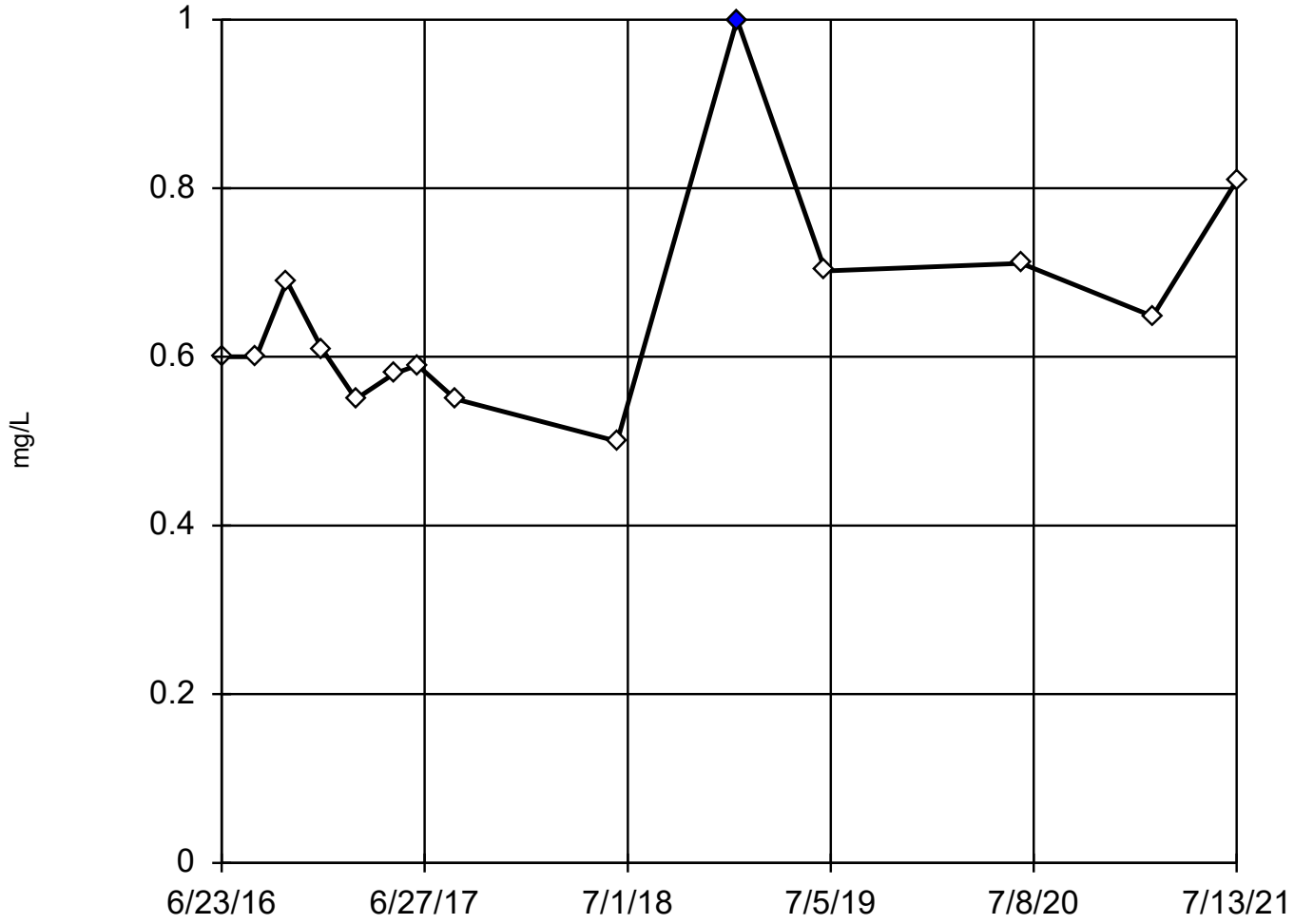
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9826
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.6529.
Std. Dev. = 0.1281.
<2: c = 0.6422
tabl = 0.546.
Alpha = 0.05.

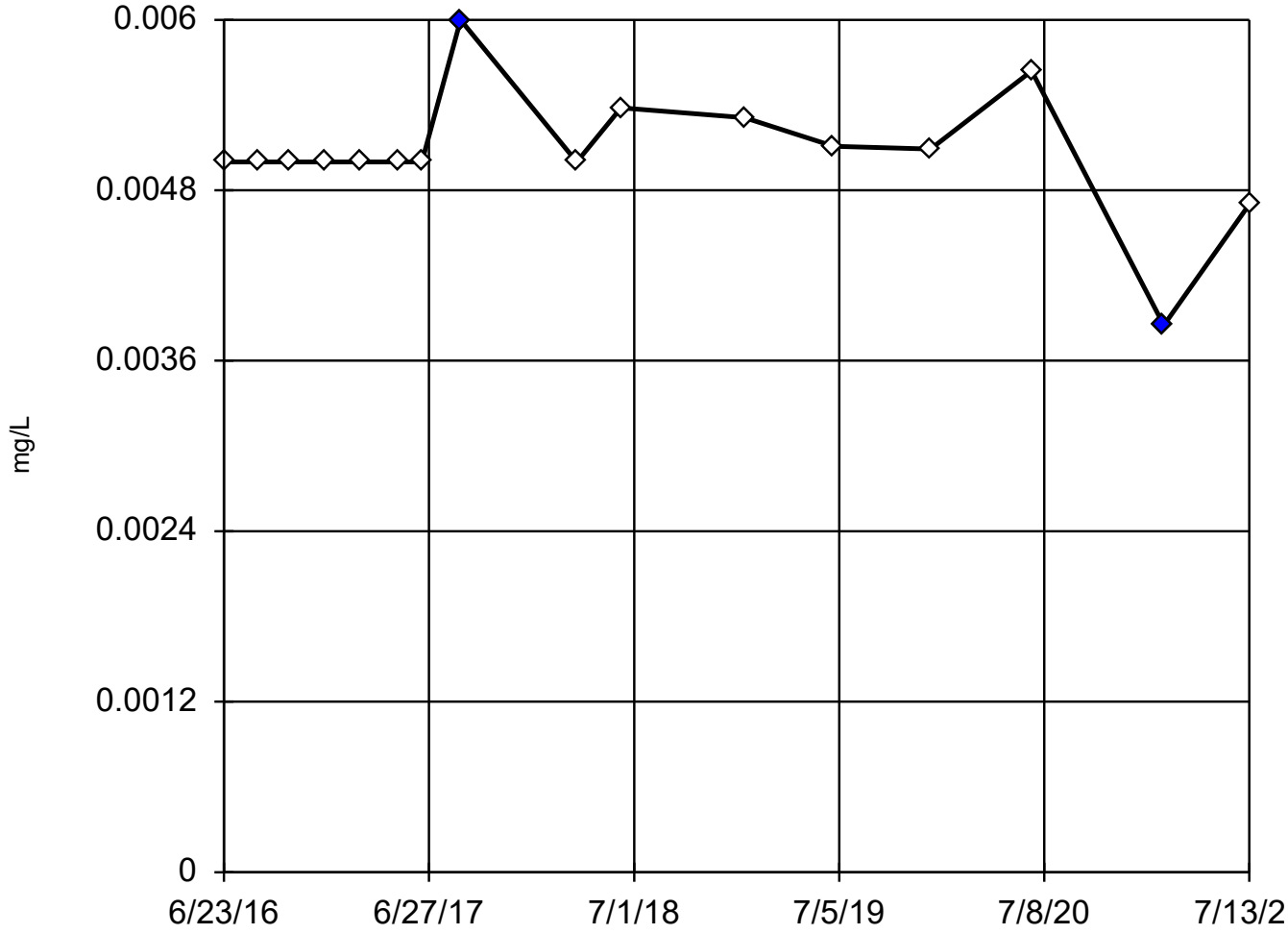
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9487
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-5



n = 16

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

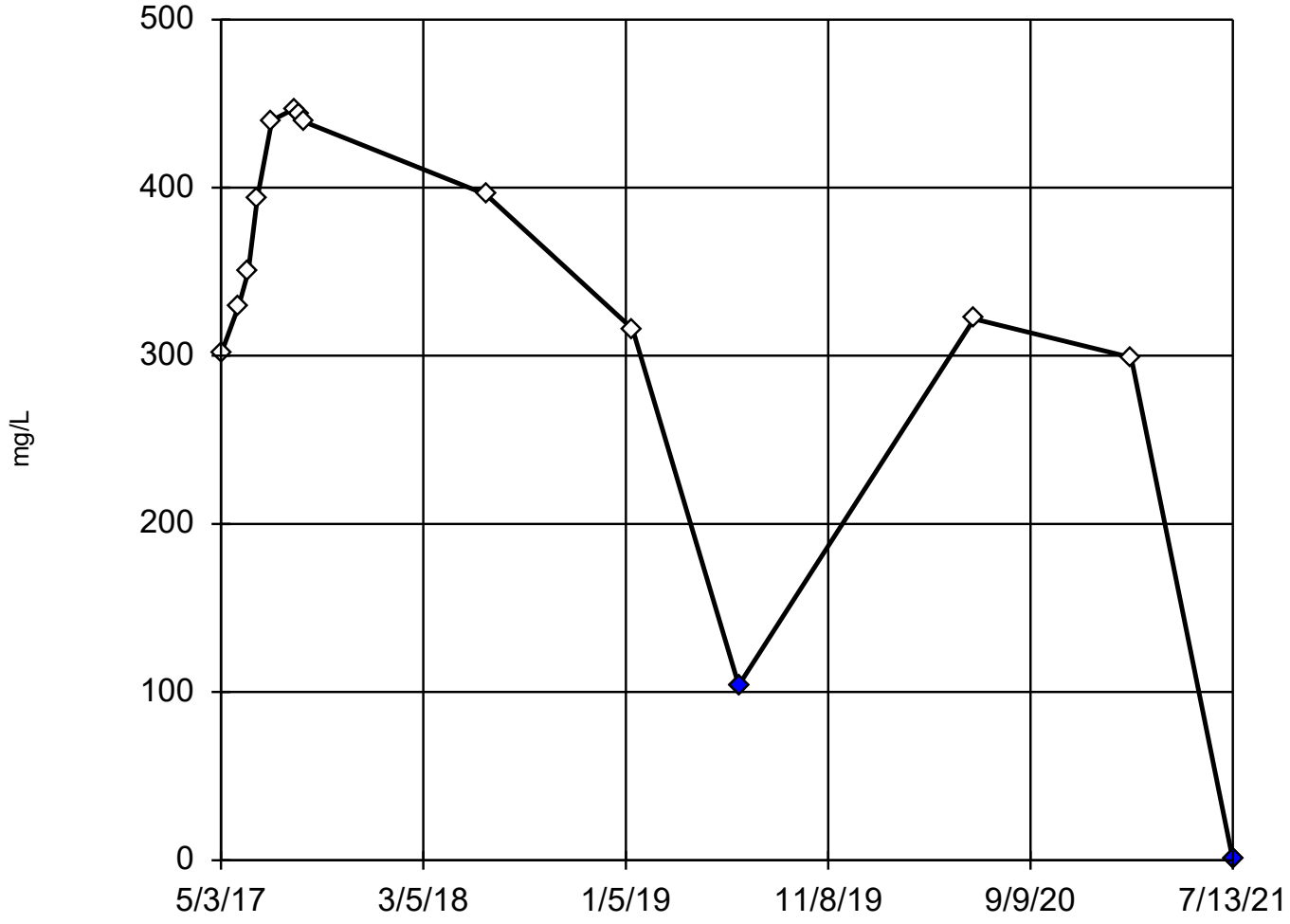
High cutoff = 0.005762, low cutoff = 0.004222, based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 14

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 327.3.
Std. Dev. = 130.5.
104: c = 0.5863
tabl = 0.546.
Alpha = 0.05.

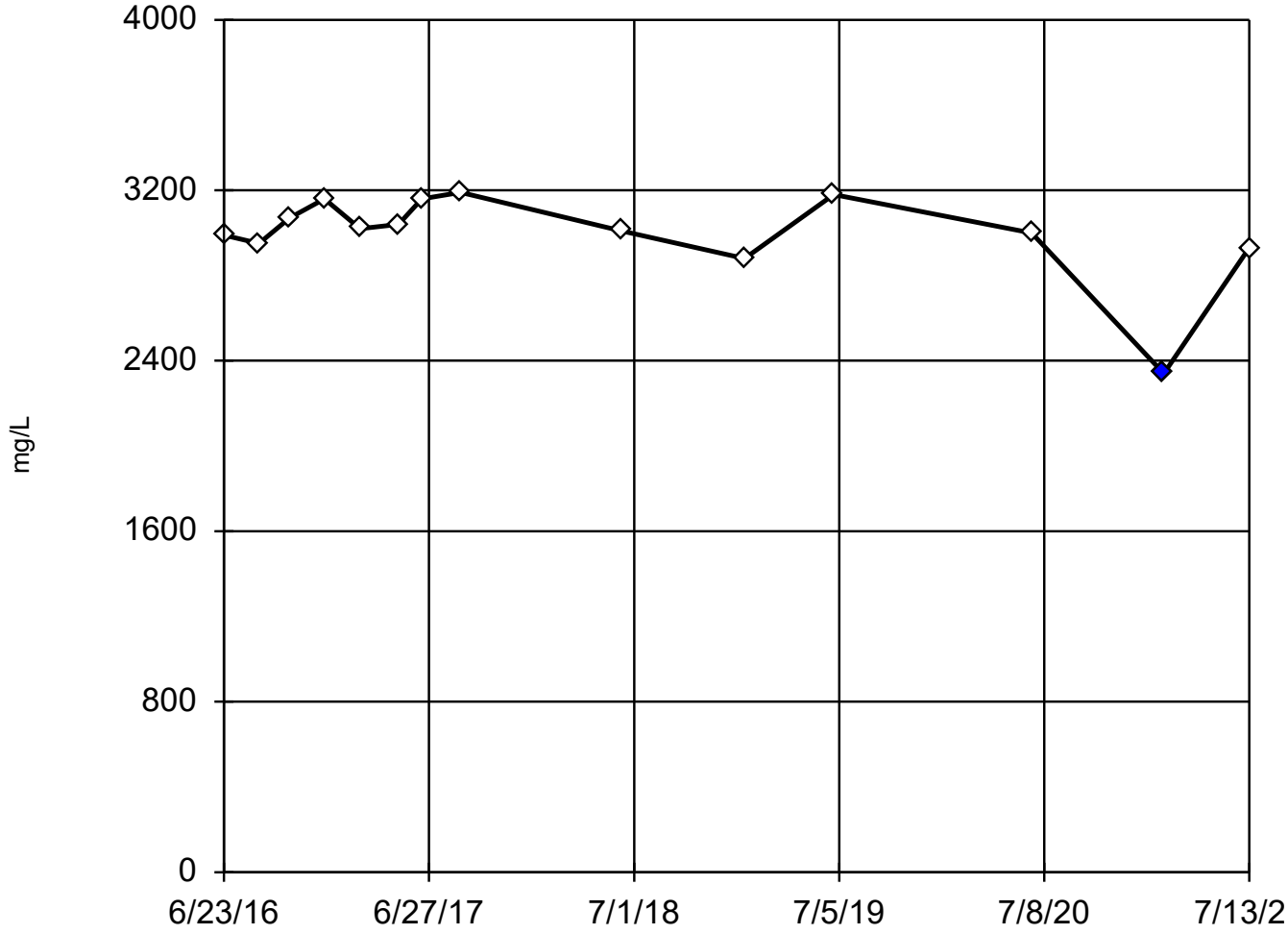
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.86
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 2994.
Std. Dev. = 211.9.
2340: c = 0.7195
tabl = 0.546.
Alpha = 0.05.

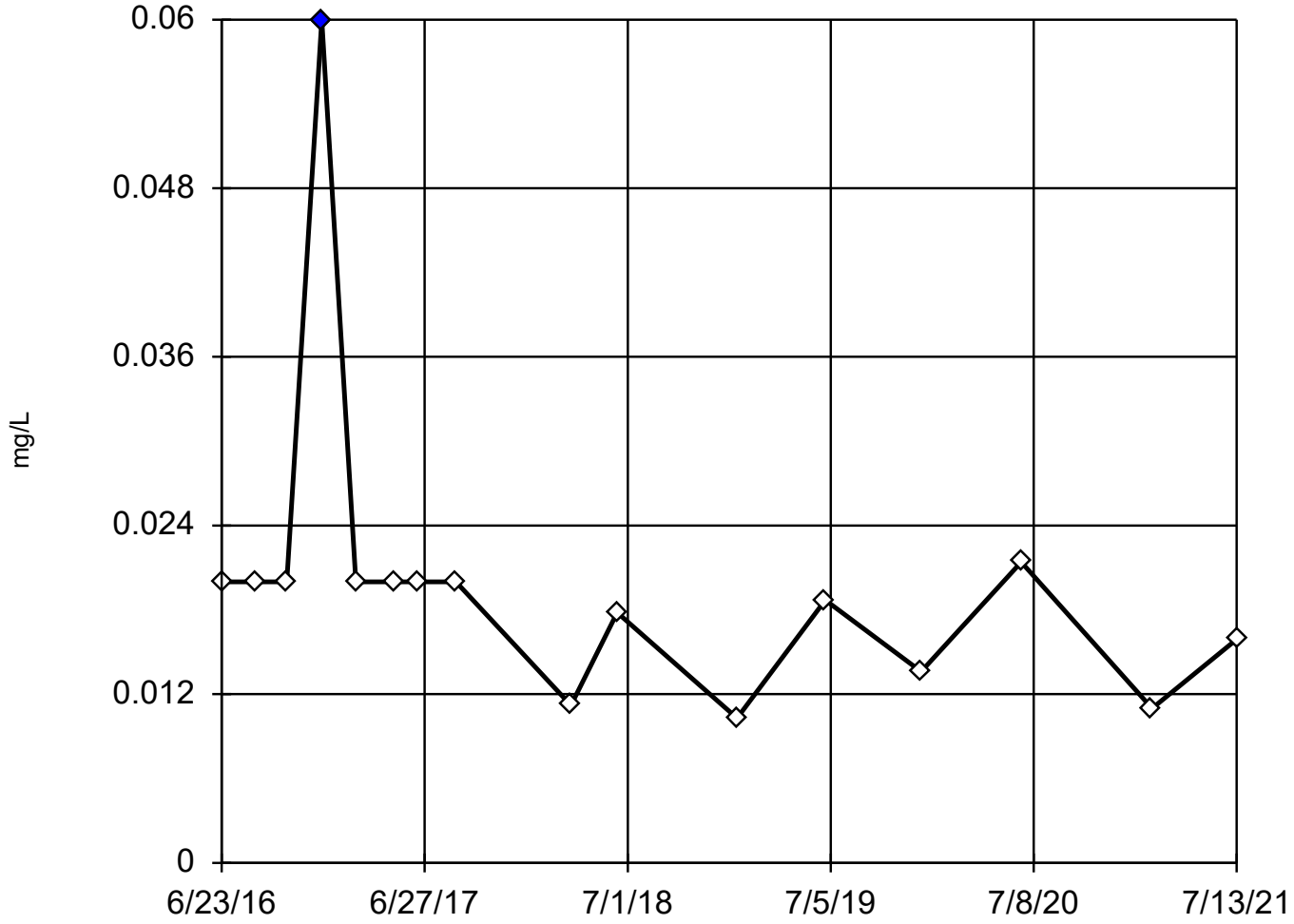
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9322
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 8/19/2021 11:13 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-2



n = 16

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

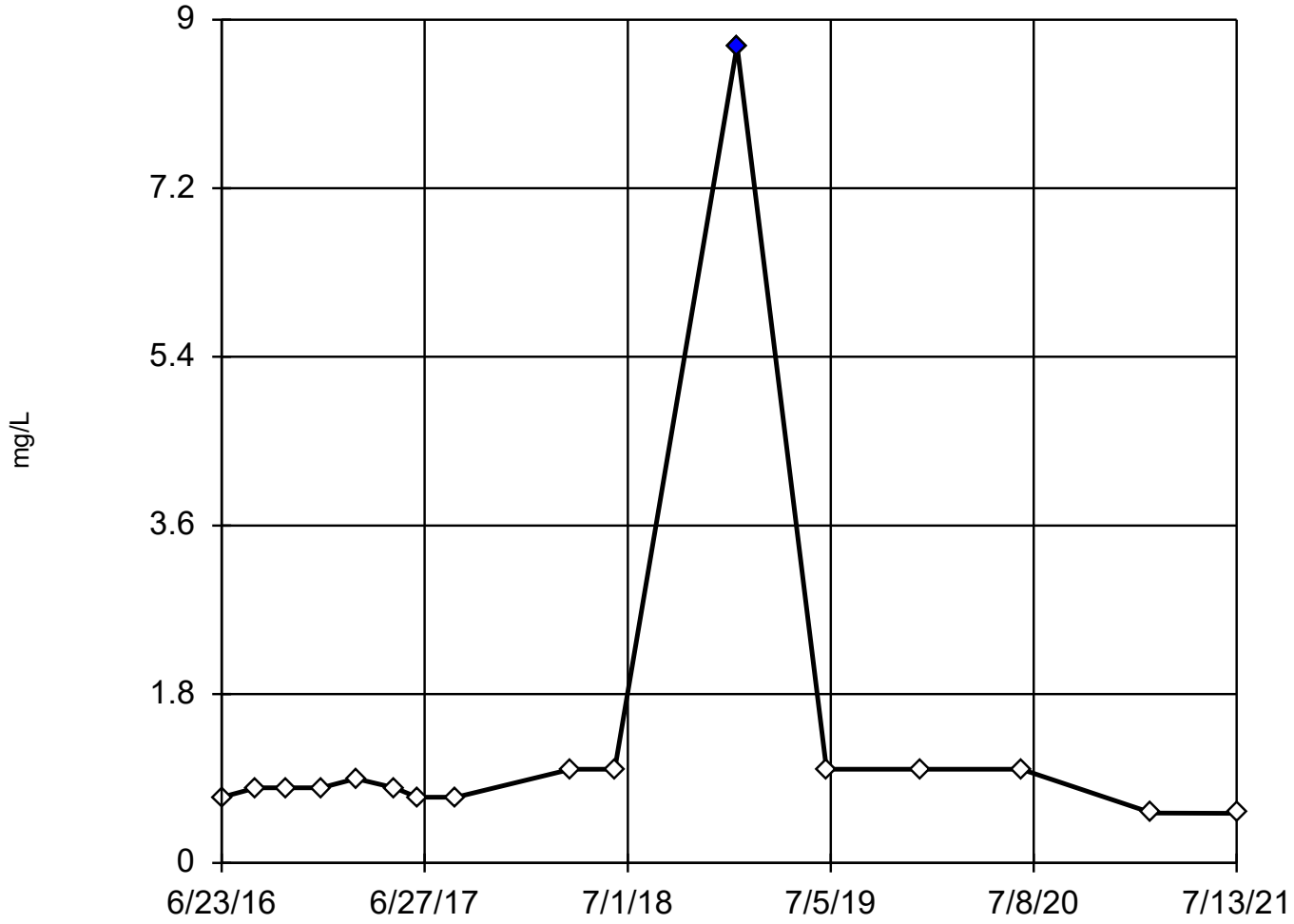
High cutoff = 0.05032, low cutoff = 0.005845, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-6



n = 16

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

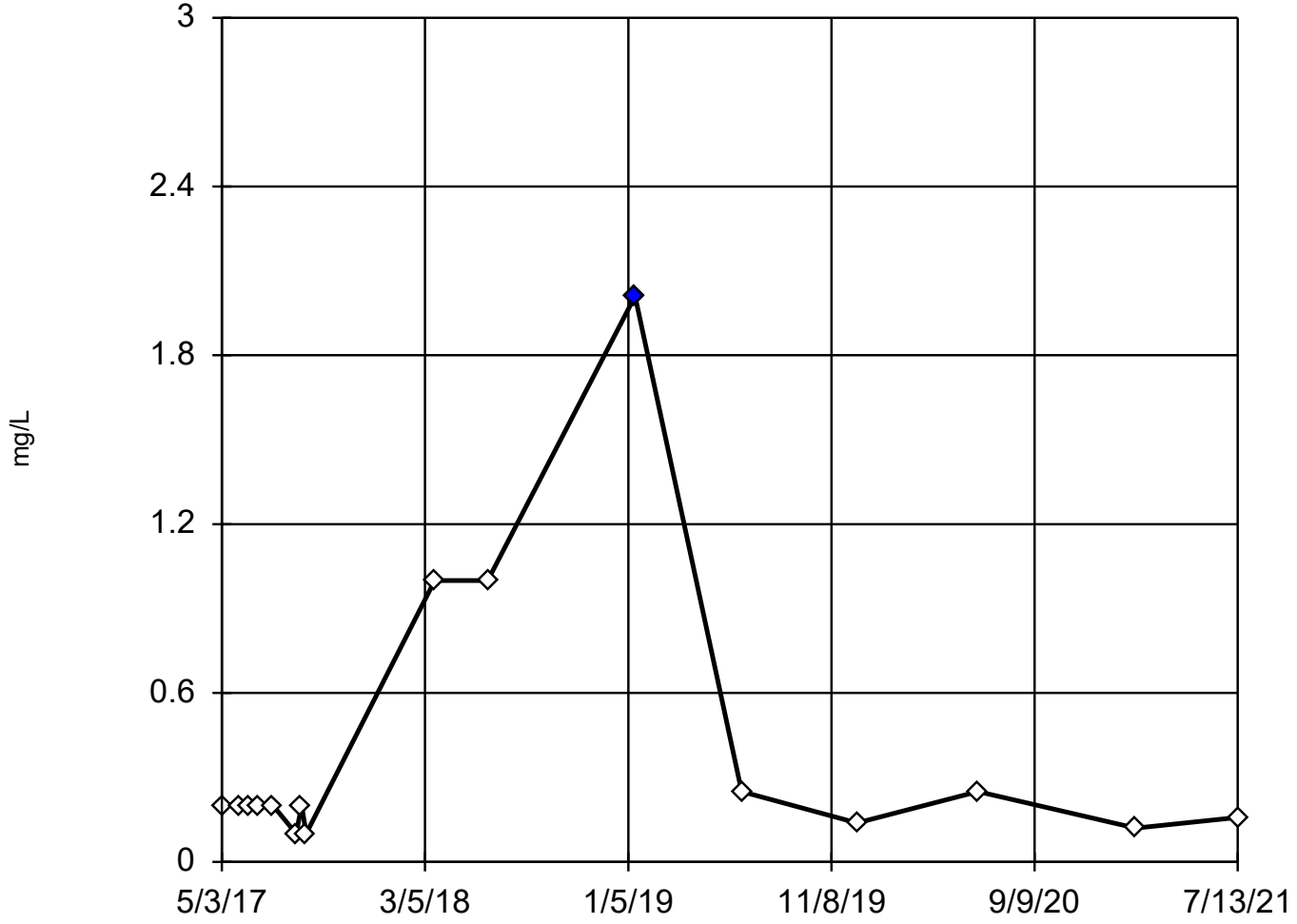
High cutoff = 2.915, low cutoff = 0.2401, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-18 (bg)



n = 16

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

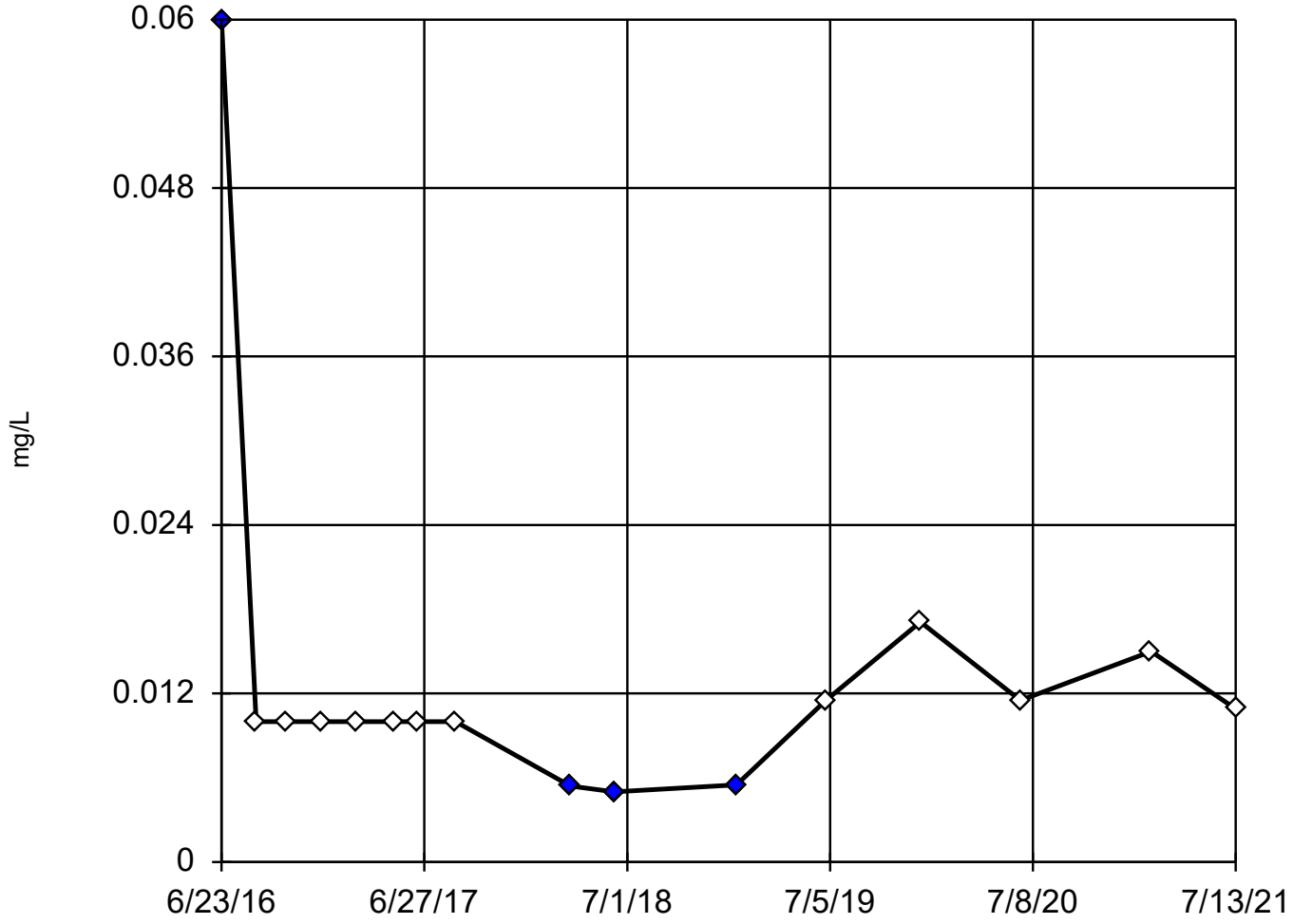
High cutoff = 1.213, low cutoff = 0.03043, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-6



n = 16

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

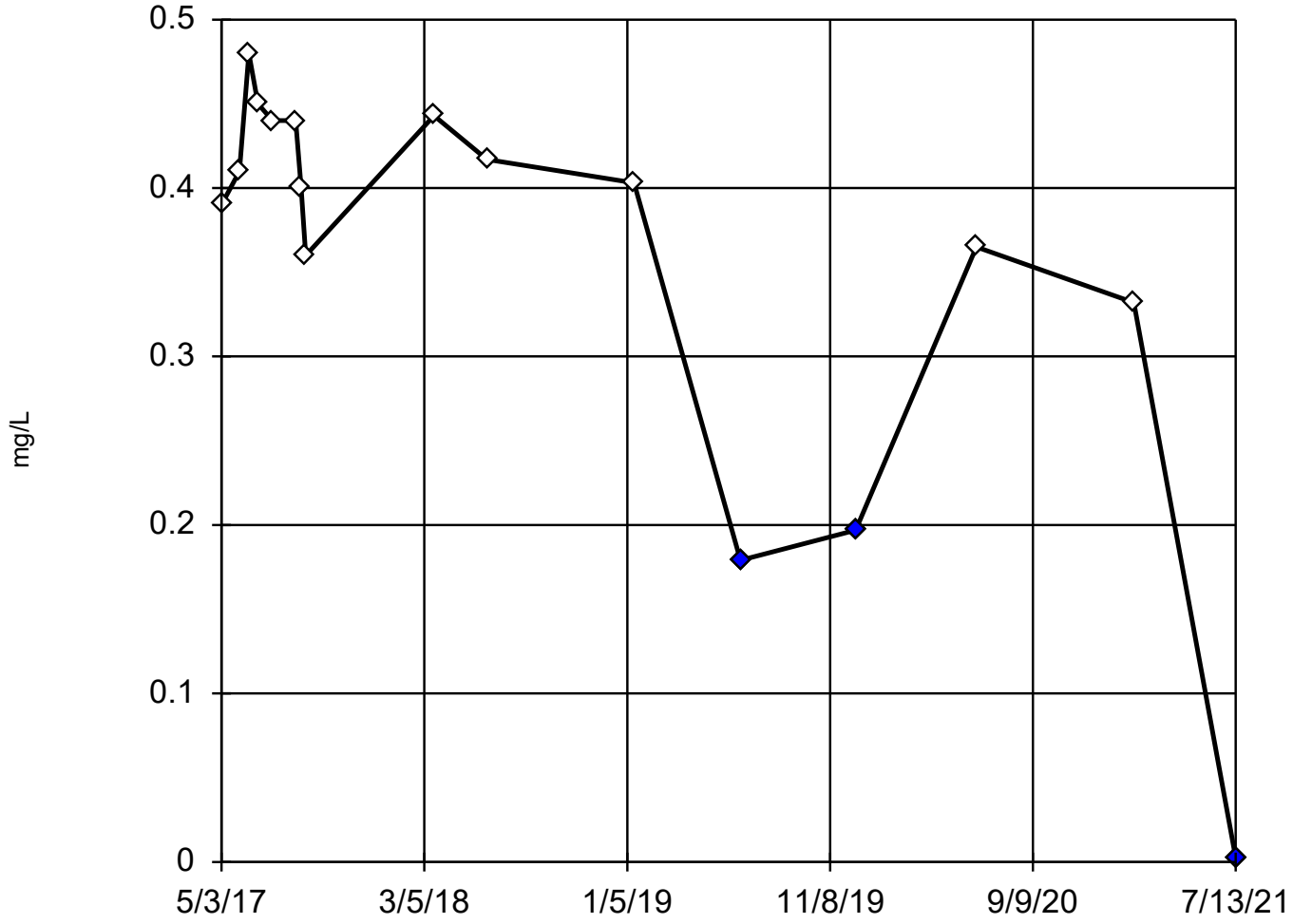
High cutoff = 0.01749, low cutoff = 0.006575, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 16

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 0.3568.
Std. Dev. = 0.1265.
0.197: c = 0.6626
tabl = 0.507.
Alpha = 0.05.

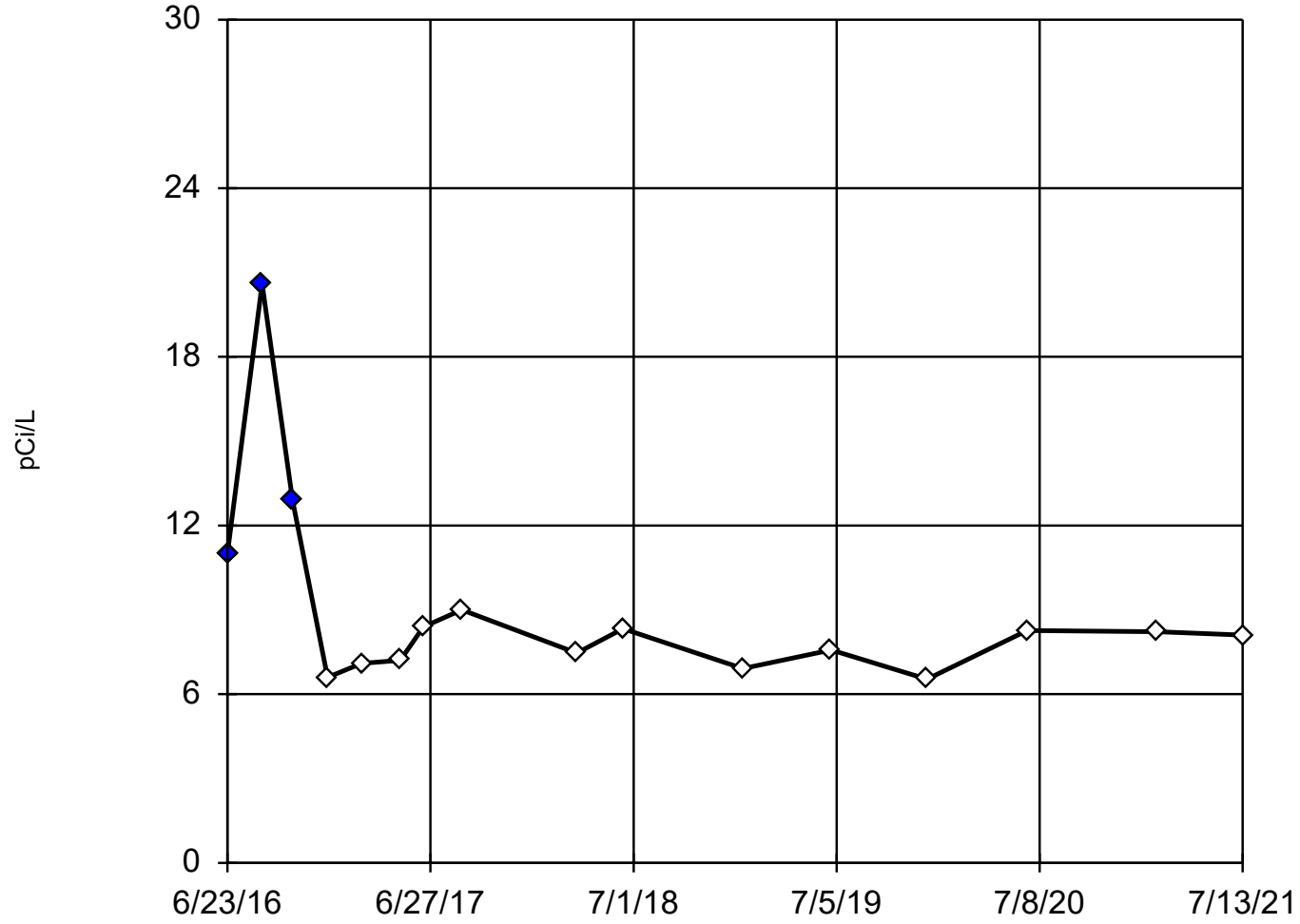
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9754
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Lithium Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 16

Statistical outliers are drawn as solid.
Testing for 3 high outliers.
Mean = 9.012.
Std. Dev. = 3.503.
11 (o): c = 0.6357
tabl = 0.507.
Alpha = 0.05.

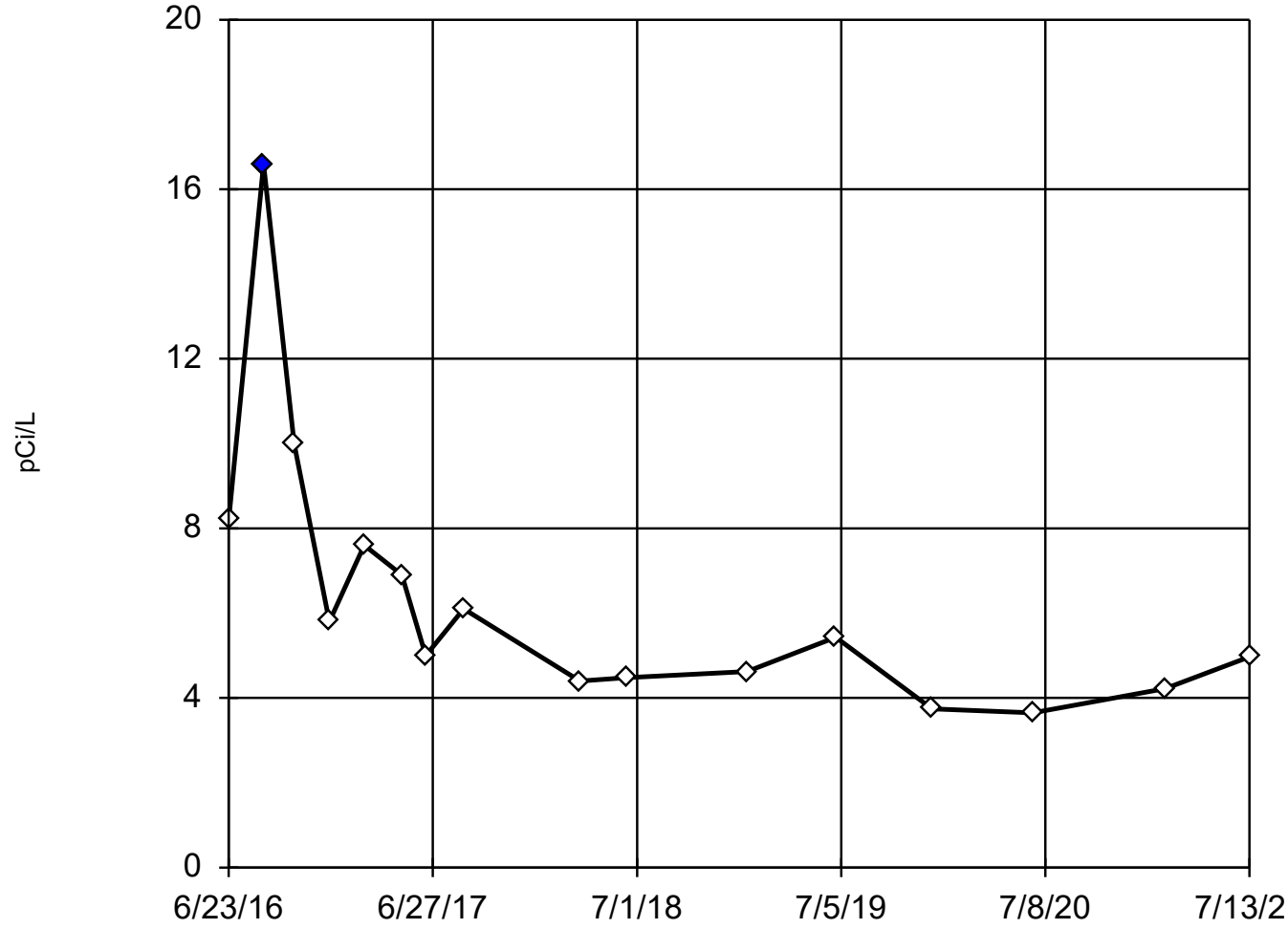
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.946
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-3



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 6.356.
Std. Dev. = 3.24.
16.6 (o): c = 0.6793
tabl = 0.507.
Alpha = 0.05.

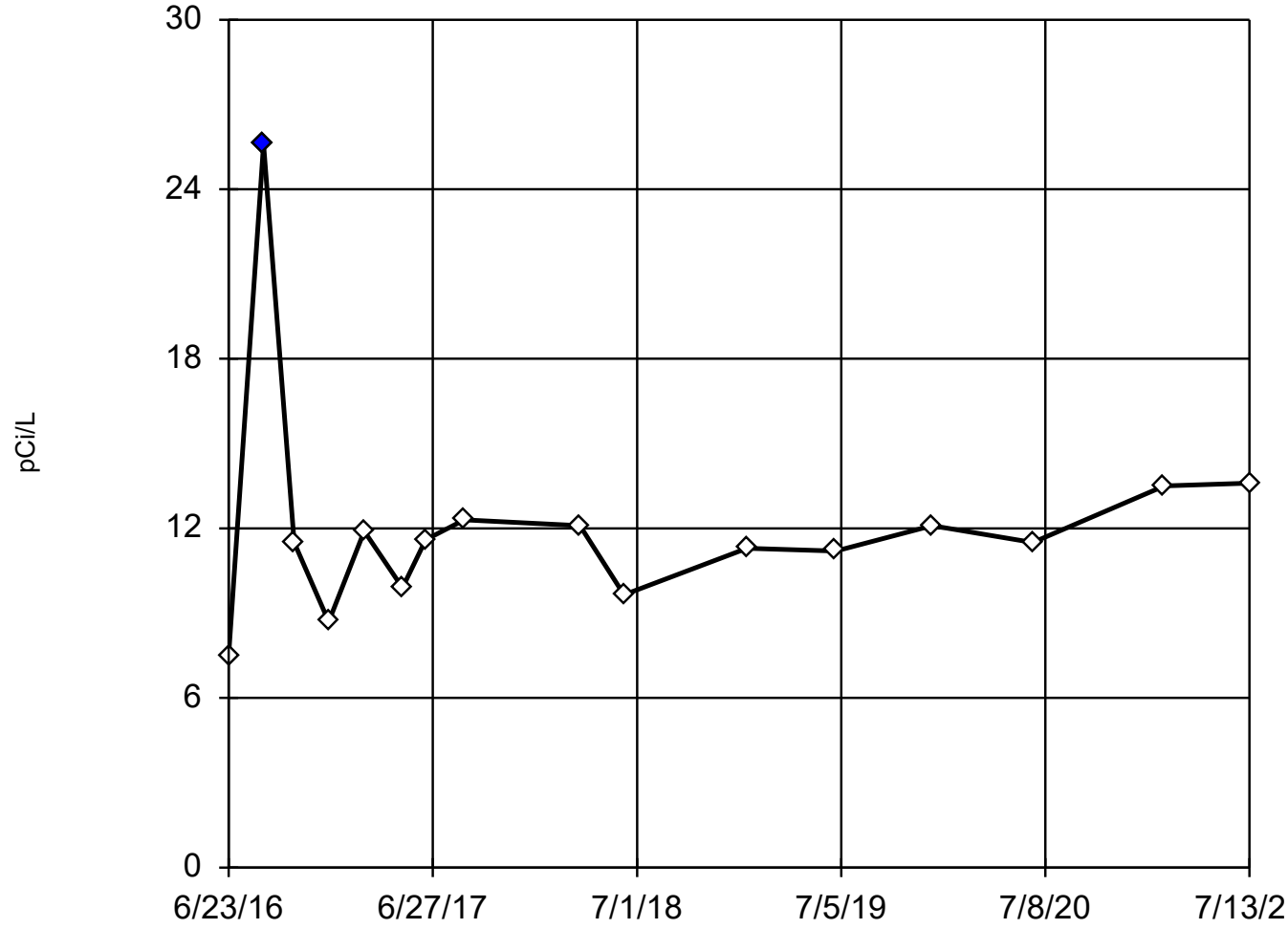
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.898
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 12.12.
Std. Dev. = 3.936.
25.6 (o): c = 0.7586
tabl = 0.507.
7.52: c = 0.3562
tabl = 0.507.
Alpha = 0.05.

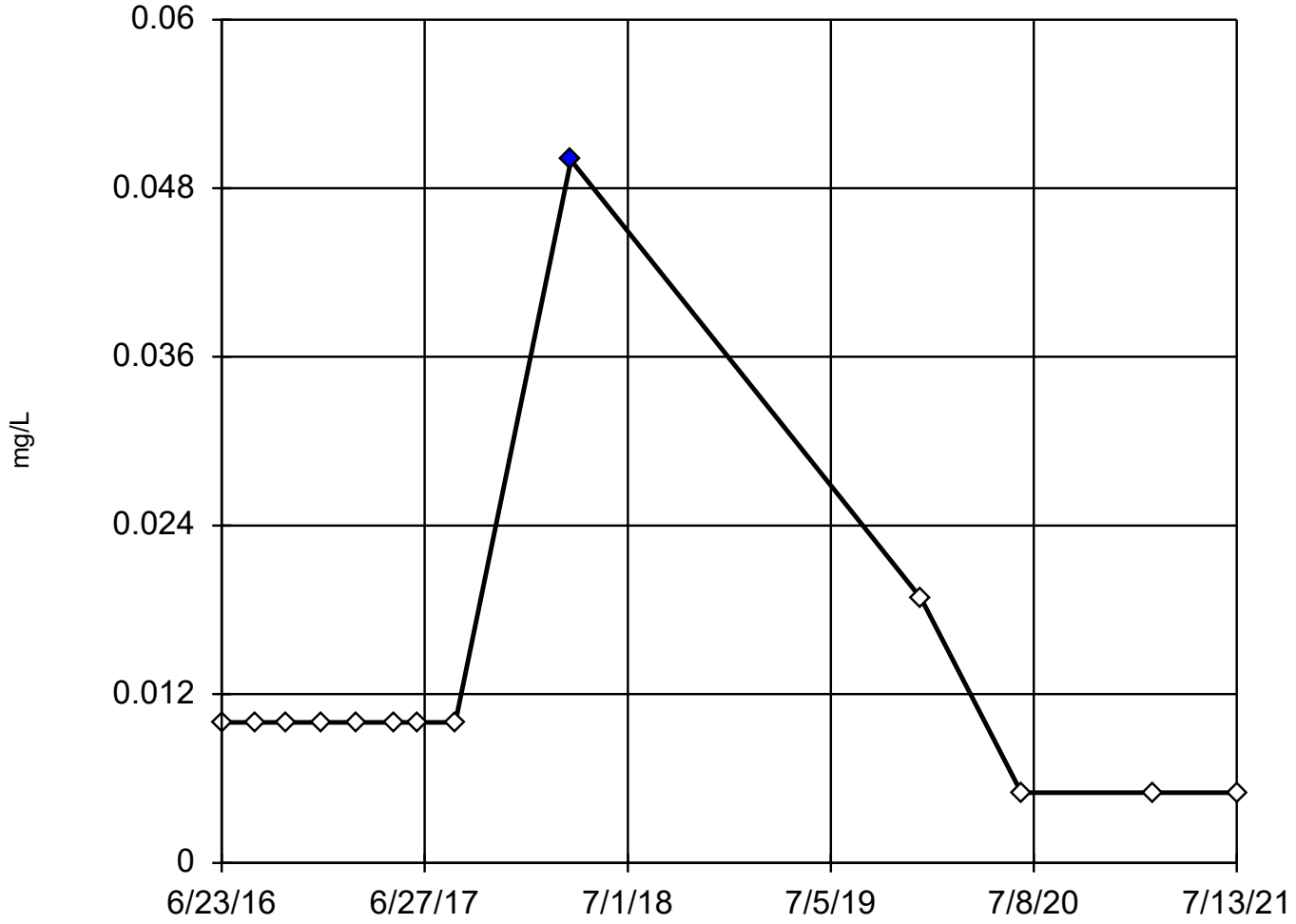
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9379
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-3



n = 13

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

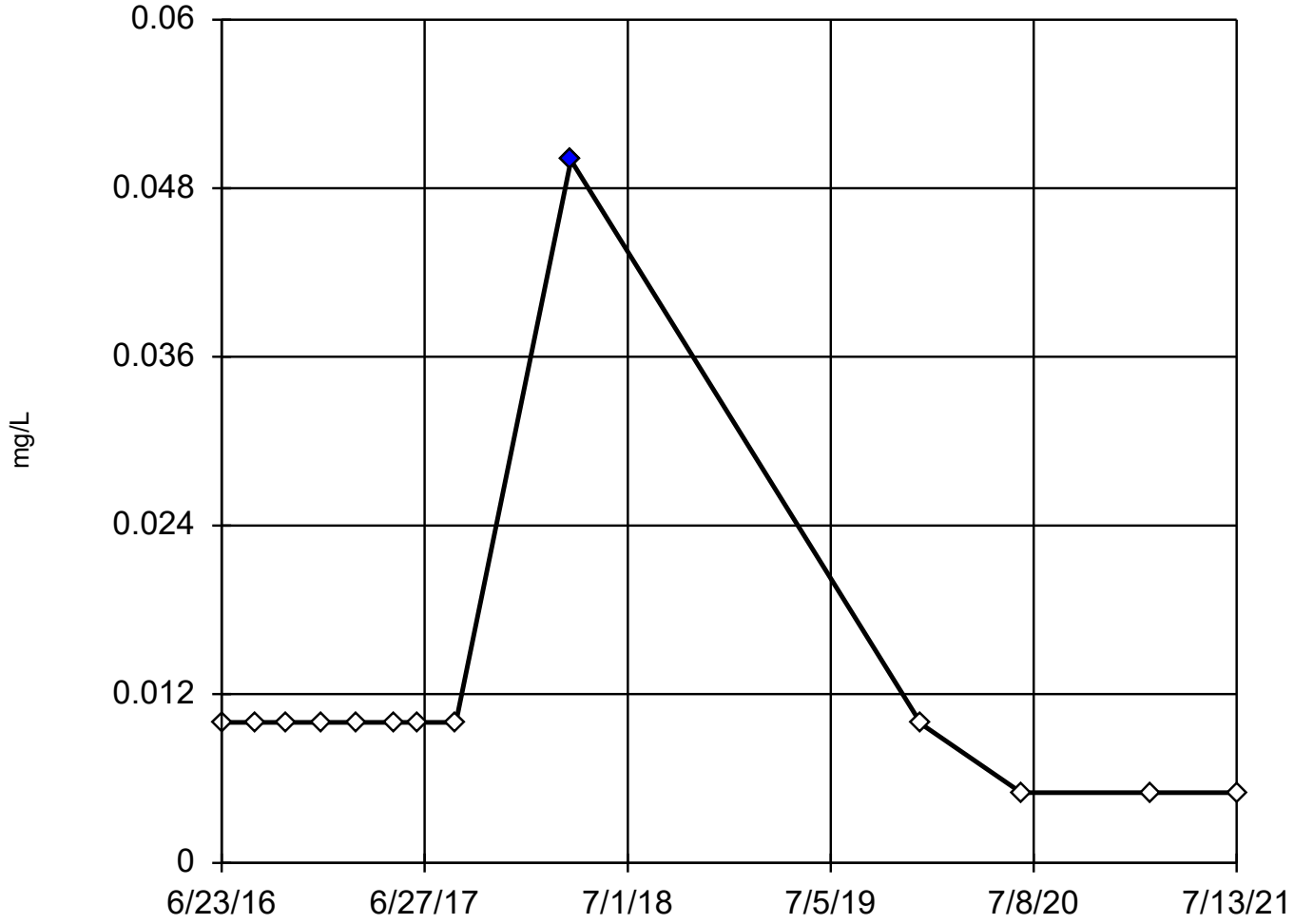
High cutoff = 0.02828, low cutoff = 0.0025, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-5



n = 13

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

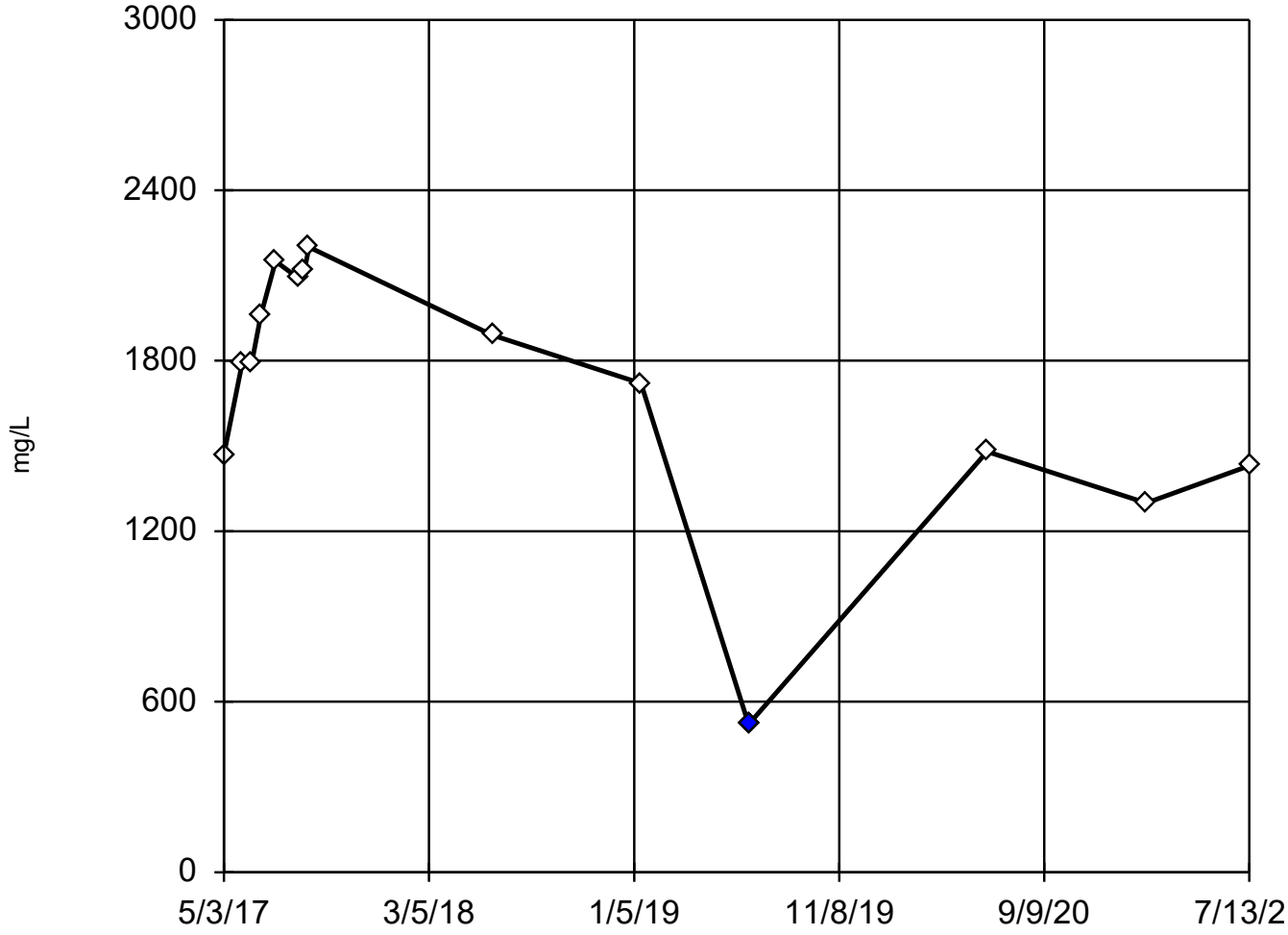
High cutoff = 0.02876, low cutoff = 0.002445, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1708.
Std. Dev. = 449.5.
520 (o): c = 0.5688
tabl = 0.546.
Alpha = 0.05.

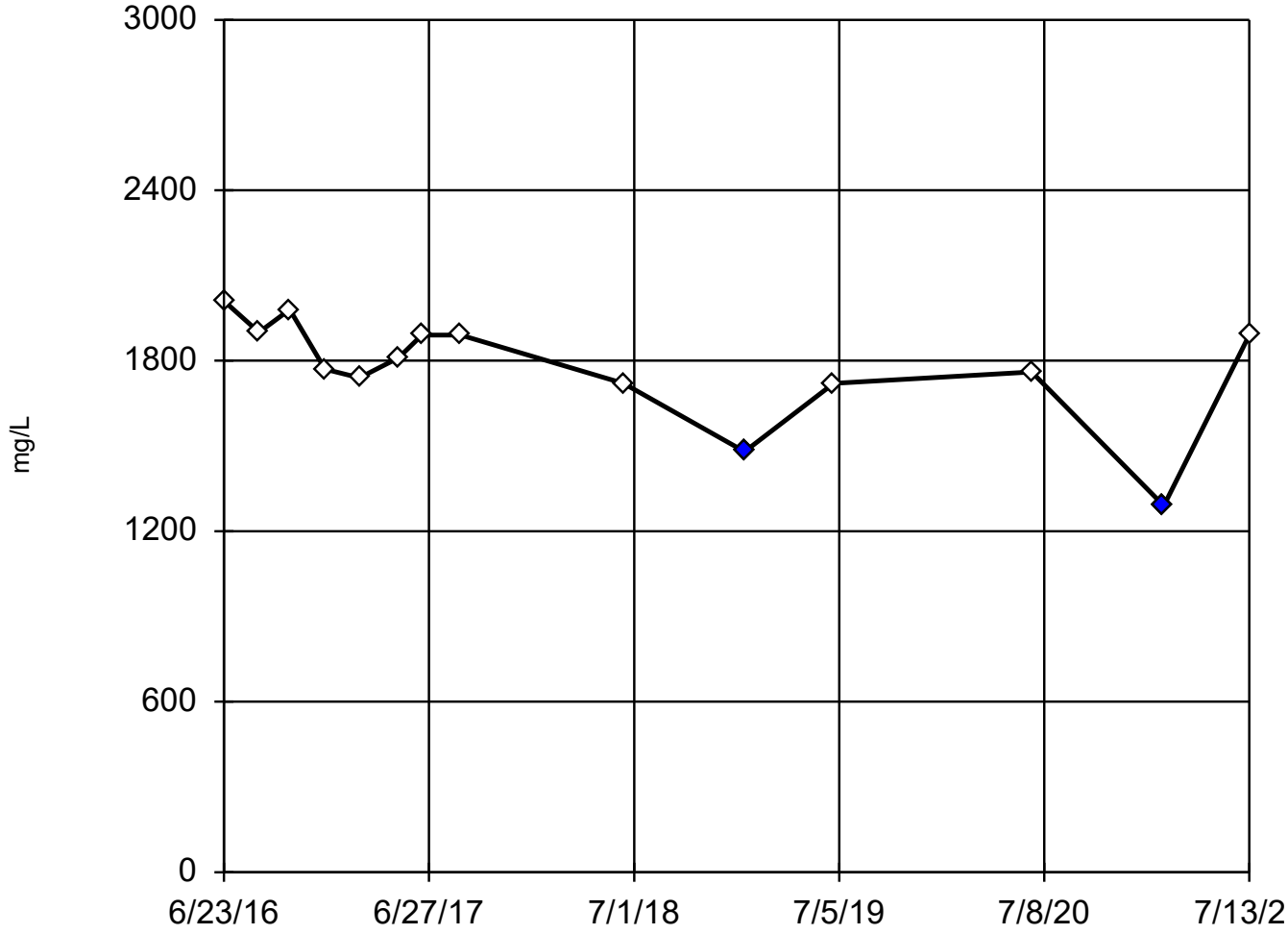
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9291
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 14

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 1775.
Std. Dev. = 192.9.
1480: c = 0.5714
tabl = 0.546.
Alpha = 0.05.

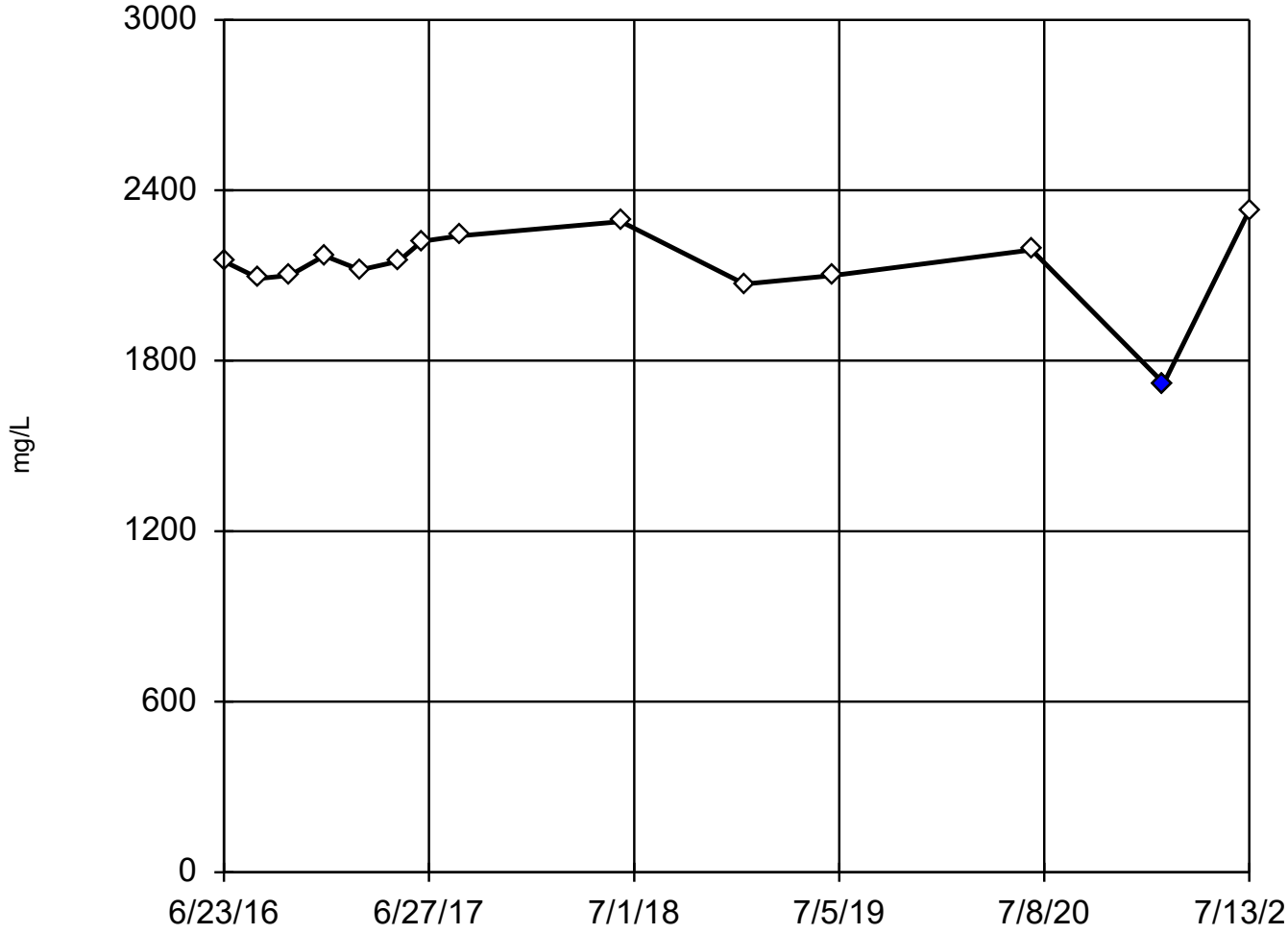
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9079
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 2139.
Std. Dev. = 143.
1720 (o): c = 0.7115
tabl = 0.546.
Alpha = 0.05.

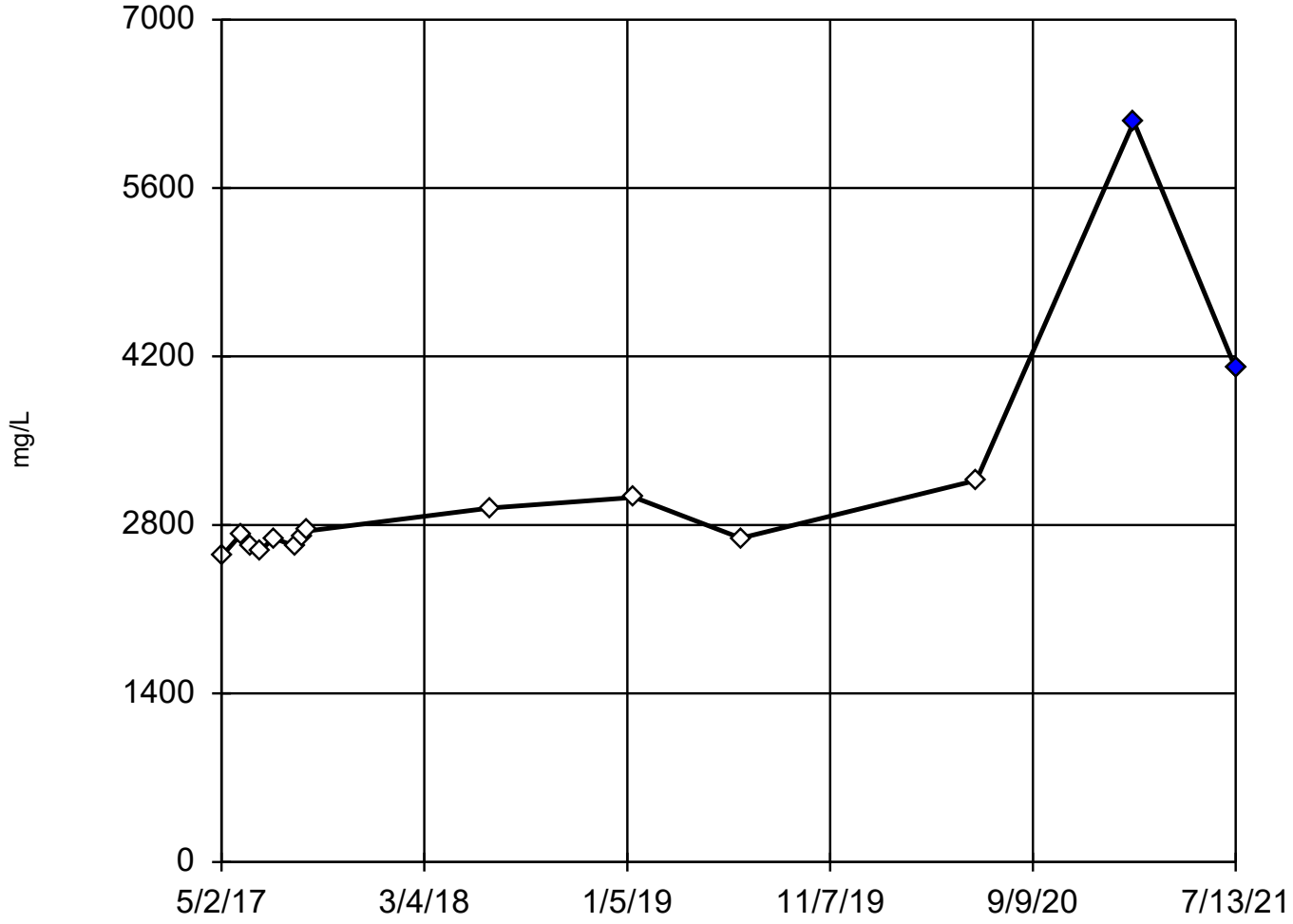
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9352
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 14

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 3093.
Std. Dev. = 966.6.
4100 (H): c = 0.723
tabl = 0.546.
Alpha = 0.05.

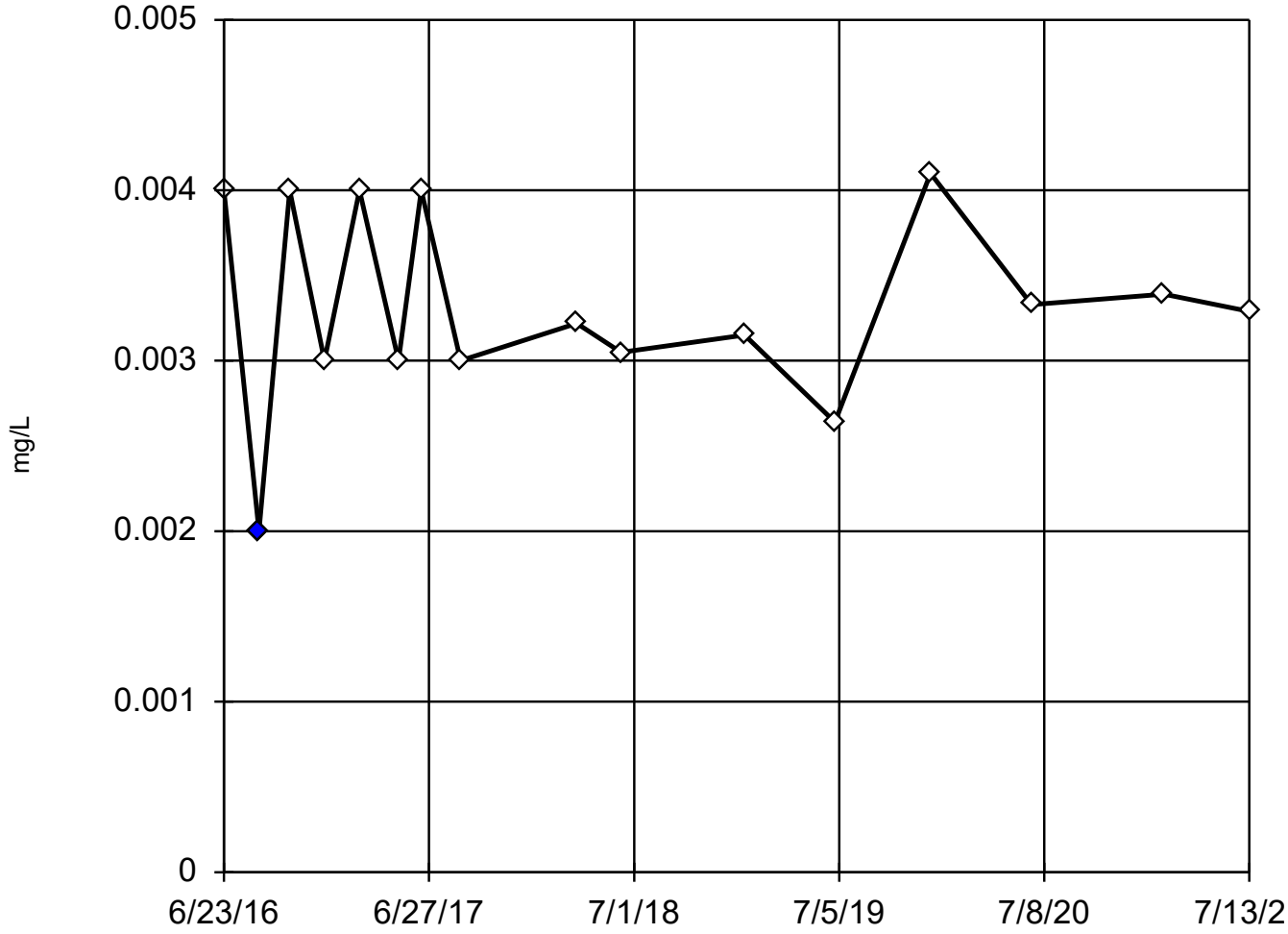
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8627
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.003323.
Std. Dev. = 0.0005824.
-6.215 (o): c = 0.585
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8865
Critical = 0.881 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Thallium Analysis Run 8/19/2021 11:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:18 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004429	0.002127	unknown	ShapiroWilk
Antimony (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	13	0.01357	0.005173	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	13	0.006846	0.004279	unknown	ShapiroWilk
Arsenic (mg/L)	**MNW-15**	**Yes**	**0.025**	**3/20/2018**	**NP (nrm)**	**NaN**	**13**	**0.01059**	**0.004552**	**unknown**	**ShapiroWilk**
Arsenic (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	13	0.007039	0.004008	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	13	0.007065	0.00396	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.009232	0.005614	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	13	0.006851	0.004272	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.008738	0.006145	unknown	ShapiroWilk
Barium (mg/L)	**SFLMW-6**	**Yes**	**0.3**	**6/23/2016**	**Dixon`s**	**0.05**	**13**	**0.06822**	**0.07278**	**normal**	**ShapiroWilk**
Barium (mg/L)	**SFLMW-7**	**Yes**	**0.1**	**3/20/2018**	**Dixon`s**	**0.05**	**13**	**0.04229**	**0.0186**	**normal**	**ShapiroWilk**
Barium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	13	0.02742	0.02242	unknown	ShapiroWilk
Barium (mg/L)	**MNW-18 (bg)**	**Yes**	**0.1,0.005**	**3/20/2018...**	**NP (nrm)**	**NaN**	**13**	**0.04951**	**0.02258**	**unknown**	**ShapiroWilk**
Barium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	13	0.03075	0.02122	unknown	ShapiroWilk
Barium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	13	0.03715	0.02655	ln(x)	ShapiroWilk
Barium (mg/L)	**SFLMW-4**	**Yes**	**0.1**	**3/20/2018**	**Dixon`s**	**0.05**	**13**	**0.03215**	**0.02115**	**normal**	**ShapiroWilk**
Barium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.03686	0.02663	unknown	ShapiroWilk
Beryllium (mg/L)	**SFLMW-6**	**Yes**	**0.028**	**6/23/2016**	**Dixon`s**	**0.05**	**16**	**0.04886**	**0.007218**	**normal**	**ShapiroWilk**
Beryllium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002438	0.001094	unknown	ShapiroWilk
Beryllium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	0.0756	0.009152	normal	ShapiroWilk
Beryllium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002387	0.001181	unknown	ShapiroWilk
Beryllium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.003091	0.00178	ln(x)	ShapiroWilk
Beryllium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.03538	0.003765	normal	ShapiroWilk
Beryllium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002438	0.001094	unknown	ShapiroWilk
Beryllium (mg/L)	**SFLMW-5**	**Yes**	**0.02**	**3/20/2018**	**Dixon`s**	**0.05**	**16**	**0.01091**	**0.002659**	**normal**	**ShapiroWilk**
Boron (mg/L)	**SFLMW-6**	**Yes**	**1**	**1/16/2019**	**Dixon`s**	**0.05**	**14**	**0.4024**	**0.1949**	**normal**	**ShapiroWilk**
Boron (mg/L)	SFLMW-7	No	n/a	n/a	Dixon`s	0.05	14	0.7756	0.1264	normal	ShapiroWilk
Boron (mg/L)	**MNW-15**	**Yes**	**11.8**	**6/12/2018**	**Dixon`s**	**0.05**	**14**	**9.26**	**0.8623**	**normal**	**ShapiroWilk**
Boron (mg/L)	**MNW-18 (bg)**	**Yes**	**0.0451**	**7/13/2021**	**NP (nrm)**	**NaN**	**14**	**0.4449**	**0.201**	**unknown**	**ShapiroWilk**
Boron (mg/L)	**SFLMW-2**	**Yes**	**1**	**1/16/2019**	**Dixon`s**	**0.05**	**14**	**0.5664**	**0.1299**	**normal**	**ShapiroWilk**
Boron (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	14	3.084	0.5754	unknown	ShapiroWilk
Boron (mg/L)	**SFLMW-4**	**Yes**	**1**	**1/16/2019**	**Dixon`s**	**0.05**	**14**	**0.6529**	**0.1281**	**normal**	**ShapiroWilk**
Boron (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	14	4.239	0.7972	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-6	No	n/a	n/a	Dixon`s	0.05	16	0.01033	0.001402	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	16	0.07544	0.0289	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.003869	0.0016	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.007296	0.001211	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	**SFLMW-5**	**Yes**	**0.006,0.0...**	**8/23/2017...**	**NP (nrm)**	**NaN**	**16**	**0.005067**	**0.000448**	**unknown**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	14	910.1	56.64	normal	ShapiroWilk
Calcium (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	14	596.6	94.79	unknown	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:18 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Calcium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	14	274.4	26.37	ln(x)	ShapiroWilk
Calcium (mg/L)	**MNW-18 (bg)**	**Yes**	**104,0.25**	**6/26/2019...**	**Dixon`s**	**0.05**	**14**	**327.3**	**130.5**	**normal**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	14	805.5	127.2	normal	ShapiroWilk
Calcium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	14	630.9	62.25	normal	ShapiroWilk
Calcium (mg/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	14	759.3	50.42	normal	ShapiroWilk
Calcium (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	14	853	61.84	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	14	3515	160.2	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	14	2644	323.7	unknown	ShapiroWilk
Chloride (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	14	676.6	57.9	unknown	ShapiroWilk
Chloride (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	14	476.2	114.2	unknown	ShapiroWilk
Chloride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	14	2788	325.1	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	14	1277	229.6	unknown	ShapiroWilk
Chloride (mg/L)	SFLMW-4	No	n/a	n/a	Dixon`s	0.05	14	1666	95.8	normal	ShapiroWilk
Chloride (mg/L)	**SFLMW-5**	**Yes**	**2340**	**2/9/2021**	**Dixon`s**	**0.05**	**14**	**2994**	**211.9**	**normal**	**ShapiroWilk**
Chromium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	13	0.008388	0.002684	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007154	0.003826	unknown	ShapiroWilk
Chromium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	13	0.01145	0.01439	unknown	ShapiroWilk
Chromium (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	13	0.007512	0.003459	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007154	0.003826	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.007185	0.003783	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007154	0.003826	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.007555	0.003311	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	0.1126	0.007891	normal	ShapiroWilk
Cobalt (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	0.01094	0.009458	unknown	ShapiroWilk
Cobalt (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	0.2994	0.03164	normal	ShapiroWilk
Cobalt (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	0.01105	0.009334	unknown	ShapiroWilk
Cobalt (mg/L)	**SFLMW-2**	**Yes**	**0.06**	**12/22/2016**	**NP (nrm)**	**NaN**	**16**	**0.01999**	**0.01131**	**unknown**	**ShapiroWilk**
Cobalt (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.06658	0.01049	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.01219	0.01177	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	0.05166	0.007063	normal	ShapiroWilk
Fluoride (mg/L)	**SFLMW-6**	**Yes**	**8.72**	**1/16/2019**	**NP (nrm)**	**NaN**	**16**	**1.311**	**1.982**	**unknown**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	0.5069	0.6643	unknown	ShapiroWilk
Fluoride (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	16	0.6837	0.2318	unknown	ShapiroWilk
Fluoride (mg/L)	**MNW-18 (bg)**	**Yes**	**2.01**	**1/16/2019**	**NP (nrm)**	**NaN**	**16**	**0.3954**	**0.5153**	**unknown**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.6802	0.7232	ln(x)	ShapiroWilk
Fluoride (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.7187	0.2778	ln(x)	ShapiroWilk
Fluoride (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.4628	0.4772	unknown	ShapiroWilk
Fluoride (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	16	0.8645	1.395	unknown	ShapiroWilk
Lead (mg/L)	**SFLMW-6**	**Yes**	**0.06,0.00...**	**6/23/2016...**	**NP (nrm)**	**NaN**	**16**	**0.01324**	**0.01286**	**unknown**	**ShapiroWilk**
Lead (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	16	0.006013	0.004317	unknown	ShapiroWilk
Lead (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	16	0.006136	0.004195	unknown	ShapiroWilk
Lead (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.006062	0.00425	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.006037	0.004287	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.02314	0.005531	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.006062	0.00425	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	16	0.006253	0.004102	unknown	ShapiroWilk
Lithium (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	0.6932	0.1075	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	16	0.4233	0.03942	normal	ShapiroWilk
Lithium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	0.09043	0.03684	ln(x)	ShapiroWilk
Lithium (mg/L)	**MNW-18 (bg)**	**Yes**	**0.197,0.0...**	**12/17/201...**	**Dixon`s**	**0.05**	**16**	**0.3568**	**0.1265**	**normal**	**ShapiroWilk**

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:18 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lithium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.4848	0.07411	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.3288	0.07595	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	16	0.4386	0.06381	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	16	0.7304	0.1151	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001393	0.002853	unknown	ShapiroWilk
Mercury (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.002231	0.0006899	normal	ShapiroWilk
Mercury (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03285	0.02264	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03255	0.02306	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03283	0.02267	unknown	ShapiroWilk
pH (S.U.)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	3.999	0.1641	normal	ShapiroWilk
pH (S.U.)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	15	6.389	0.2319	normal	ShapiroWilk
pH (S.U.)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	3.539	0.1506	normal	ShapiroWilk
pH (S.U.)	MNW-18 (bg)	No	n/a	n/a	EPA 1989	0.05	16	6.792	0.254	normal	ShapiroWilk
pH (S.U.)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	6.251	0.3868	normal	ShapiroWilk
pH (S.U.)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	3.74	0.128	normal	ShapiroWilk
pH (S.U.)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	16	6.204	0.2011	normal	ShapiroWilk
pH (S.U.)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	4.586	0.2571	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	13.02	6.904	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	16	2.458	0.7042	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	0.7643	0.5945	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	No	n/a	n/a	Dixon`s	0.05	16	4.503	1.983	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-2**	**Yes**	**11,20.6,12.9**	**6/23/2016...**	**Dixon`s**	**0.05**	**16**	**9.012**	**3.503**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	**SFLMW-3**	**Yes**	**16.6**	**8/25/2016**	**Dixon`s**	**0.05**	**16**	**6.356**	**3.24**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	16	2.336	1.737	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**Yes**	**25.6**	**8/25/2016**	**Dixon`s**	**0.05**	**16**	**12.12**	**3.936**	**normal**	**ShapiroWilk**
Selenium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	13	0.01596	0.01612	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	13	0.009231	0.004003	unknown	ShapiroWilk
Selenium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	13	0.01612	0.01381	ln(x)	ShapiroWilk
Selenium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	**SFLMW-3**	**Yes**	**0.05**	**3/20/2018**	**NP (nrm)**	**NaN**	**13**	**0.0126**	**0.01178**	**unknown**	**ShapiroWilk**
Selenium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	**SFLMW-5**	**Yes**	**0.05**	**3/20/2018**	**NP (nrm)**	**NaN**	**13**	**0.01191**	**0.01165**	**unknown**	**ShapiroWilk**
Sulfate (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	14	2256	176.3	normal	ShapiroWilk
Sulfate (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	14	742.5	72.3	unknown	ShapiroWilk
Sulfate (mg/L)	MNW-15	No	n/a	n/a	Dixon`s	0.05	14	1284	75.01	normal	ShapiroWilk
Sulfate (mg/L)	**MNW-18 (bg)**	**Yes**	**520**	**6/26/2019**	**Dixon`s**	**0.05**	**14**	**1708**	**449.5**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**SFLMW-2**	**Yes**	**1480,1290**	**1/16/2019...**	**Dixon`s**	**0.05**	**14**	**1775**	**192.9**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	14	2264	105.9	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:18 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Sulfate (mg/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	14	2176	135.9	normal	ShapiroWilk
Sulfate (mg/L)	**SFLMW-5**	**Yes**	**1720**	**2/9/2021**	**Dixon`s**	**0.05**	**14**	**2139**	**143**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	14	8398	1088	normal	ShapiroWilk
TDS (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	14	6163	911.7	unknown	ShapiroWilk
TDS (mg/L)	**MNW-15**	**Yes**	**4100,6150**	**7/13/2021...**	**Dixon`s**	**0.05**	**14**	**3093**	**966.6**	**normal**	**ShapiroWilk**
TDS (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	14	3342	813.1	unknown	ShapiroWilk
TDS (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	14	6991	711.9	normal	ShapiroWilk
TDS (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	14	5233	390.8	normal	ShapiroWilk
TDS (mg/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	14	5926	285.3	normal	ShapiroWilk
TDS (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	14	7616	381.4	normal	ShapiroWilk
Thallium (mg/L)	**SFLMW-6**	**Yes**	**0.002**	**8/25/2016**	**Dixon`s**	**0.05**	**16**	**0.003323**	**0.0005824**	**ln(x)**	**ShapiroWilk**
Thallium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001688	0.0004787	unknown	ShapiroWilk
Thallium (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001736	0.0005843	unknown	ShapiroWilk
Thallium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001688	0.0004787	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.001657	0.0005335	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.005906	0.0006006	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001938	0.001181	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	16	0.001764	0.0003652	unknown	ShapiroWilk

Data

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 12:00 PM

	MNW-15 Arsenic (mg/L)	SFLMW-6 Barium (mg/L)	SFLMW-7 Barium (mg/L)	MNW-15 Barium (mg/L)	SFLMW-2 Barium (mg/L)	SFLMW-3 Barium (mg/L)	SFLMW-4 Barium (mg/L)	SFLMW-5 Barium (mg/L)	SFLMW-6 Beryllium (mg/L)	SFLMW-5 Beryllium (mg/L)
6/23/2016		0.3 (o)							0.028 (o)	
8/25/2016										
10/19/2016										
12/22/2016										
2/23/2017										
5/2/2017										
6/14/2017										
8/22/2017										
3/20/2018	<0.025 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)		<0.02 (o)
1/16/2019										

	SFLMW-2 Cobalt (mg/L)	SFLMW-6 Fluoride (mg/L)	SFLMW-6 Lead (mg/L)	SFLMW-3 Lead (mg/L)	MNW-15 Mercury (mg/L)	SFLMW-2 Radium 226 + 228 (pCi/L)	SFLMW-3 Radium 226 + 228 (pCi/L)	SFLMW-5 Radium 226 + 228 (pCi/L)	SFLMW-3 Selenium (mg/L)	SFLMW-5 Selenium (mg/L)
6/23/2016			0.06 (o)	0.02 (o)		11 (o)				
8/25/2016				0.03 (o)		20.6 (o)	16.6 (o)	25.6 (o)		
10/19/2016				0.03 (o)		12.9 (o)				
12/22/2016	0.06 (o)			0.03 (o)						
2/23/2017				0.03 (o)						
5/2/2017				0.02 (o)						
6/14/2017				0.03 (o)	0.012 (o)					
8/22/2017				0.03 (o)						
3/20/2018									<0.005 (o)	<0.005 (o)
1/16/2019		8.72 (o)								

	SFLMW-6 Thallium (mg/L)
6/23/2016	
8/25/2016	0.002 (o)
10/19/2016	
12/22/2016	
2/23/2017	
5/2/2017	
6/14/2017	
8/22/2017	
3/20/2018	
1/16/2019	

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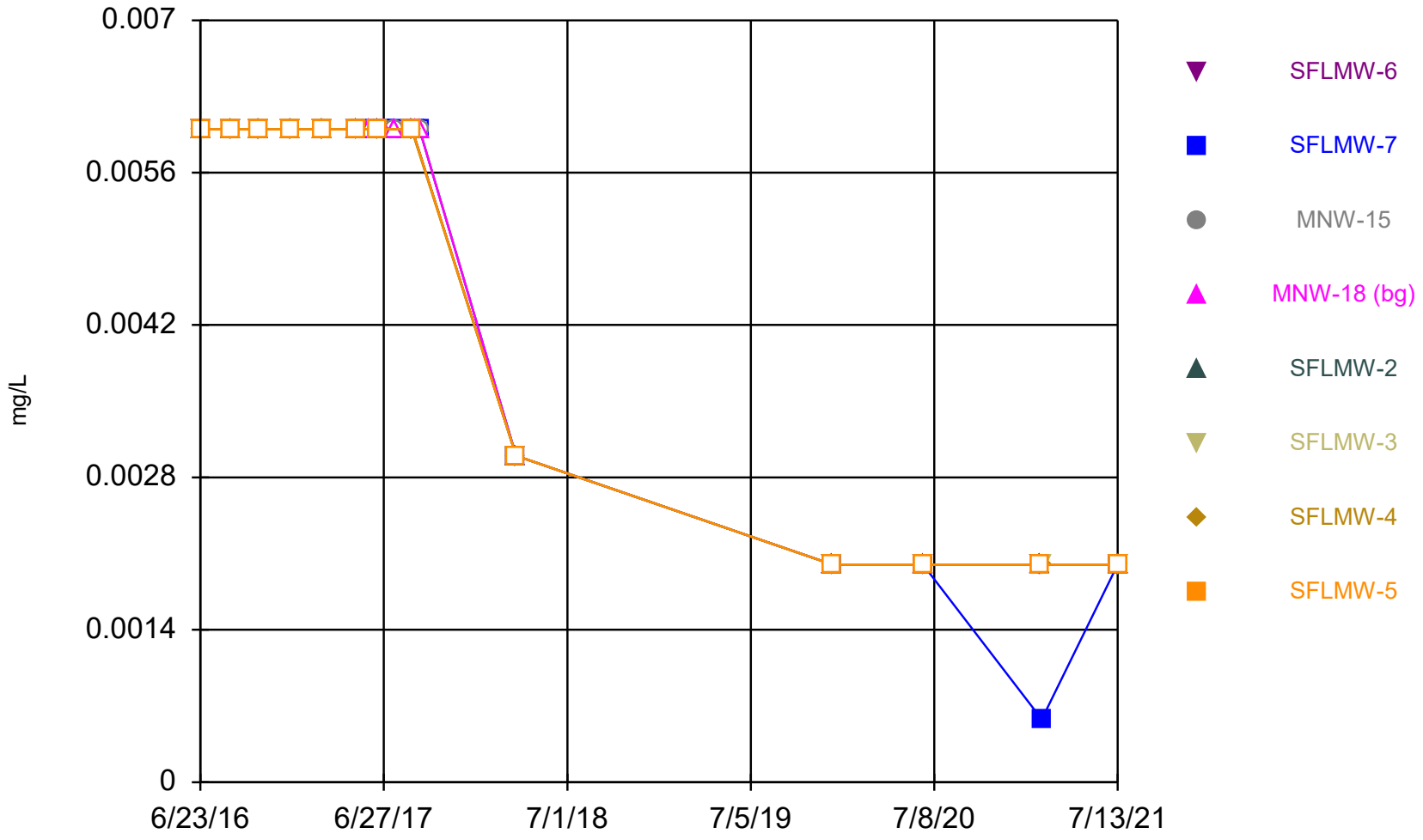
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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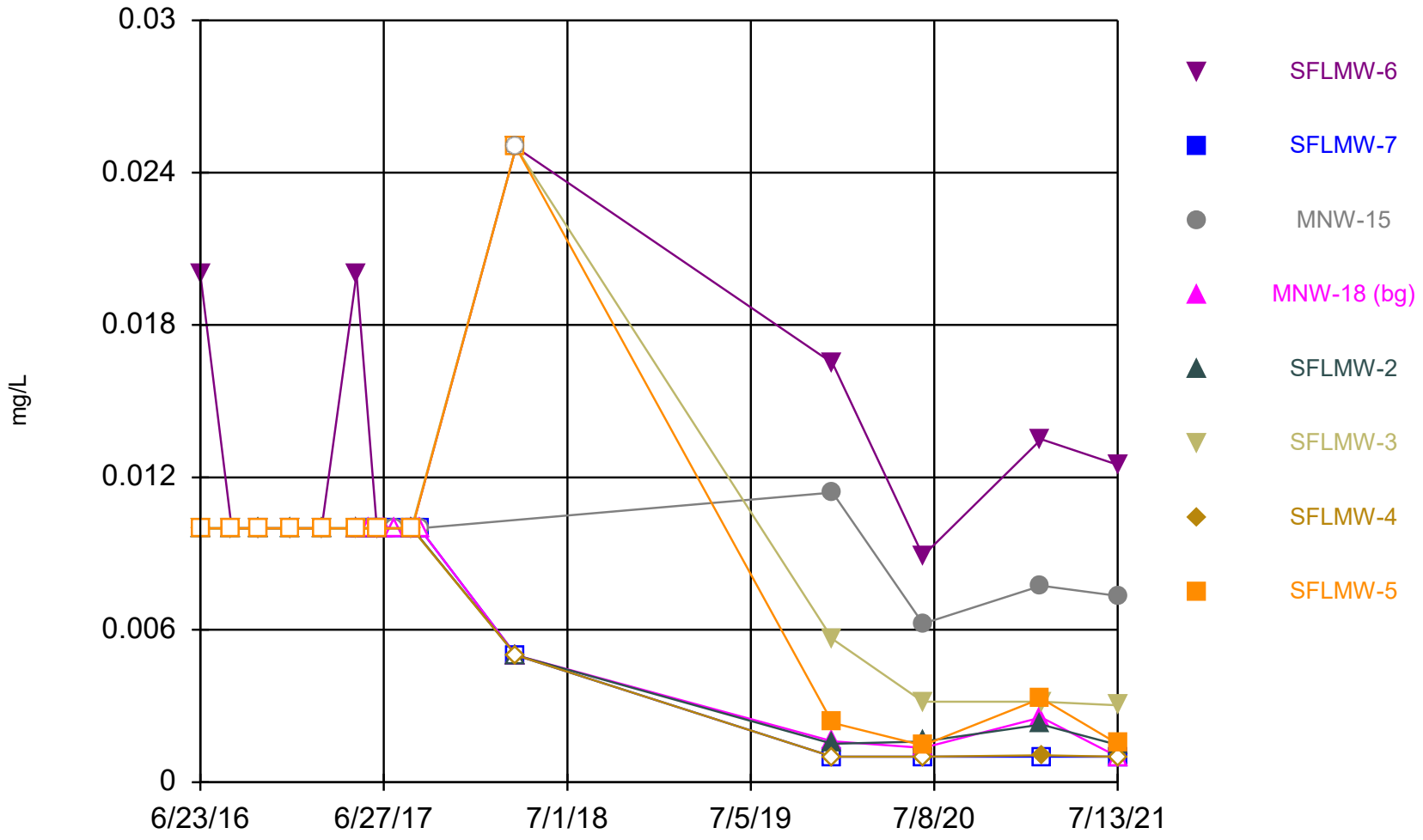
Time Series



Constituent: Arsenic Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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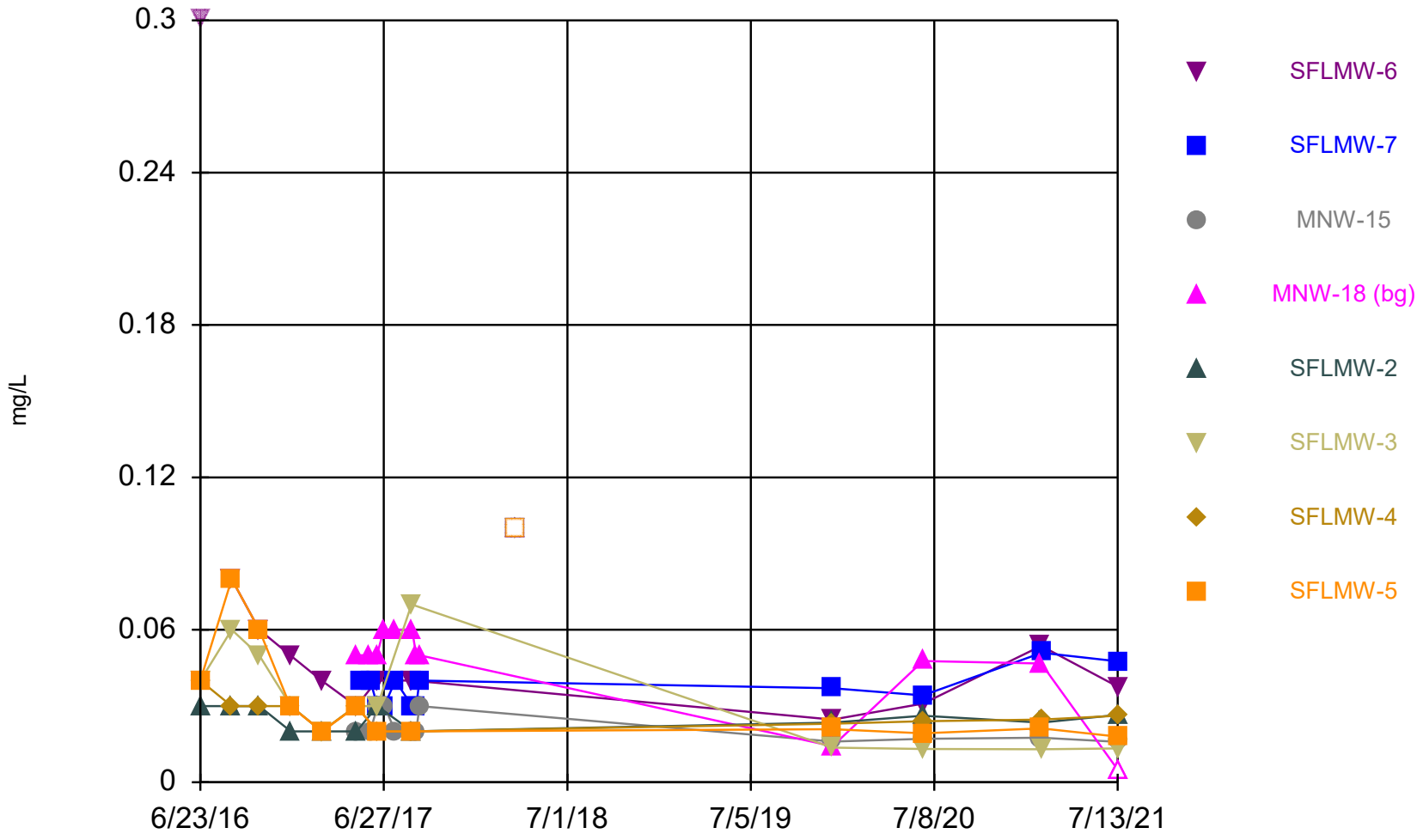
Time Series



Constituent: Barium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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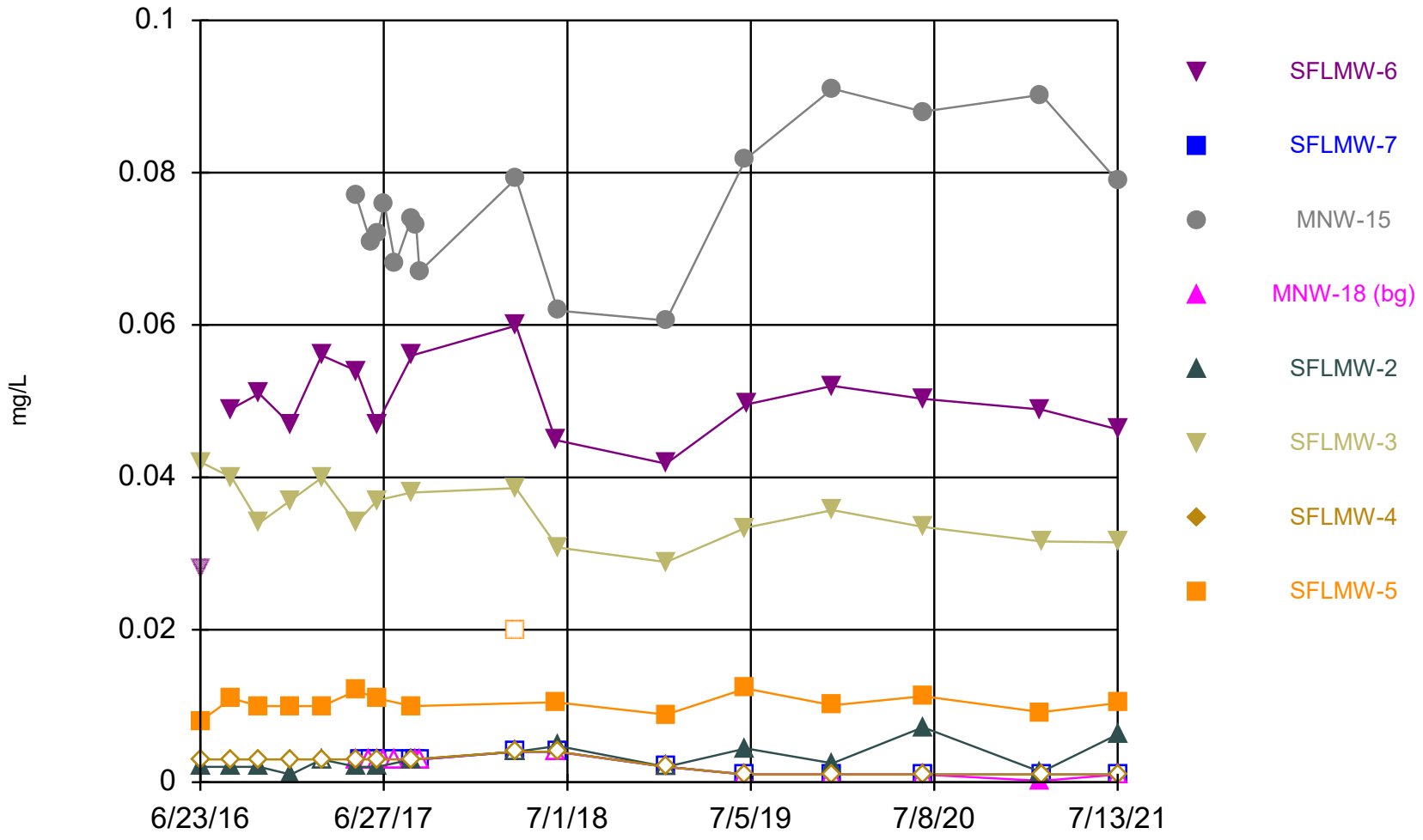
Time Series

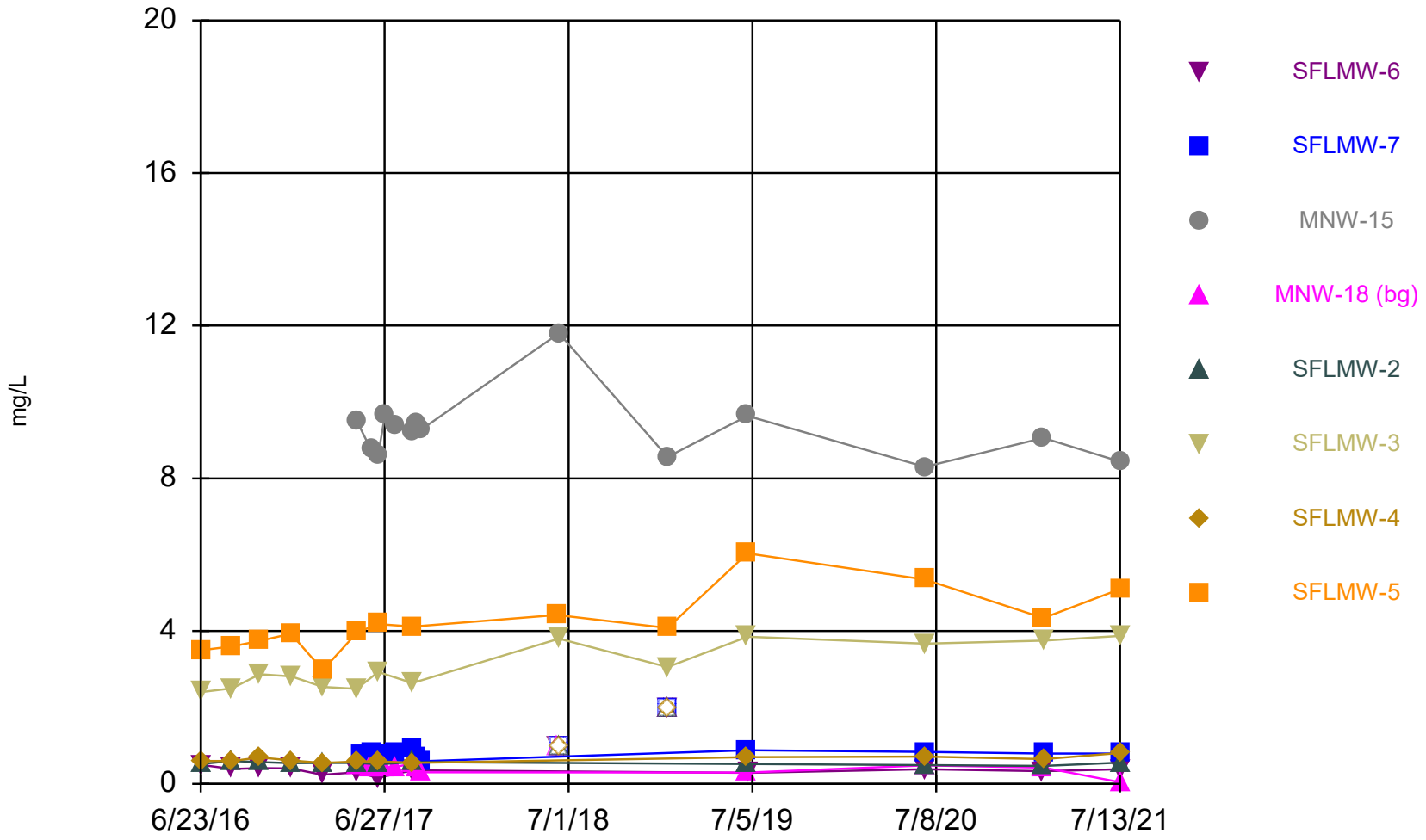


Constituent: Beryllium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

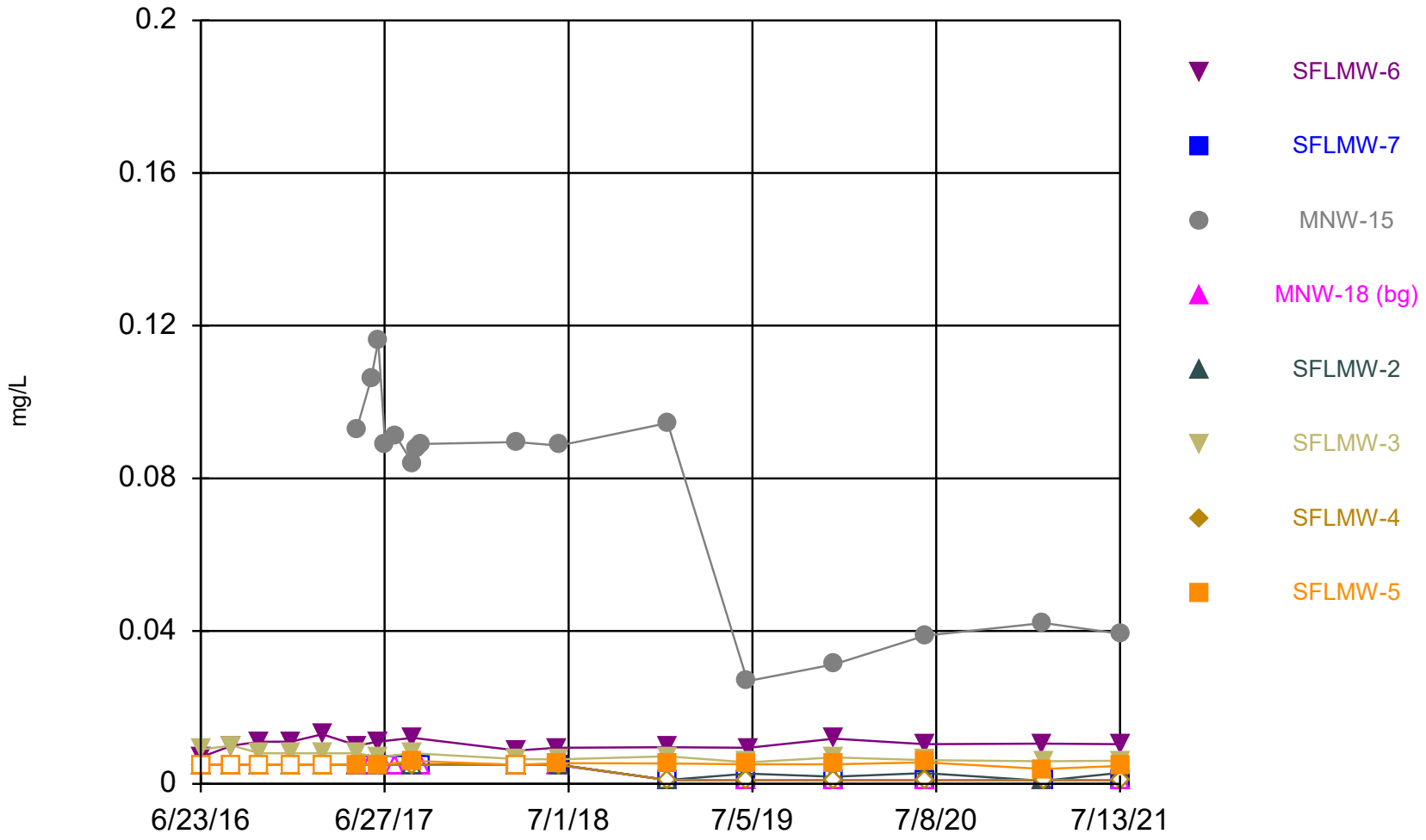


Constituent: Boron Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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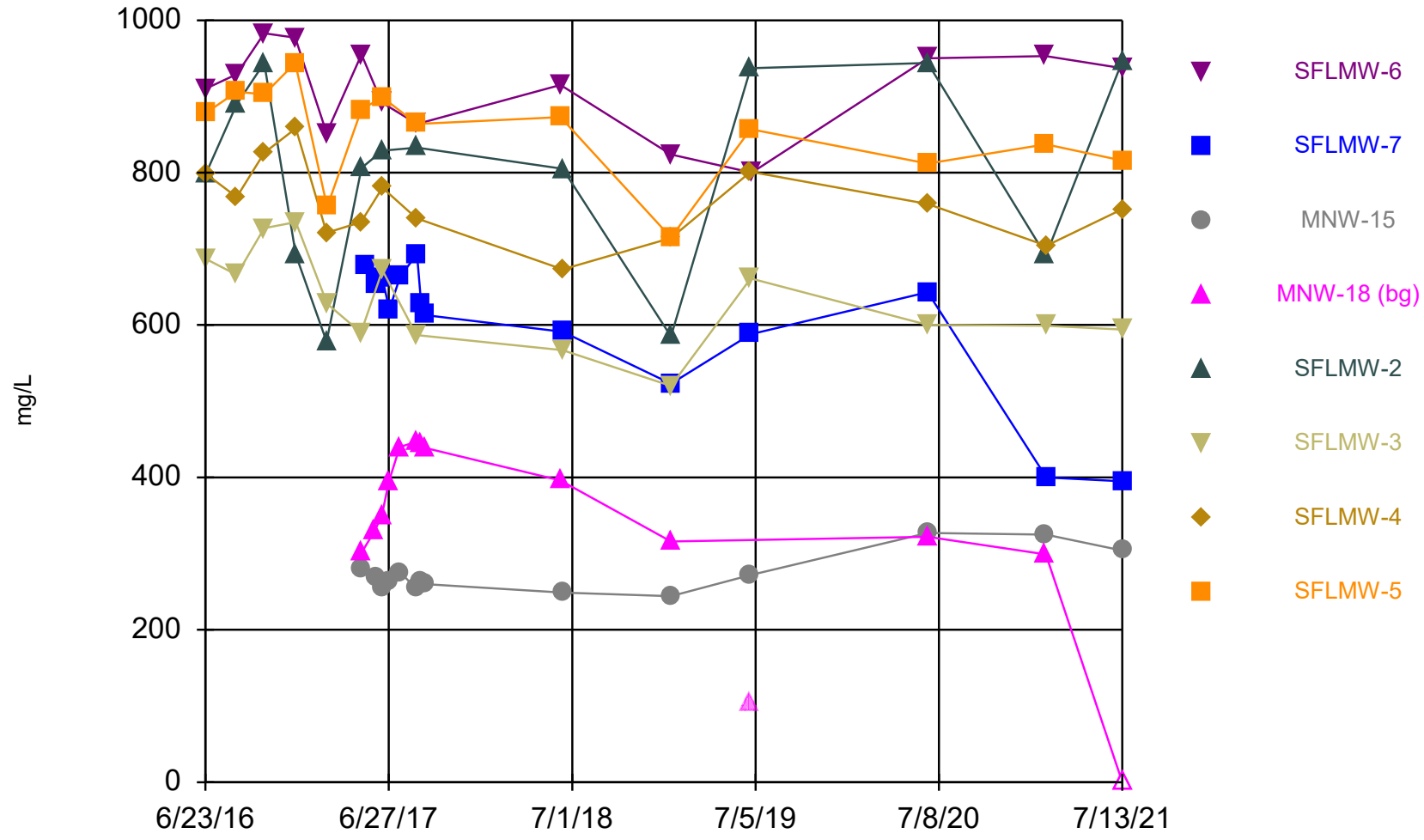
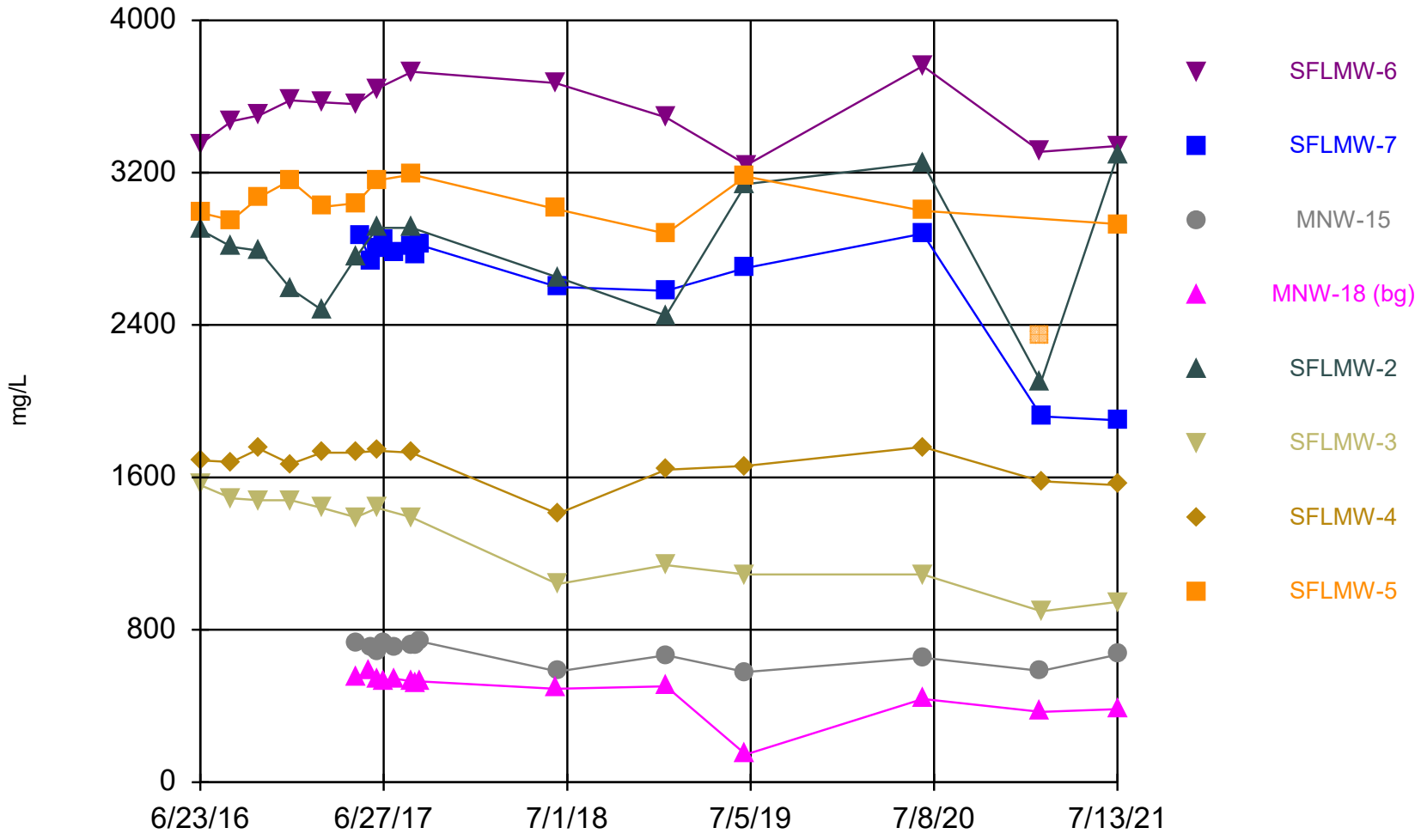
Time Series



Constituent: Calcium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: Chloride Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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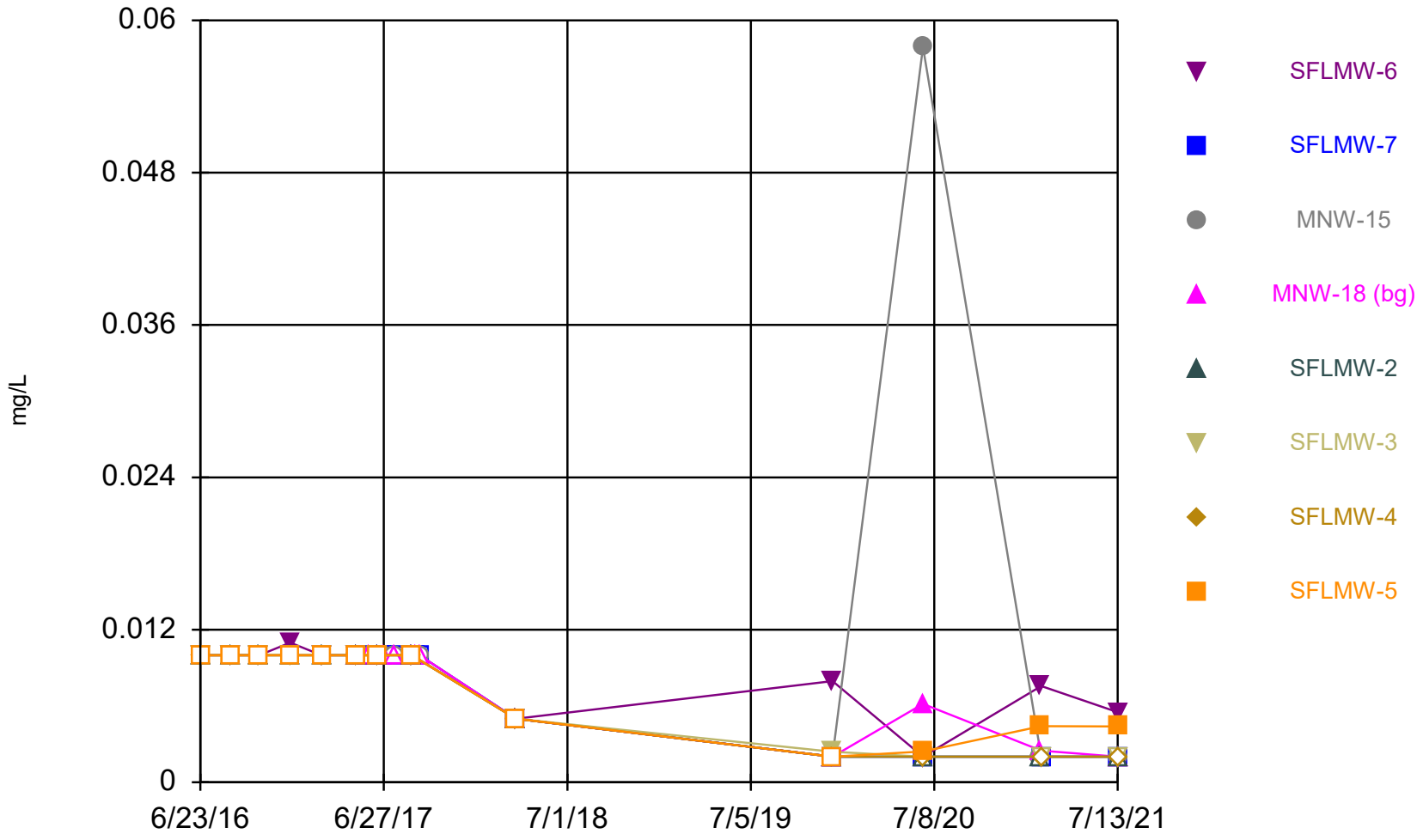
Time Series



Constituent: Chromium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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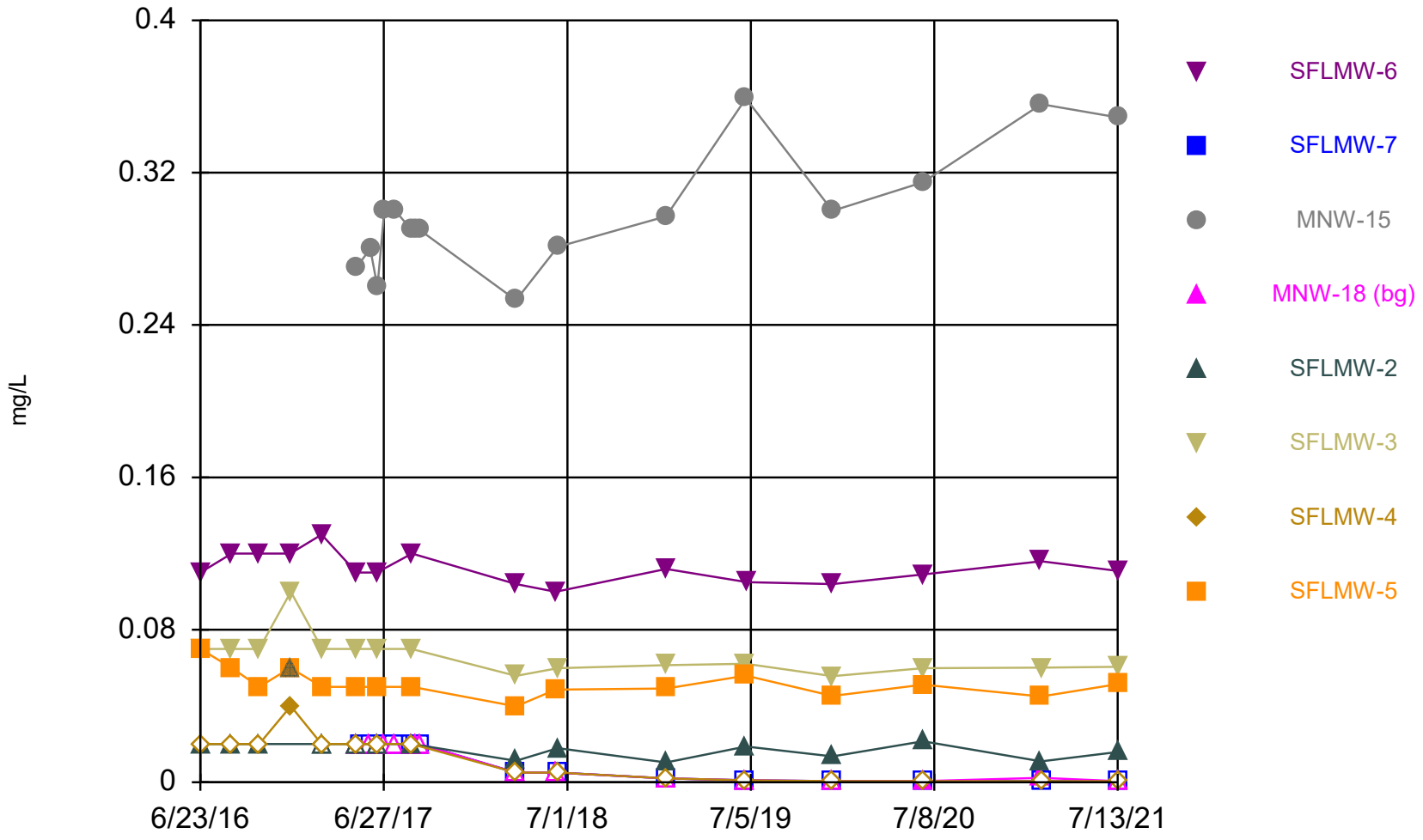
Time Series



Constituent: Cobalt Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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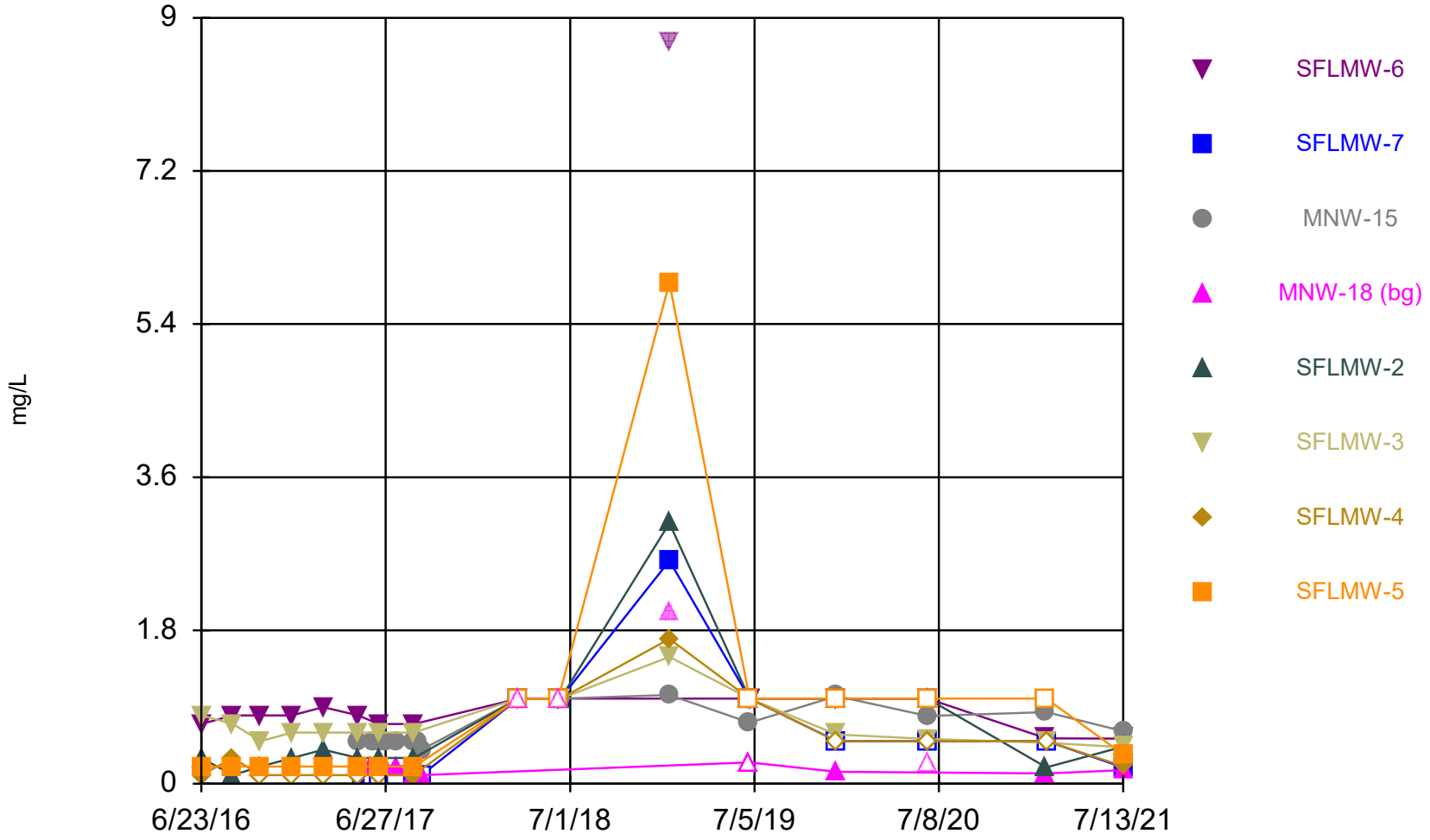
Time Series



Constituent: Fluoride Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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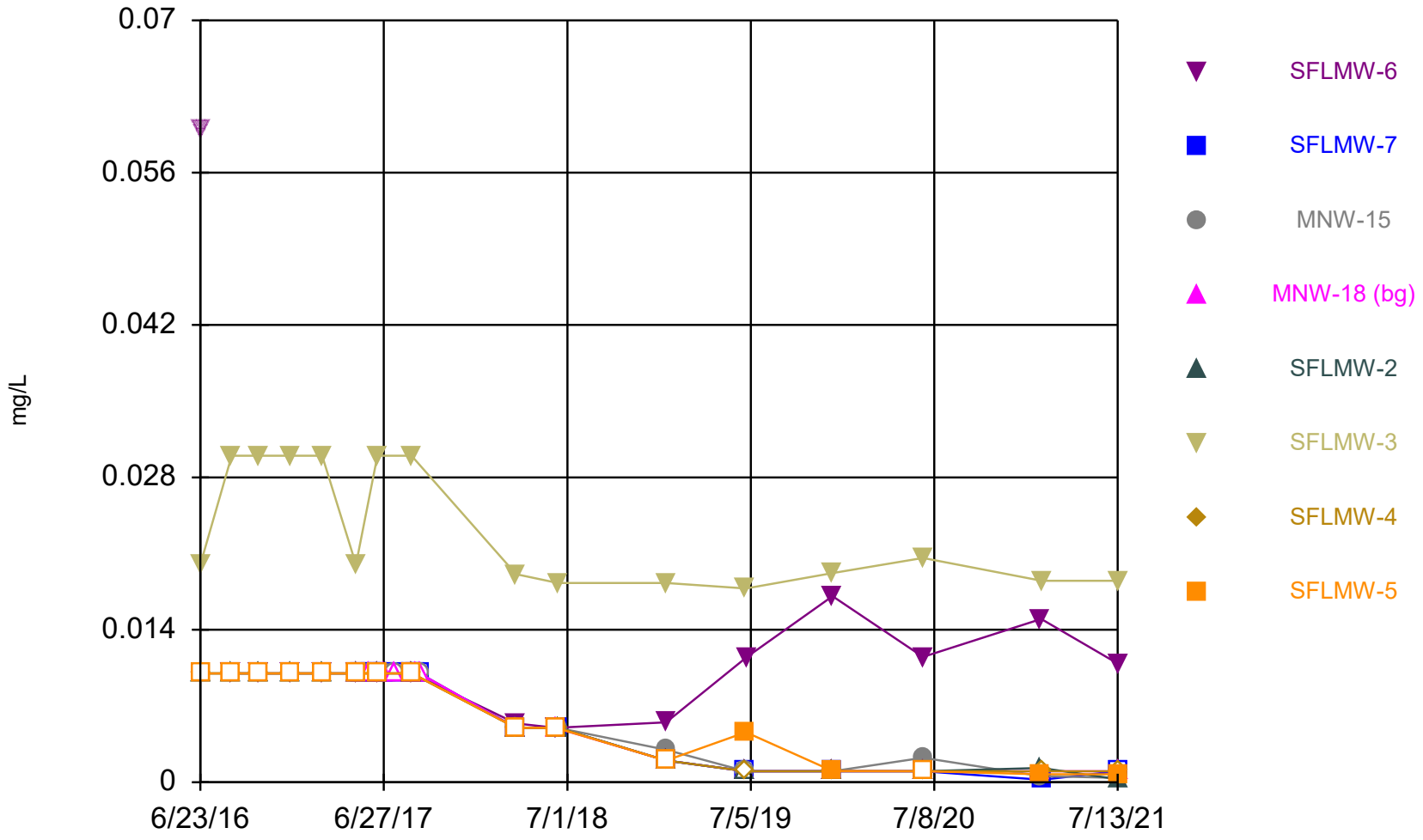
Time Series



Constituent: Lead Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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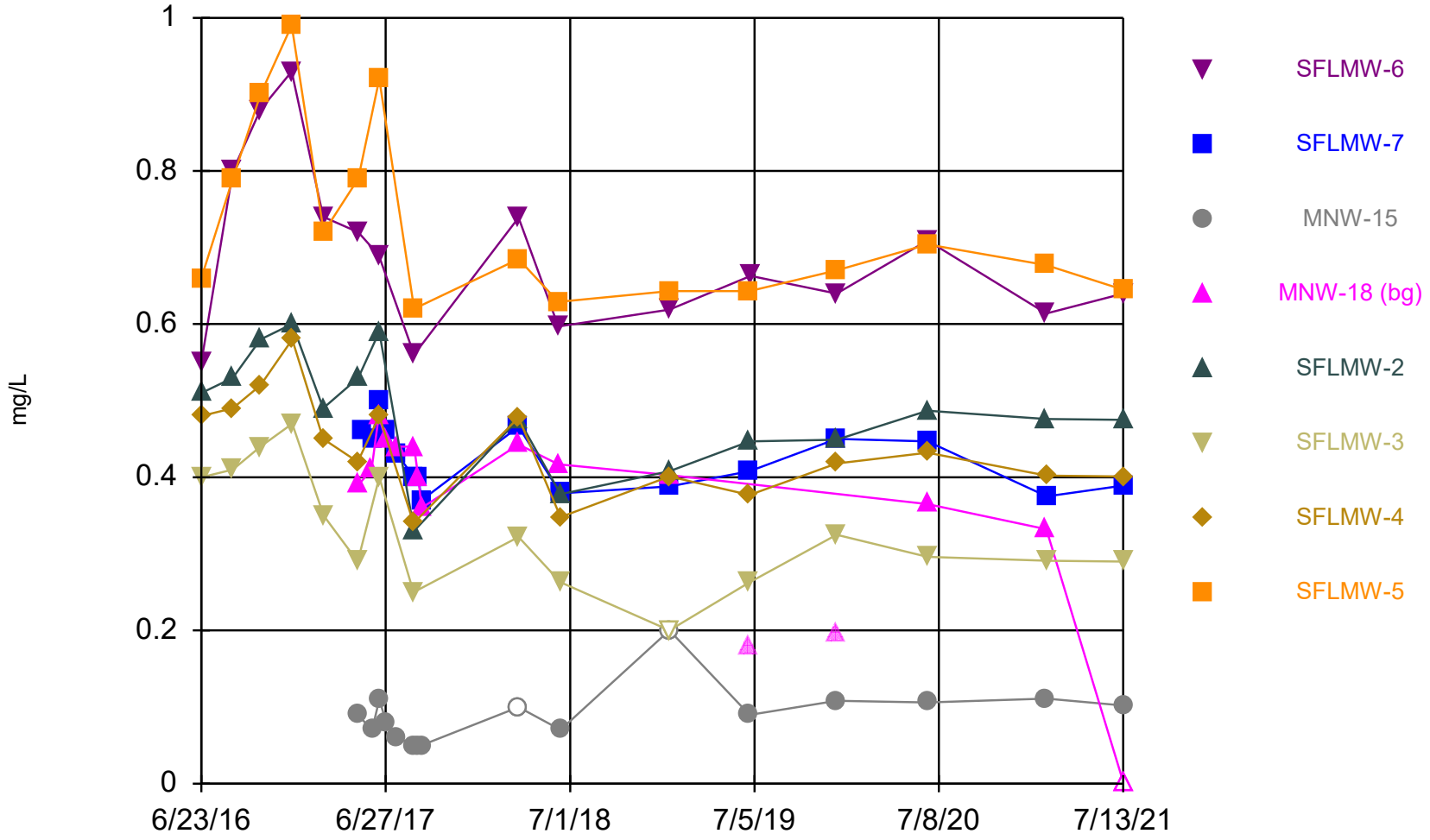
Hollow symbols indicate censored values.

Time Series



Constituent: Lithium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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Hollow symbols indicate censored values.

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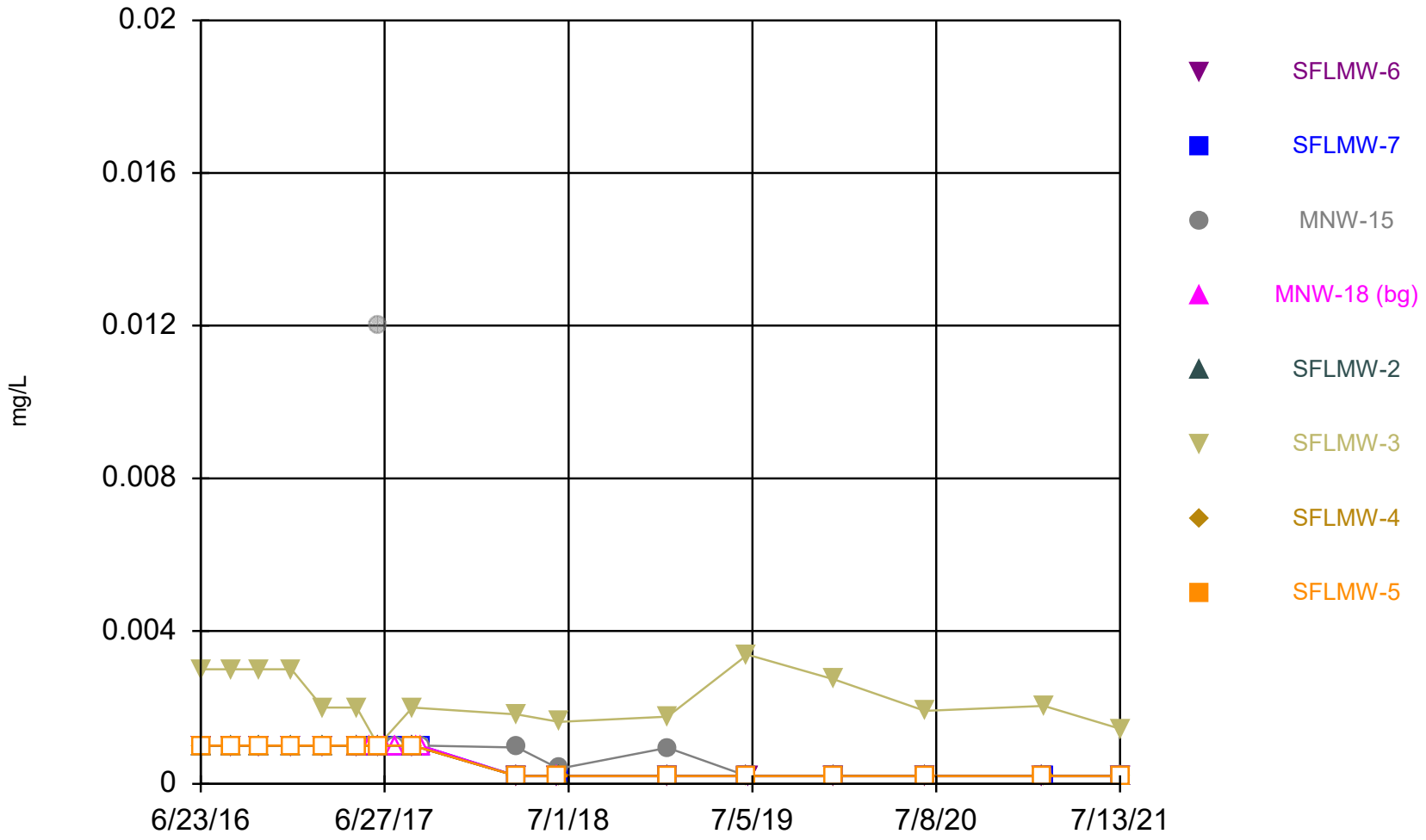

Constituent: Mercury Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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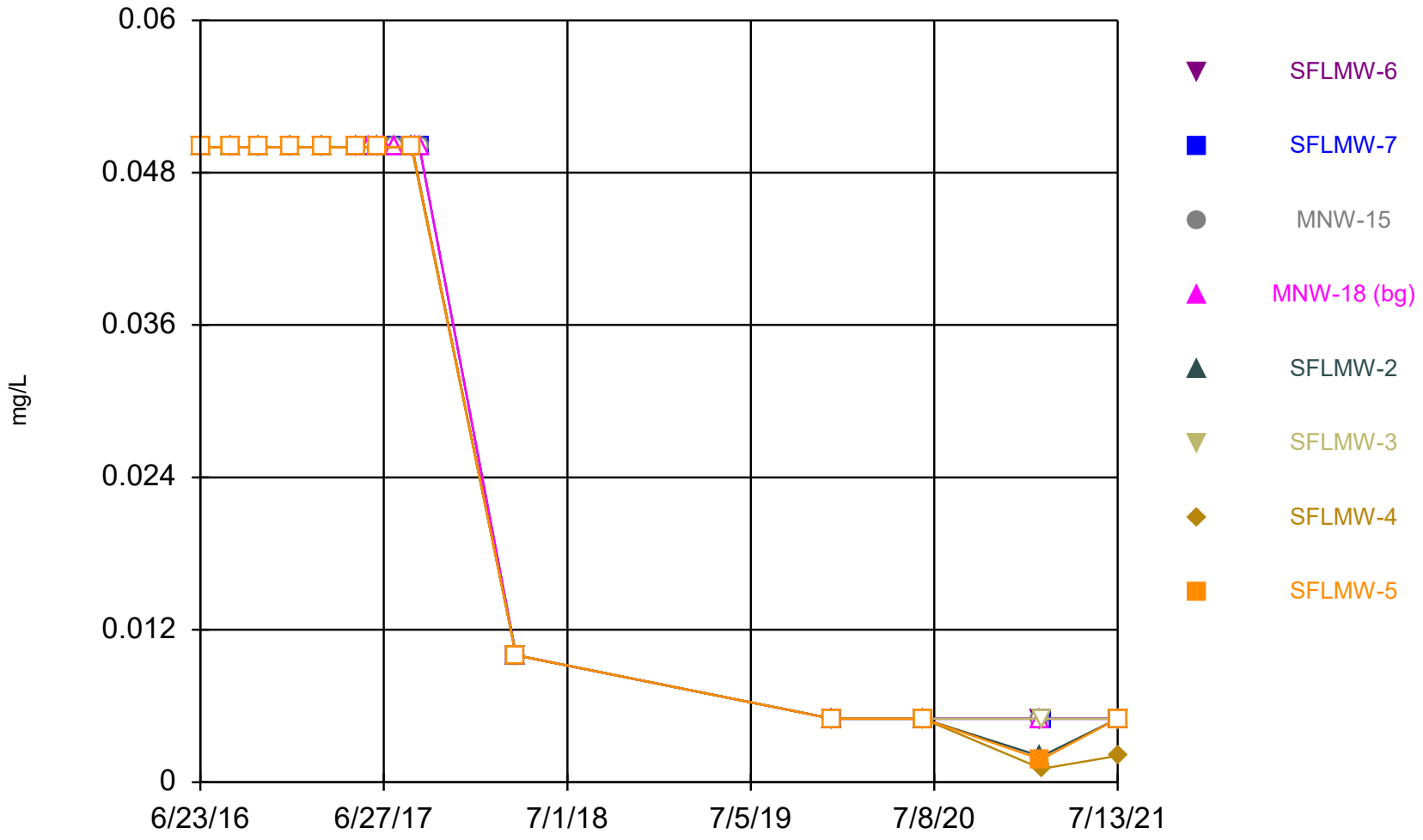
Hollow symbols indicate censored values.

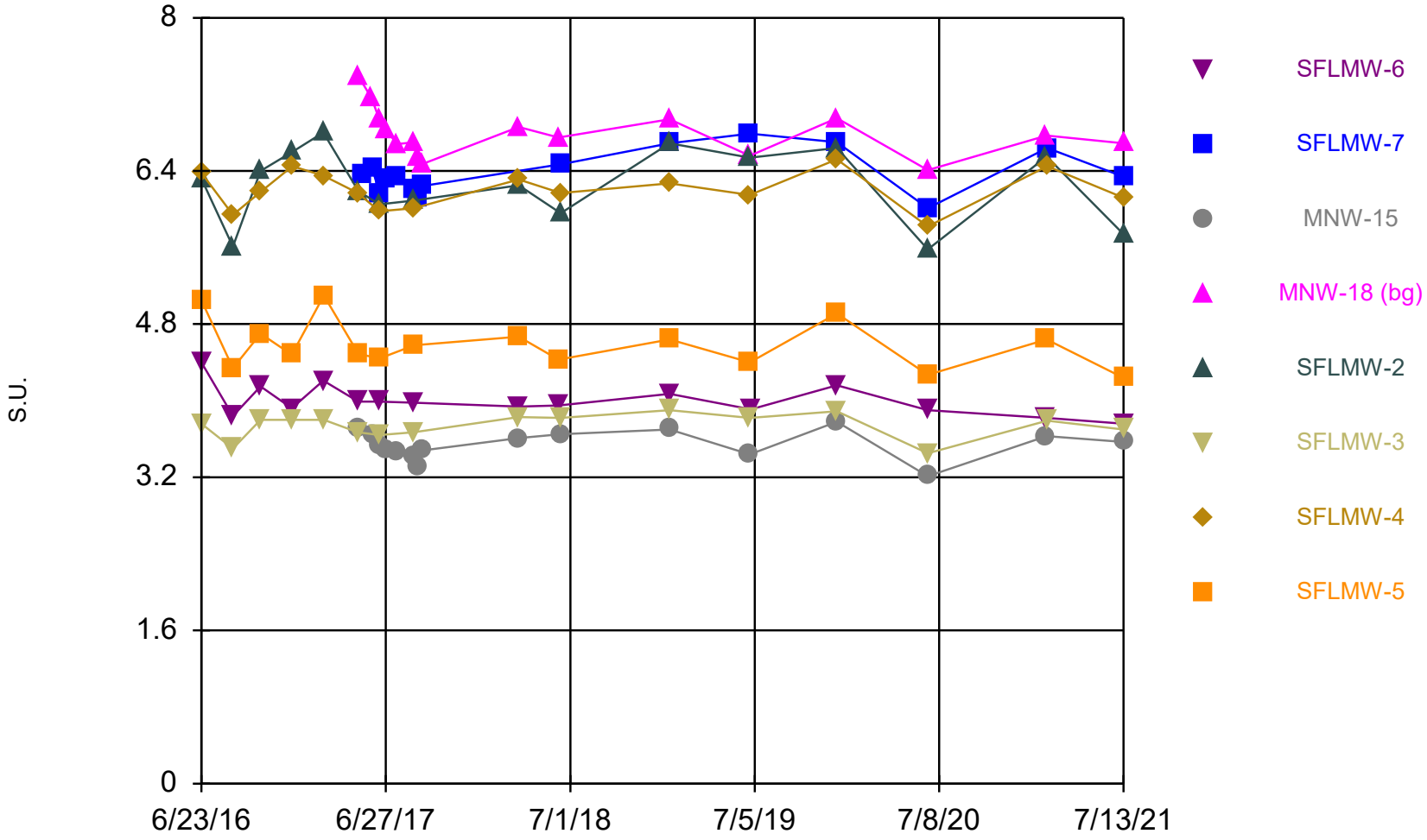
Time Series



Constituent: Molybdenum Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

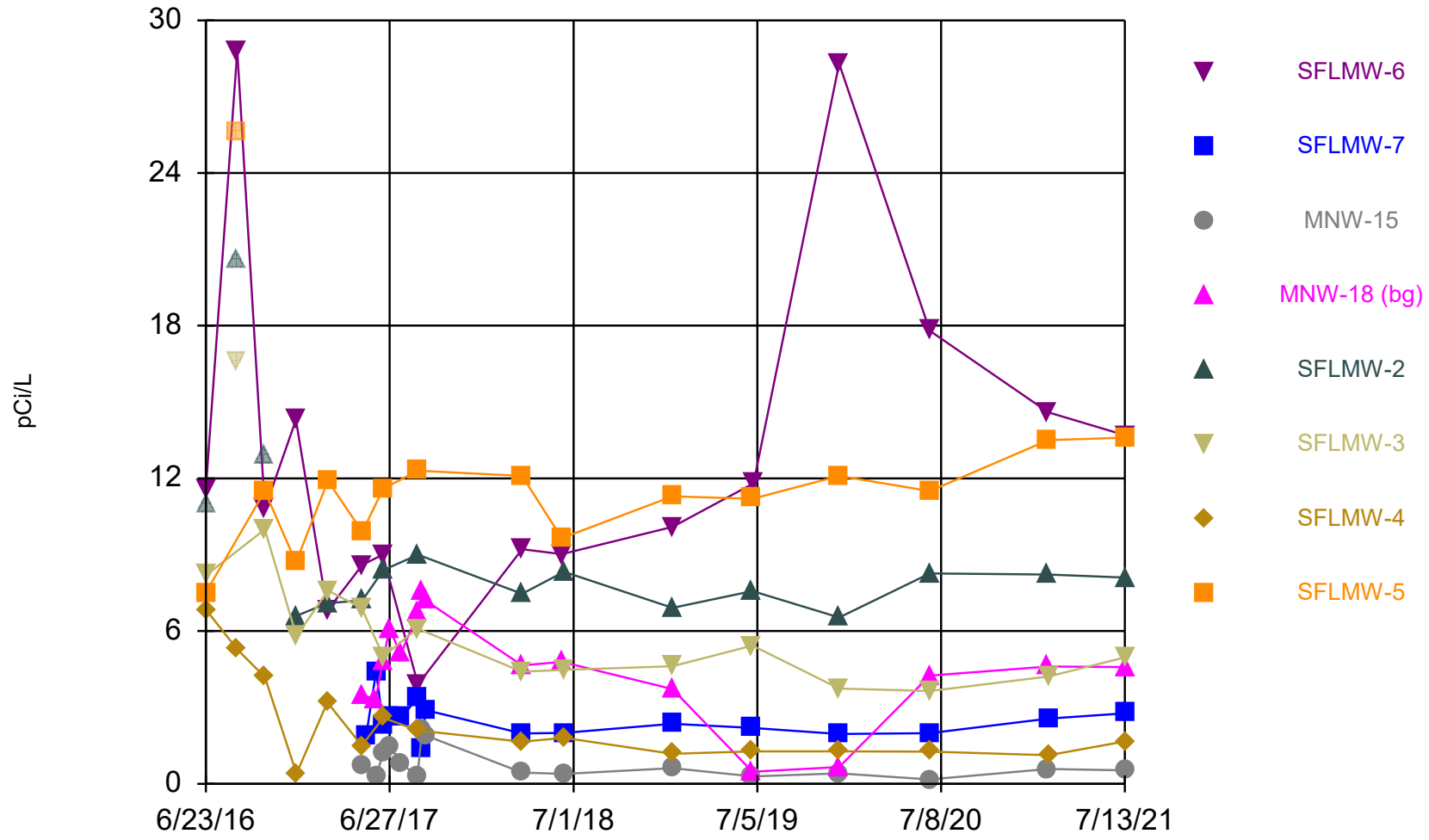
Time Series



Constituent: pH Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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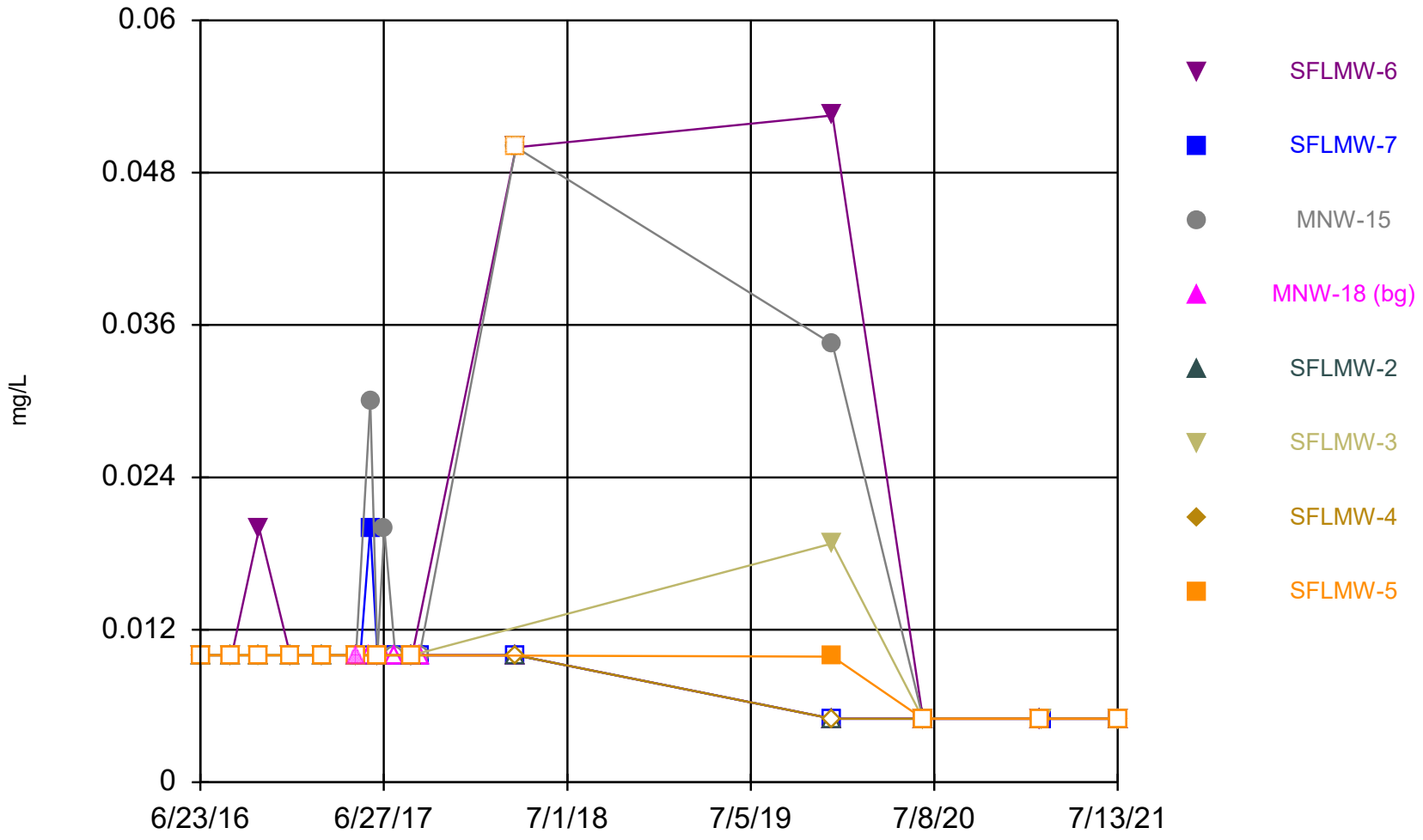
Hollow symbols indicate censored values.

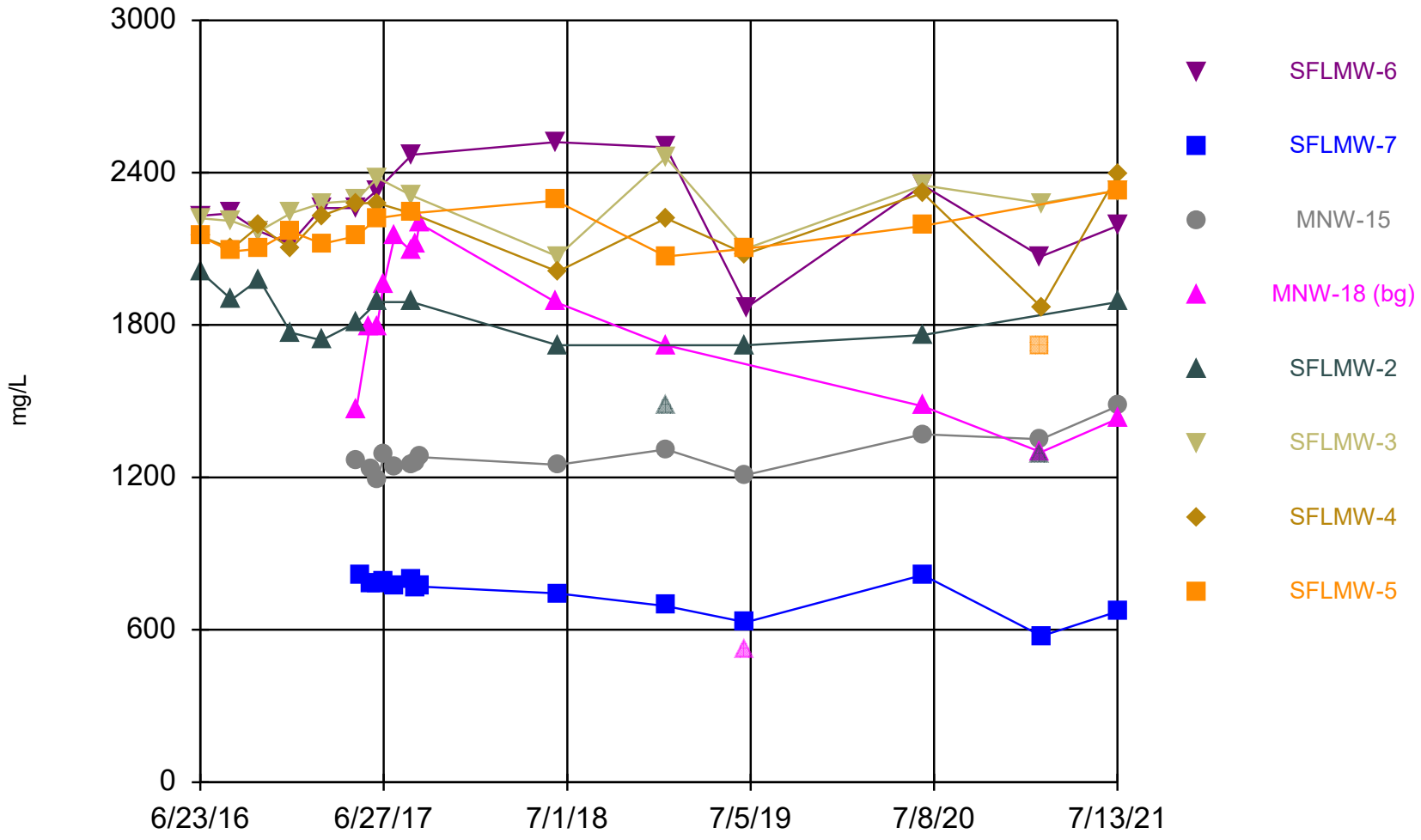
Time Series



Constituent: Selenium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

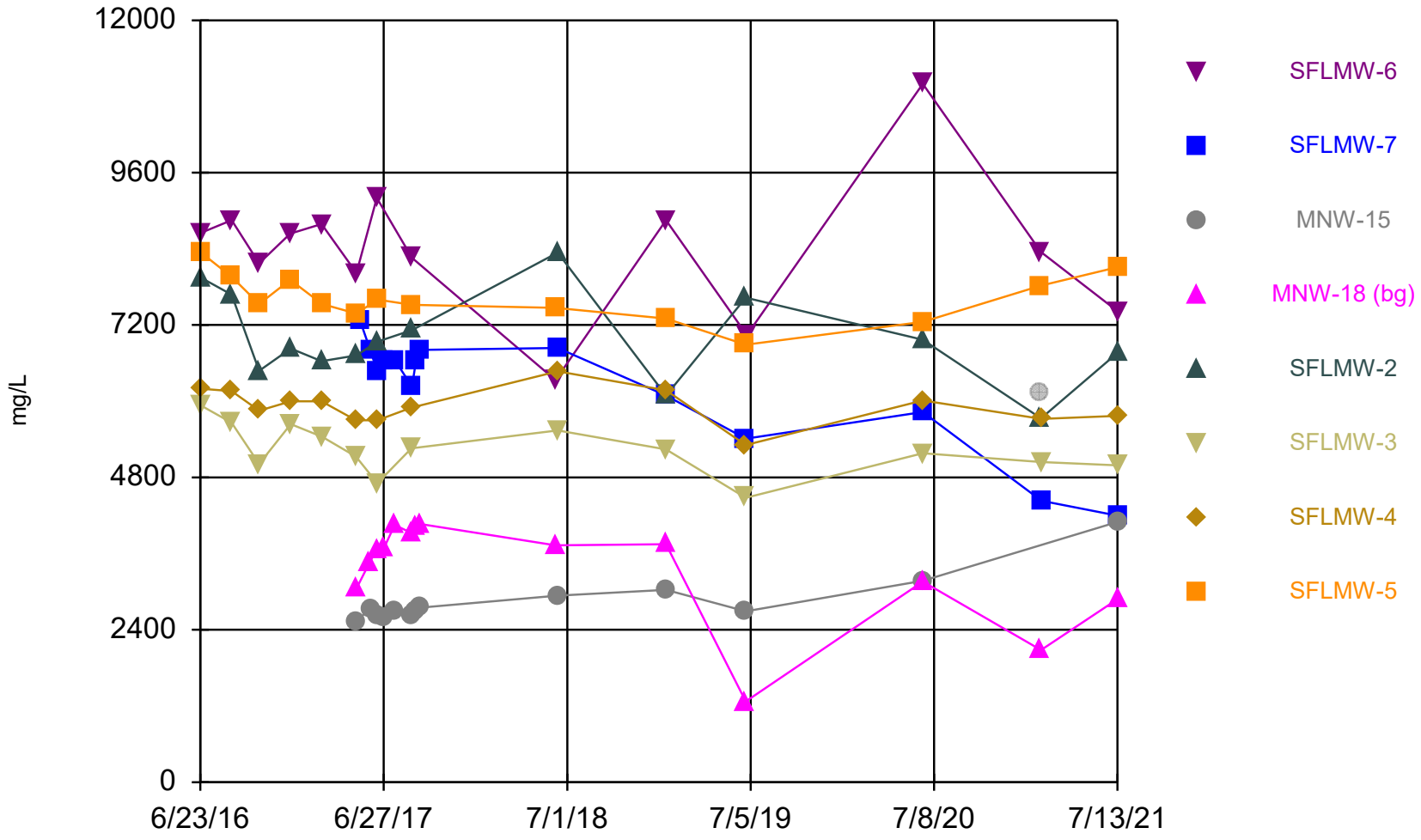
Time Series



Constituent: Sulfate Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: TDS Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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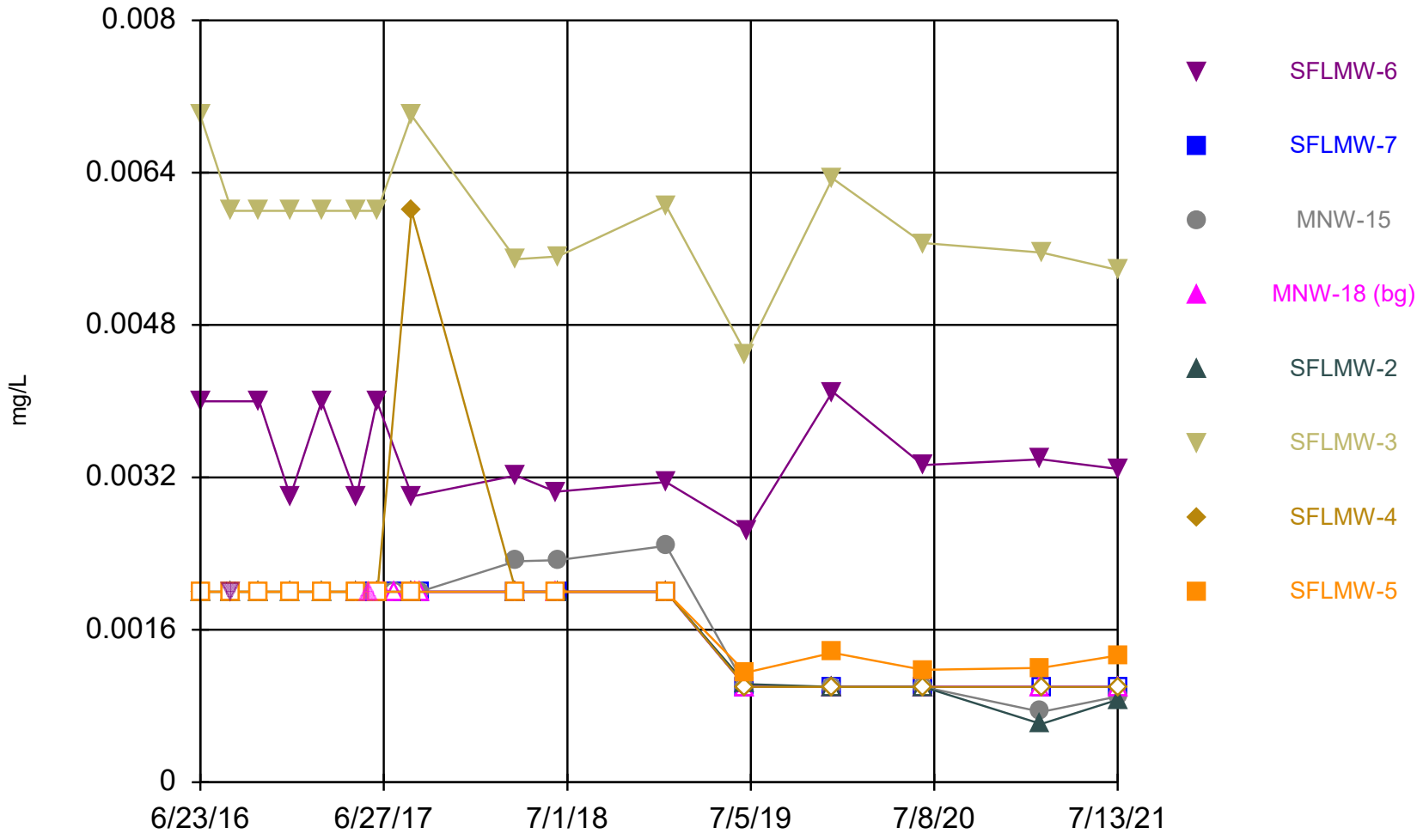
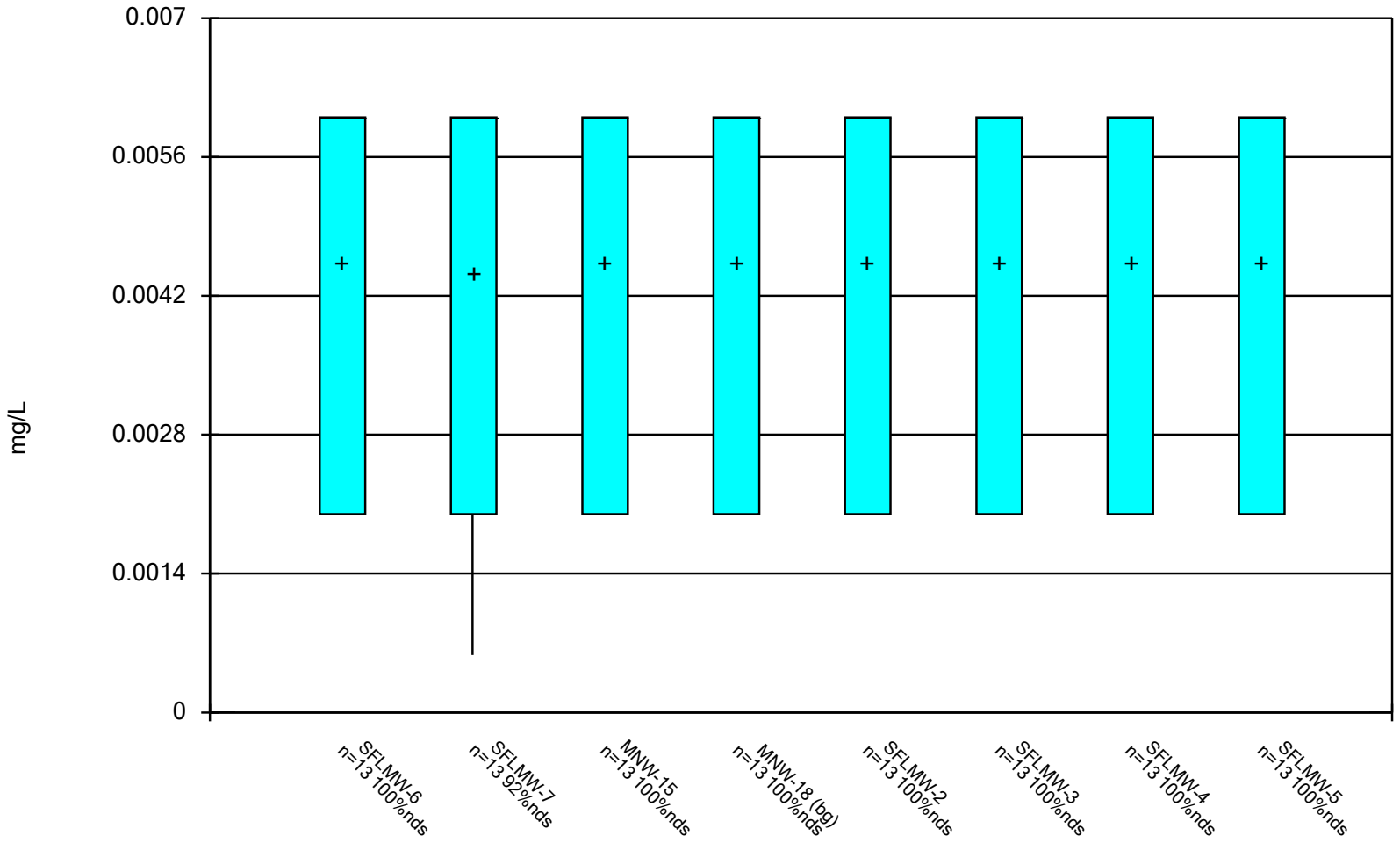
Time Series



Constituent: Thallium Analysis Run 8/19/2021 11:29 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

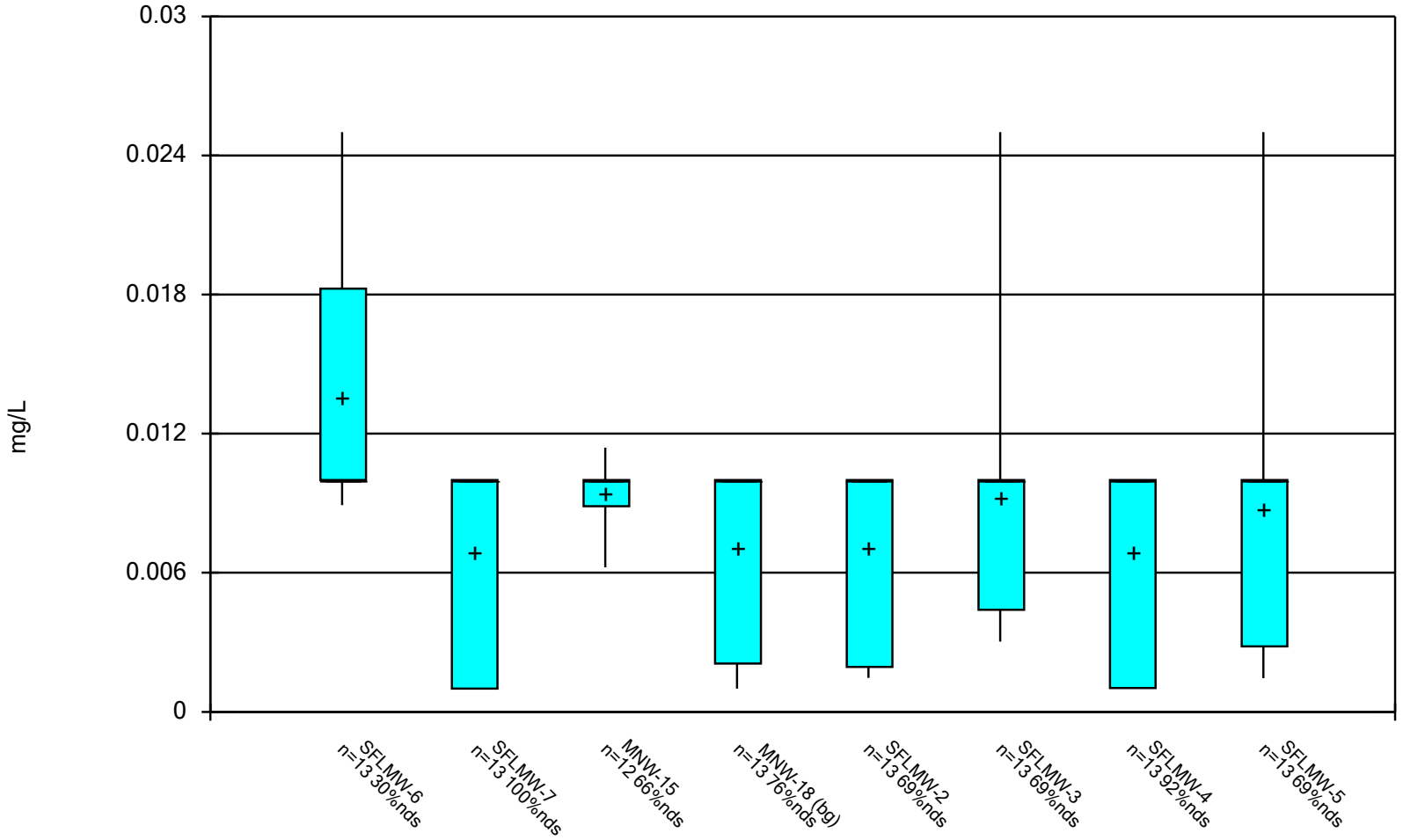
Box & Whiskers Plot



Constituent: Antimony Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

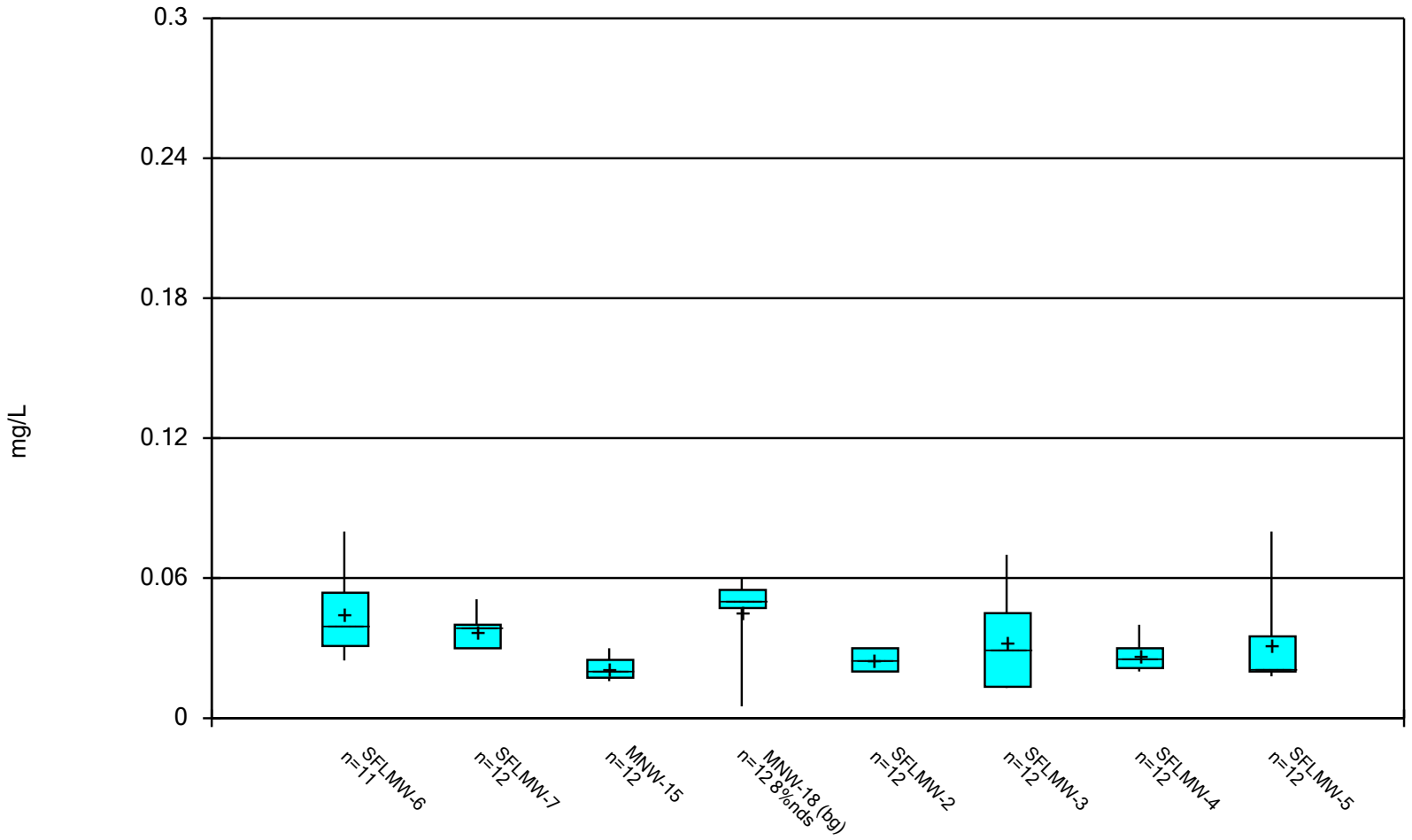
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

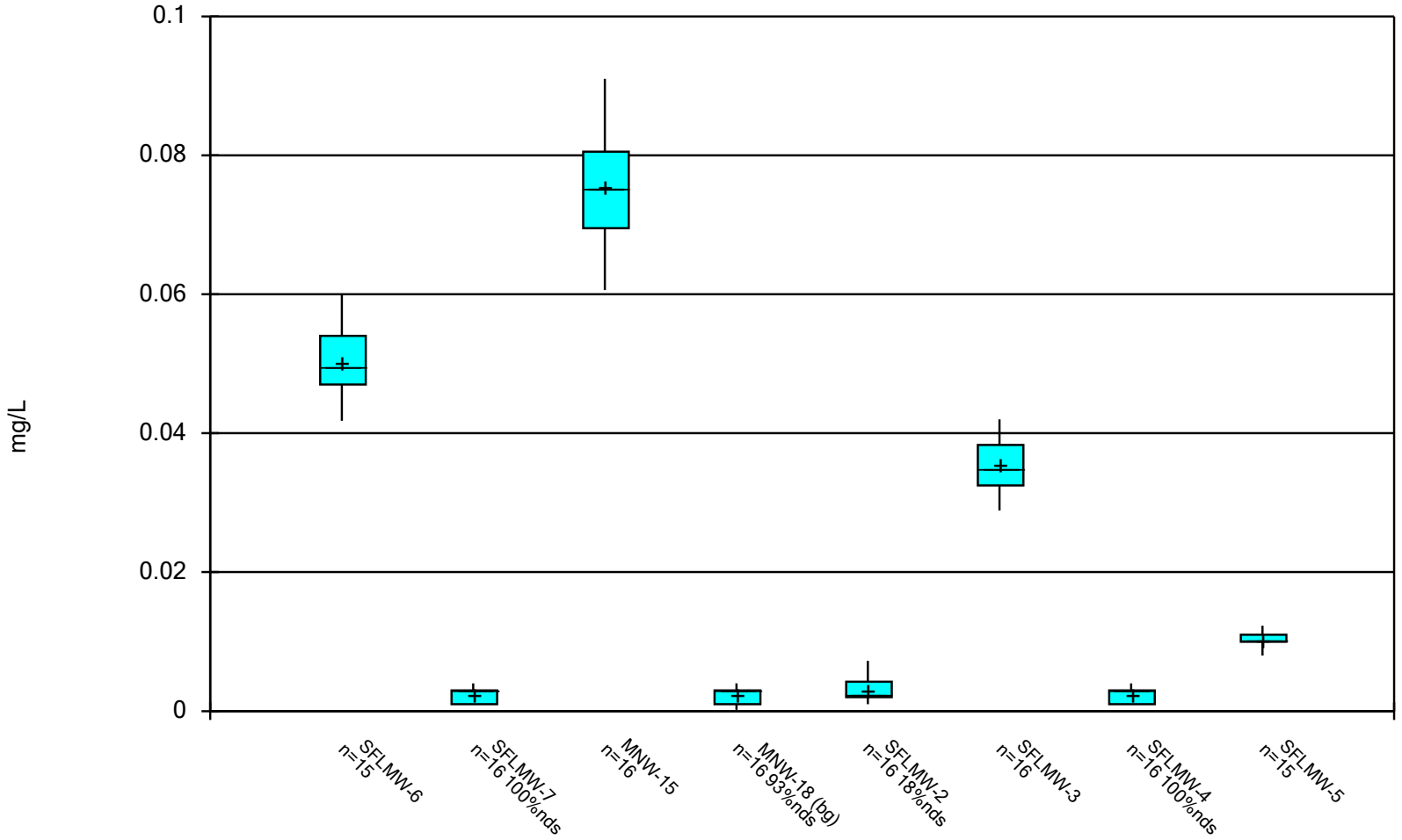
Box & Whiskers Plot



Constituent: Barium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

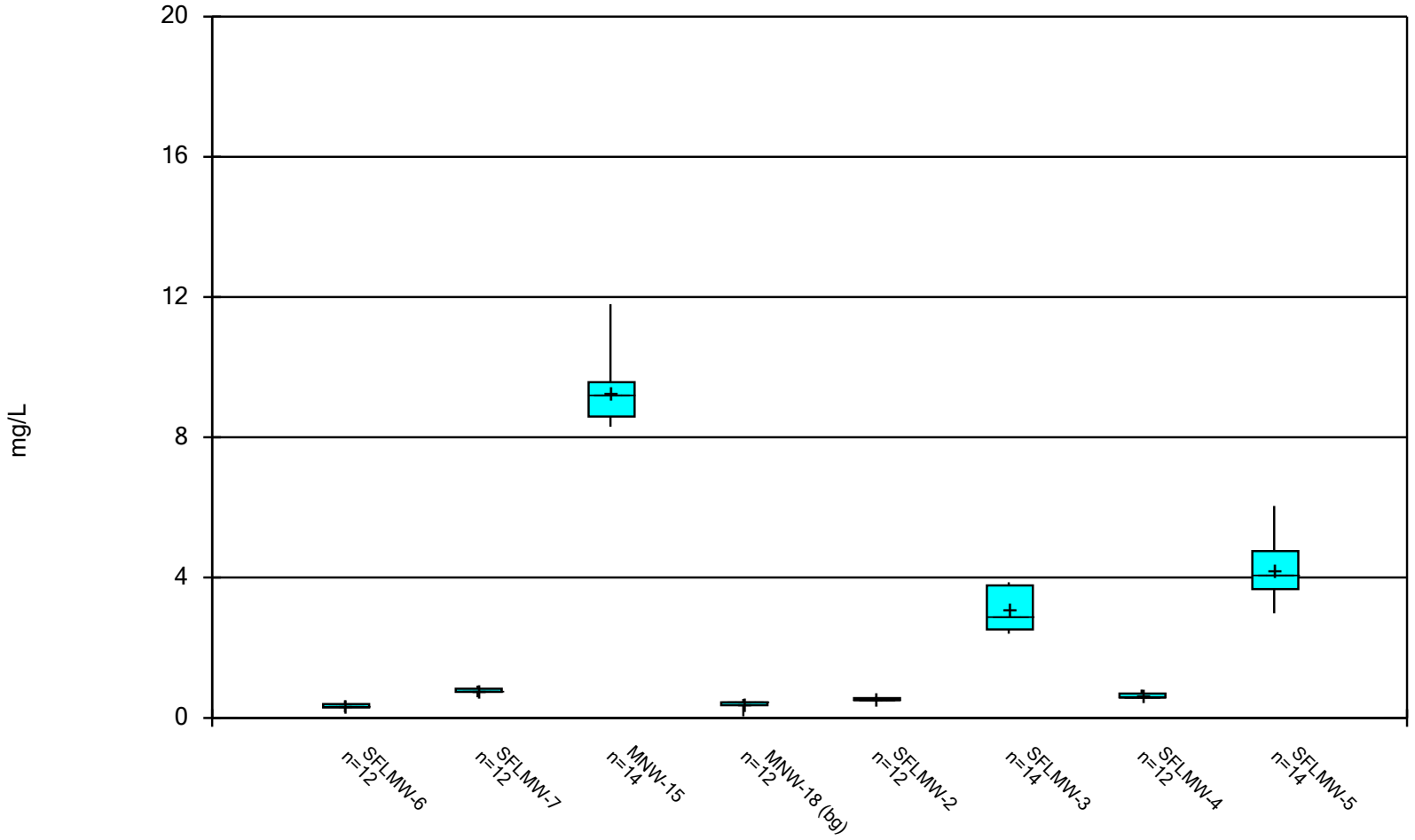
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

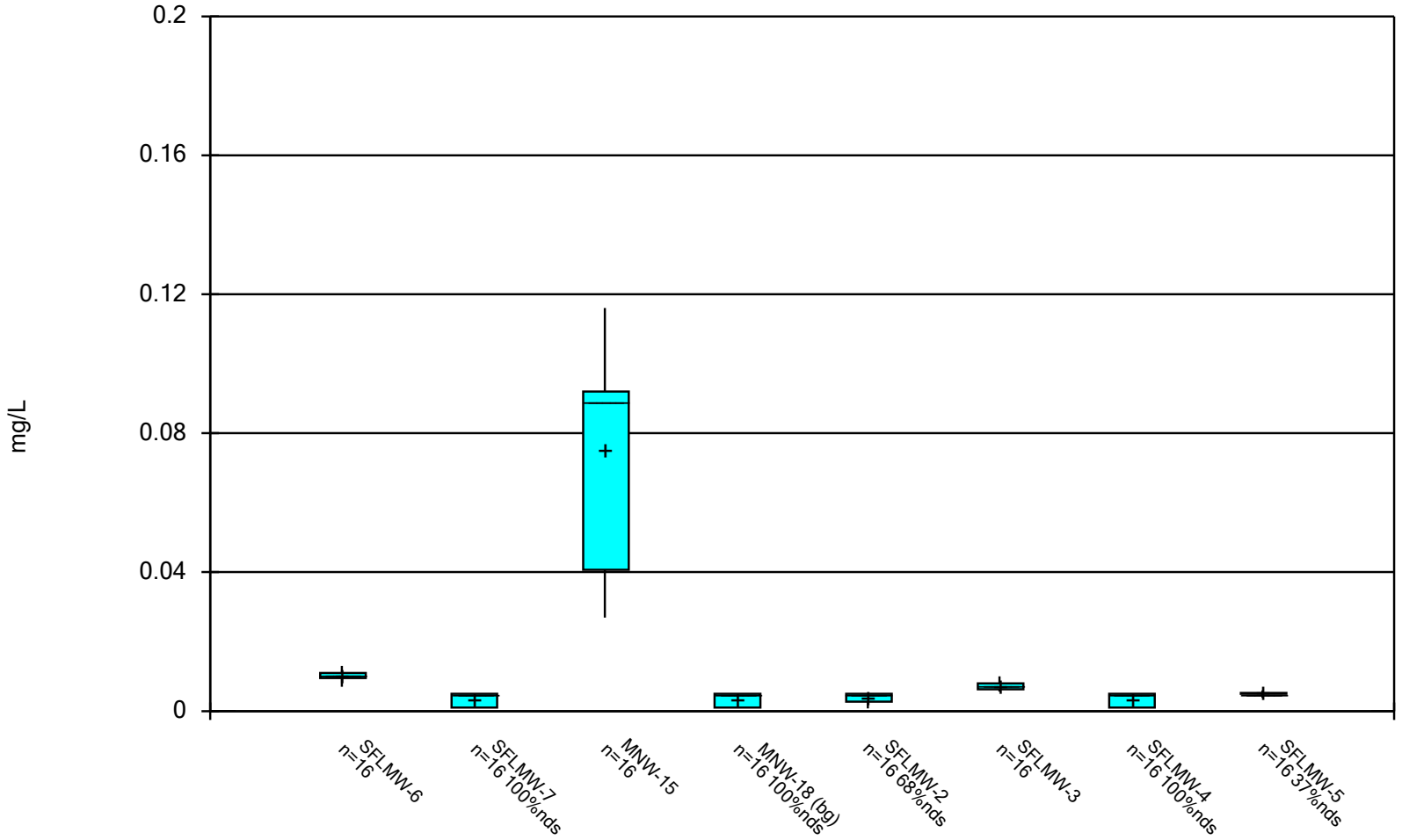
Box & Whiskers Plot



Constituent: Boron Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

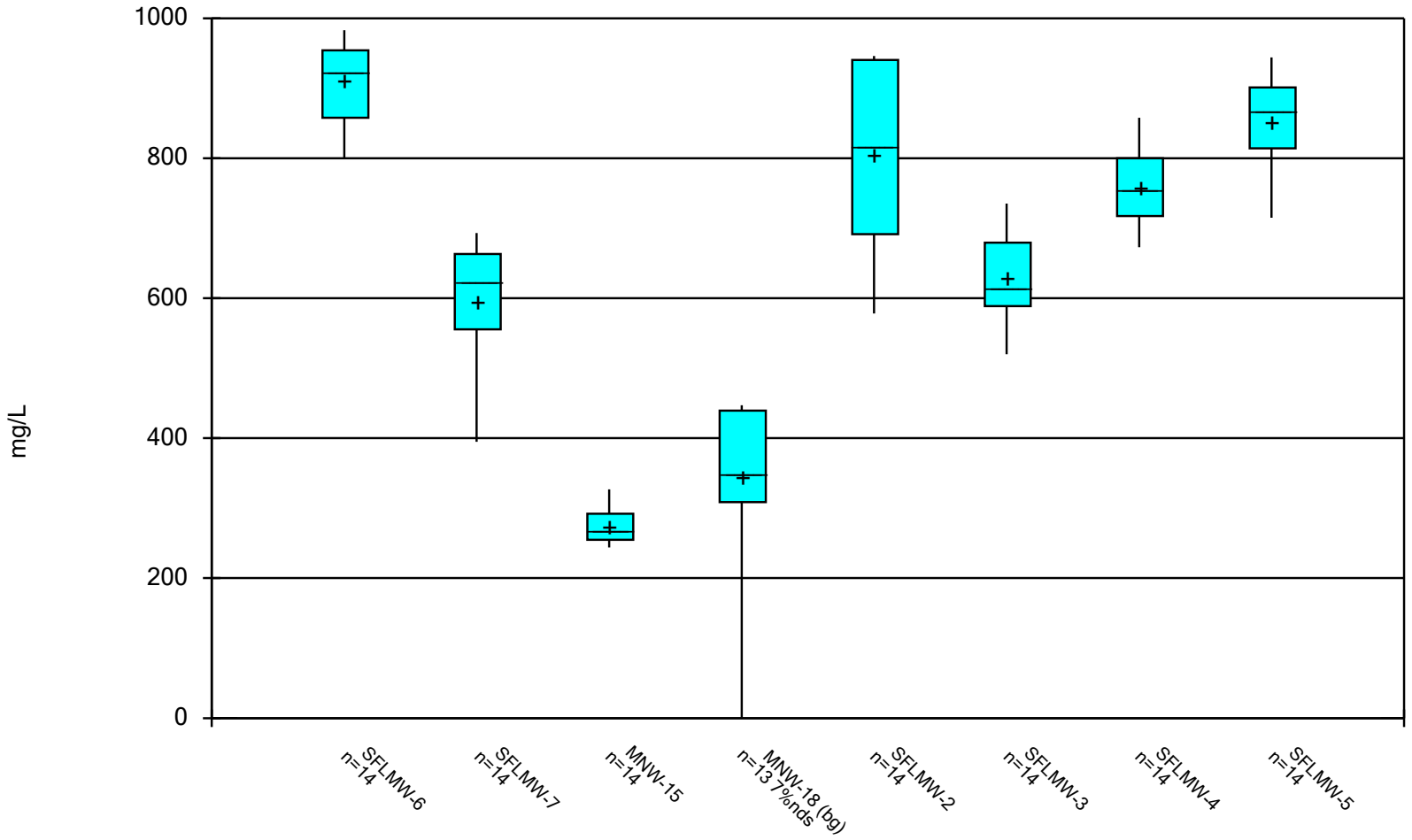
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

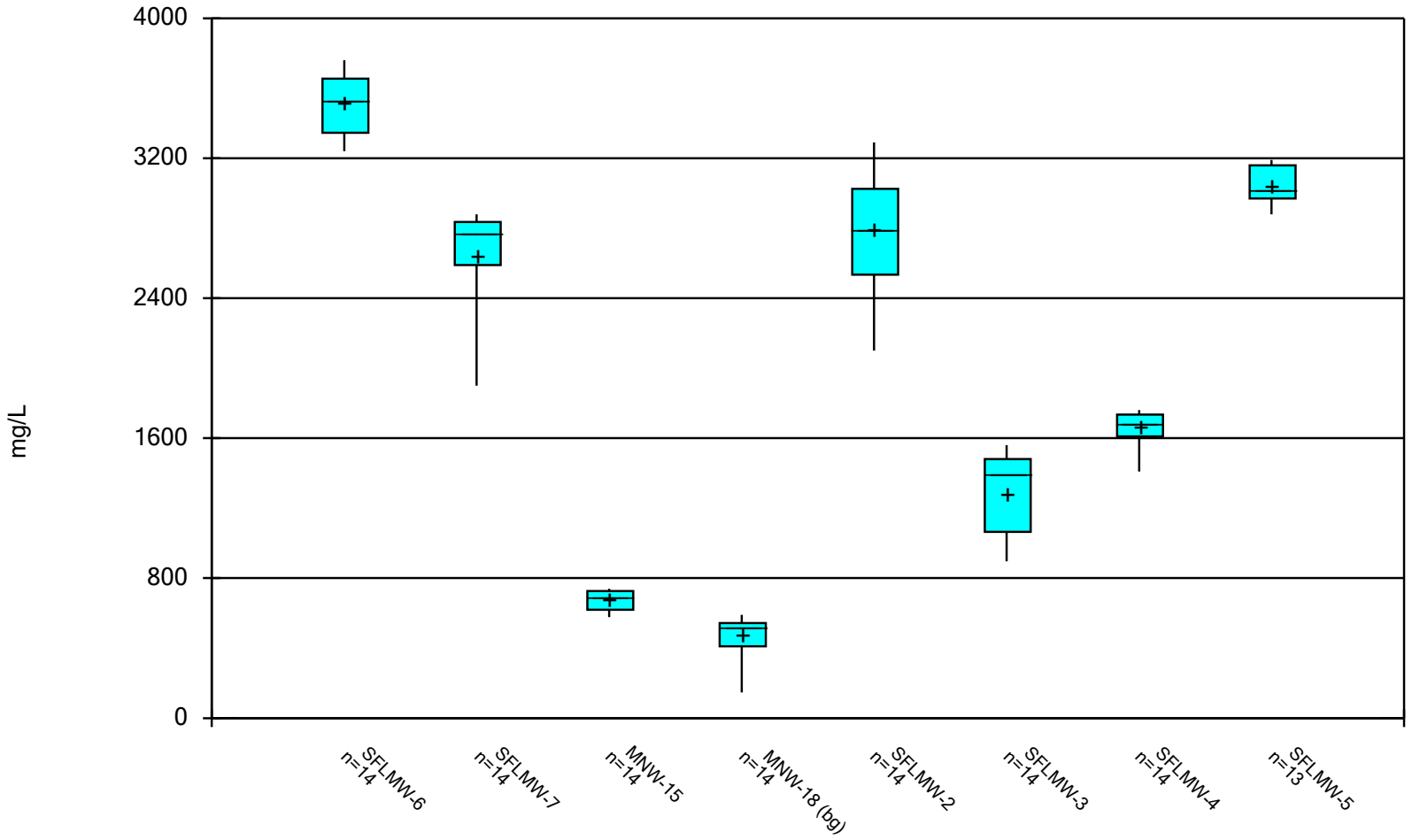
Box & Whiskers Plot



Constituent: Calcium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

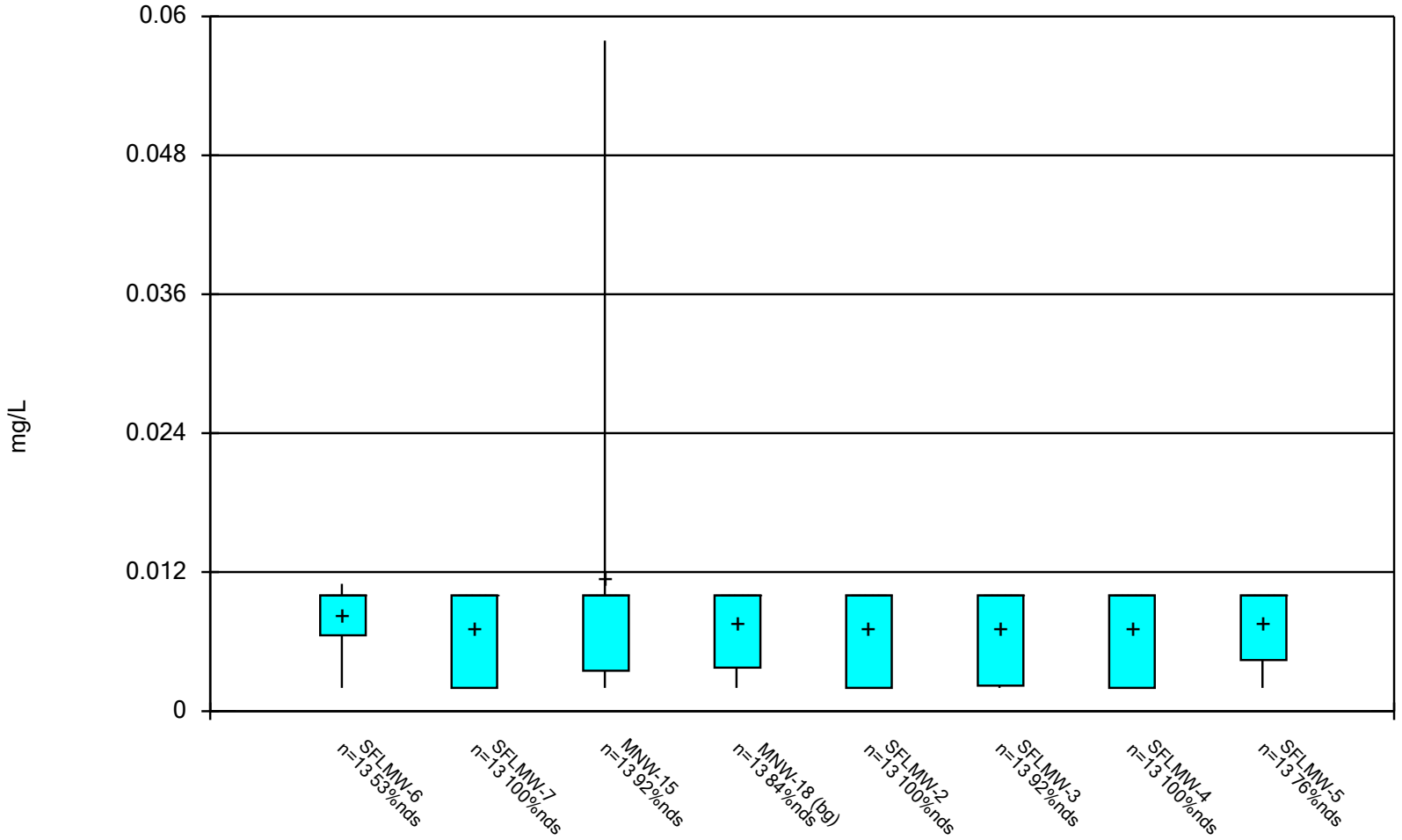
Box & Whiskers Plot



Constituent: Chloride Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

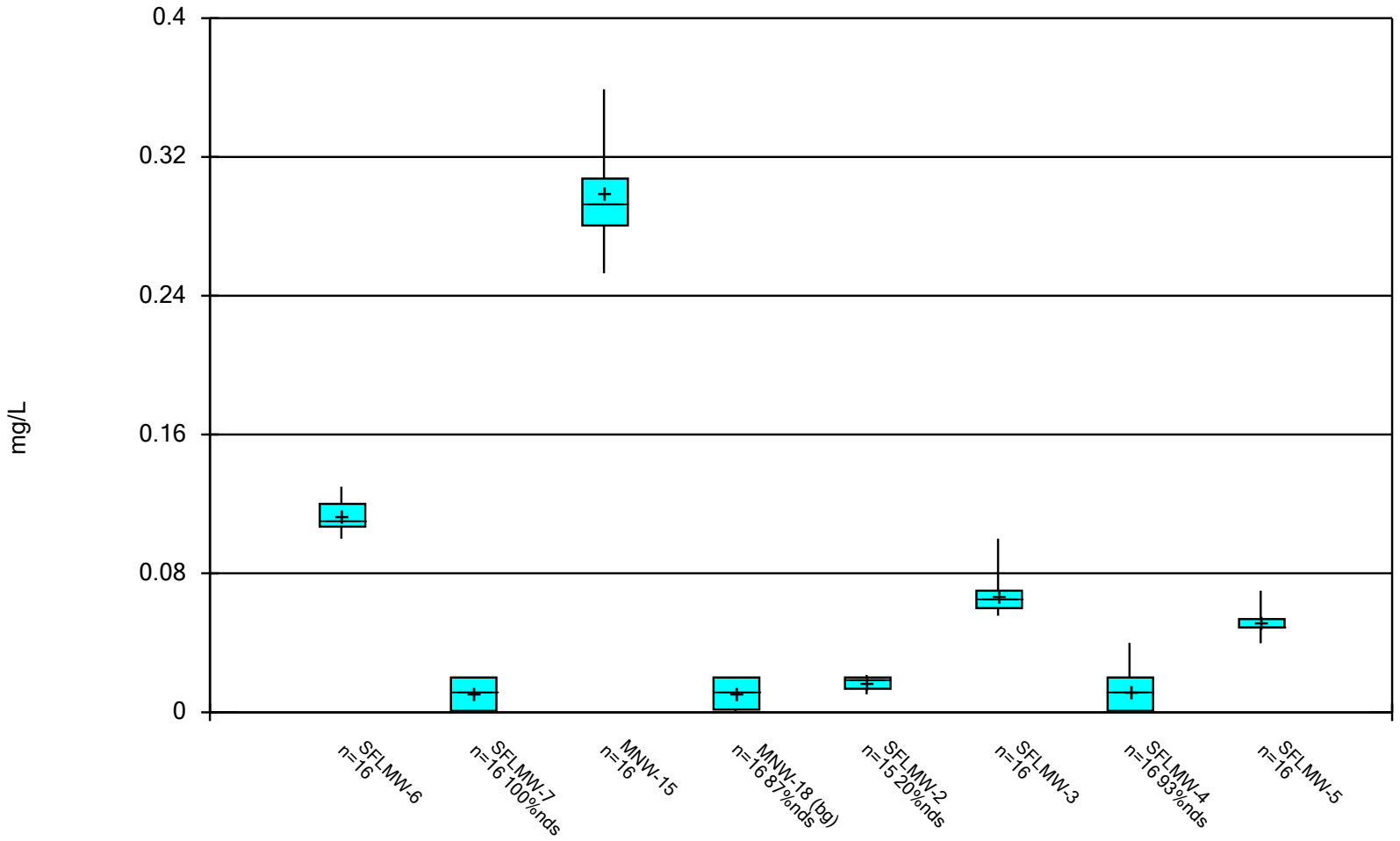
Box & Whiskers Plot



Constituent: Chromium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

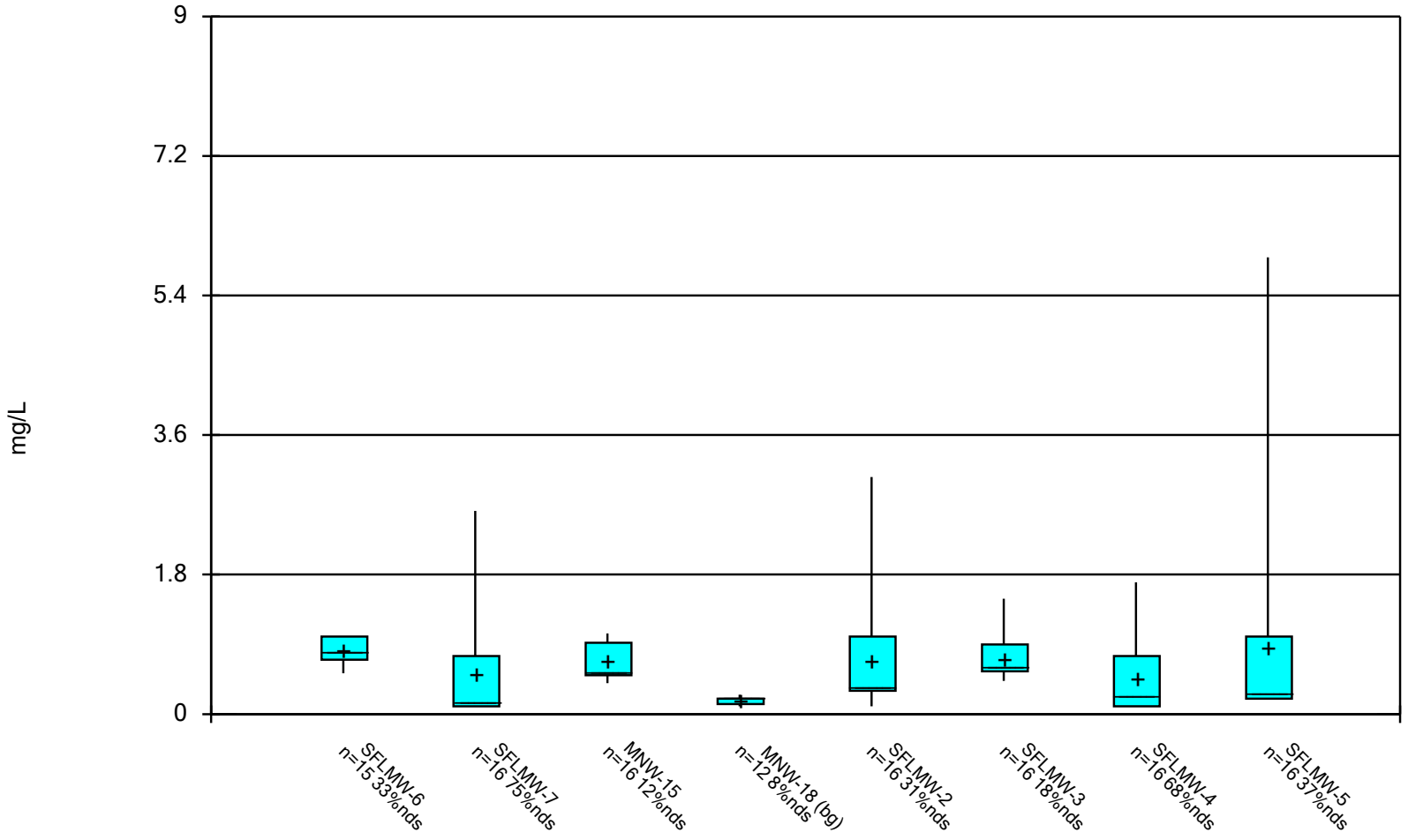
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

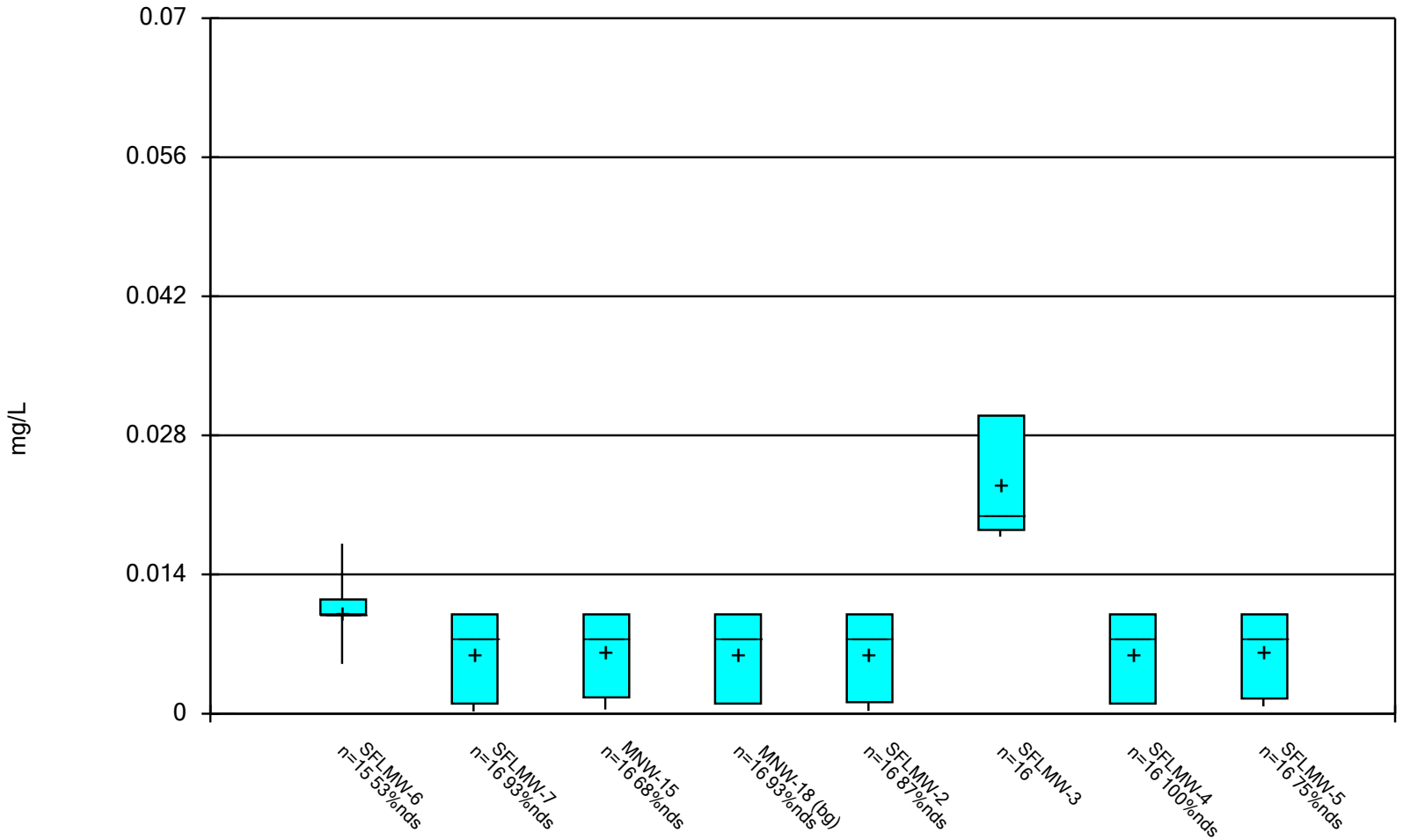
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

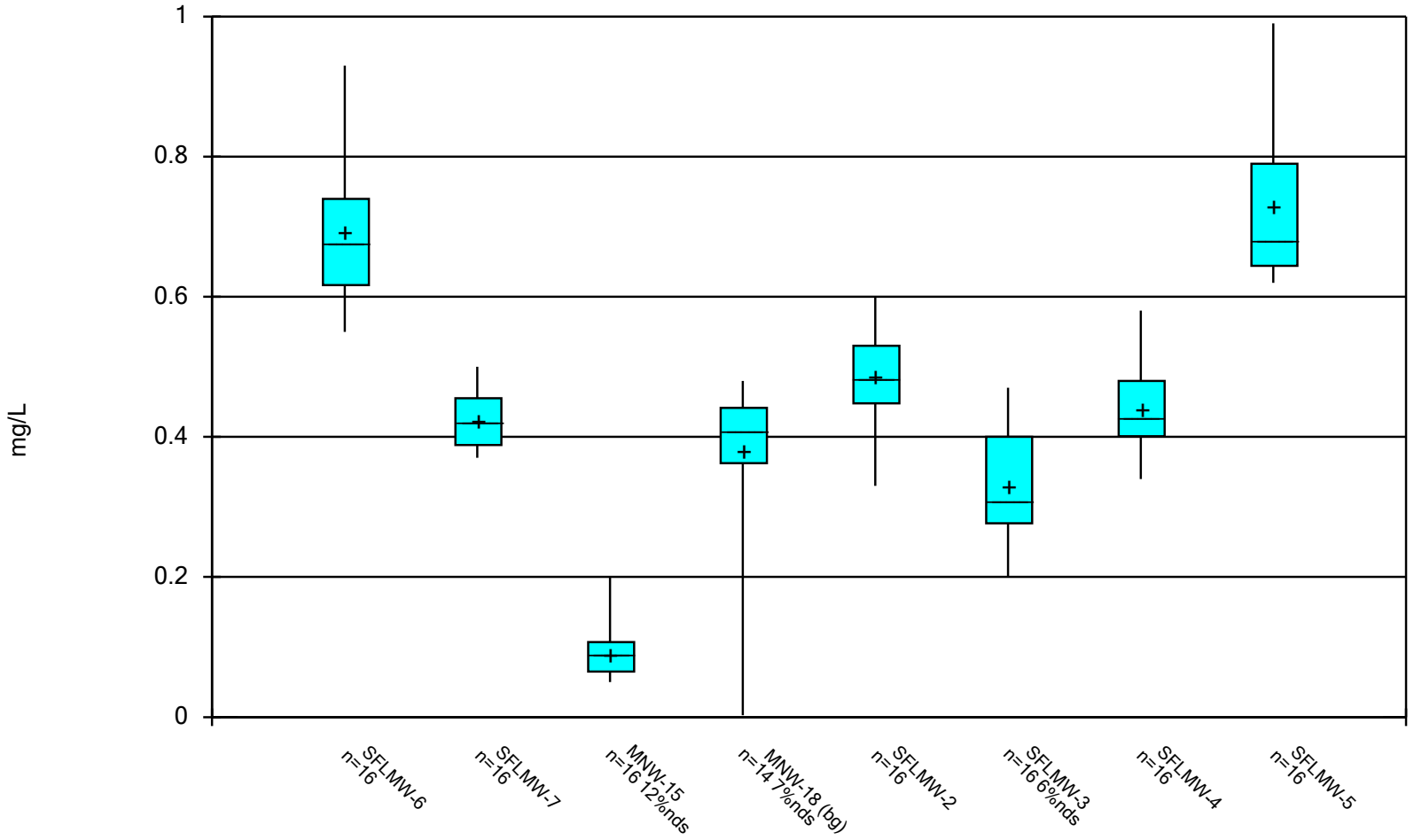
Box & Whiskers Plot



Constituent: Lead Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

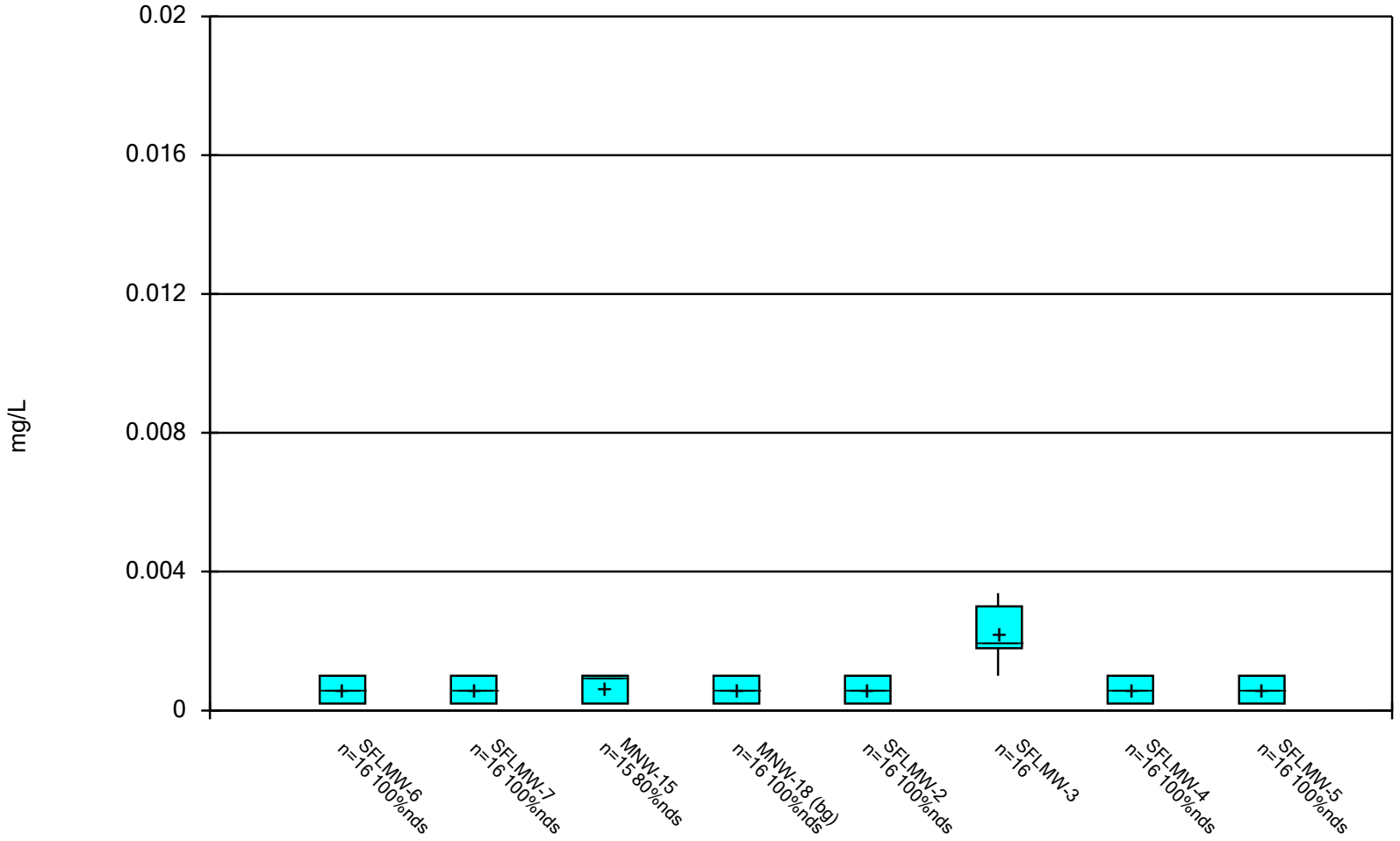
Box & Whiskers Plot



Constituent: Lithium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

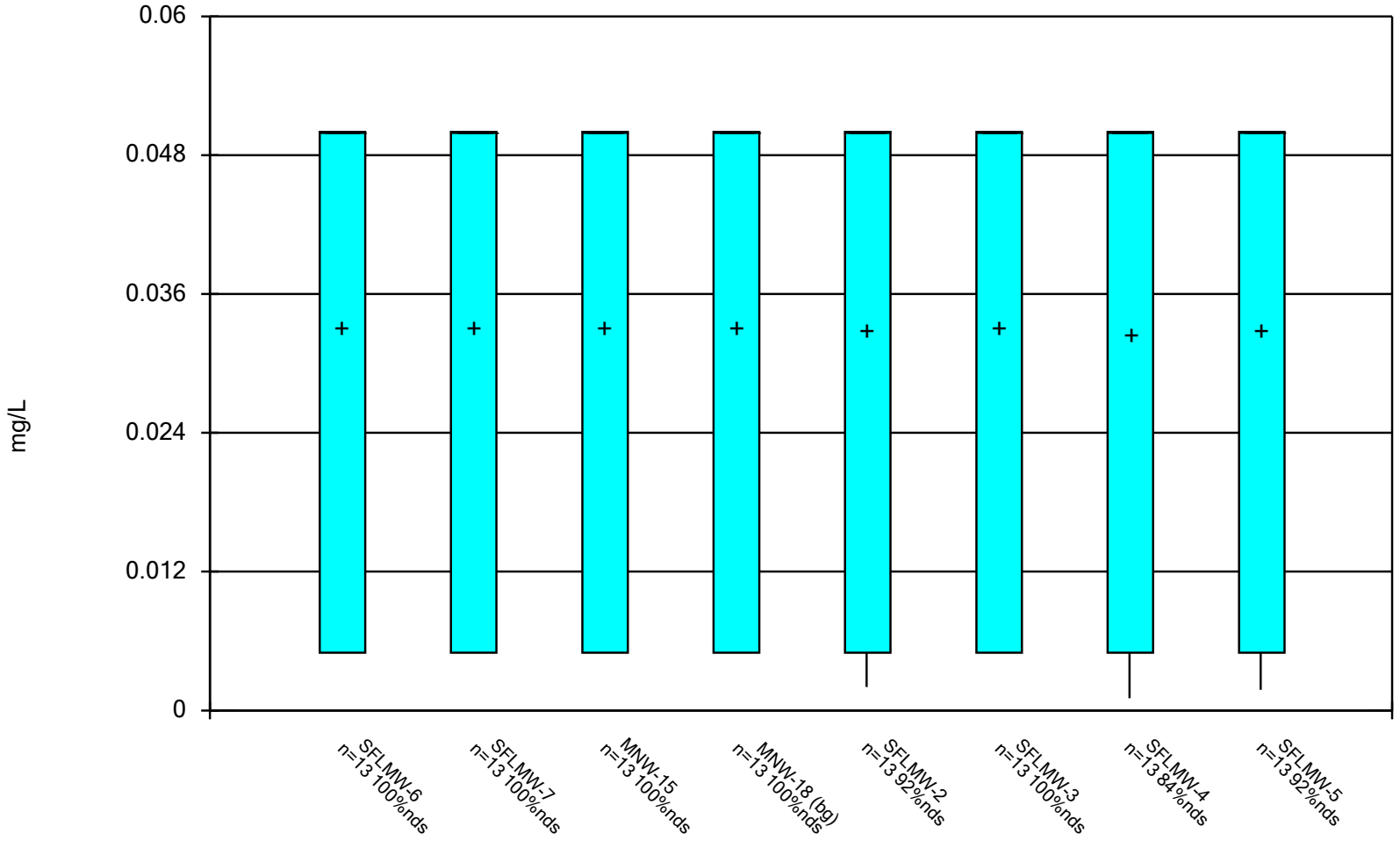
Box & Whiskers Plot



Constituent: Mercury Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

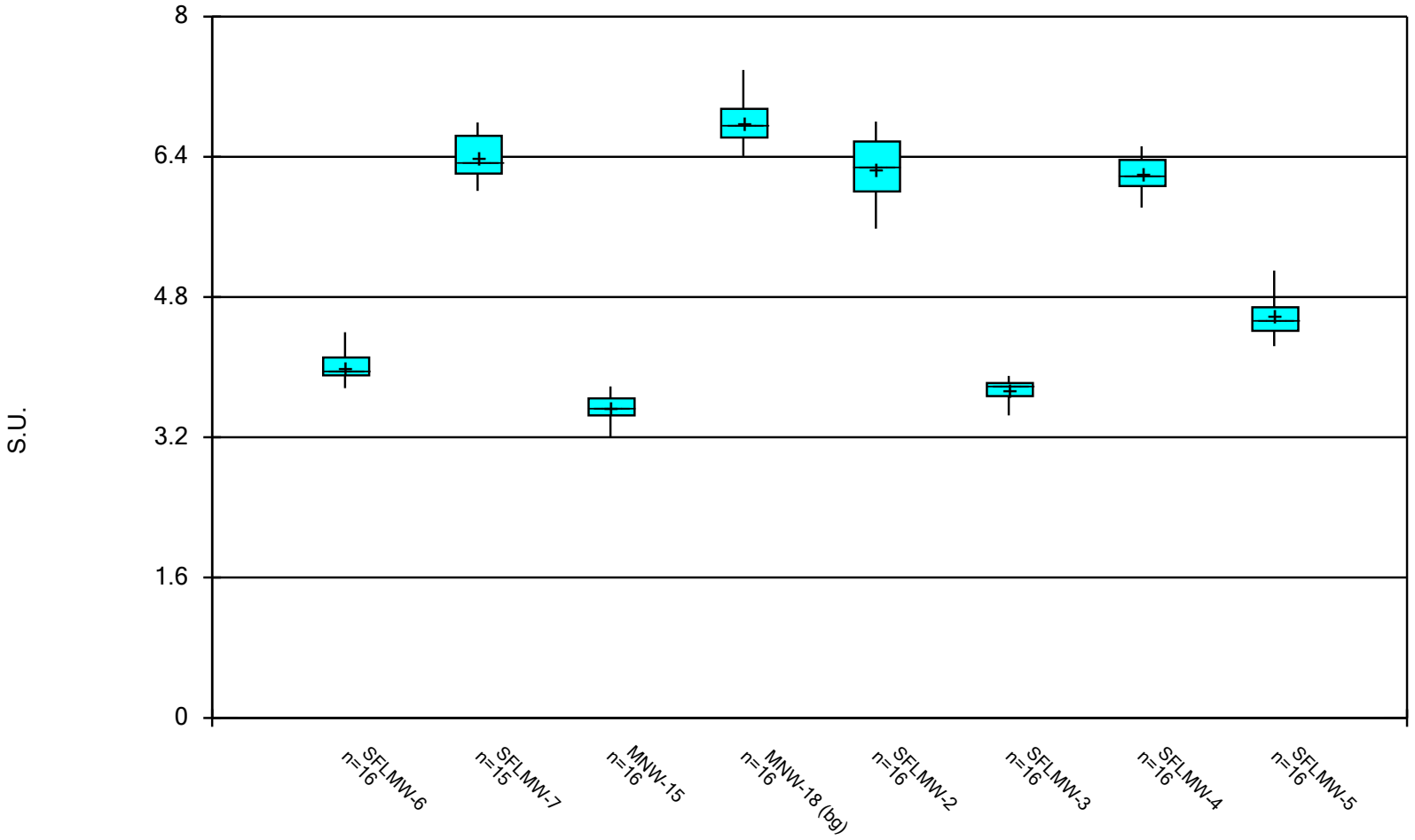
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

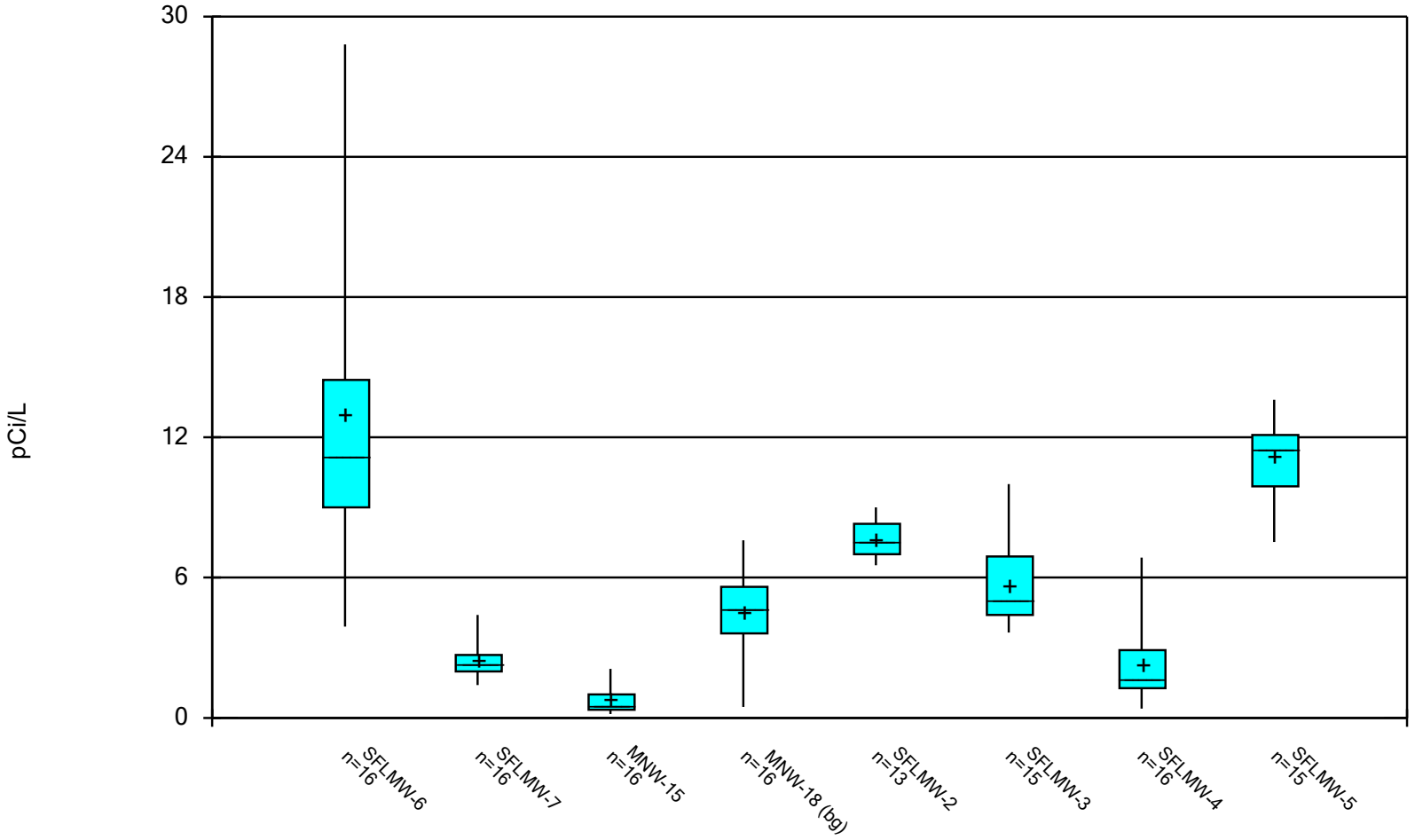
Box & Whiskers Plot



Constituent: pH Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

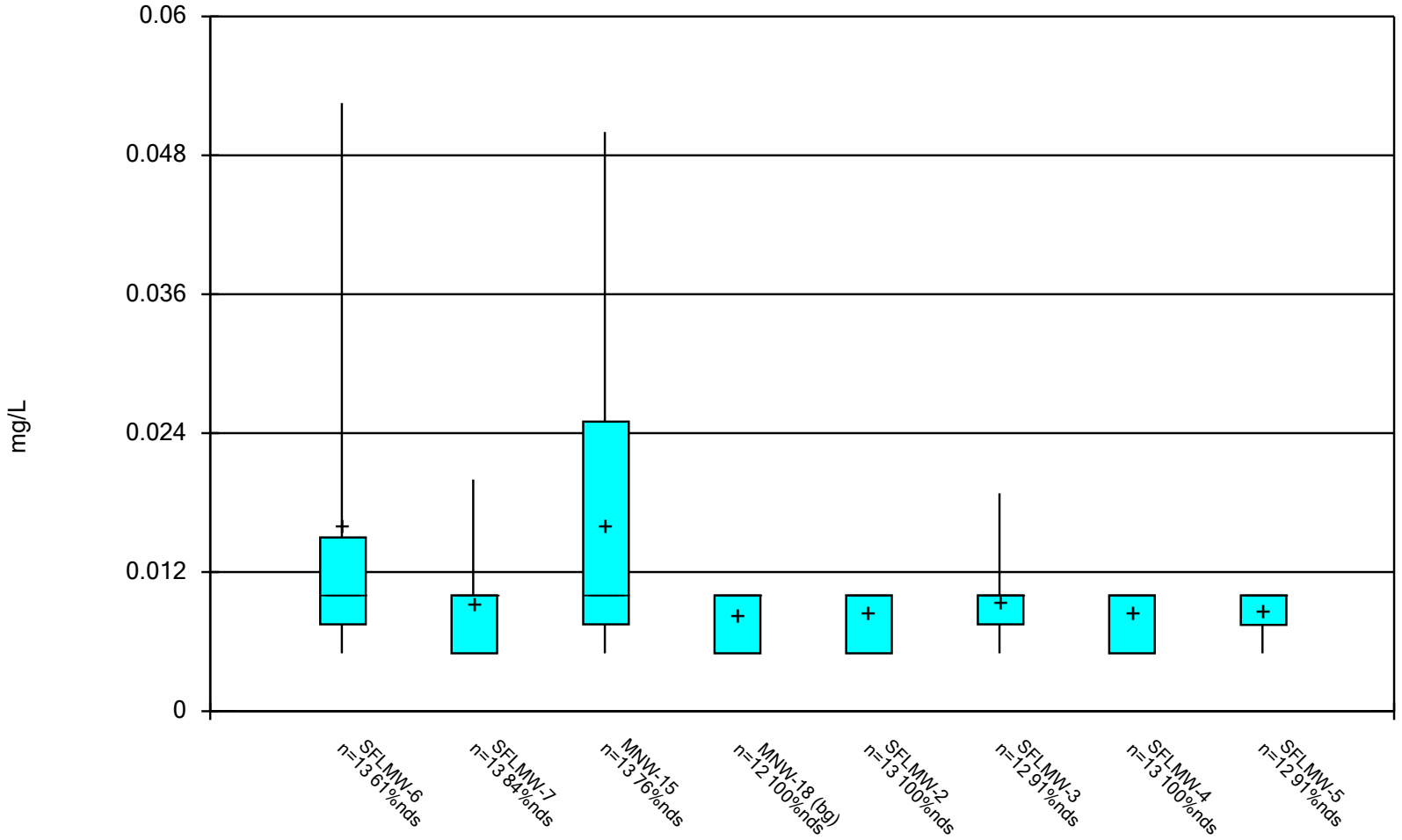
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

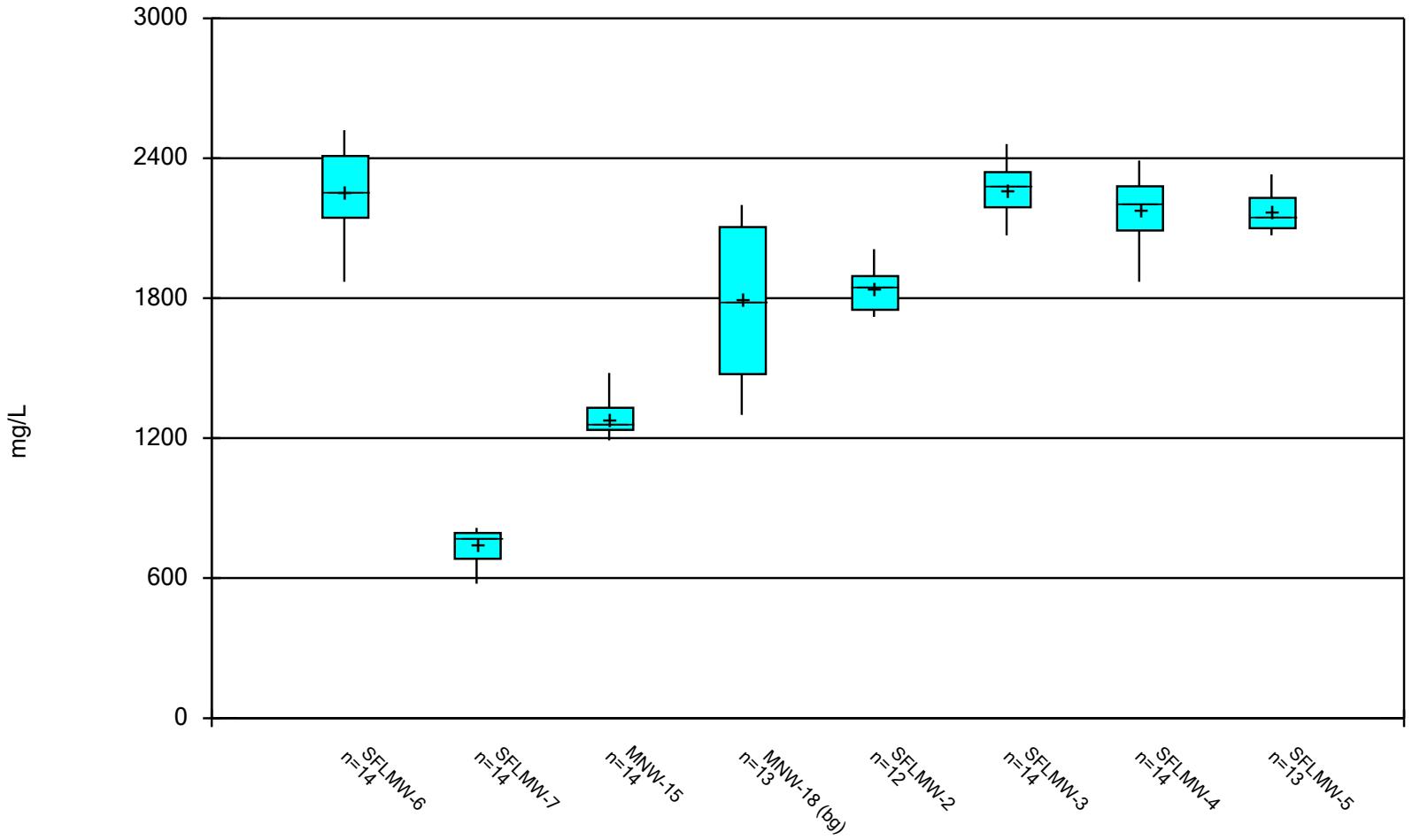
Box & Whiskers Plot



Constituent: Selenium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

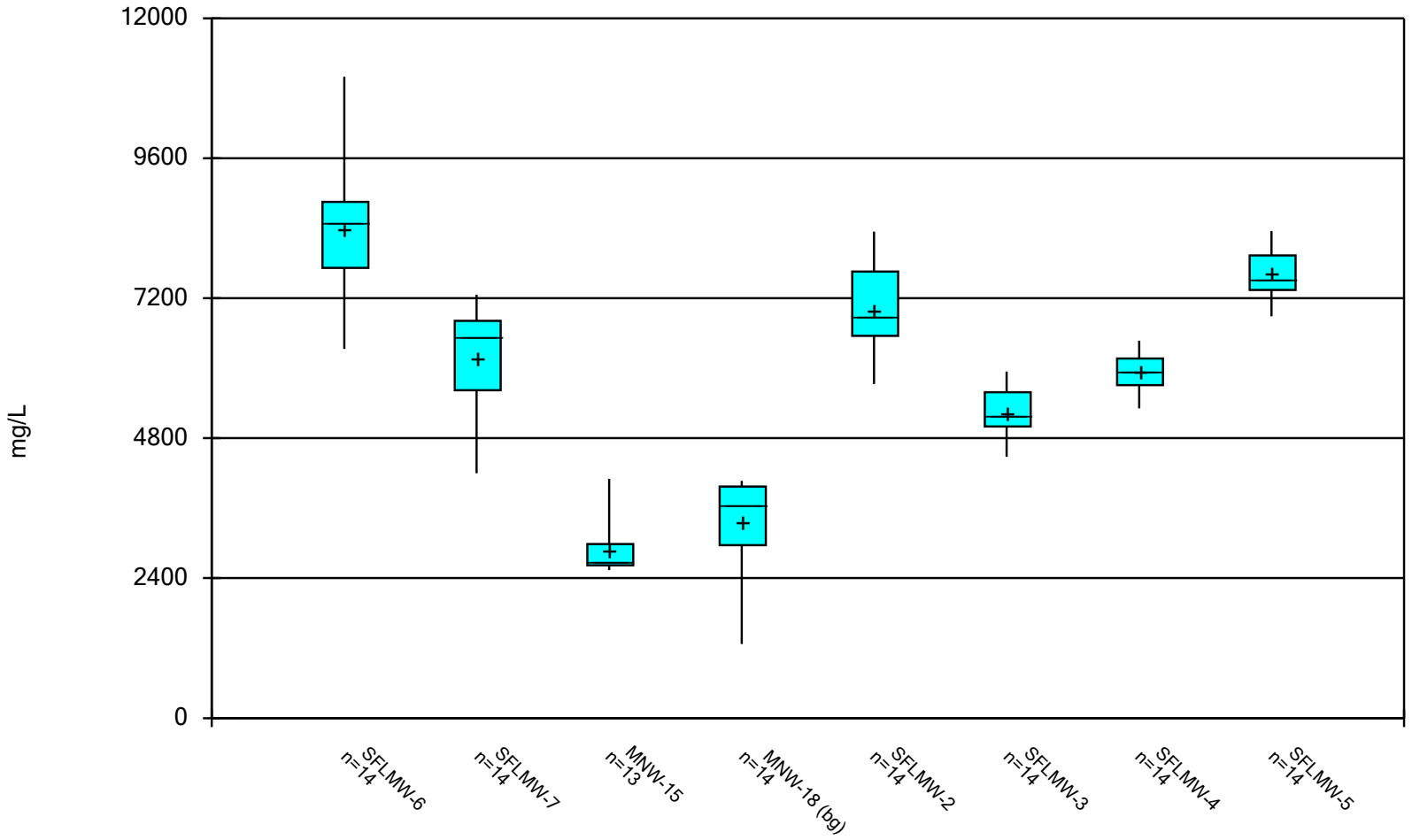
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

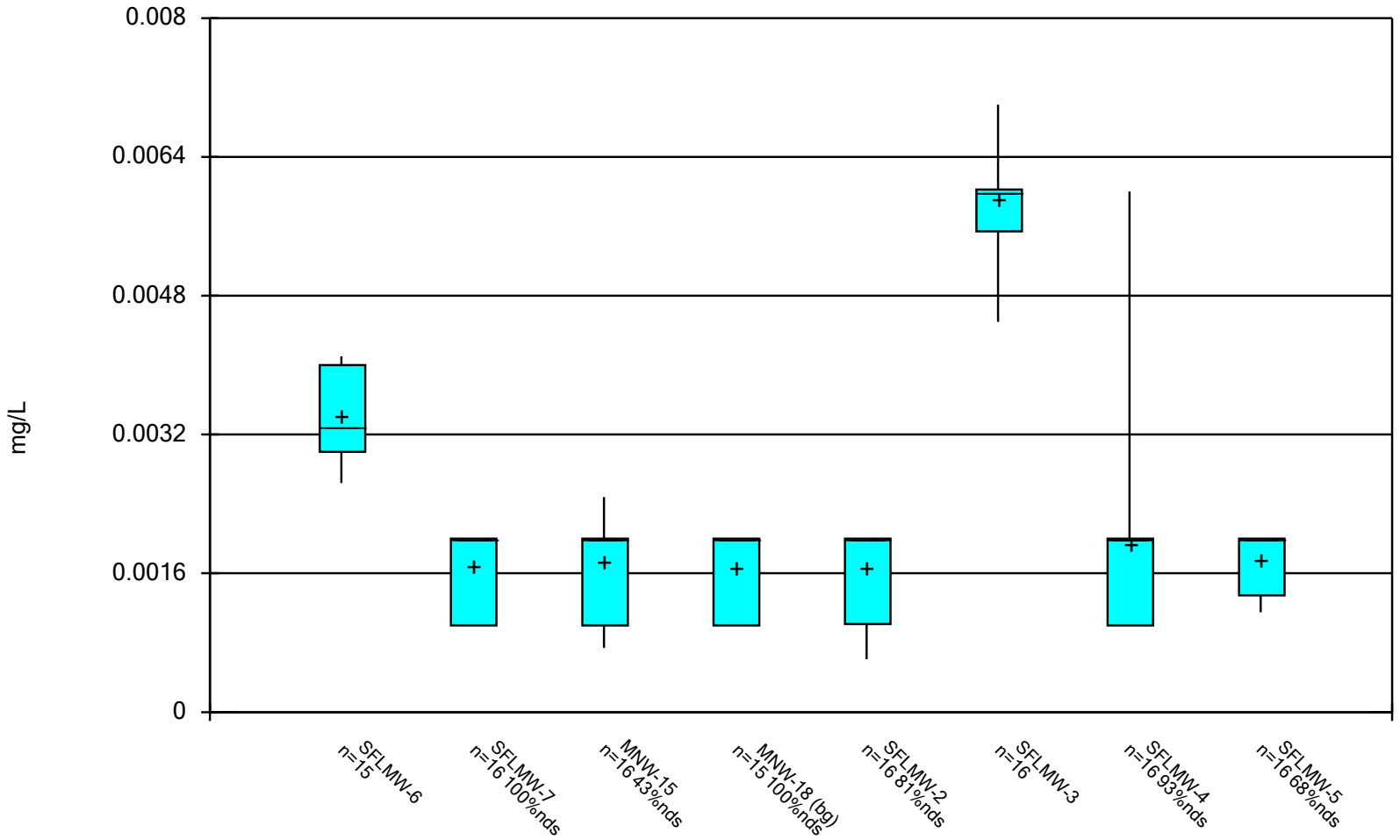
Box & Whiskers Plot



Constituent: TDS Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 8/19/2021 11:30 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:33 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Antimony (mg/L)	SFLMW-6	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-7	13	0.004429	0.006	0.000579	0.006	92.31
Antimony (mg/L)	MNW-15	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	MNW-18 (bg)	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-2	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-3	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-4	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-5	13	0.004538	0.006	0.002	0.006	100
Arsenic (mg/L)	SFLMW-6	13	0.01357	0.01	0.00892	0.025	30.77
Arsenic (mg/L)	SFLMW-7	13	0.006846	0.01	0.001	0.01	100
Arsenic (mg/L)	MNW-15	12	0.009393	0.01	0.00624	0.0114	66.67
Arsenic (mg/L)	MNW-18 (bg)	13	0.007039	0.01	0.001	0.01	76.92
Arsenic (mg/L)	SFLMW-2	13	0.007065	0.01	0.00147	0.01	69.23
Arsenic (mg/L)	SFLMW-3	13	0.009232	0.01	0.00303	0.025	69.23
Arsenic (mg/L)	SFLMW-4	13	0.006851	0.01	0.001	0.01	92.31
Arsenic (mg/L)	SFLMW-5	13	0.008738	0.01	0.00145	0.025	69.23
Barium (mg/L)	SFLMW-6	11	0.04426	0.04	0.0247	0.08	0
Barium (mg/L)	SFLMW-7	12	0.03748	0.0385	0.03	0.051	0
Barium (mg/L)	MNW-15	12	0.02138	0.02	0.0159	0.03	0
Barium (mg/L)	MNW-18 (bg)	12	0.0453	0.05	0.005	0.06	8.333
Barium (mg/L)	SFLMW-2	12	0.02498	0.02485	0.02	0.03	0
Barium (mg/L)	SFLMW-3	12	0.03192	0.03	0.013	0.07	0
Barium (mg/L)	SFLMW-4	12	0.02649	0.02545	0.02	0.04	0
Barium (mg/L)	SFLMW-5	12	0.0316	0.02105	0.0179	0.08	0
Beryllium (m...	SFLMW-6	15	0.05025	0.0496	0.0418	0.0599	0
Beryllium (m...	SFLMW-7	16	0.002438	0.003	0.001	0.004	100
Beryllium (m...	MNW-15	16	0.0756	0.075	0.0606	0.091	0
Beryllium (m...	MNW-18 (bg)	16	0.002387	0.003	0.000184	0.004	93.75
Beryllium (m...	SFLMW-2	16	0.003091	0.002235	0.001	0.00722	18.75
Beryllium (m...	SFLMW-3	16	0.03538	0.03485	0.0289	0.042	0
Beryllium (m...	SFLMW-4	16	0.002438	0.003	0.001	0.004	100
Beryllium (m...	SFLMW-5	15	0.01031	0.0101	0.008	0.0123	0
Boron (mg/L)	SFLMW-6	12	0.3444	0.365	0.16	0.5	0
Boron (mg/L)	SFLMW-7	12	0.7798	0.786	0.59	0.92	0
Boron (mg/L)	MNW-15	14	9.26	9.24	8.3	11.8	0
Boron (mg/L)	MNW-18 (bg)	12	0.3941	0.44	0.0451	0.54	0
Boron (mg/L)	SFLMW-2	12	0.5358	0.545	0.464	0.6	0
Boron (mg/L)	SFLMW-3	14	3.084	2.9	2.4	3.87	0
Boron (mg/L)	SFLMW-4	12	0.6367	0.605	0.55	0.809	0
Boron (mg/L)	SFLMW-5	14	4.239	4.1	2.98	6.04	0
Cadmium (mg/L)	SFLMW-6	16	0.01033	0.0104	0.007	0.013	0
Cadmium (mg/L)	SFLMW-7	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	MNW-15	16	0.07544	0.0888	0.0269	0.116	0
Cadmium (mg/L)	MNW-18 (bg)	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	SFLMW-2	16	0.003869	0.005	0.000761	0.005	68.75
Cadmium (mg/L)	SFLMW-3	16	0.007296	0.0071	0.0056	0.01	0
Cadmium (mg/L)	SFLMW-4	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	SFLMW-5	16	0.005067	0.005	0.00385	0.006	37.5
Calcium (mg/L)	SFLMW-6	14	910.1	922	800	983	0
Calcium (mg/L)	SFLMW-7	14	596.6	624	395	693	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:33 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Calcium (mg/L)	MNW-15	14	274.4	266.5	244	327	0
Calcium (mg/L)	MNW-18 (bg)	13	344.5	350	0.25	447	7.692
Calcium (mg/L)	SFLMW-2	14	805.5	817.5	578	946	0
Calcium (mg/L)	SFLMW-3	14	630.9	614	520	735	0
Calcium (mg/L)	SFLMW-4	14	759.3	755.5	673	858	0
Calcium (mg/L)	SFLMW-5	14	853	868.5	715	944	0
Chloride (mg/L)	SFLMW-6	14	3515	3530	3240	3760	0
Chloride (mg/L)	SFLMW-7	14	2644	2775	1900	2880	0
Chloride (mg/L)	MNW-15	14	676.6	696	578	740	0
Chloride (mg/L)	MNW-18 (bg)	14	476.2	525	146	590	0
Chloride (mg/L)	SFLMW-2	14	2788	2800	2100	3290	0
Chloride (mg/L)	SFLMW-3	14	1277	1390	897	1560	0
Chloride (mg/L)	SFLMW-4	14	1666	1685	1410	1760	0
Chloride (mg/L)	SFLMW-5	13	3045	3020	2880	3190	0
Chromium (mg/L)	SFLMW-6	13	0.008388	0.01	0.002	0.011	53.85
Chromium (mg/L)	SFLMW-7	13	0.007154	0.01	0.002	0.01	100
Chromium (mg/L)	MNW-15	13	0.01145	0.01	0.002	0.0579	92.31
Chromium (mg/L)	MNW-18 (bg)	13	0.007512	0.01	0.002	0.01	84.62
Chromium (mg/L)	SFLMW-2	13	0.007154	0.01	0.002	0.01	100
Chromium (mg/L)	SFLMW-3	13	0.007185	0.01	0.002	0.01	92.31
Chromium (mg/L)	SFLMW-4	13	0.007154	0.01	0.002	0.01	100
Chromium (mg/L)	SFLMW-5	13	0.007555	0.01	0.002	0.01	76.92
Cobalt (mg/L)	SFLMW-6	16	0.1126	0.1105	0.1	0.13	0
Cobalt (mg/L)	SFLMW-7	16	0.01094	0.0125	0.0005	0.02	100
Cobalt (mg/L)	MNW-15	16	0.2994	0.2935	0.253	0.359	0
Cobalt (mg/L)	MNW-18 (bg)	16	0.01105	0.0125	0.0005	0.02	87.5
Cobalt (mg/L)	SFLMW-2	15	0.01733	0.02	0.0103	0.0214	20
Cobalt (mg/L)	SFLMW-3	16	0.06658	0.0661	0.0556	0.1	0
Cobalt (mg/L)	SFLMW-4	16	0.01219	0.0125	0.0005	0.04	93.75
Cobalt (mg/L)	SFLMW-5	16	0.05166	0.05	0.0398	0.07	0
Fluoride (mg/L)	SFLMW-6	15	0.8172	0.8	0.527	1	33.33
Fluoride (mg/L)	SFLMW-7	16	0.5069	0.145	0.1	2.62	75
Fluoride (mg/L)	MNW-15	16	0.6837	0.5585	0.4	1.04	12.5
Fluoride (mg/L)	MNW-18 (bg)	12	0.1722	0.2	0.1	0.25	8.333
Fluoride (mg/L)	SFLMW-2	16	0.6802	0.35	0.1	3.06	31.25
Fluoride (mg/L)	SFLMW-3	16	0.7187	0.6	0.427	1.49	18.75
Fluoride (mg/L)	SFLMW-4	16	0.4628	0.252	0.1	1.7	68.75
Fluoride (mg/L)	SFLMW-5	16	0.8645	0.271	0.2	5.89	37.5
Lead (mg/L)	SFLMW-6	15	0.01013	0.01	0.005	0.0171	53.33
Lead (mg/L)	SFLMW-7	16	0.006013	0.0075	0.000211	0.01	93.75
Lead (mg/L)	MNW-15	16	0.006136	0.0075	0.000404	0.01	68.75
Lead (mg/L)	MNW-18 (bg)	16	0.006062	0.0075	0.001	0.01	93.75
Lead (mg/L)	SFLMW-2	16	0.006037	0.0075	0.000272	0.01	87.5
Lead (mg/L)	SFLMW-3	16	0.02314	0.02	0.0178	0.03	0
Lead (mg/L)	SFLMW-4	16	0.006062	0.0075	0.001	0.01	100
Lead (mg/L)	SFLMW-5	16	0.006253	0.0075	0.000721	0.01	75
Lithium (mg/L)	SFLMW-6	16	0.6932	0.6765	0.55	0.93	0
Lithium (mg/L)	SFLMW-7	16	0.4233	0.419	0.37	0.5	0
Lithium (mg/L)	MNW-15	16	0.09043	0.0899	0.05	0.2	12.5
Lithium (mg/L)	MNW-18 (bg)	14	0.3809	0.4065	0.0025	0.48	7.143

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:33 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Lithium (mg/L)	SFLMW-2	16	0.4848	0.4815	0.33	0.6	0
Lithium (mg/L)	SFLMW-3	16	0.3288	0.309	0.2	0.47	6.25
Lithium (mg/L)	SFLMW-4	16	0.4386	0.426	0.34	0.58	0
Lithium (mg/L)	SFLMW-5	16	0.7304	0.681	0.62	0.99	0
Mercury (mg/L)	SFLMW-6	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	SFLMW-7	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	MNW-15	15	0.000...	0.000949	0.0002	0.001	80
Mercury (mg/L)	MNW-18 (bg)	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	SFLMW-2	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	SFLMW-3	16	0.002231	0.002	0.001	0.00338	0
Mercury (mg/L)	SFLMW-4	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	SFLMW-5	16	0.0006	0.0006	0.0002	0.001	100
Molybdenum (...	SFLMW-6	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	SFLMW-7	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	MNW-15	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	MNW-18 (bg)	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	SFLMW-2	13	0.03285	0.05	0.00202	0.05	92.31
Molybdenum (...	SFLMW-3	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	SFLMW-4	13	0.03255	0.05	0.00106	0.05	84.62
Molybdenum (...	SFLMW-5	13	0.03283	0.05	0.0018	0.05	92.31
pH (S.U.)	SFLMW-6	16	3.999	3.965	3.76	4.4	0
pH (S.U.)	SFLMW-7	15	6.389	6.34	6.01	6.79	0
pH (S.U.)	MNW-15	16	3.539	3.55	3.21	3.78	0
pH (S.U.)	MNW-18 (bg)	16	6.792	6.76	6.41	7.39	0
pH (S.U.)	SFLMW-2	16	6.251	6.285	5.58	6.8	0
pH (S.U.)	SFLMW-3	16	3.74	3.795	3.45	3.9	0
pH (S.U.)	SFLMW-4	16	6.204	6.175	5.82	6.52	0
pH (S.U.)	SFLMW-5	16	4.586	4.535	4.24	5.1	0
Radium 226 +...	SFLMW-6	16	13.02	11.2	3.9	28.8	0
Radium 226 +...	SFLMW-7	16	2.458	2.33	1.4	4.4	0
Radium 226 +...	MNW-15	16	0.7643	0.551	0.167	2.1	0
Radium 226 +...	MNW-18 (bg)	16	4.503	4.63	0.47	7.6	0
Radium 226 +...	SFLMW-2	13	7.668	7.57	6.53	9	0
Radium 226 +...	SFLMW-3	15	5.673	5	3.65	10	0
Radium 226 +...	SFLMW-4	16	2.336	1.655	0.4	6.85	0
Radium 226 +...	SFLMW-5	15	11.22	11.5	7.52	13.6	0
Selenium (mg/L)	SFLMW-6	13	0.01596	0.01	0.005	0.0525	61.54
Selenium (mg/L)	SFLMW-7	13	0.009231	0.01	0.005	0.02	84.62
Selenium (mg/L)	MNW-15	13	0.01612	0.01	0.005	0.05	76.92
Selenium (mg/L)	MNW-18 (bg)	12	0.008333	0.01	0.005	0.01	100
Selenium (mg/L)	SFLMW-2	13	0.008462	0.01	0.005	0.01	100
Selenium (mg/L)	SFLMW-3	12	0.009483	0.01	0.005	0.0188	91.67
Selenium (mg/L)	SFLMW-4	13	0.008462	0.01	0.005	0.01	100
Selenium (mg/L)	SFLMW-5	12	0.008741	0.01	0.005	0.01	91.67
Sulfate (mg/L)	SFLMW-6	14	2256	2250	1870	2520	0
Sulfate (mg/L)	SFLMW-7	14	742.5	770	576	816	0
Sulfate (mg/L)	MNW-15	14	1284	1265	1190	1480	0
Sulfate (mg/L)	MNW-18 (bg)	13	1799	1790	1300	2200	0
Sulfate (mg/L)	SFLMW-2	12	1840	1850	1720	2010	0
Sulfate (mg/L)	SFLMW-3	14	2264	2280	2070	2460	0

Box & Whiskers Plot

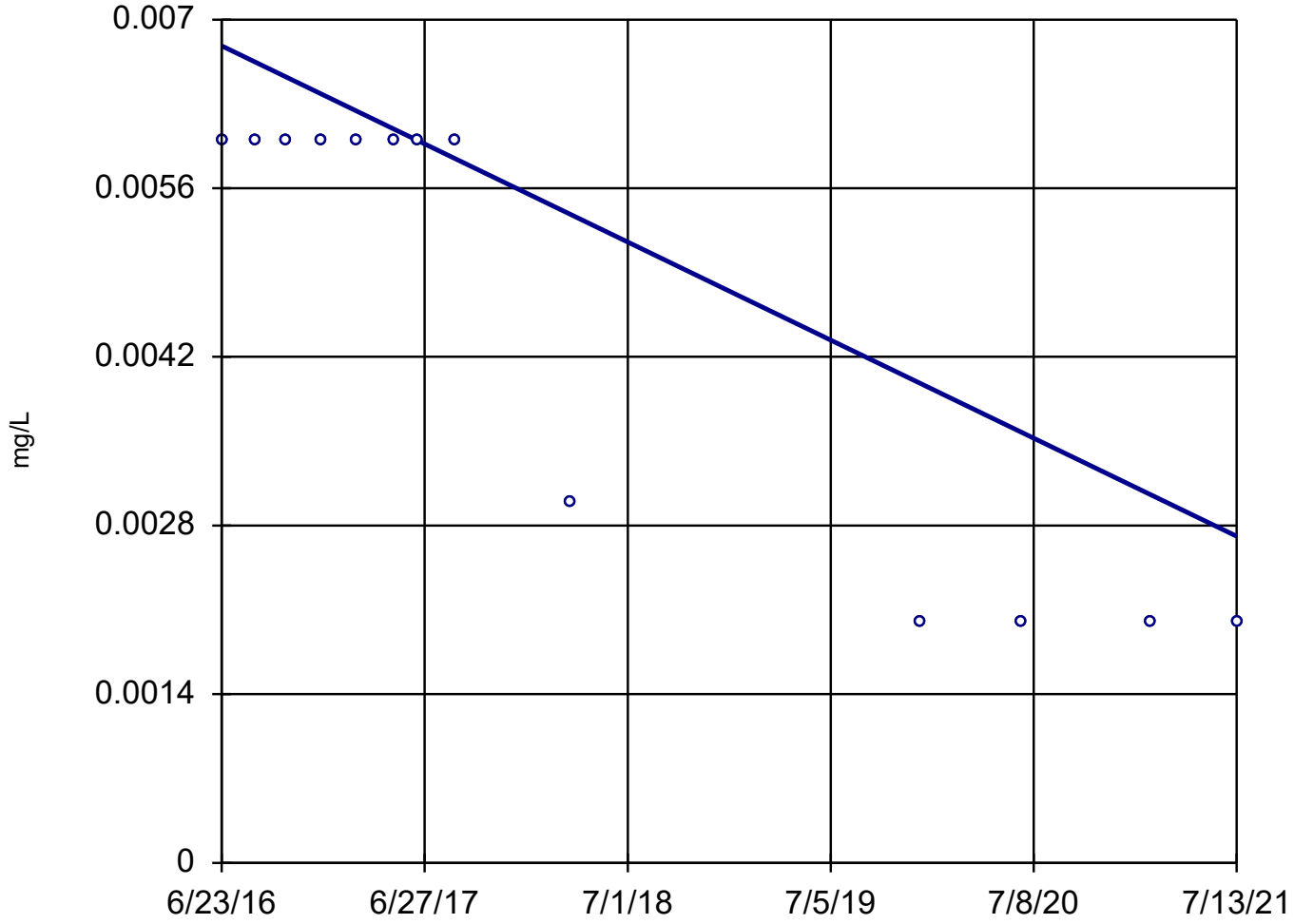
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:33 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Sulfate (mg/L)	SFLMW-4	14	2176	2205	1870	2390	0
Sulfate (mg/L)	SFLMW-5	13	2171	2150	2070	2330	0
TDS (mg/L)	SFLMW-6	14	8398	8495	6330	11000	0
TDS (mg/L)	SFLMW-7	14	6163	6540	4200	7260	0
TDS (mg/L)	MNW-15	13	2858	2700	2540	4100	0
TDS (mg/L)	MNW-18 (bg)	14	3342	3675	1270	4070	0
TDS (mg/L)	SFLMW-2	14	6991	6885	5730	8340	0
TDS (mg/L)	SFLMW-3	14	5233	5210	4480	5940	0
TDS (mg/L)	SFLMW-4	14	5926	5950	5310	6470	0
TDS (mg/L)	SFLMW-5	14	7616	7530	6890	8350	0
Thallium (mg/L)	SFLMW-6	15	0.003411	0.00329	0.00264	0.0041	0
Thallium (mg/L)	SFLMW-7	16	0.001688	0.002	0.001	0.002	100
Thallium (mg/L)	MNW-15	16	0.001736	0.002	0.000739	0.00248	43.75
Thallium (mg/L)	MNW-18 (bg)	15	0.001667	0.002	0.001	0.002	100
Thallium (mg/L)	SFLMW-2	16	0.001657	0.002	0.000612	0.002	81.25
Thallium (mg/L)	SFLMW-3	16	0.005906	0.006	0.0045	0.007	0
Thallium (mg/L)	SFLMW-4	16	0.001938	0.002	0.001	0.006	93.75
Thallium (mg/L)	SFLMW-5	16	0.001764	0.002	0.00115	0.002	68.75

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

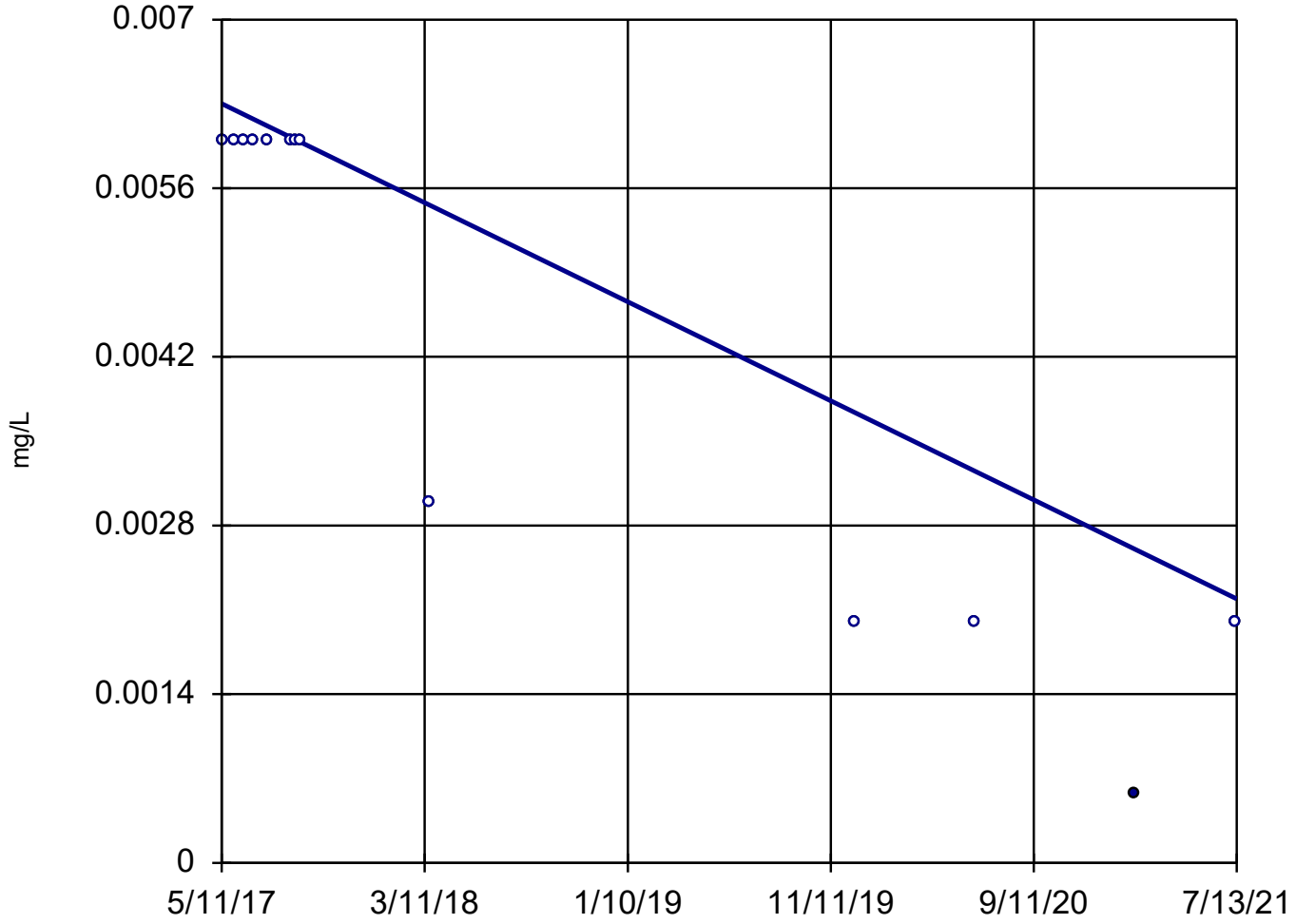
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 13

Slope = -0.0009845 units per year.

Mann-Kendall statistic = -45
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

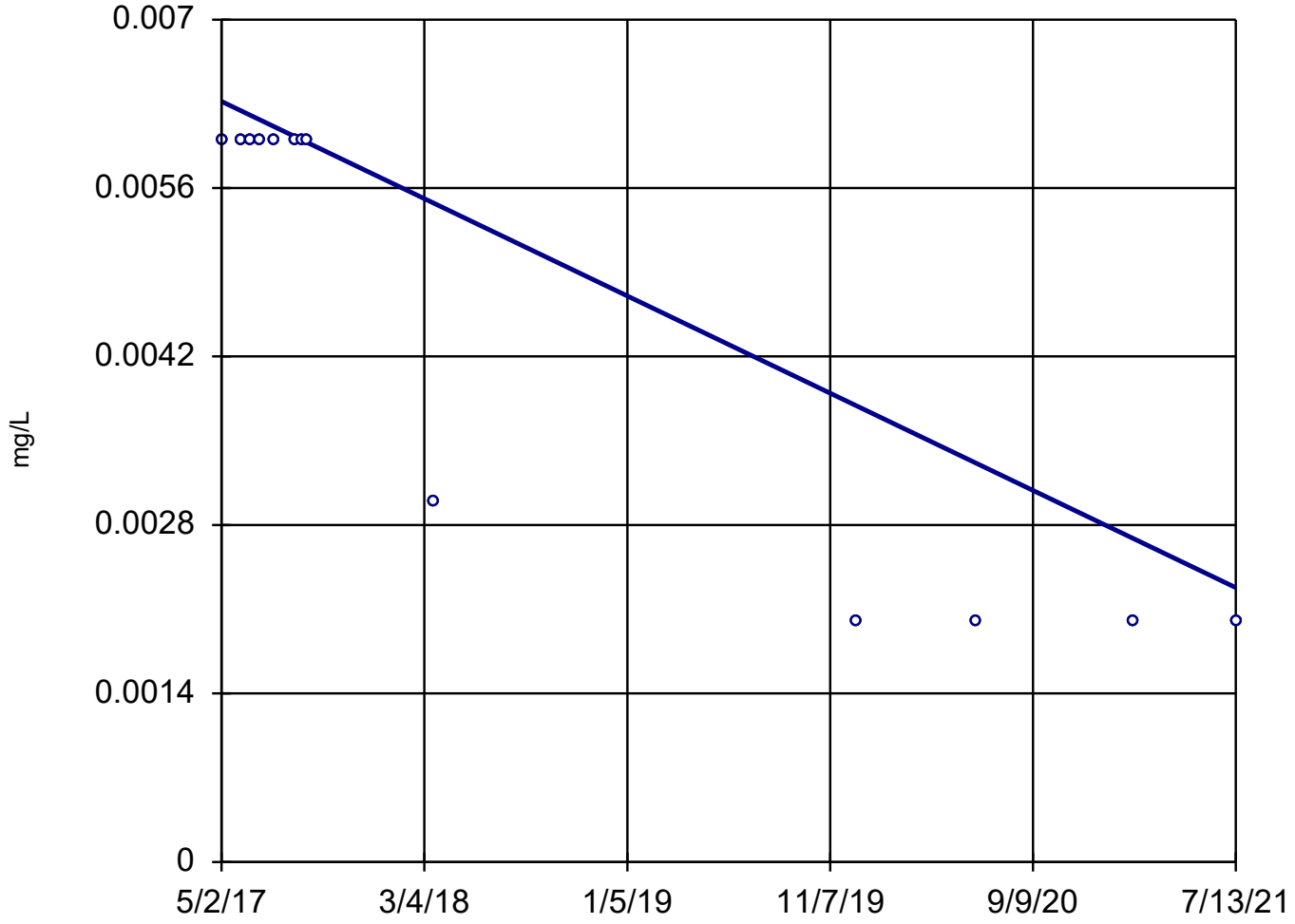
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 13

Slope = -0.0009616 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

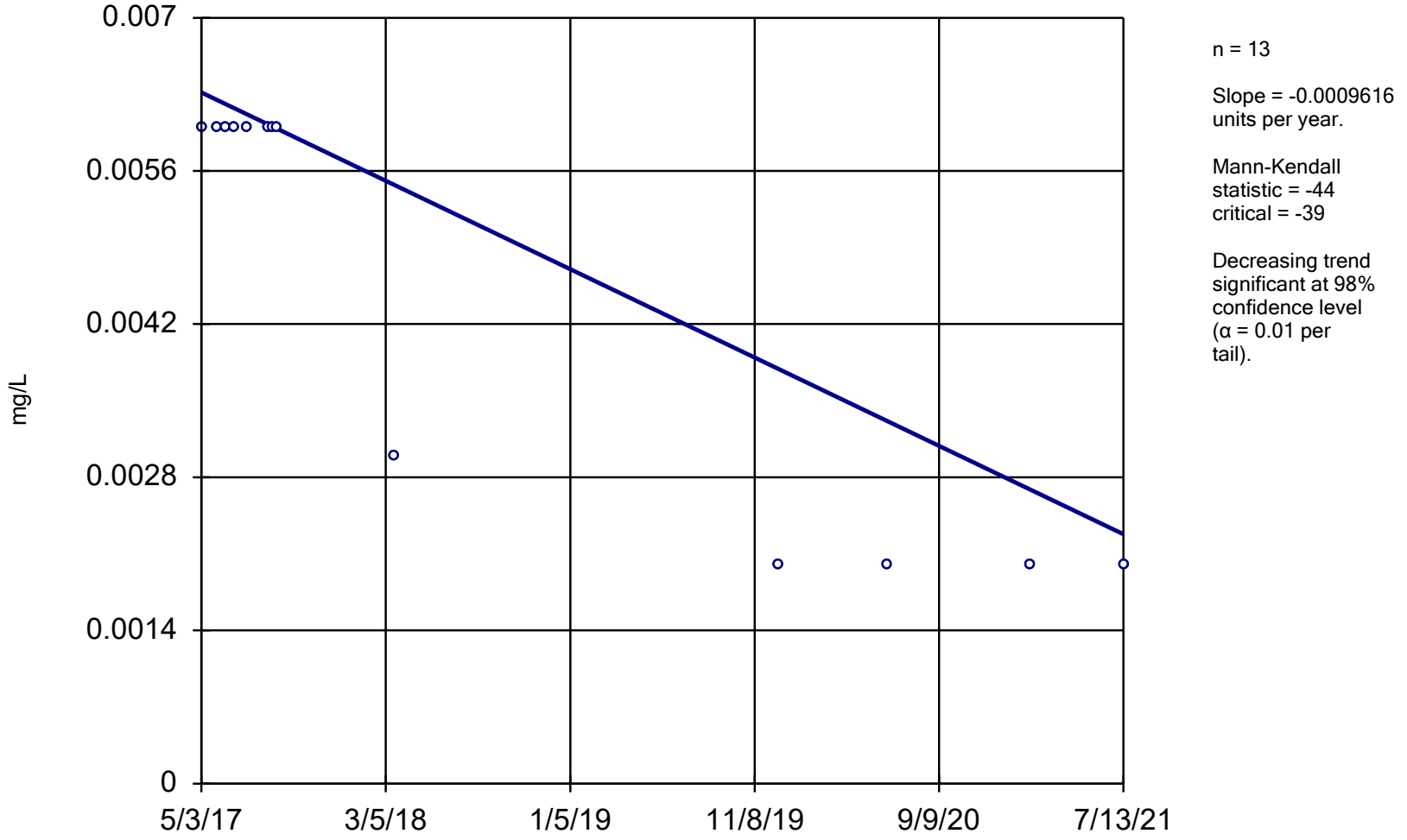
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 13

Slope = -0.0009616 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

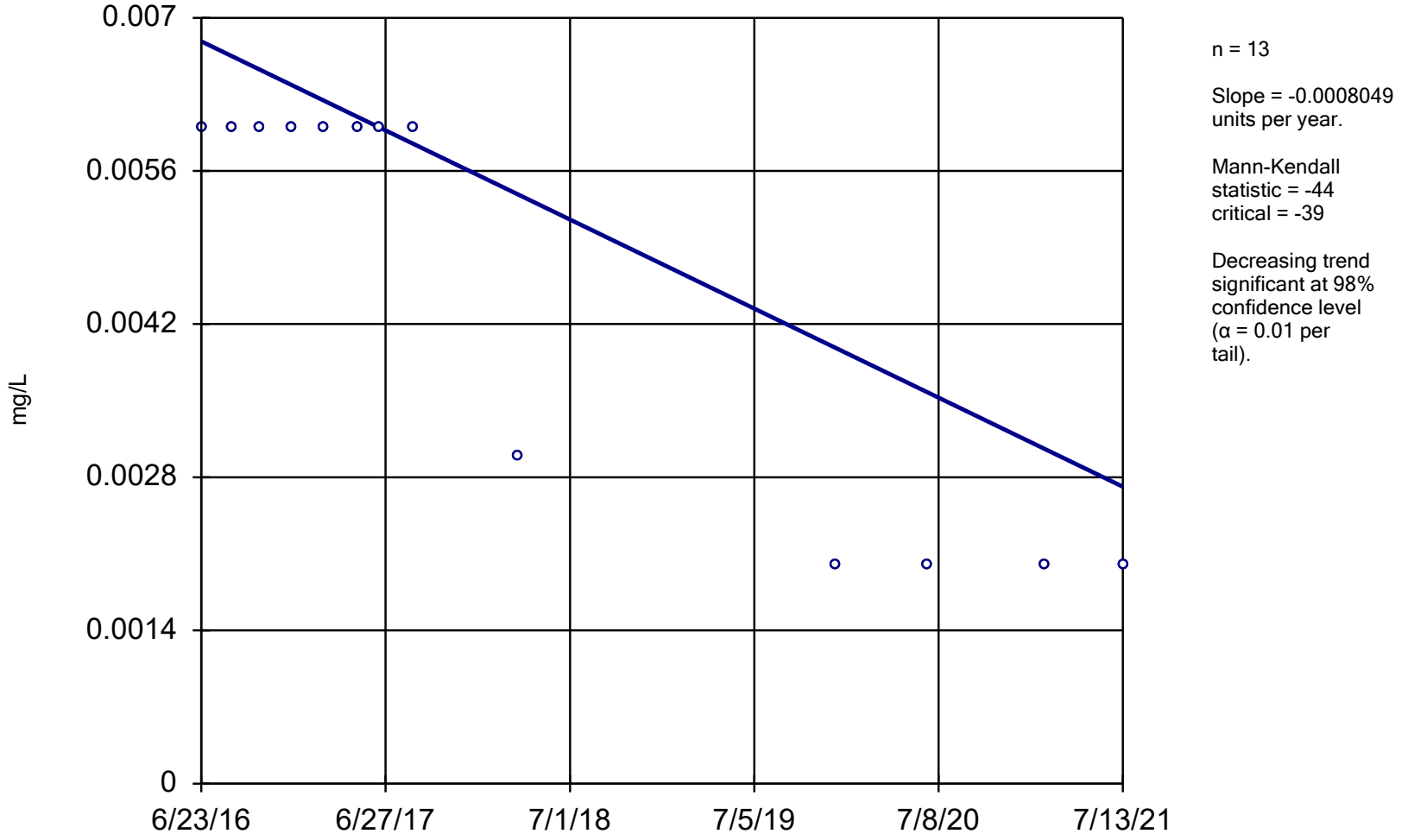
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

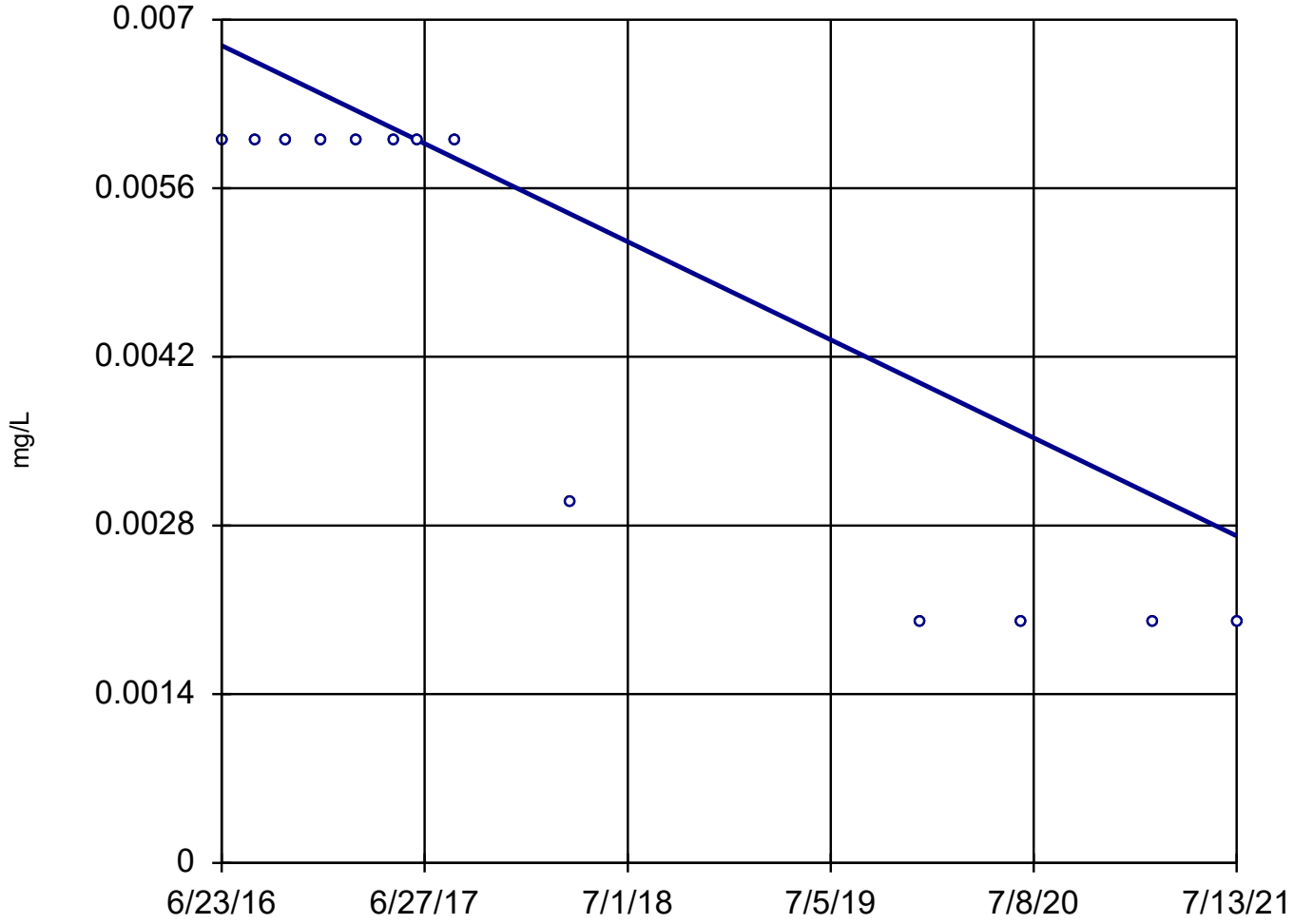
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

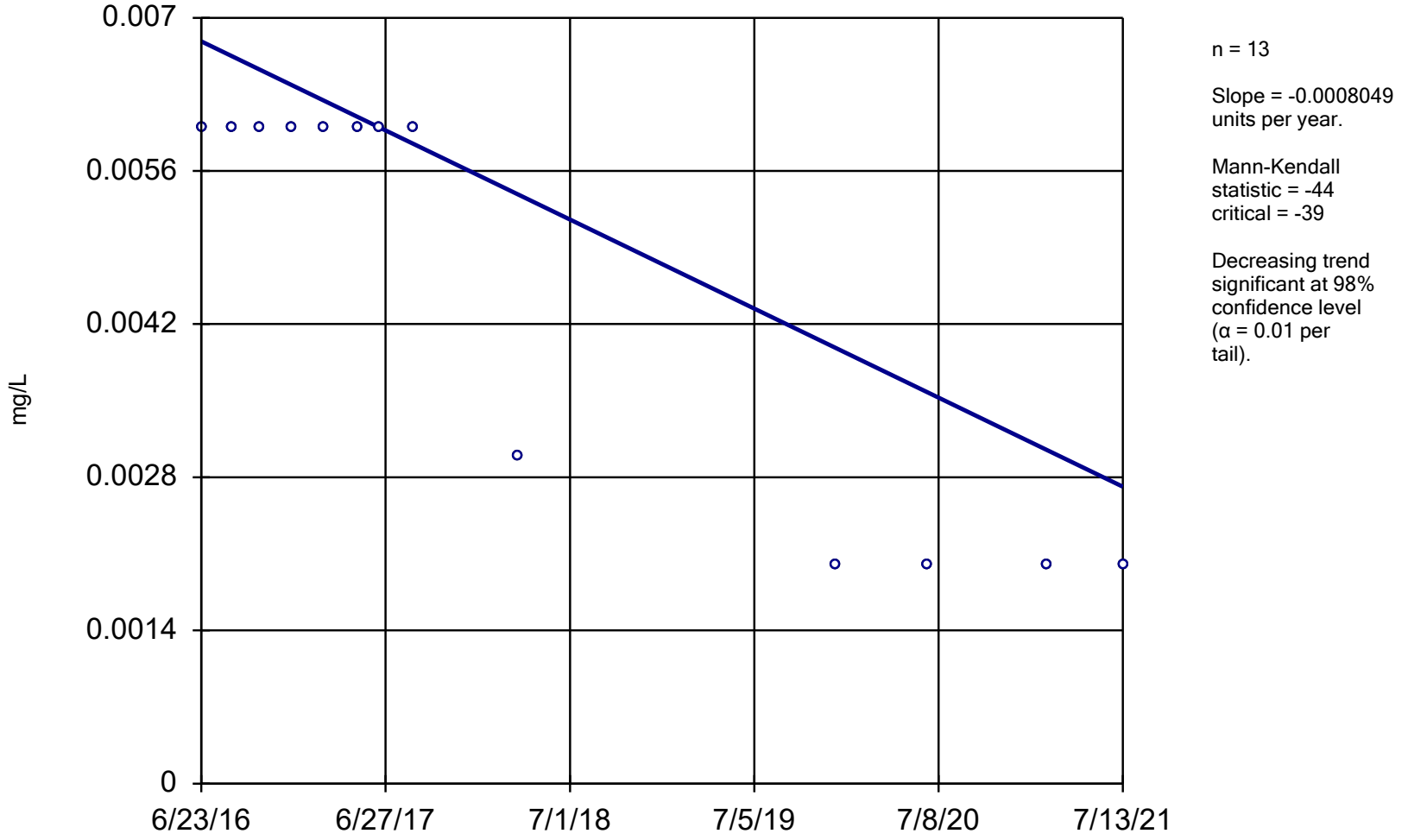
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

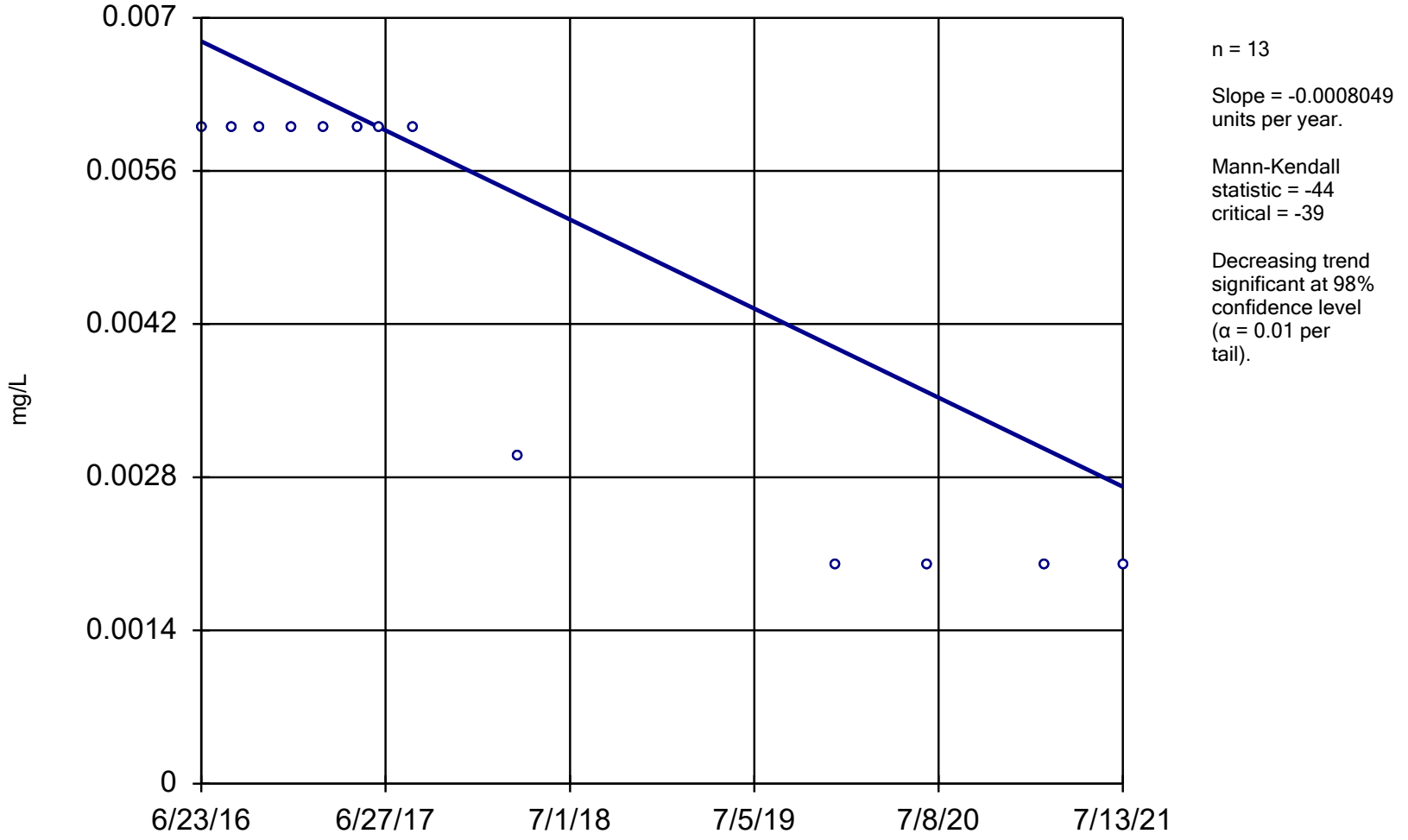
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

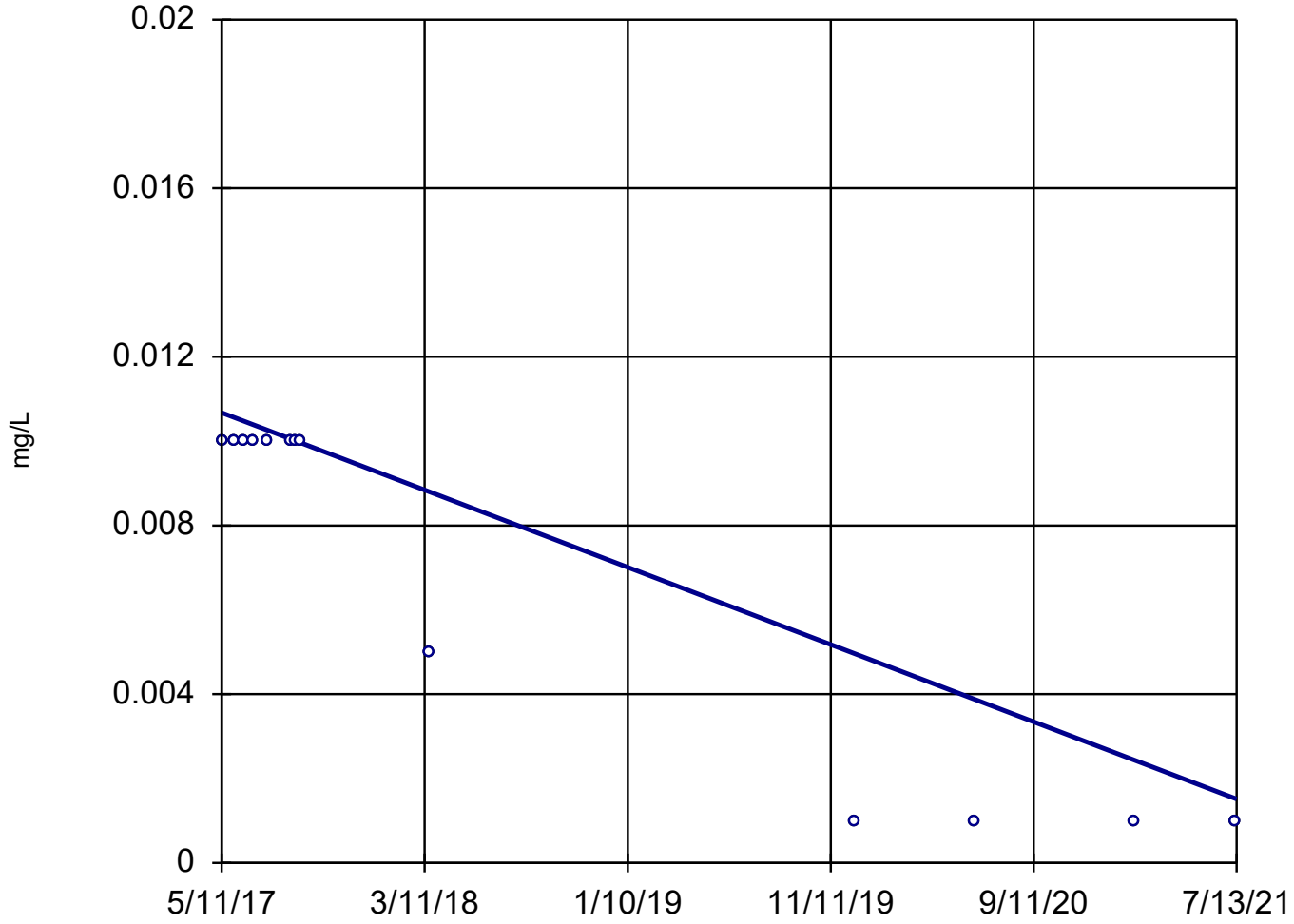
Constituent: Antimony Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 13

Slope = -0.002194 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

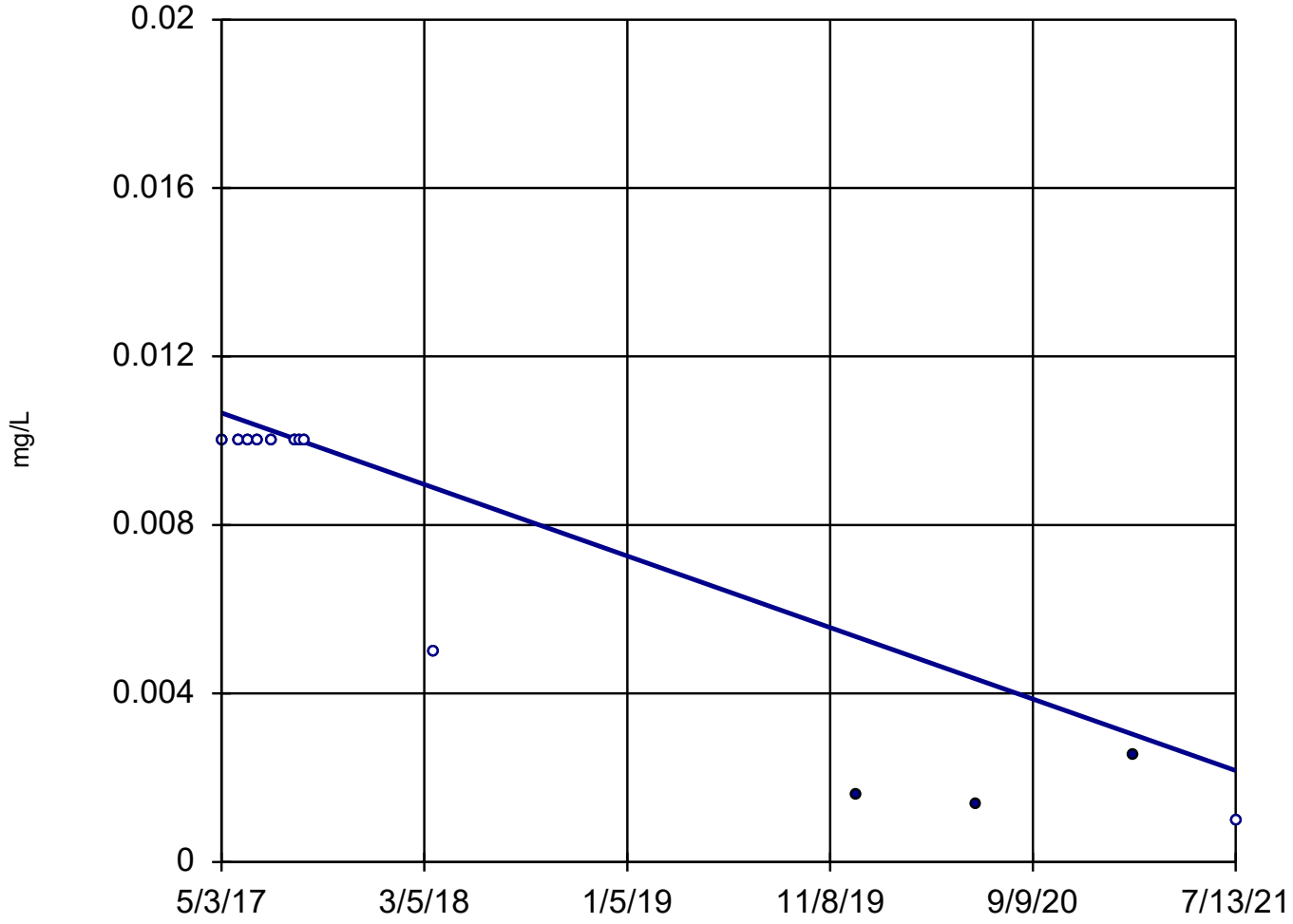
Constituent: Arsenic Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 13

Slope = -0.002023 units per year.

Mann-Kendall statistic = -46
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

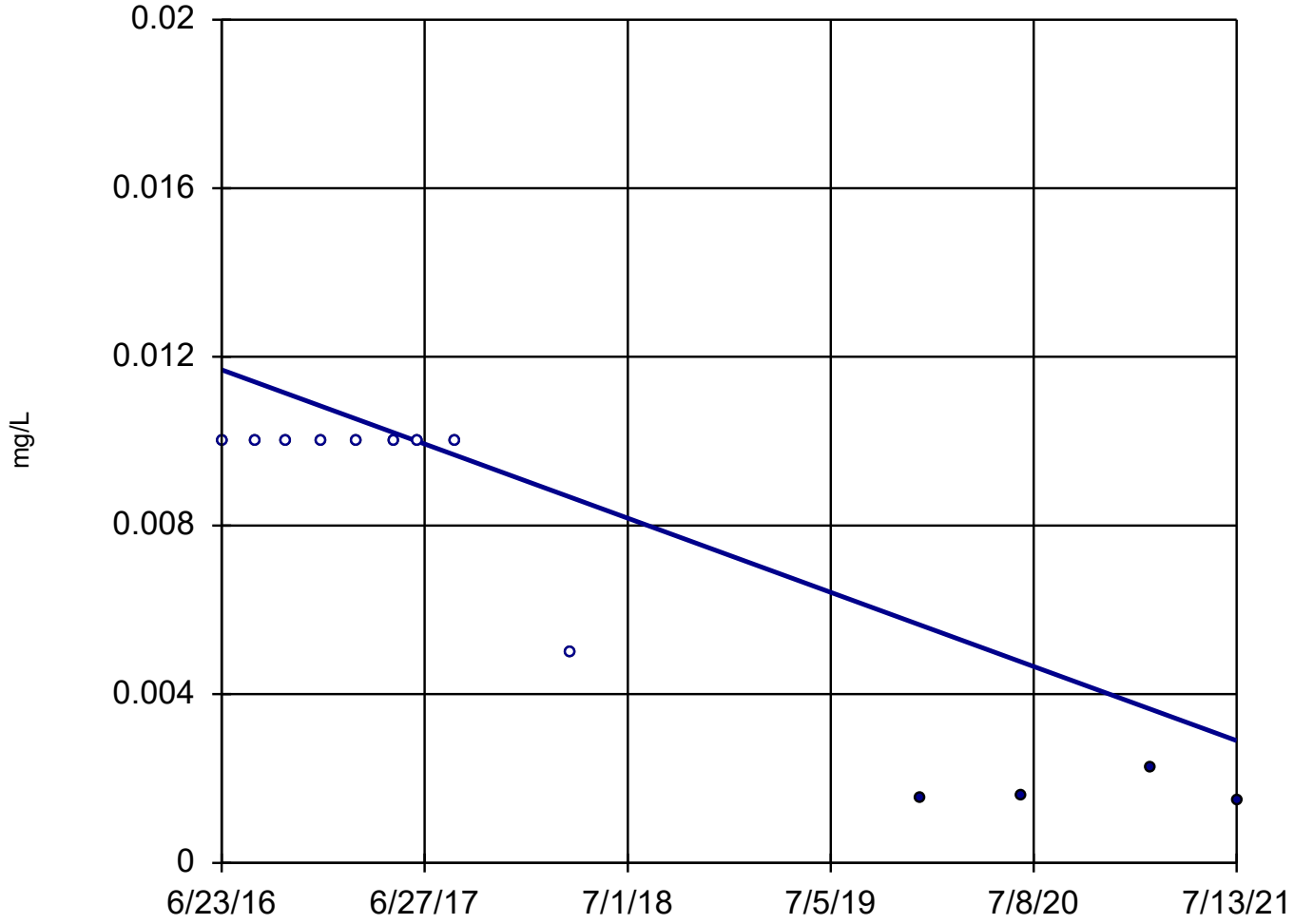
Constituent: Arsenic Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 13

Slope = -0.001739 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

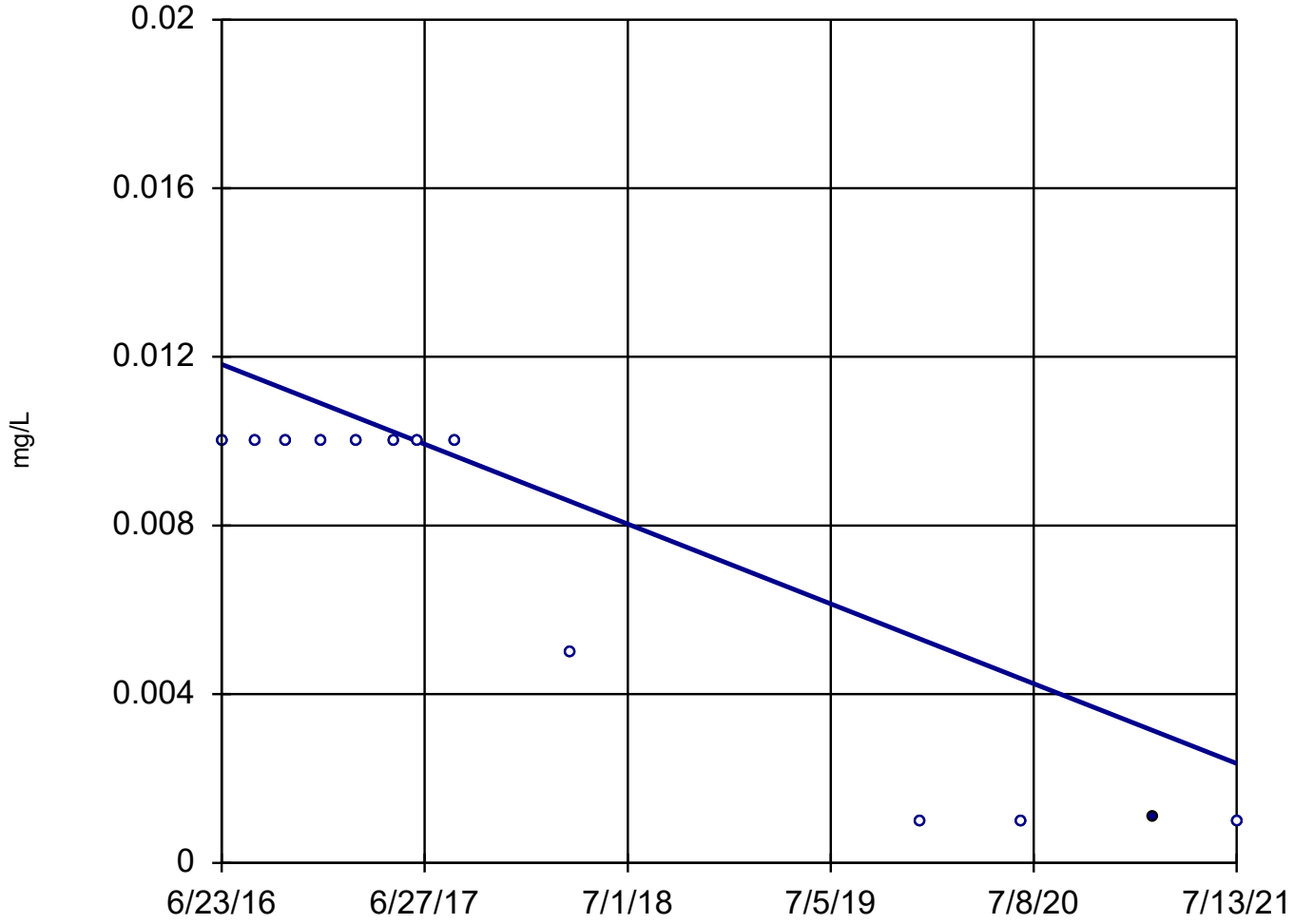
Constituent: Arsenic Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 13

Slope = -0.001872 units per year.

Mann-Kendall statistic = -43
critical = -39

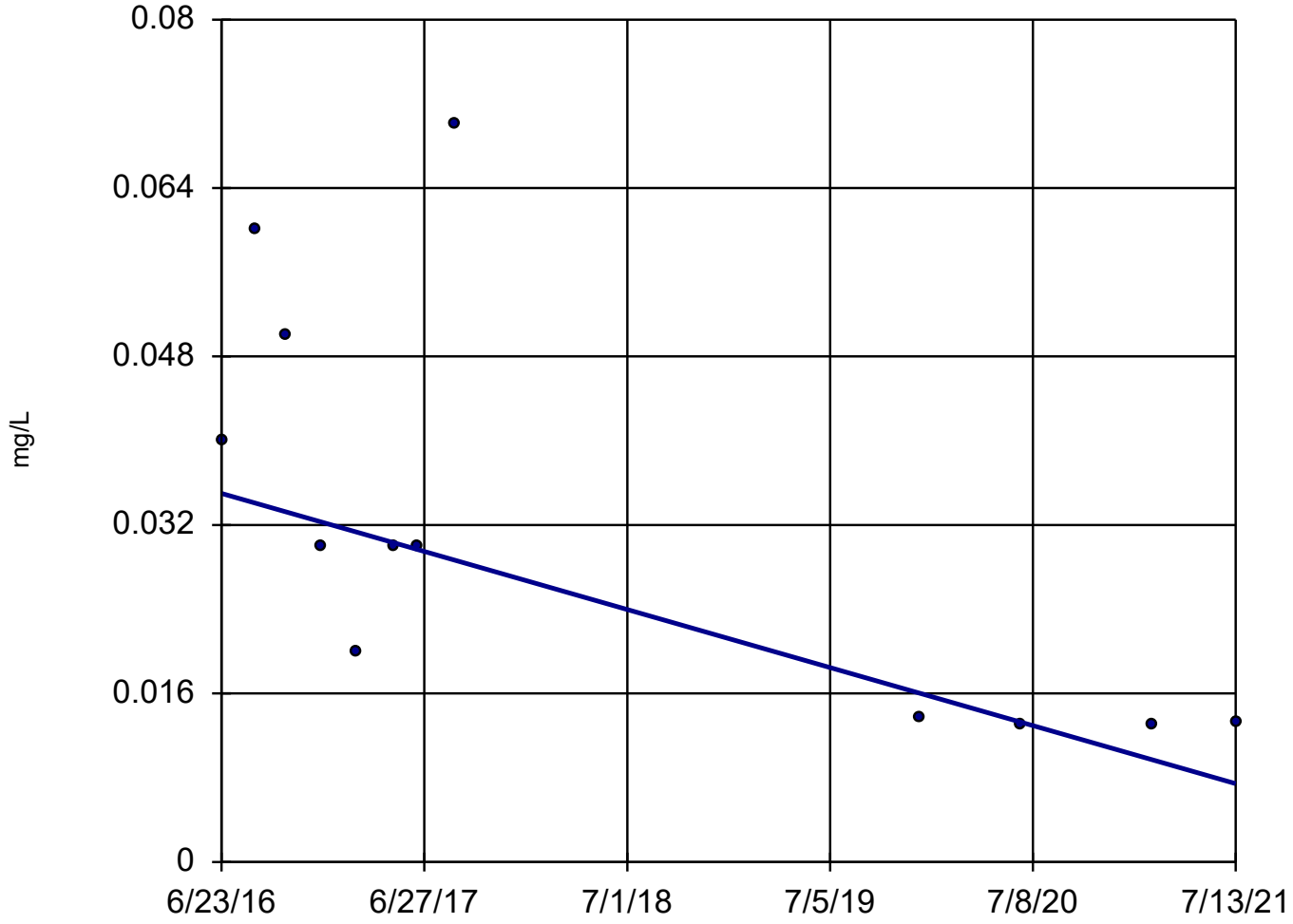
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Arsenic Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 12

Slope = -0.005449 units per year.

Mann-Kendall statistic = -37
critical = -35

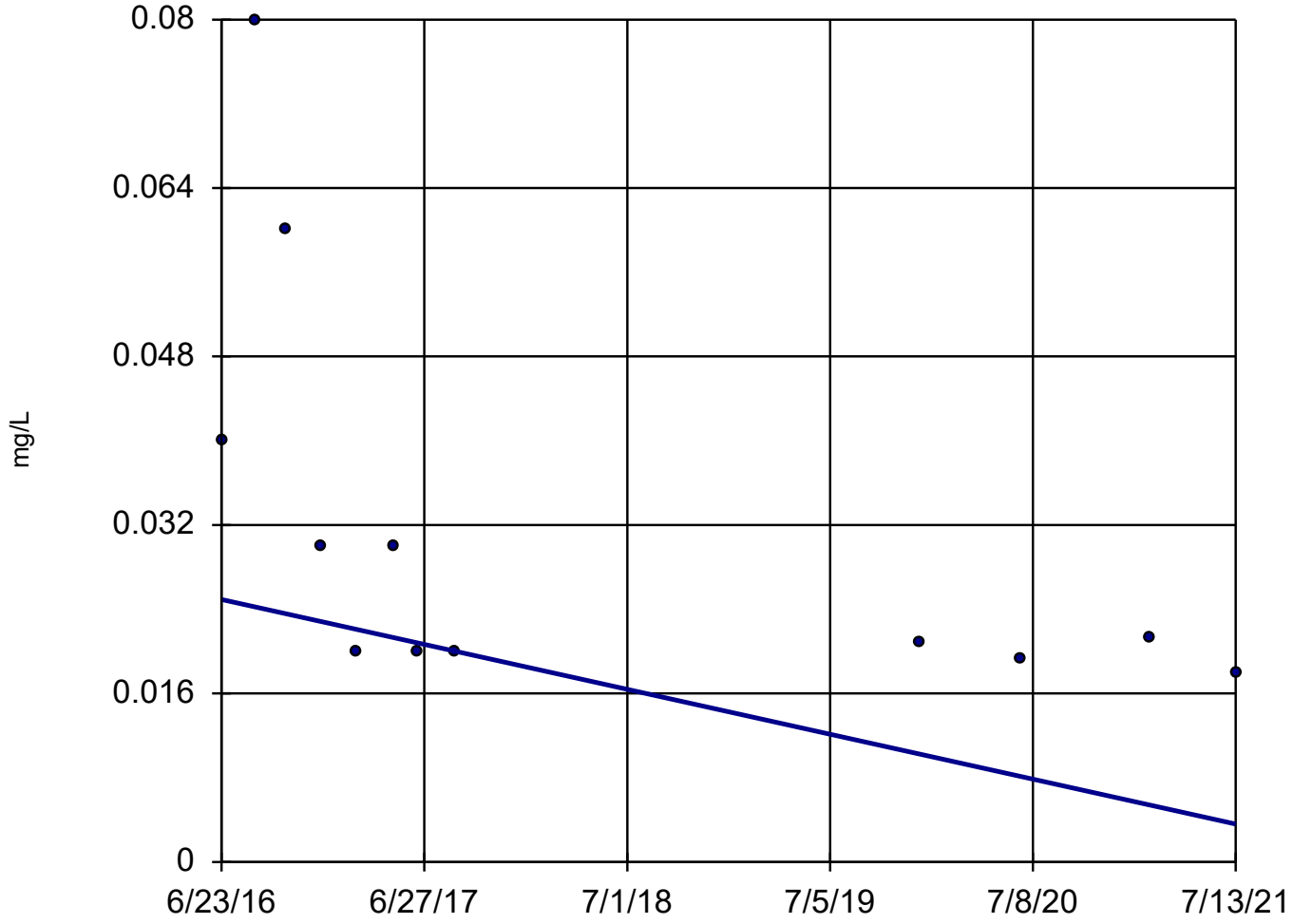
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 12

Slope = -0.004213 units per year.

Mann-Kendall statistic = -40
critical = -35

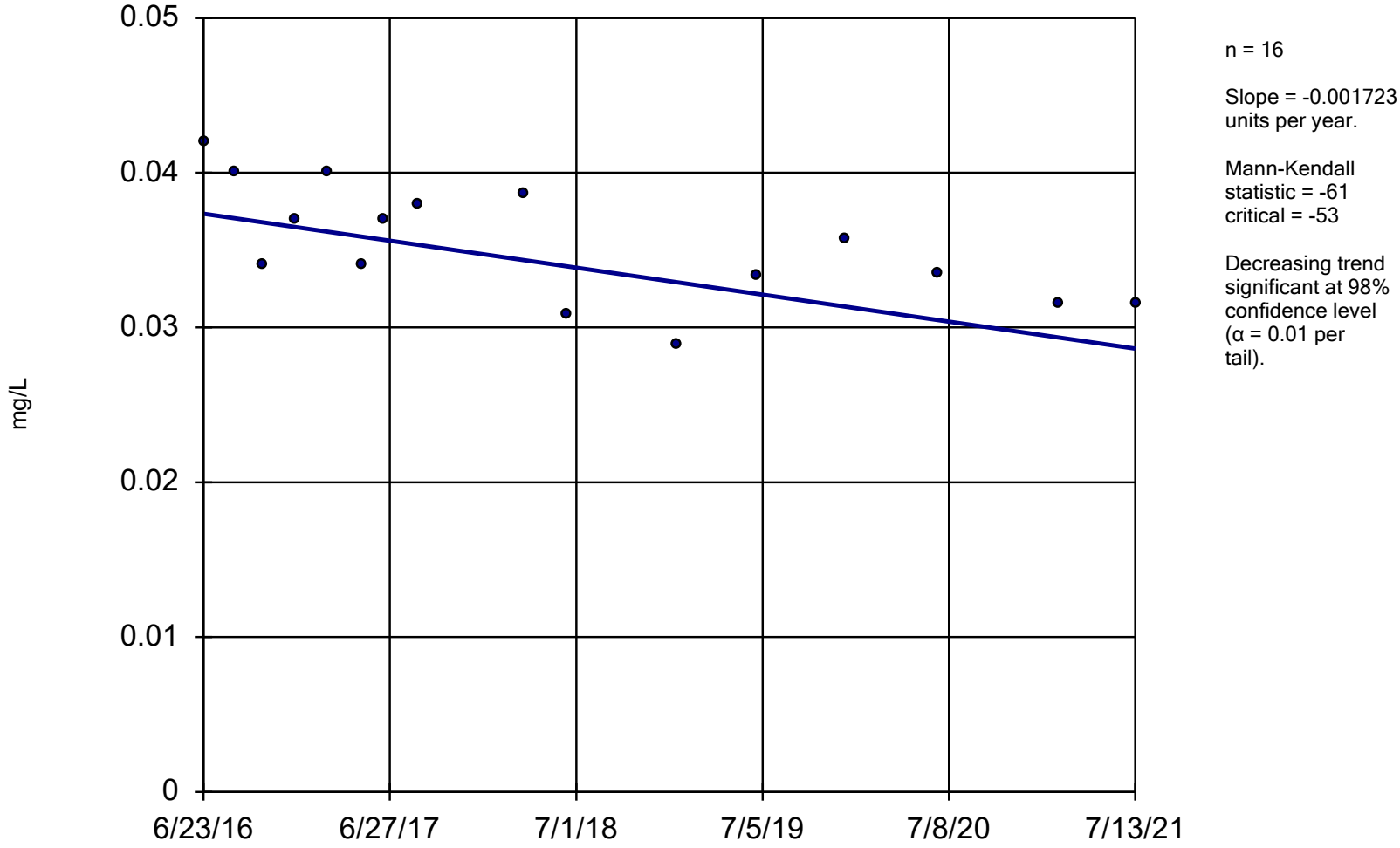
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 16

Slope = -0.001723 units per year.

Mann-Kendall statistic = -61
critical = -53

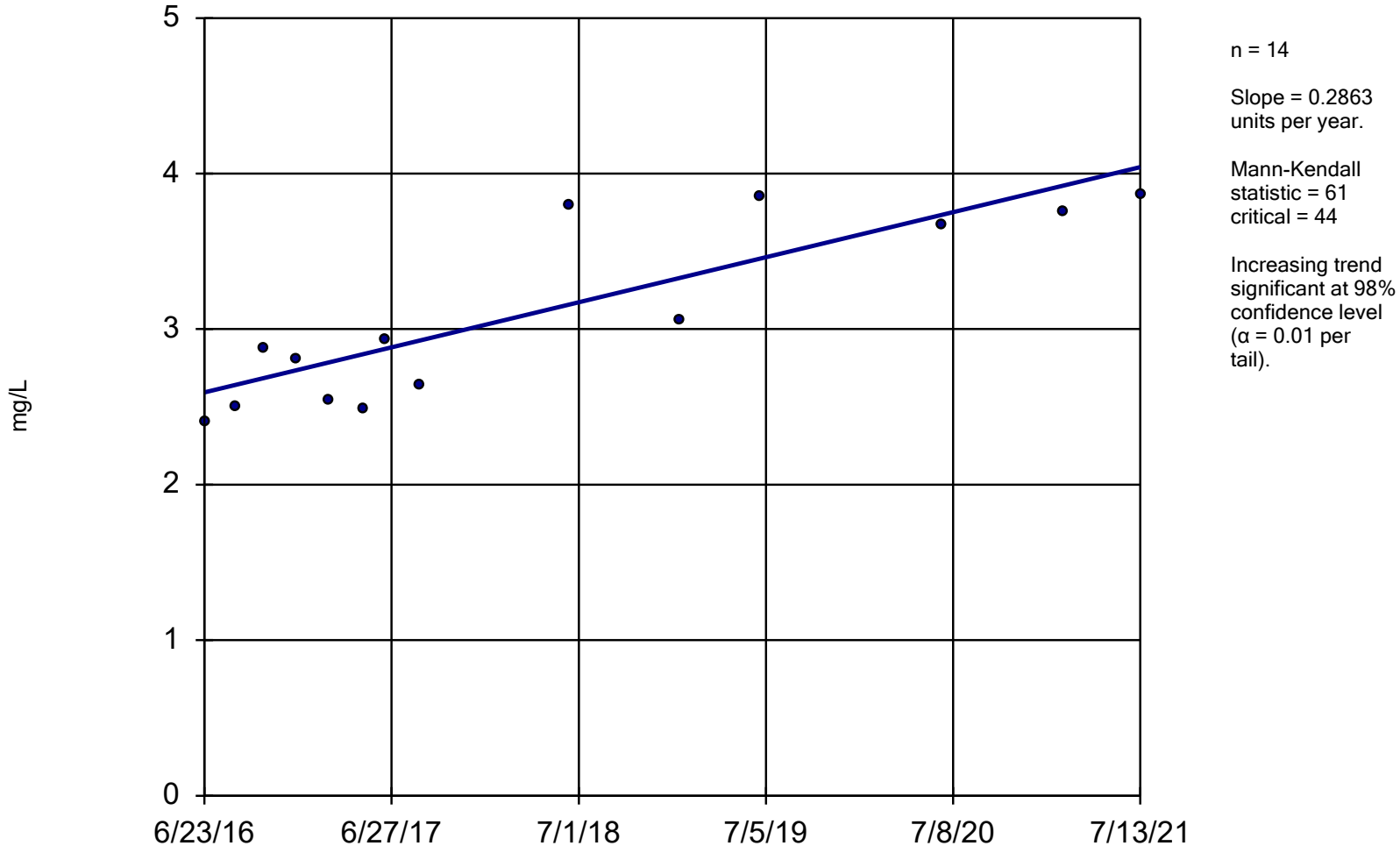
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 8/19/2021 11:37 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 14

Slope = 0.2863 units per year.

Mann-Kendall statistic = 61
critical = 44

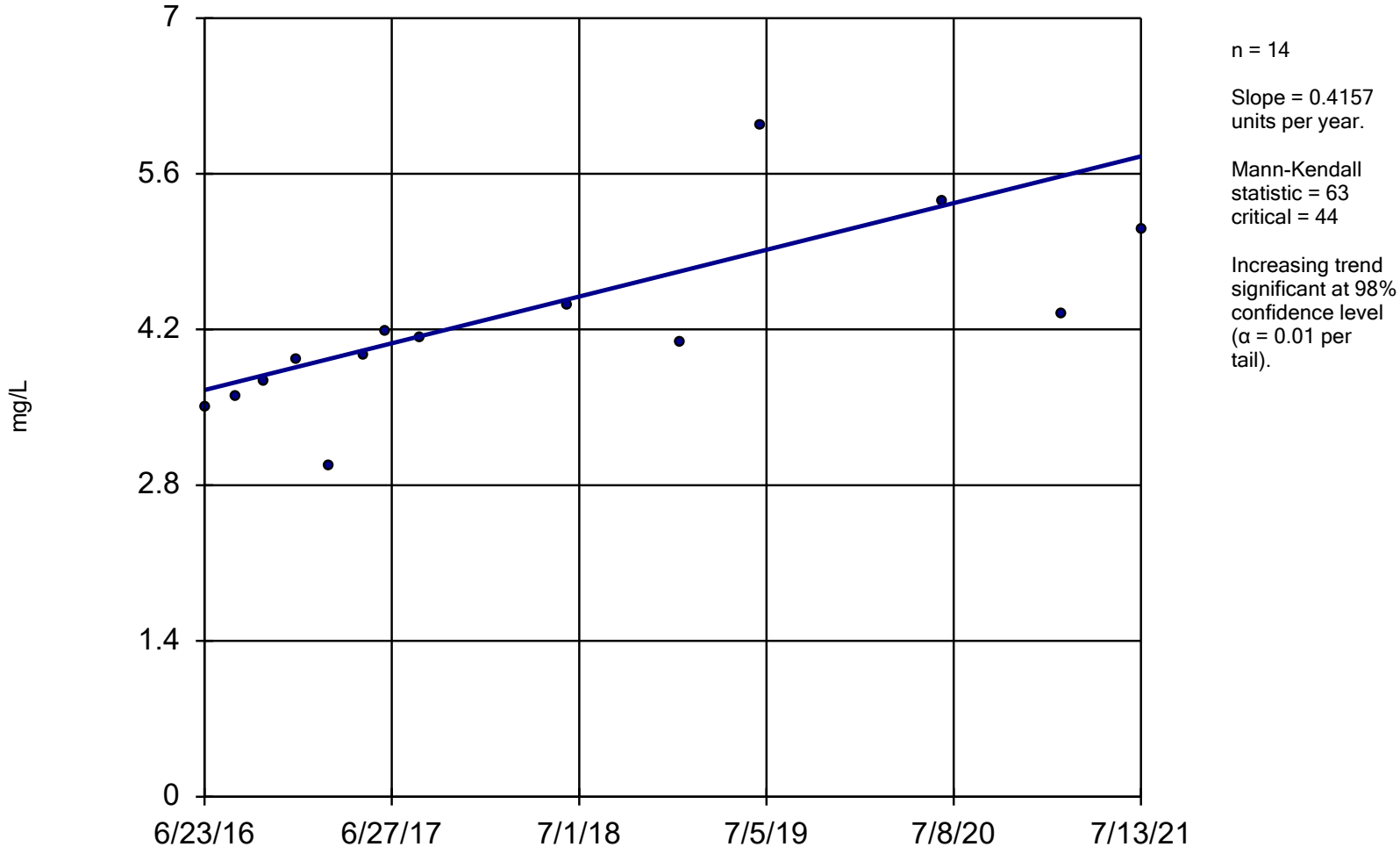
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 14

Slope = 0.4157 units per year.

Mann-Kendall statistic = 63
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

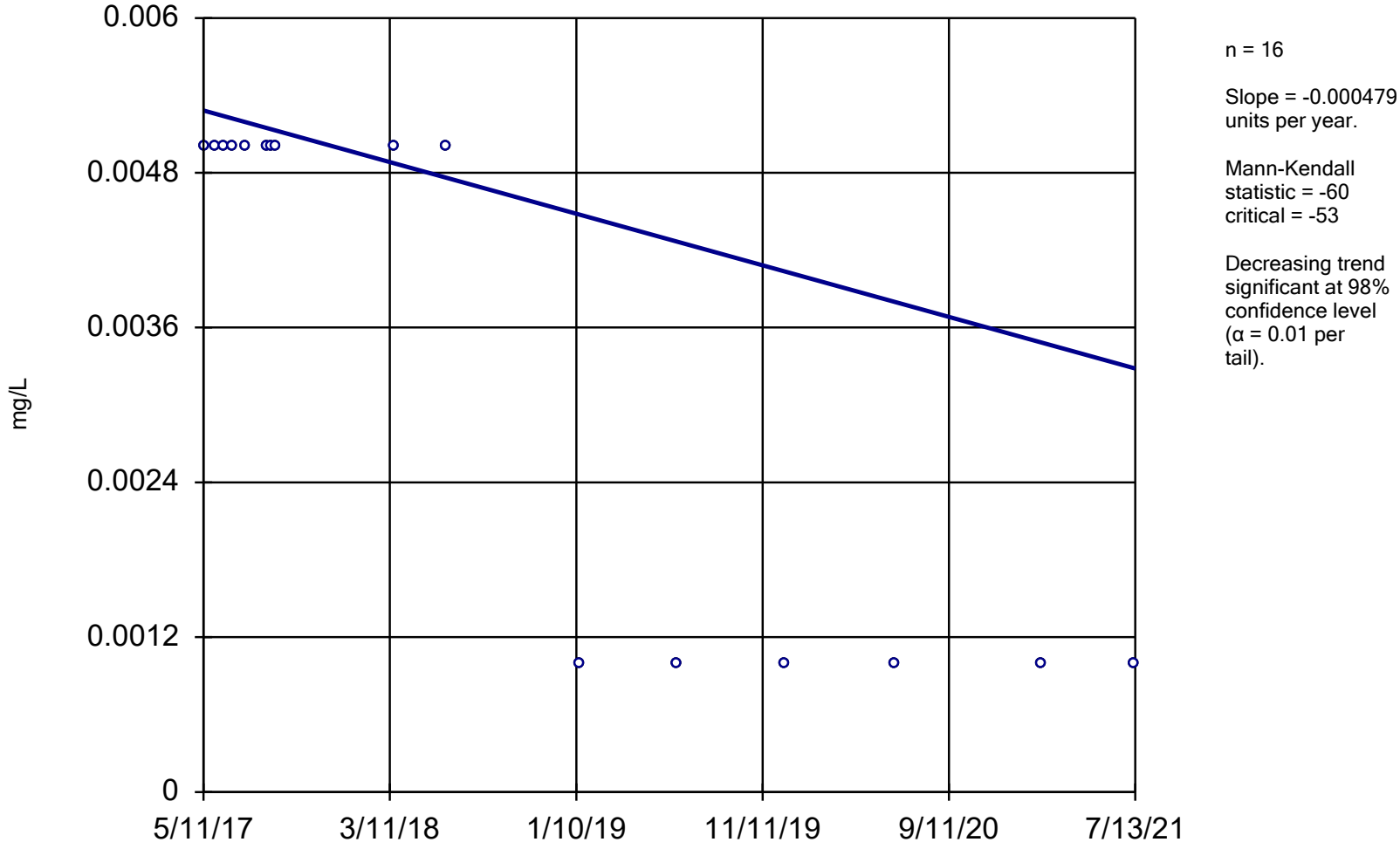
Constituent: Boron Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 16

Slope = -0.000479 units per year.

Mann-Kendall statistic = -60
critical = -53

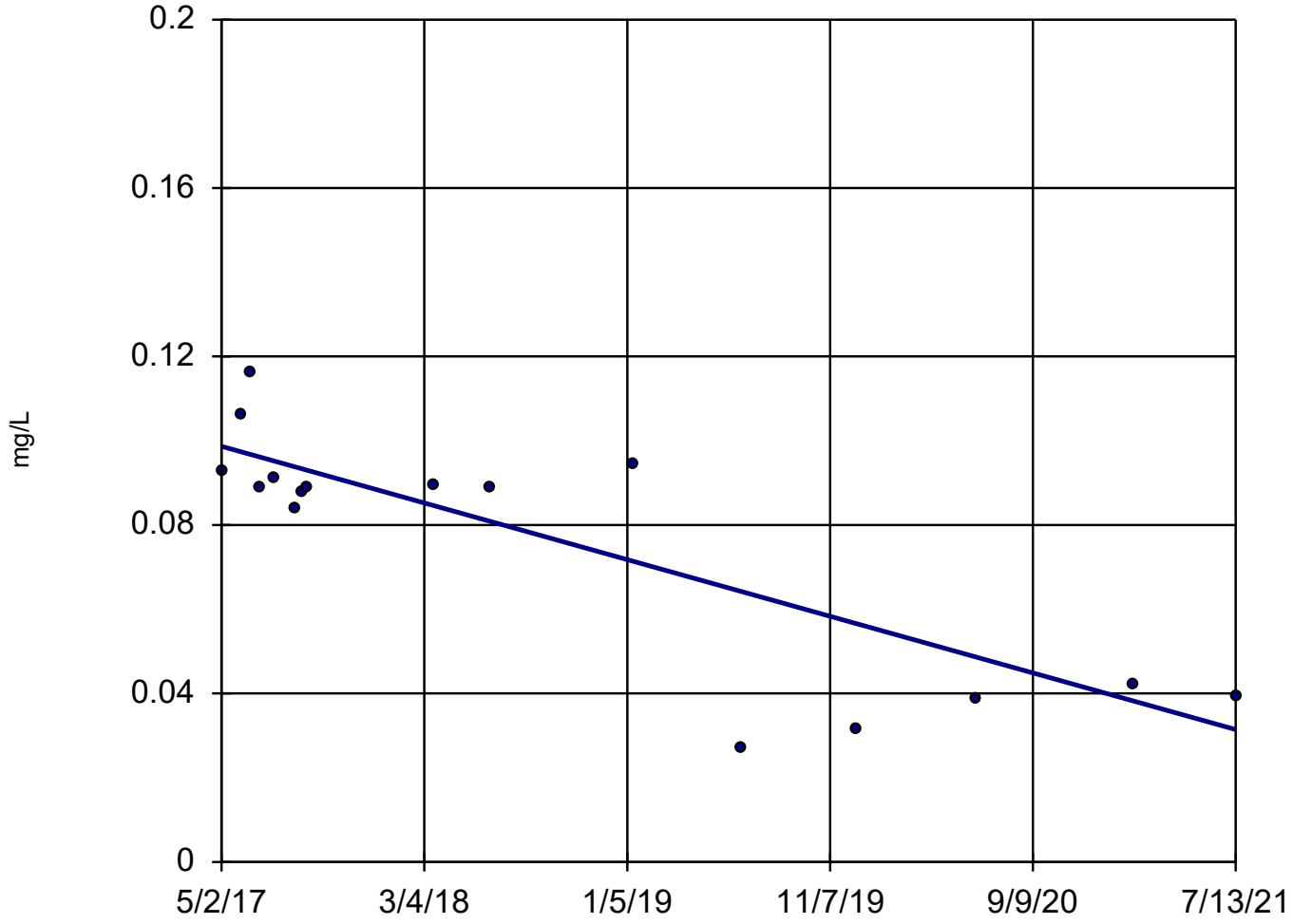
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 16

Slope = -0.016 units per year.

Mann-Kendall statistic = -59
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

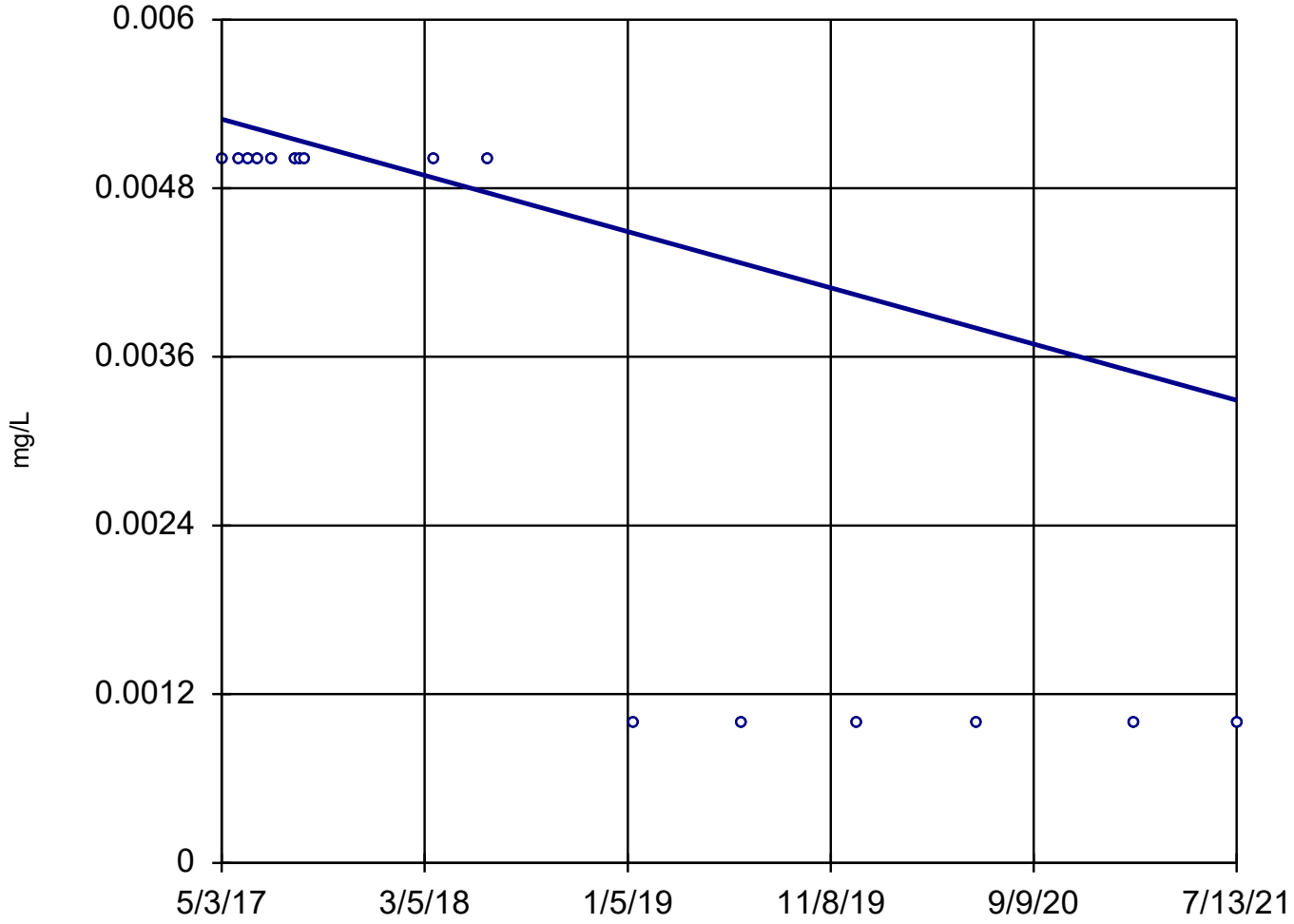
Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 16

Slope = -0.0004765 units per year.

Mann-Kendall statistic = -60
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

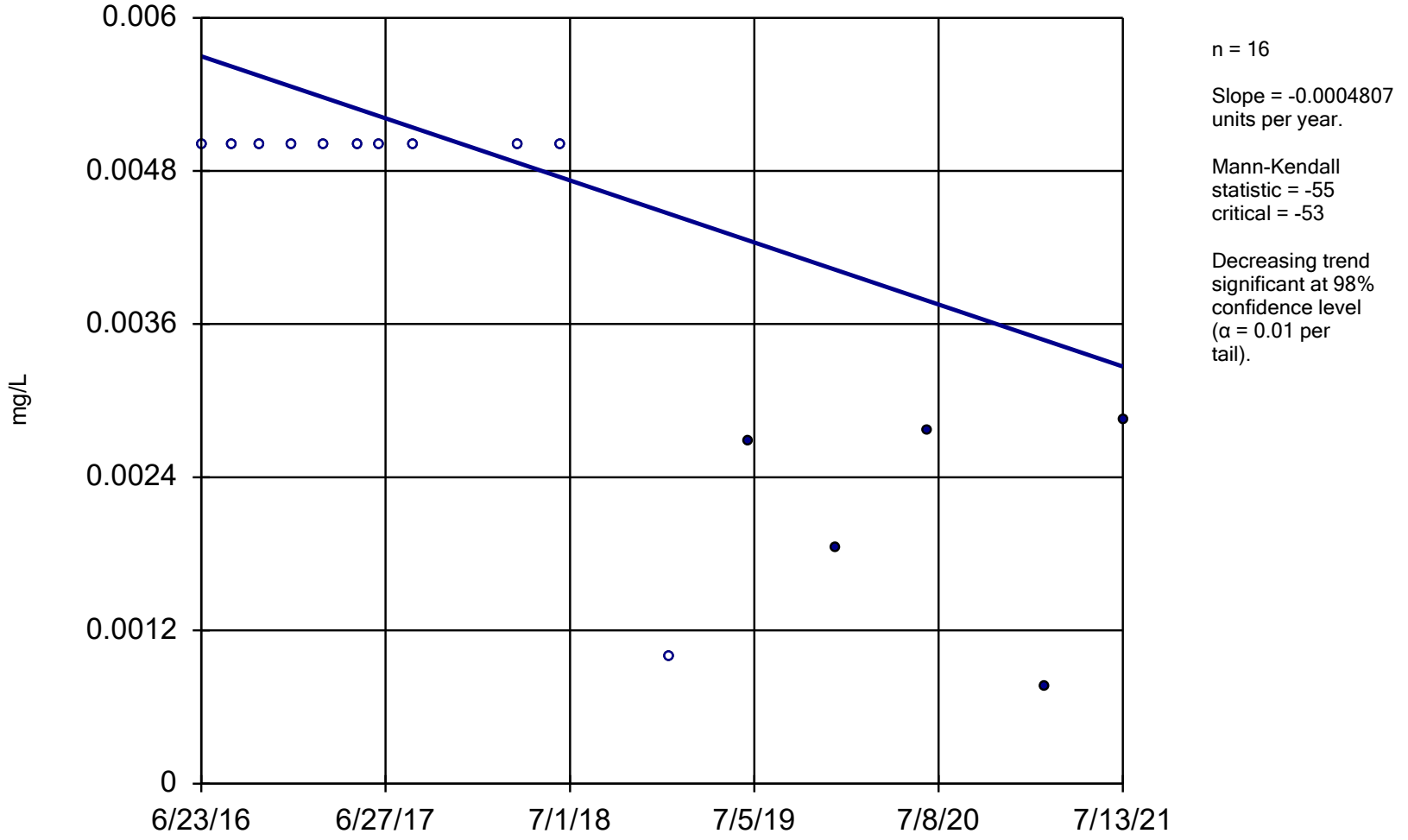
Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 16

Slope = -0.0004807 units per year.

Mann-Kendall statistic = -55
critical = -53

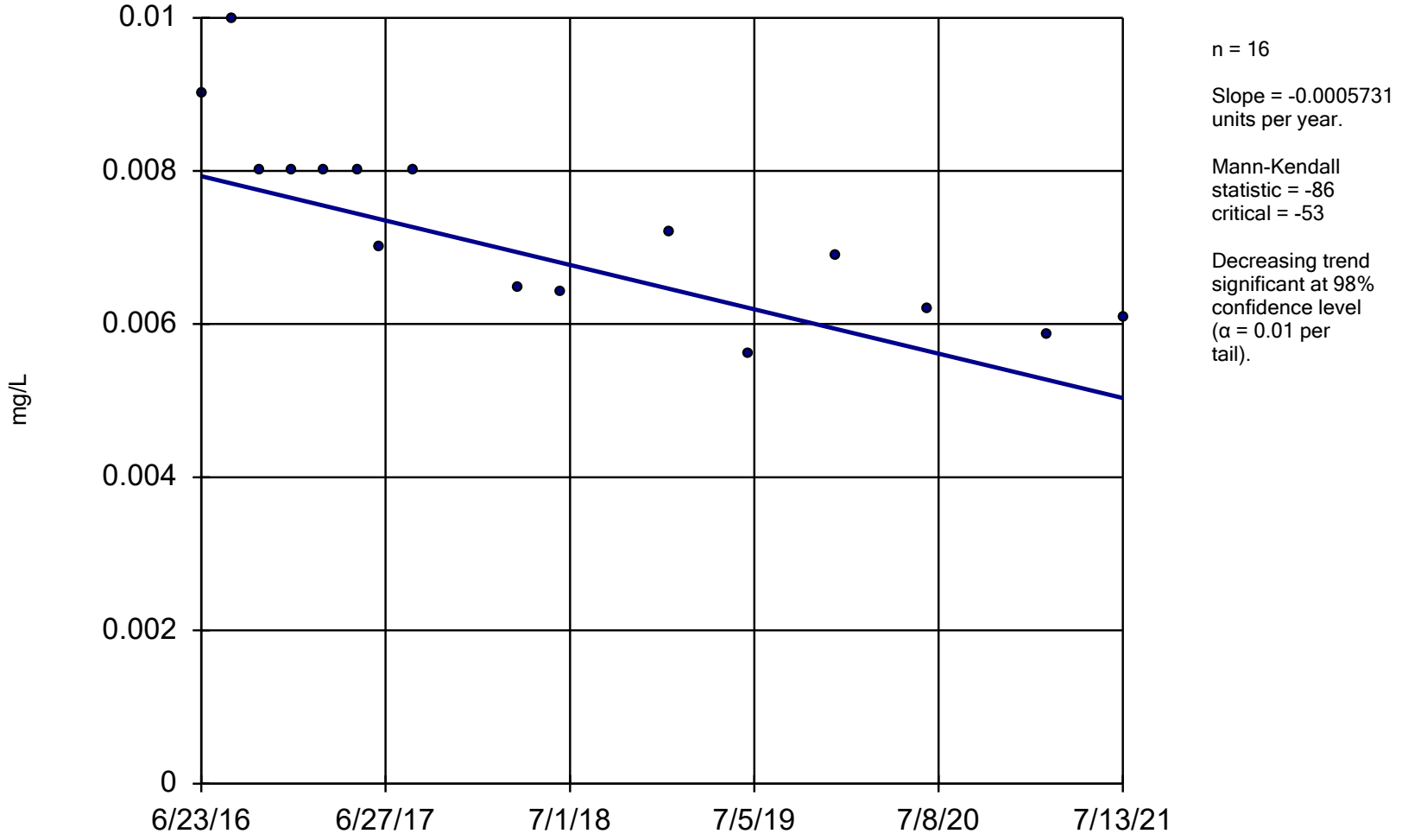
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 16

Slope = -0.0005731 units per year.

Mann-Kendall statistic = -86
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

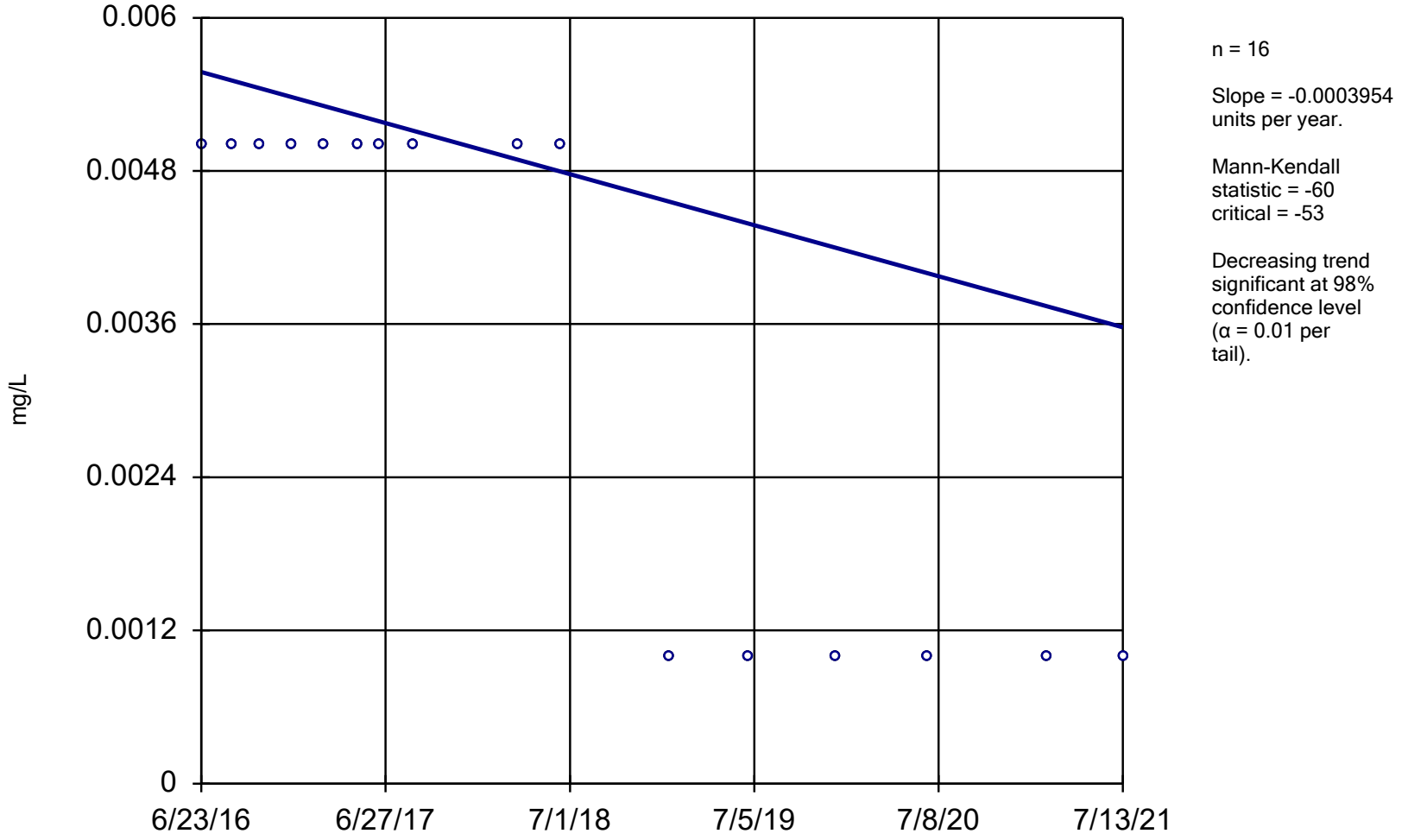
Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 16

Slope = -0.0003954 units per year.

Mann-Kendall statistic = -60
critical = -53

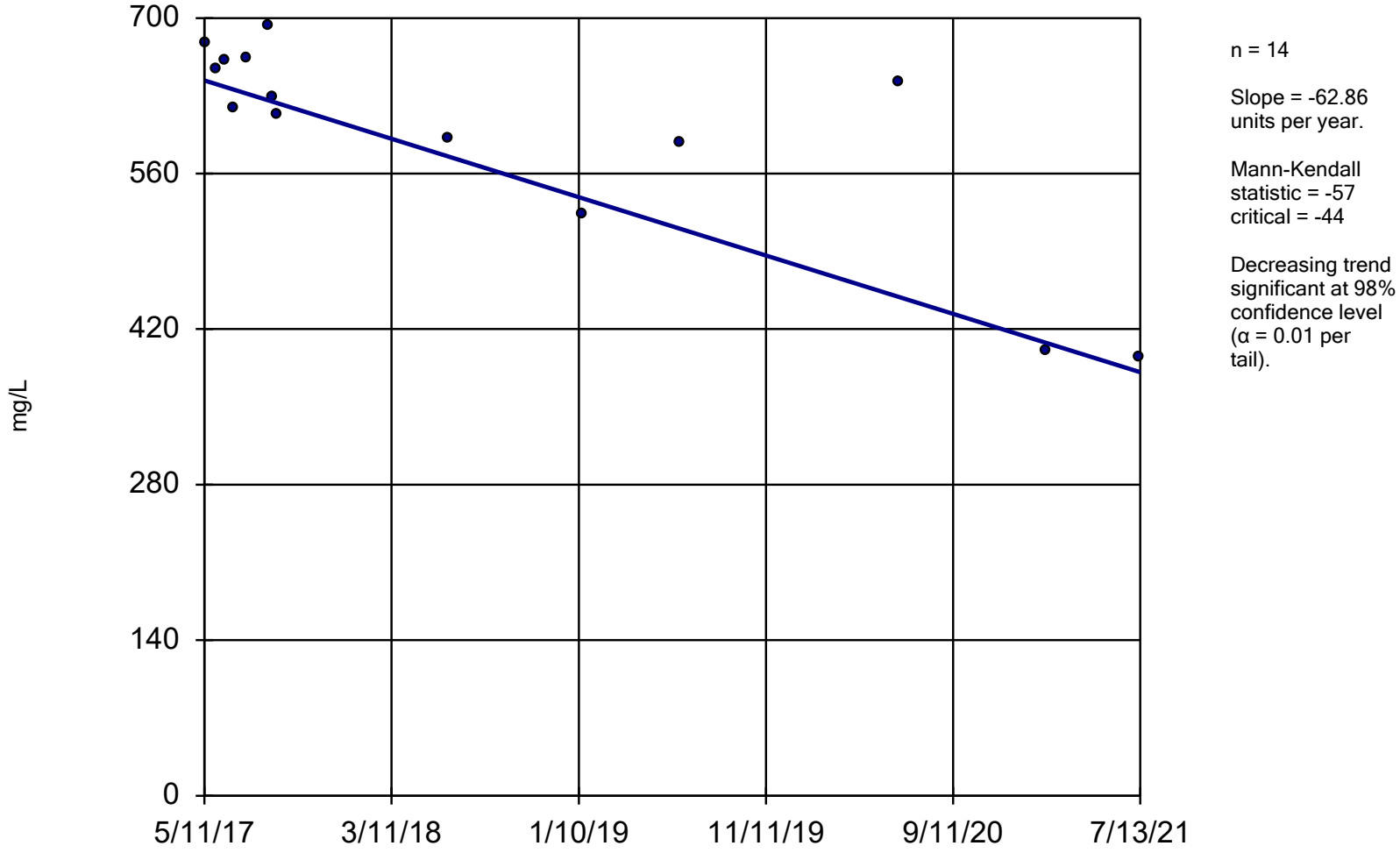
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -62.86 units per year.

Mann-Kendall statistic = -57
critical = -44

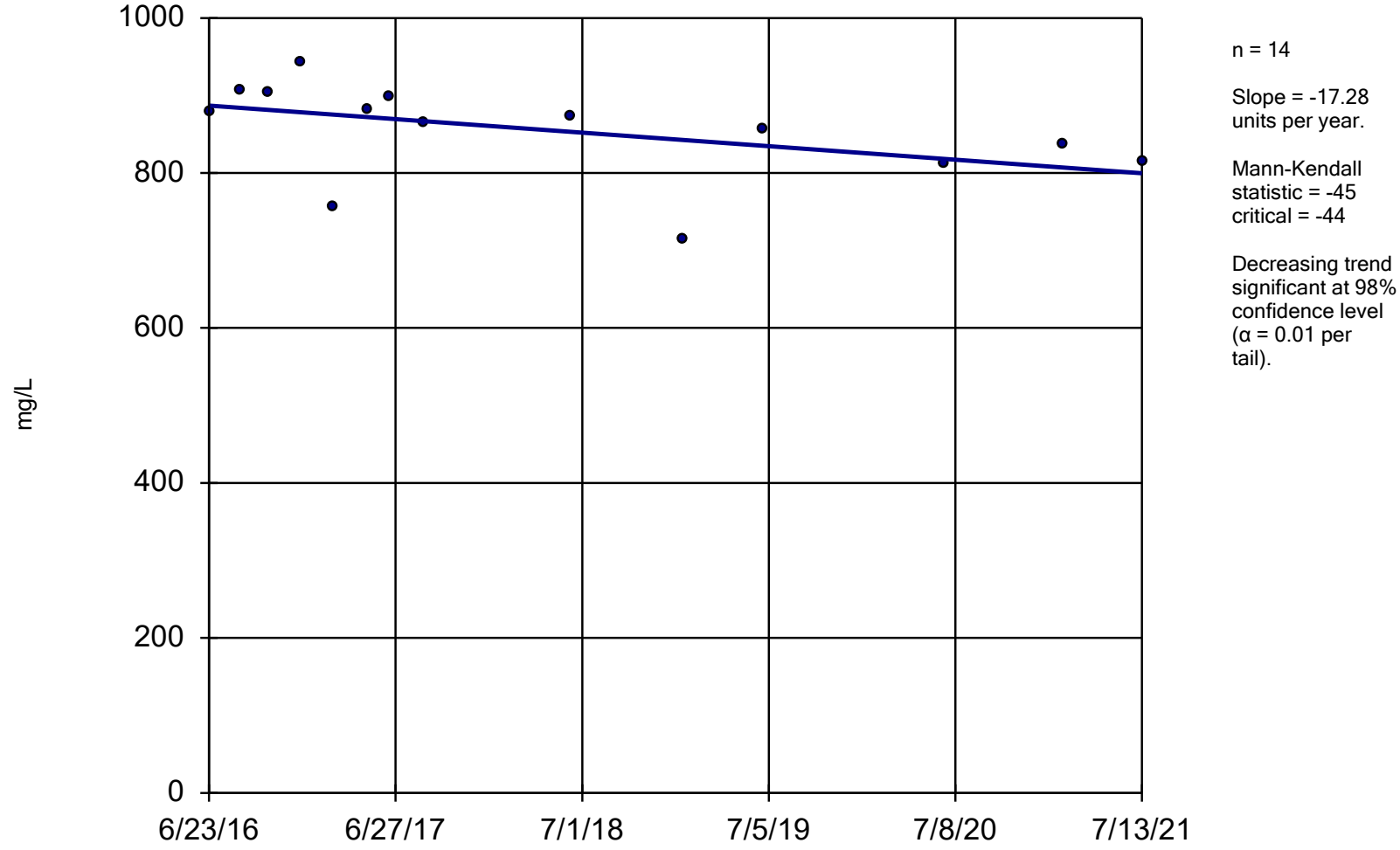
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 14

Slope = -17.28 units per year.

Mann-Kendall statistic = -45
critical = -44

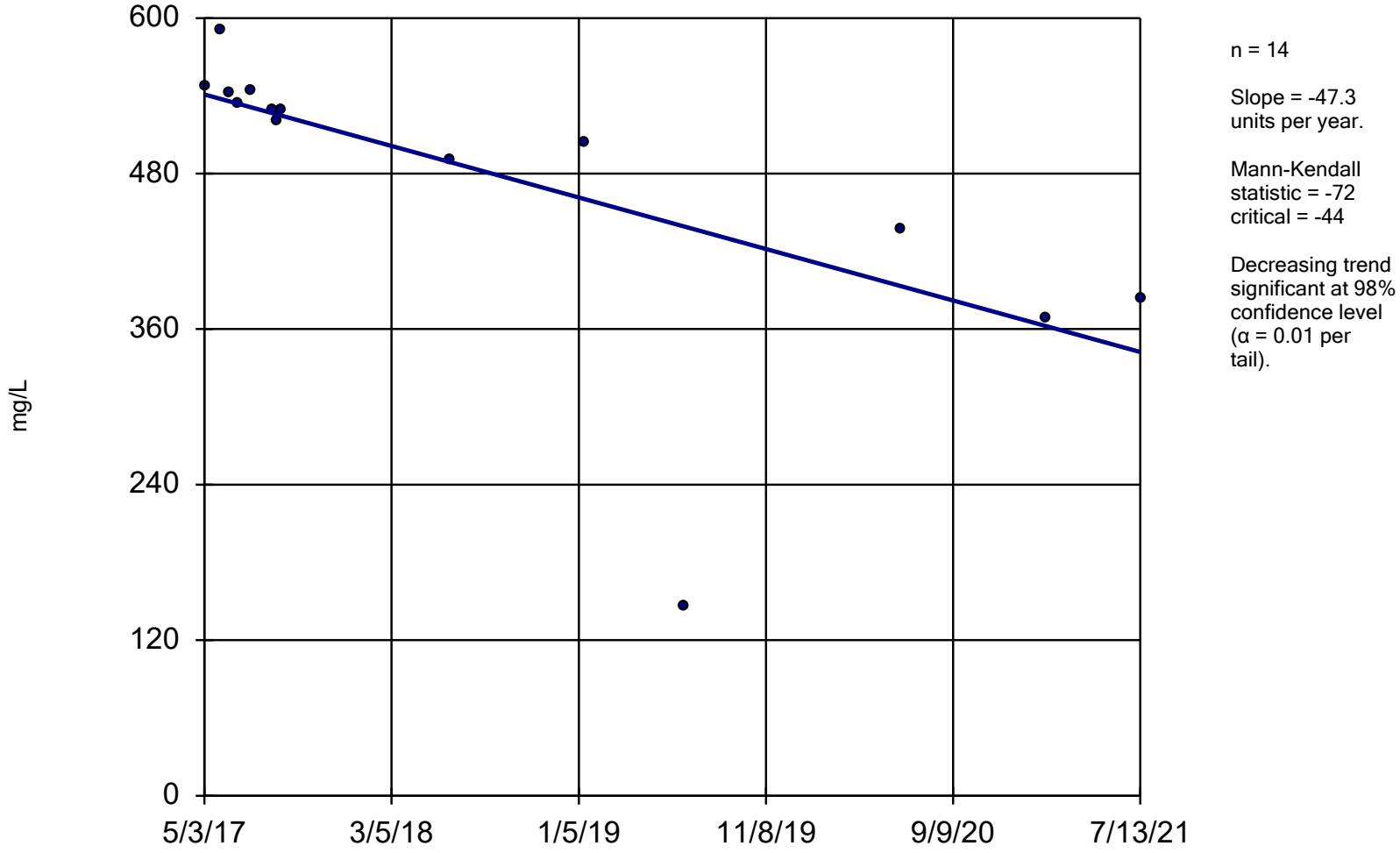
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-18 (bg)



n = 14

Slope = -47.3 units per year.

Mann-Kendall statistic = -72
critical = -44

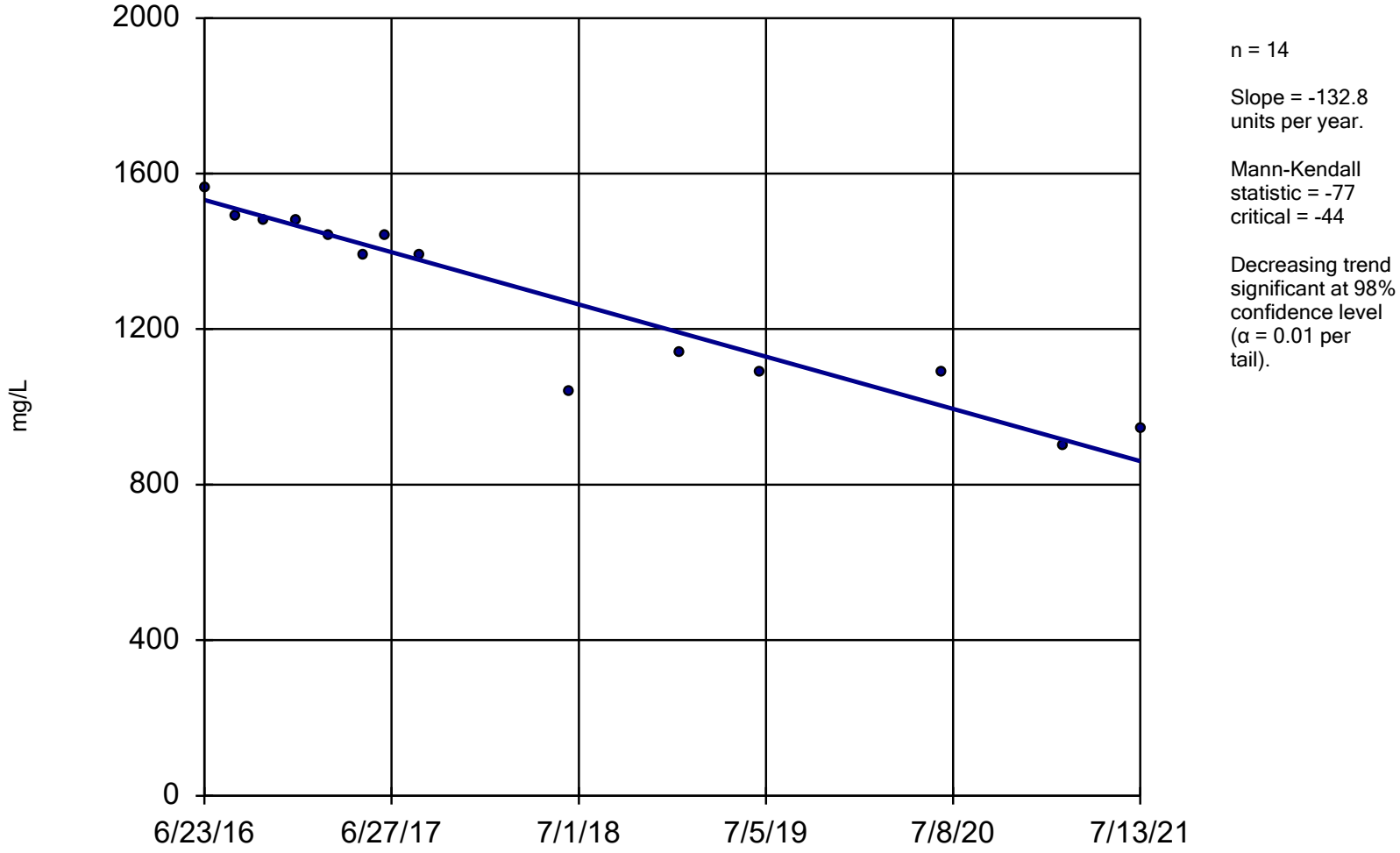
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 14

Slope = -132.8 units per year.

Mann-Kendall statistic = -77
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

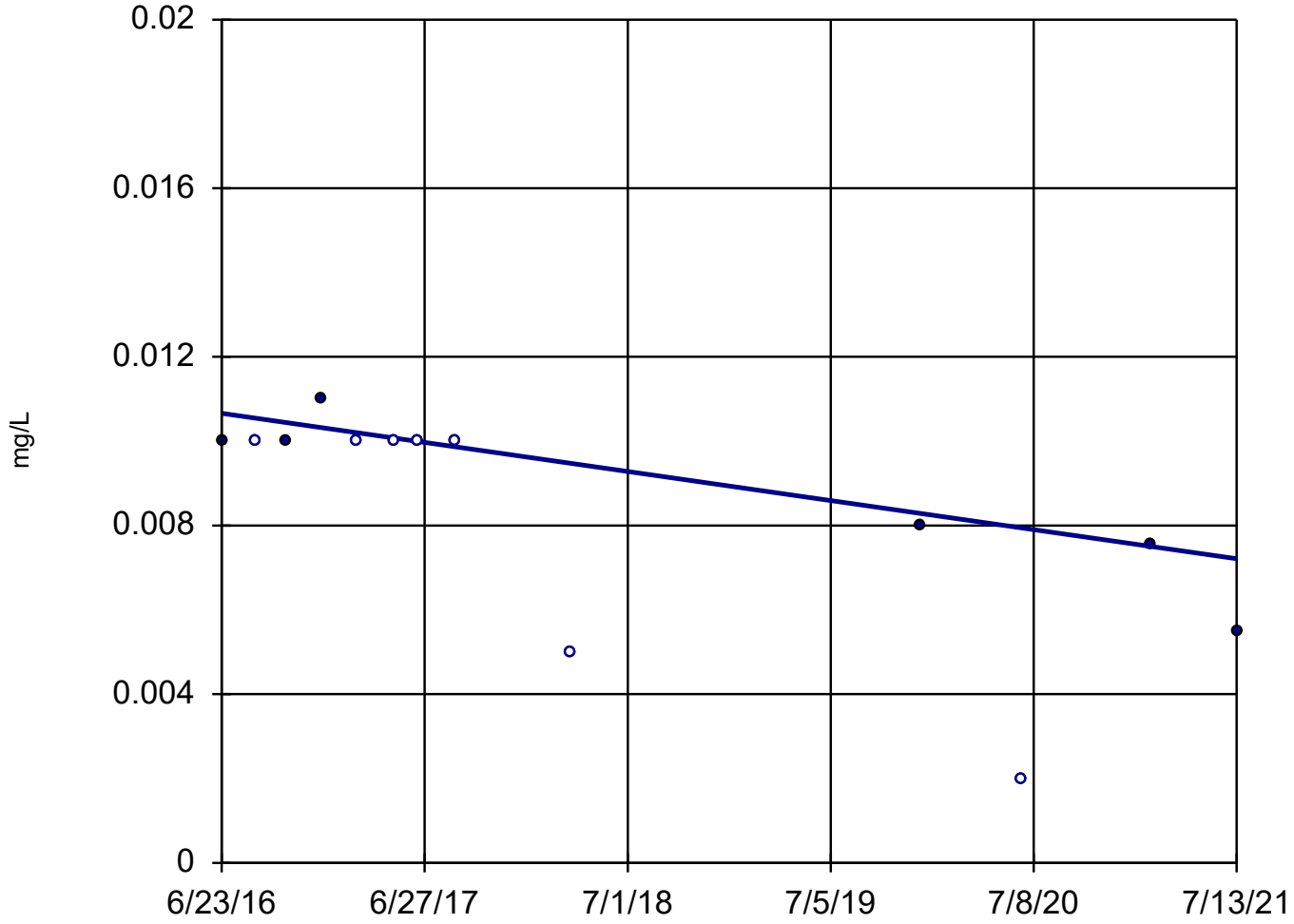
Constituent: Chloride Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 13

Slope = -0.000682 units per year.

Mann-Kendall statistic = -41
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

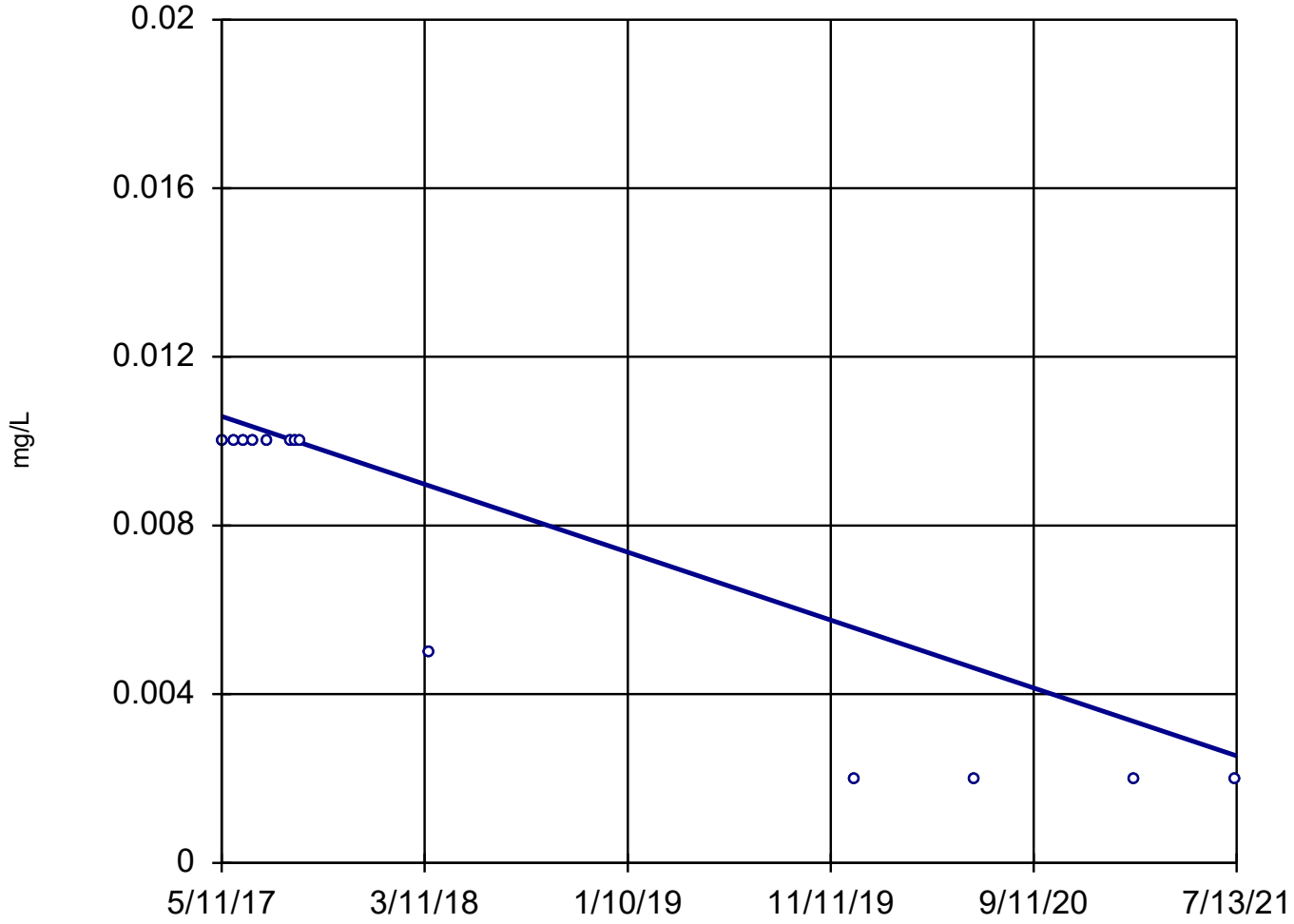
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 13

Slope = -0.001929 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

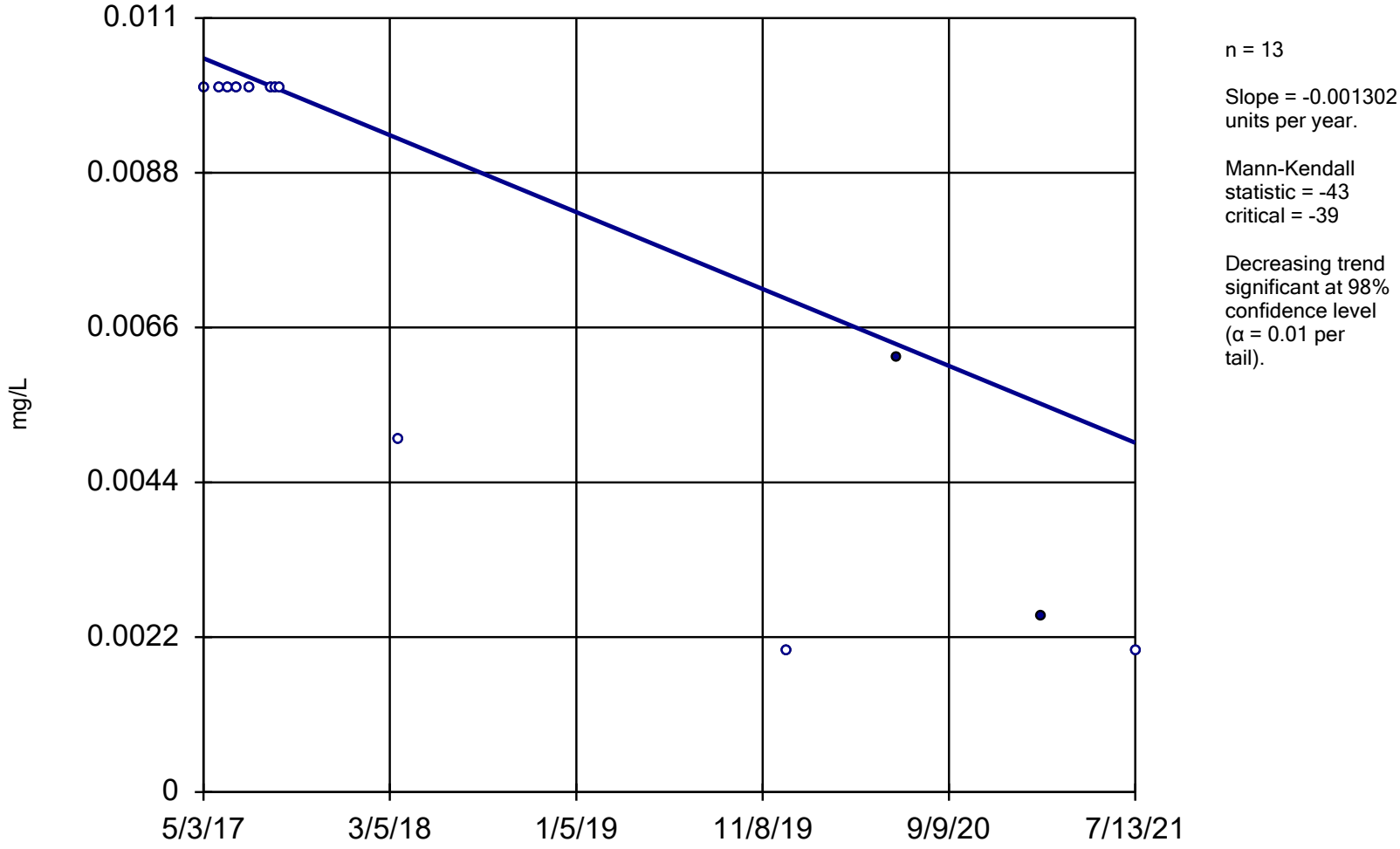
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 13

Slope = -0.001302 units per year.

Mann-Kendall statistic = -43
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

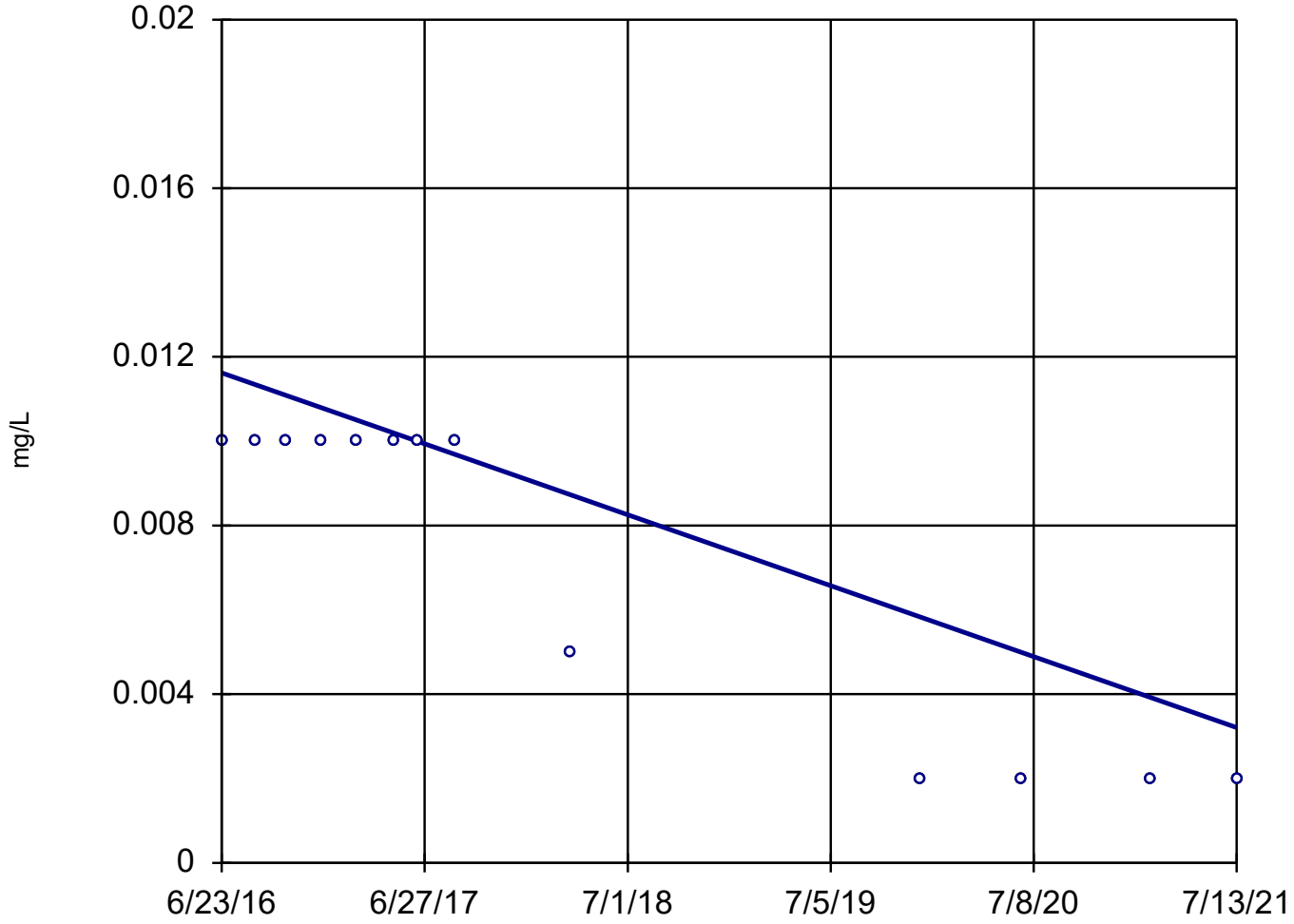
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 13

Slope = -0.001664 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

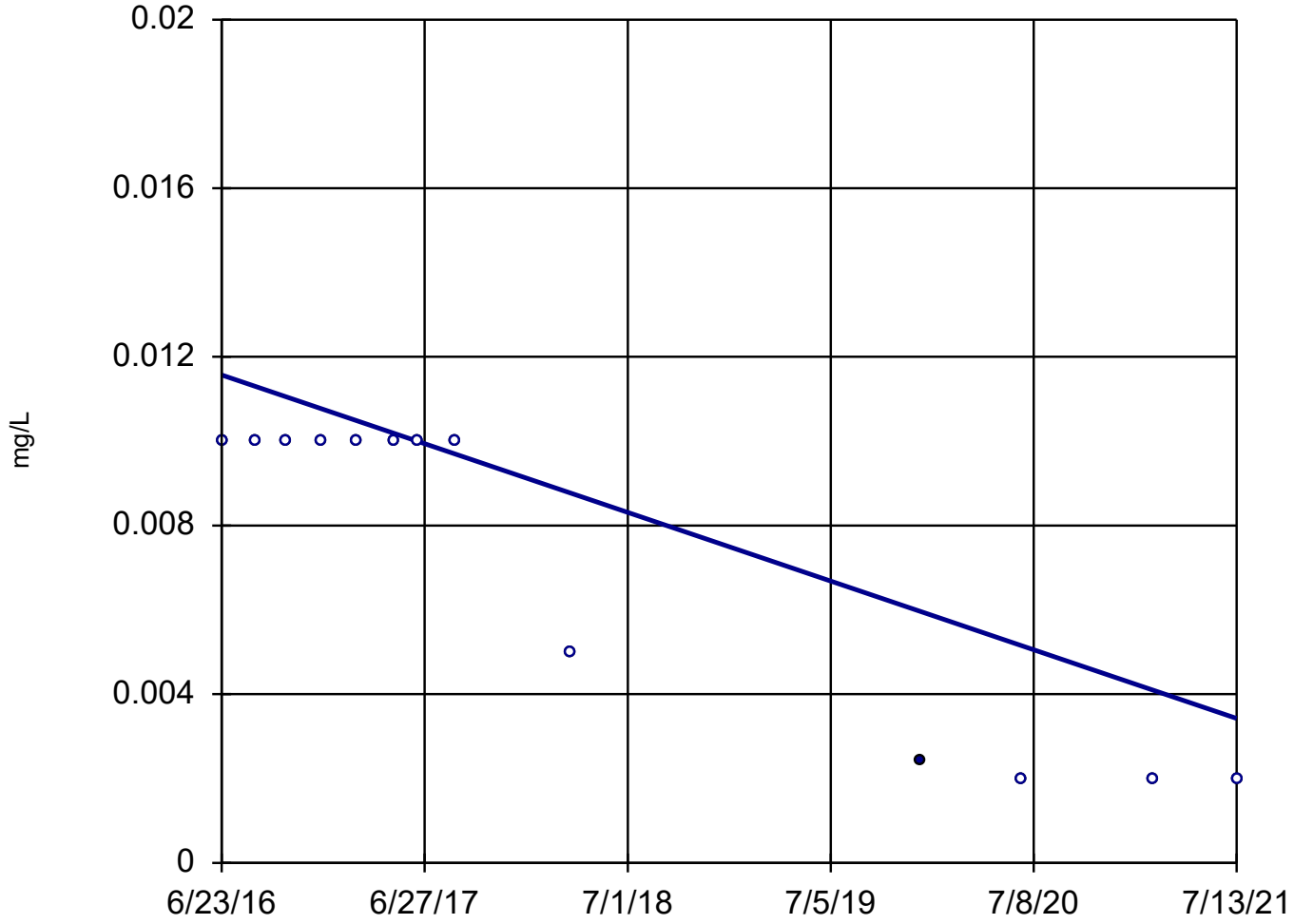
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 13

Slope = -0.00161 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

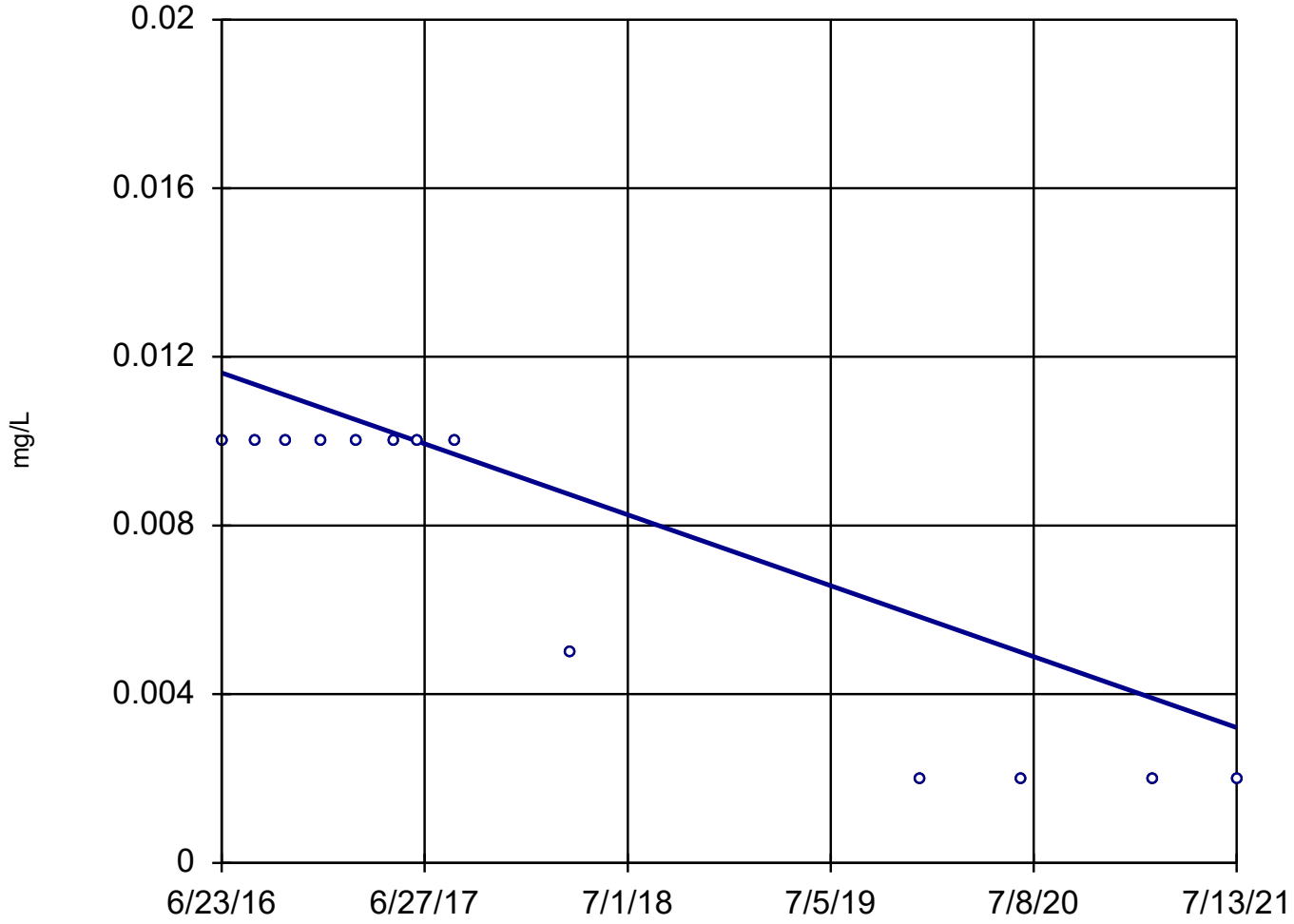
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 13

Slope = -0.001664 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

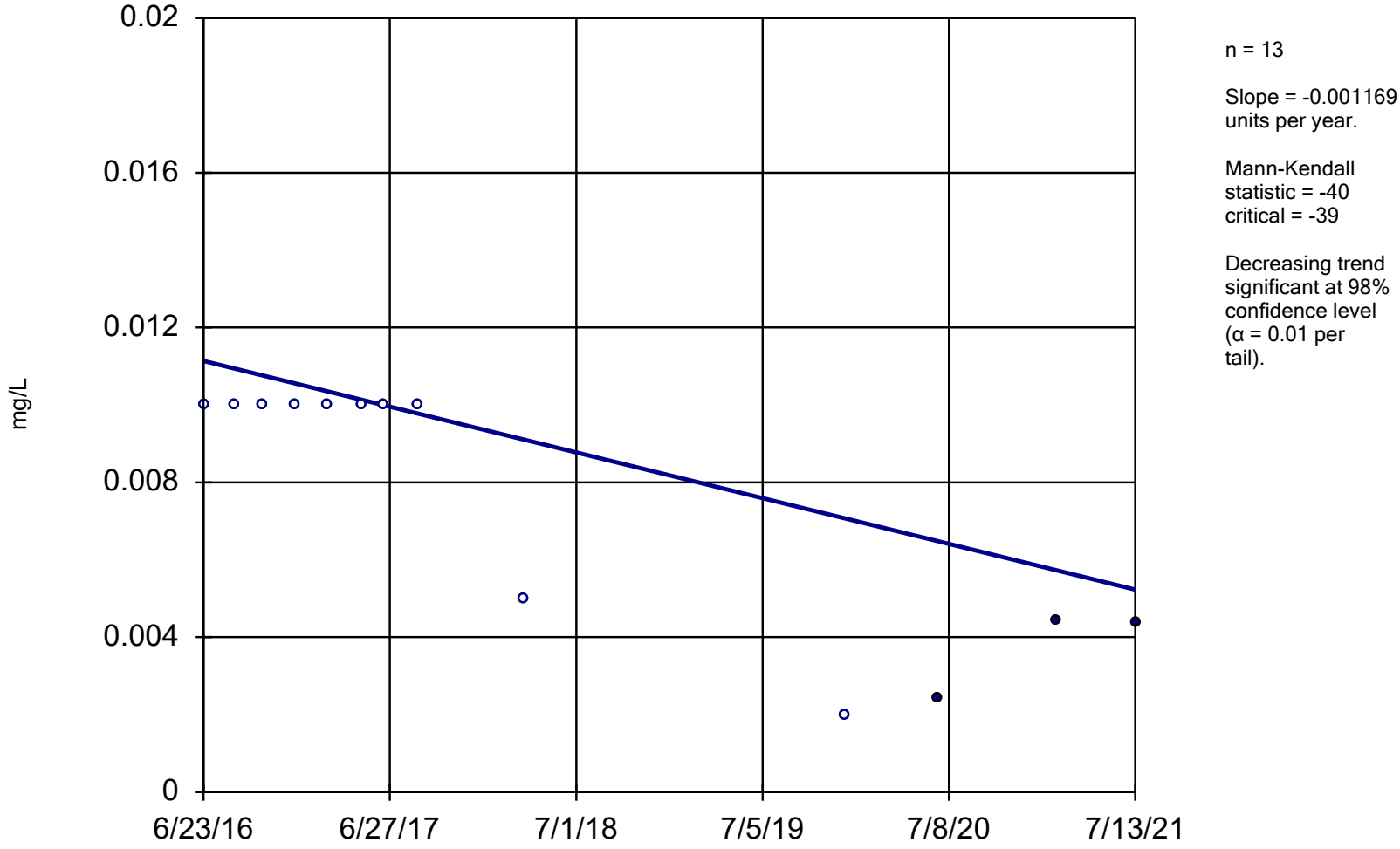
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 13

Slope = -0.001169 units per year.

Mann-Kendall statistic = -40
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

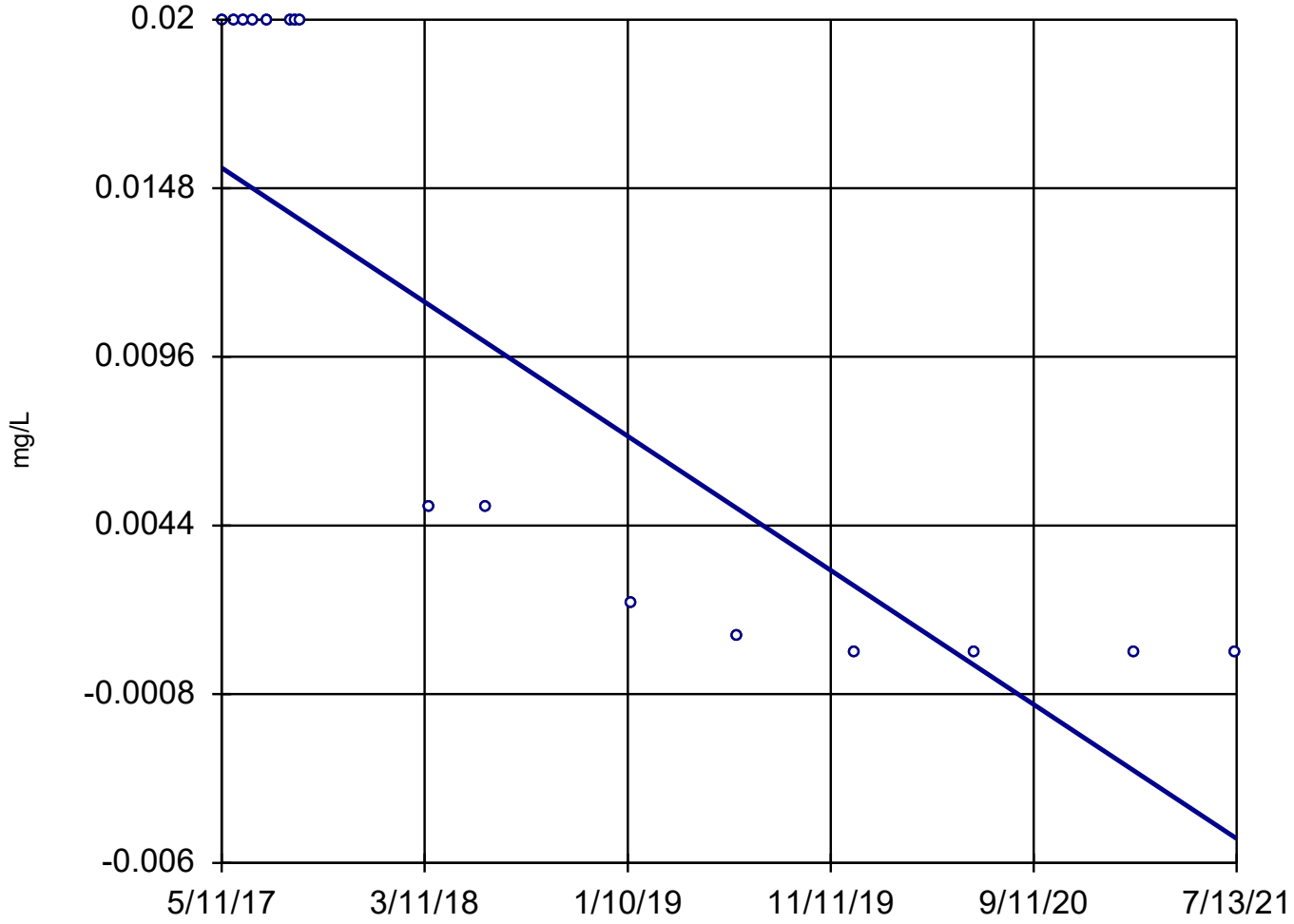
Constituent: Chromium Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 16

Slope = -0.004954 units per year.

Mann-Kendall statistic = -85
critical = -53

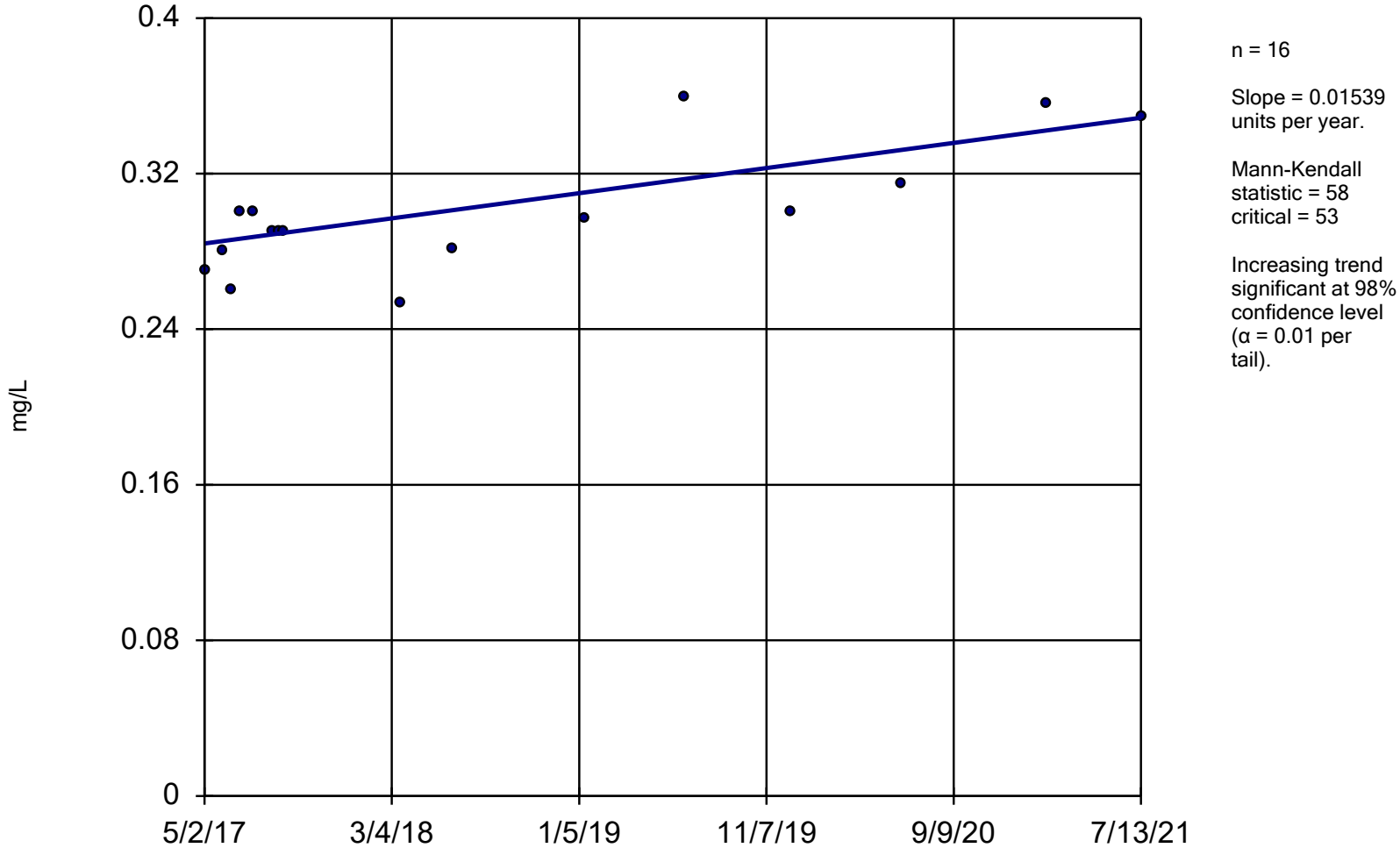
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 16

Slope = 0.01539 units per year.

Mann-Kendall statistic = 58
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

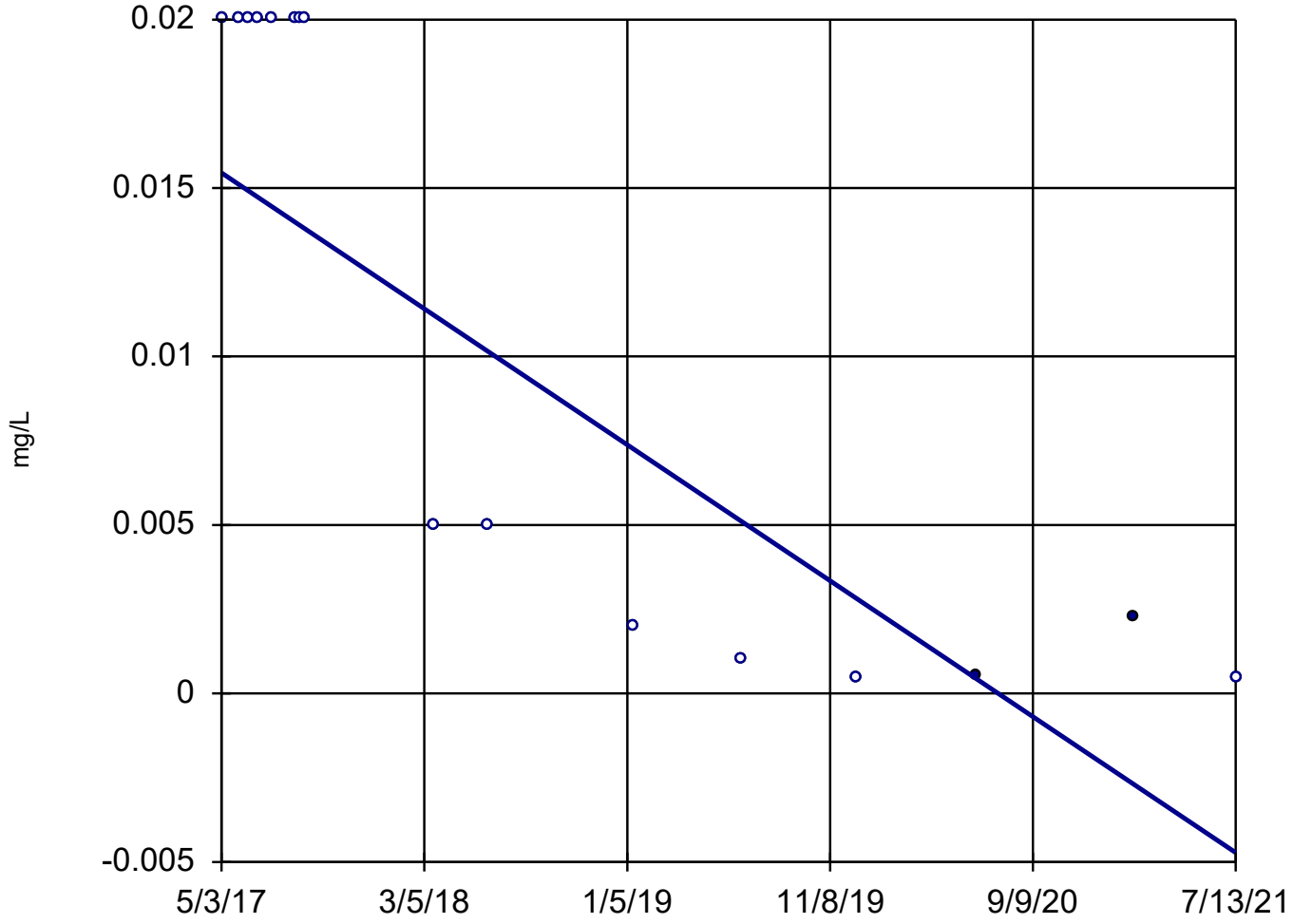
Constituent: Cobalt Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 16

Slope = -0.004806 units per year.

Mann-Kendall statistic = -80
critical = -53

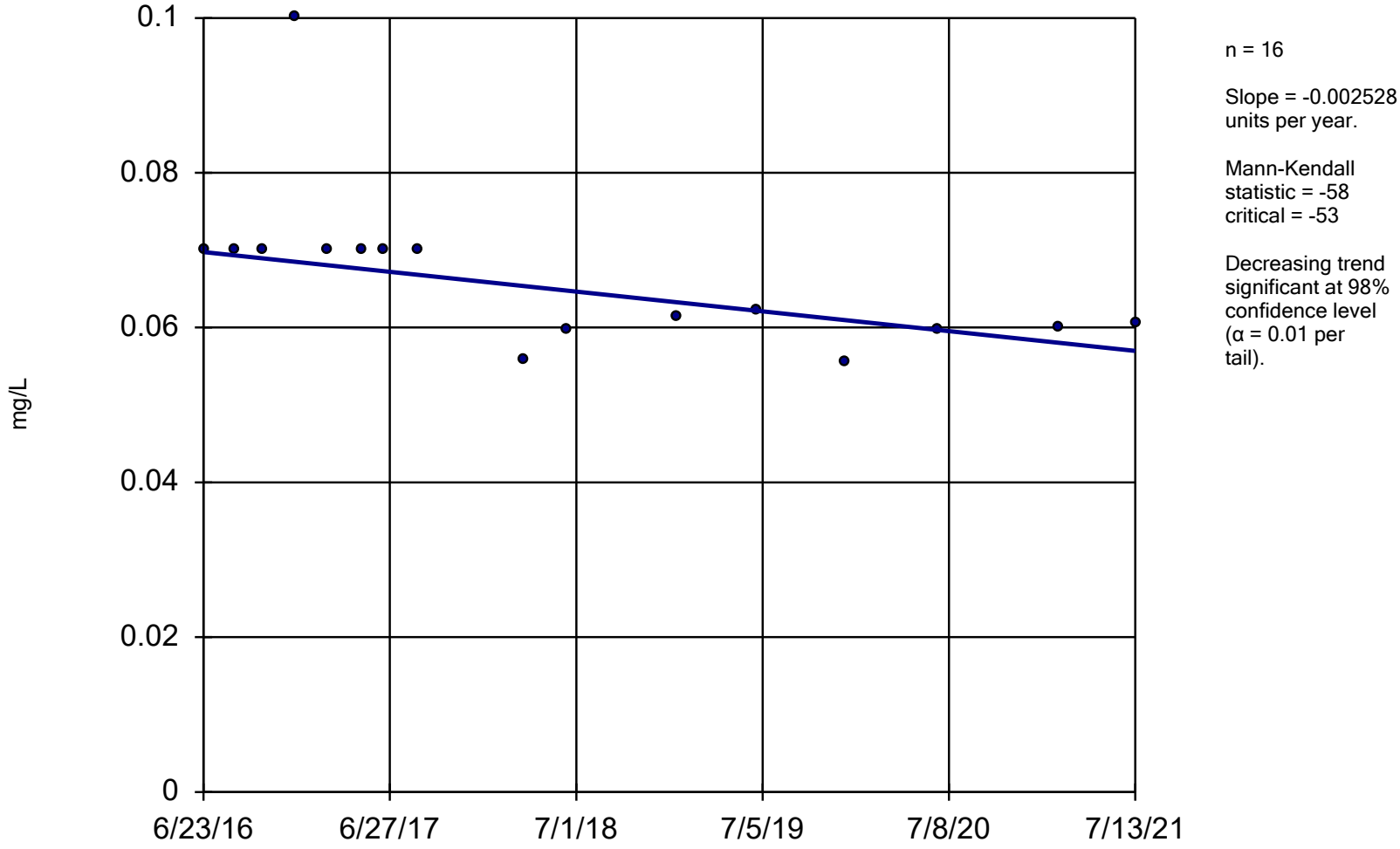
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 16

Slope = -0.002528 units per year.

Mann-Kendall statistic = -58
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

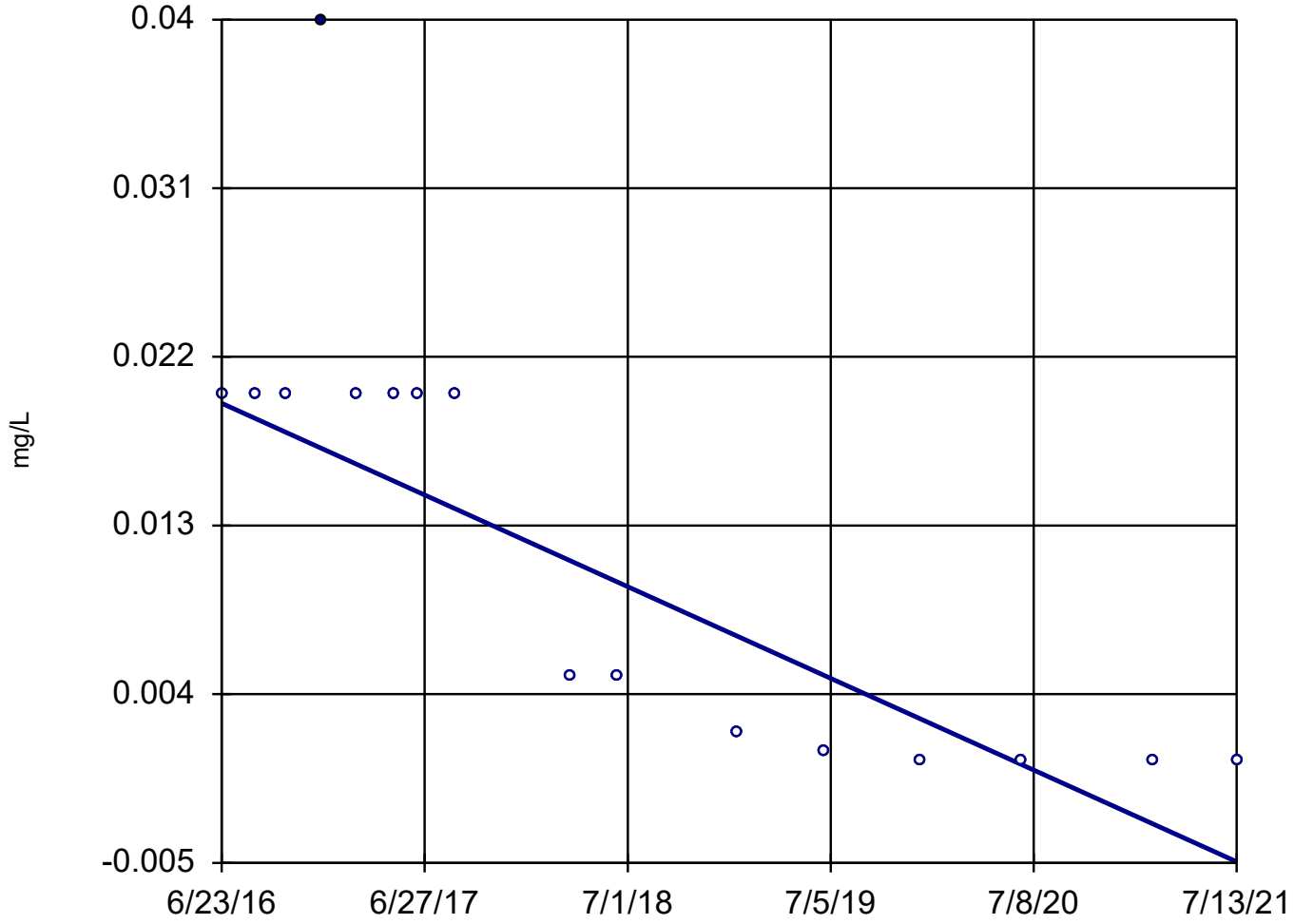
Constituent: Cobalt Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 16

Slope = -0.004836 units per year.

Mann-Kendall statistic = -86
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

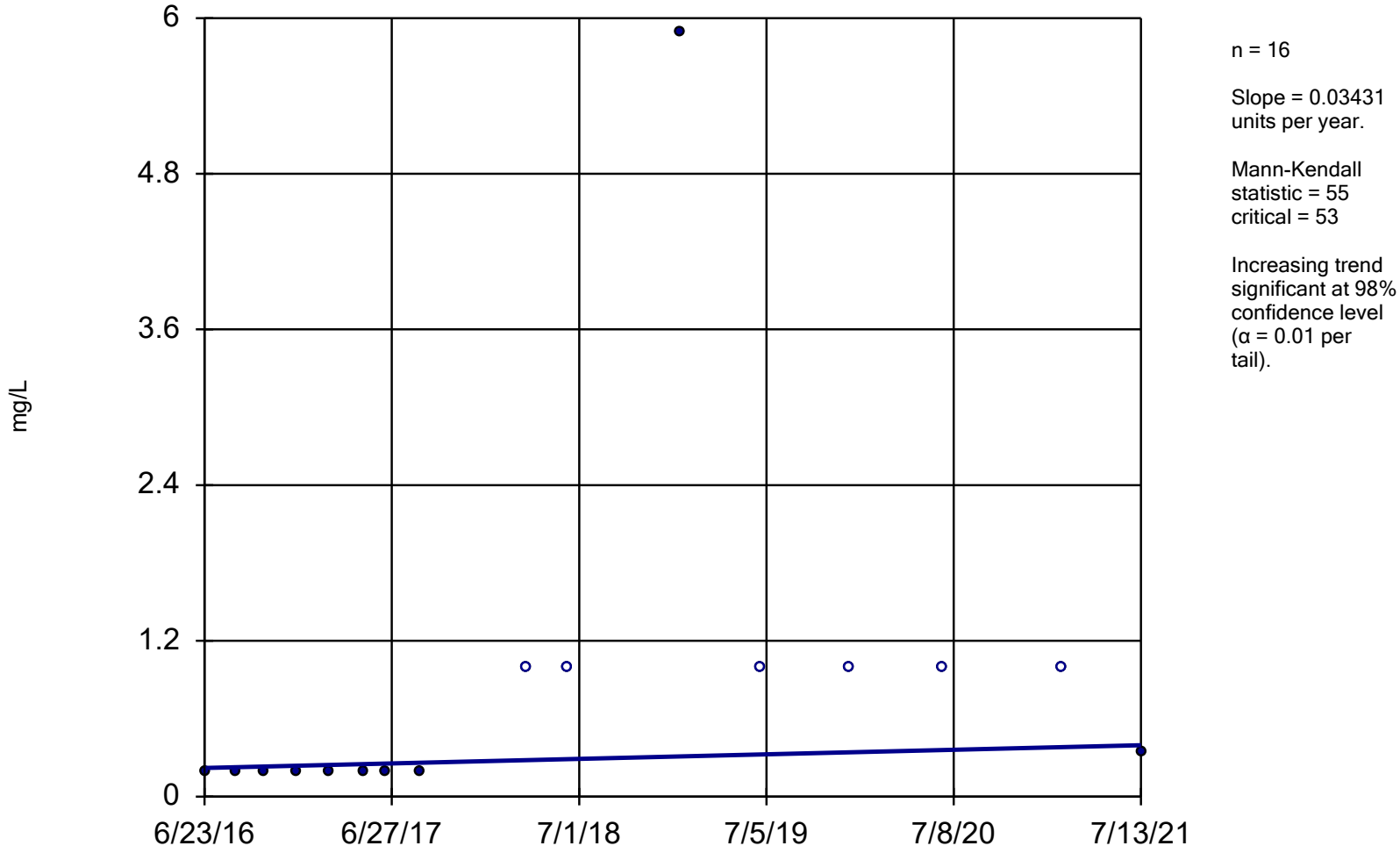
Constituent: Cobalt Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 16

Slope = 0.03431 units per year.

Mann-Kendall statistic = 55
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

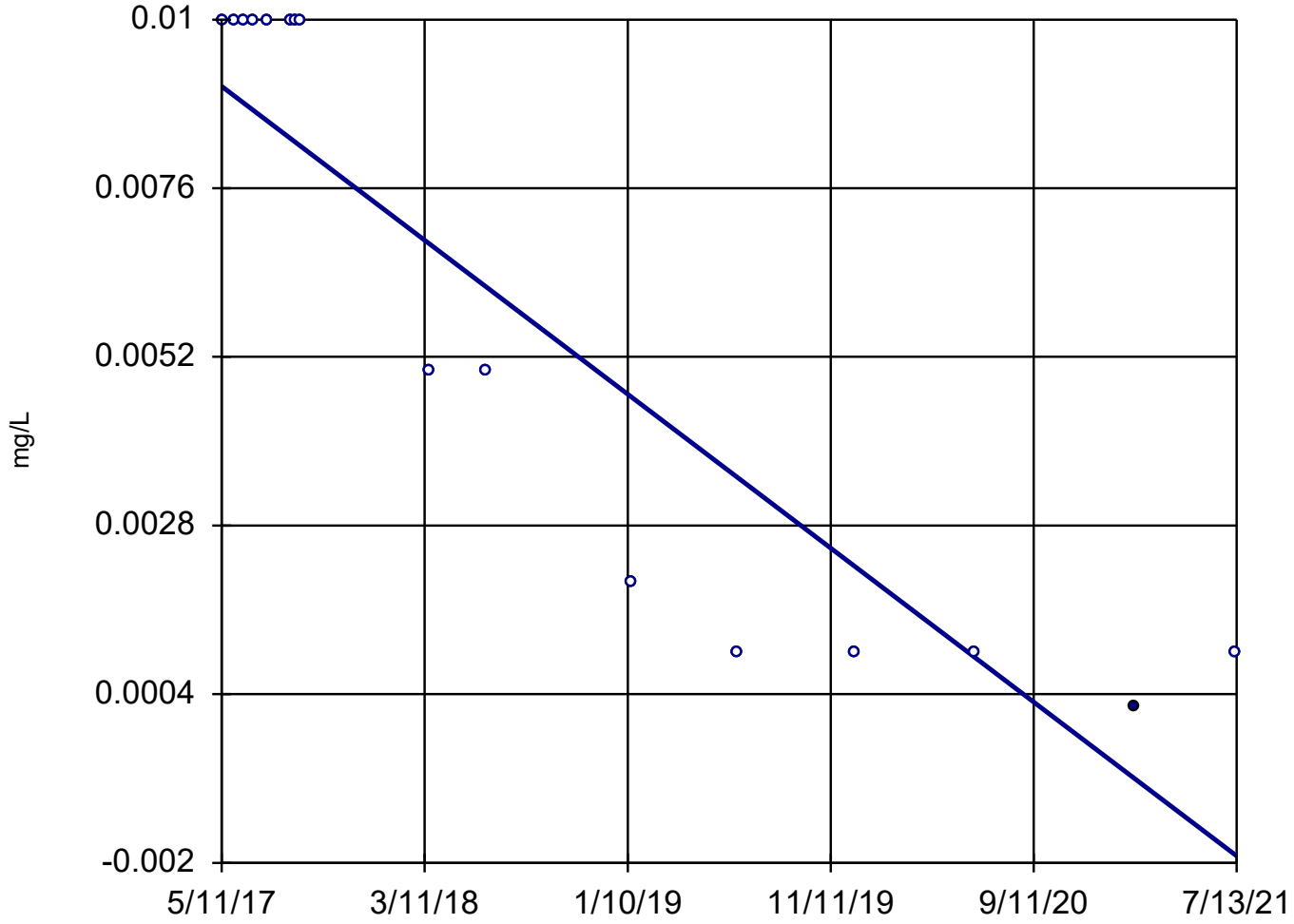
Constituent: Fluoride Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 16

Slope = -0.002623 units per year.

Mann-Kendall statistic = -83
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

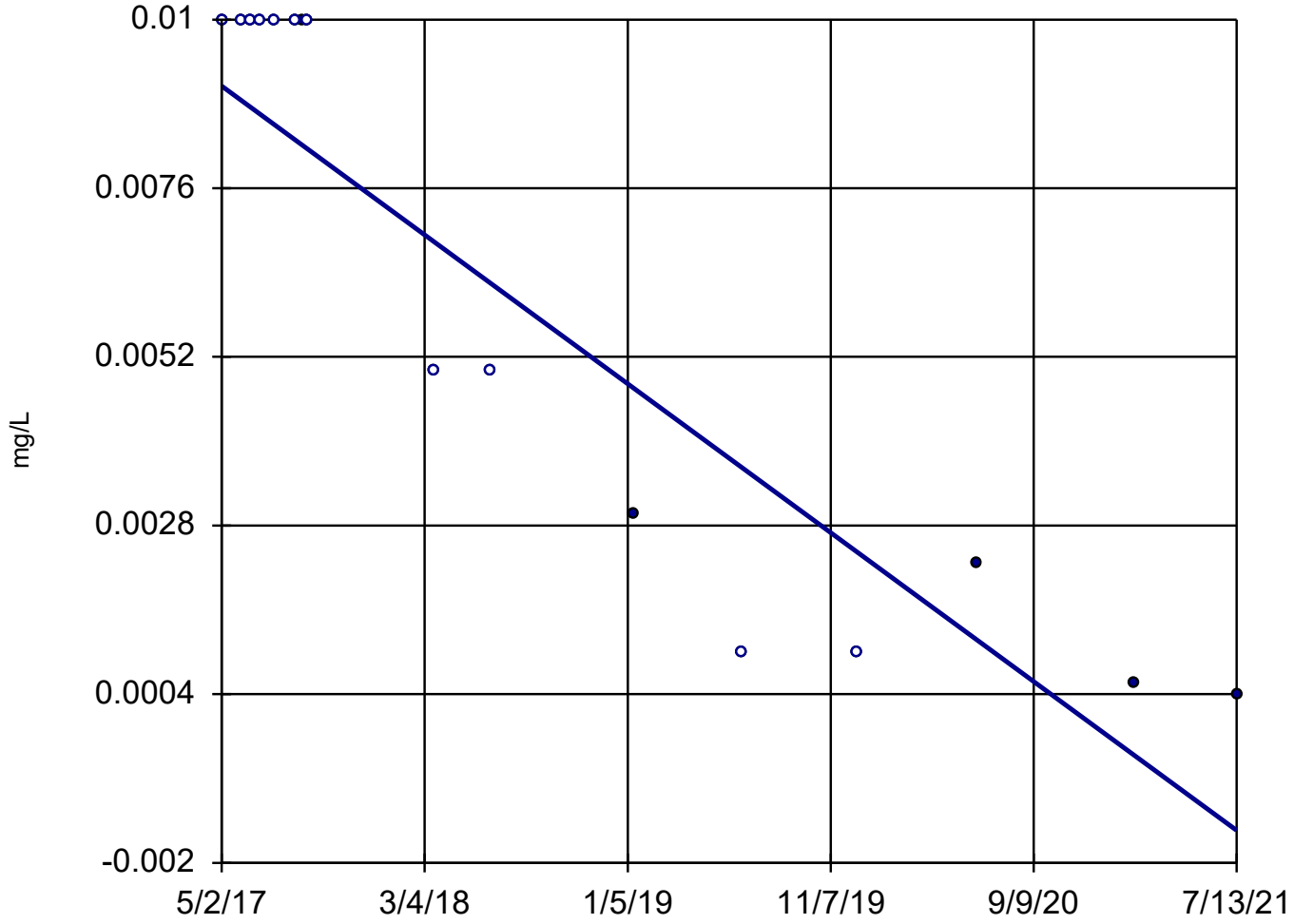
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 16

Slope = -0.002522 units per year.

Mann-Kendall statistic = -86
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

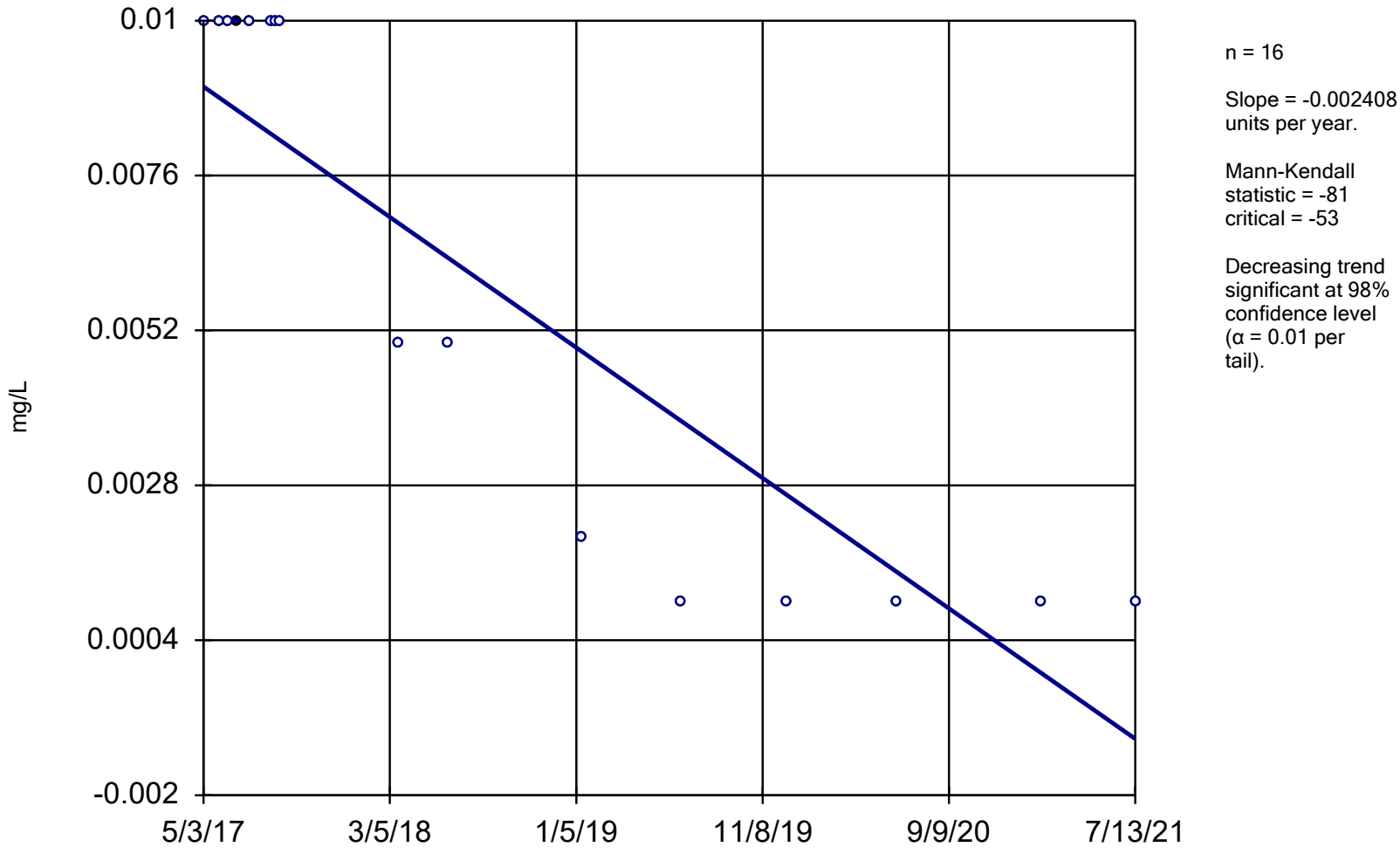
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 16

Slope = -0.002408 units per year.

Mann-Kendall statistic = -81
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

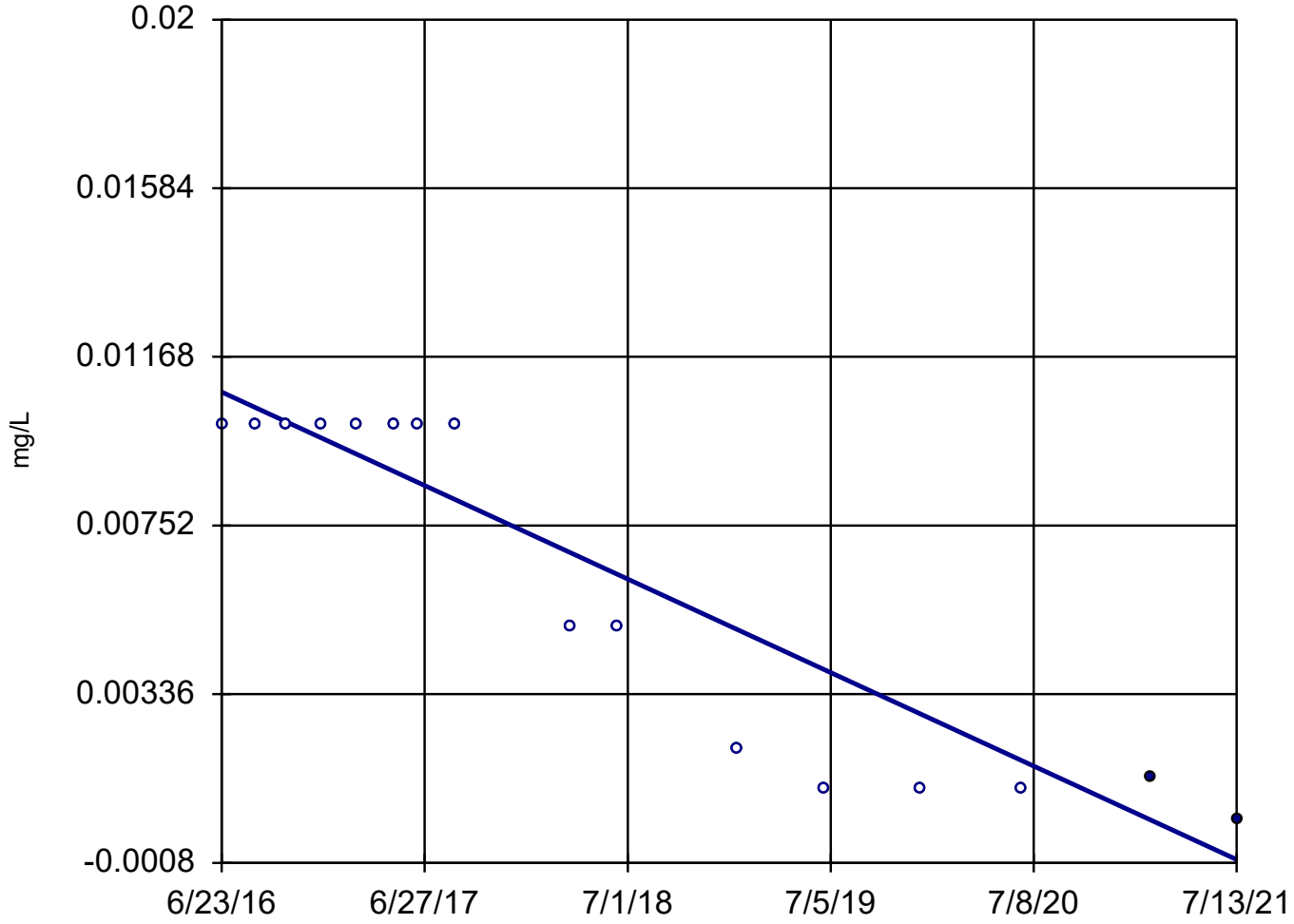
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 16

Slope = -0.00228 units per year.

Mann-Kendall statistic = -82
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

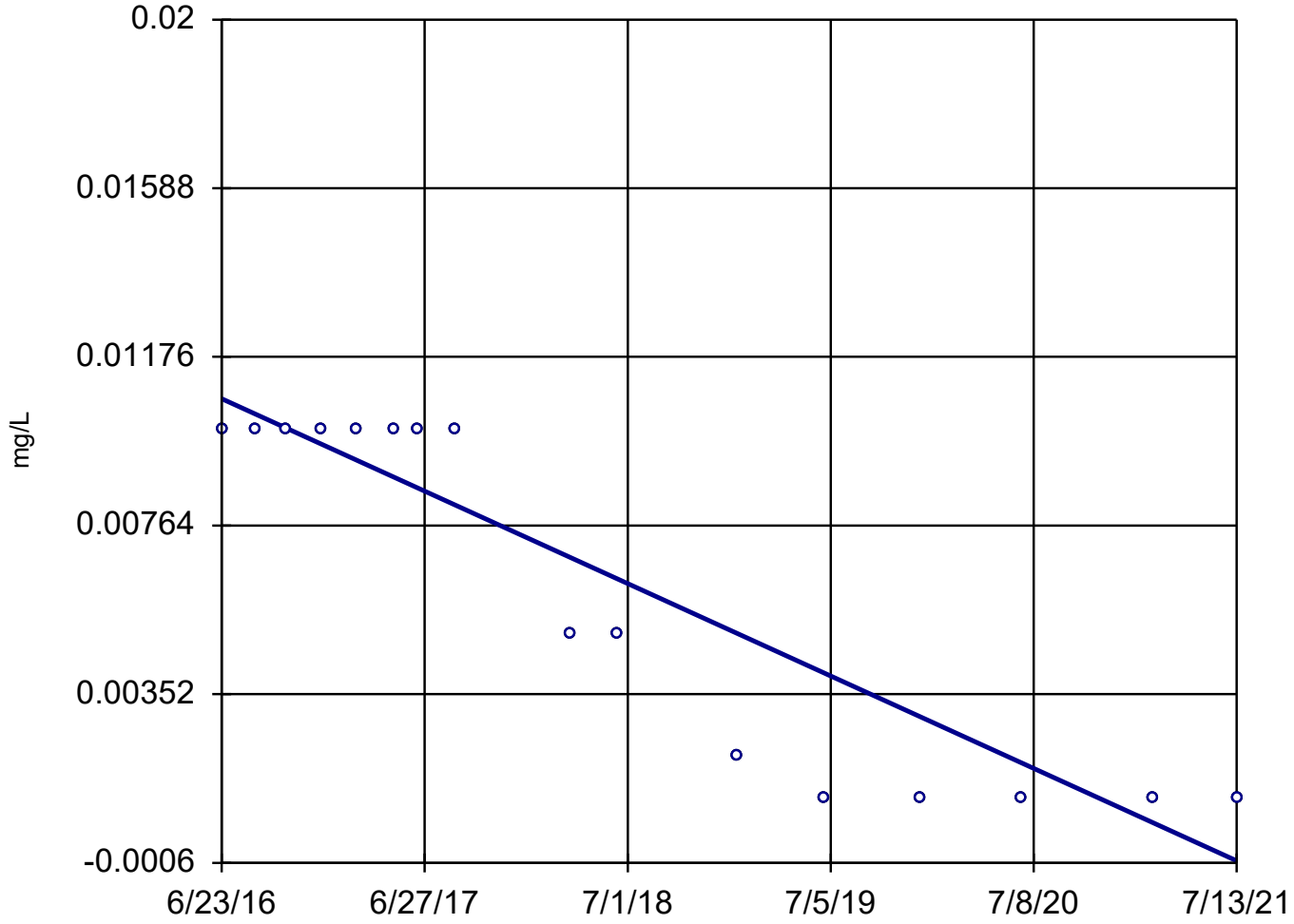
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 16

Slope = -0.002232 units per year.

Mann-Kendall statistic = -81
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

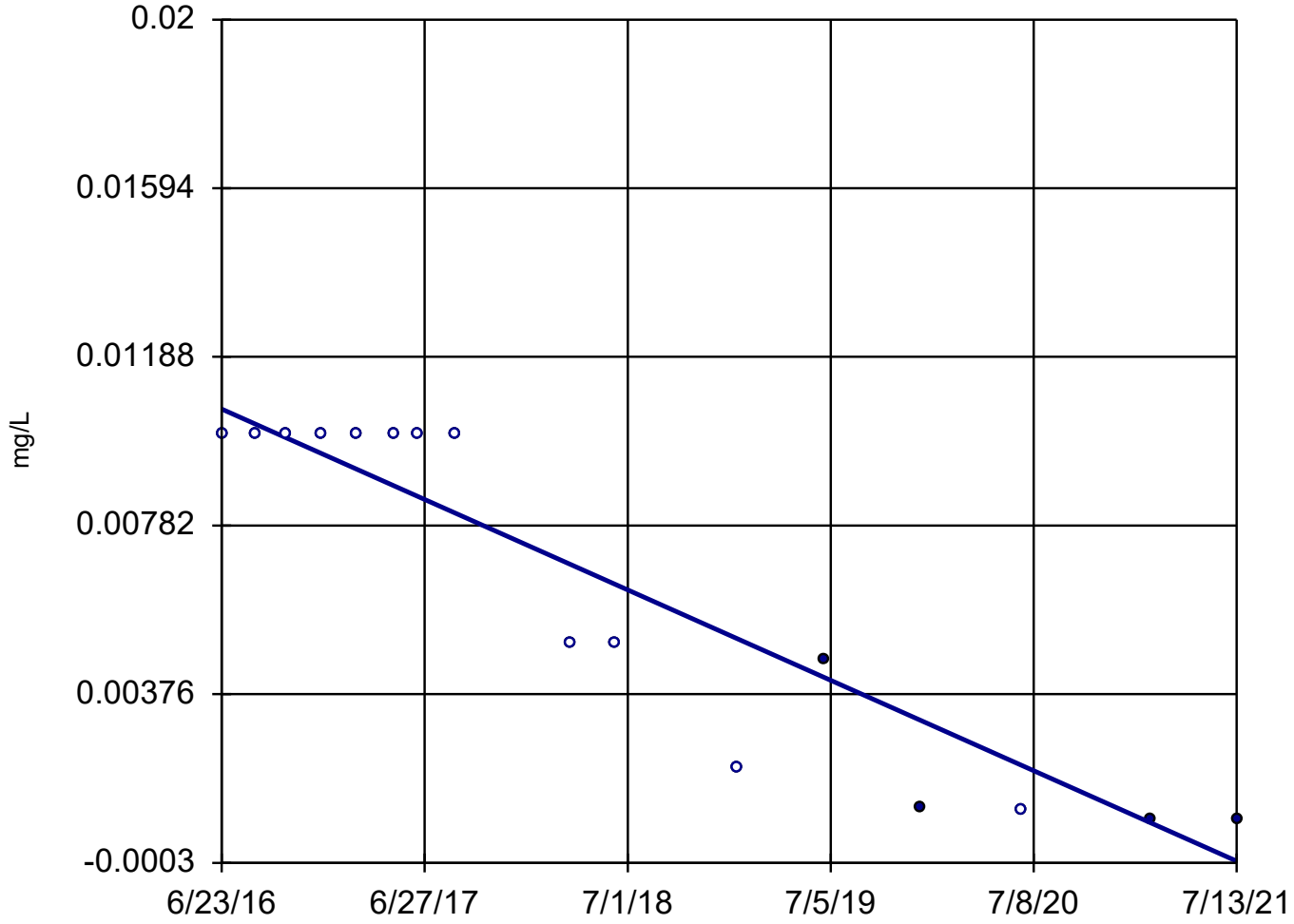
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 16

Slope = -0.002152 units per year.

Mann-Kendall statistic = -89
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

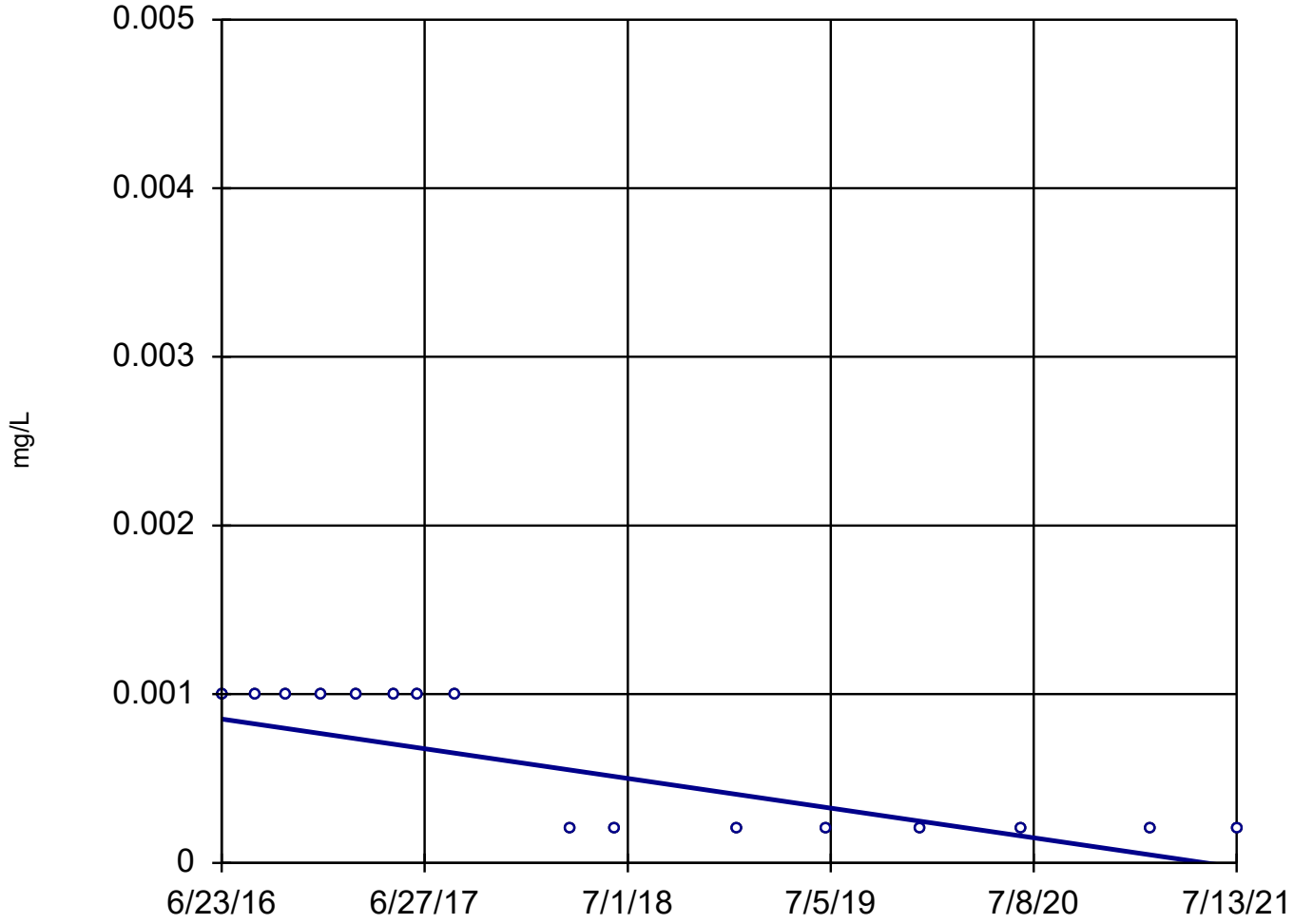
Constituent: Lead Analysis Run 8/19/2021 11:38 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 16

Slope = -0.000174 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

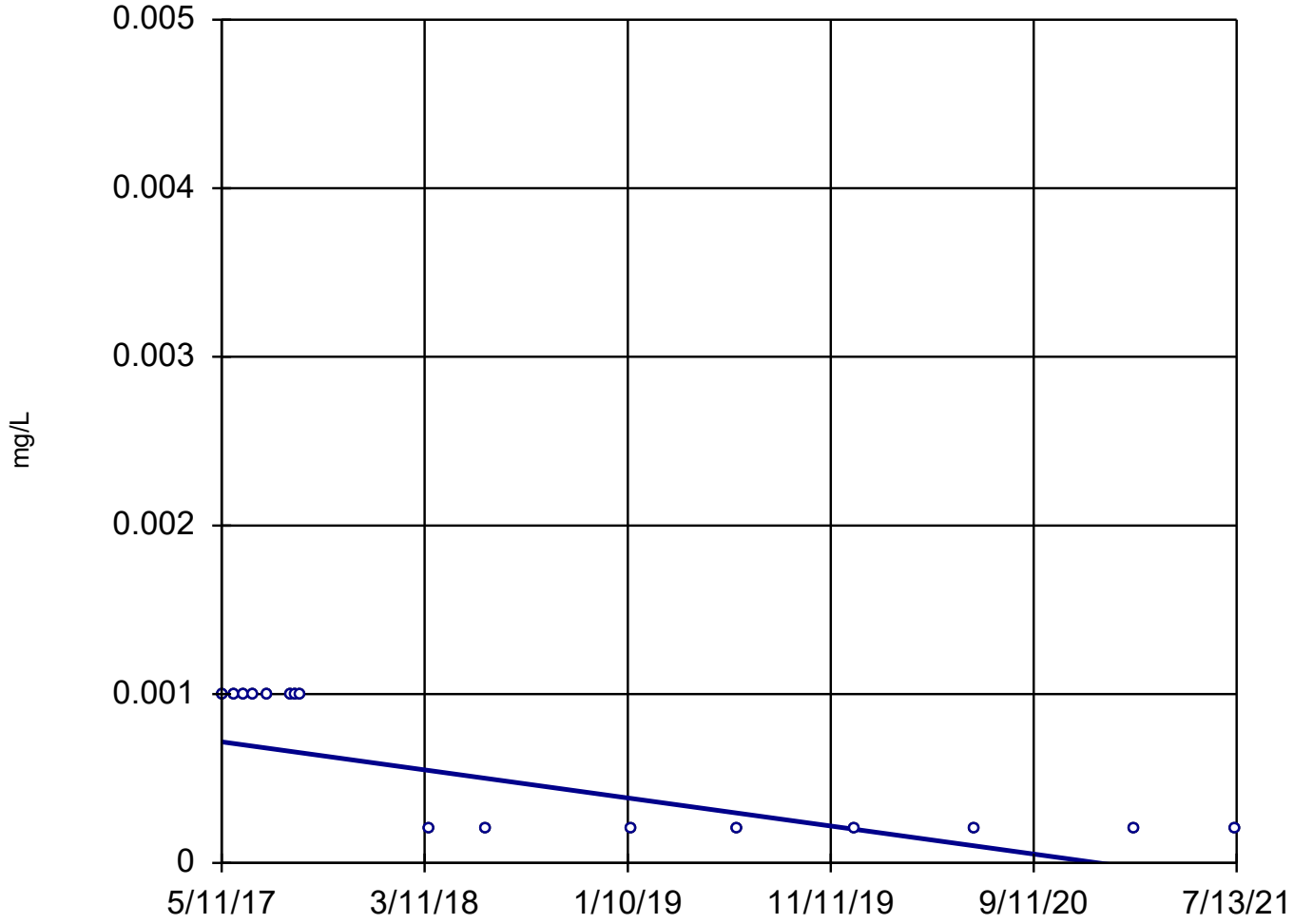
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 16

Slope = -0.0001993 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

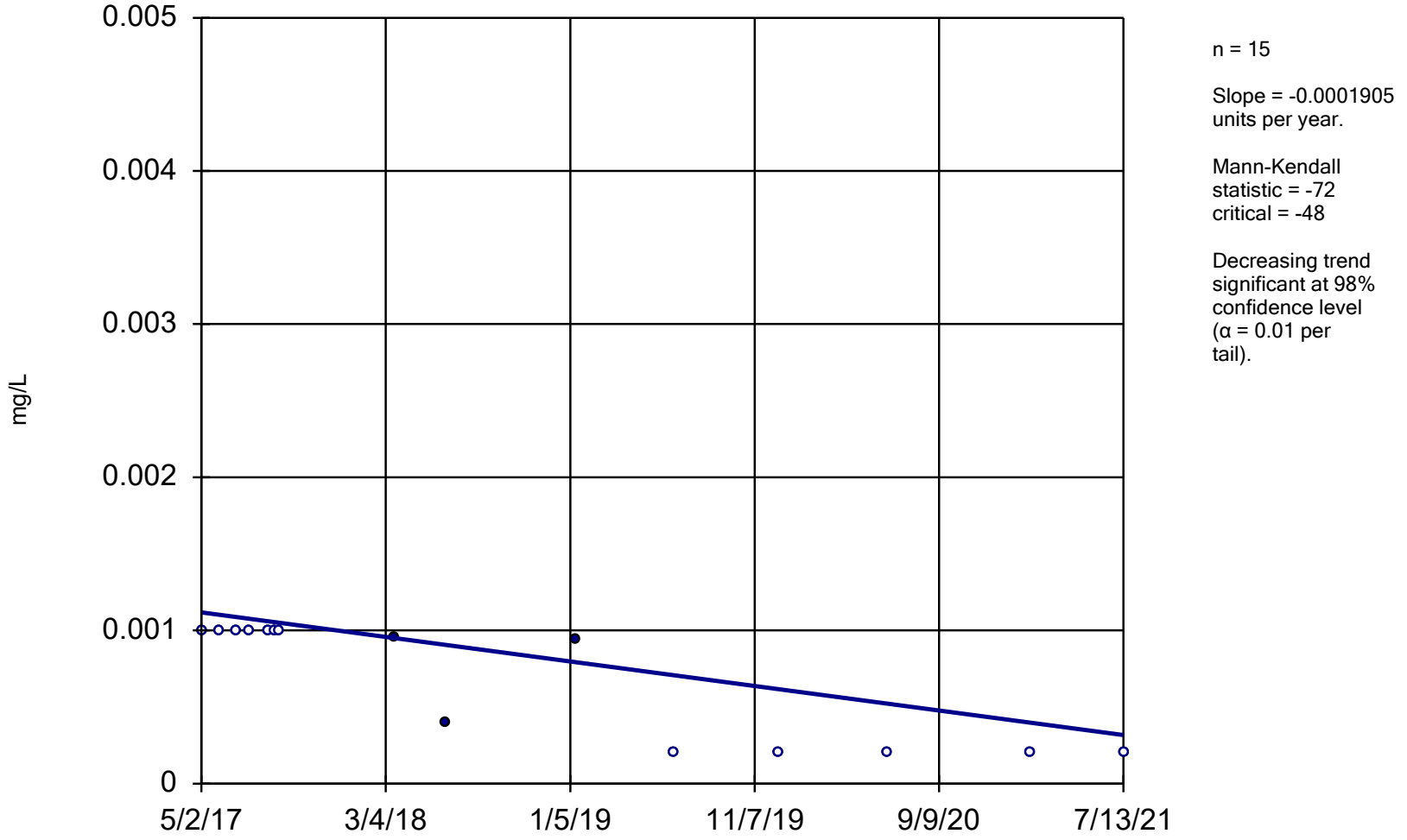
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 15

Slope = -0.0001905 units per year.

Mann-Kendall statistic = -72
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

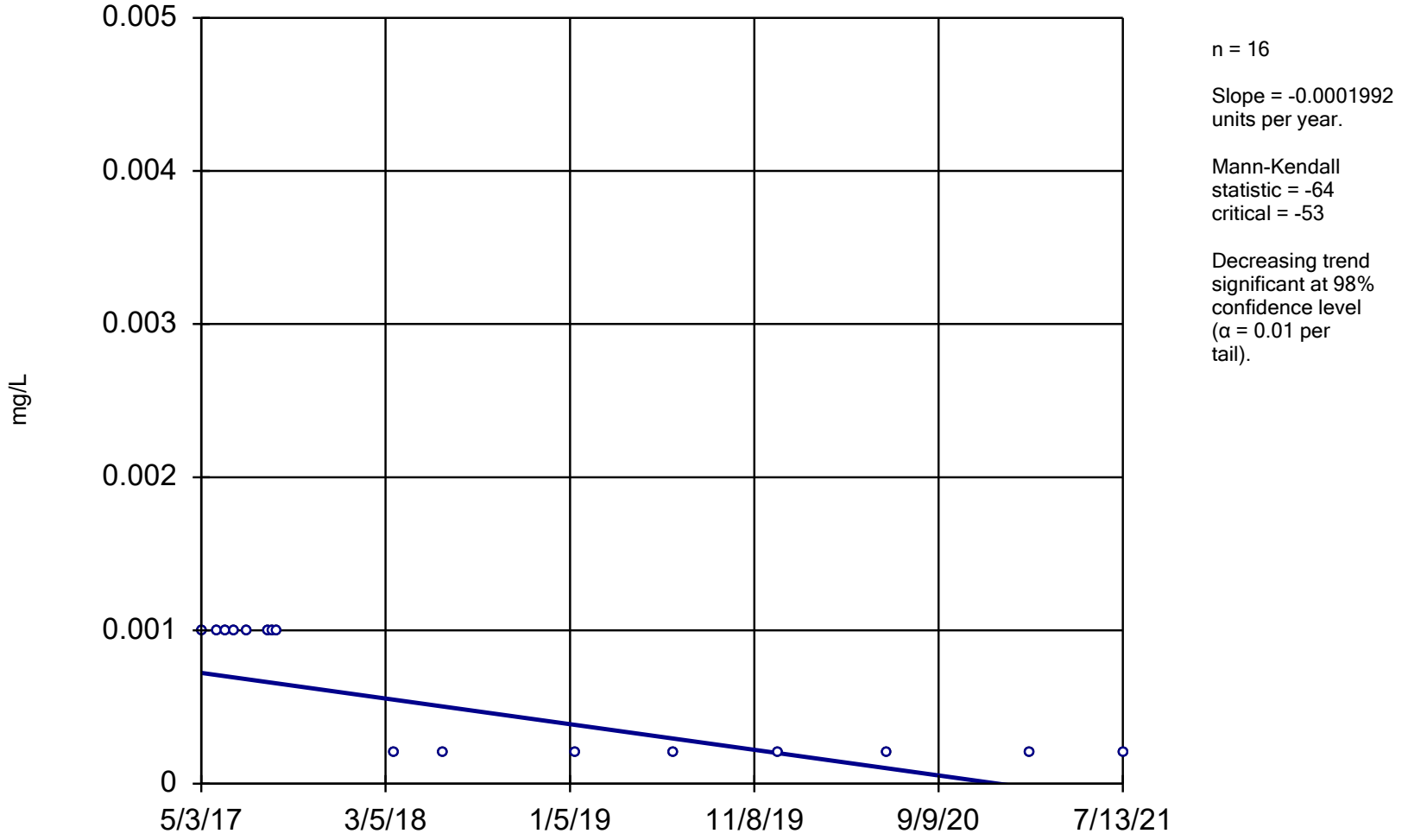
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 16

Slope = -0.0001992 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

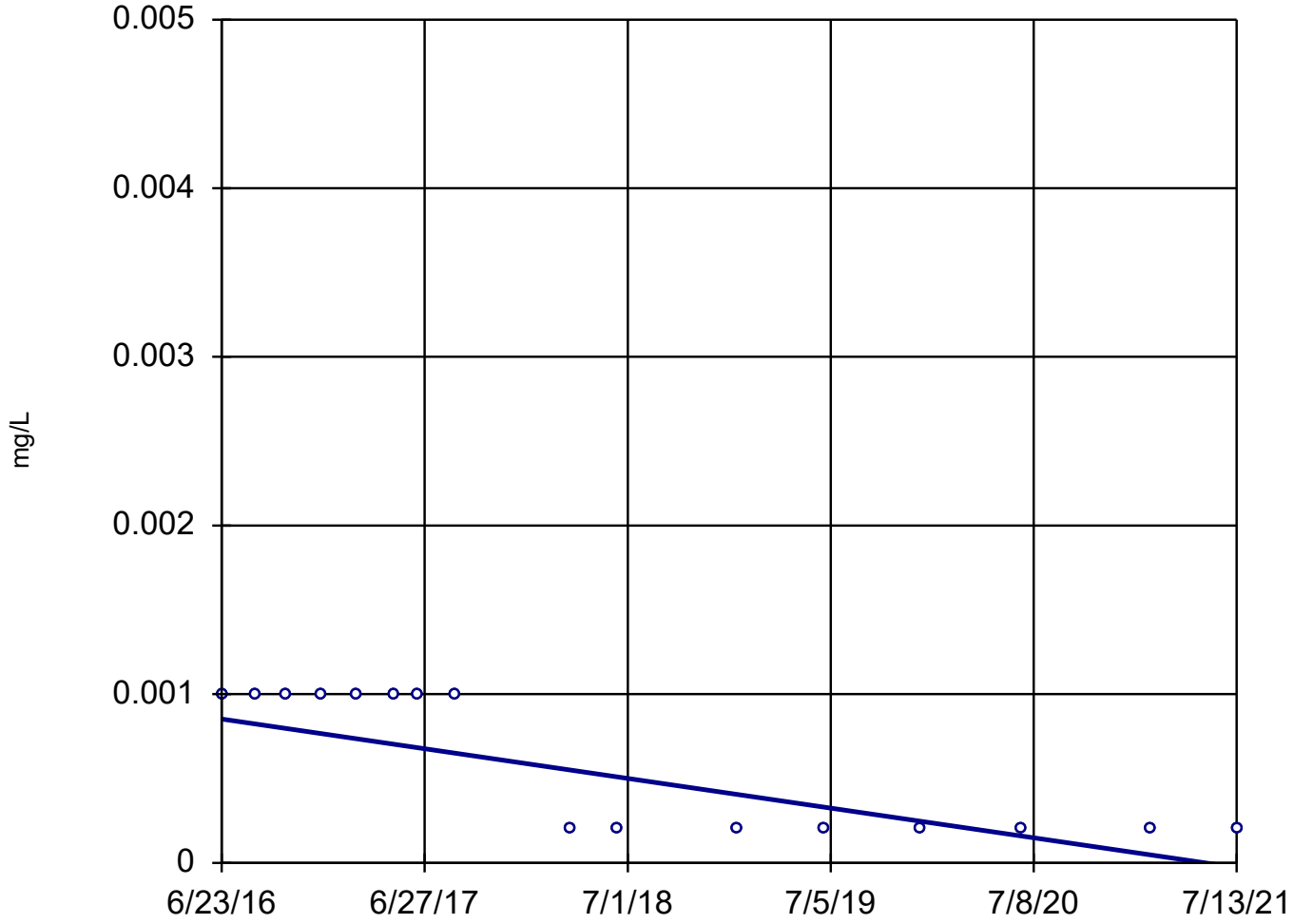
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 16

Slope = -0.000174 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

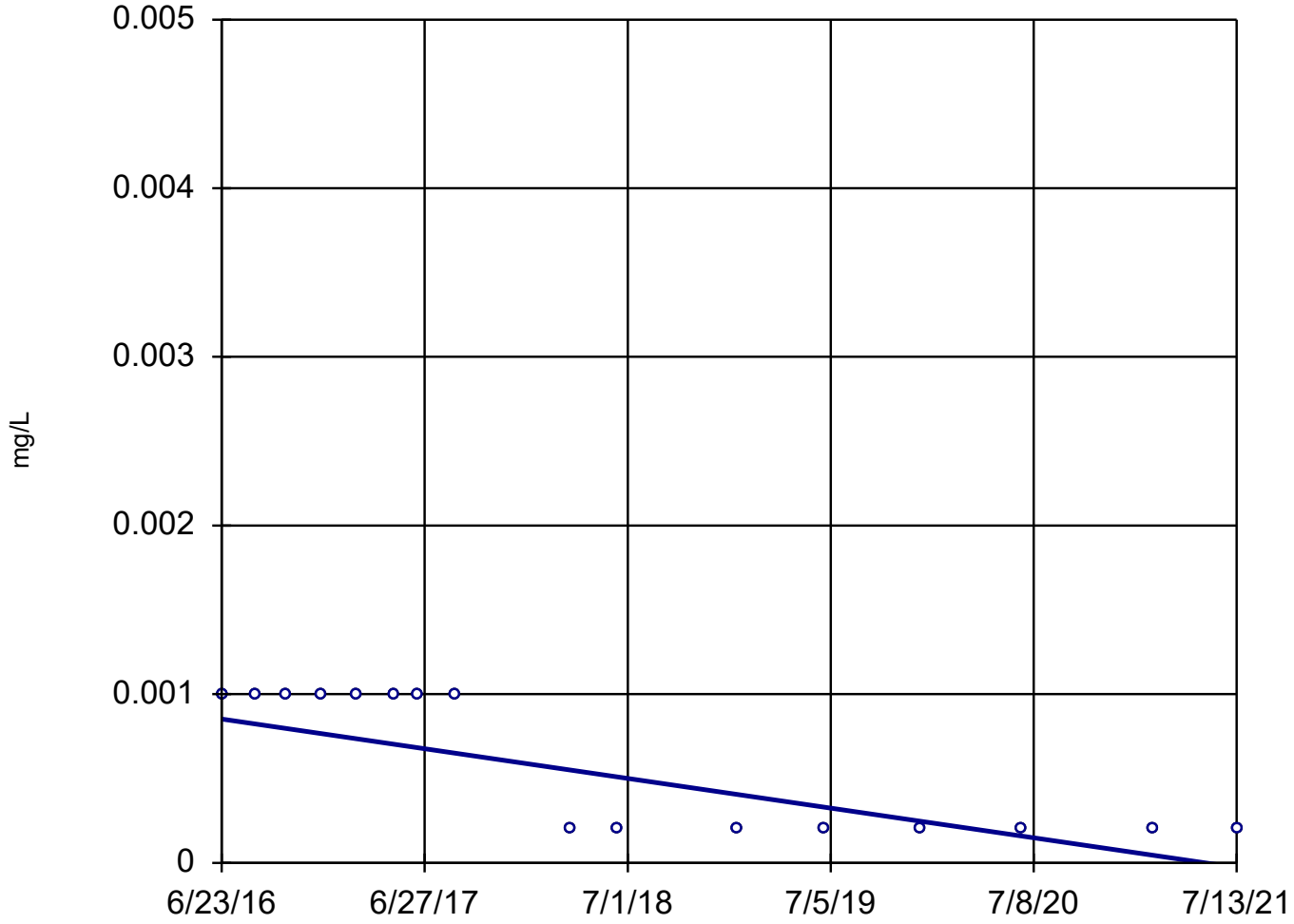
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 16

Slope = -0.000174 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

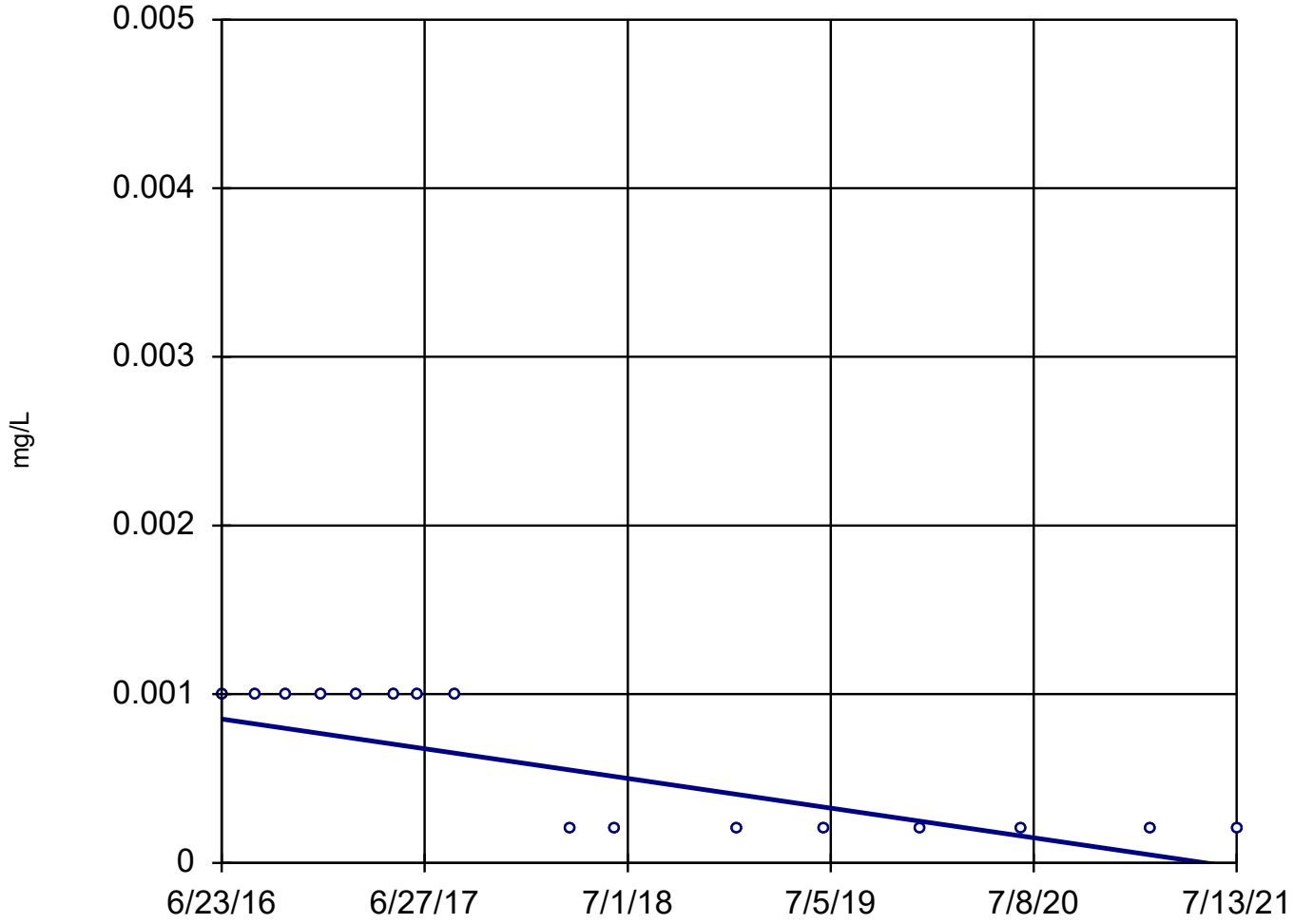
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 16

Slope = -0.000174 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

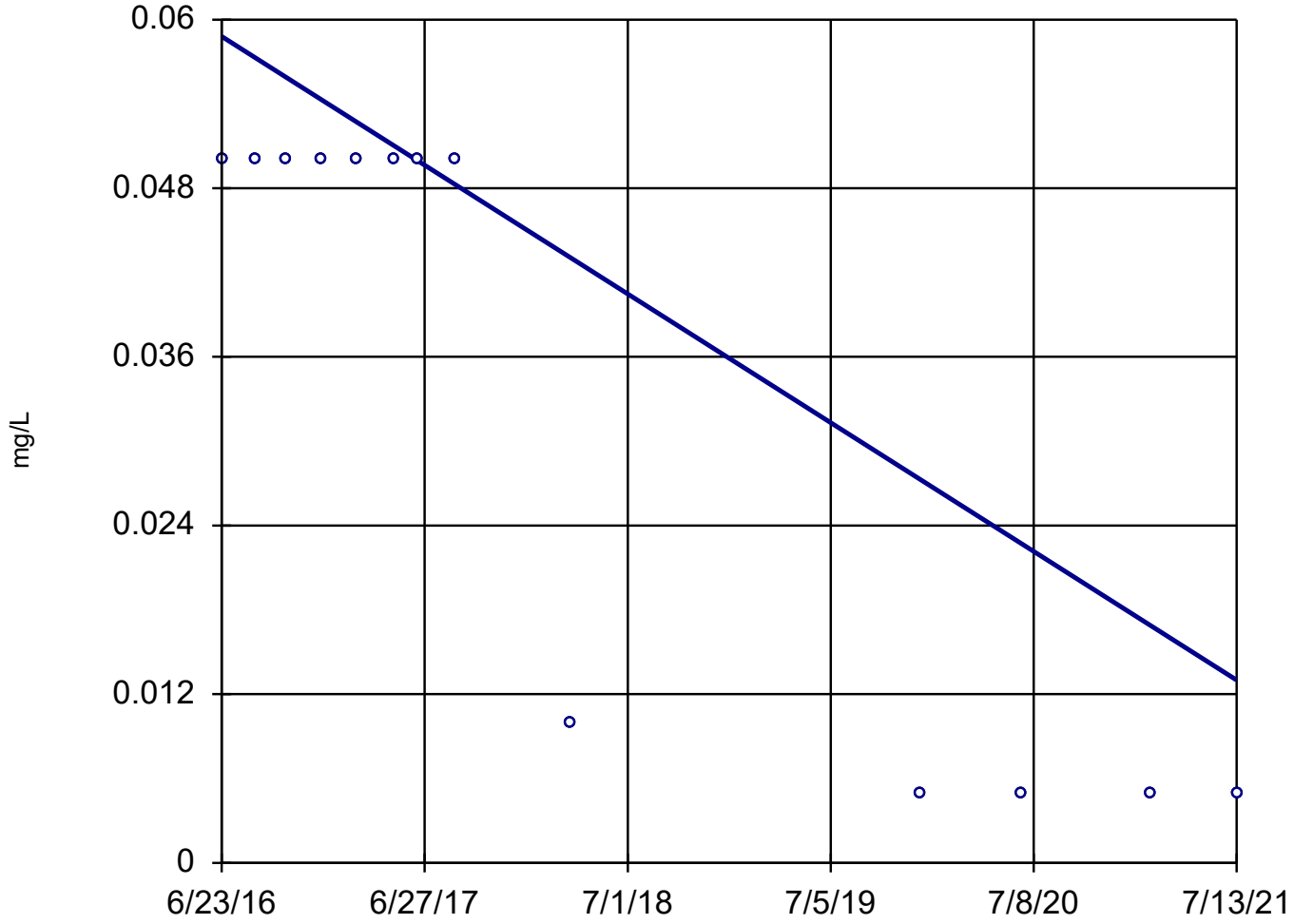
Constituent: Mercury Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 13

Slope = -0.009055 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

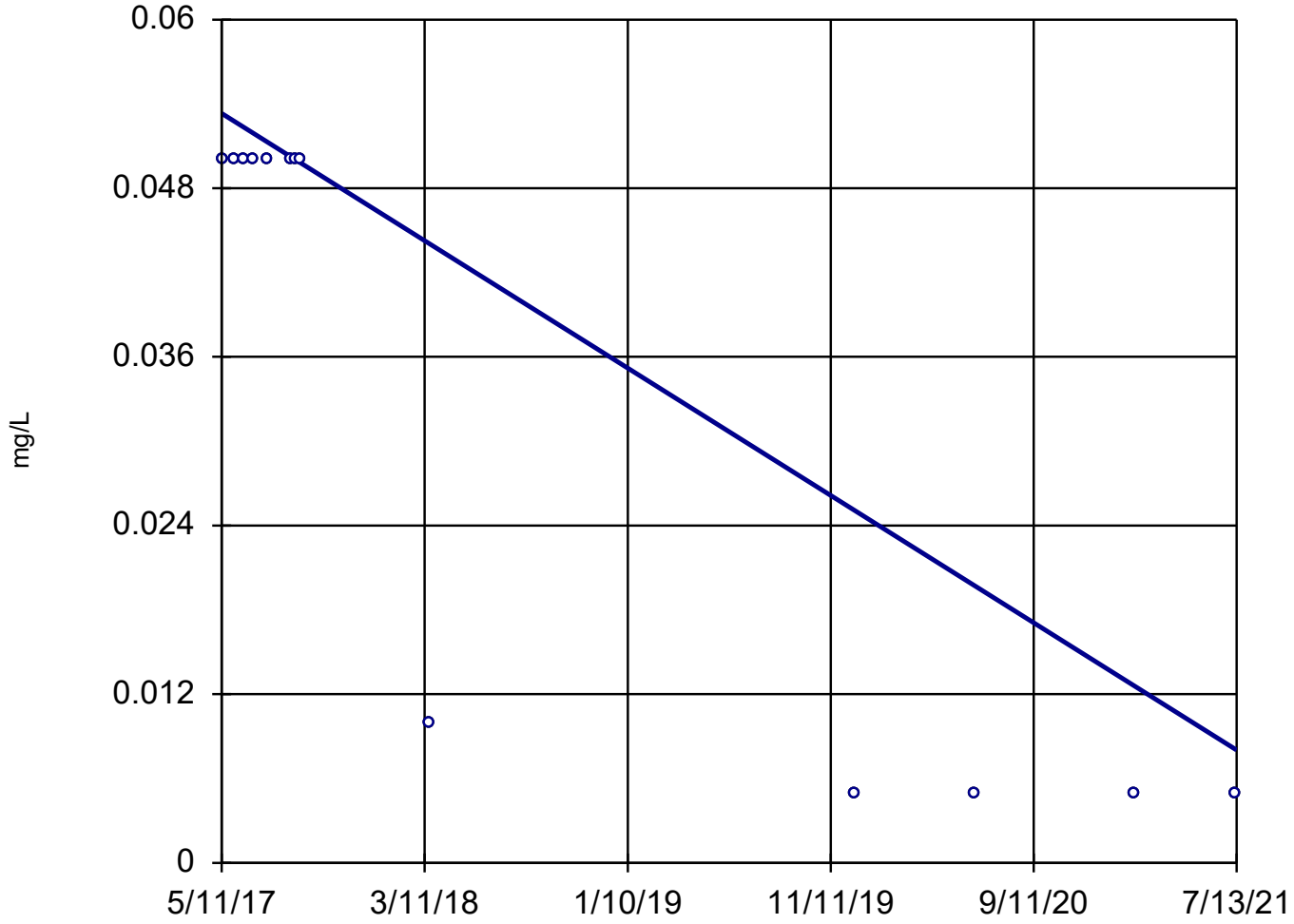
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 13

Slope = -0.01085 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

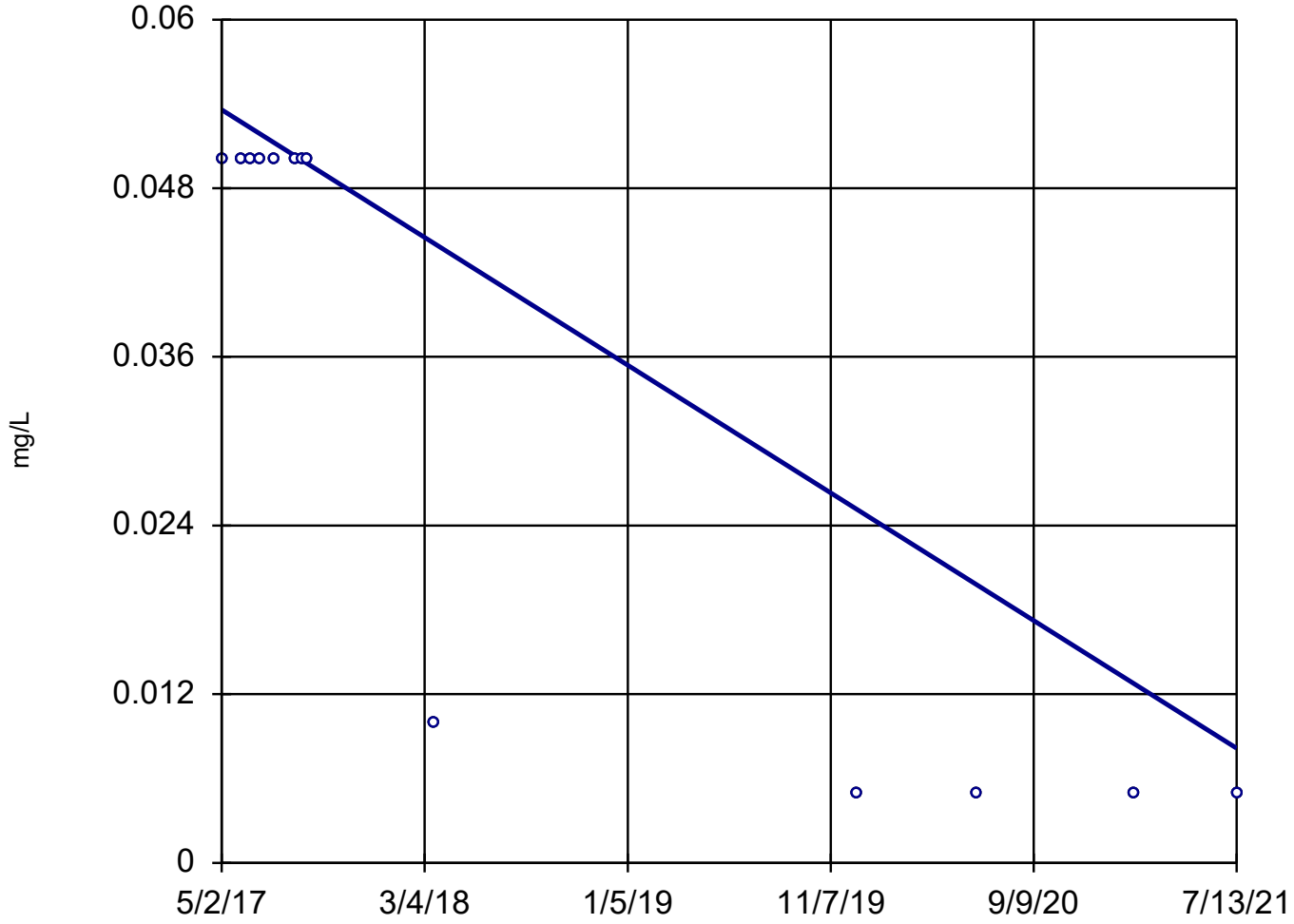
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 13

Slope = -0.01082 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

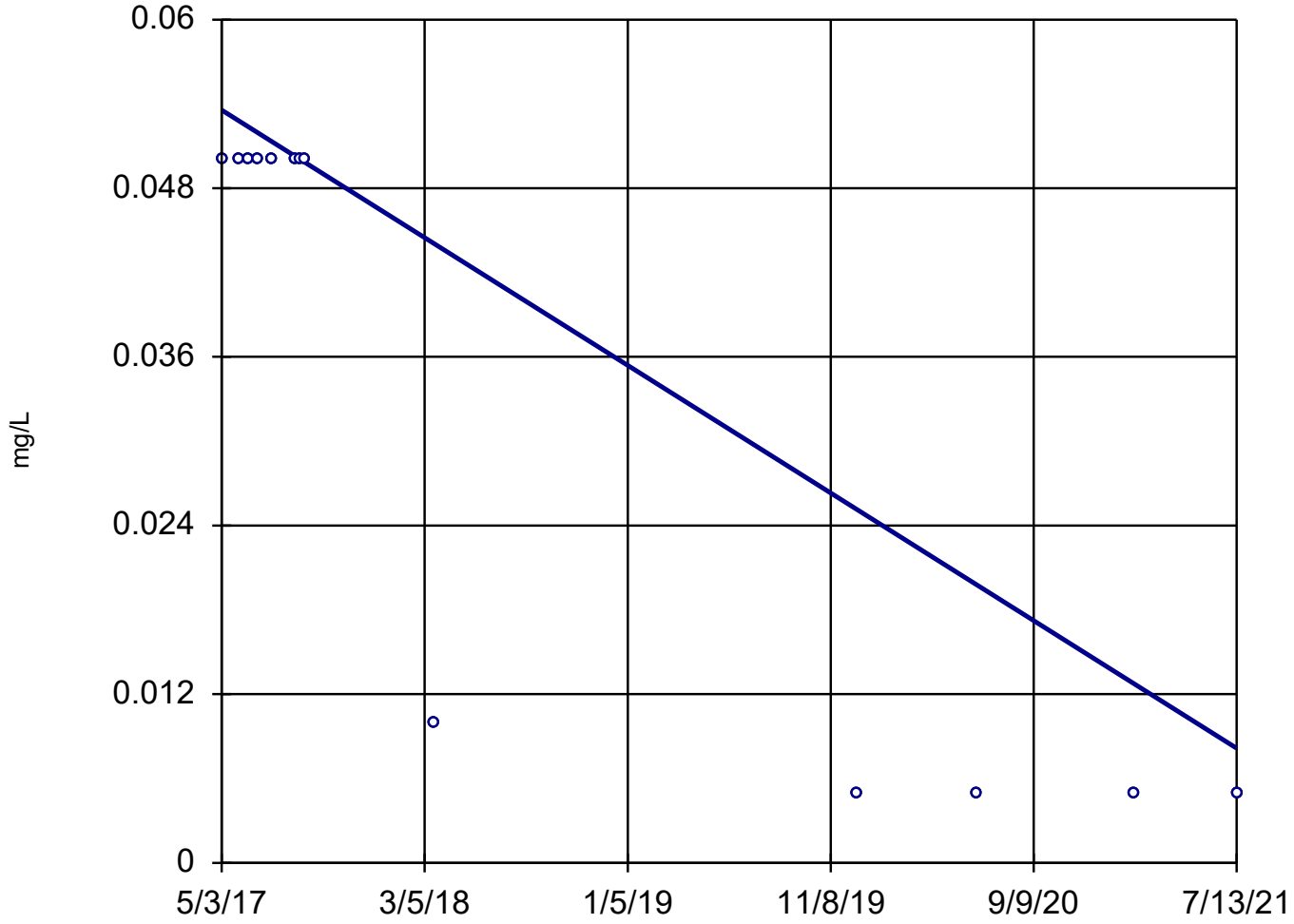
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 13

Slope = -0.01082 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

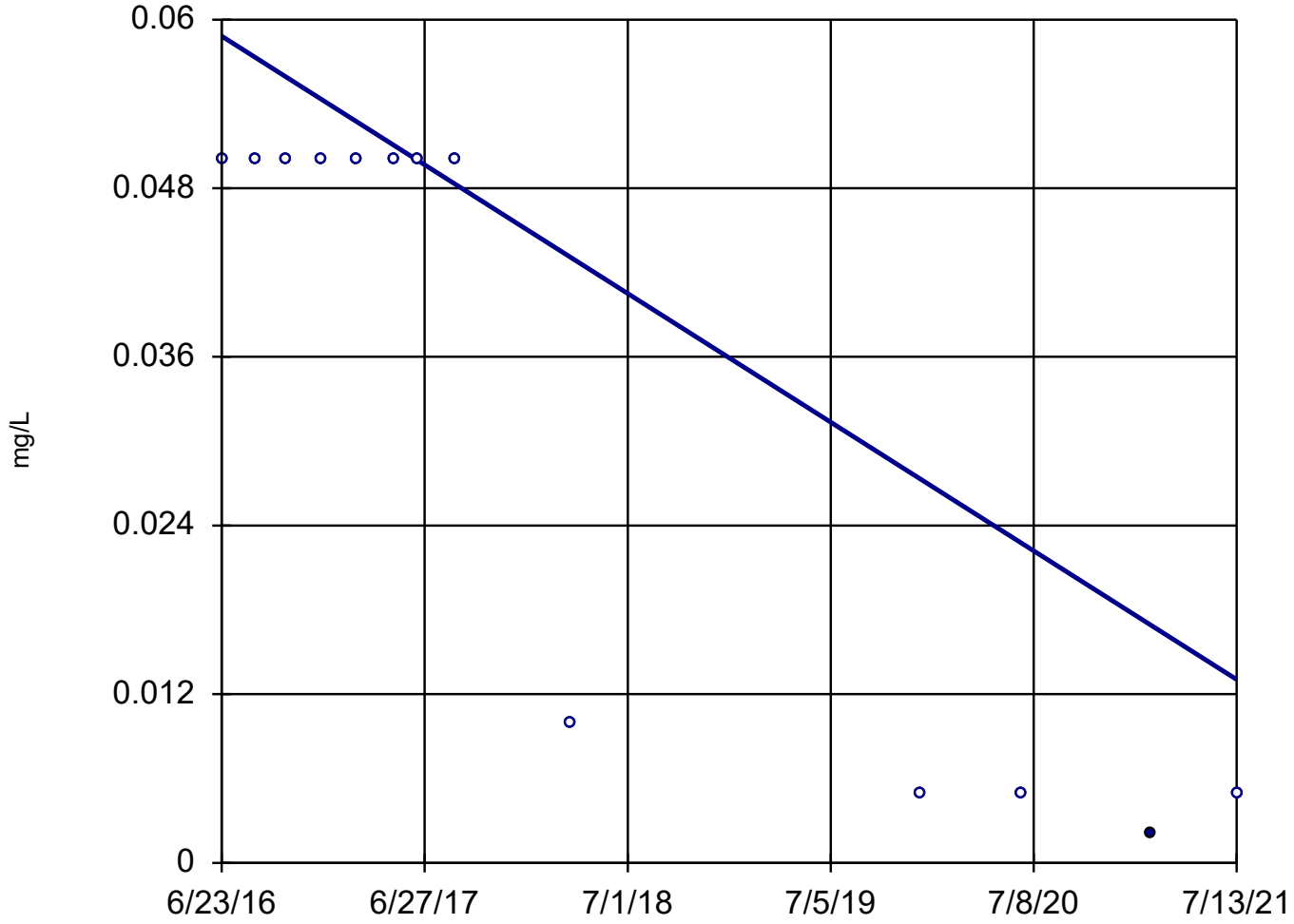
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 13

Slope = -0.009055 units per year.

Mann-Kendall statistic = -45
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

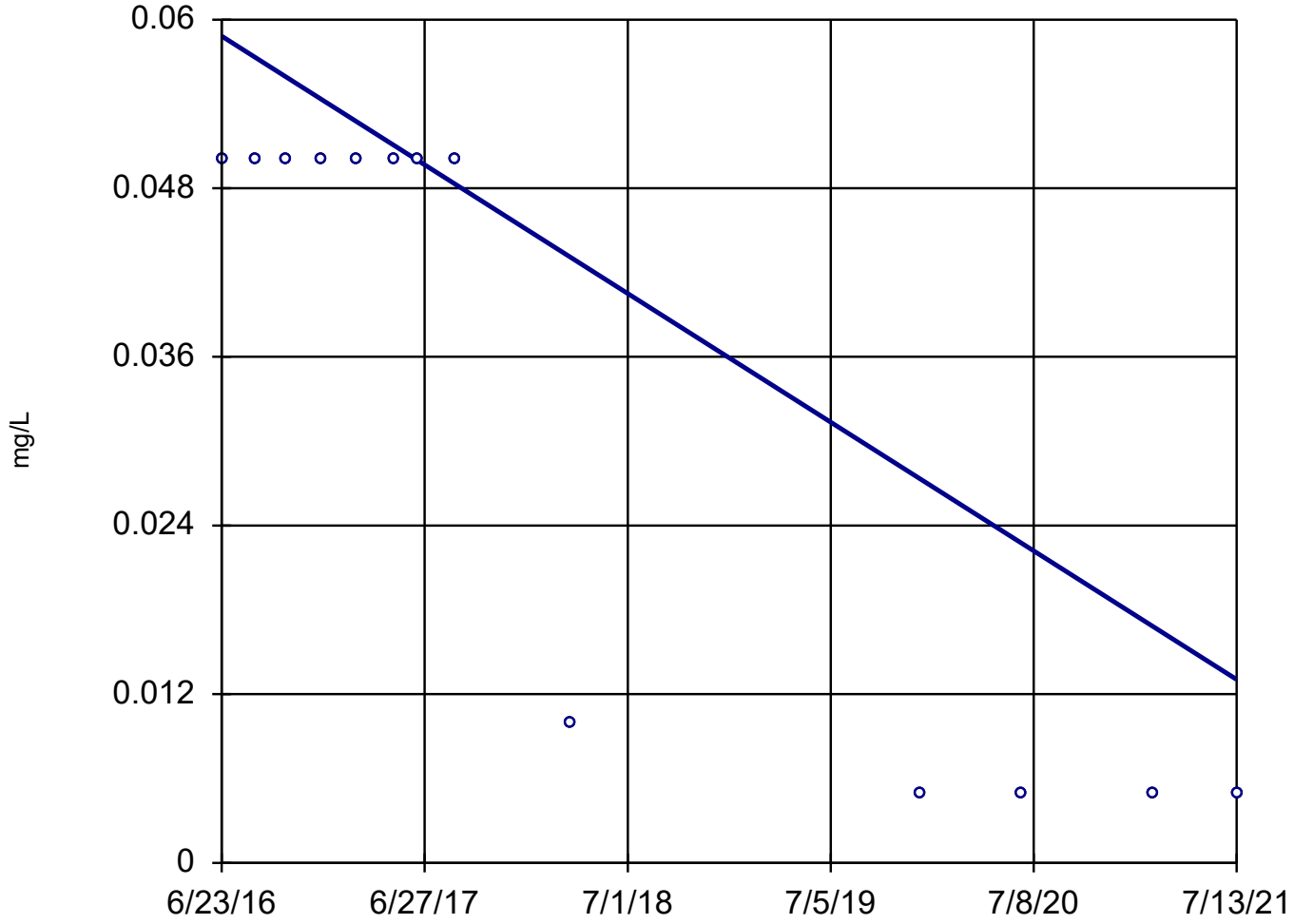
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 13

Slope = -0.009055 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

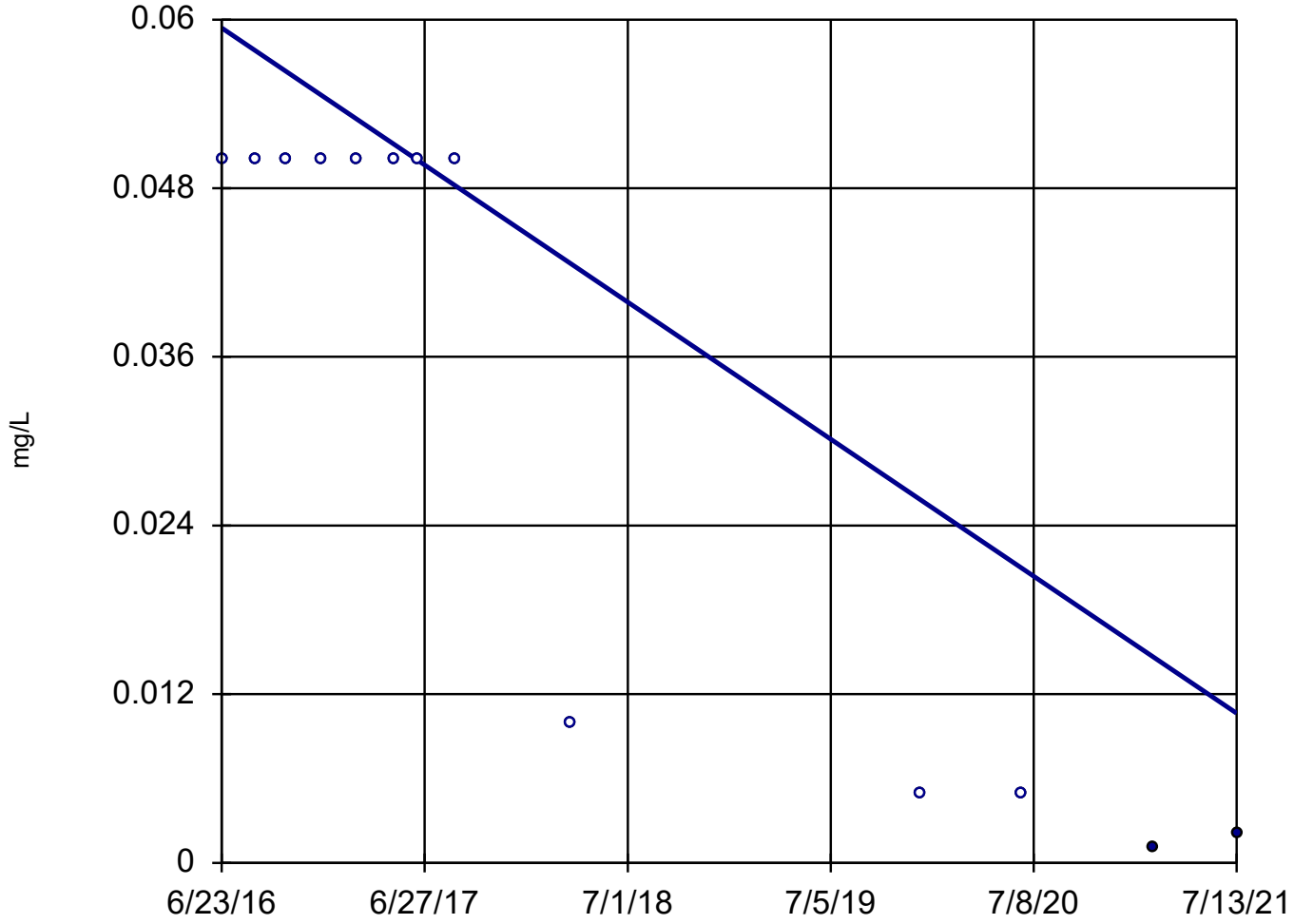
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 13

Slope = -0.009642 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

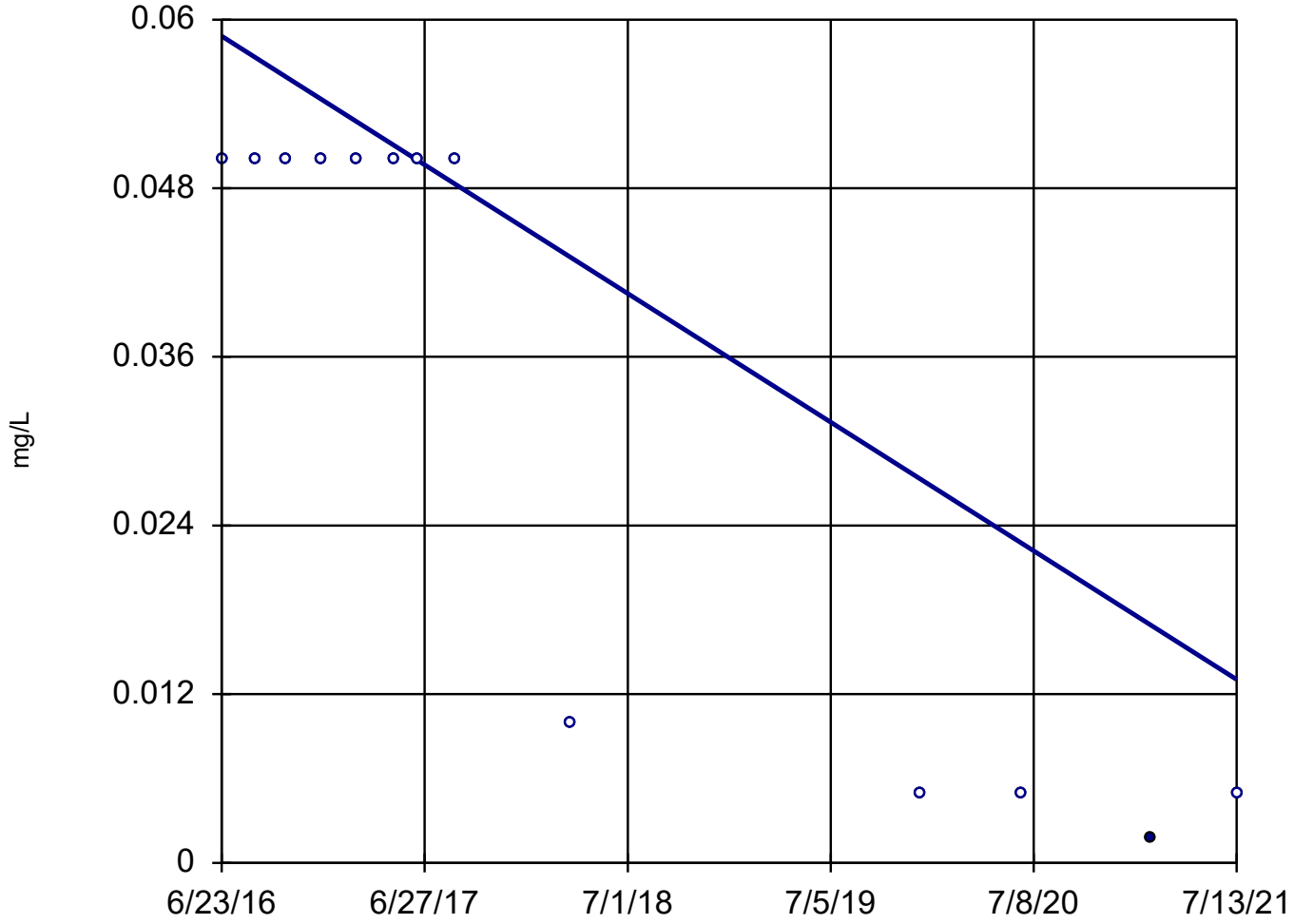
Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 13

Slope = -0.009055 units per year.

Mann-Kendall statistic = -45
critical = -39

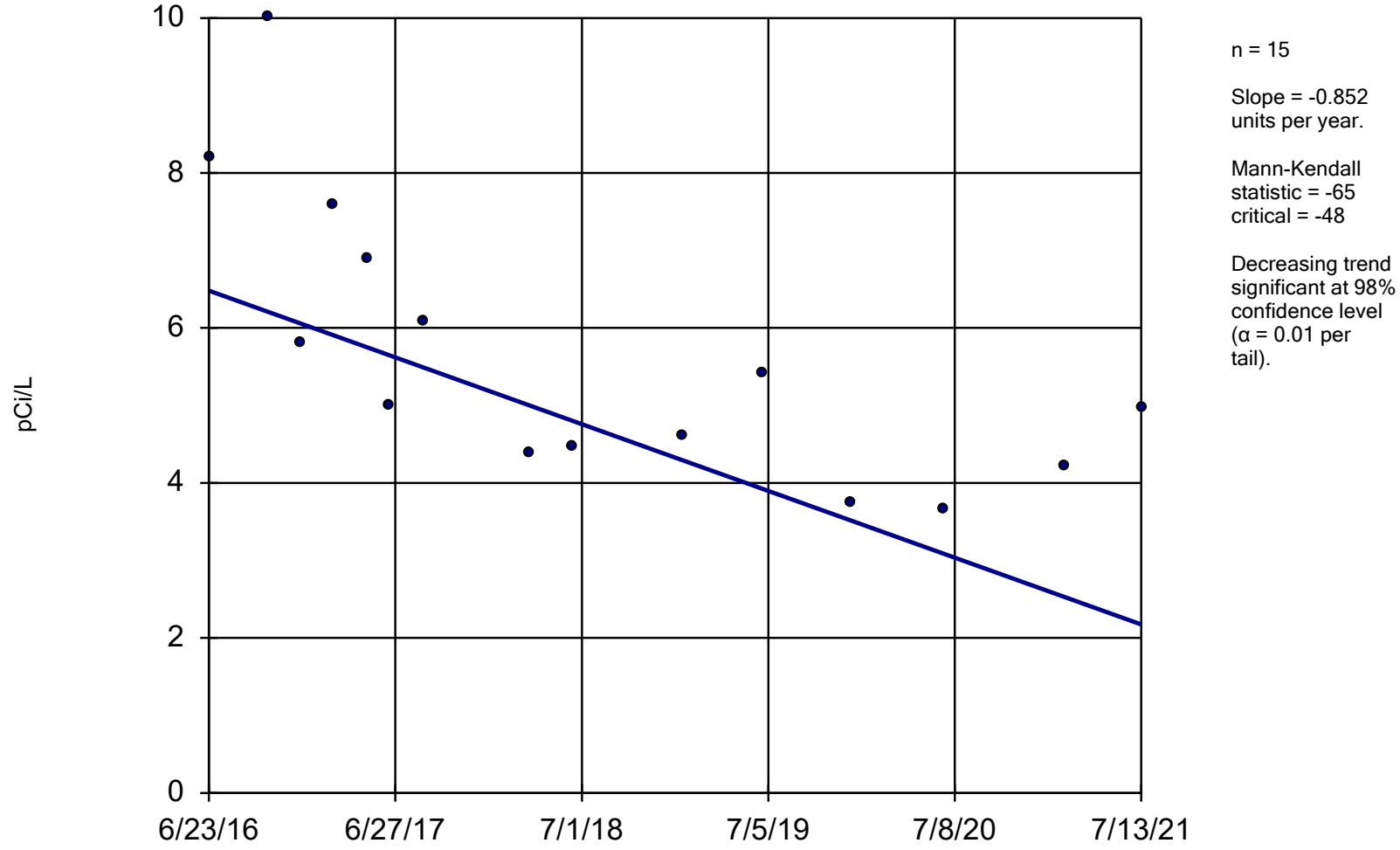
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 15

Slope = -0.852 units per year.

Mann-Kendall statistic = -65
critical = -48

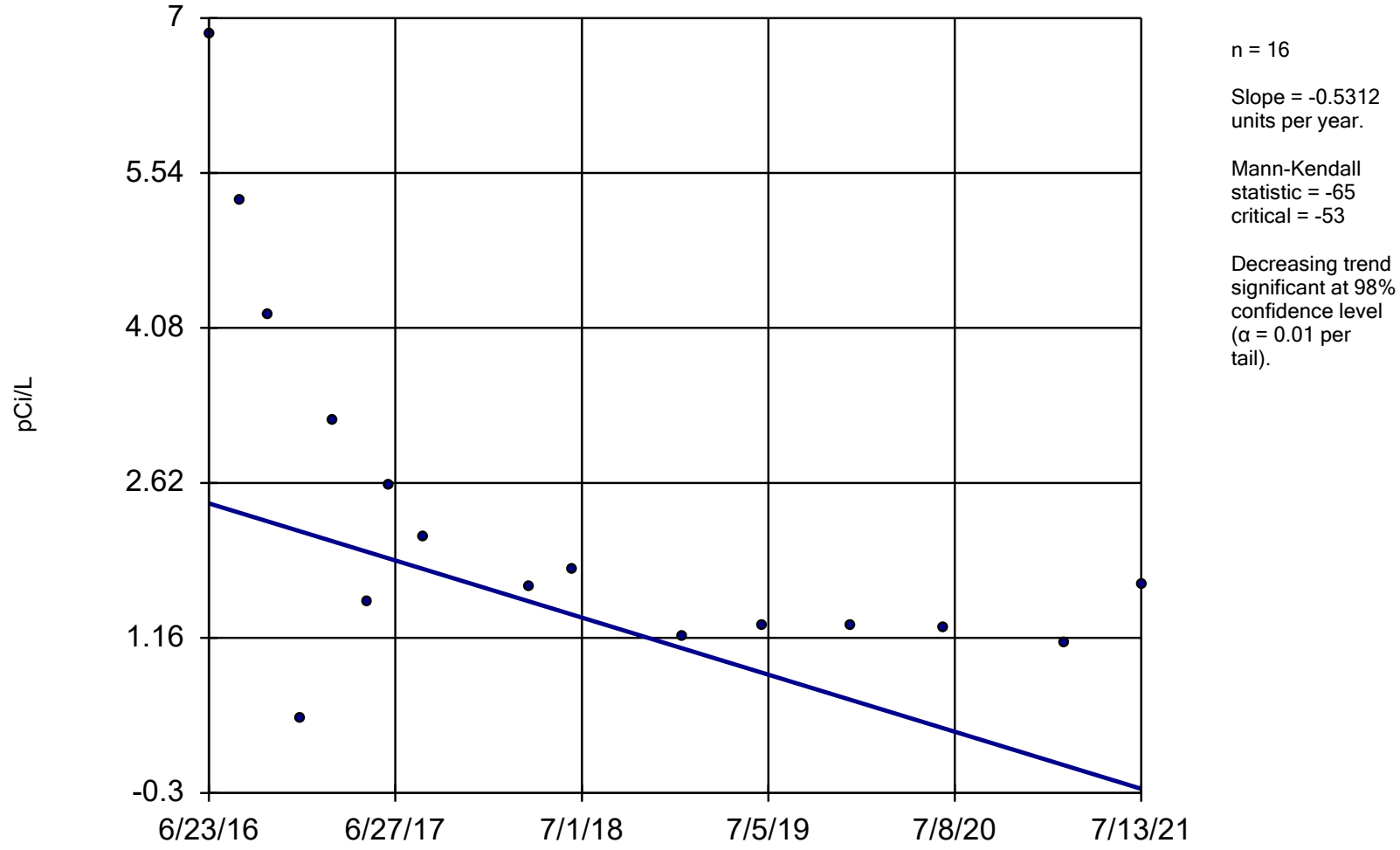
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-4



n = 16

Slope = -0.5312 units per year.

Mann-Kendall statistic = -65
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

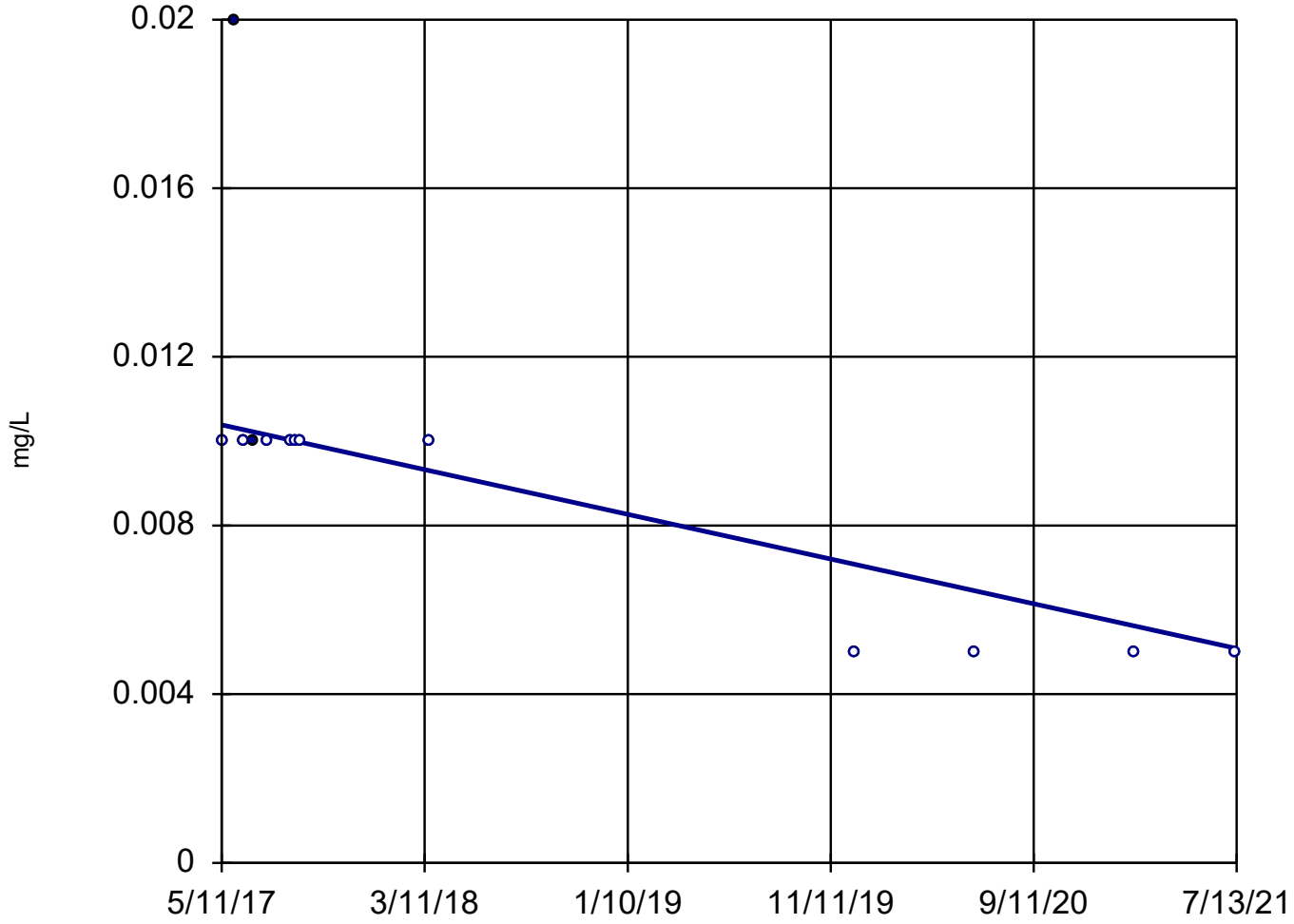
Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 13

Slope = -0.00127 units per year.

Mann-Kendall statistic = -42
critical = -39

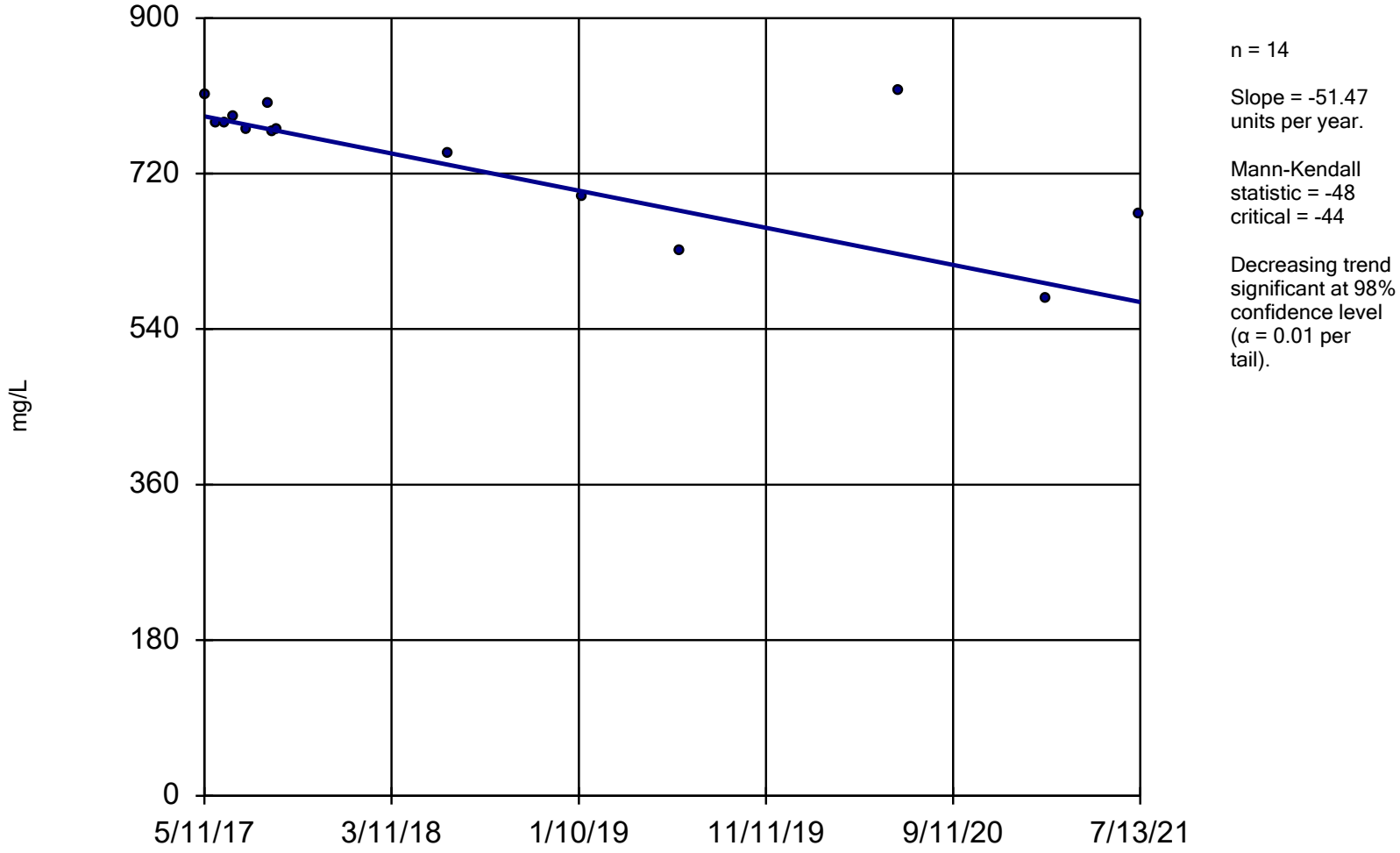
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Selenium Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -51.47 units per year.

Mann-Kendall statistic = -48
critical = -44

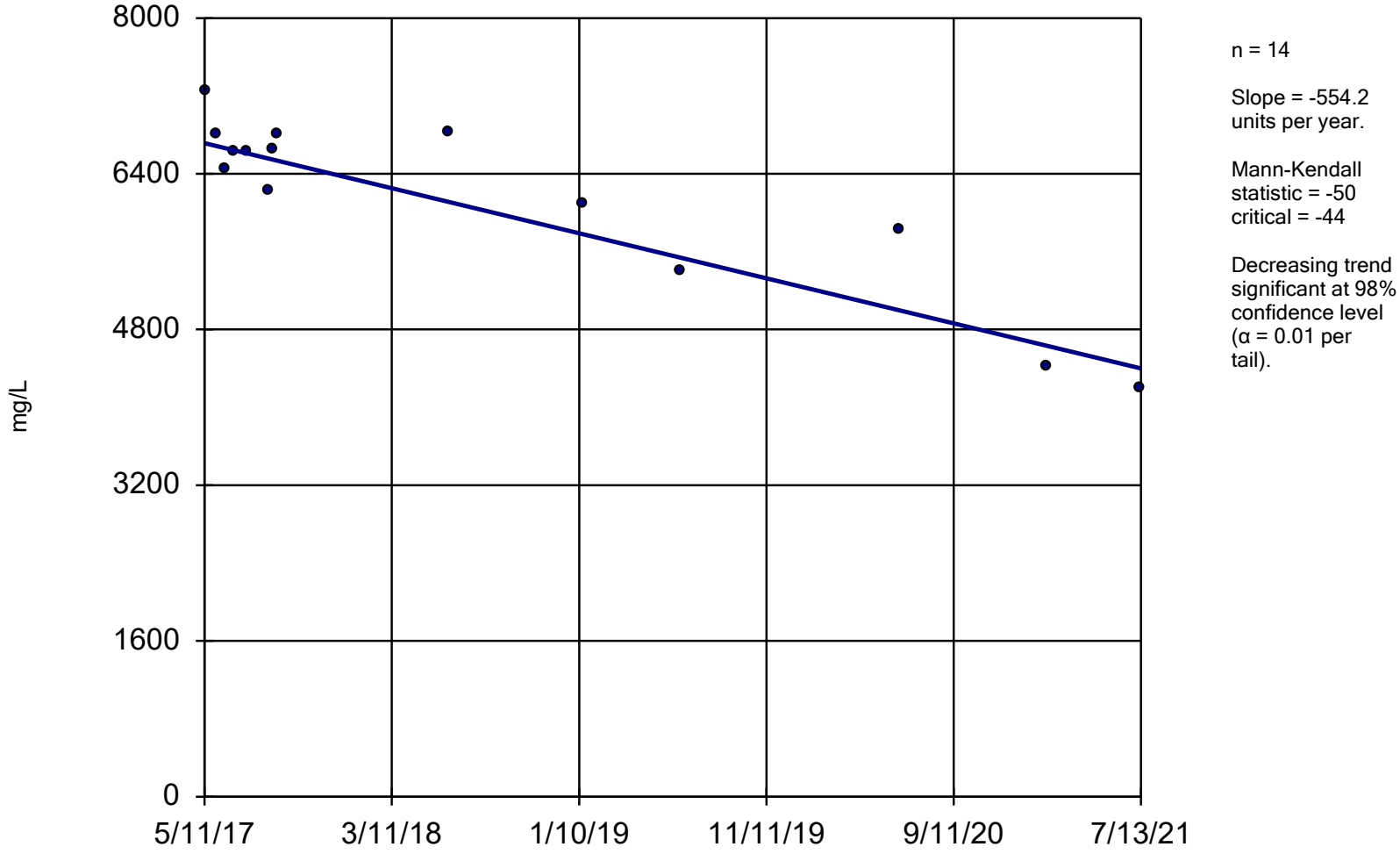
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -554.2 units per year.

Mann-Kendall statistic = -50
critical = -44

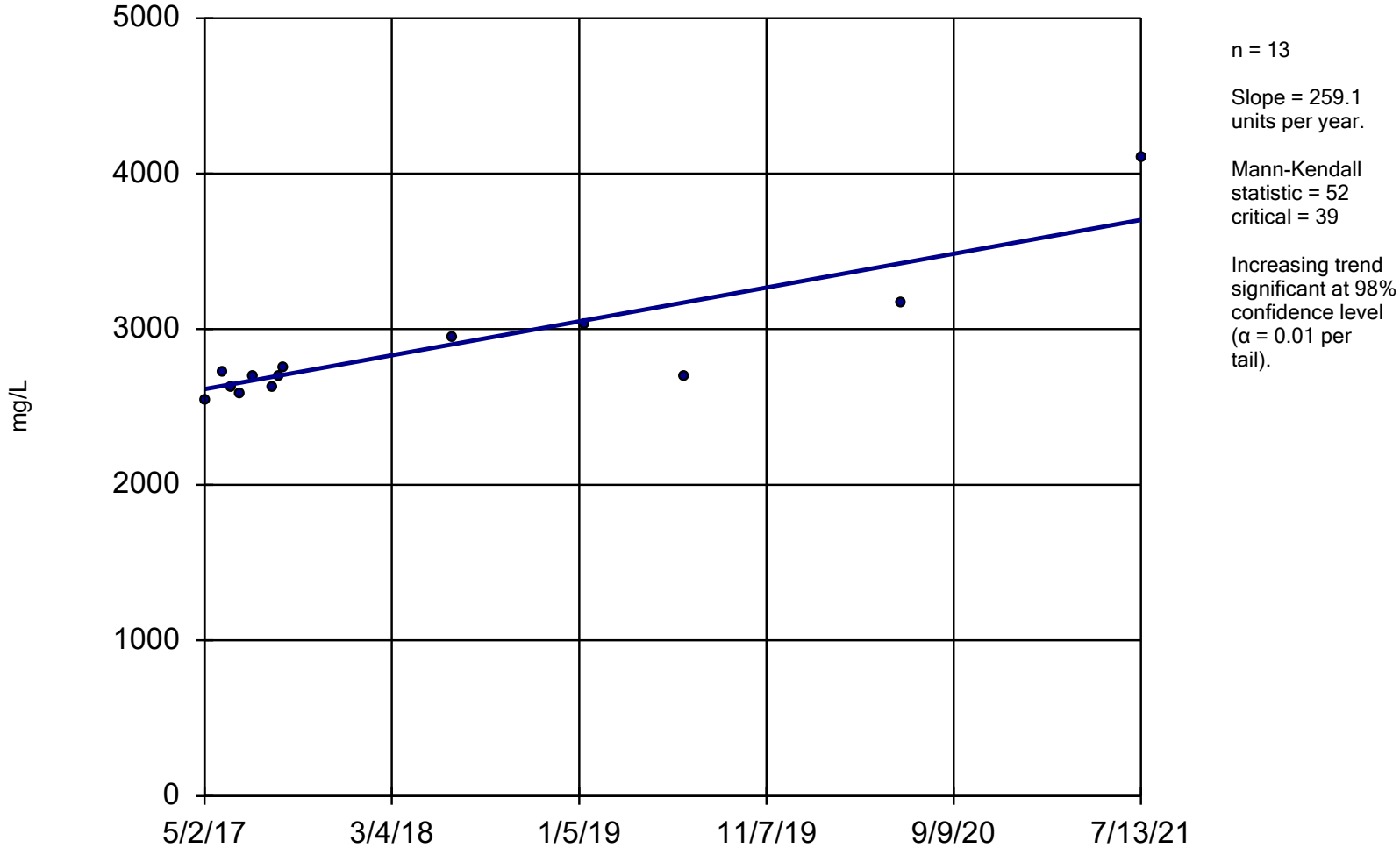
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 13

Slope = 259.1 units per year.

Mann-Kendall statistic = 52
critical = 39

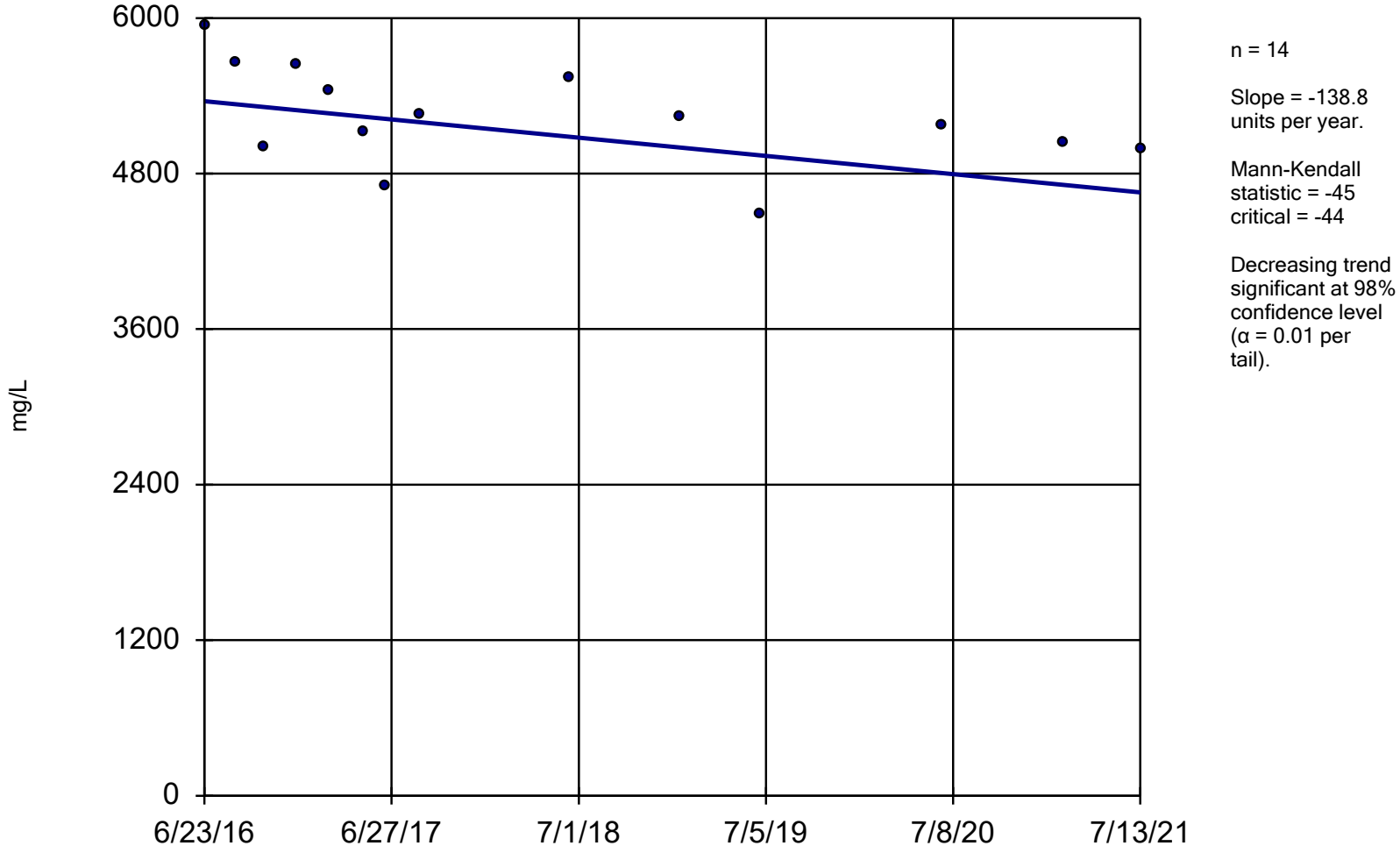
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 14

Slope = -138.8 units per year.

Mann-Kendall statistic = -45
critical = -44

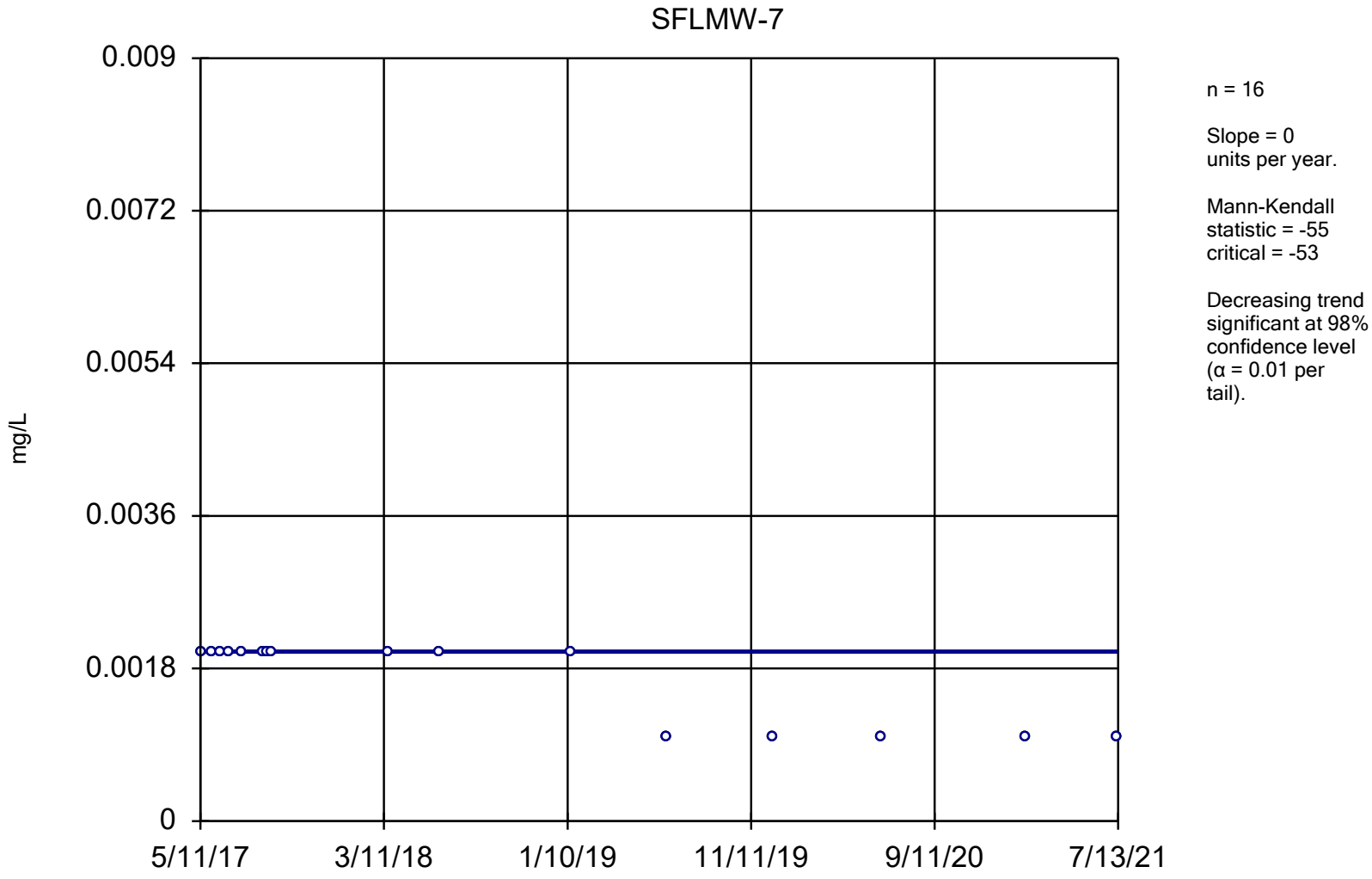
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



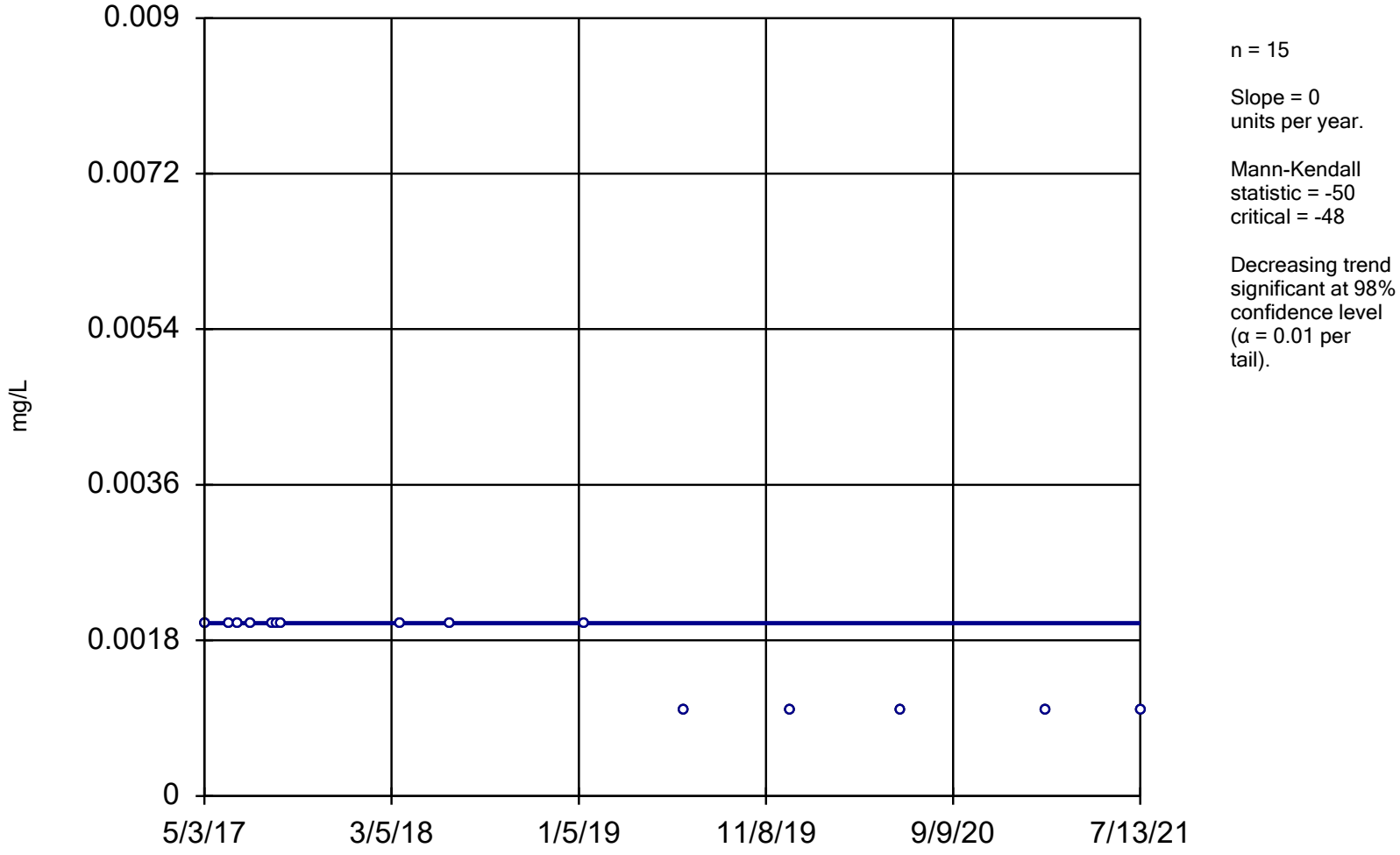
Constituent: Thallium Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 15

Slope = 0
units per year.

Mann-Kendall
statistic = -50
critical = -48

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

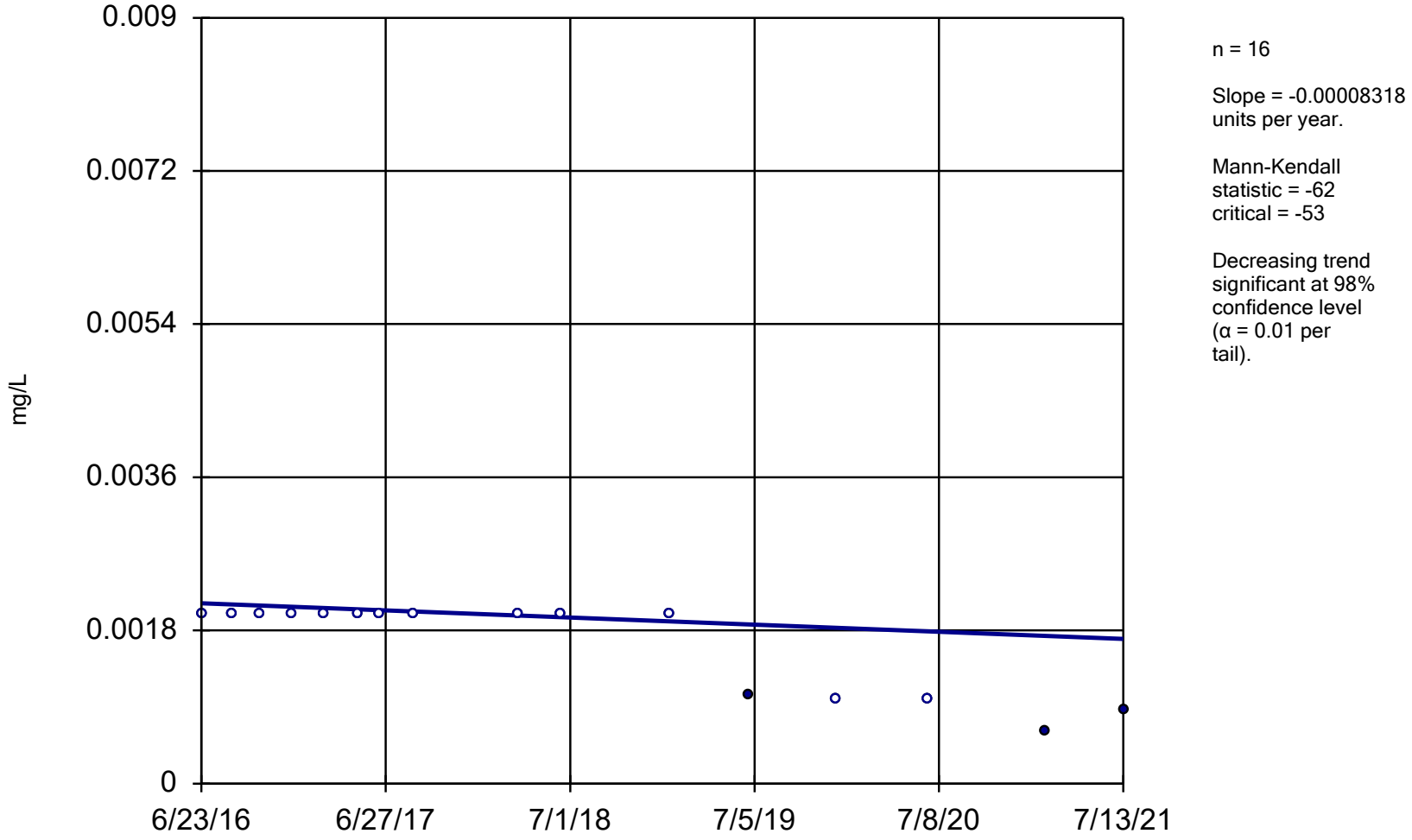
Constituent: Thallium Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 16

Slope = -0.00008318 units per year.

Mann-Kendall statistic = -62
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Thallium Analysis Run 8/19/2021 11:39 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	**SFLMW-6**	**-0.0008049**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-7**	**-0.0009845**	**-45**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-15**	**-0.0009616**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-18 (bg)**	**-0.0009616**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-2**	**-0.0008049**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-3**	**-0.0008049**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-4**	**-0.0008049**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-5**	**-0.0008049**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-6	0	2	39	No	13	30.77	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-7**	**-0.002194**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	MNW-15	0	-18	-35	No	12	66.67	n/a	n/a	0.02	NP
Arsenic (mg/L)	**MNW-18 (bg)**	**-0.002023**	**-46**	**-39**	**Yes**	**13**	**76.92**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**SFLMW-2**	**-0.001739**	**-44**	**-39**	**Yes**	**13**	**69.23**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-3	-0.0007925	-33	-39	No	13	69.23	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-4**	**-0.001872**	**-43**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-5	-0.0002639	-28	-39	No	13	69.23	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-6	-0.005432	-24	-31	No	11	0	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-7	0.001405	14	35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	MNW-15	-0.000964	-29	-35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	MNW-18 (bg)	-0.0009602	-31	-35	No	12	8.333	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-2	0	-7	-35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	**SFLMW-3**	**-0.005449**	**-37**	**-35**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Barium (mg/L)	SFLMW-4	-0.001208	-19	-35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	**SFLMW-5**	**-0.004213**	**-40**	**-35**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-6	-0.0005527	-17	-48	No	15	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	SFLMW-7	-0.0004923	-49	-53	No	16	100	n/a	n/a	0.02	NP
Beryllium (mg/L)	MNW-15	0.003659	30	53	No	16	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	MNW-18 (bg)	-0.0005155	-51	-53	No	16	93.75	n/a	n/a	0.02	NP
Beryllium (mg/L)	SFLMW-2	0.0007966	46	53	No	16	18.75	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SFLMW-3**	**-0.001723**	**-61**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-4	-0.00042	-49	-53	No	16	100	n/a	n/a	0.02	NP
Beryllium (mg/L)	SFLMW-5	0.00004314	14	48	No	15	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-6	-0.01541	-20	-35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-7	0.008655	10	35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-15	-0.1166	-21	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-18 (bg)	-0.04071	-26	-35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-2	-0.0136	-22	-35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-3**	**0.2863**	**61**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	SFLMW-4	0.02237	20	35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-5**	**0.4157**	**63**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-6	0.00001422	5	53	No	16	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	**SFLMW-7**	**-0.000479**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-15**	**-0.016**	**-59**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-18 (bg)**	**-0.0004765**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-2**	**-0.0004807**	**-55**	**-53**	**Yes**	**16**	**68.75**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-3**	**-0.0005731**	**-86**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-4**	**-0.0003954**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-5	1.3e-10	12	53	No	16	37.5	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-6	-7.837	-13	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-7**	**-62.86**	**-57**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MNW-15	5.714	9	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MNW-18 (bg)	-17.62	-16	-39	No	13	7.692	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-2	11.46	16	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-3	-23.93	-41	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-4	-12.28	-27	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-5**	**-17.28**	**-45**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-6	30.42	5	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SFLMW-7	-154.2	-39	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	MNW-15	-23.98	-34	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**MNW-18 (bg)**	**-47.3**	**-72**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-2	73.2	10	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**SFLMW-3**	**-132.8**	**-77**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-4	-23.78	-24	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SFLMW-5	-4.517	-3	-39	No	13	0	n/a	n/a	0.02	NP
Chromium (mg/L)	**SFLMW-6**	**-0.000682**	**-41**	**-39**	**Yes**	**13**	**53.85**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-7**	**-0.001929**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	MNW-15	0	-27	-39	No	13	92.31	n/a	n/a	0.02	NP
Chromium (mg/L)	**MNW-18 (bg)**	**-0.001302**	**-43**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-2**	**-0.001664**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-3**	**-0.00161**	**-47**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-4**	**-0.001664**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-5**	**-0.001169**	**-40**	**-39**	**Yes**	**13**	**76.92**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-6	-0.001872	-32	-53	No	16	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-7**	**-0.004954**	**-85**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-15**	**0.01539**	**58**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-18 (bg)**	**-0.004806**	**-80**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-2	-0.0007061	-38	-48	No	15	20	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-3**	**-0.002528**	**-58**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**SFLMW-4**	**-0.004836**	**-86**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-5	-0.001432	-41	-53	No	16	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-6	0	10	48	No	15	33.33	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-7	0.0232	46	53	No	16	75	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-15	0.06876	46	53	No	16	12.5	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-18 (bg)	-0.005003	-16	-35	No	12	8.333	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-2	0.1784	46	53	No	16	31.25	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-3	-0.01267	-25	-53	No	16	18.75	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-4	0.0261	39	53	No	16	68.75	n/a	n/a	0.02	NP
Fluoride (mg/L)	**SFLMW-5**	**0.03431**	**55**	**53**	**Yes**	**16**	**37.5**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	SFLMW-6	0.0001901	27	48	No	15	53.33	n/a	n/a	0.02	NP
Lead (mg/L)	**SFLMW-7**	**-0.002623**	**-83**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-15**	**-0.002522**	**-86**	**-53**	**Yes**	**16**	**68.75**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-18 (bg)**	**-0.002408**	**-81**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-2**	**-0.00228**	**-82**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	SFLMW-3	-0.001007	-52	-53	No	16	0	n/a	n/a	0.02	NP
Lead (mg/L)	**SFLMW-4**	**-0.002232**	**-81**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-5**	**-0.002152**	**-89**	**-53**	**Yes**	**16**	**75**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SFLMW-6	-0.03003	-35	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-7	-0.01512	-43	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	MNW-15	0.007717	33	53	No	16	12.5	n/a	n/a	0.02	NP
Lithium (mg/L)	MNW-18 (bg)	-0.0303	-42	-44	No	14	7.143	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	SFLMW-2	-0.01617	-38	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-3	-0.02962	-51	-53	No	16	6.25	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-4	-0.02025	-52	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-5	-0.02861	-32	-53	No	16	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-6**	**-0.000174**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-7**	**-0.0001993**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-15**	**-0.0001905**	**-72**	**-48**	**Yes**	**15**	**80**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-18 (bg)**	**-0.0001992**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-2**	**-0.000174**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	SFLMW-3	-0.0001421	-39	-53	No	16	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-4**	**-0.000174**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-5**	**-0.000174**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-6**	**-0.009055**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-7**	**-0.01085**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-15**	**-0.01082**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-18 (bg)**	**-0.01082**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-2**	**-0.009055**	**-45**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-3**	**-0.009055**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-4**	**-0.009642**	**-47**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-5**	**-0.009055**	**-45**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SFLMW-6	-0.04323	-49	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-7	0.06371	18	48	No	15	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-15	-0.005103	-4	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-18 (bg)	-0.1042	-39	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-2	-0.03207	-6	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-3	0.01035	17	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-4	-0.01154	-8	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-5	-0.04545	-31	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	SFLMW-6	0.88	24	53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	SFLMW-7	-0.01134	-7	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	MNW-15	-0.1098	-29	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	MNW-18 (bg)	-0.1579	-20	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	SFLMW-2	0.2077	10	39	No	13	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	**SFLMW-3**	**-0.852**	**-65**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 ...	**SFLMW-4**	**-0.5312**	**-65**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 ...	SFLMW-5	0.6541	47	48	No	15	0	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-6	-5.7e-10	-16	-39	No	13	61.54	n/a	n/a	0.02	NP
Selenium (mg/L)	**SFLMW-7**	**-0.00127**	**-42**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	MNW-15	-0.00124	-22	-39	No	13	76.92	n/a	n/a	0.02	NP
Selenium (mg/L)	MNW-18 (bg)	0	-32	-35	No	12	100	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-2	0	-36	-39	No	13	100	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-3	0	-19	-35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-4	0	-36	-39	No	13	100	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-5	-0.000034	-35	-35	No	12	91.67	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-6	28.82	12	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**SFLMW-7**	**-51.47**	**-48**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	MNW-15	39.36	42	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	MNW-18 (bg)	-87.72	-15	-39	No	13	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-2	-35.36	-26	-35	No	12	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-3	28.89	28	44	No	14	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:40 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	SFLMW-4	26.95	13	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-5	41.61	28	39	No	13	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-6	-121	-12	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-7**	**-554.2**	**-50**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	**MNW-15**	**259.1**	**52**	**39**	**Yes**	**13**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	MNW-18 (bg)	-174.9	-11	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-2	-173.8	-13	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-3**	**-138.8**	**-45**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SFLMW-4	-67.64	-21	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-5	-114.3	-34	-44	No	14	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SFLMW-6	0	-4	-48	No	15	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SFLMW-7**	**0**	**-55**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	MNW-15	-0.00005563	-33	-53	No	16	43.75	n/a	n/a	0.02	NP
Thallium (mg/L)	**MNW-18 (bg)**	**0**	**-50**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SFLMW-2**	**-0.00008318**	**-62**	**-53**	**Yes**	**16**	**81.25**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	SFLMW-3	-0.0001147	-40	-53	No	16	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SFLMW-4	0	-51	-53	No	16	93.75	n/a	n/a	0.02	NP
Thallium (mg/L)	SFLMW-5	0	-51	-53	No	16	68.75	n/a	n/a	0.02	NP

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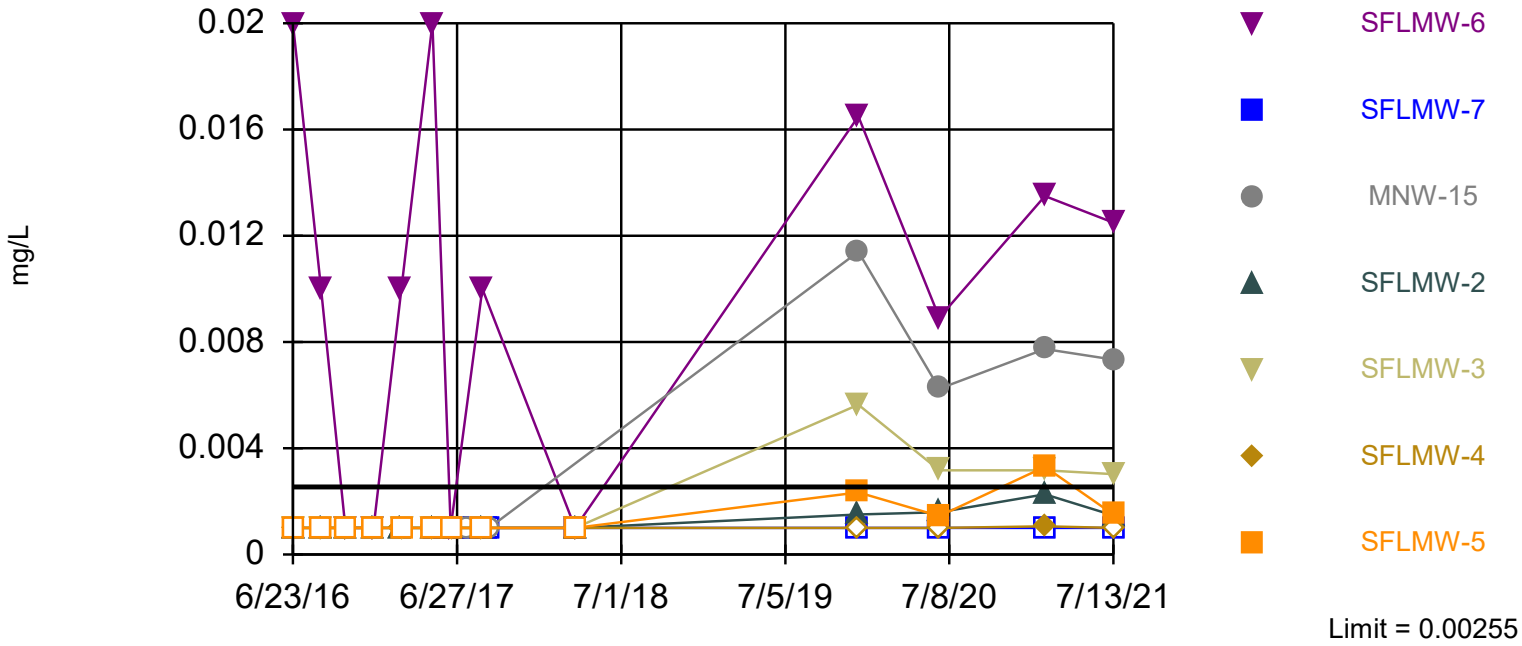
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, MNW-15, SFLMW-3

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 76.92% NDs. Report alpha = 0.35. Individual comparison alpha = 0.05969. Most recent point for each compliance well compared to limit.

Constituent: Arsenic Analysis Run 11/23/2021 1:02 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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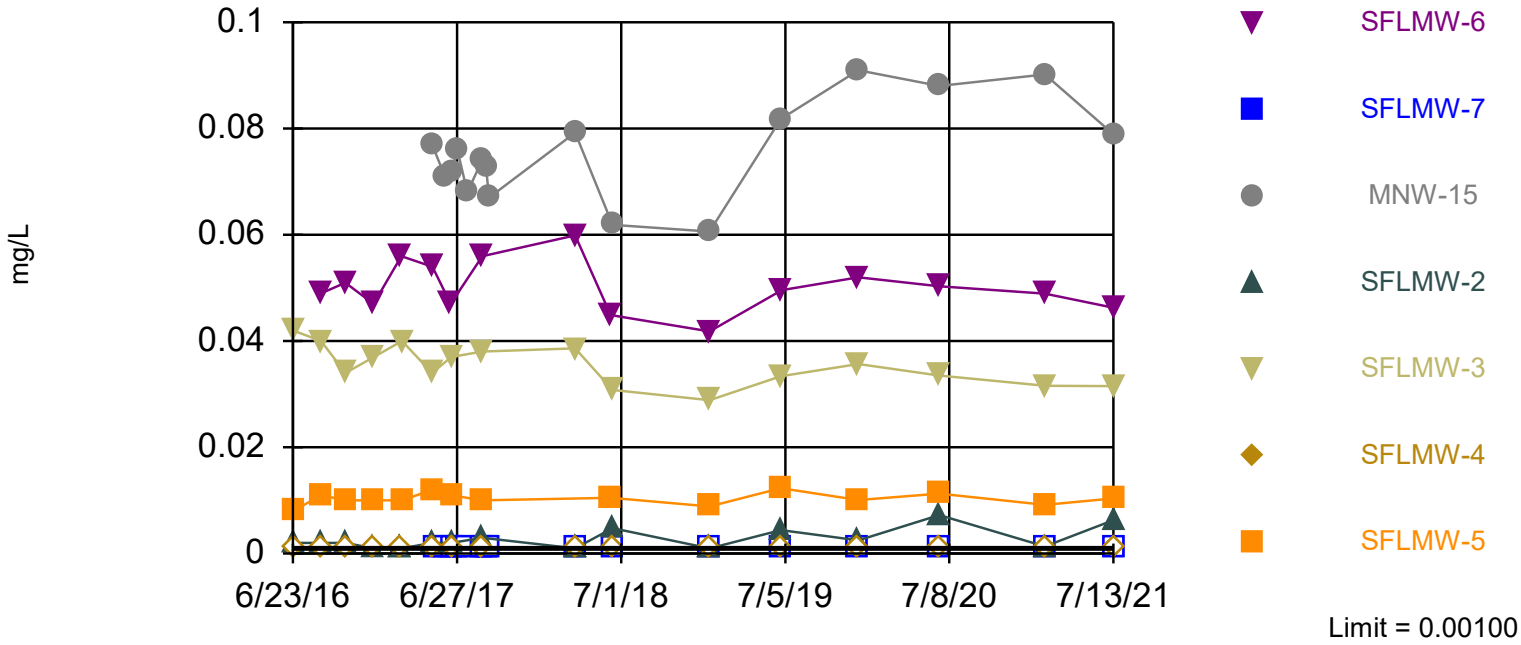
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, MNW-15, SFLMW-2, SFLMW-3, SFLMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 93.75% NDs. Report alpha = 0.3043. Individual comparison alpha = 0.05052. Most recent point for each compliance well compared to limit.

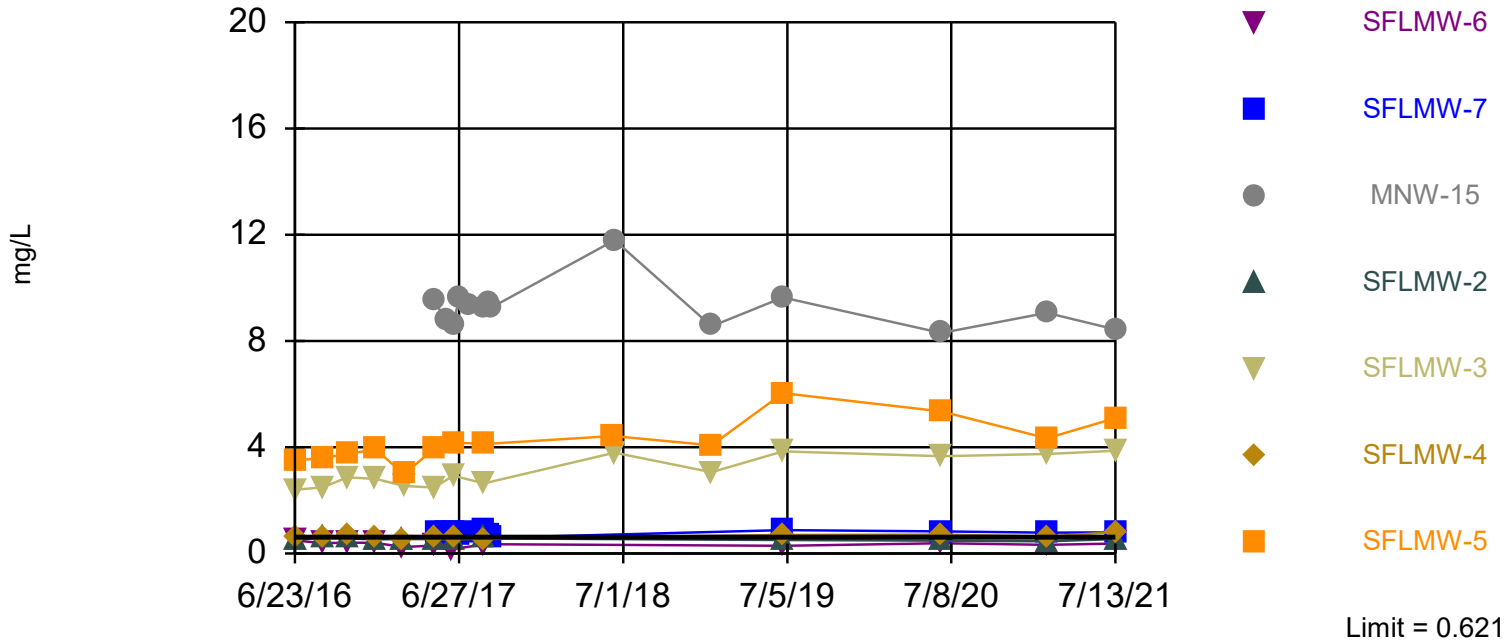
Constituent: Beryllium Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SFLMW-7, MNW-15, SFLMW-3, SFLMW-4, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square transformation): Mean=0.1706, Std. Dev.=0.07622, n=12. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8795, critical = 0.859. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Boron Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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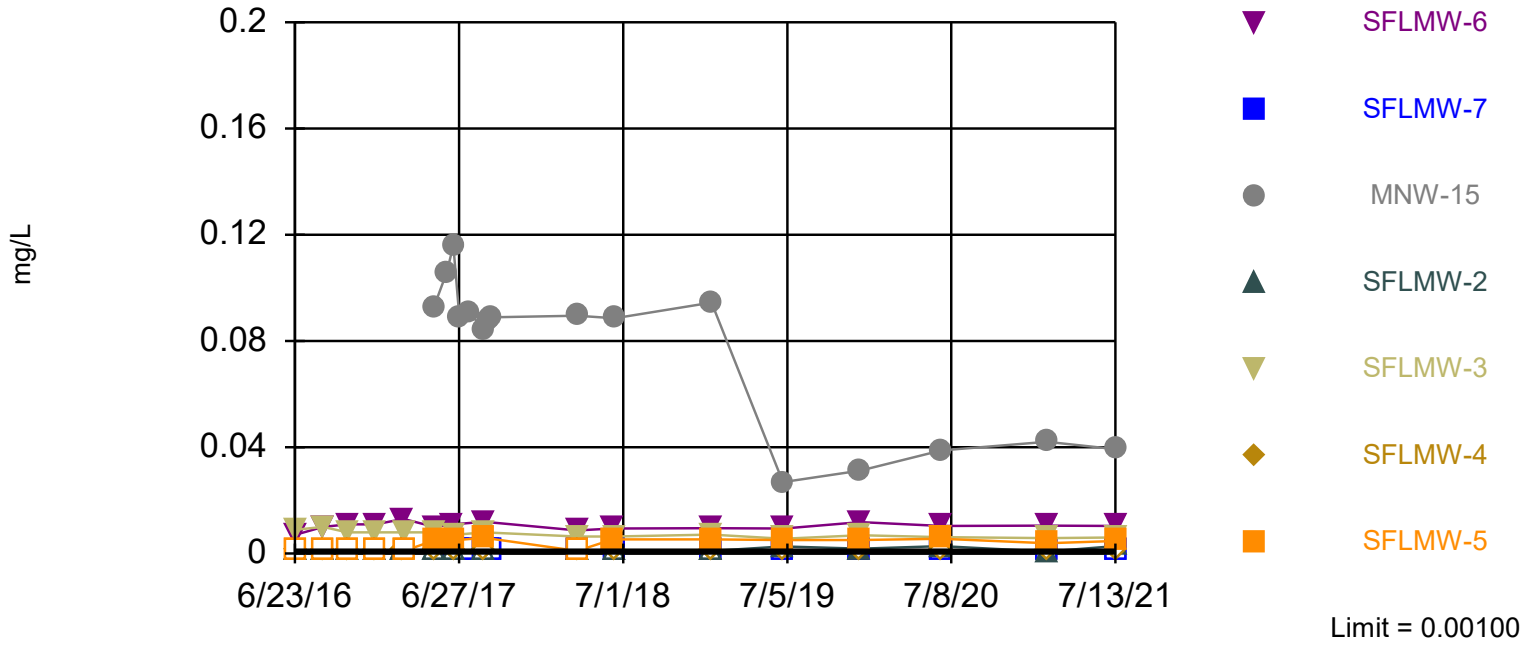
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, MNW-15, SFLMW-2, SFLMW-3, SFLMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 16) were censored; limit is most recent reporting limit. Report alpha = 0.3043. Individual comparison alpha = 0.05052. Most recent point for each compliance well compared to limit.

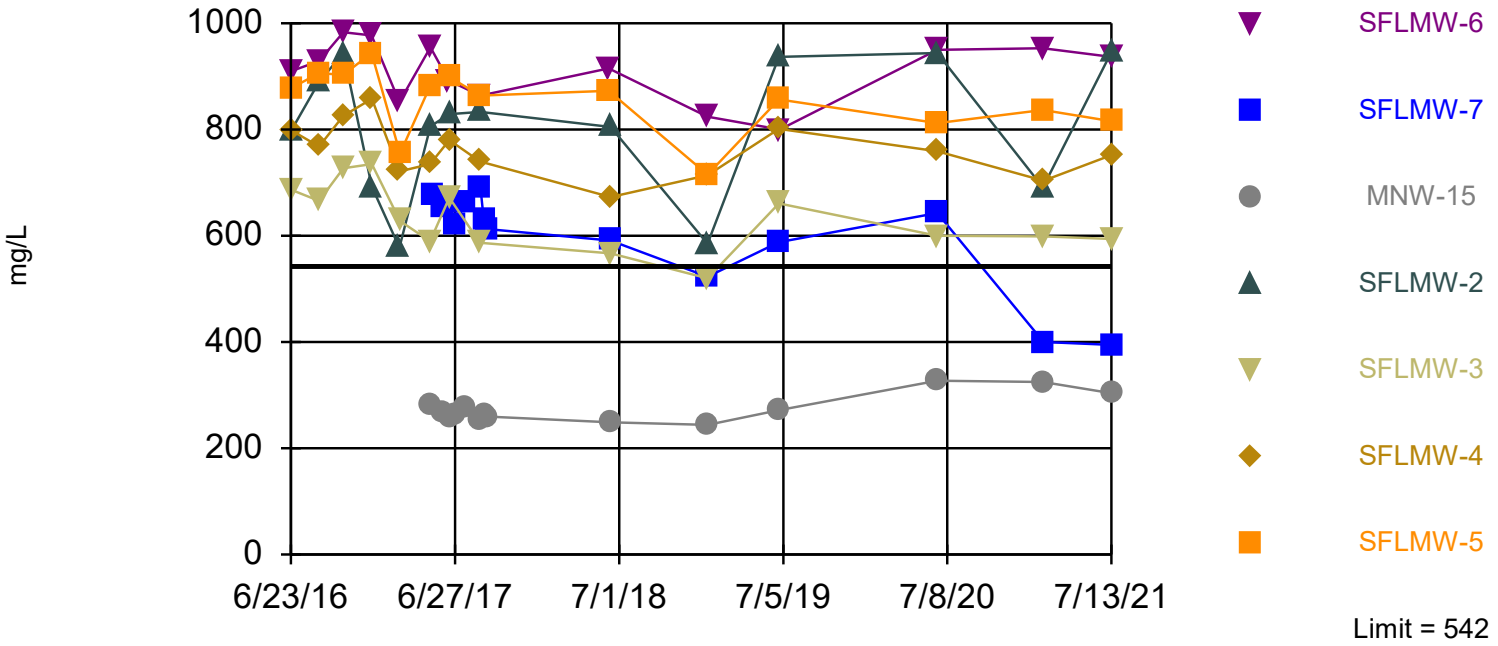
Constituent: Cadmium Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SFLMW-6, SFLMW-2, SFLMW-3, SFLMW-4, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square transformation): Mean=131558, Std. Dev.=58372, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.901, critical = 0.866. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

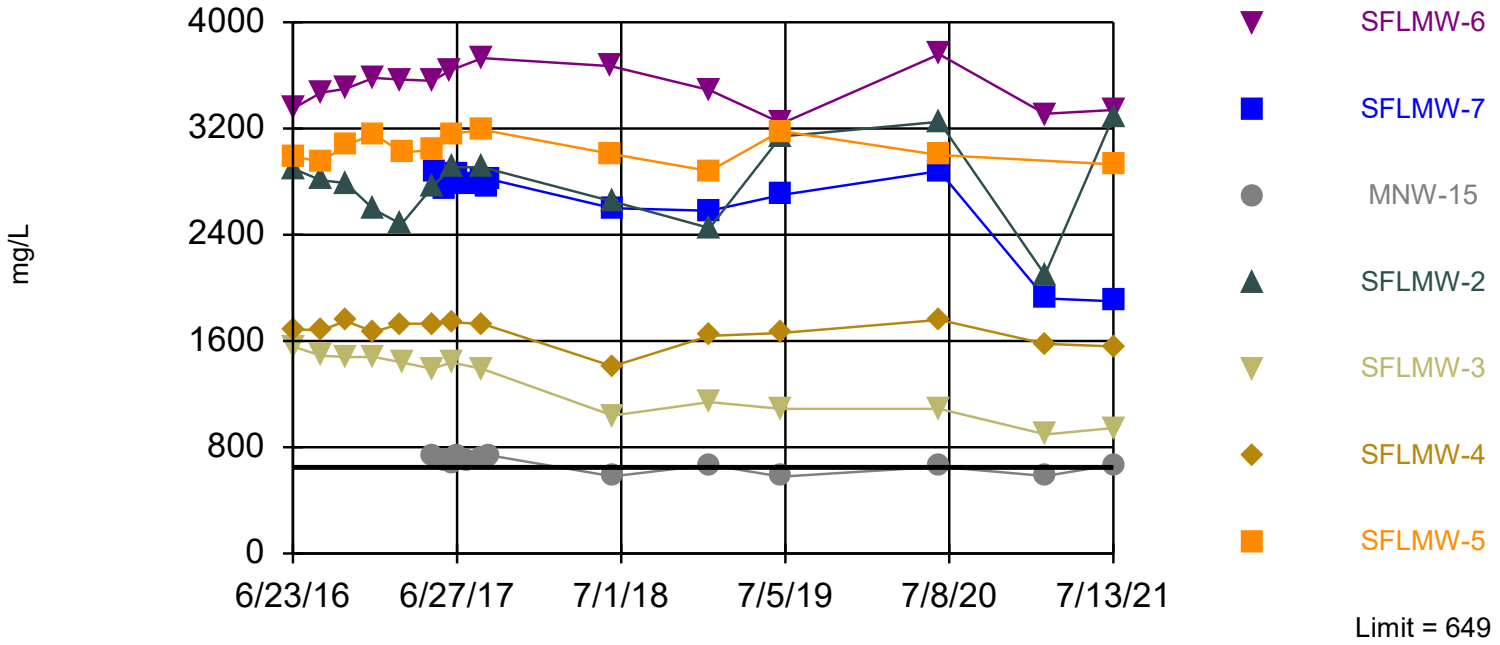
Constituent: Calcium Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SFLMW-6, SFLMW-7, MNW -15, SFLMW-2, SFLMW-3, SFLMW-4, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube transformation): Mean=1.2e8, Std. Dev.=5.5e7, n=14. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9079, critical = 0.874. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Chloride Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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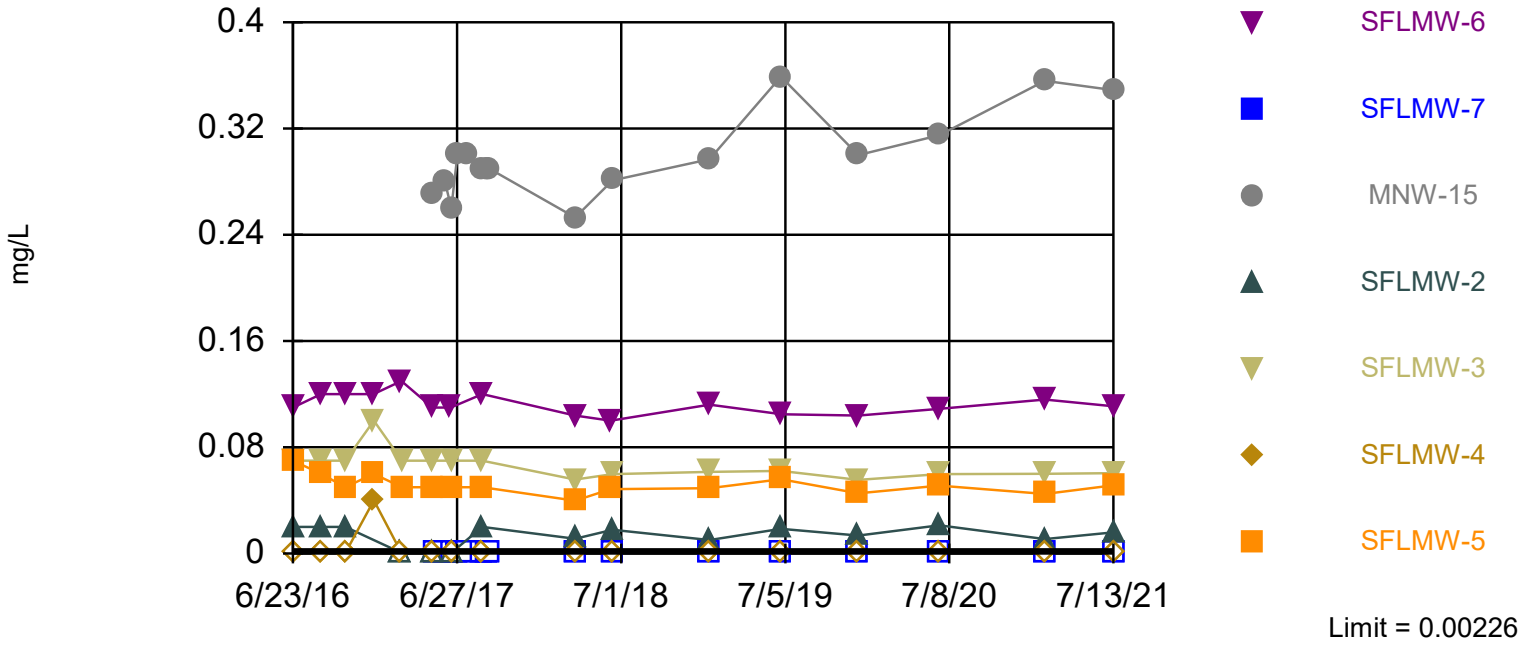
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, MNW-15, SFLMW-2, SFLMW-3, SFLMW-5

Prediction Limit

Interwell Non-parametric



Limit = 0.00226

Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 87.5% NDs. Report alpha = 0.3043. Individual comparison alpha = 0.05052. Most recent point for each compliance well compared to limit.

Constituent: Cobalt Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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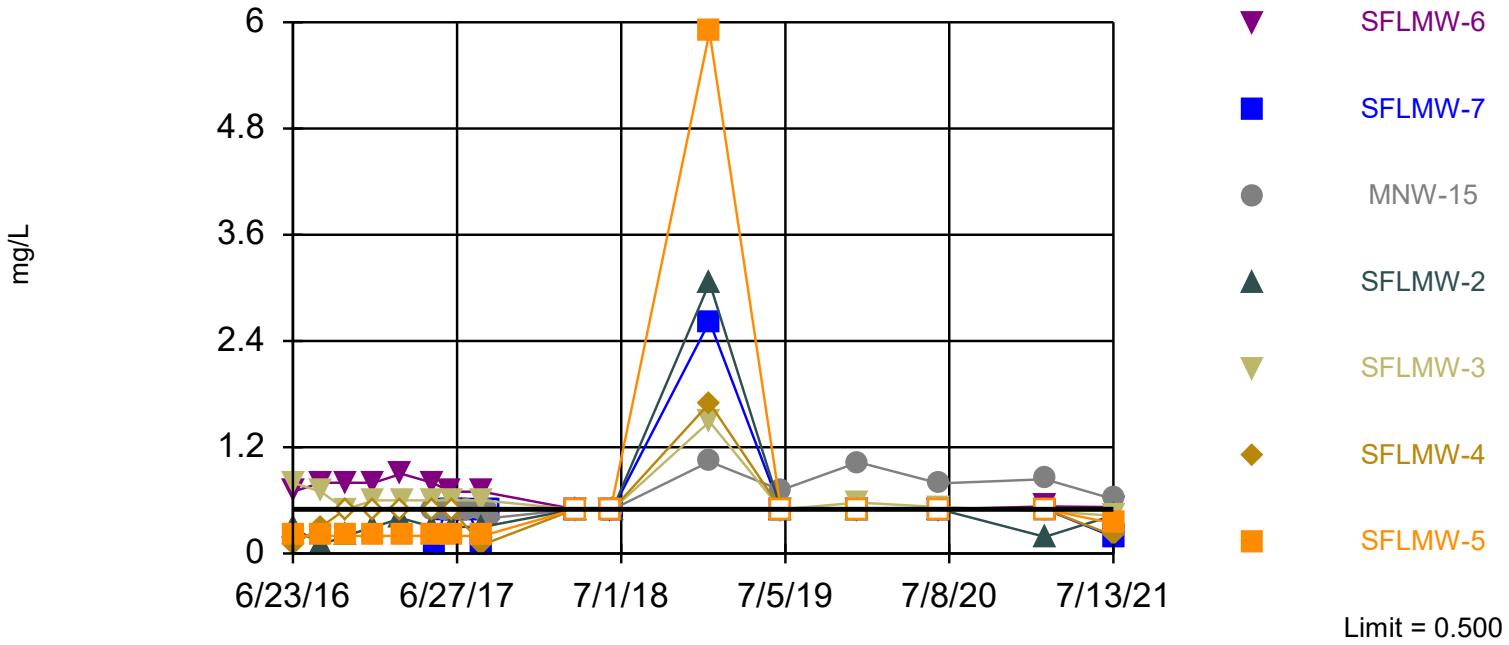
Hollow symbols indicate censored values.

Exceeds Limit: MNW-15

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 12 background values. 8.333% NDs. Report alpha = 0.3684. Individual comparison alpha = 0.06354. Most recent point for each compliance well compared to limit.

Constituent: Fluoride Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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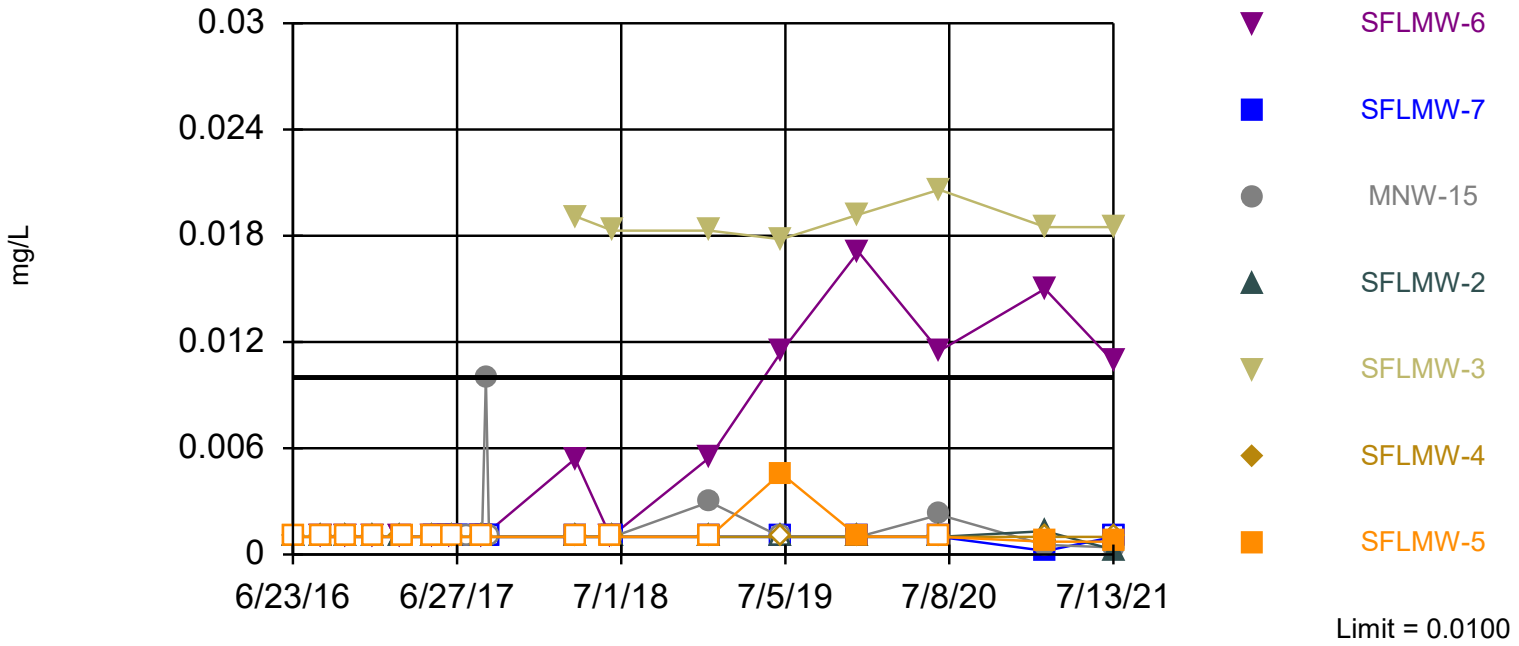
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, SFLMW-3

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 93.75% NDs. Report alpha = 0.3043. Individual comparison alpha = 0.05052. Most recent point for each compliance well compared to limit.

Constituent: Lead Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

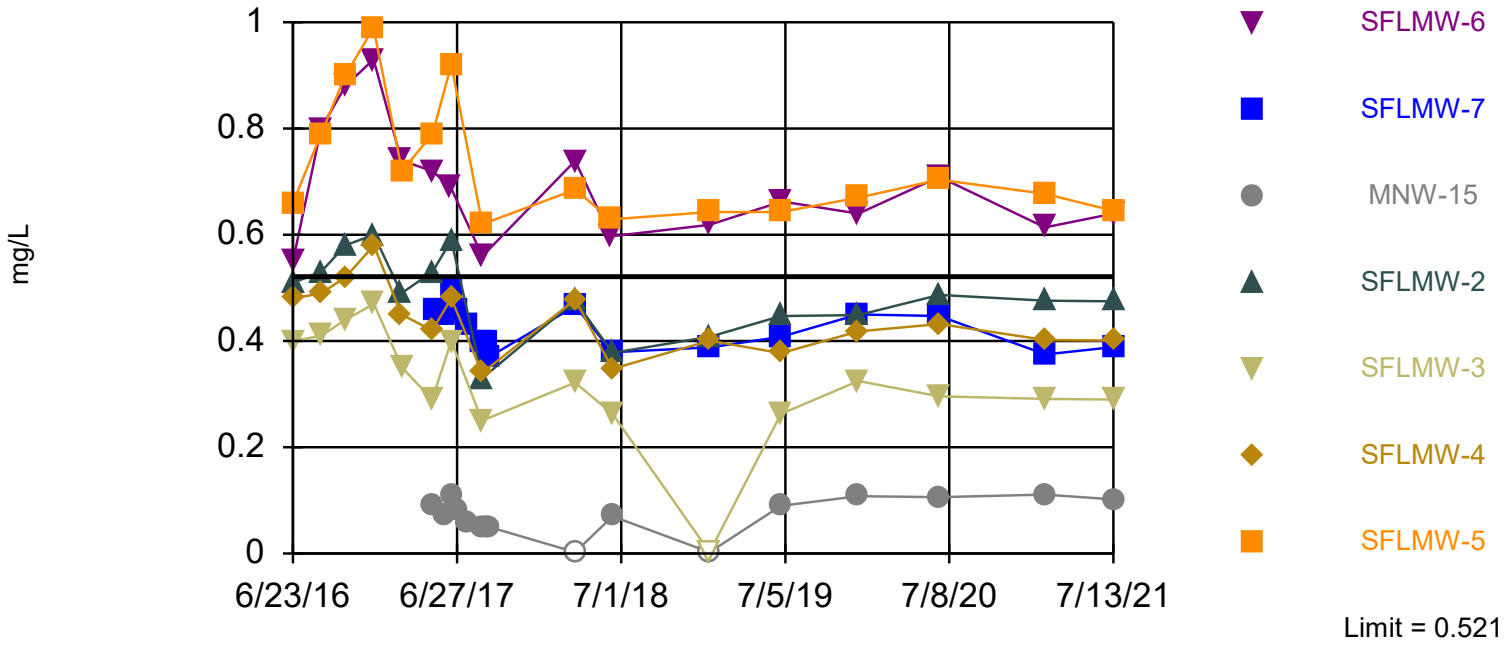
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube transformation): Mean=0.06579, Std. Dev.=0.02744, n=14, 7.143% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9526, critical = 0.874. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Lithium Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

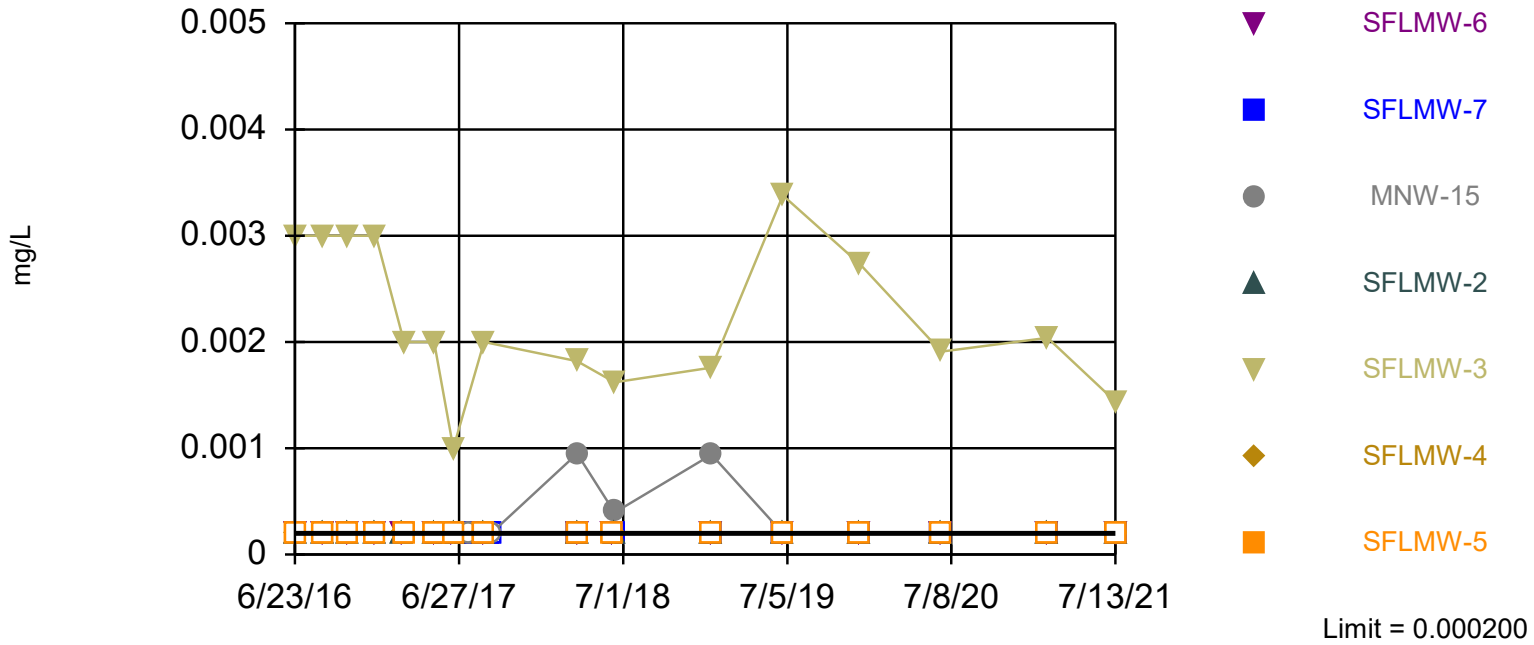
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-3

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 16) were censored; limit is most recent reporting limit. Report alpha = 0.3043. Individual comparison alpha = 0.05052. Most recent point for each compliance well compared to limit.

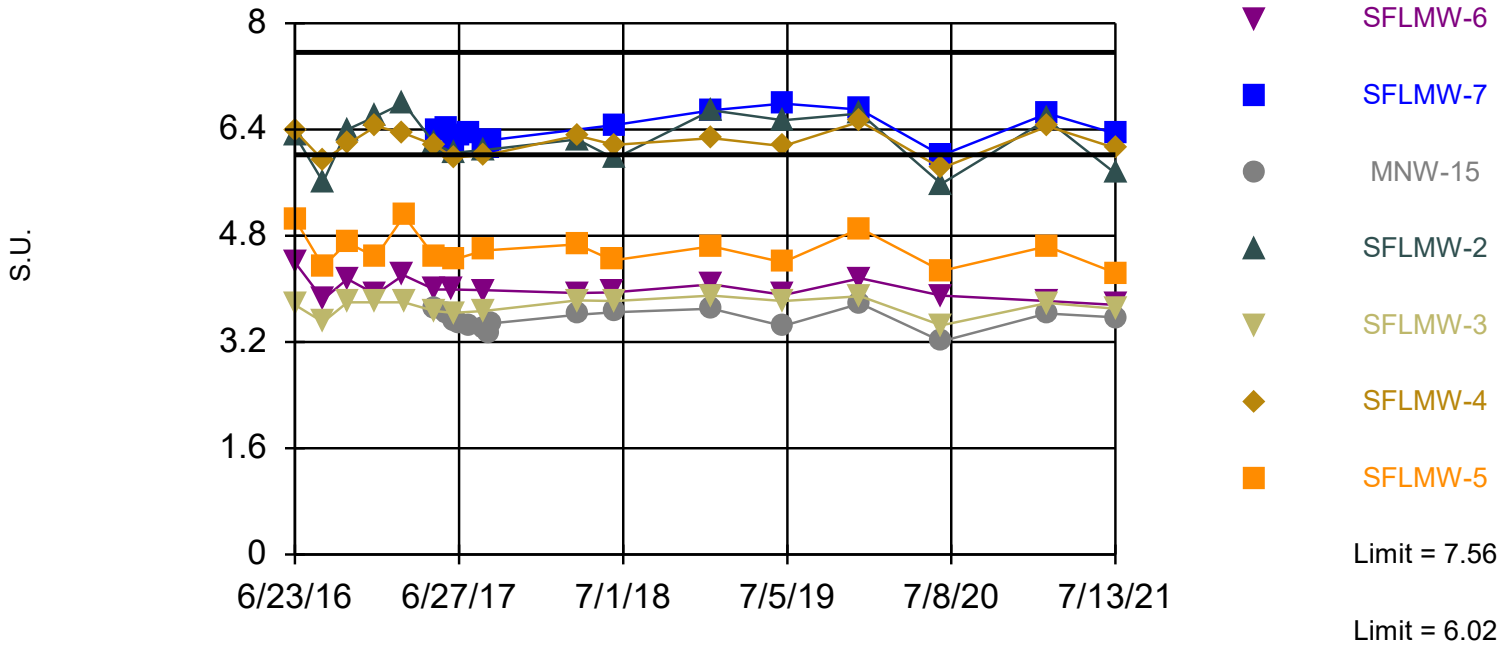
Constituent: Mercury Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limits: SFLMW-6, MNW-15, SFLMW-2, SFLMW-3, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=6.792, Std. Dev.=0.254, n=16. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9573, critical = 0.887. Report alpha = 0.06793. Individual comparison alpha = 0.005. Most recent point for each compliance well compared to limit.

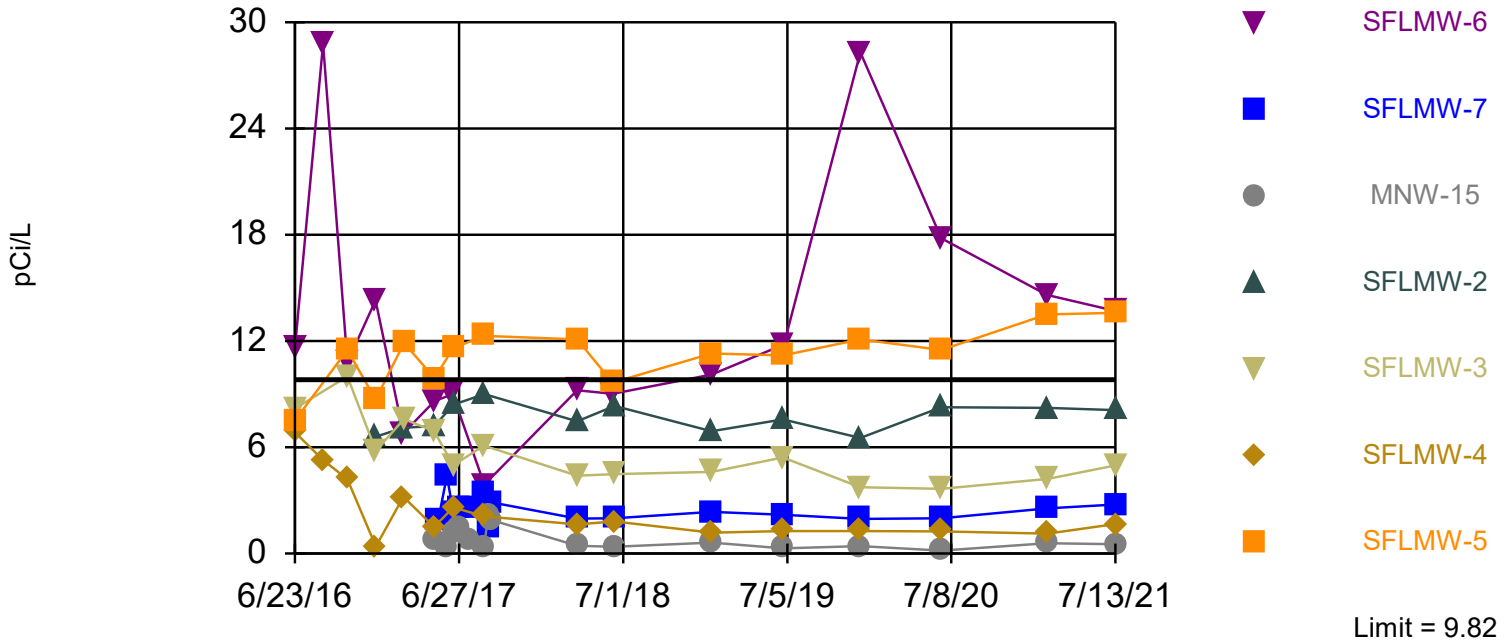
Constituent: pH Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SFLMW-6, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=4.503, Std. Dev.=1.983, n=16. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.925, critical = 0.887. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

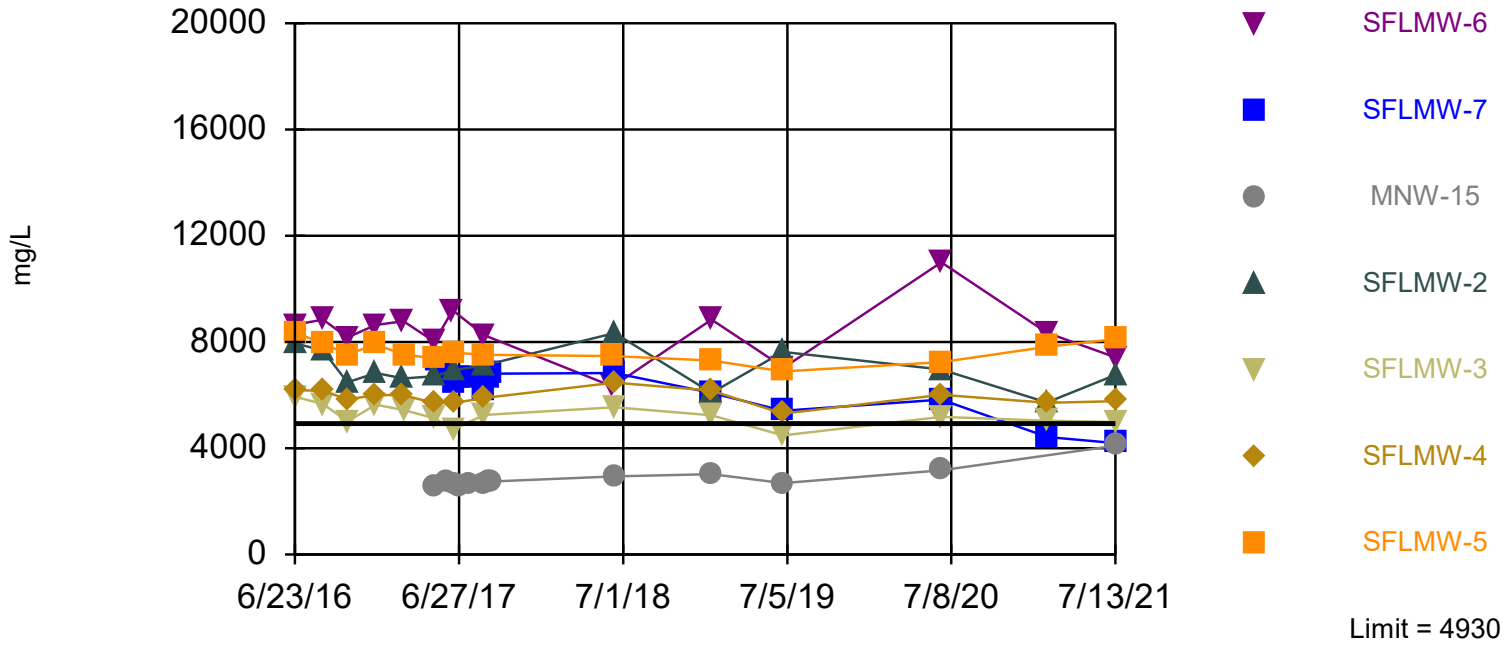
Constituent: Radium 226 + 228 Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SFLMW-6, SFLMW-2, SFLMW-3, SFLMW-4, SFLMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on square transformation): Mean=1.2e7, Std. Dev.=4578380, n=14. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8856, critical = 0.874. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: TDS Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

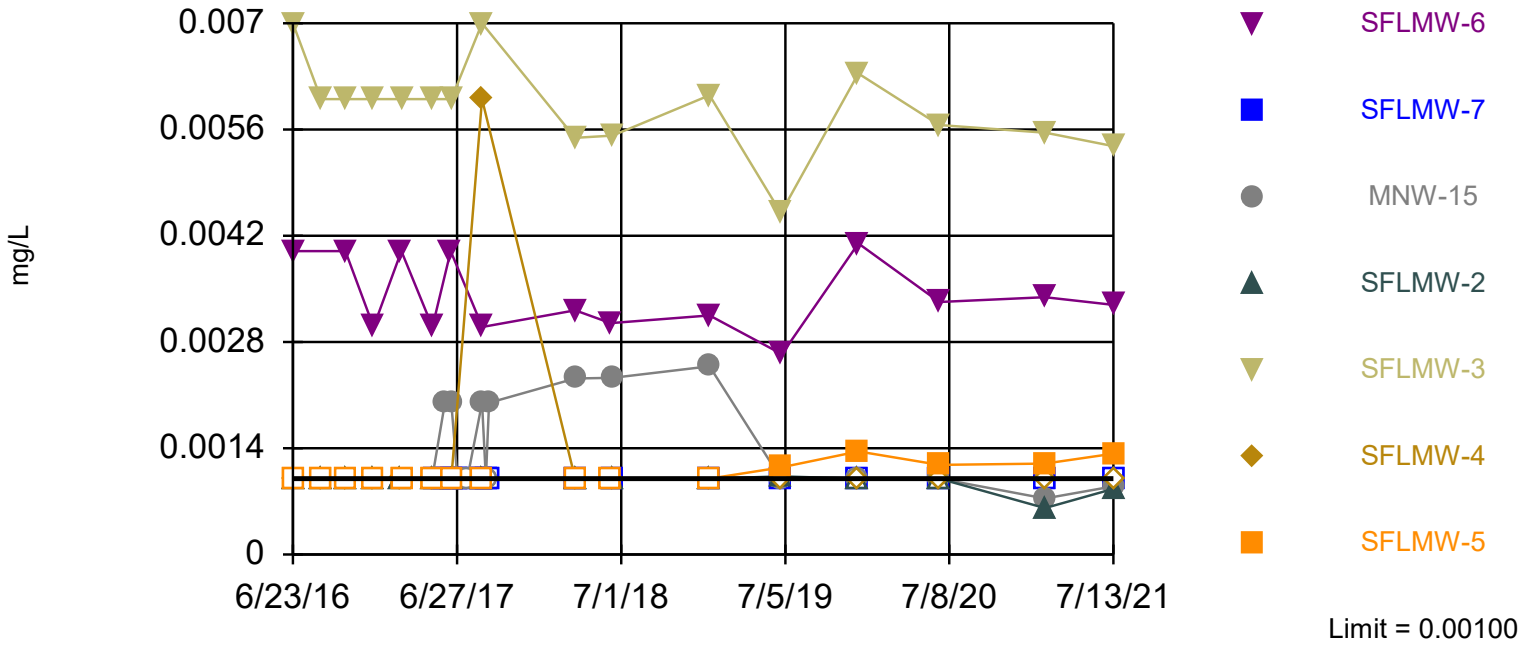
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SFLMW-6, SFLMW-3, SFLMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 15) were censored; limit is most recent reporting limit. Report alpha = 0.3182. Individual comparison alpha = 0.05324. Most recent point for each compliance well compared to limit.

Constituent: Thallium Analysis Run 11/23/2021 1:03 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 11/23/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	SFLMW-6	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	SFLMW-7	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	MNW-15	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	SFLMW-2	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	SFLMW-3	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	SFLMW-4	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Antimony (mg/L)	SFLMW-5	0.00200	n/a	7/13/2021	0.002ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	**SFLMW-6**	**0.00255**	**n/a**	**7/13/2021**	**0.0125**	**Yes**	**13**	**MNW-18**	**76.92**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	SFLMW-7	0.00255	n/a	7/13/2021	0.001ND	No	13	MNW-18	76.92	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	**MNW-15**	**0.00255**	**n/a**	**7/13/2021**	**0.00734**	**Yes**	**13**	**MNW-18**	**76.92**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	SFLMW-2	0.00255	n/a	7/13/2021	0.00147	No	13	MNW-18	76.92	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	**SFLMW-3**	**0.00255**	**n/a**	**7/13/2021**	**0.00303**	**Yes**	**13**	**MNW-18**	**76.92**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	SFLMW-4	0.00255	n/a	7/13/2021	0.001ND	No	13	MNW-18	76.92	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	SFLMW-5	0.00255	n/a	7/13/2021	0.00151	No	13	MNW-18	76.92	n/a	n/a	0.05969	NP Inter (NDs)
Barium (mg/L)	SFLMW-6	0.0600	n/a	7/13/2021	0.0376	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	SFLMW-7	0.0600	n/a	7/13/2021	0.0476	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	MNW-15	0.0600	n/a	7/13/2021	0.0159	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	SFLMW-2	0.0600	n/a	7/13/2021	0.0265	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	SFLMW-3	0.0600	n/a	7/13/2021	0.0133	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	SFLMW-4	0.0600	n/a	7/13/2021	0.0262	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Barium (mg/L)	SFLMW-5	0.0600	n/a	7/13/2021	0.0179	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Beryllium (mg/L)	**SFLMW-6**	**0.00100**	**n/a**	**7/13/2021**	**0.0463**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Beryllium (mg/L)	SFLMW-7	0.00100	n/a	7/13/2021	0.001ND	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Beryllium (mg/L)	**MNW-15**	**0.00100**	**n/a**	**7/13/2021**	**0.0789**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Beryllium (mg/L)	**SFLMW-2**	**0.00100**	**n/a**	**7/13/2021**	**0.00626**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Beryllium (mg/L)	**SFLMW-3**	**0.00100**	**n/a**	**7/13/2021**	**0.0315**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Beryllium (mg/L)	SFLMW-4	0.00100	n/a	7/13/2021	0.001ND	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Beryllium (mg/L)	**SFLMW-5**	**0.00100**	**n/a**	**7/13/2021**	**0.0104**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Boron (mg/L)	SFLMW-6	0.621	n/a	7/13/2021	0.38	No	12	MNW-18	0	None	x^2	0.01	Param Inter
Boron (mg/L)	**SFLMW-7**	**0.621**	**n/a**	**7/13/2021**	**0.795**	**Yes**	**12**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Boron (mg/L)	**MNW-15**	**0.621**	**n/a**	**7/13/2021**	**8.44**	**Yes**	**12**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Boron (mg/L)	SFLMW-2	0.621	n/a	7/13/2021	0.552	No	12	MNW-18	0	None	x^2	0.01	Param Inter
Boron (mg/L)	**SFLMW-3**	**0.621**	**n/a**	**7/13/2021**	**3.87**	**Yes**	**12**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Boron (mg/L)	**SFLMW-4**	**0.621**	**n/a**	**7/13/2021**	**0.809**	**Yes**	**12**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Boron (mg/L)	**SFLMW-5**	**0.621**	**n/a**	**7/13/2021**	**5.1**	**Yes**	**12**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Cadmium (mg/L)	**SFLMW-6**	**0.00100**	**n/a**	**7/13/2021**	**0.0104**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cadmium (mg/L)	SFLMW-7	0.00100	n/a	7/13/2021	0.001ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Cadmium (mg/L)	**MNW-15**	**0.00100**	**n/a**	**7/13/2021**	**0.0393**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cadmium (mg/L)	**SFLMW-2**	**0.00100**	**n/a**	**7/13/2021**	**0.00285**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cadmium (mg/L)	**SFLMW-3**	**0.00100**	**n/a**	**7/13/2021**	**0.00608**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cadmium (mg/L)	SFLMW-4	0.00100	n/a	7/13/2021	0.001ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Cadmium (mg/L)	**SFLMW-5**	**0.00100**	**n/a**	**7/13/2021**	**0.0047**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Calcium (mg/L)	**SFLMW-6**	**542**	**n/a**	**7/13/2021**	**937**	**Yes**	**13**	**MNW-18**	**7.692**	**None**	**x^2**	**0.01**	**Param Inter**
Calcium (mg/L)	SFLMW-7	542	n/a	7/13/2021	395	No	13	MNW-18	7.692	None	x^2	0.01	Param Inter
Calcium (mg/L)	MNW-15	542	n/a	7/13/2021	304	No	13	MNW-18	7.692	None	x^2	0.01	Param Inter
Calcium (mg/L)	**SFLMW-2**	**542**	**n/a**	**7/13/2021**	**946**	**Yes**	**13**	**MNW-18**	**7.692**	**None**	**x^2**	**0.01**	**Param Inter**
Calcium (mg/L)	**SFLMW-3**	**542**	**n/a**	**7/13/2021**	**594**	**Yes**	**13**	**MNW-18**	**7.692**	**None**	**x^2**	**0.01**	**Param Inter**
Calcium (mg/L)	**SFLMW-4**	**542**	**n/a**	**7/13/2021**	**752**	**Yes**	**13**	**MNW-18**	**7.692**	**None**	**x^2**	**0.01**	**Param Inter**
Calcium (mg/L)	**SFLMW-5**	**542**	**n/a**	**7/13/2021**	**816**	**Yes**	**13**	**MNW-18**	**7.692**	**None**	**x^2**	**0.01**	**Param Inter**
Chloride (mg/L)	**SFLMW-6**	**649**	**n/a**	**7/13/2021**	**3340**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**

Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 11/23/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Chloride (mg/L)	**SFLMW-7**	**649**	**n/a**	**7/13/2021**	**1900**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chloride (mg/L)	**MNW-15**	**649**	**n/a**	**7/13/2021**	**669**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chloride (mg/L)	**SFLMW-2**	**649**	**n/a**	**7/13/2021**	**3290**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chloride (mg/L)	**SFLMW-3**	**649**	**n/a**	**7/13/2021**	**946**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chloride (mg/L)	**SFLMW-4**	**649**	**n/a**	**7/13/2021**	**1560**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chloride (mg/L)	**SFLMW-5**	**649**	**n/a**	**7/13/2021**	**2930**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^3**	**0.01**	**Param Inter**
Chromium (mg/L)	SFLMW-6	0.00617	n/a	7/13/2021	0.00551	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	SFLMW-7	0.00617	n/a	7/13/2021	0.002ND	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	MNW-15	0.00617	n/a	7/13/2021	0.002ND	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	SFLMW-2	0.00617	n/a	7/13/2021	0.002ND	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	SFLMW-3	0.00617	n/a	7/13/2021	0.002ND	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	SFLMW-4	0.00617	n/a	7/13/2021	0.002ND	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Chromium (mg/L)	SFLMW-5	0.00617	n/a	7/13/2021	0.0044	No	13	MNW-18	84.62	n/a	n/a	0.05969	NP Inter (NDs)
Cobalt (mg/L)	**SFLMW-6**	**0.00226**	**n/a**	**7/13/2021**	**0.111**	**Yes**	**16**	**MNW-18**	**87.5**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cobalt (mg/L)	SFLMW-7	0.00226	n/a	7/13/2021	0.0005ND	No	16	MNW-18	87.5	n/a	n/a	0.05052	NP Inter (NDs)
Cobalt (mg/L)	**MNW-15**	**0.00226**	**n/a**	**7/13/2021**	**0.349**	**Yes**	**16**	**MNW-18**	**87.5**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cobalt (mg/L)	**SFLMW-2**	**0.00226**	**n/a**	**7/13/2021**	**0.0159**	**Yes**	**16**	**MNW-18**	**87.5**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cobalt (mg/L)	**SFLMW-3**	**0.00226**	**n/a**	**7/13/2021**	**0.0606**	**Yes**	**16**	**MNW-18**	**87.5**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Cobalt (mg/L)	SFLMW-4	0.00226	n/a	7/13/2021	0.0005ND	No	16	MNW-18	87.5	n/a	n/a	0.05052	NP Inter (NDs)
Cobalt (mg/L)	**SFLMW-5**	**0.00226**	**n/a**	**7/13/2021**	**0.0515**	**Yes**	**16**	**MNW-18**	**87.5**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Fluoride (mg/L)	SFLMW-6	0.500	n/a	7/13/2021	0.527J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Fluoride (mg/L)	SFLMW-7	0.500	n/a	7/13/2021	0.19J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Fluoride (mg/L)	**MNW-15**	**0.500**	**n/a**	**7/13/2021**	**0.617**	**Yes**	**12**	**MNW-18**	**8.333**	**n/a**	**n/a**	**0.06354**	**NP Inter (normality)**
Fluoride (mg/L)	SFLMW-2	0.500	n/a	7/13/2021	0.433J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Fluoride (mg/L)	SFLMW-3	0.500	n/a	7/13/2021	0.427J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Fluoride (mg/L)	SFLMW-4	0.500	n/a	7/13/2021	0.204J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Fluoride (mg/L)	SFLMW-5	0.500	n/a	7/13/2021	0.342J	No	12	MNW-18	8.333	n/a	n/a	0.06354	NP Inter (normality)
Lead (mg/L)	**SFLMW-6**	**0.0100**	**n/a**	**7/13/2021**	**0.0109**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Lead (mg/L)	SFLMW-7	0.0100	n/a	7/13/2021	0.001ND	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Lead (mg/L)	MNW-15	0.0100	n/a	7/13/2021	0.000404J	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Lead (mg/L)	SFLMW-2	0.0100	n/a	7/13/2021	0.000272J	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Lead (mg/L)	**SFLMW-3**	**0.0100**	**n/a**	**7/13/2021**	**0.0185**	**Yes**	**16**	**MNW-18**	**93.75**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Lead (mg/L)	SFLMW-4	0.0100	n/a	7/13/2021	0.001ND	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Lead (mg/L)	SFLMW-5	0.0100	n/a	7/13/2021	0.000721J	No	16	MNW-18	93.75	n/a	n/a	0.05052	NP Inter (NDs)
Lithium (mg/L)	**SFLMW-6**	**0.521**	**n/a**	**7/13/2021**	**0.64**	**Yes**	**14**	**MNW-18**	**7.143**	**None**	**x^3**	**0.01**	**Param Inter**
Lithium (mg/L)	SFLMW-7	0.521	n/a	7/13/2021	0.389	No	14	MNW-18	7.143	None	x^3	0.01	Param Inter
Lithium (mg/L)	MNW-15	0.521	n/a	7/13/2021	0.102	No	14	MNW-18	7.143	None	x^3	0.01	Param Inter
Lithium (mg/L)	SFLMW-2	0.521	n/a	7/13/2021	0.475	No	14	MNW-18	7.143	None	x^3	0.01	Param Inter
Lithium (mg/L)	SFLMW-3	0.521	n/a	7/13/2021	0.29	No	14	MNW-18	7.143	None	x^3	0.01	Param Inter
Lithium (mg/L)	SFLMW-4	0.521	n/a	7/13/2021	0.401	No	14	MNW-18	7.143	None	x^3	0.01	Param Inter
Lithium (mg/L)	**SFLMW-5**	**0.521**	**n/a**	**7/13/2021**	**0.645**	**Yes**	**14**	**MNW-18**	**7.143**	**None**	**x^3**	**0.01**	**Param Inter**
Mercury (mg/L)	SFLMW-6	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Mercury (mg/L)	SFLMW-7	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Mercury (mg/L)	MNW-15	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Mercury (mg/L)	SFLMW-2	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Mercury (mg/L)	**SFLMW-3**	**0.000200**	**n/a**	**7/13/2021**	**0.00144**	**Yes**	**16**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05052**	**NP Inter (NDs)**
Mercury (mg/L)	SFLMW-4	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Mercury (mg/L)	SFLMW-5	0.000200	n/a	7/13/2021	0.0002ND	No	16	MNW-18	100	n/a	n/a	0.05052	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-6	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-7	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)

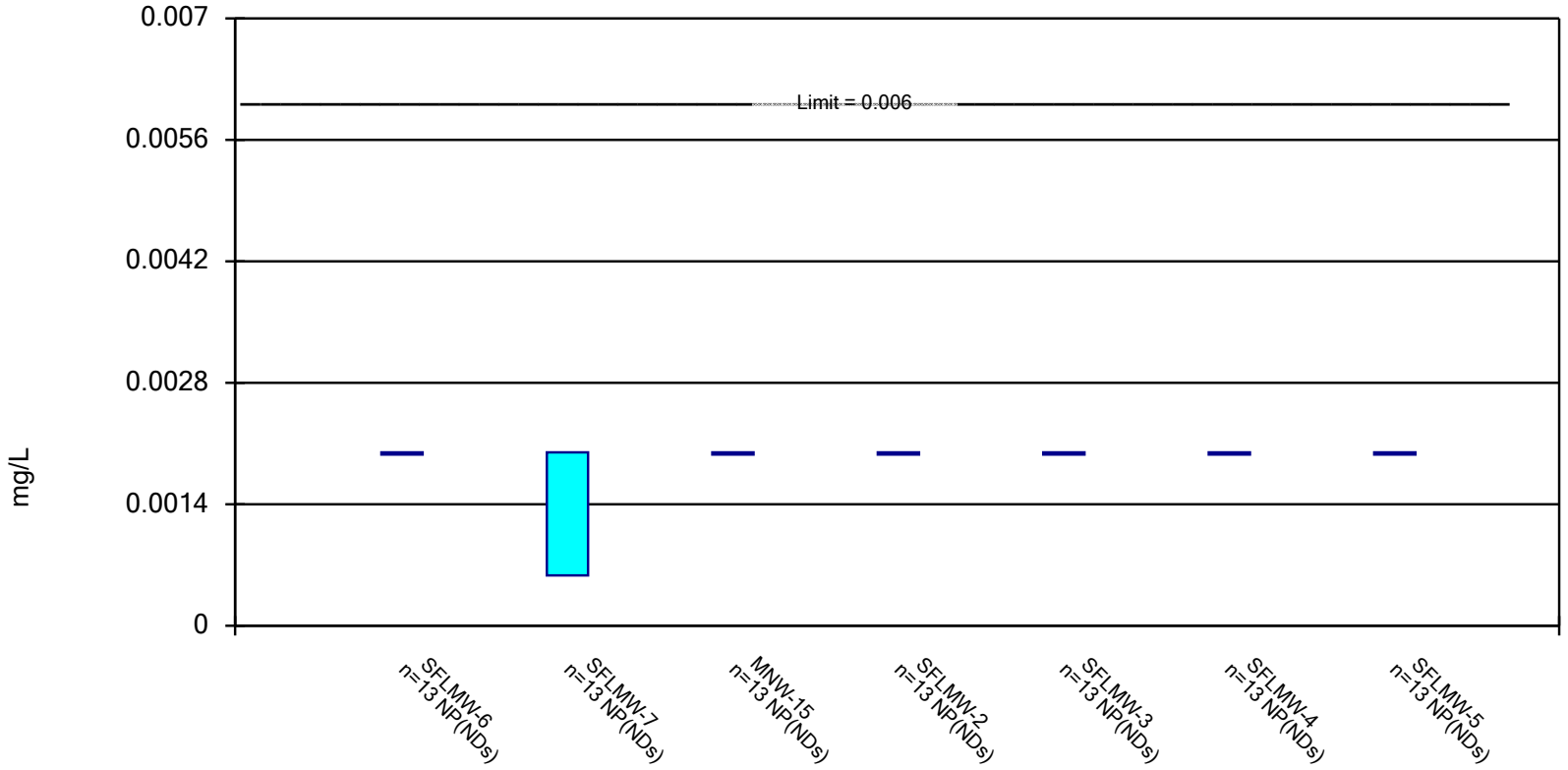
Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 11/23/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	MNW-15	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-2	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-3	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-4	0.00500	n/a	7/13/2021	0.00208J	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
Molybdenum (mg/L)	SFLMW-5	0.00500	n/a	7/13/2021	0.005ND	No	13	MNW-18	100	n/a	n/a	0.05969	NP Inter (NDs)
pH (S.U.)	**SFLMW-6**	**7.56**	**6.02**	**7/13/2021**	**3.76**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	SFLMW-7	7.56	6.02	7/13/2021	6.34	No	16	MNW-18	0	None	No	0.005	Param Inter
pH (S.U.)	**MNW-15**	**7.56**	**6.02**	**7/13/2021**	**3.57**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	**SFLMW-2**	**7.56**	**6.02**	**7/13/2021**	**5.74**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	**SFLMW-3**	**7.56**	**6.02**	**7/13/2021**	**3.7**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	SFLMW-4	7.56	6.02	7/13/2021	6.12	No	16	MNW-18	0	None	No	0.005	Param Inter
pH (S.U.)	**SFLMW-5**	**7.56**	**6.02**	**7/13/2021**	**4.24**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.005**	**Param Inter**
Radium 226 + 228 (pCi/L)	**SFLMW-6**	**9.82**	**n/a**	**7/13/2021**	**13.7**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.01**	**Param Inter**
Radium 226 + 228 (pCi/L)	SFLMW-7	9.82	n/a	7/13/2021	2.77	No	16	MNW-18	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	MNW-15	9.82	n/a	7/13/2021	0.525	No	16	MNW-18	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	SFLMW-2	9.82	n/a	7/13/2021	8.1	No	16	MNW-18	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	SFLMW-3	9.82	n/a	7/13/2021	4.97	No	16	MNW-18	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	SFLMW-4	9.82	n/a	7/13/2021	1.66	No	16	MNW-18	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**9.82**	**n/a**	**7/13/2021**	**13.6**	**Yes**	**16**	**MNW-18**	**0**	**None**	**No**	**0.01**	**Param Inter**
Selenium (mg/L)	SFLMW-6	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SFLMW-7	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	MNW-15	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SFLMW-2	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SFLMW-3	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SFLMW-4	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SFLMW-5	0.00500	n/a	7/13/2021	0.005ND	No	12	MNW-18	100	n/a	n/a	0.06354	NP Inter (NDs)
Sulfate (mg/L)	SFLMW-6	2640	n/a	7/13/2021	2190	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SFLMW-7	2640	n/a	7/13/2021	672	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	MNW-15	2640	n/a	7/13/2021	1480	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SFLMW-2	2640	n/a	7/13/2021	1890	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SFLMW-3	2640	n/a	7/13/2021	2330	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SFLMW-4	2640	n/a	7/13/2021	2390	No	13	MNW-18	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SFLMW-5	2640	n/a	7/13/2021	2330	No	13	MNW-18	0	None	No	0.01	Param Inter
TDS (mg/L)	**SFLMW-6**	**4930**	**n/a**	**7/13/2021**	**7420**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
TDS (mg/L)	SFLMW-7	4930	n/a	7/13/2021	4200	No	14	MNW-18	0	None	x^2	0.01	Param Inter
TDS (mg/L)	MNW-15	4930	n/a	7/13/2021	4100	No	14	MNW-18	0	None	x^2	0.01	Param Inter
TDS (mg/L)	**SFLMW-2**	**4930**	**n/a**	**7/13/2021**	**6760**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
TDS (mg/L)	**SFLMW-3**	**4930**	**n/a**	**7/13/2021**	**4990**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
TDS (mg/L)	**SFLMW-4**	**4930**	**n/a**	**7/13/2021**	**5770**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
TDS (mg/L)	**SFLMW-5**	**4930**	**n/a**	**7/13/2021**	**8110**	**Yes**	**14**	**MNW-18**	**0**	**None**	**x^2**	**0.01**	**Param Inter**
Thallium (mg/L)	**SFLMW-6**	**0.00100**	**n/a**	**7/13/2021**	**0.00329**	**Yes**	**15**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Thallium (mg/L)	SFLMW-7	0.00100	n/a	7/13/2021	0.001ND	No	15	MNW-18	100	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	MNW-15	0.00100	n/a	7/13/2021	0.000901J	No	15	MNW-18	100	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	SFLMW-2	0.00100	n/a	7/13/2021	0.000865J	No	15	MNW-18	100	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	**SFLMW-3**	**0.00100**	**n/a**	**7/13/2021**	**0.00538**	**Yes**	**15**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Thallium (mg/L)	SFLMW-4	0.00100	n/a	7/13/2021	0.001ND	No	15	MNW-18	100	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	**SFLMW-5**	**0.00100**	**n/a**	**7/13/2021**	**0.00133**	**Yes**	**15**	**MNW-18**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

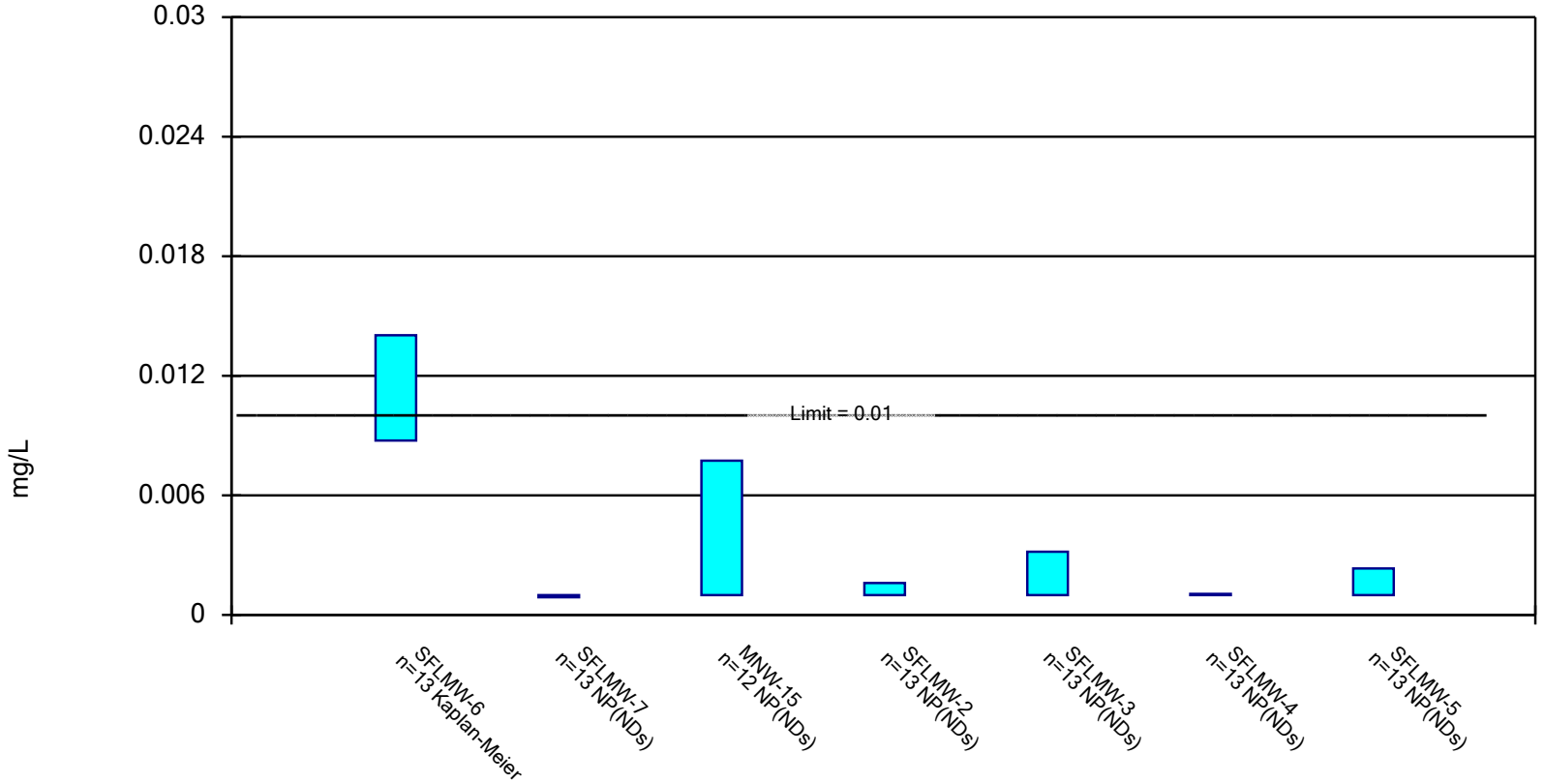


Constituent: Antimony Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

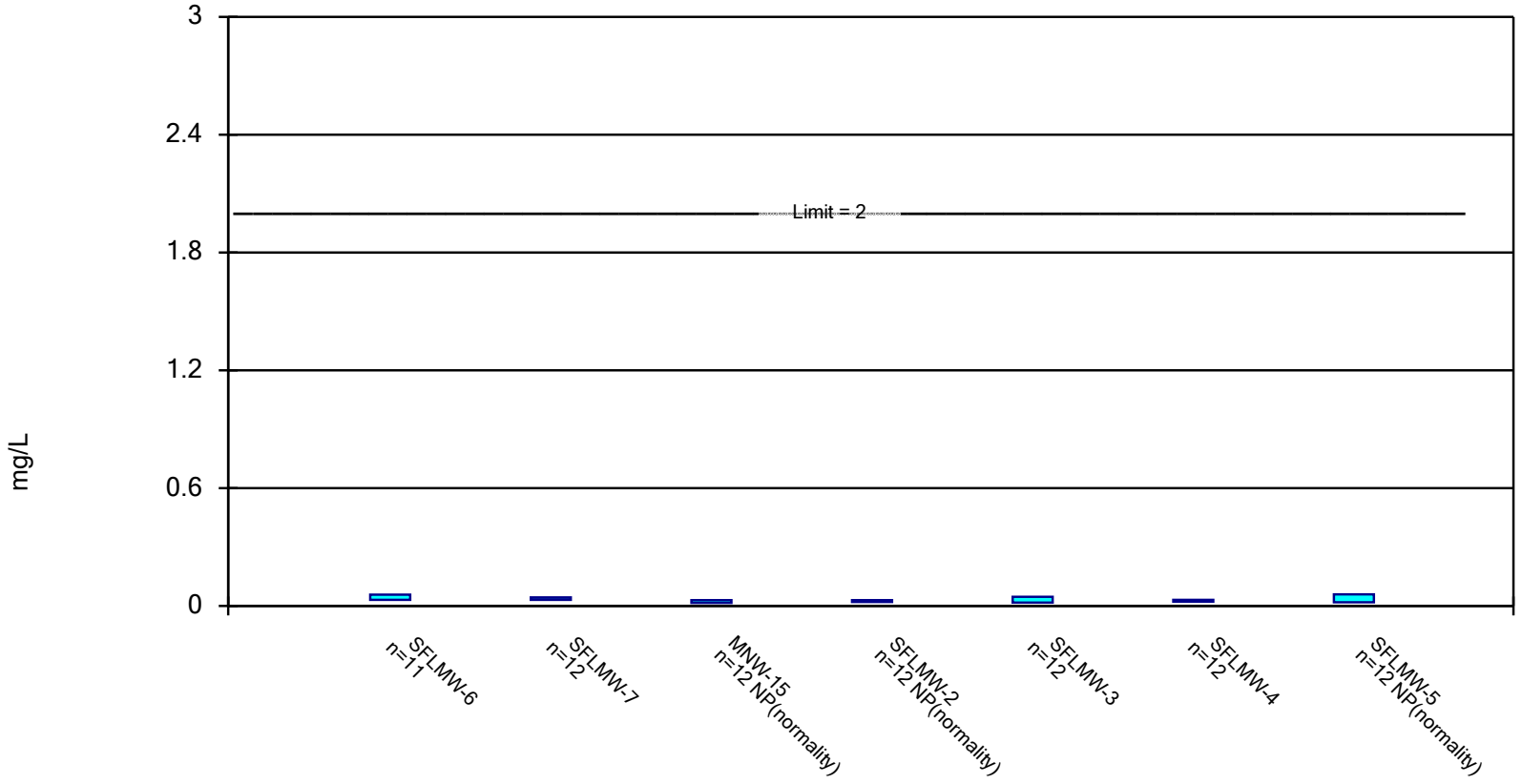


Constituent: Arsenic Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

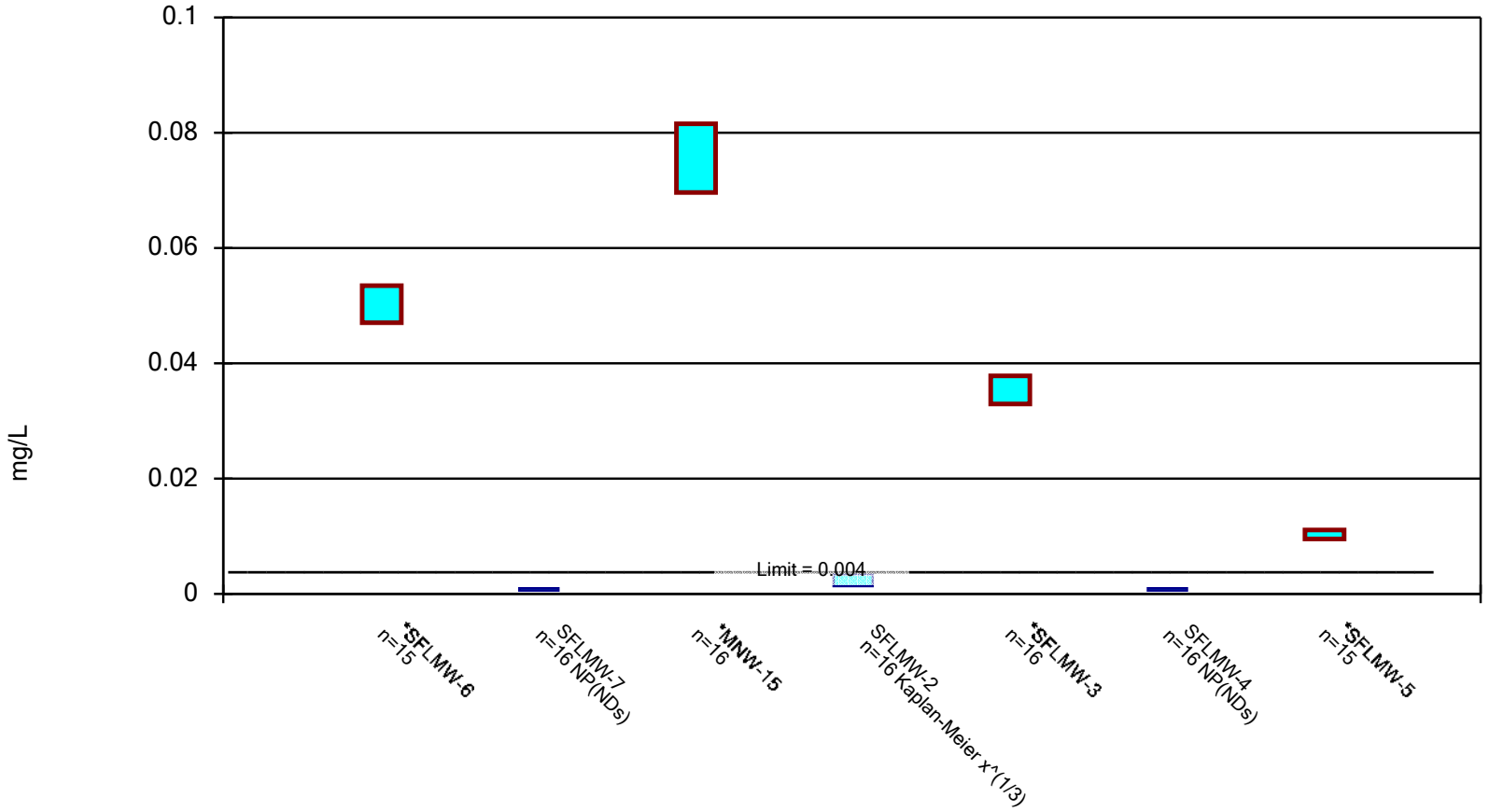


Constituent: Barium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

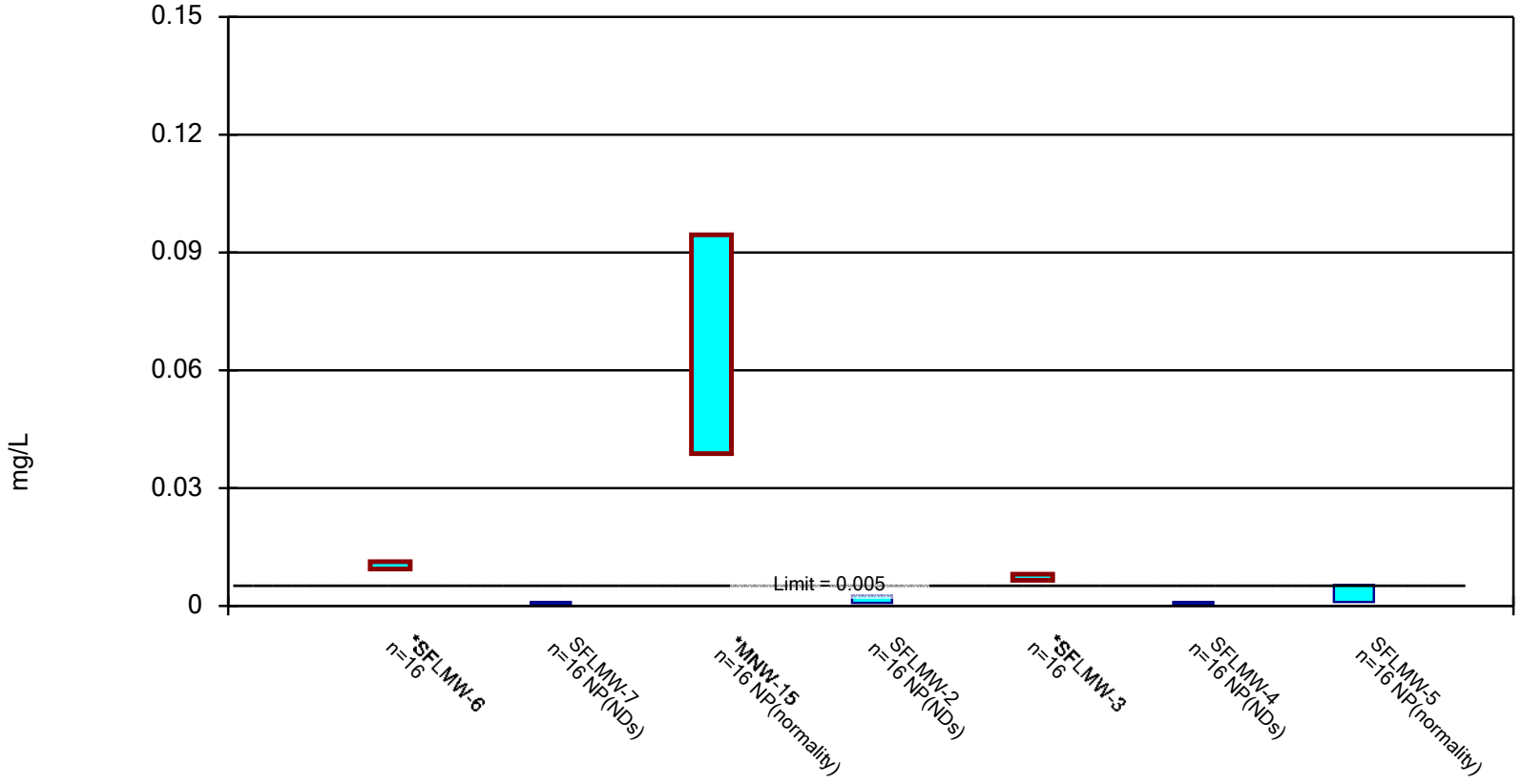


Constituent: Beryllium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

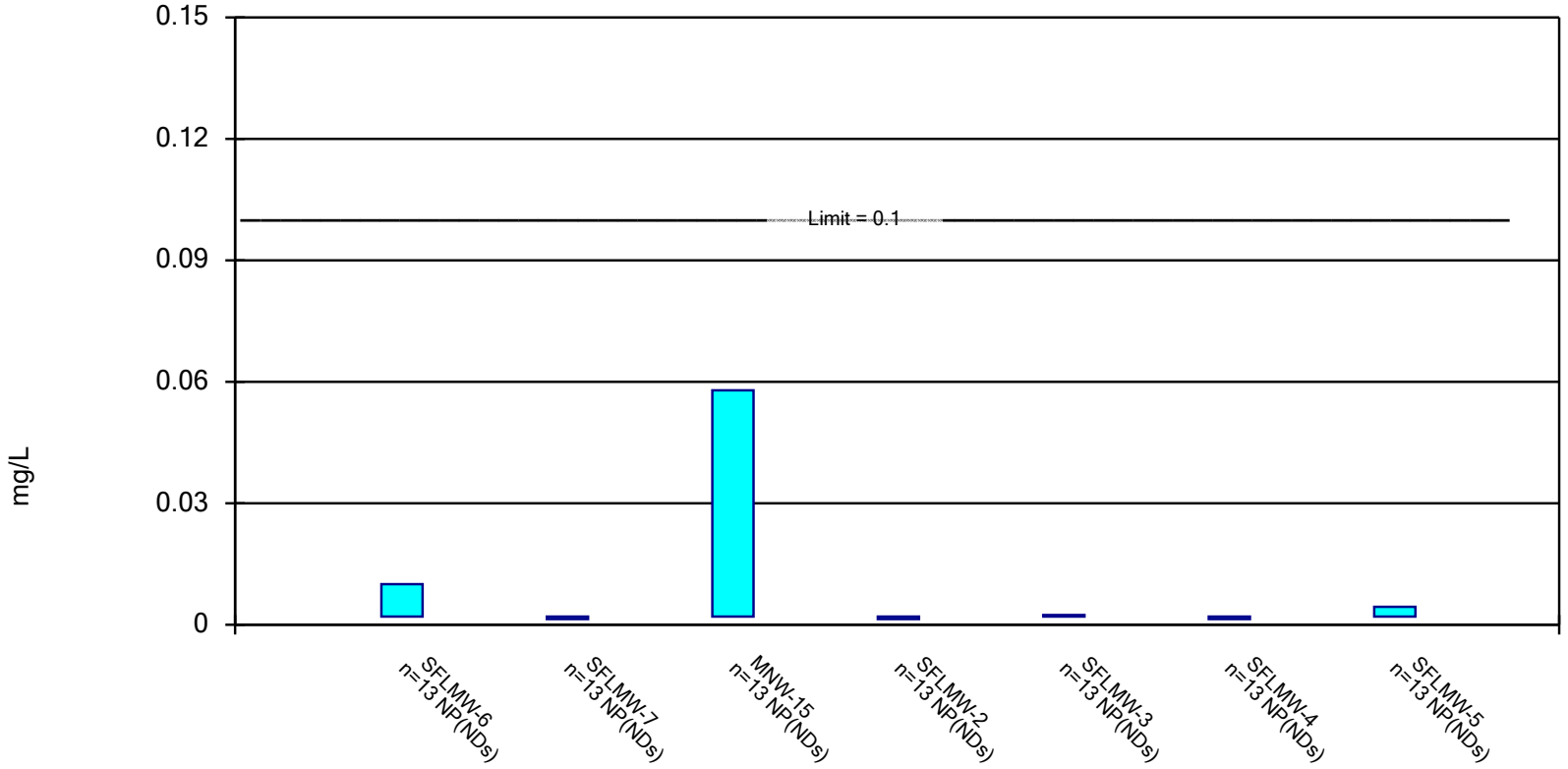


Constituent: Cadmium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

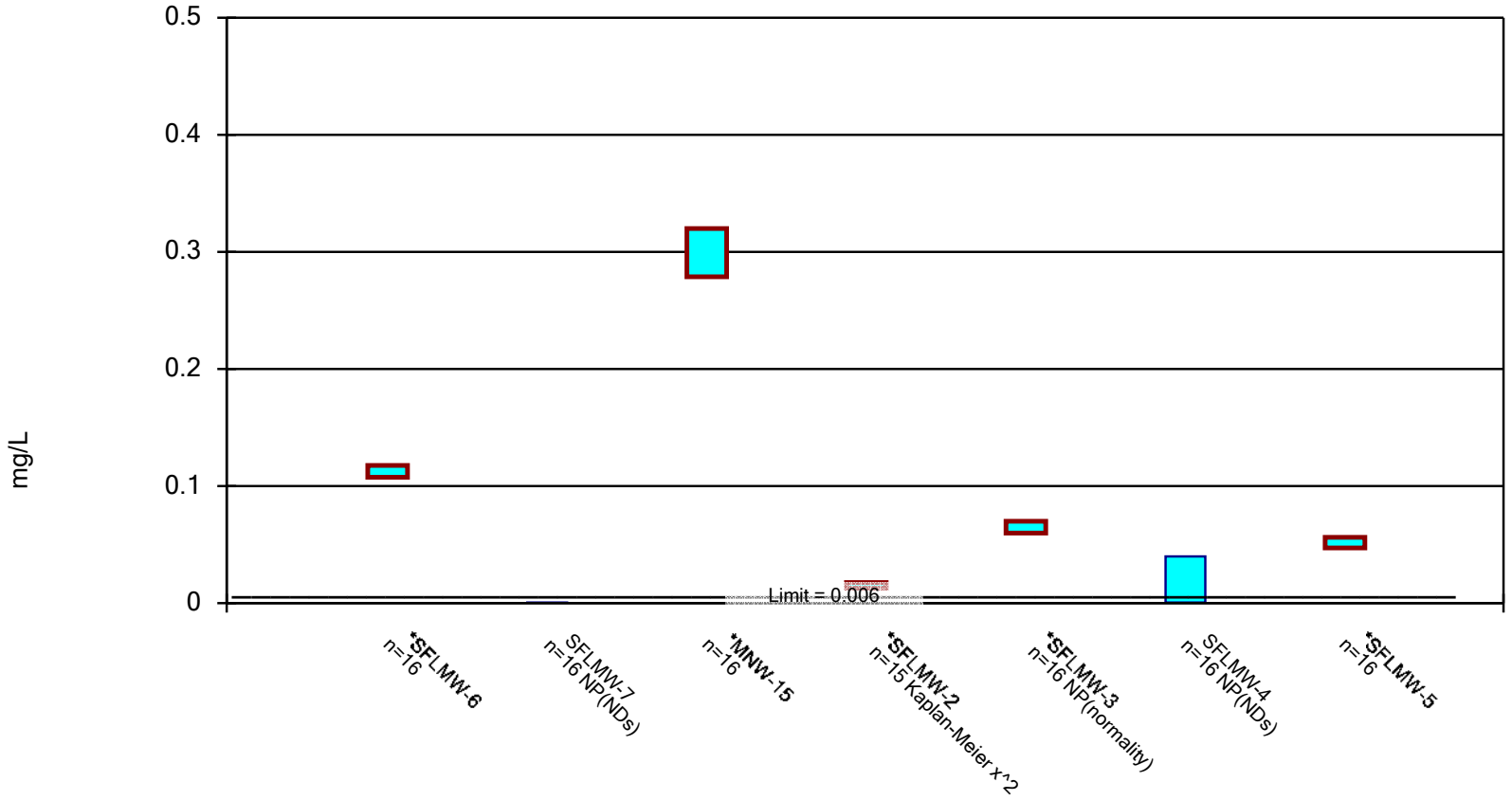


Constituent: Chromium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

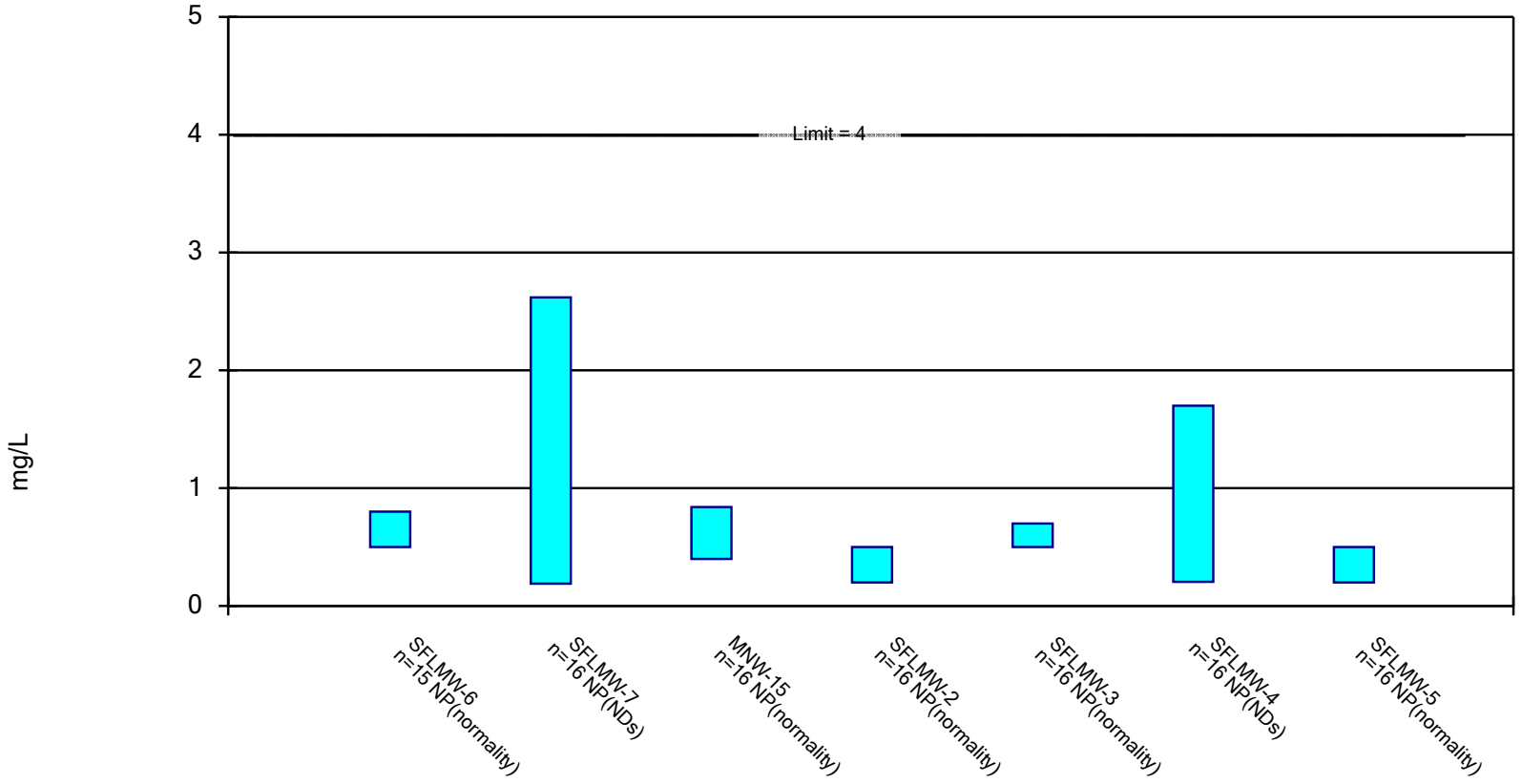


Constituent: Cobalt Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

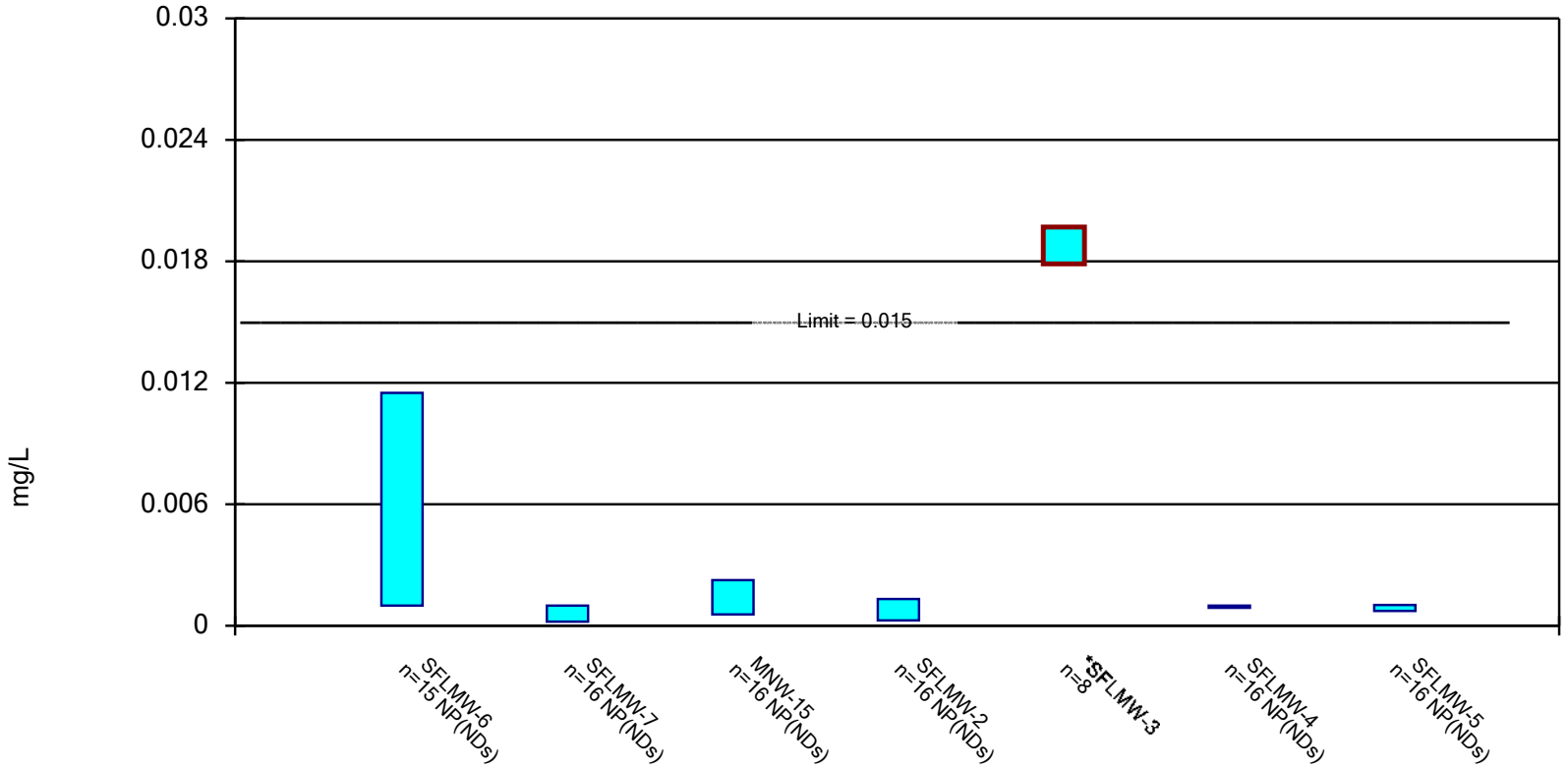


Constituent: Fluoride Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

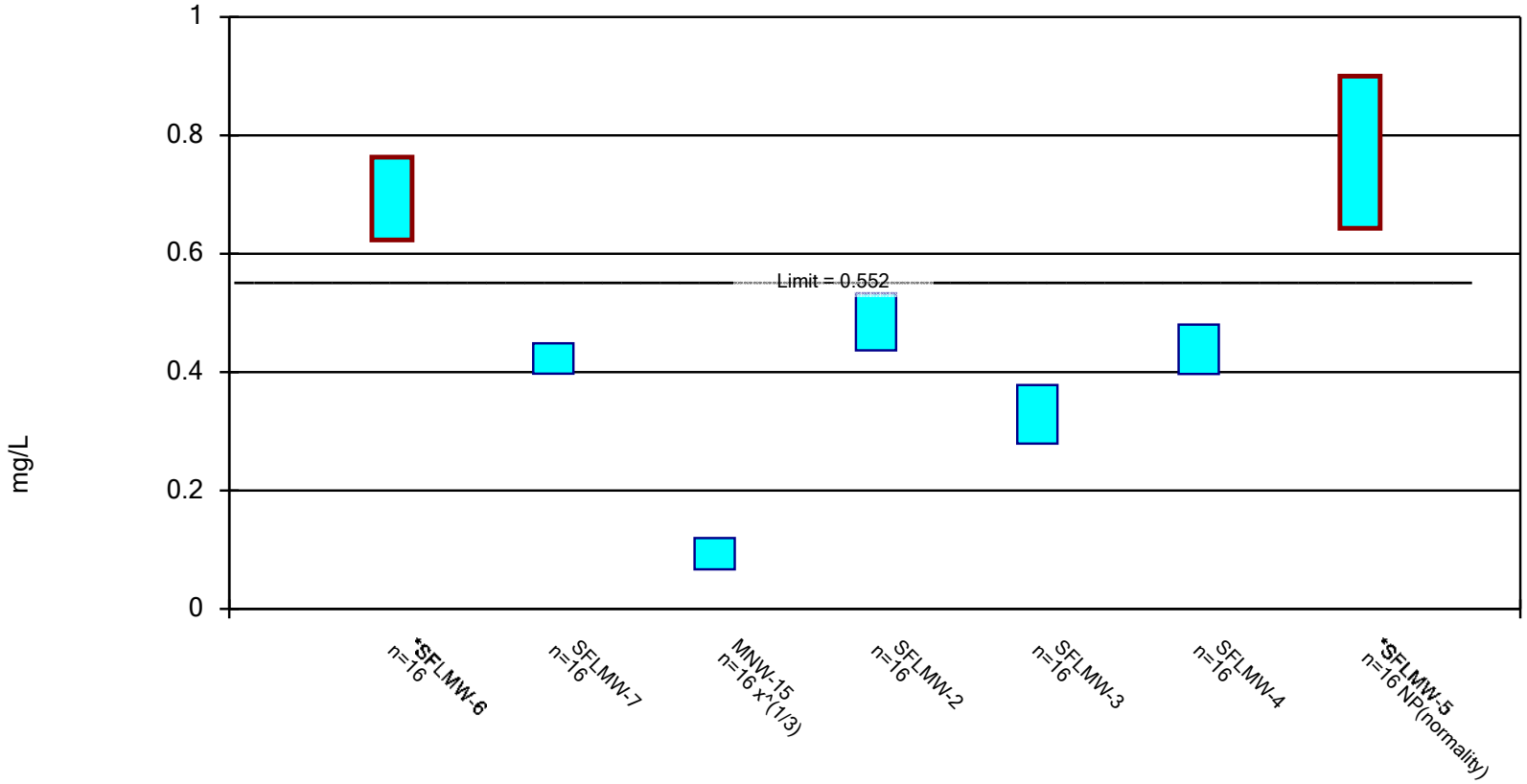


Constituent: Lead Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

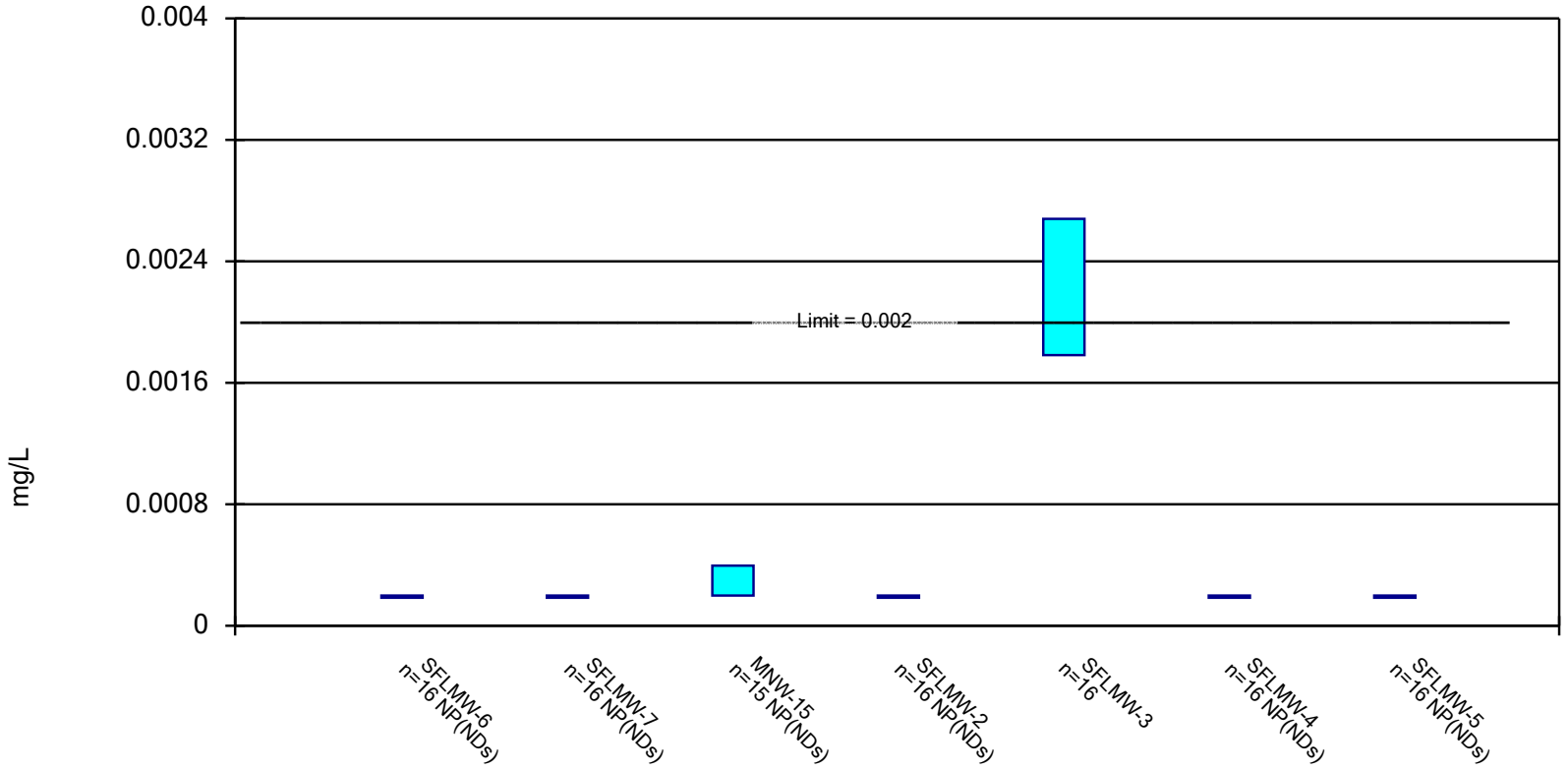


Constituent: Lithium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

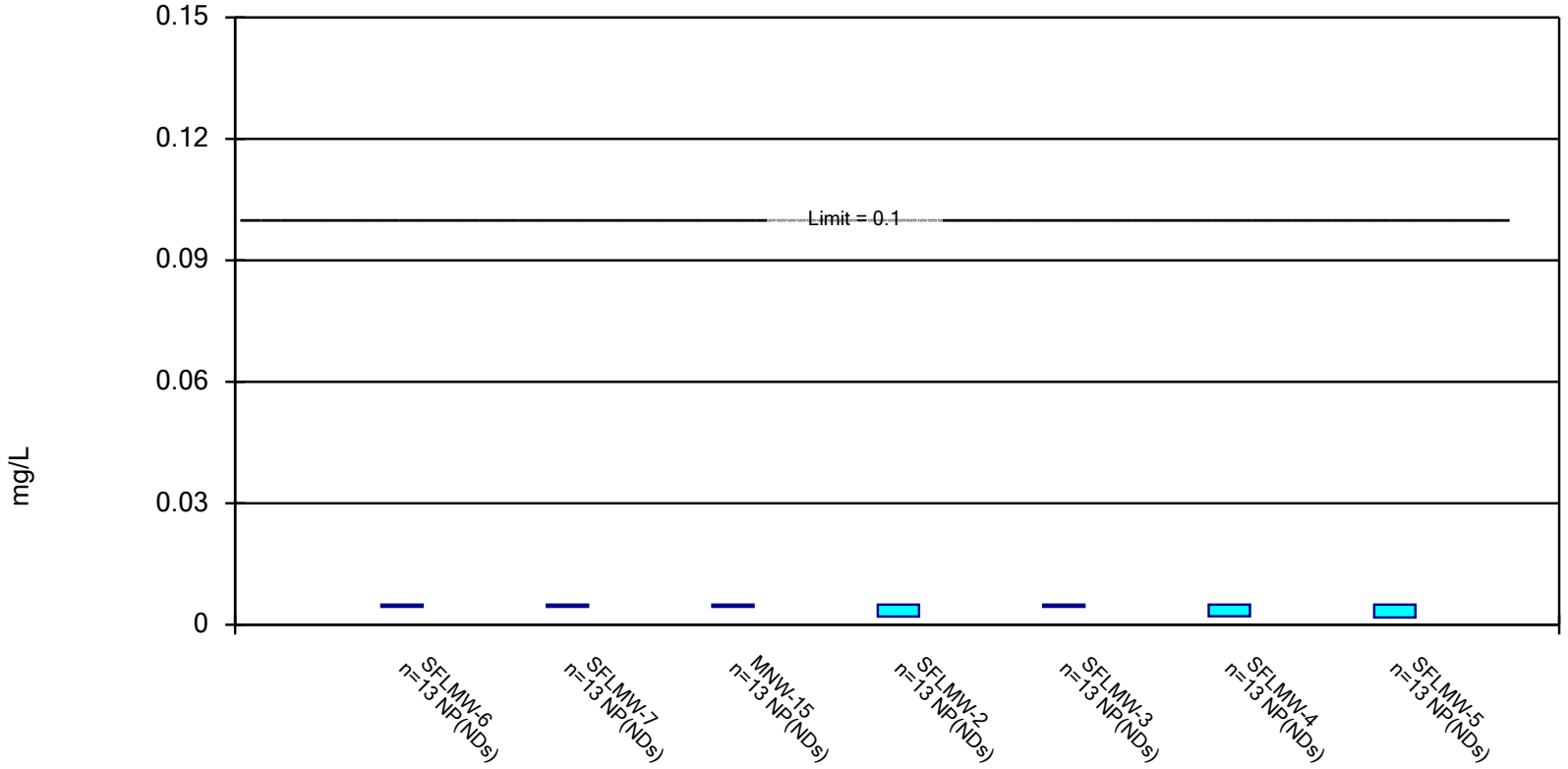


Constituent: Mercury Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

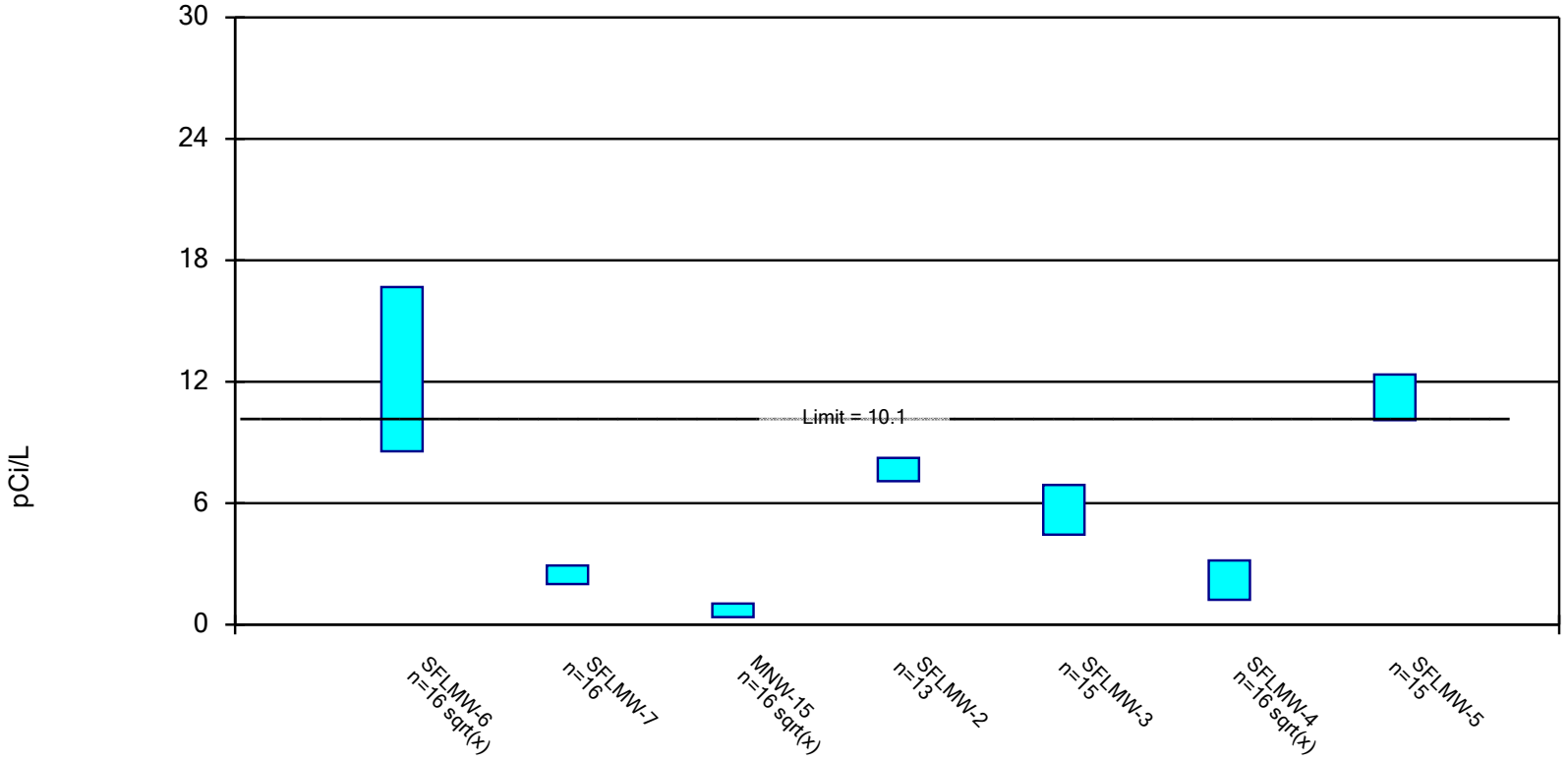


Constituent: Molybdenum Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

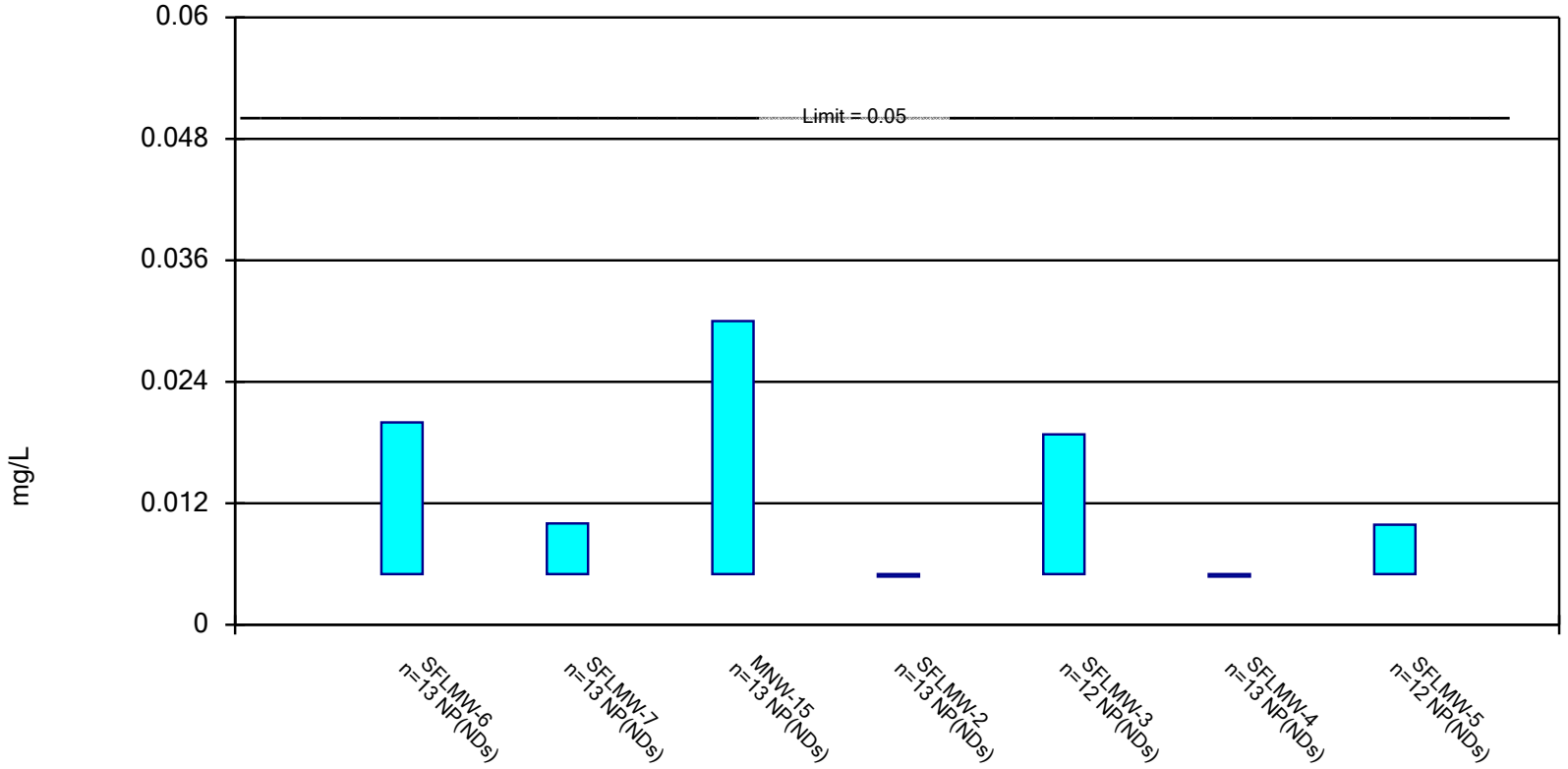


Constituent: Radium 226 + 228 Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

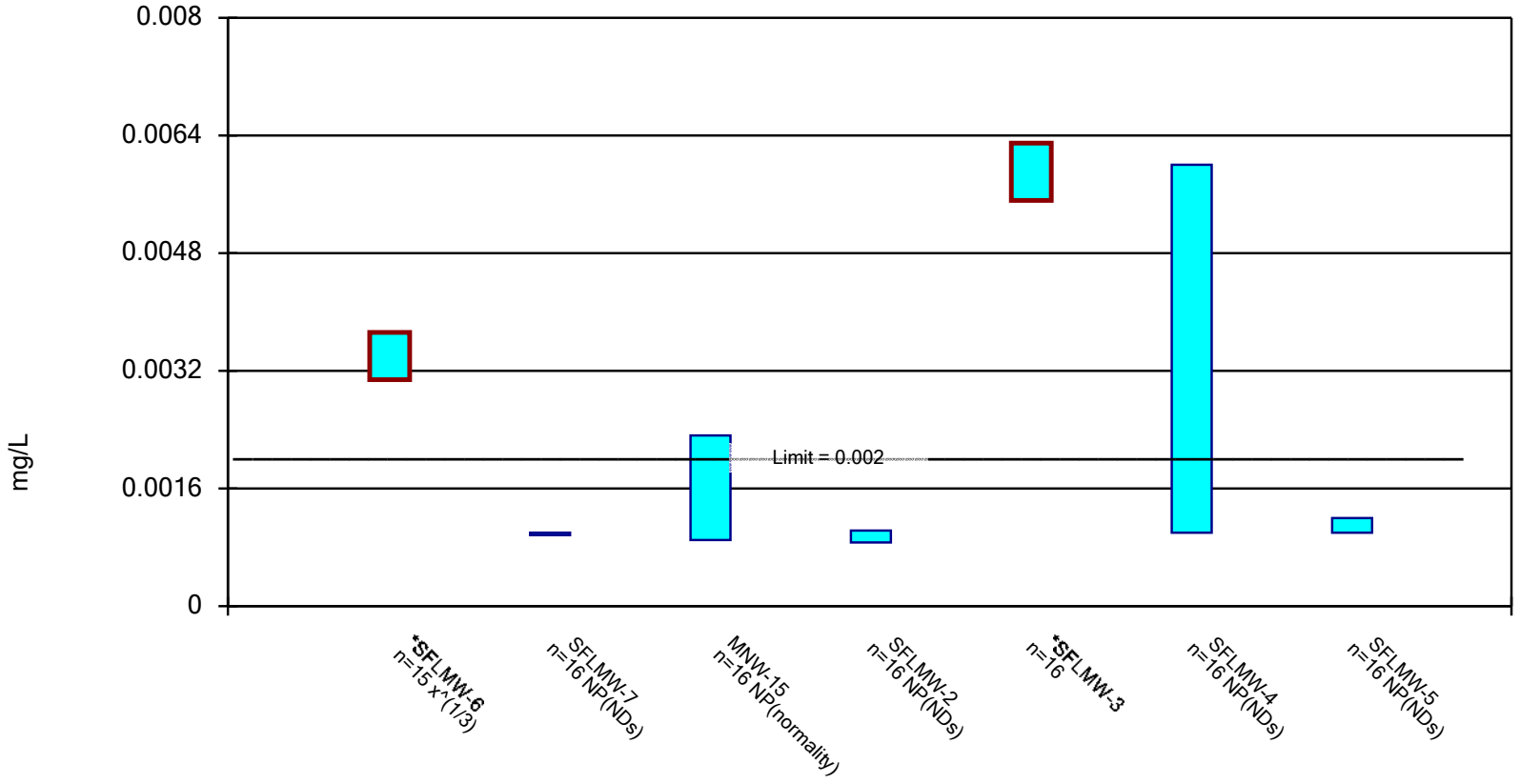


Constituent: Selenium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 8/19/2021 11:59 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SFLMW-6	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SFLMW-7	0.002	0.000579	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	MNW-15	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SFLMW-2	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SFLMW-3	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SFLMW-4	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SFLMW-5	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	SFLMW-6	0.01403	0.008743	0.01	No	13	30.77	No	0.01	Param.
Arsenic (mg/L)	SFLMW-7	0.001	0.001	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	MNW-15	0.00774	0.001	0.01	No	12	66.67	No	0.01	NP (NDs)
Arsenic (mg/L)	SFLMW-2	0.0016	0.001	0.01	No	13	69.23	No	0.01	NP (NDs)
Arsenic (mg/L)	SFLMW-3	0.00317	0.001	0.01	No	13	69.23	No	0.01	NP (NDs)
Arsenic (mg/L)	SFLMW-4	0.00106	0.001	0.01	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	SFLMW-5	0.00234	0.001	0.01	No	13	69.23	No	0.01	NP (NDs)
Barium (mg/L)	SFLMW-6	0.05747	0.03106	2	No	11	0	No	0.01	Param.
Barium (mg/L)	SFLMW-7	0.04301	0.03196	2	No	12	0	No	0.01	Param.
Barium (mg/L)	MNW-15	0.03	0.016	2	No	12	0	No	0.01	NP (normality)
Barium (mg/L)	SFLMW-2	0.03	0.02	2	No	12	0	No	0.01	NP (normality)
Barium (mg/L)	SFLMW-3	0.04721	0.01662	2	No	12	0	No	0.01	Param.
Barium (mg/L)	SFLMW-4	0.0311	0.02188	2	No	12	0	No	0.01	Param.
Barium (mg/L)	SFLMW-5	0.06	0.0192	2	No	12	0	No	0.01	NP (normality)
Beryllium (mg/L)	**SFLMW-6**	**0.05347**	**0.04702**	**0.004**	**Yes**	**15**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-7	0.001	0.001	0.004	No	16	100	No	0.01	NP (NDs)
Beryllium (mg/L)	**MNW-15**	**0.08155**	**0.06965**	**0.004**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-2	0.003386	0.001329	0.004	No	16	18.75	x^(1/3)	0.01	Param.
Beryllium (mg/L)	**SFLMW-3**	**0.03782**	**0.03293**	**0.004**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-4	0.001	0.001	0.004	No	16	100	No	0.01	NP (NDs)
Beryllium (mg/L)	**SFLMW-5**	**0.01108**	**0.009541**	**0.004**	**Yes**	**15**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	**SFLMW-6**	**0.01124**	**0.009417**	**0.005**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-7	0.001	0.001	0.005	No	16	100	No	0.01	NP (NDs)
Cadmium (mg/L)	**MNW-15**	**0.0945**	**0.0388**	**0.005**	**Yes**	**16**	**0**	**No**	**0.01**	**NP (normality)**
Cadmium (mg/L)	SFLMW-2	0.00268	0.000761	0.005	No	16	68.75	No	0.01	NP (NDs)
Cadmium (mg/L)	**SFLMW-3**	**0.008084**	**0.006509**	**0.005**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-4	0.001	0.001	0.005	No	16	100	No	0.01	NP (NDs)
Cadmium (mg/L)	SFLMW-5	0.00538	0.001	0.005	No	16	37.5	No	0.01	NP (normality)
Chromium (mg/L)	SFLMW-6	0.01	0.002	0.1	No	13	53.85	No	0.01	NP (NDs)
Chromium (mg/L)	SFLMW-7	0.002	0.002	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	MNW-15	0.0579	0.002	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	SFLMW-2	0.002	0.002	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	SFLMW-3	0.0024	0.002	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	SFLMW-4	0.002	0.002	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	SFLMW-5	0.0044	0.002	0.1	No	13	76.92	No	0.01	NP (NDs)
Cobalt (mg/L)	**SFLMW-6**	**0.1177**	**0.1074**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SFLMW-7	0.0005	0.0005	0.006	No	16	100	No	0.01	NP (NDs)
Cobalt (mg/L)	**MNW-15**	**0.32**	**0.2788**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-2**	**0.01775**	**0.01265**	**0.006**	**Yes**	**15**	**20**	**x^2**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-3**	**0.07**	**0.0598**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**NP (normality)**
Cobalt (mg/L)	SFLMW-4	0.04	0.0005	0.006	No	16	93.75	No	0.01	NP (NDs)
Cobalt (mg/L)	**SFLMW-5**	**0.05625**	**0.04706**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SFLMW-6	0.8	0.5	4	No	15	33.33	No	0.01	NP (normality)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SFLMW-7	2.62	0.19	4	No	16	75	No	0.01	NP (NDs)
Fluoride (mg/L)	MNW-15	0.84	0.4	4	No	16	12.5	No	0.01	NP (normality)
Fluoride (mg/L)	SFLMW-2	0.5	0.2	4	No	16	31.25	No	0.01	NP (normality)
Fluoride (mg/L)	SFLMW-3	0.7	0.5	4	No	16	18.75	No	0.01	NP (normality)
Fluoride (mg/L)	SFLMW-4	1.7	0.204	4	No	16	68.75	No	0.01	NP (NDs)
Fluoride (mg/L)	SFLMW-5	0.5	0.2	4	No	16	37.5	No	0.01	NP (normality)
Lead (mg/L)	SFLMW-6	0.0115	0.001	0.015	No	15	53.33	No	0.01	NP (NDs)
Lead (mg/L)	SFLMW-7	0.001	0.000211	0.015	No	16	93.75	No	0.01	NP (NDs)
Lead (mg/L)	MNW-15	0.00225	0.000555	0.015	No	16	68.75	No	0.01	NP (NDs)
Lead (mg/L)	SFLMW-2	0.00132	0.000272	0.015	No	16	87.5	No	0.01	NP (NDs)
Lead (mg/L)	**SFLMW-3**	**0.0197**	**0.01788**	**0.015**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Lead (mg/L)	SFLMW-4	0.001	0.001	0.015	No	16	100	No	0.01	NP (NDs)
Lead (mg/L)	SFLMW-5	0.00102	0.000725	0.015	No	16	75	No	0.01	NP (NDs)
Lithium (mg/L)	**SFLMW-6**	**0.7632**	**0.6232**	**0.552**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Lithium (mg/L)	SFLMW-7	0.4489	0.3976	0.552	No	16	0	No	0.01	Param.
Lithium (mg/L)	MNW-15	0.1197	0.06711	0.552	No	16	12.5	x^(1/3)	0.01	Param.
Lithium (mg/L)	SFLMW-2	0.533	0.4365	0.552	No	16	0	No	0.01	Param.
Lithium (mg/L)	SFLMW-3	0.3782	0.2793	0.552	No	16	6.25	No	0.01	Param.
Lithium (mg/L)	SFLMW-4	0.4801	0.397	0.552	No	16	0	No	0.01	Param.
Lithium (mg/L)	**SFLMW-5**	**0.9**	**0.643**	**0.552**	**Yes**	**16**	**0**	**No**	**0.01**	**NP (normality)**
Mercury (mg/L)	SFLMW-6	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	SFLMW-7	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	MNW-15	0.000396	0.0002	0.002	No	15	80	No	0.01	NP (NDs)
Mercury (mg/L)	SFLMW-2	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	SFLMW-3	0.00268	0.001782	0.002	No	16	0	No	0.01	Param.
Mercury (mg/L)	SFLMW-4	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	SFLMW-5	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-6	0.005	0.005	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-7	0.005	0.005	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	MNW-15	0.005	0.005	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-2	0.005	0.00202	0.1	No	13	92.31	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-3	0.005	0.005	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-4	0.005	0.00208	0.1	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	SFLMW-5	0.005	0.0018	0.1	No	13	92.31	No	0.01	NP (NDs)
Radium 226 + 228 (pCi/L)	SFLMW-6	16.67	8.561	10.1	No	16	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-7	2.916	1.999	10.1	No	16	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	MNW-15	1.047	0.3817	10.1	No	16	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-2	8.245	7.092	10.1	No	13	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-3	6.896	4.451	10.1	No	15	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-4	3.166	1.234	10.1	No	16	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-5	12.35	10.1	10.1	No	15	0	No	0.01	Param.
Selenium (mg/L)	SFLMW-6	0.02	0.005	0.05	No	13	61.54	No	0.01	NP (NDs)
Selenium (mg/L)	SFLMW-7	0.01	0.005	0.05	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	MNW-15	0.03	0.005	0.05	No	13	76.92	No	0.01	NP (NDs)
Selenium (mg/L)	SFLMW-2	0.005	0.005	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	SFLMW-3	0.0188	0.005	0.05	No	12	91.67	No	0.01	NP (NDs)
Selenium (mg/L)	SFLMW-4	0.005	0.005	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	SFLMW-5	0.00989	0.005	0.05	No	12	91.67	No	0.01	NP (NDs)
Thallium (mg/L)	**SFLMW-6**	**0.003723**	**0.003079**	**0.002**	**Yes**	**15**	**0**	**x^(1/3)**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-7	0.001	0.001	0.002	No	16	100	No	0.01	NP (NDs)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 11:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	MNW-15	0.00232	0.000901	0.002	No	16	43.75	No	0.01	NP (normality)
Thallium (mg/L)	SFLMW-2	0.00103	0.000865	0.002	No	16	81.25	No	0.01	NP (NDs)
Thallium (mg/L)	**SFLMW-3**	**0.006297**	**0.005515**	**0.002**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-4	0.006	0.001	0.002	No	16	93.75	No	0.01	NP (NDs)
Thallium (mg/L)	SFLMW-5	0.0012	0.001	0.002	No	16	68.75	No	0.01	NP (NDs)

Attachment A-2

Statistical Analysis

-July 2022

-Site F Landfill

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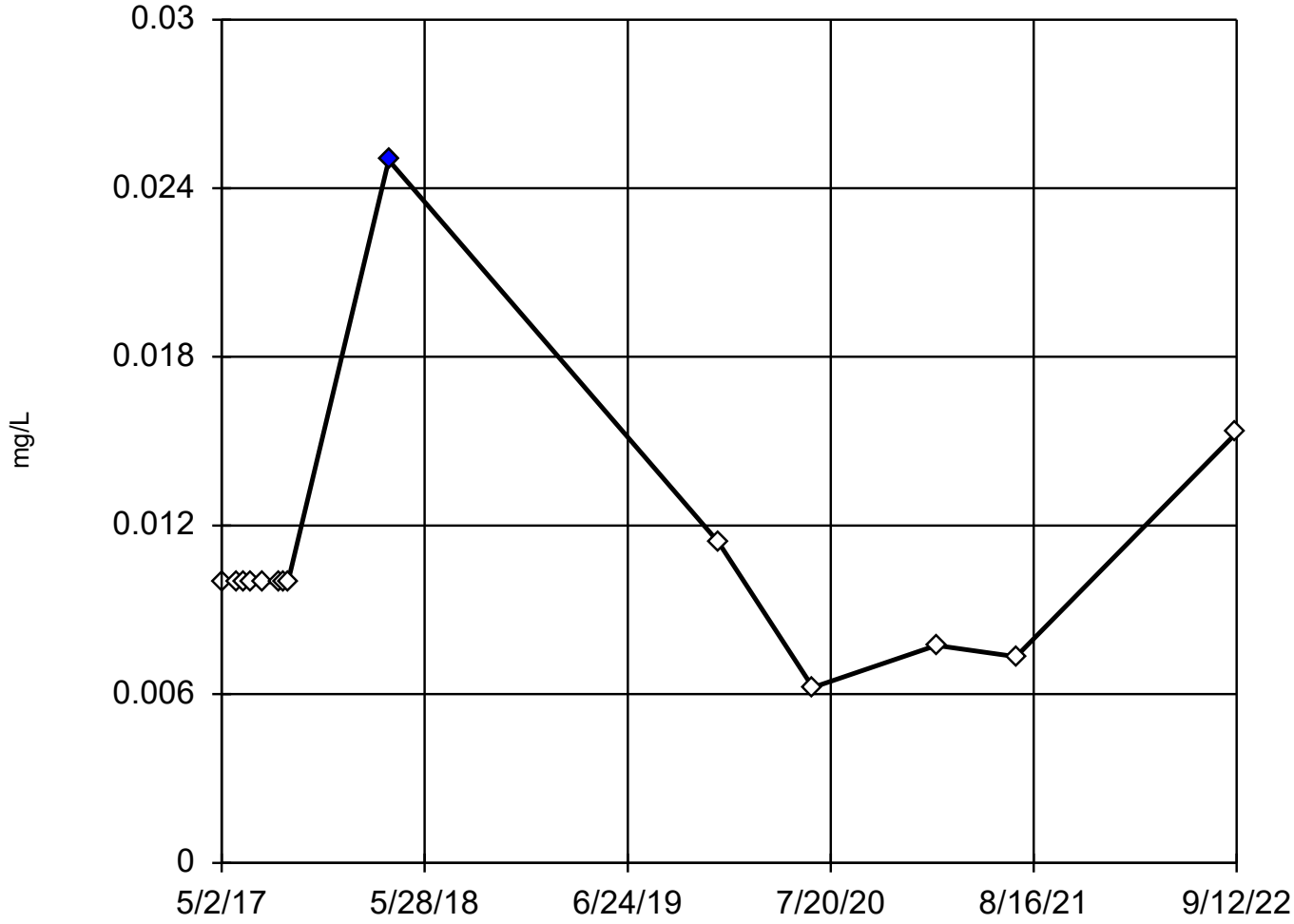
Tukey's Outlier Screening

MNW-15



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

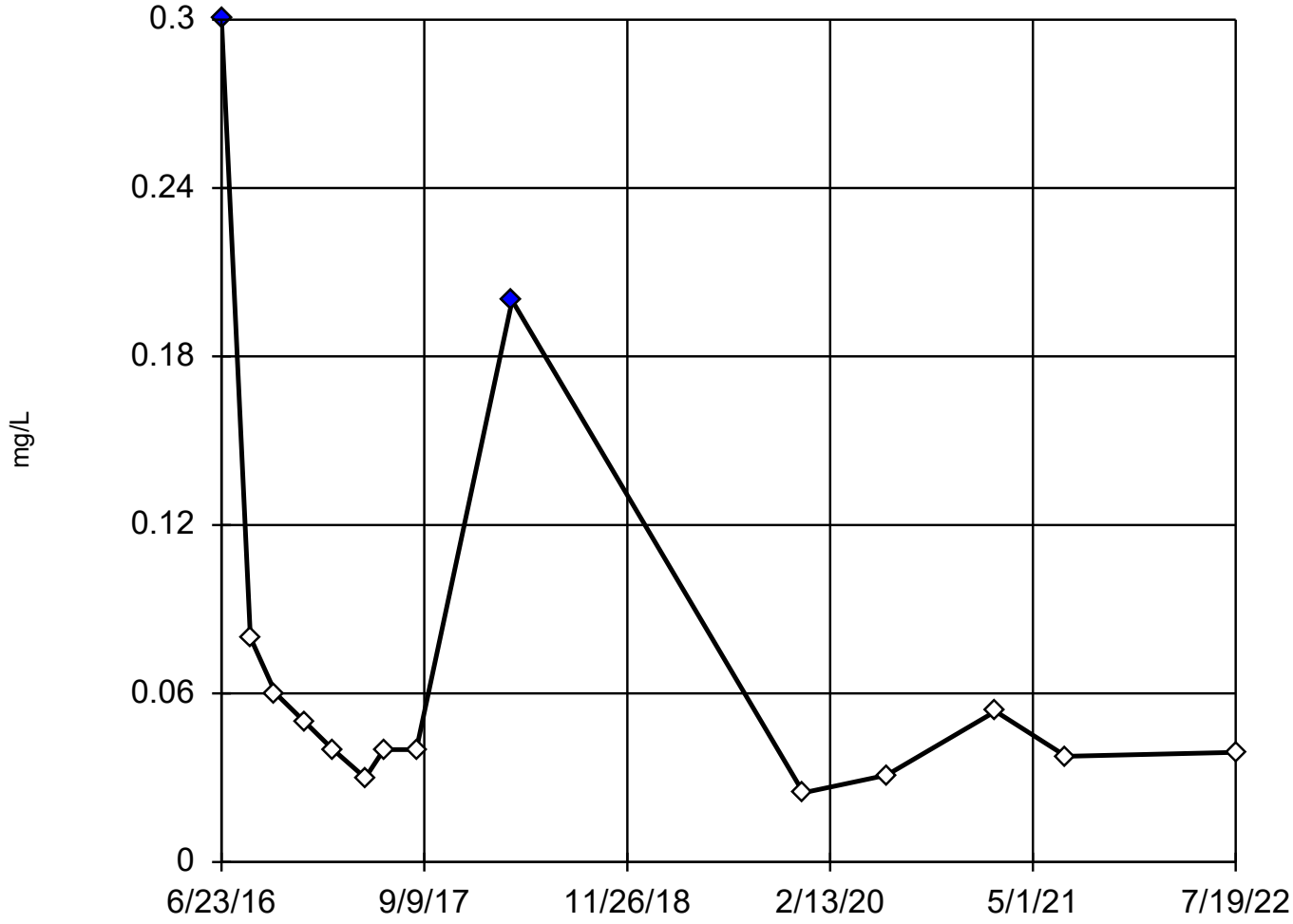
High cutoff = 0.01909, low cutoff = 0.004922, based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 10/19/2022 2:27 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 14

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high outliers.
Mean = 0.07328.
Std. Dev. = 0.07865.
<0.2 (o): c = 0.8279
tabl = 0.546.
Alpha = 0.05.

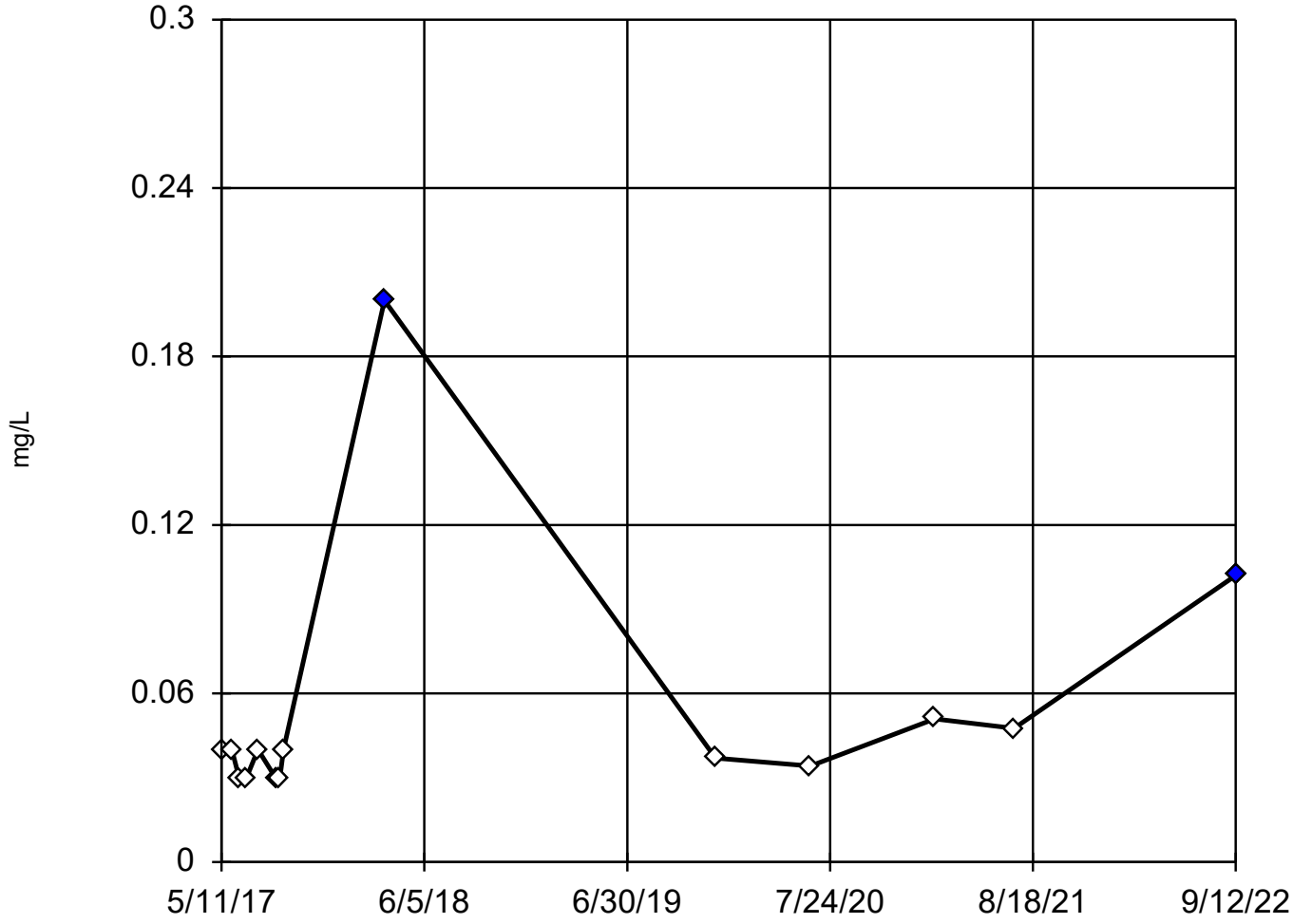
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8958
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Barium Analysis Run 10/19/2022 2:27 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-7



n = 14

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 2 high outliers.
Mean = 0.0537.
Std. Dev. = 0.04594.
0.102: c = 0.7556
tabl = 0.546.
Alpha = 0.05.

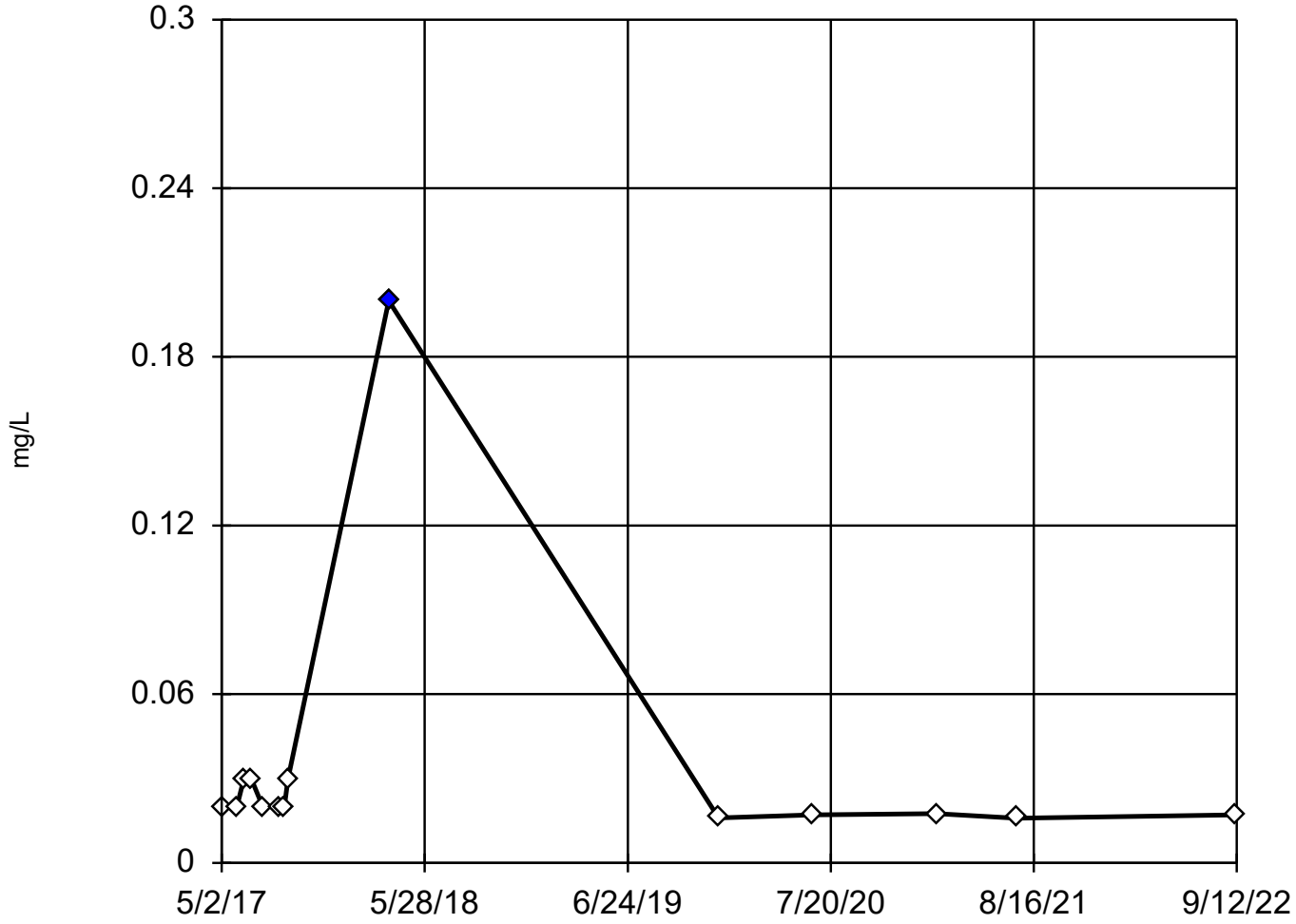
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.88
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Barium Analysis Run 10/19/2022 2:27 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-15



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

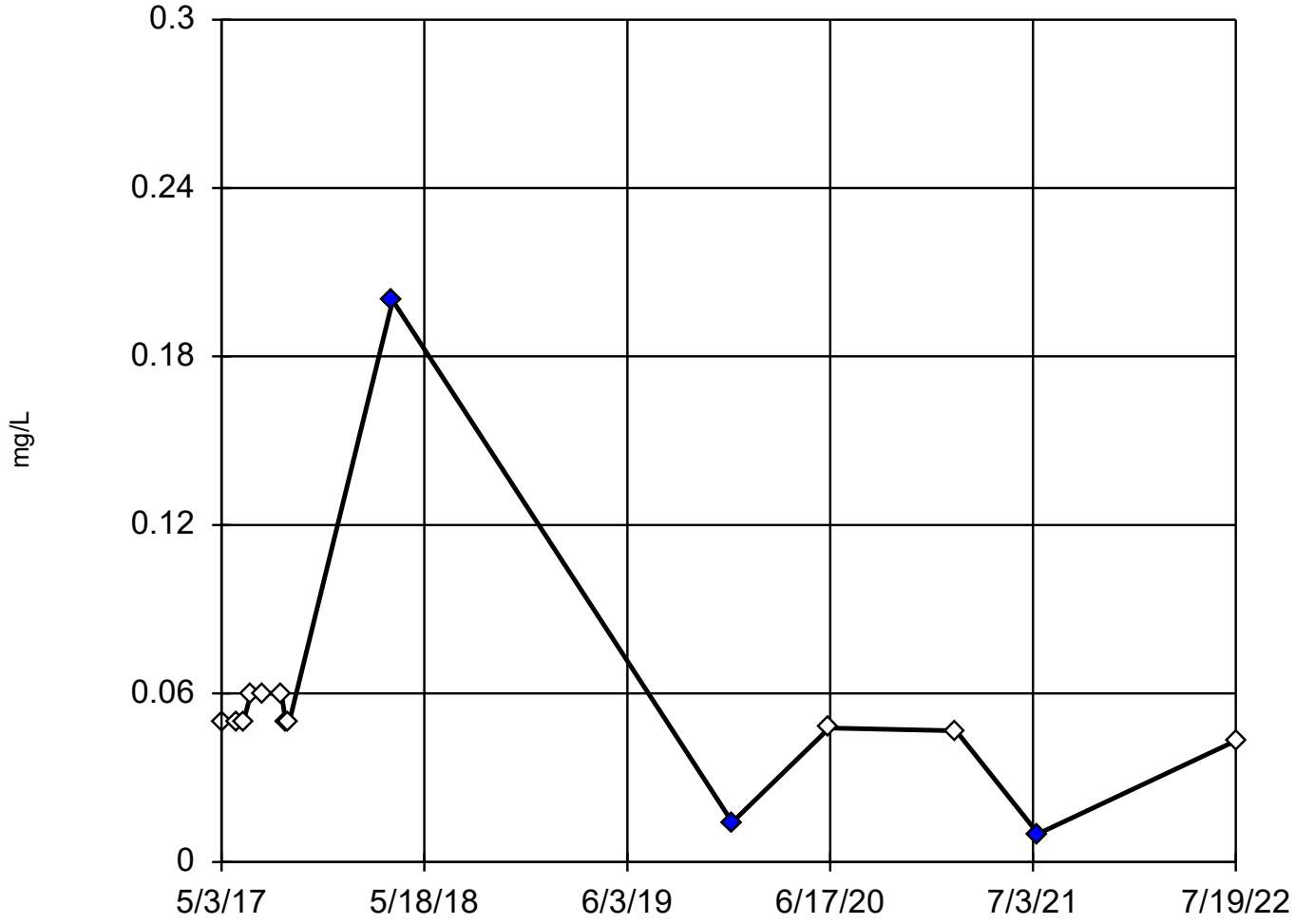
High cutoff = 0.162, low cutoff = 0.003167, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-18 (bg)



n = 14

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

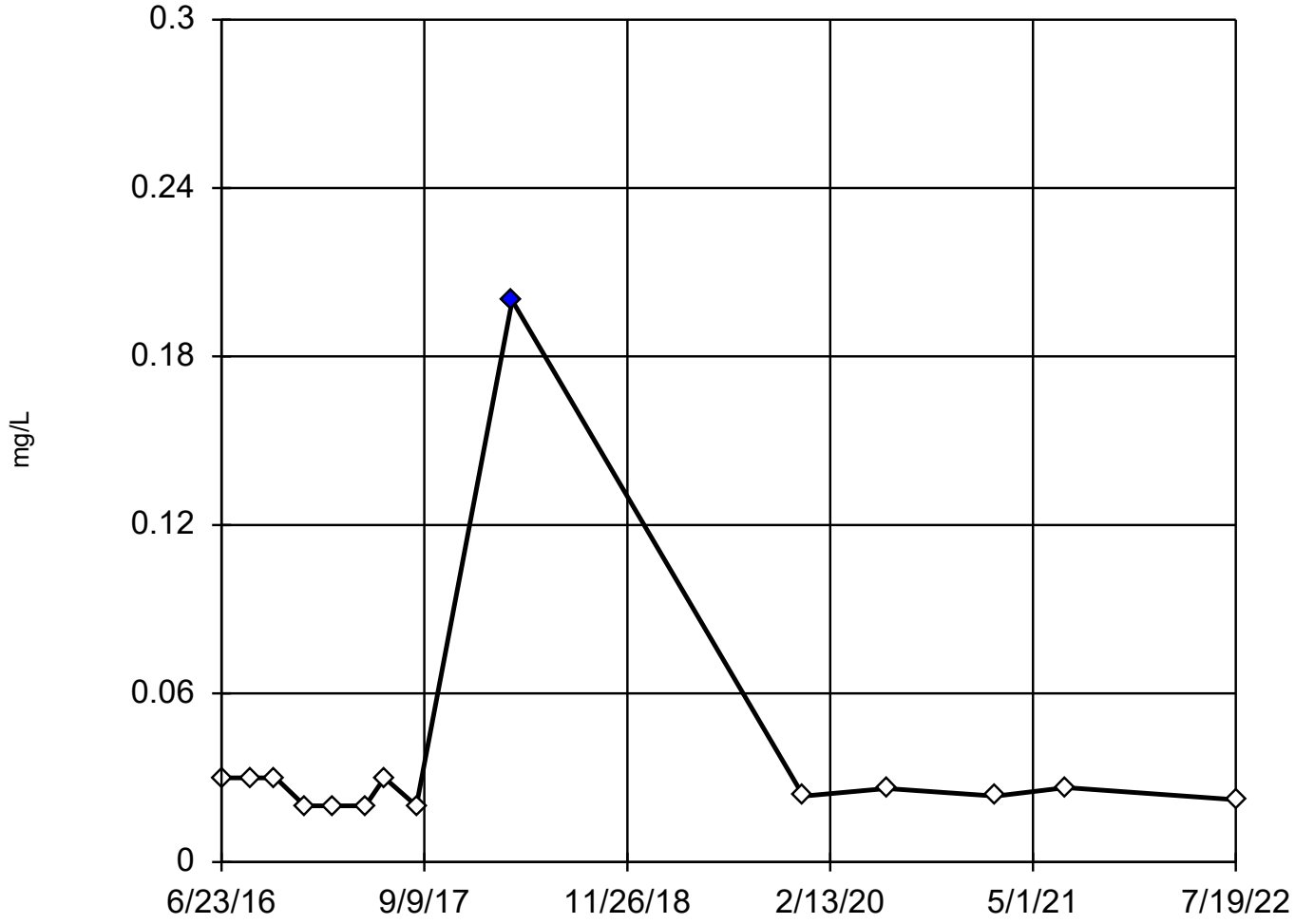
High cutoff = 0.143, low cutoff = 0.01884, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-2



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

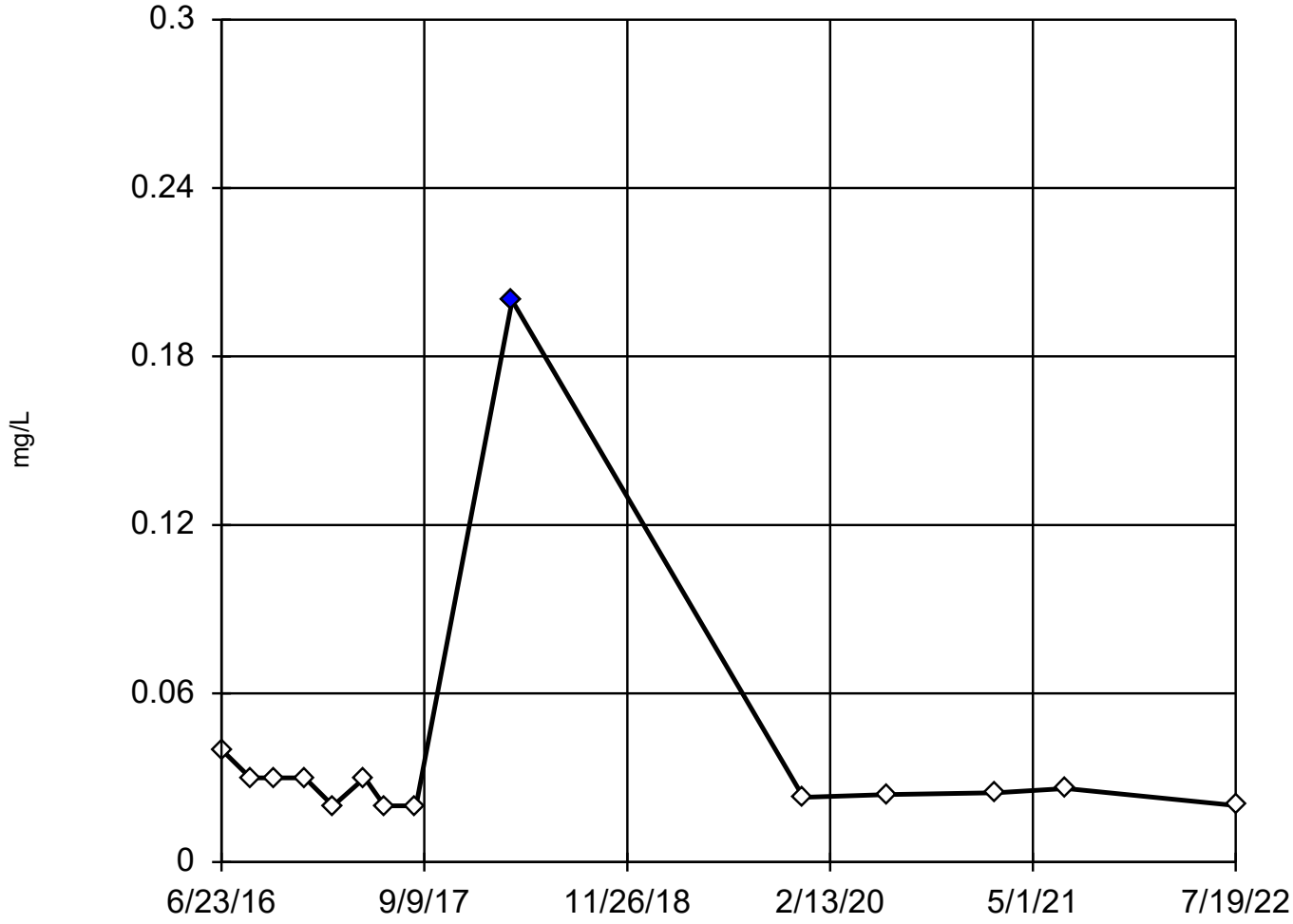
High cutoff = 0.1013, low cutoff = 0.005926, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 14

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.03843.
Std. Dev. = 0.04685.
<0.2 (o): c = 0.9444
tabl = 0.546.
Alpha = 0.05.

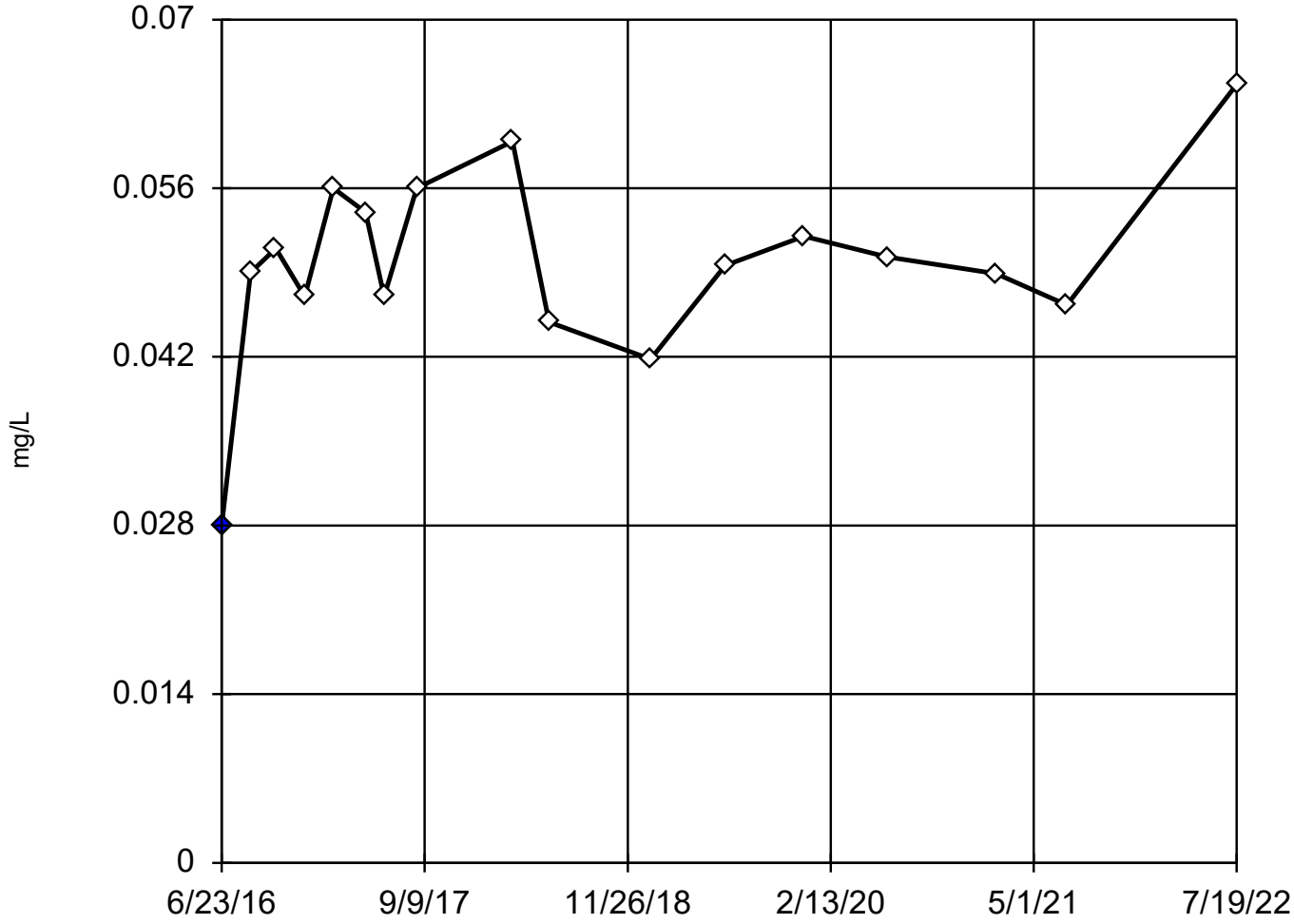
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8676
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.04978.
Std. Dev. = 0.007964.
0.028 (o): c = 0.6036
tabl = 0.49.
Alpha = 0.05.

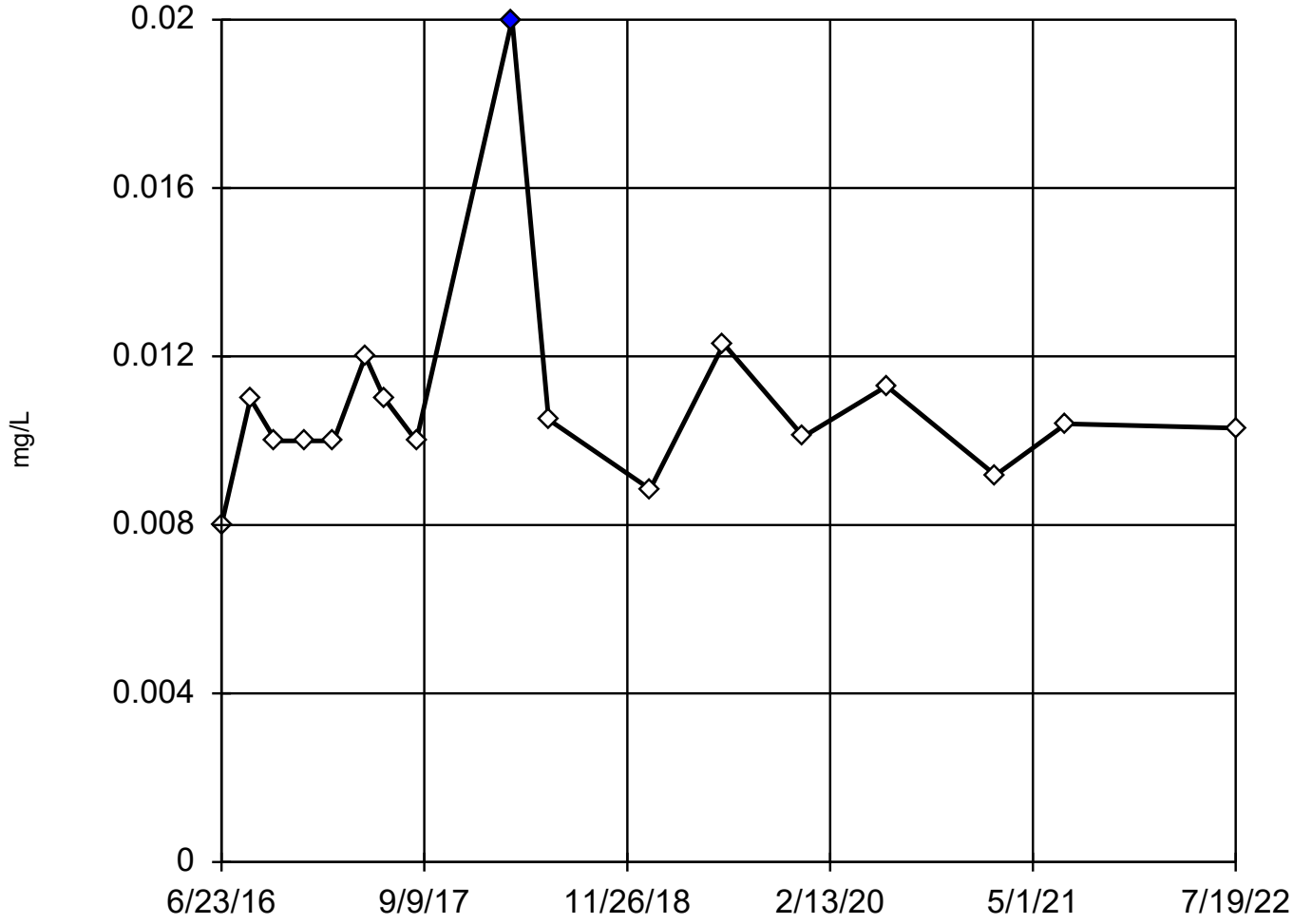
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9573
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Beryllium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.01088.
Std. Dev. = 0.002578.
<0.02 (o): c = 0.7394
tabl = 0.49.
Alpha = 0.05.

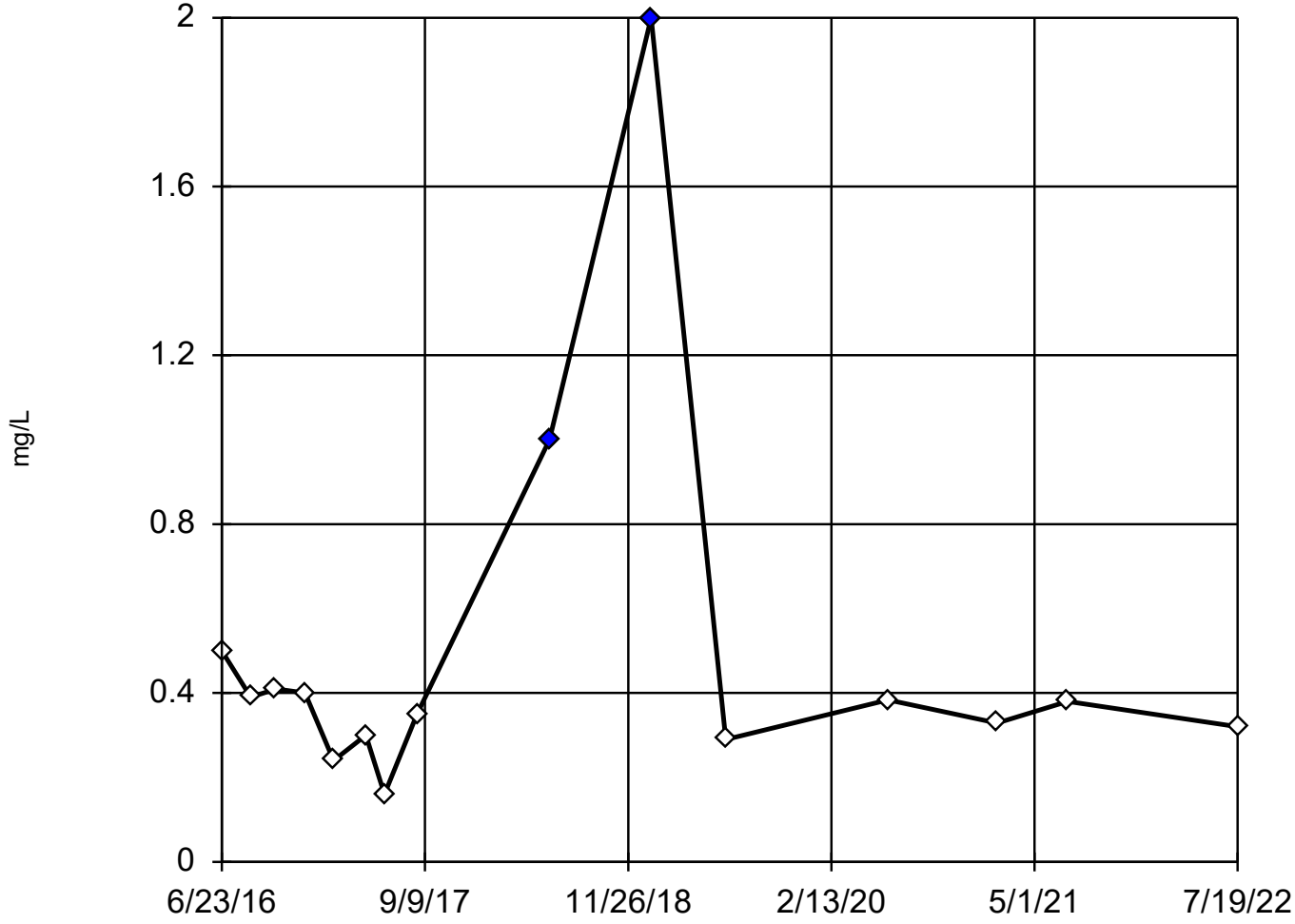
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9639
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Beryllium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 15

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high and 1 low outliers.
Mean = 0.4969.
Std. Dev. = 0.4559.
<1 (o): c = 0.831
tabl = 0.525.
0.16: c = 0.52
tabl = 0.525.
Alpha = 0.05.

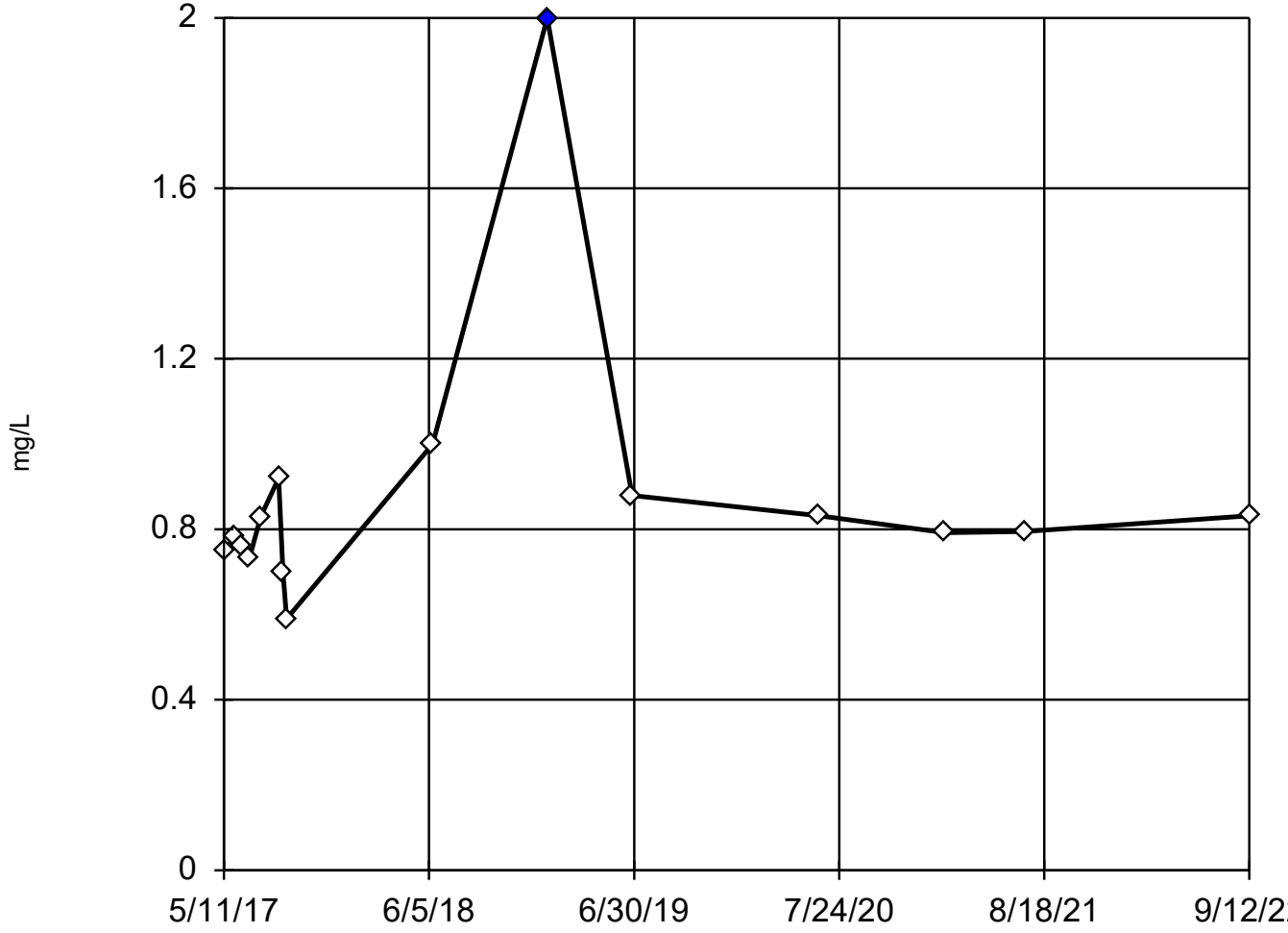
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9719
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-7



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.8793.
Std. Dev. = 0.3243.
<2 (o): c = 0.8504
tabl = 0.525.
Alpha = 0.05.

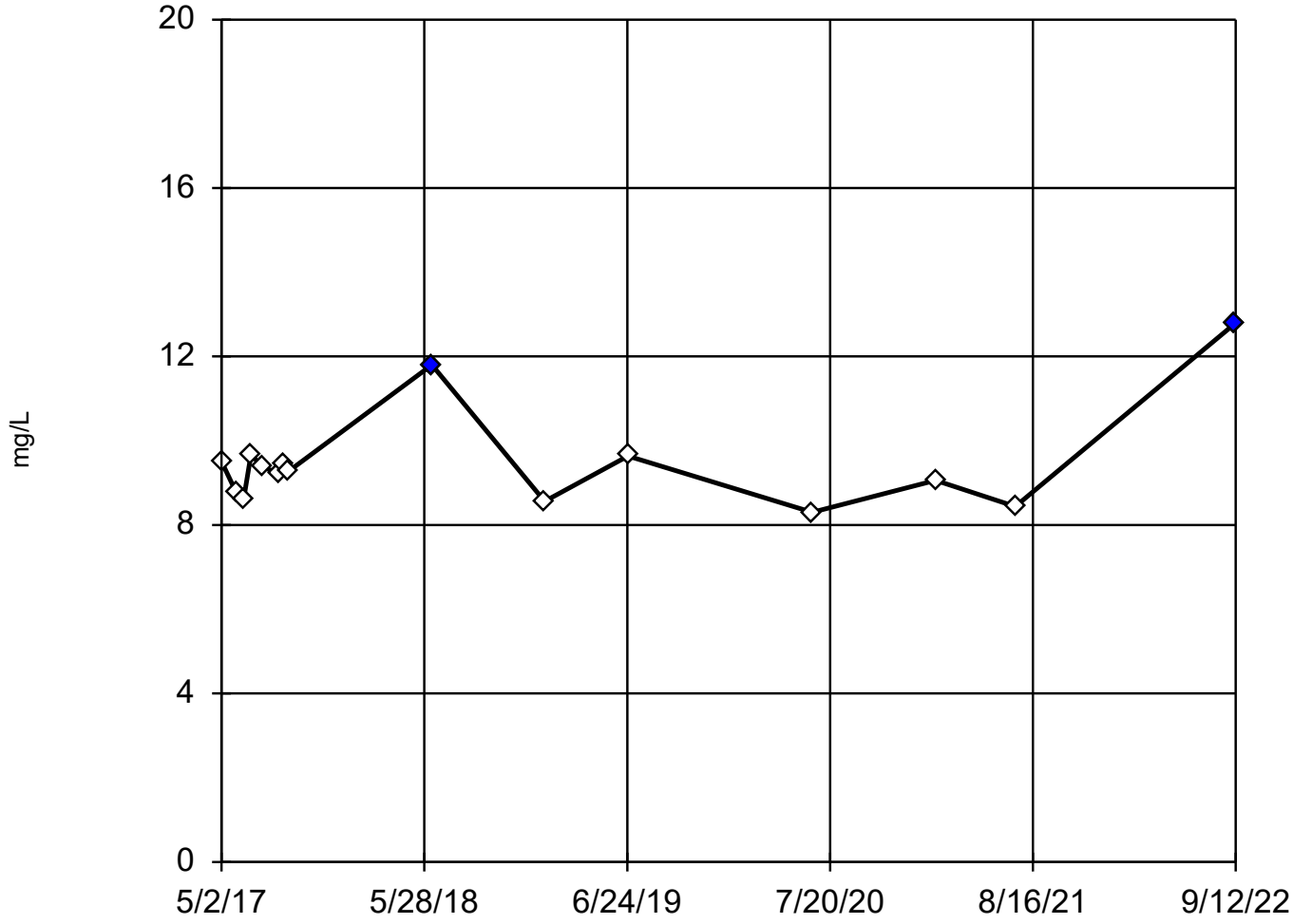
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9763
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 15

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 9.496.
Std. Dev. = 1.235.
11.8: c = 0.6667
tabl = 0.525.
Alpha = 0.05.

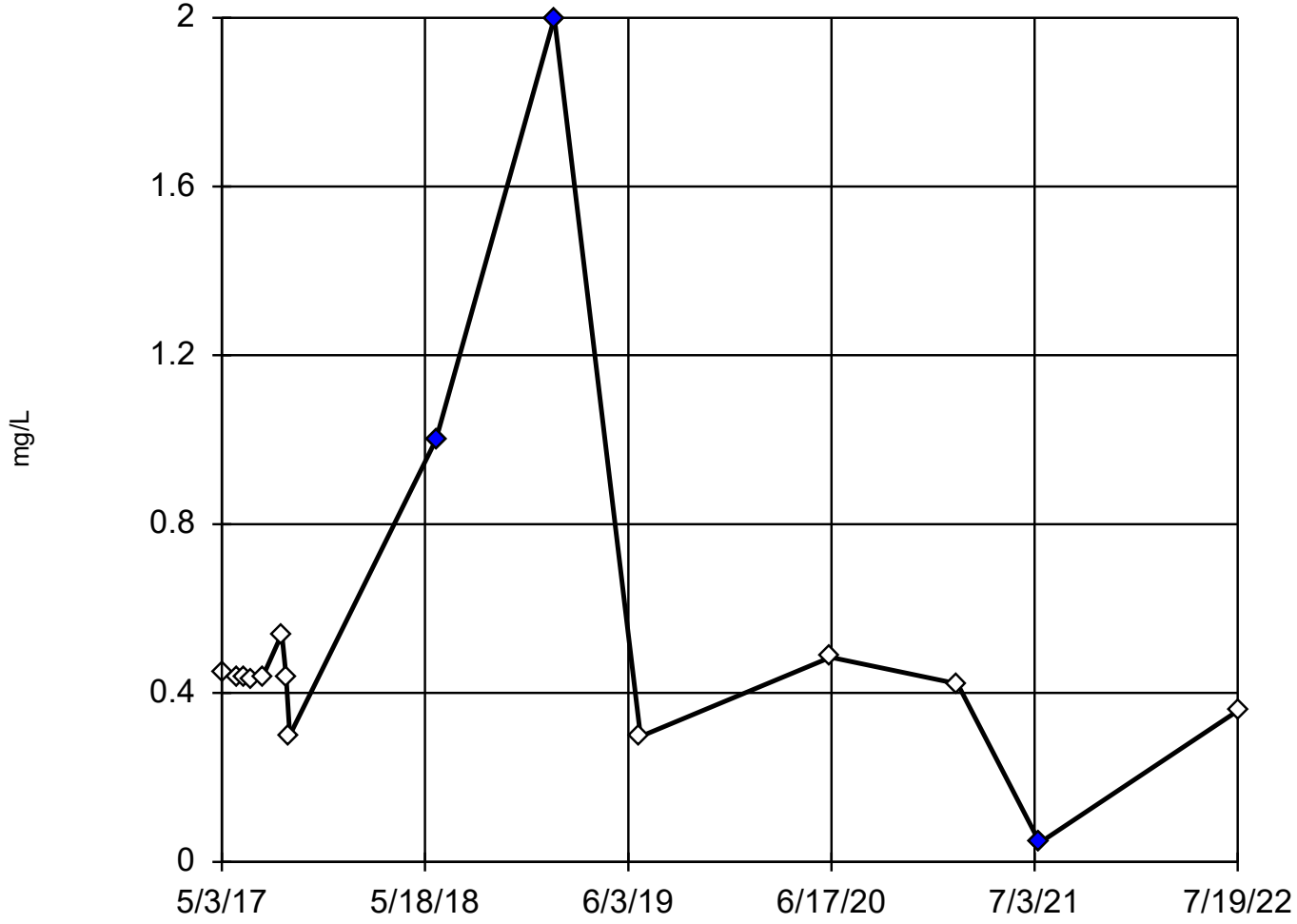
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9194
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 15

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high and 1 low outliers.
Mean = 0.5391.
Std. Dev. = 0.4484.
<1 (o): c = 0.7357
tabl = 0.525.
0.0451 (J): c = 0.5794
tabl = 0.525.
Alpha = 0.05.

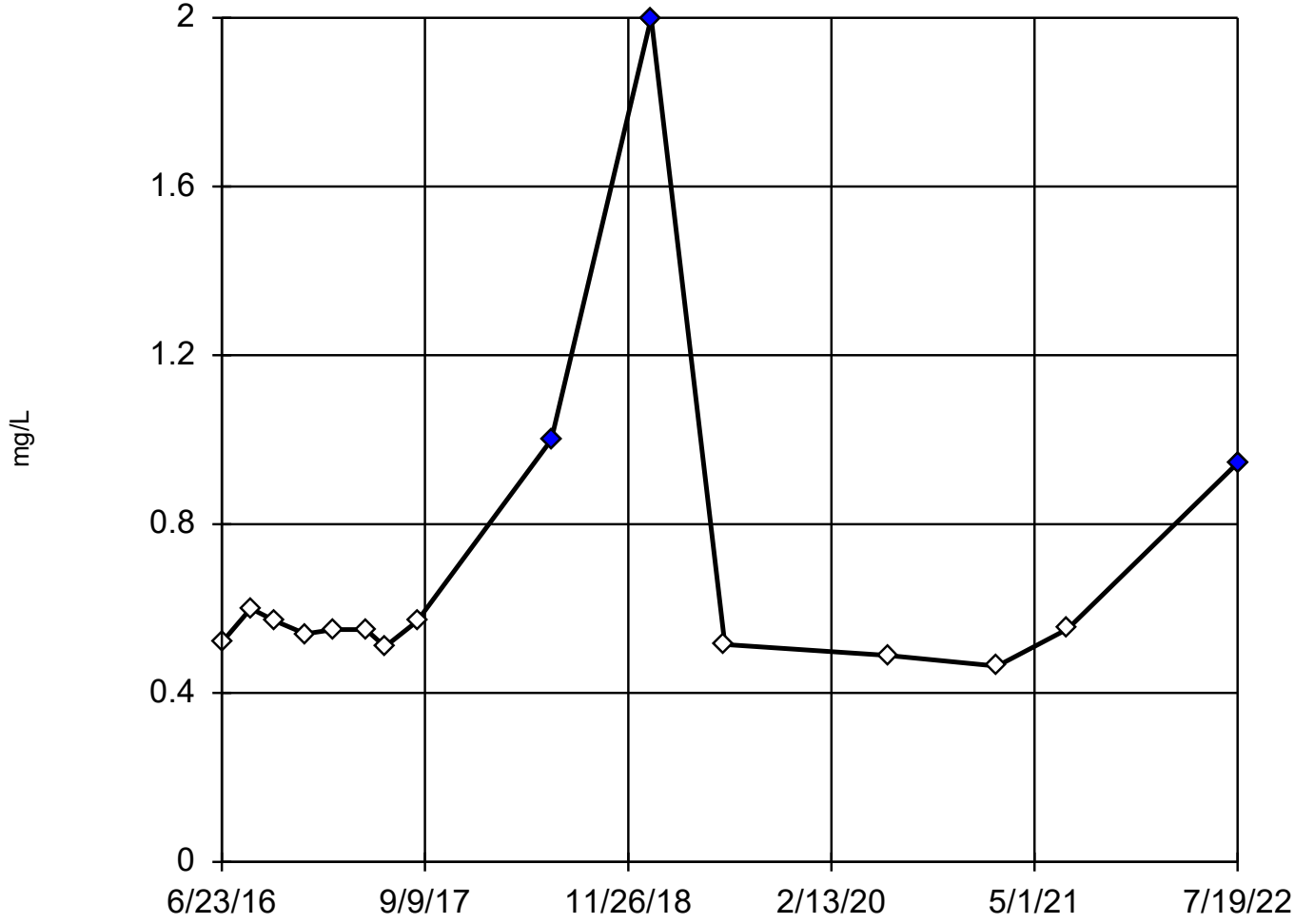
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8858
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 15

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 3 high outliers.
Mean = 0.6917.
Std. Dev. = 0.3944.
0.945: c = 0.8621
tabl = 0.525.
Alpha = 0.05.

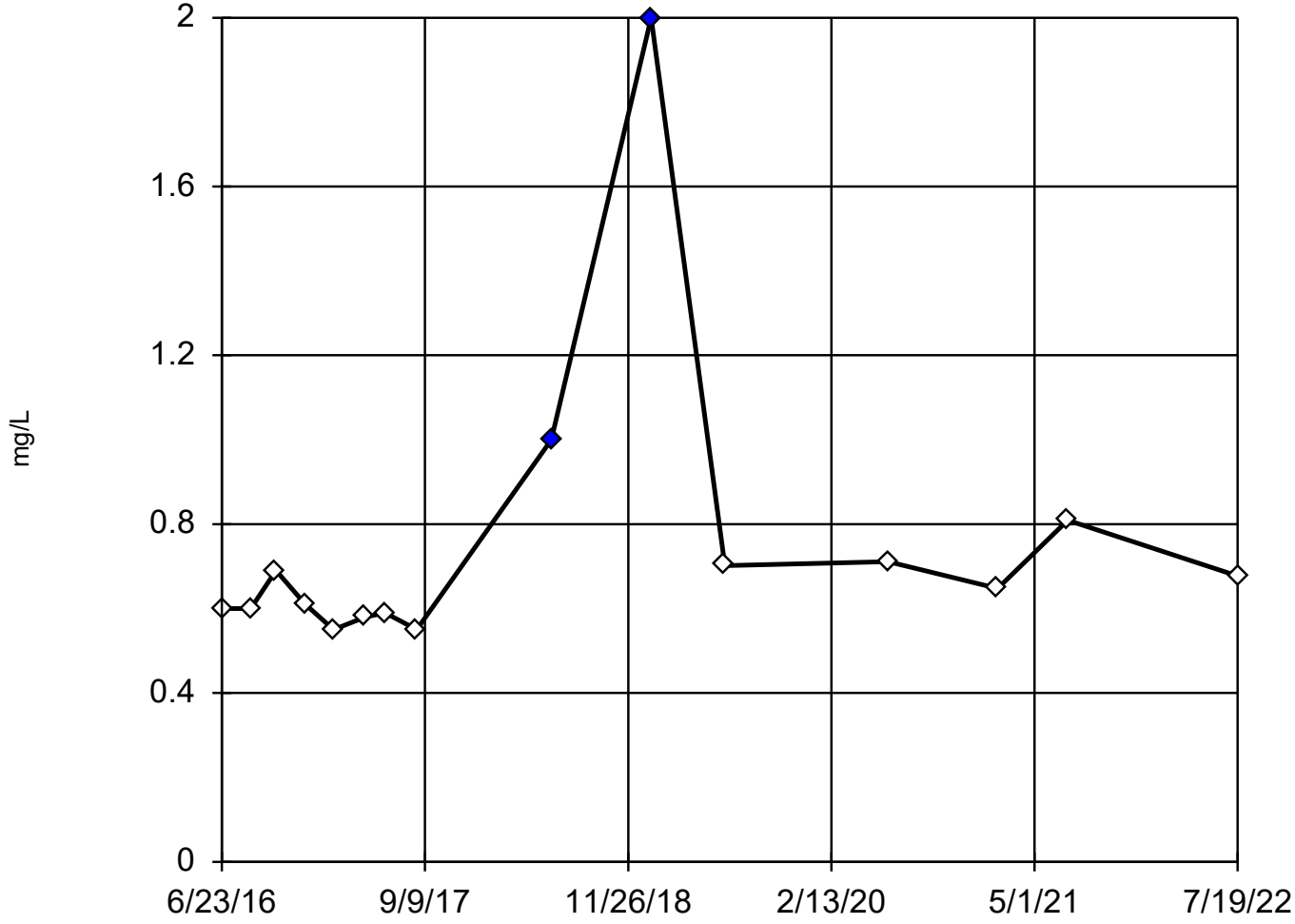
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9773
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 15

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high outliers.
Mean = 0.7545.
Std. Dev. = 0.3636.
<1 (o): c = 0.6881
tabl = 0.525.
Alpha = 0.05.

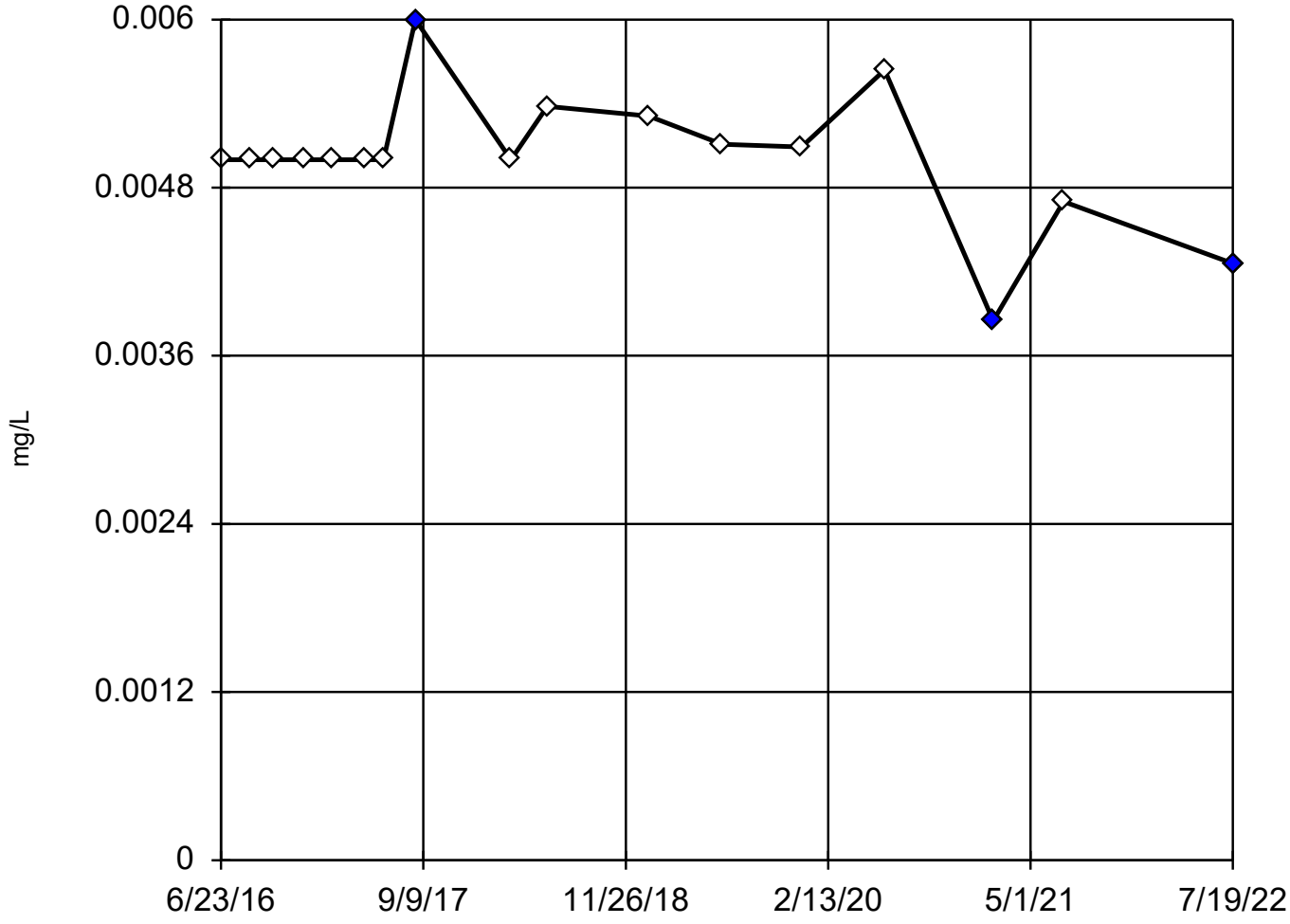
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9212
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-5



n = 17

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

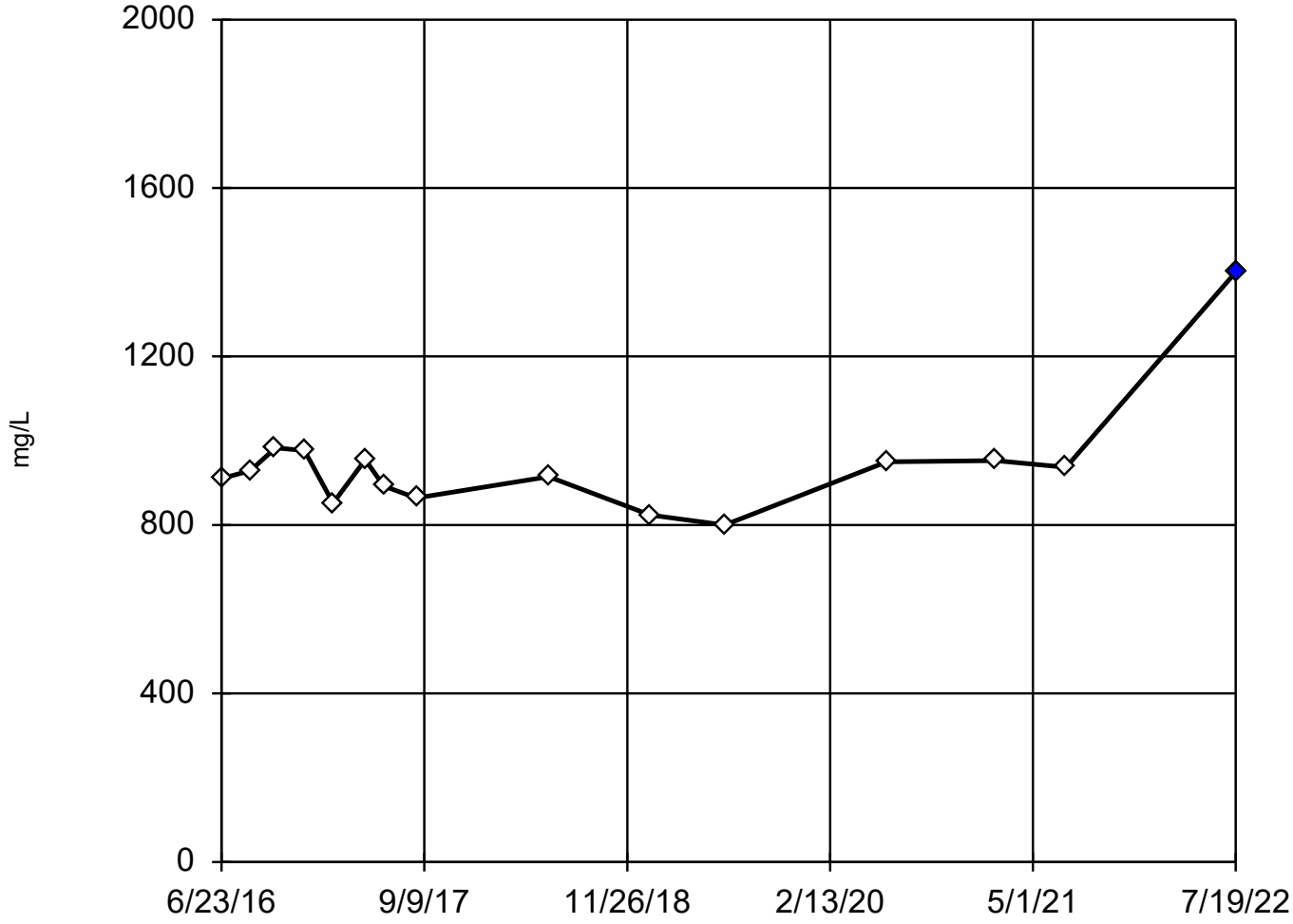
High cutoff = 0.005798, low cutoff = 0.004306, based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 942.7.
Std. Dev. = 137.8.
1400: c = 0.7719
tabl = 0.525.
Alpha = 0.05.

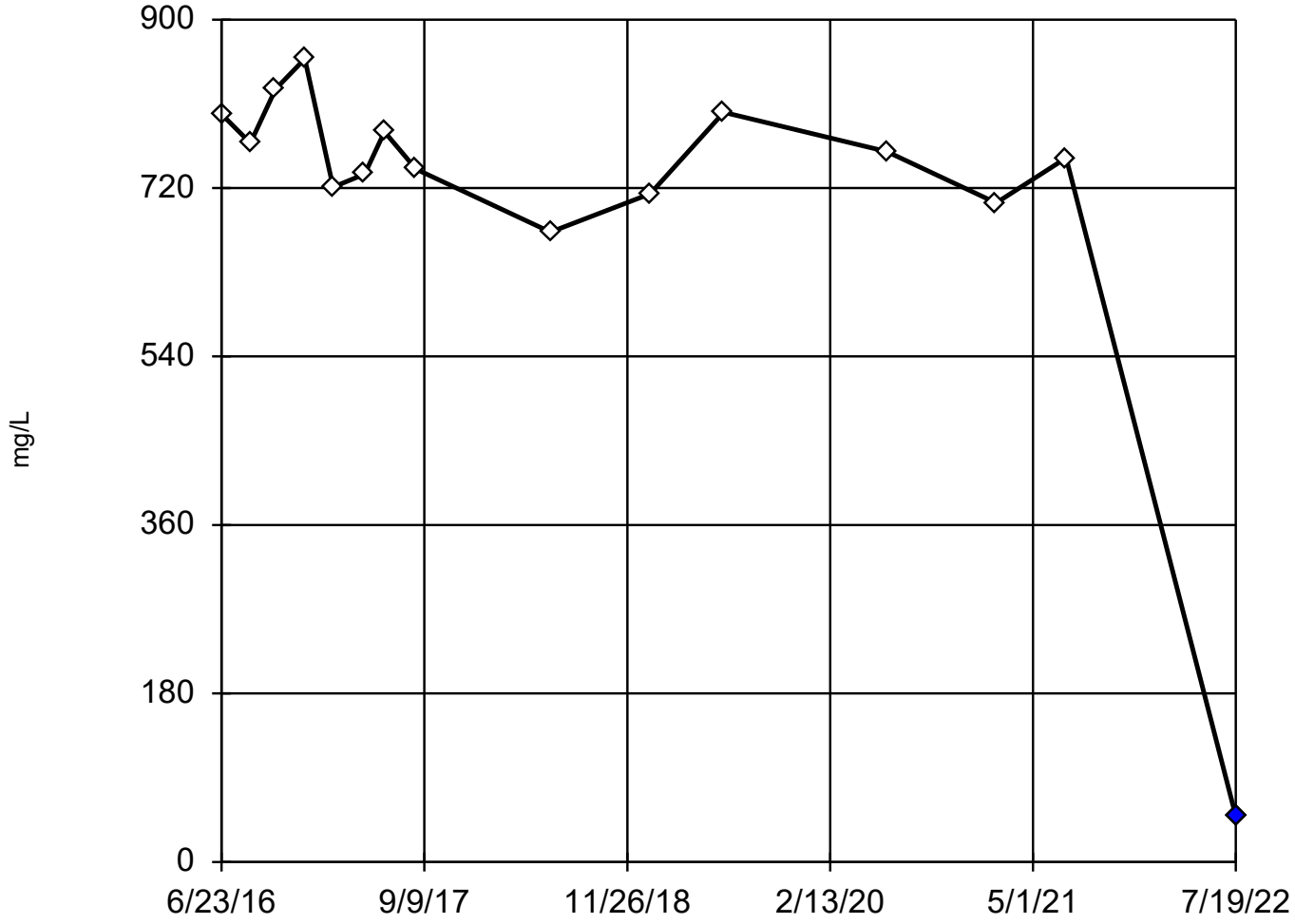
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9374
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 711.9.
Std. Dev. = 189.7.
48.9: c = 0.871
tabl = 0.525.
Alpha = 0.05.

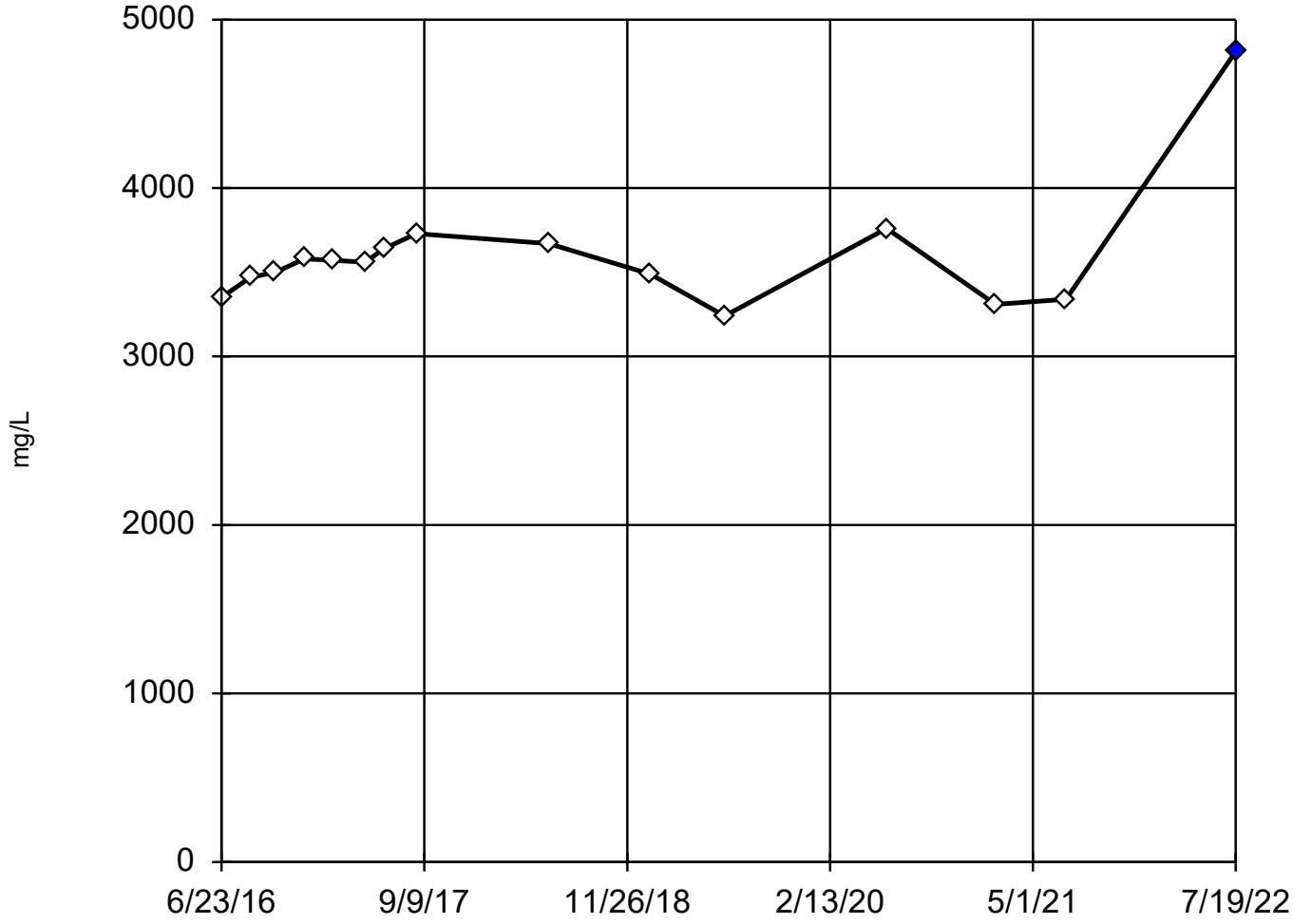
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9897
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 3601.
Std. Dev. = 368.3.
4810: c = 0.7347
tabl = 0.525.
Alpha = 0.05.

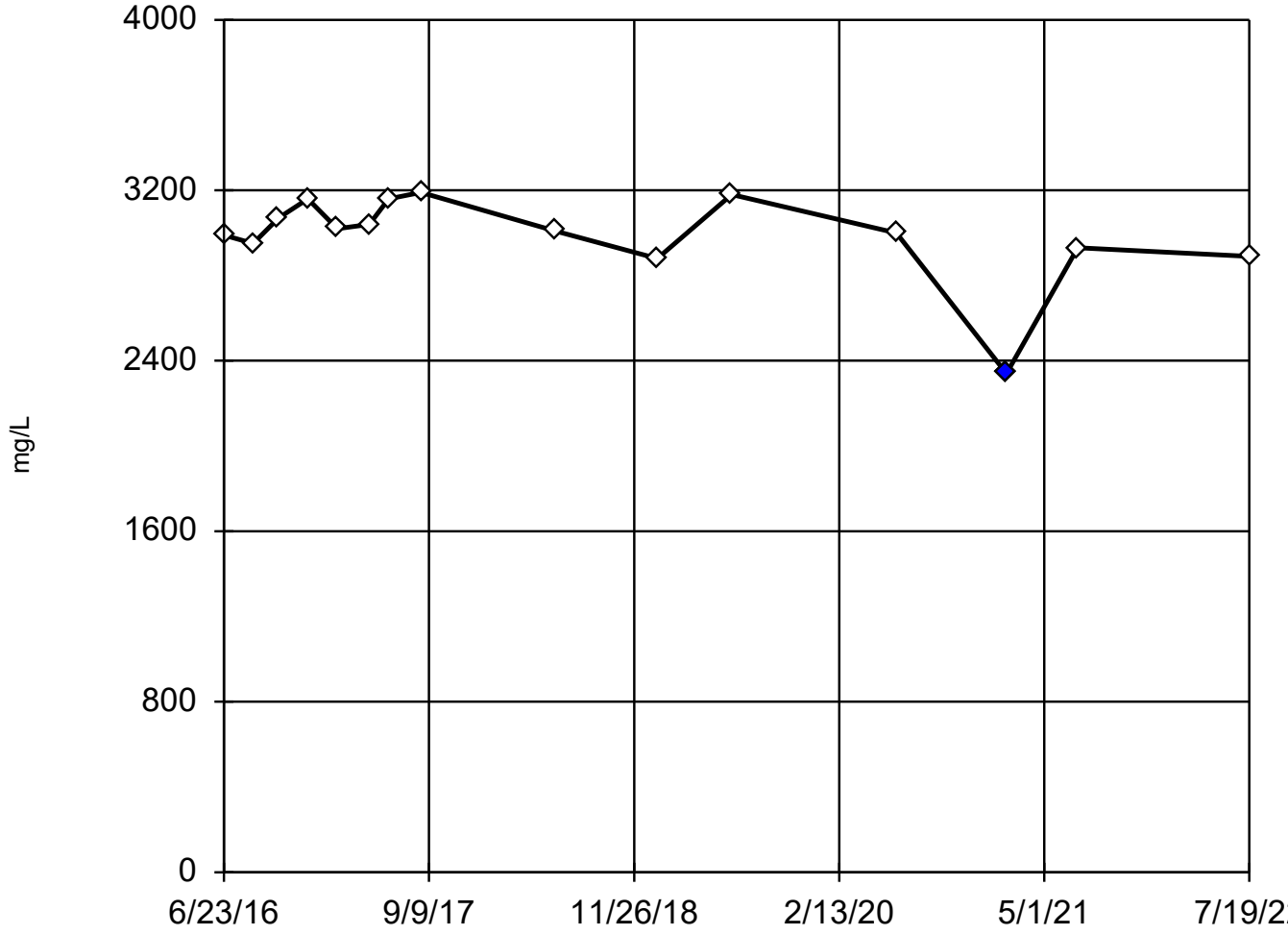
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.963
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 2987.
Std. Dev. = 206.
2340 (o): c = 0.6707
tabl = 0.525.
Alpha = 0.05.

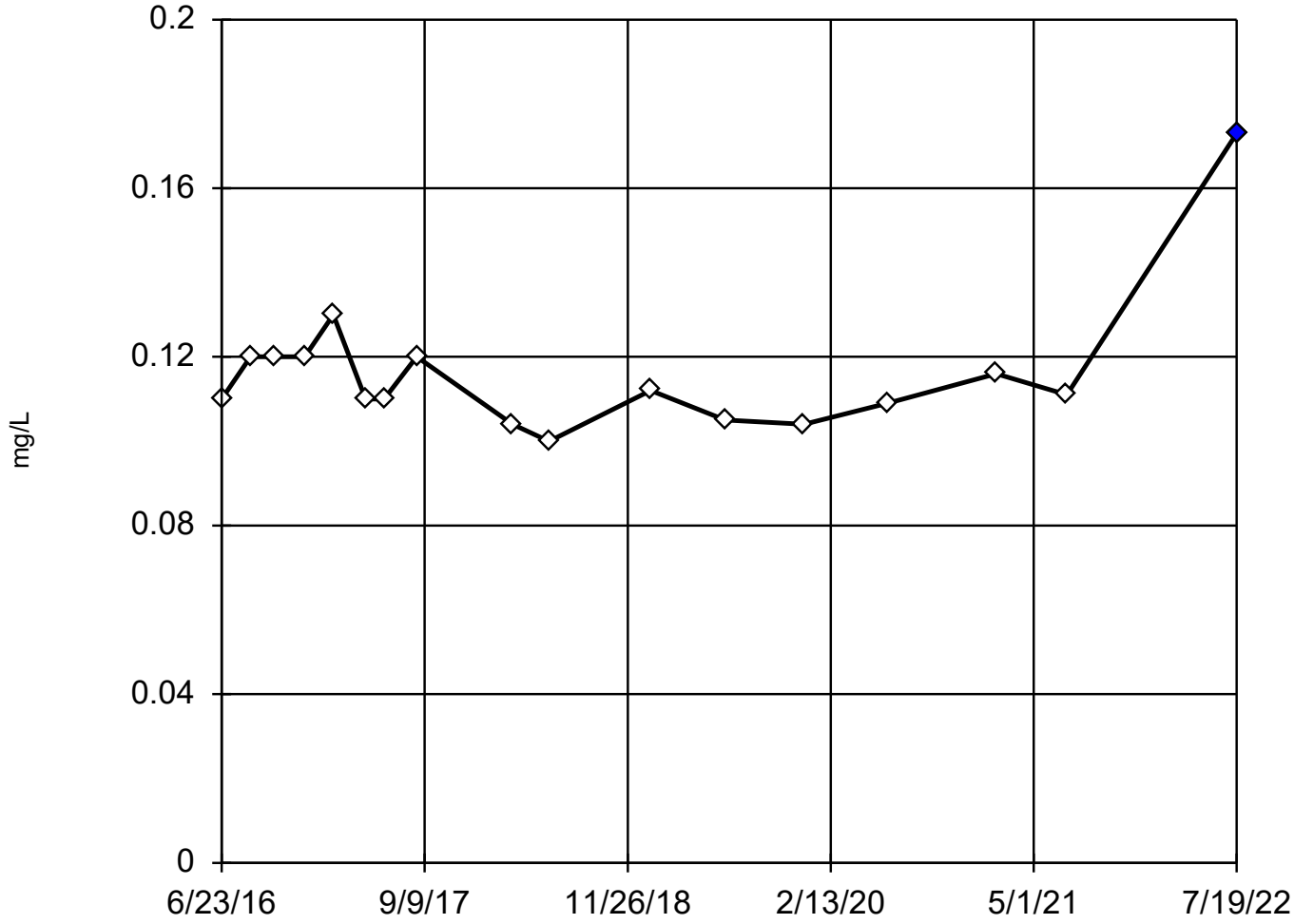
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9268
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 17

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.1161.
Std. Dev. = 0.01653.
0.173: c = 0.7681
tabl = 0.49.
Alpha = 0.05.

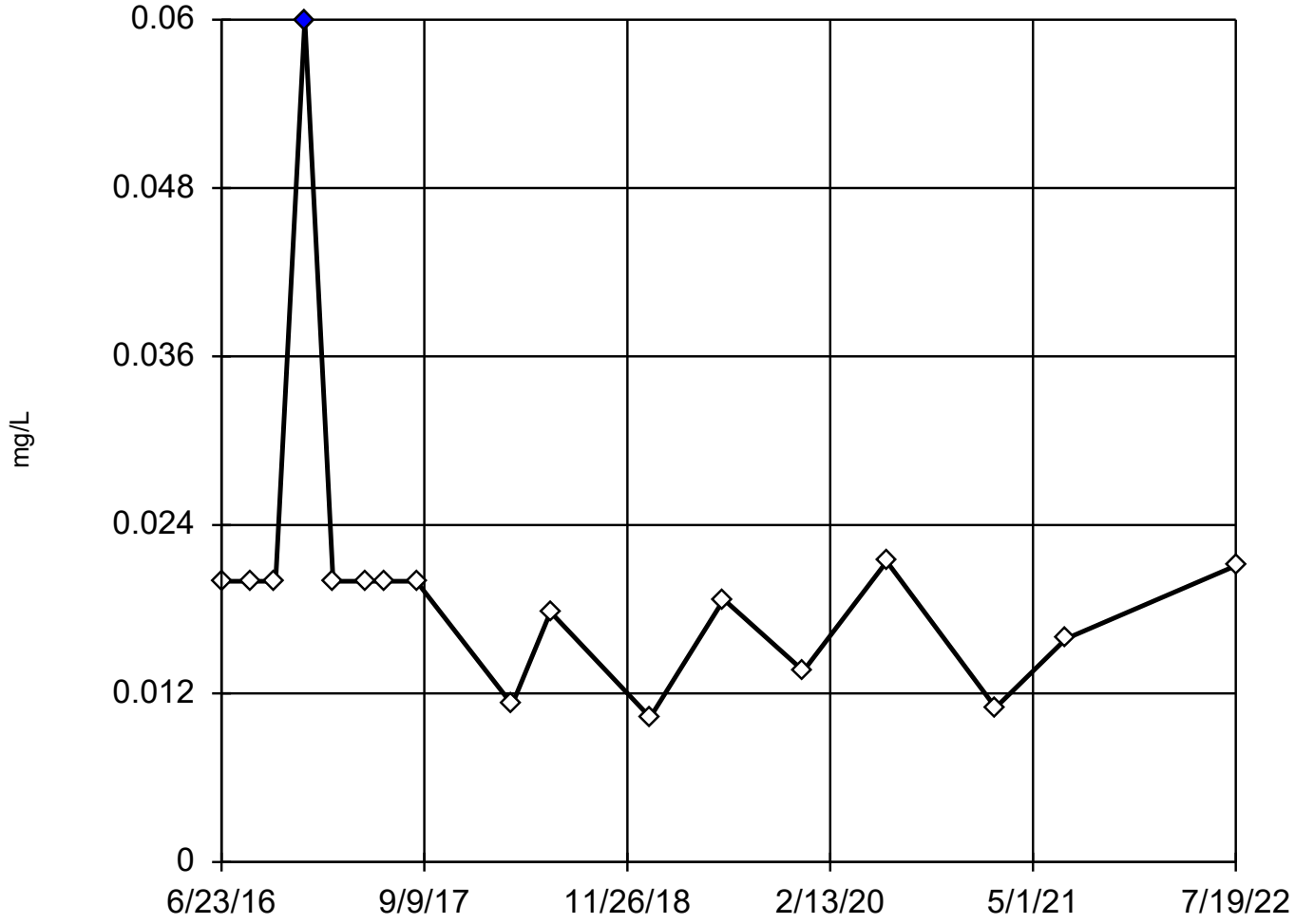
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9449
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Cobalt Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SFLMW-2



n = 17

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

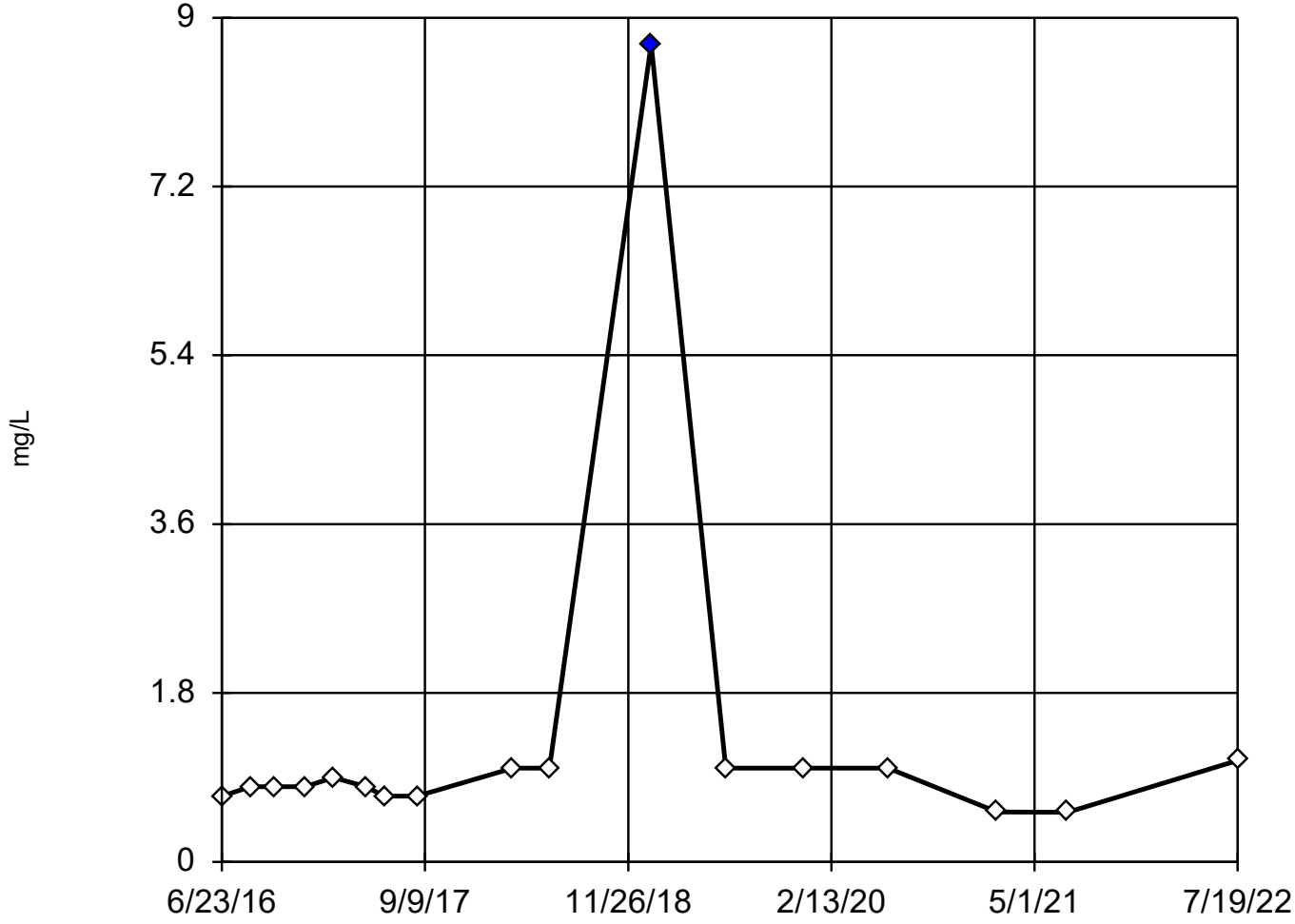
High cutoff = 0.05032, low cutoff = 0.005845, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.298.
Std. Dev. = 1.92.
8.72 (o): c = 0.9626
tabl = 0.49.
Alpha = 0.05.

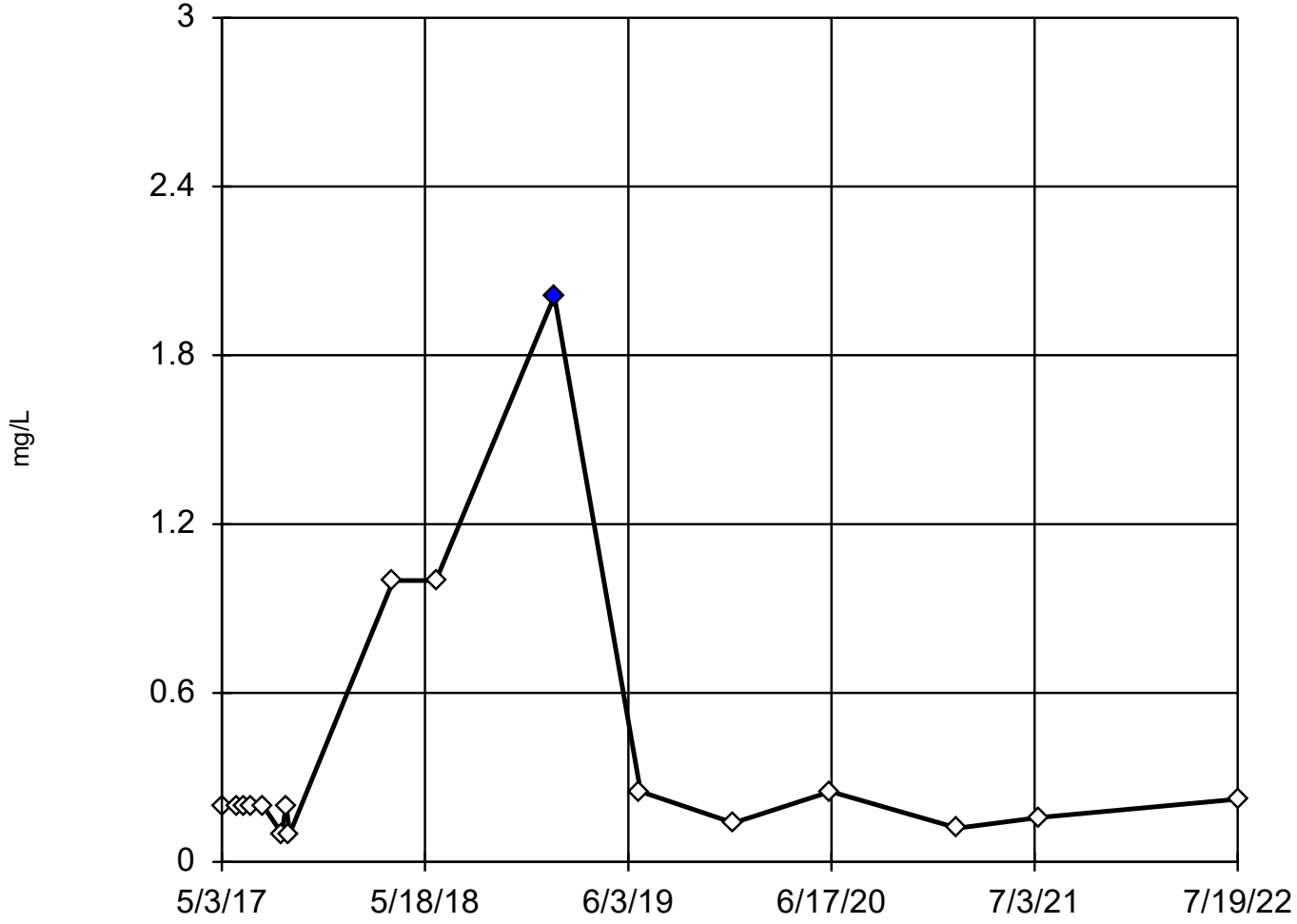
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9077
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Fluoride Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-18 (bg)



n = 17

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

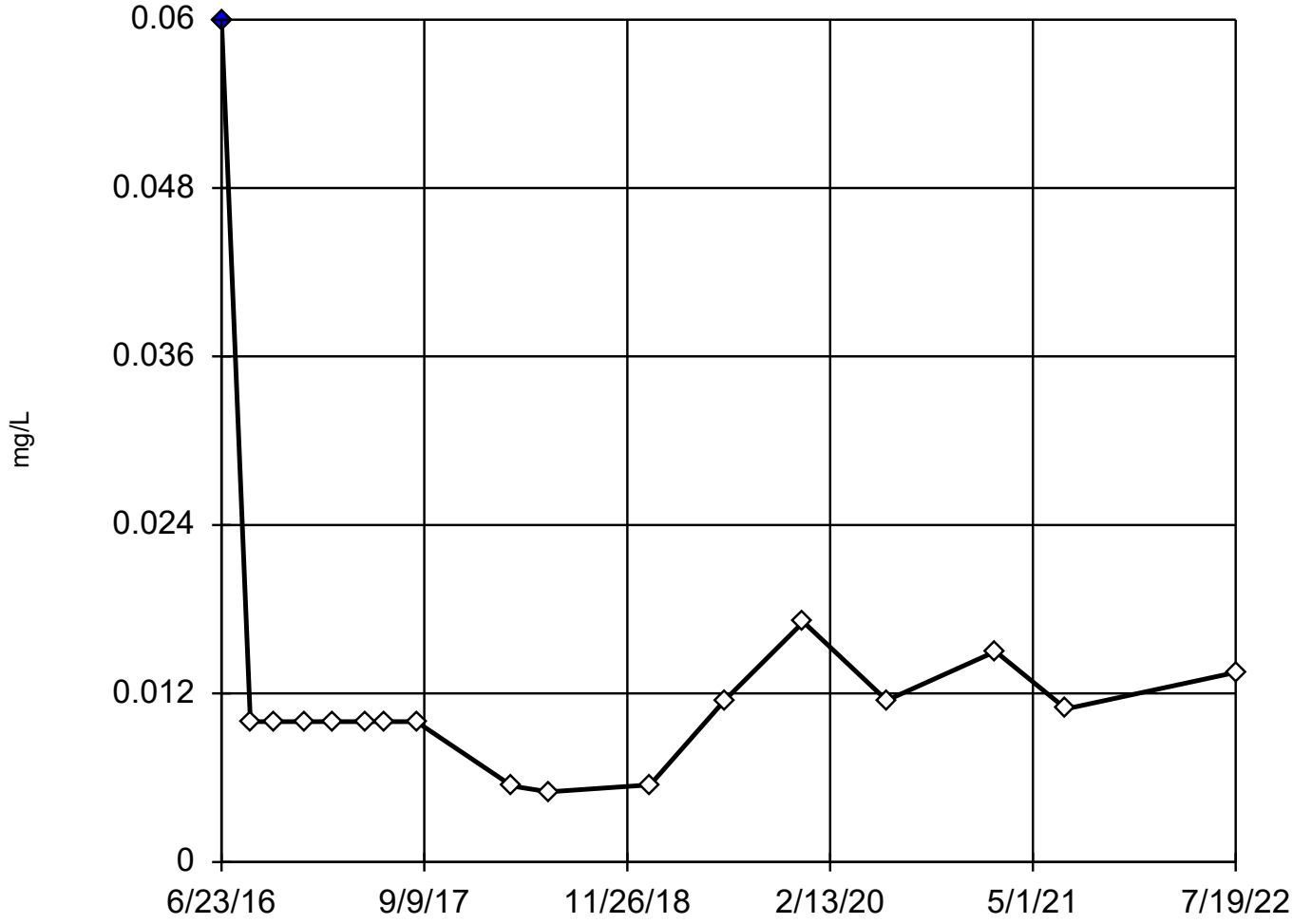
High cutoff = 1.213, low cutoff = 0.03043, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.01326.
Std. Dev. = 0.01245.
0.06 (o): c = 0.8255
tabl = 0.49.
Alpha = 0.05.

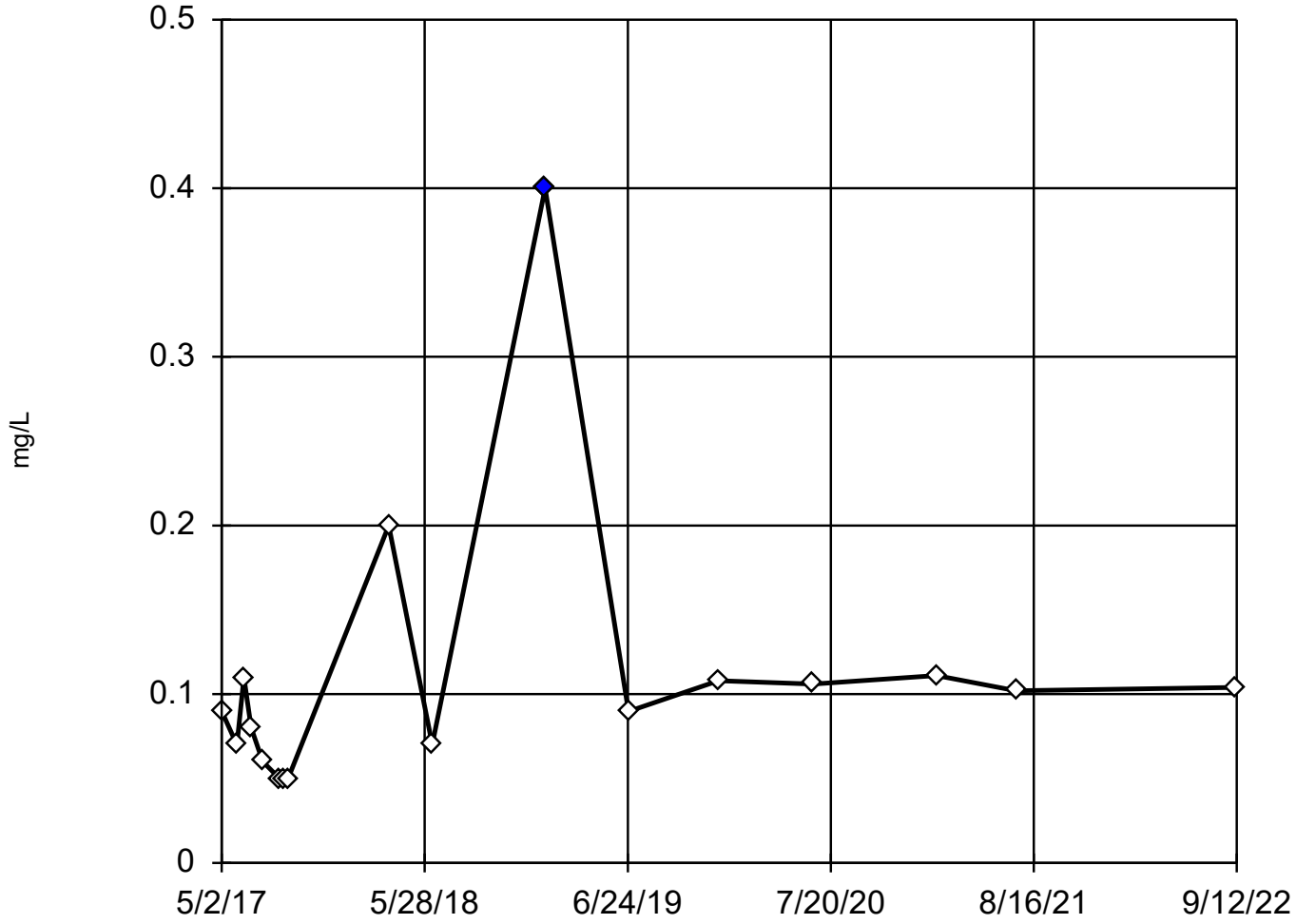
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8973
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lead Analysis Run 10/19/2022 2:28 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.1089.
Std. Dev. = 0.0831.
<0.4 (o): c = 0.6165
tabl = 0.49.
Alpha = 0.05.

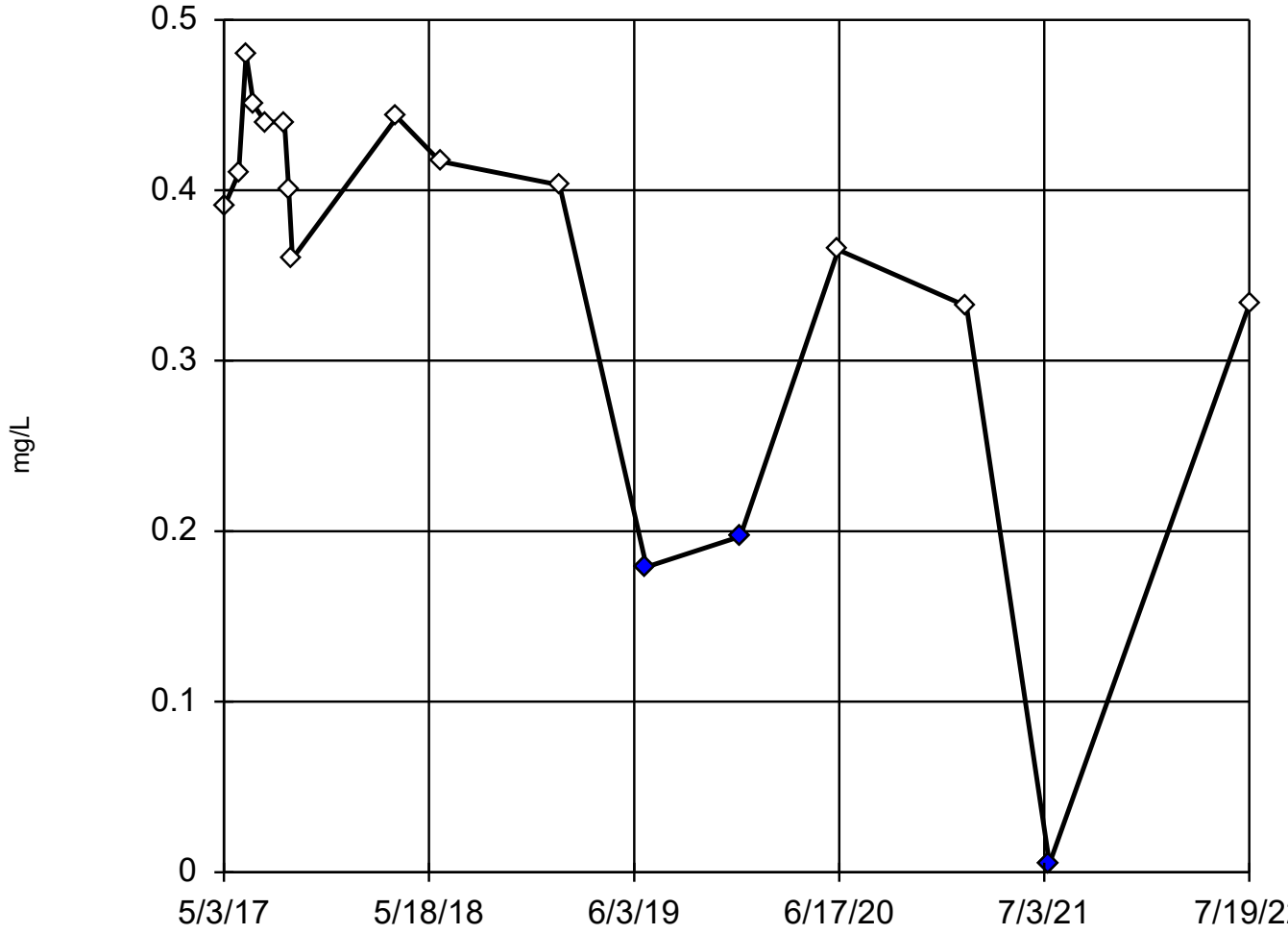
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.92
Critical = 0.887 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Lithium Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 17

Statistical outliers are drawn as solid.
3 values manually flagged as outliers.
Testing for 3 low outliers.
Mean = 0.3555.
Std. Dev. = 0.1222.
0.197 (o): c = 0.5528
tabl = 0.49.
Alpha = 0.05.

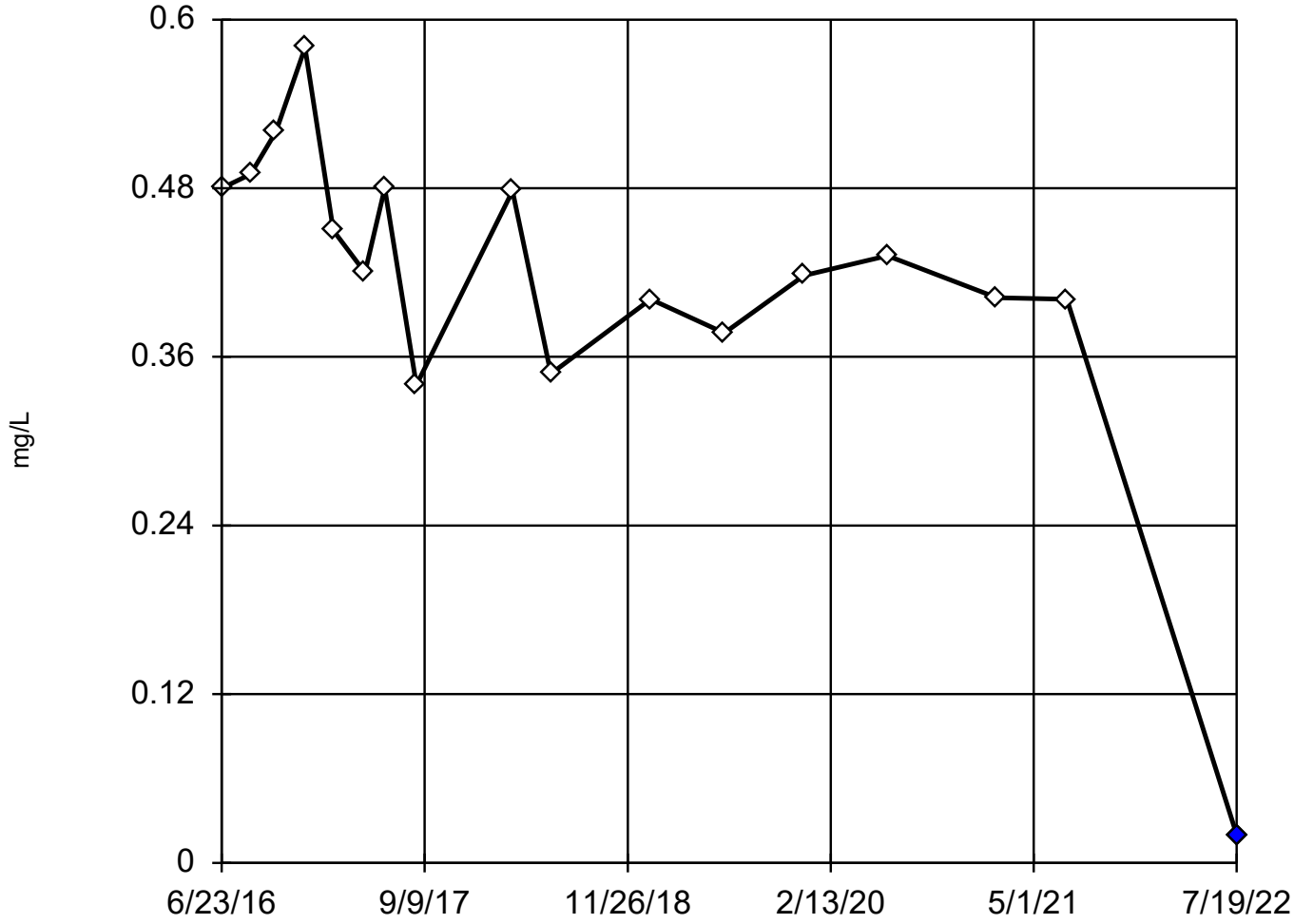
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9573
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 17

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.4139.
Std. Dev. = 0.1188.
0.02: c = 0.6979
tabl = 0.49.
Alpha = 0.05.

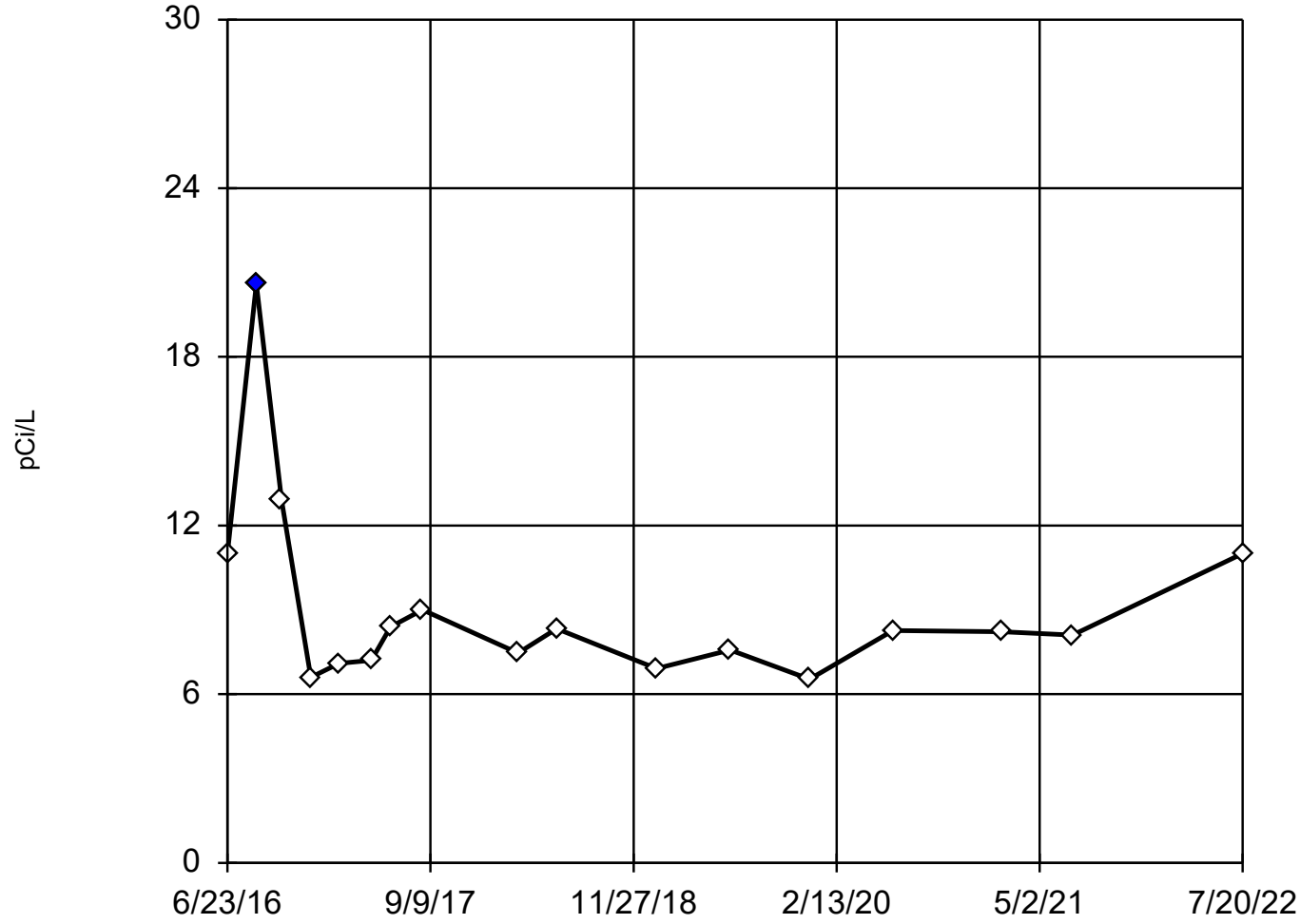
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9663
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 17

Statistical outlier is drawn as solid.
3 values manually flagged as outliers.
Testing for 1 high outlier.
Mean = 9.129.
Std. Dev. = 3.425.
20.6 (o): c = 0.5744
tabl = 0.49.
Alpha = 0.05.

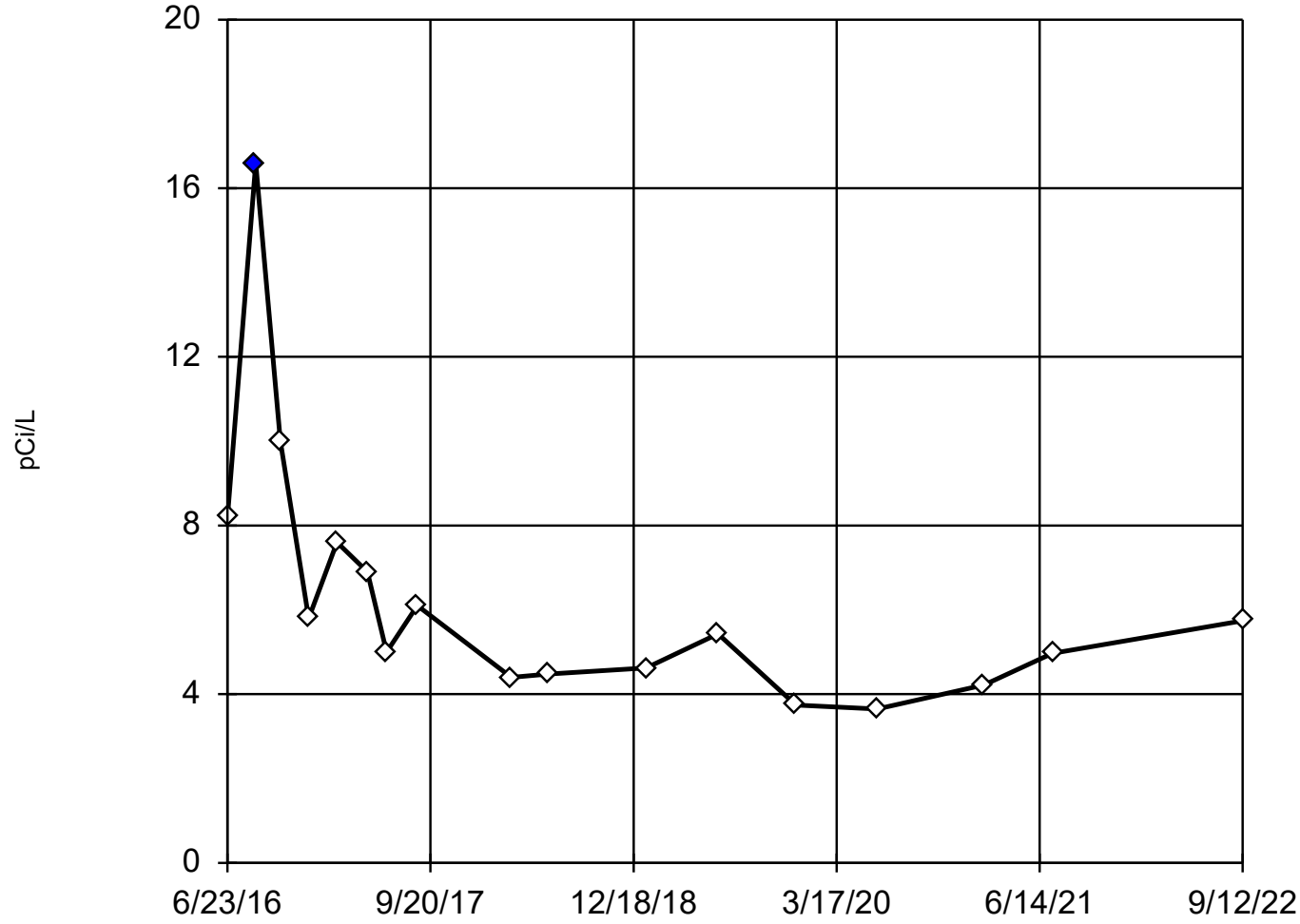
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8983
Critical = 0.887 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-3



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 6.32.
Std. Dev. = 3.141.
16.6 (o): c = 0.6793
tabl = 0.49.
Alpha = 0.05.

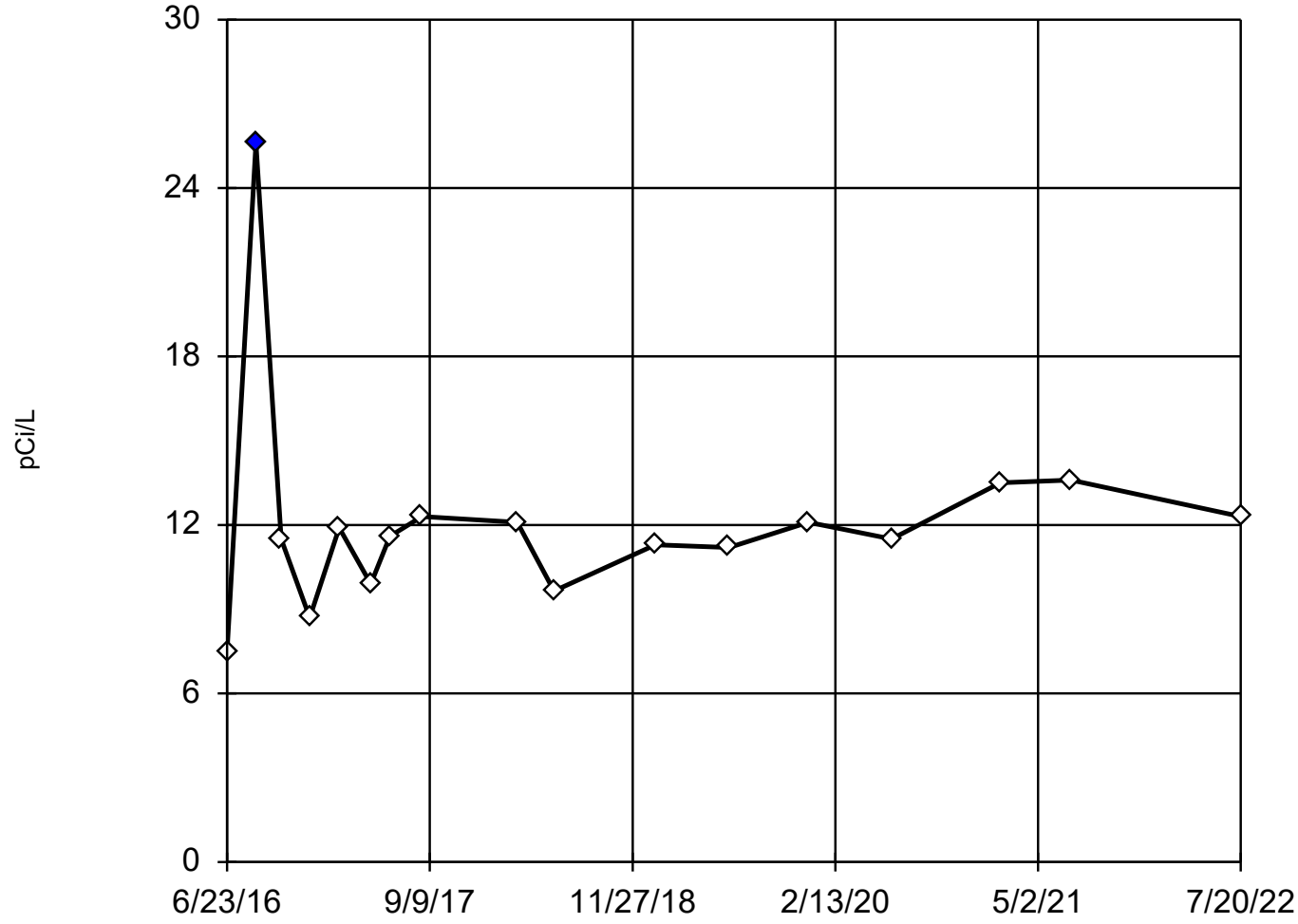
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9039
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 12.13.
Std. Dev. = 3.811.
25.6 (o): c = 0.7586
tabl = 0.49.
7.52: c = 0.3562
tabl = 0.49.
Alpha = 0.05.

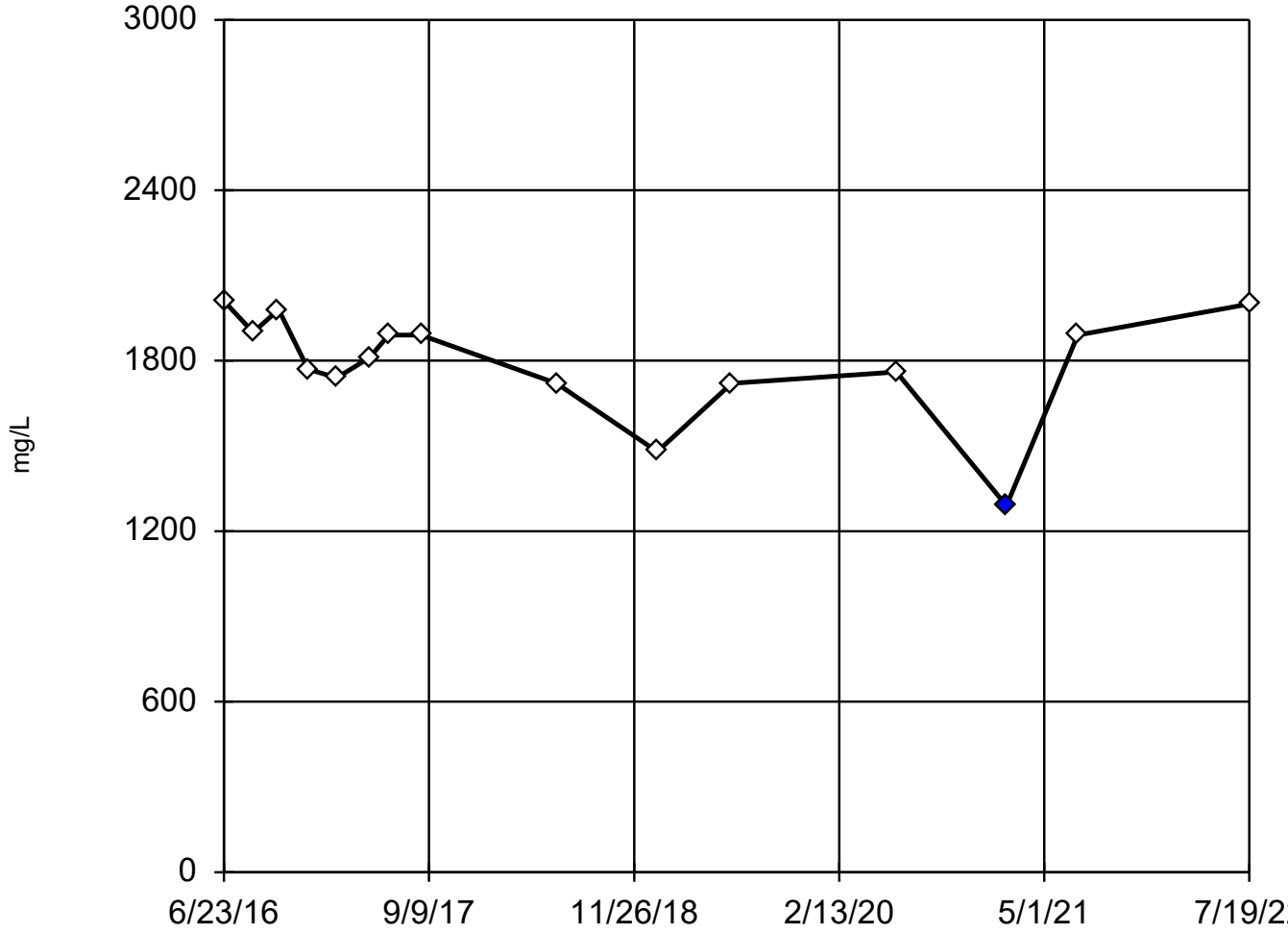
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9324
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-2



n = 15

Statistical outlier is drawn as solid.
2 values manually flagged as outliers.
Testing for 2 low outliers.
Mean = 1790.
Std. Dev. = 194.7.
1480 (o): c = 0.48
tabl = 0.525.
Alpha = 0.05.
1290 (o): c = 0.6232
tabl = 0.525.
Alpha = 0.05.

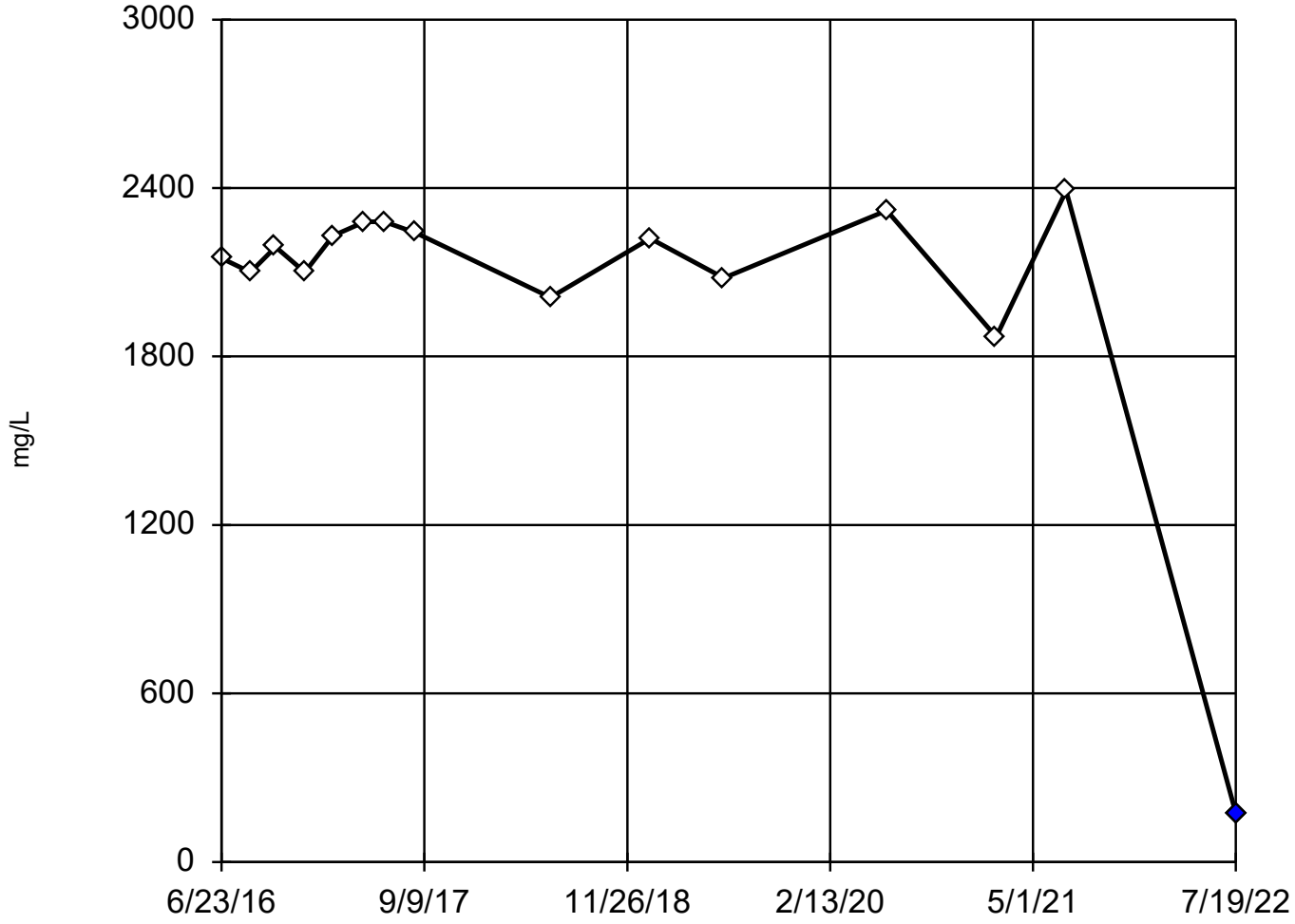
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.916
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 2042.
Std. Dev. = 533.2.
174: c = 0.8718
tabl = 0.525.
Alpha = 0.05.

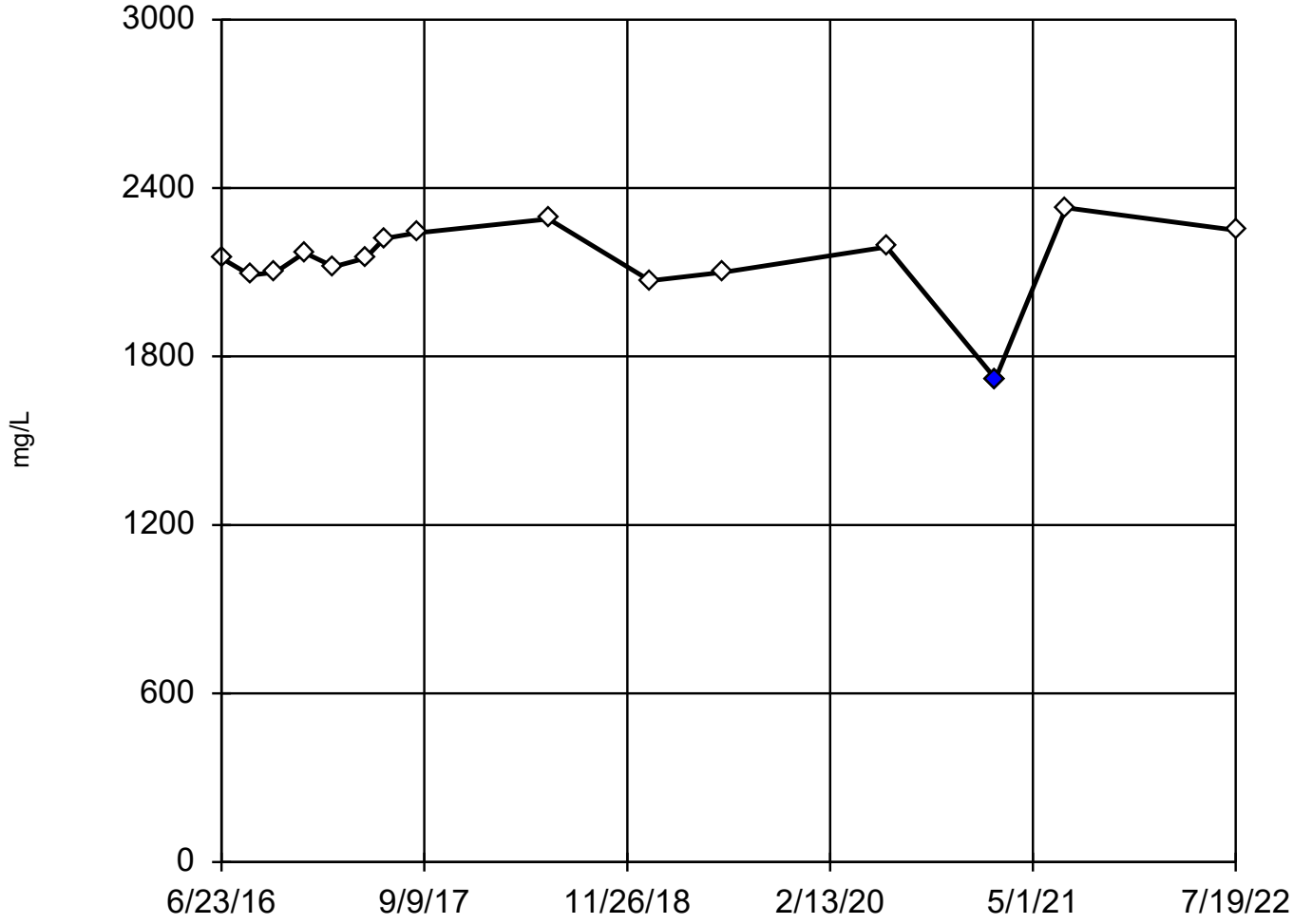
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.966
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 2146.
Std. Dev. = 140.8.
1720 (o): c = 0.6981
tabl = 0.525.
Alpha = 0.05.

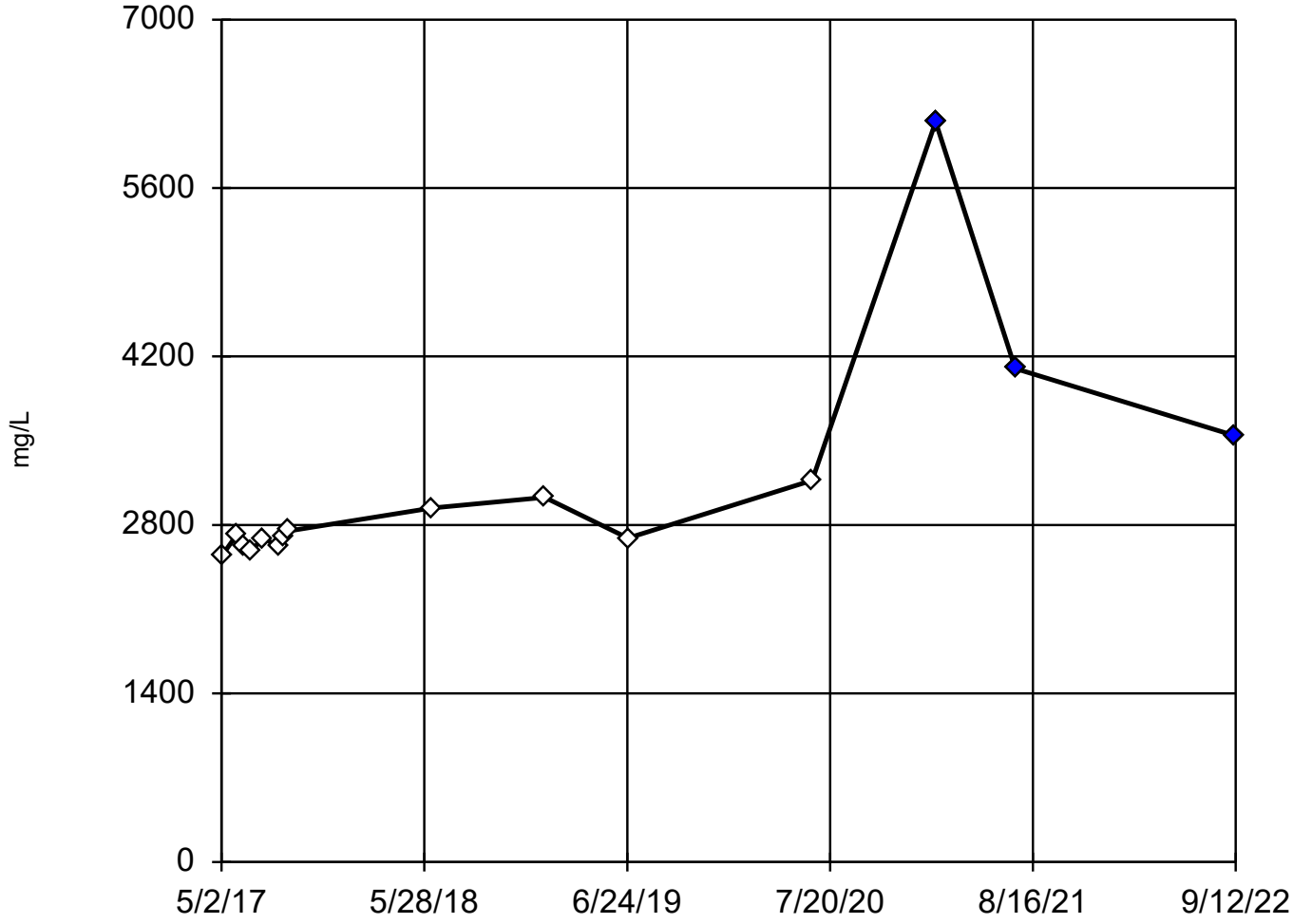
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9486
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 15

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 3 high outliers.
Mean = 3123.
Std. Dev. = 938.5.
3540: c = 0.5543
tabl = 0.525.
Alpha = 0.05.

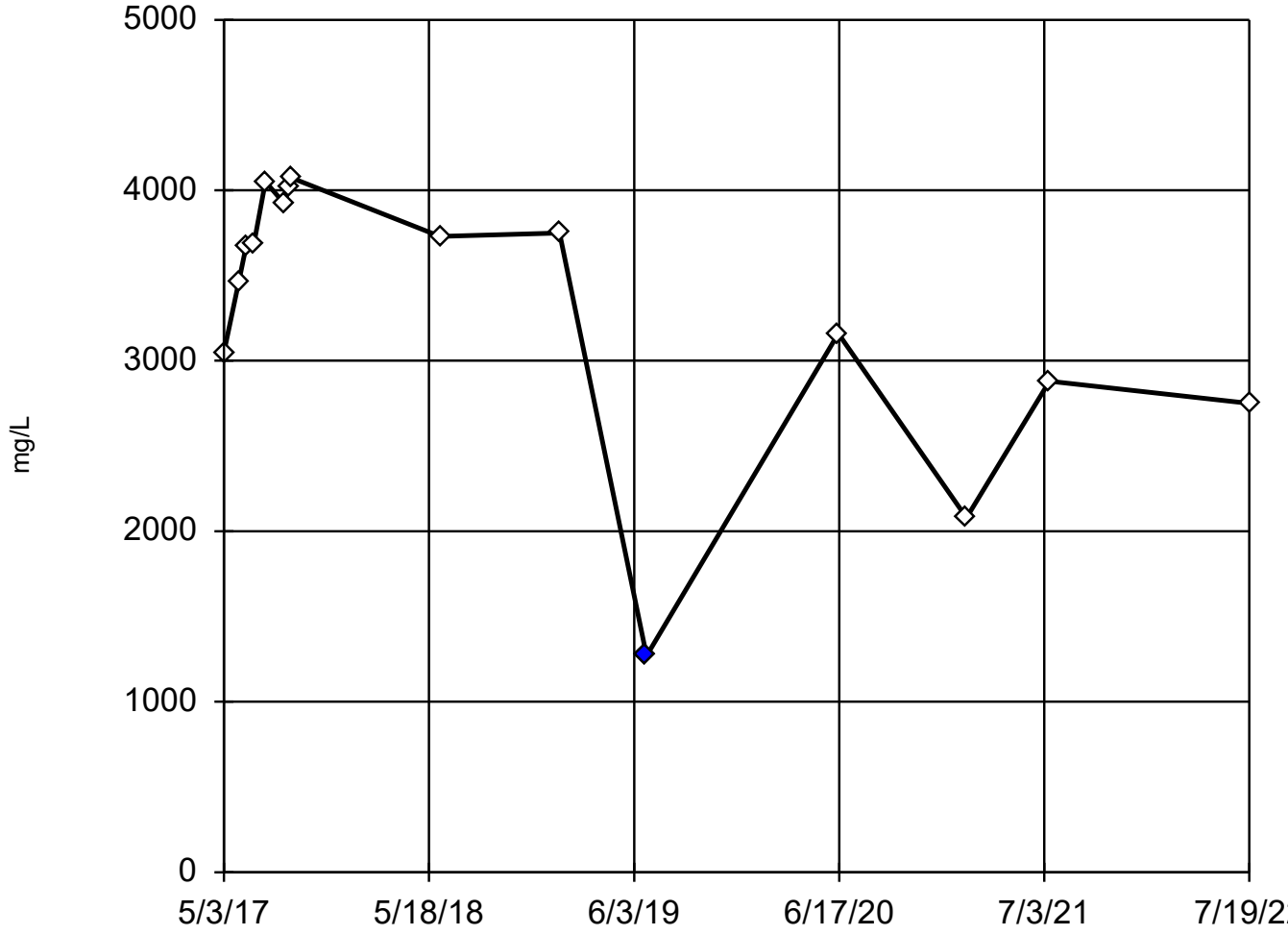
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8627
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-18 (bg)



n = 15

Statistical outlier is drawn as solid.
Testing for 2 low outliers.
Mean = 3303.
Std. Dev. = 798.3.
2080: c = 0.4124
tabl = 0.525.
Alpha = 0.05.
1270: c = 0.5382
tabl = 0.525.
Alpha = 0.05.

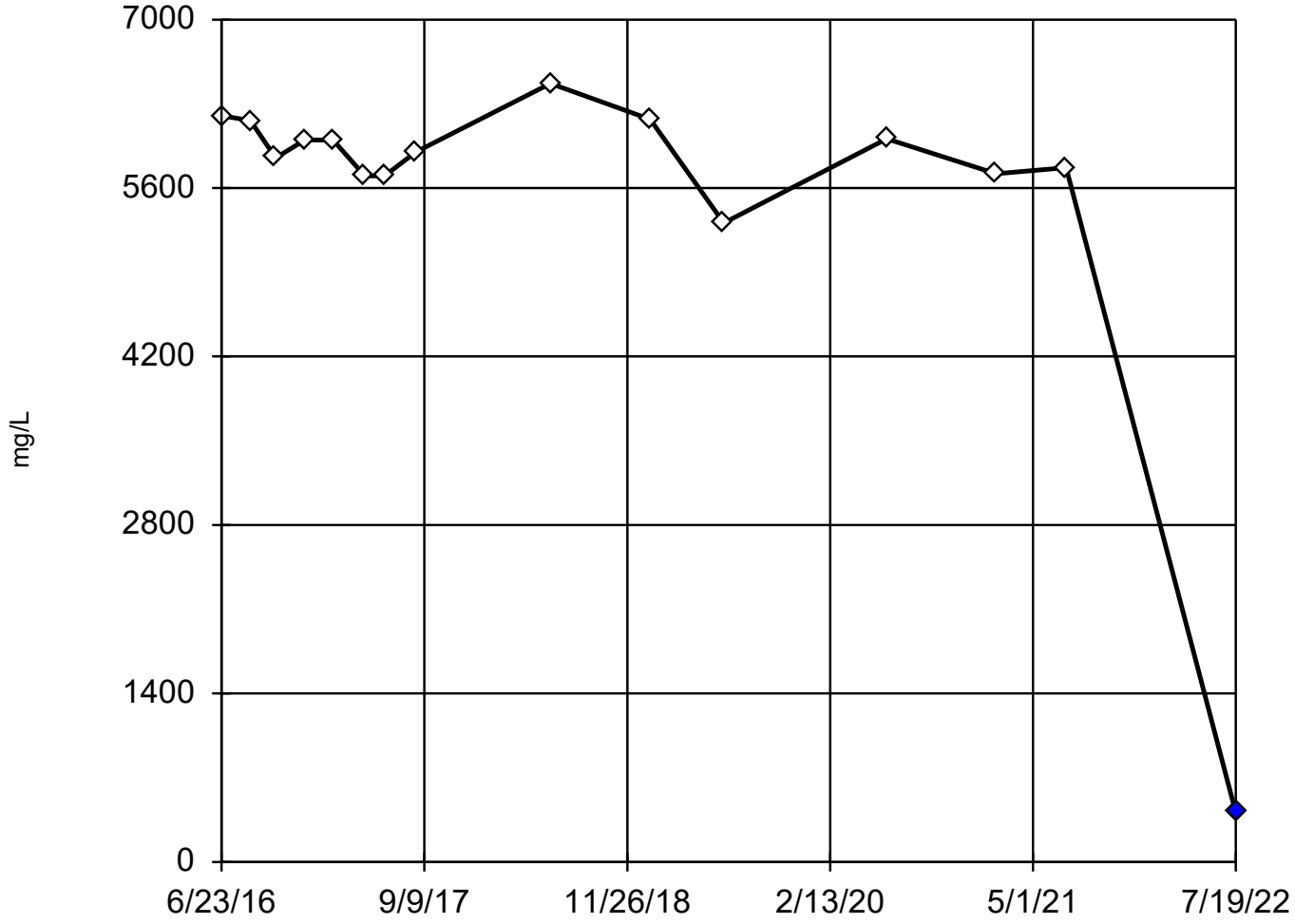
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8955
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 5558.
Std. Dev. = 1450.
411: c = 0.9184
tabl = 0.525.
Alpha = 0.05.

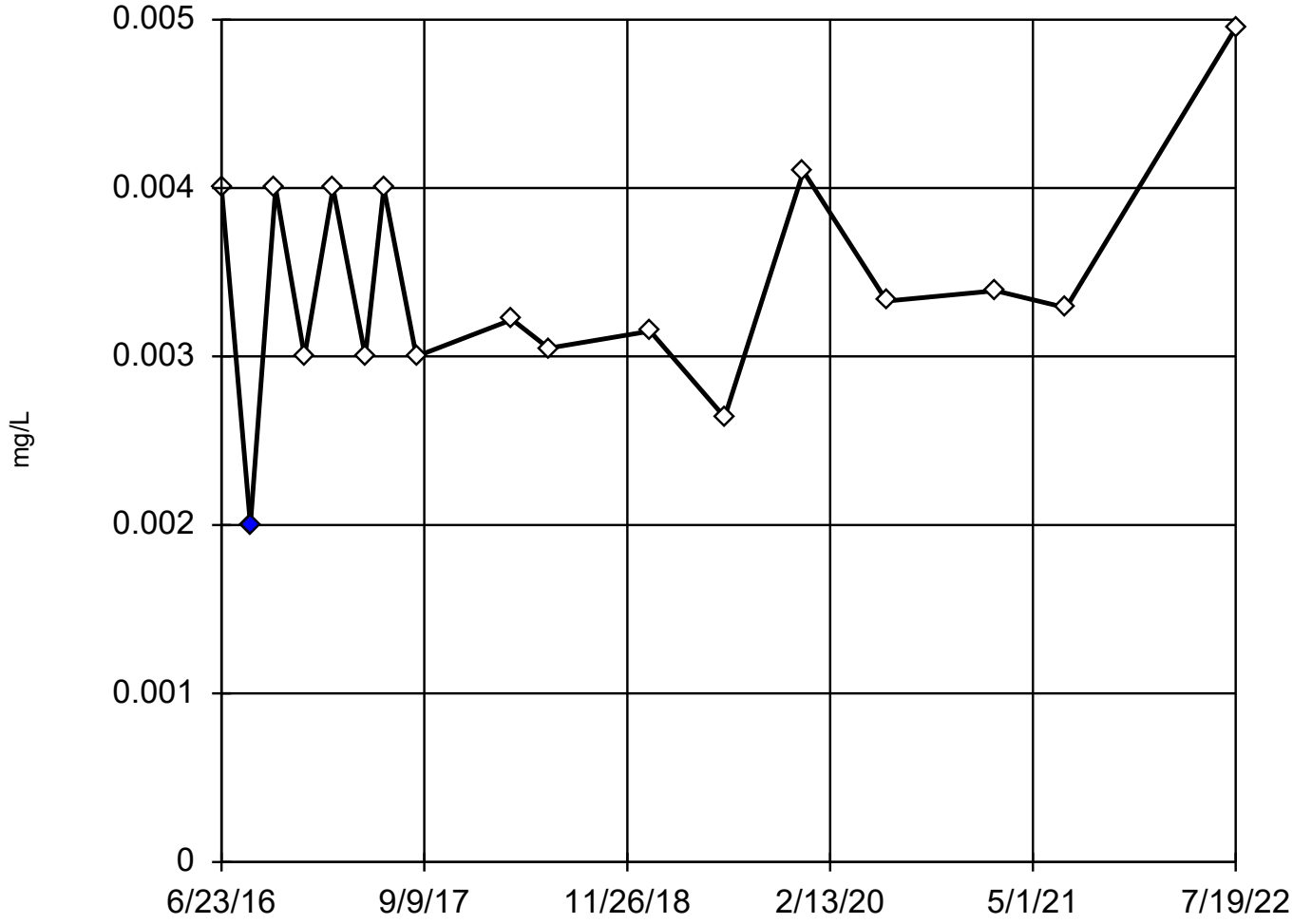
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9698
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.003419.
Std. Dev. = 0.0006882.
0.002 (o): c = 0.5
tabl = 0.49.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8975
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Thallium Analysis Run 10/19/2022 2:29 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:32 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Antimony (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002242	unknown	ShapiroWilk
Antimony (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002151	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.005393	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004449	unknown	ShapiroWilk
Arsenic (mg/L)	**MNW-15**	**Yes**	**0.025**	**3/20/2018**	**NP (nrm)**	**NaN**	**14**	**0.0...**	**0.004551**	**unknown**	**ShapiroWilk**
Arsenic (mg/L)	MNW-18 ...	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004012	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004075	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.005458	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004413	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.006207	unknown	ShapiroWilk
Barium (mg/L)	**SFLMW-6**	**Yes**	**0.2,0.3**	**3/20/2018,6/23/2016**	**Dixon`s**	**0.05**	**14**	**0.0...**	**0.07865**	**normal**	**ShapiroWilk**
Barium (mg/L)	**SFLMW-7**	**Yes**	**0.102,0.2**	**9/12/2022,3/20/2018**	**Dixon`s**	**0.05**	**14**	**0.0537**	**0.04594**	**normal**	**ShapiroWilk**
Barium (mg/L)	**MNW-15**	**Yes**	**0.2**	**3/20/2018**	**NP (nrm)**	**NaN**	**14**	**0.0...**	**0.0481**	**unknown**	**ShapiroWilk**
Barium (mg/L)	**MNW-18 ...**	**Yes**	**0.2,0.0142,0.01**	**3/20/2018,12/17/2...**	**NP (nrm)**	**NaN**	**14**	**0.0...**	**0.04398**	**unknown**	**ShapiroWilk**
Barium (mg/L)	**SFLMW-2**	**Yes**	**0.2**	**3/20/2018**	**NP (nrm)**	**NaN**	**14**	**0.0...**	**0.04701**	**unknown**	**ShapiroWilk**
Barium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	14	0.0...	0.04894	ln(x)	ShapiroWilk
Barium (mg/L)	**SFLMW-4**	**Yes**	**0.2**	**3/20/2018**	**Dixon`s**	**0.05**	**14**	**0.0...**	**0.04685**	**normal**	**ShapiroWilk**
Barium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.04894	unknown	ShapiroWilk
Beryllium (mg/L)	**SFLMW-6**	**Yes**	**0.028**	**6/23/2016**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.007964**	**normal**	**ShapiroWilk**
Beryllium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001115	unknown	ShapiroWilk
Beryllium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.009389	normal	ShapiroWilk
Beryllium (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001192	unknown	ShapiroWilk
Beryllium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.002339	ln(x)	ShapiroWilk
Beryllium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.003742	normal	ShapiroWilk
Beryllium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001115	unknown	ShapiroWilk
Beryllium (mg/L)	**SFLMW-5**	**Yes**	**0.02**	**3/20/2018**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.002578**	**normal**	**ShapiroWilk**
Boron (mg/L)	**SFLMW-6**	**Yes**	**1,2**	**6/8/2018,1/16/2019**	**Dixon`s**	**0.05**	**15**	**0.4969**	**0.4559**	**normal**	**ShapiroWilk**
Boron (mg/L)	**SFLMW-7**	**Yes**	**2**	**1/16/2019**	**Dixon`s**	**0.05**	**15**	**0.8793**	**0.3243**	**normal**	**ShapiroWilk**
Boron (mg/L)	**MNW-15**	**Yes**	**11.8,12.8**	**6/12/2018,9/12/2022**	**Dixon`s**	**0.05**	**15**	**9.496**	**1.235**	**normal**	**ShapiroWilk**
Boron (mg/L)	**MNW-18 ...**	**Yes**	**1,2,0.0451**	**6/8/2018,1/16/201...**	**Dixon`s**	**0.05**	**15**	**0.5391**	**0.4484**	**normal**	**ShapiroWilk**
Boron (mg/L)	**SFLMW-2**	**Yes**	**0.945,2,1**	**7/19/2022,1/16/20...**	**Dixon`s**	**0.05**	**15**	**0.6917**	**0.3944**	**normal**	**ShapiroWilk**
Boron (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	3.212	0.743	ln(x)	ShapiroWilk
Boron (mg/L)	**SFLMW-4**	**Yes**	**1,2**	**6/12/2018,1/16/2019**	**Dixon`s**	**0.05**	**15**	**0.7545**	**0.3636**	**normal**	**ShapiroWilk**
Boron (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	15	4.143	0.8534	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-6	No	n/a	n/a	Dixon`s	0.05	17	0.0...	0.001447	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002091	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.02921	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002029	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001563	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.001235	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002029	unknown	ShapiroWilk
Cadmium (mg/L)	**SFLMW-5**	**Yes**	**0.006,0.00385,0.0...**	**8/23/2017,2/9/202...**	**NP (nrm)**	**NaN**	**17**	**0.0...**	**0.0004759**	**unknown**	**ShapiroWilk**
Calcium (mg/L)	**SFLMW-6**	**Yes**	**1400**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**942.7**	**137.8**	**normal**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	15	588.5	96.58	unknown	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:32 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Calcium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	15	278.6	30.11	unknown	ShapiroWilk
Calcium (mg/L)	MNW-18 ...	No	n/a	n/a	NP (nrm)	NaN	15	325.4	125.9	unknown	ShapiroWilk
Calcium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	15	814.8	127.7	unknown	ShapiroWilk
Calcium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	629.9	60.12	normal	ShapiroWilk
Calcium (mg/L)	**SFLMW-4**	**Yes**	**48.9**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**711.9**	**189.7**	**normal**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	15	851.4	59.92	normal	ShapiroWilk
Chloride (mg/L)	**SFLMW-6**	**Yes**	**4810**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**3601**	**368.3**	**normal**	**ShapiroWilk**
Chloride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	15	2603	351.2	unknown	ShapiroWilk
Chloride (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	15	674.9	56.15	unknown	ShapiroWilk
Chloride (mg/L)	MNW-18 ...	No	n/a	n/a	NP (nrm)	NaN	15	470.2	112.5	unknown	ShapiroWilk
Chloride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	15	2817	332.5	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	1247	249.6	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	15	1557	435.2	unknown	ShapiroWilk
Chloride (mg/L)	**SFLMW-5**	**Yes**	**2340**	**2/9/2021**	**Dixon`s**	**0.05**	**15**	**2987**	**206**	**normal**	**ShapiroWilk**
Chromium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002583	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003926	unknown	ShapiroWilk
Chromium (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.01405	unknown	ShapiroWilk
Chromium (mg/L)	MNW-18 ...	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003636	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003926	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.00389	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003785	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003381	unknown	ShapiroWilk
Cobalt (mg/L)	**SFLMW-6**	**Yes**	**0.173**	**7/19/2022**	**Dixon`s**	**0.05**	**17**	**0.1161**	**0.01653**	**normal**	**ShapiroWilk**
Cobalt (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.009502	unknown	ShapiroWilk
Cobalt (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	17	0.3015	0.0319	normal	ShapiroWilk
Cobalt (mg/L)	MNW-18 ...	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.009339	unknown	ShapiroWilk
Cobalt (mg/L)	**SFLMW-2**	**Yes**	**0.06**	**12/22/2016**	**NP (nrm)**	**NaN**	**17**	**0.0...**	**0.01095**	**unknown**	**ShapiroWilk**
Cobalt (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.01068	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0115	0.01175	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.006863	ln(x)	ShapiroWilk
Fluoride (mg/L)	**SFLMW-6**	**Yes**	**8.72**	**1/16/2019**	**Dixon`s**	**0.05**	**17**	**1.298**	**1.92**	**normal**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	17	0.4806	0.6523	unknown	ShapiroWilk
Fluoride (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	17	0.6869	0.2248	unknown	ShapiroWilk
Fluoride (mg/L)	**MNW-18 ...**	**Yes**	**2.01**	**1/16/2019**	**NP (nrm)**	**NaN**	**17**	**0.3852**	**0.5006**	**unknown**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	17	0.6559	0.7073	ln(x)	ShapiroWilk
Fluoride (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.7141	0.2696	ln(x)	ShapiroWilk
Fluoride (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.464	0.462	unknown	ShapiroWilk
Fluoride (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	17	0.8208	1.362	unknown	ShapiroWilk
Lead (mg/L)	**SFLMW-6**	**Yes**	**0.06**	**6/23/2016**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.01245**	**normal**	**ShapiroWilk**
Lead (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.00441	unknown	ShapiroWilk
Lead (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004279	unknown	ShapiroWilk
Lead (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004355	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004324	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.005515	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004294	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004208	unknown	ShapiroWilk
Lithium (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	17	0.7035	0.1124	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	17	0.4219	0.03855	normal	ShapiroWilk
Lithium (mg/L)	**MNW-15**	**Yes**	**0.4**	**1/16/2019**	**Dixon`s**	**0.05**	**17**	**0.1089**	**0.0831**	**ln(x)**	**ShapiroWilk**
Lithium (mg/L)	**MNW-18 ...**	**Yes**	**0.197,0.005,0.179**	**12/17/2019,7/13/2...**	**Dixon`s**	**0.05**	**17**	**0.3555**	**0.1222**	**normal**	**ShapiroWilk**

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:32 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Lithium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	17	0.481	0.0734	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.3378	0.06879	normal	ShapiroWilk
Lithium (mg/L)	**SFLMW-4**	**Yes**	**0.02**	**7/19/2022**	**Dixon`s**	**0.05**	**17**	**0.4139**	**0.1188**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	17	0.7224	0.1162	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002778	unknown	ShapiroWilk
Mercury (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.0007059	normal	ShapiroWilk
Mercury (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02272	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02302	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02272	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02272	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02299	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02272	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02362	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02301	unknown	ShapiroWilk
pH (S.U.)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	3.999	0.1641	normal	ShapiroWilk
pH (S.U.)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	15	6.389	0.2319	normal	ShapiroWilk
pH (S.U.)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	3.539	0.1506	normal	ShapiroWilk
pH (S.U.)	MNW-18 ...	No	n/a	n/a	EPA 1989	0.05	16	6.792	0.254	normal	ShapiroWilk
pH (S.U.)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	6.251	0.3868	normal	ShapiroWilk
pH (S.U.)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	3.74	0.128	normal	ShapiroWilk
pH (S.U.)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	16	6.204	0.2011	normal	ShapiroWilk
pH (S.U.)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	4.586	0.2571	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	17	13.2	6.723	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	17	2.429	0.6916	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	17	0.804	0.5985	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-18 ...	No	n/a	n/a	Dixon`s	0.05	17	4.499	1.92	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-2**	**Yes**	**20.6**	**8/25/2016**	**Dixon`s**	**0.05**	**17**	**9.129**	**3.425**	**ln(x)**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	**SFLMW-3**	**Yes**	**16.6**	**8/25/2016**	**Dixon`s**	**0.05**	**17**	**6.32**	**3.141**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	17	2.492	1.801	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**Yes**	**25.6**	**8/25/2016**	**Dixon`s**	**0.05**	**17**	**12.13**	**3.811**	**normal**	**ShapiroWilk**
Selenium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.01576	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004009	unknown	ShapiroWilk
Selenium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	14	0.0...	0.02815	ln(x)	ShapiroWilk
Selenium (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002486	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002486	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.01363	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002486	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.01134	unknown	ShapiroWilk
Sulfate (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	15	2294	225.5	normal	ShapiroWilk
Sulfate (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	15	728.2	89	unknown	ShapiroWilk
Sulfate (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	15	1295	84	normal	ShapiroWilk
Sulfate (mg/L)	MNW-18 ...	No	n/a	n/a	Dixon`s	0.05	15	1675	451.9	normal	ShapiroWilk
Sulfate (mg/L)	**SFLMW-2**	**Yes**	**1290**	**2/9/2021**	**Dixon`s**	**0.05**	**15**	**1790**	**194.7**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	2275	110.7	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:32 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Sulfate (mg/L)	**SFLMW-4**	**Yes**	**174**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**2042**	**533.2**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**SFLMW-5**	**Yes**	**1720**	**2/9/2021**	**Dixon`s**	**0.05**	**15**	**2146**	**140.8**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	15	8638	1402	normal	ShapiroWilk
TDS (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	15	6027	1025	unknown	ShapiroWilk
TDS (mg/L)	**MNW-15**	**Yes**	**3540,6150,4100**	**9/12/2022,2/9/202...**	**Dixon`s**	**0.05**	**15**	**3123**	**938.5**	**normal**	**ShapiroWilk**
TDS (mg/L)	**MNW-18 ...**	**Yes**	**1270**	**6/26/2019**	**Dixon`s**	**0.05**	**15**	**3303**	**798.3**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	15	7063	740.4	normal	ShapiroWilk
TDS (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	5212	385.2	normal	ShapiroWilk
TDS (mg/L)	**SFLMW-4**	**Yes**	**411**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**5558**	**1450**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	15	7637	376.4	normal	ShapiroWilk
Thallium (mg/L)	**SFLMW-6**	**Yes**	**0.002**	**8/25/2016**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.0006882**	**normal**	**ShapiroWilk**
Thallium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004926	unknown	ShapiroWilk
Thallium (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0005925	unknown	ShapiroWilk
Thallium (mg/L)	MNW-18 ...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004926	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0005605	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.000582	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001166	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0003836	unknown	ShapiroWilk

Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:35 PM

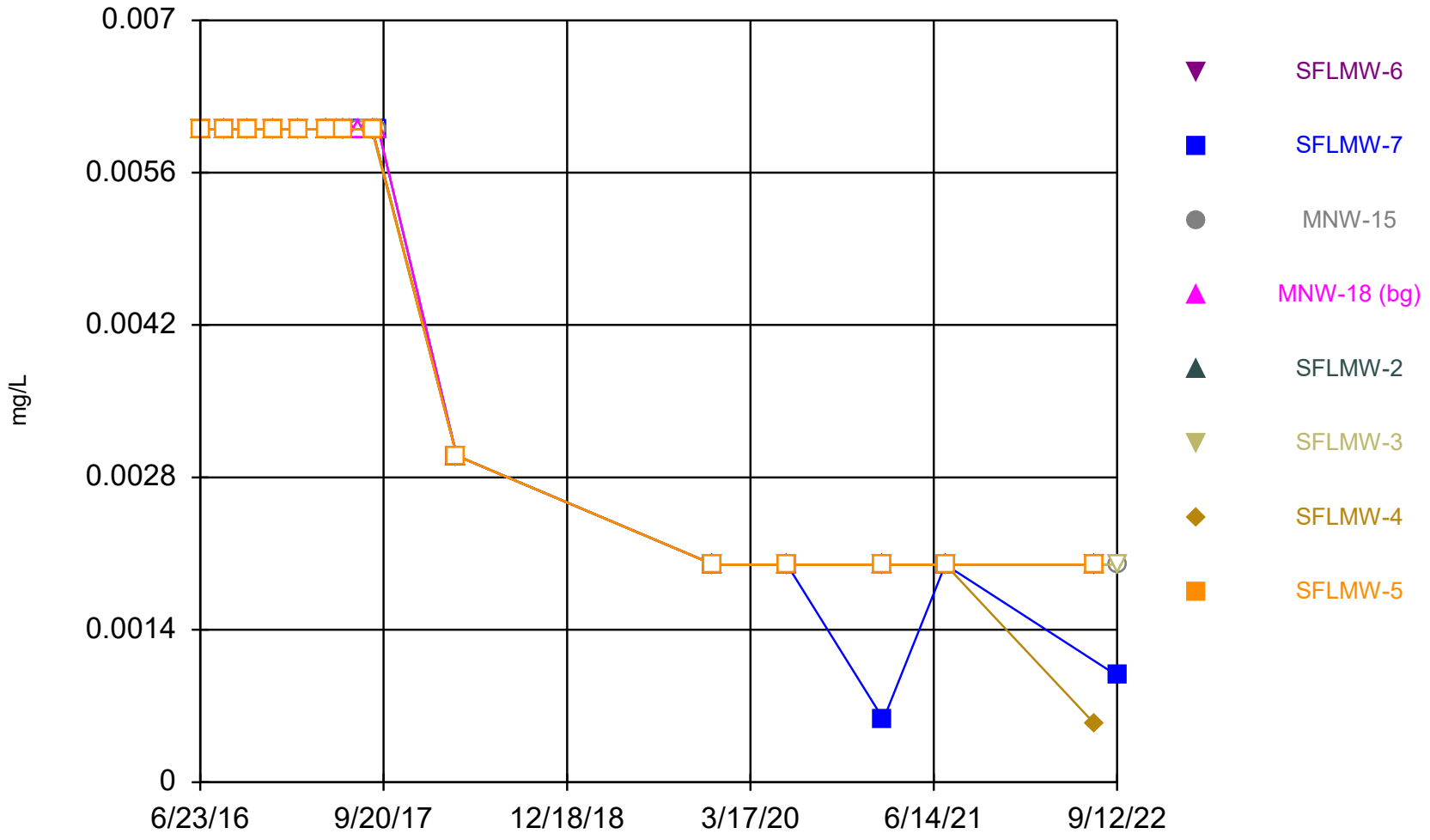
	MNW-15 Arsenic (mg/L)	SFLMW-6 Barium (mg/L)	SFLMW-7 Barium (mg/L)	MNW-15 Barium (mg/L)	MNW-18 Barium (mg/L)	SFLMW-2 Barium (mg/L)	SFLMW-4 Barium (mg/L)	SFLMW-6 Beryllium (mg/L)	SFLMW-5 Beryllium (mg/L)	SFLMW-6 Boron (mg/L)
6/23/2016		0.3 (o)						0.028 (o)		
8/25/2016										
12/22/2016										
3/20/2018	<0.025 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)		<0.02 (o)	
6/8/2018										<1 (o)
6/12/2018										
1/16/2019										<2 (o)
6/26/2019										
12/17/2019										
2/9/2021										
7/13/2021										

	SFLMW-7 Boron (mg/L)	MNW-18 Boron (mg/L)	SFLMW-2 Boron (mg/L)	SFLMW-4 Boron (mg/L)	MNW-18 Calcium (mg/L)	SFLMW-5 Chloride (mg/L)	SFLMW-2 Cobalt (mg/L)	SFLMW-6 Fluoride (mg/L)	MNW-18 Fluoride (mg/L)	SFLMW-6 Lead (mg/L)
6/23/2016										0.06 (o)
8/25/2016										
12/22/2016							0.06 (o)			
3/20/2018										
6/8/2018		<1 (o)								
6/12/2018			<1 (o)	<1 (o)						
1/16/2019	<2 (o)	<2 (o)	<2 (o)	<2 (o)				8.72 (o)	2.01 (o)	
6/26/2019					104 (o)					
12/17/2019										
2/9/2021						2340 (o)				
7/13/2021										

	MNW-15 Lithium (mg/L)	MNW-18 Lithium (mg/L)	SFLMW-2 Radium 226 + 228 (pCi/L)	SFLMW-3 Radium 226 + 228 (pCi/L)	SFLMW-5 Radium 226 + 228 (pCi/L)	SFLMW-2 Sulfate (mg/L)	SFLMW-5 Sulfate (mg/L)	MNW-15 TDS (mg/L)	SFLMW-6 Thallium (mg/L)
6/23/2016									
8/25/2016			20.6 (o)	16.6 (o)	25.6 (o)				0.002 (o)
12/22/2016									
3/20/2018									
6/8/2018									
6/12/2018									
1/16/2019	<0.4 (o)					1480 (o)			
6/26/2019		0.179 (o)							
12/17/2019		0.197 (o)							
2/9/2021						1290 (o)	1720 (o)	6150 (o)	
7/13/2021		<0.005 (o)							

Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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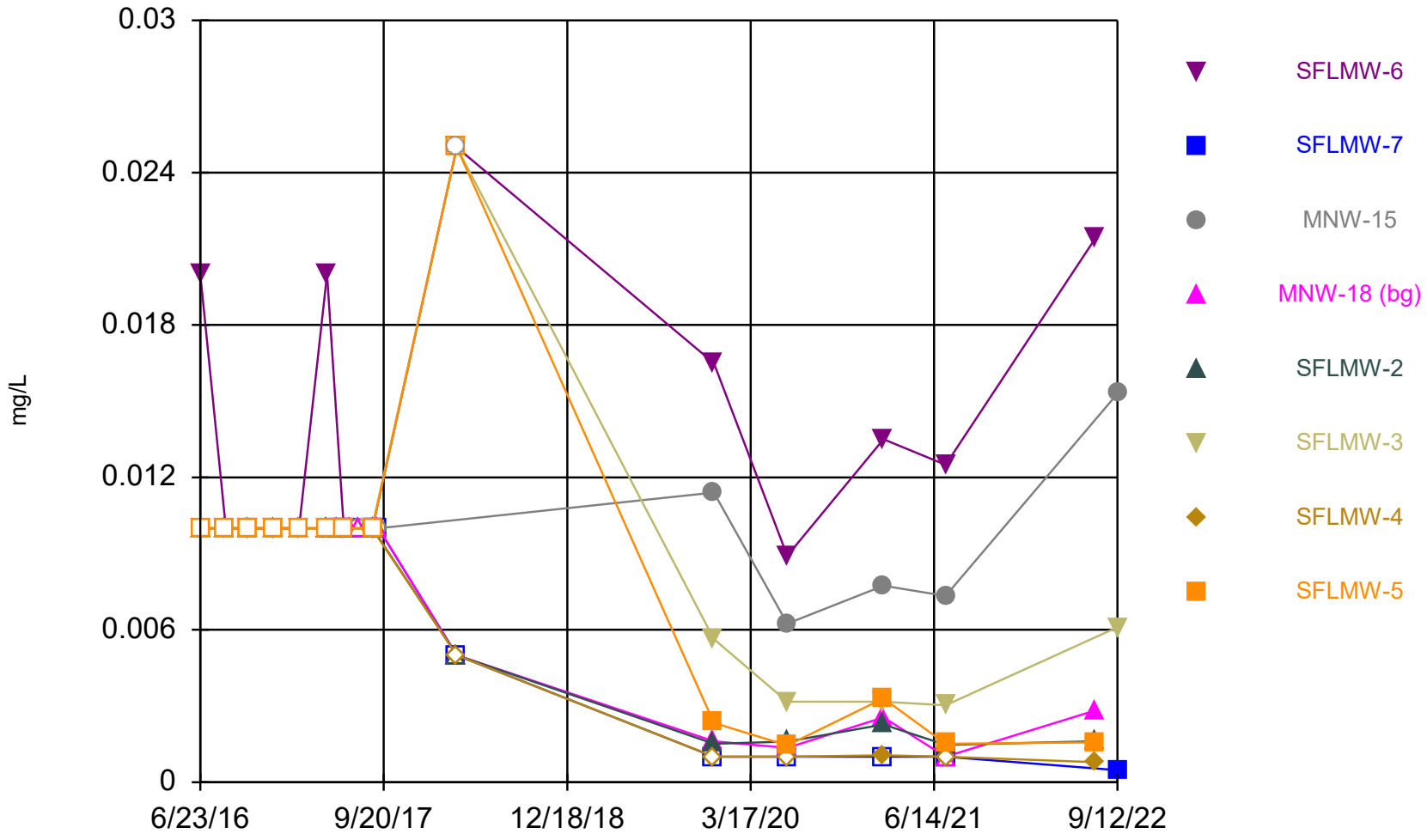
Time Series



Constituent: Arsenic Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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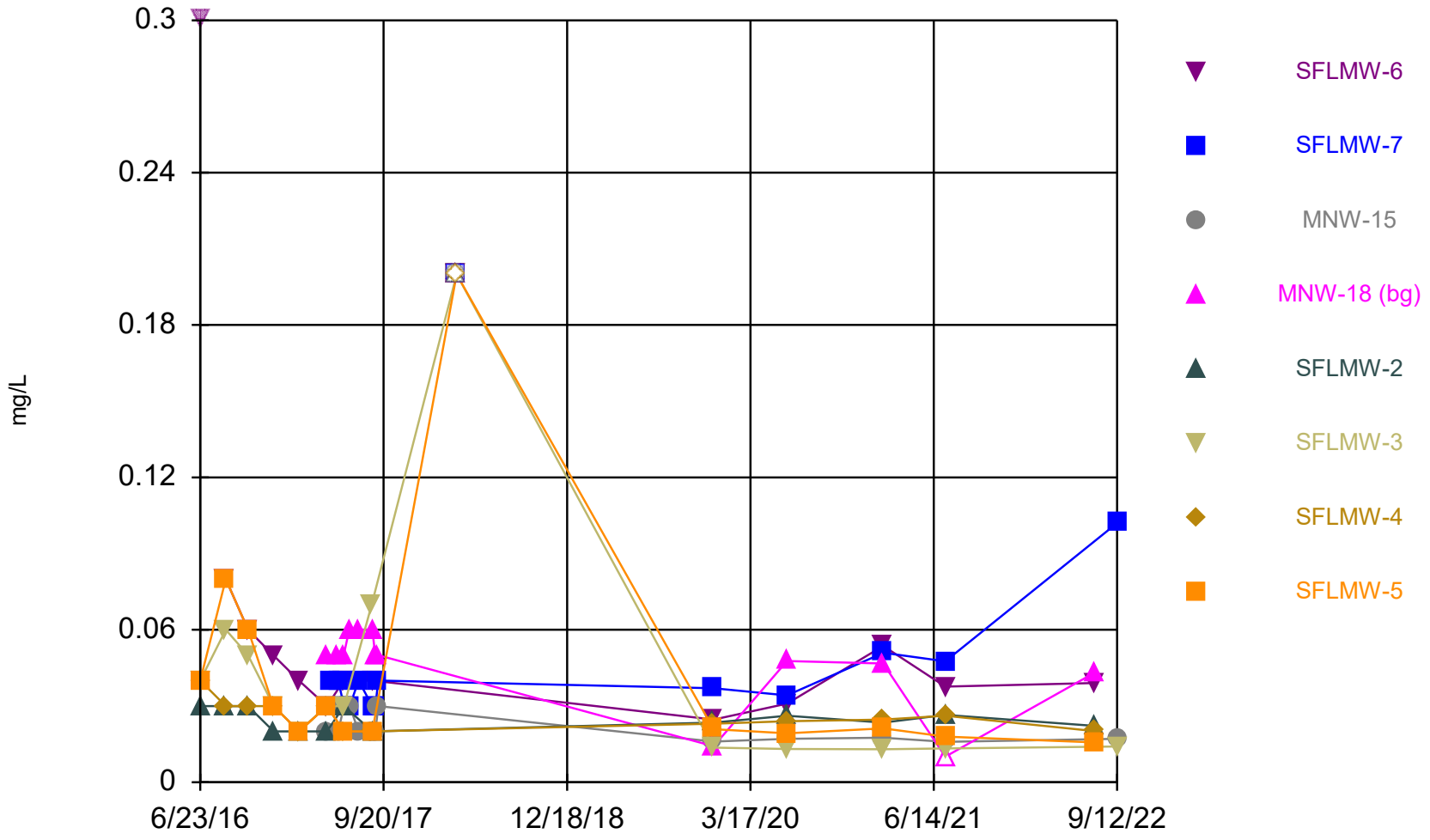
Time Series



Constituent: Barium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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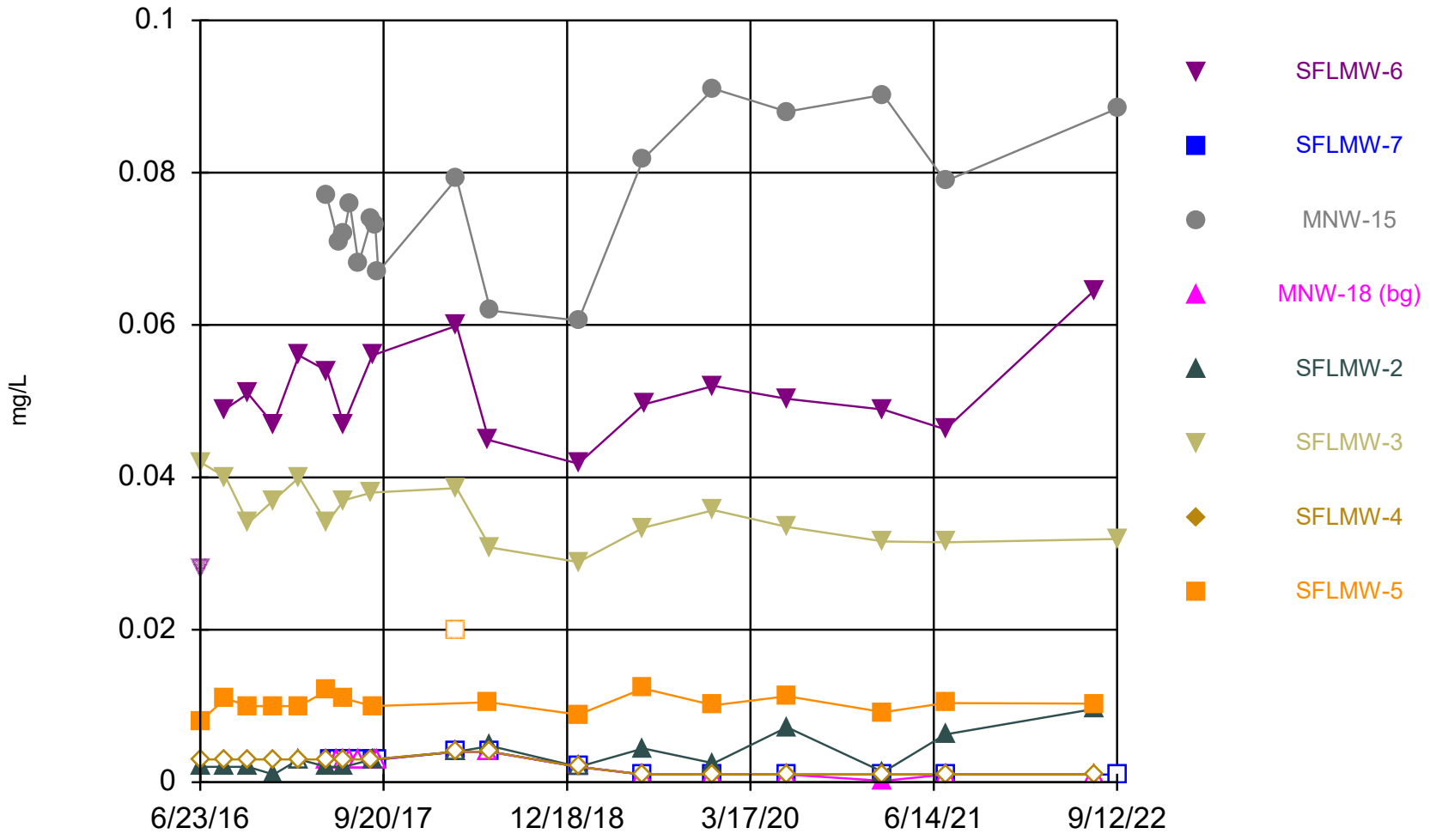
Time Series



Constituent: Beryllium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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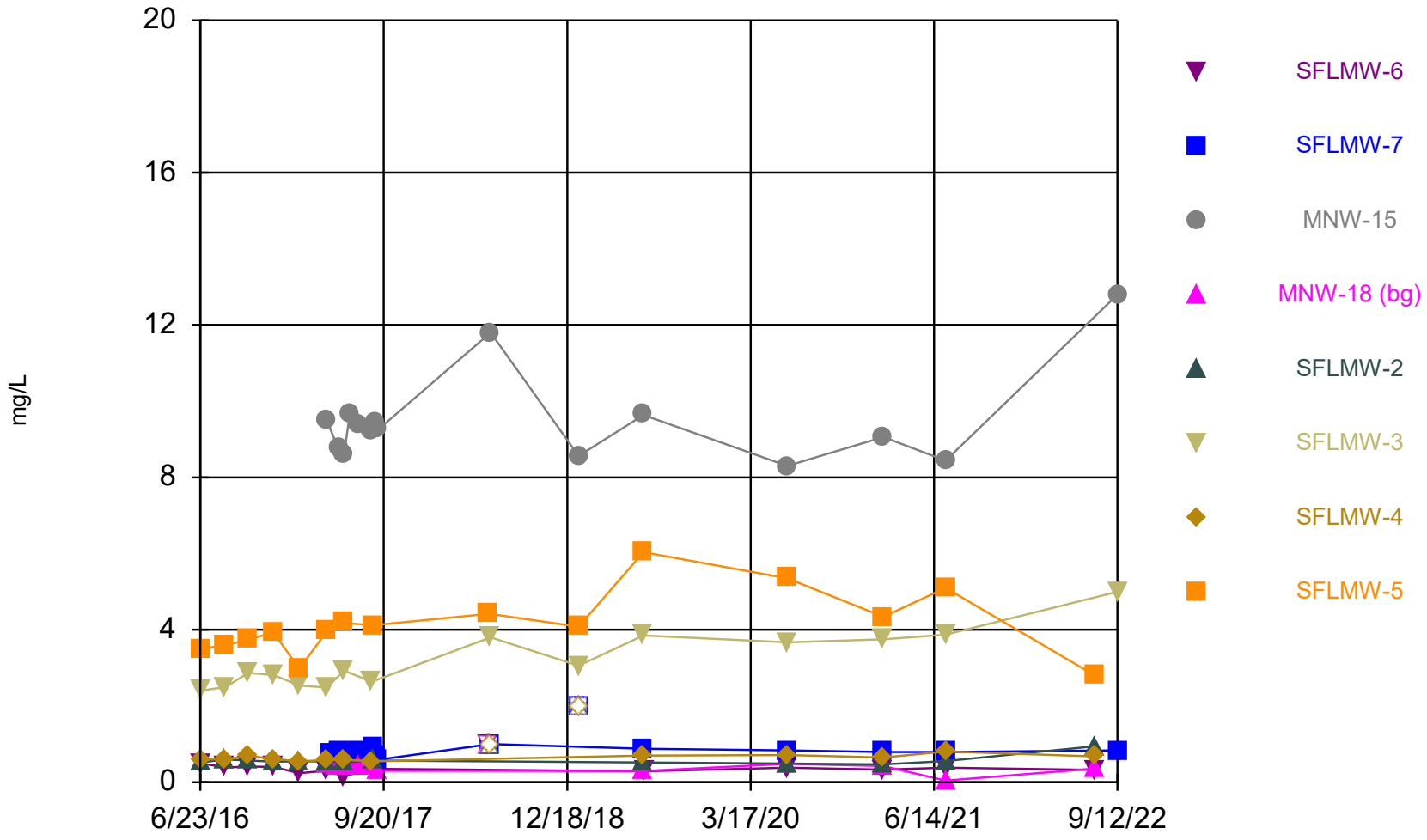
Time Series

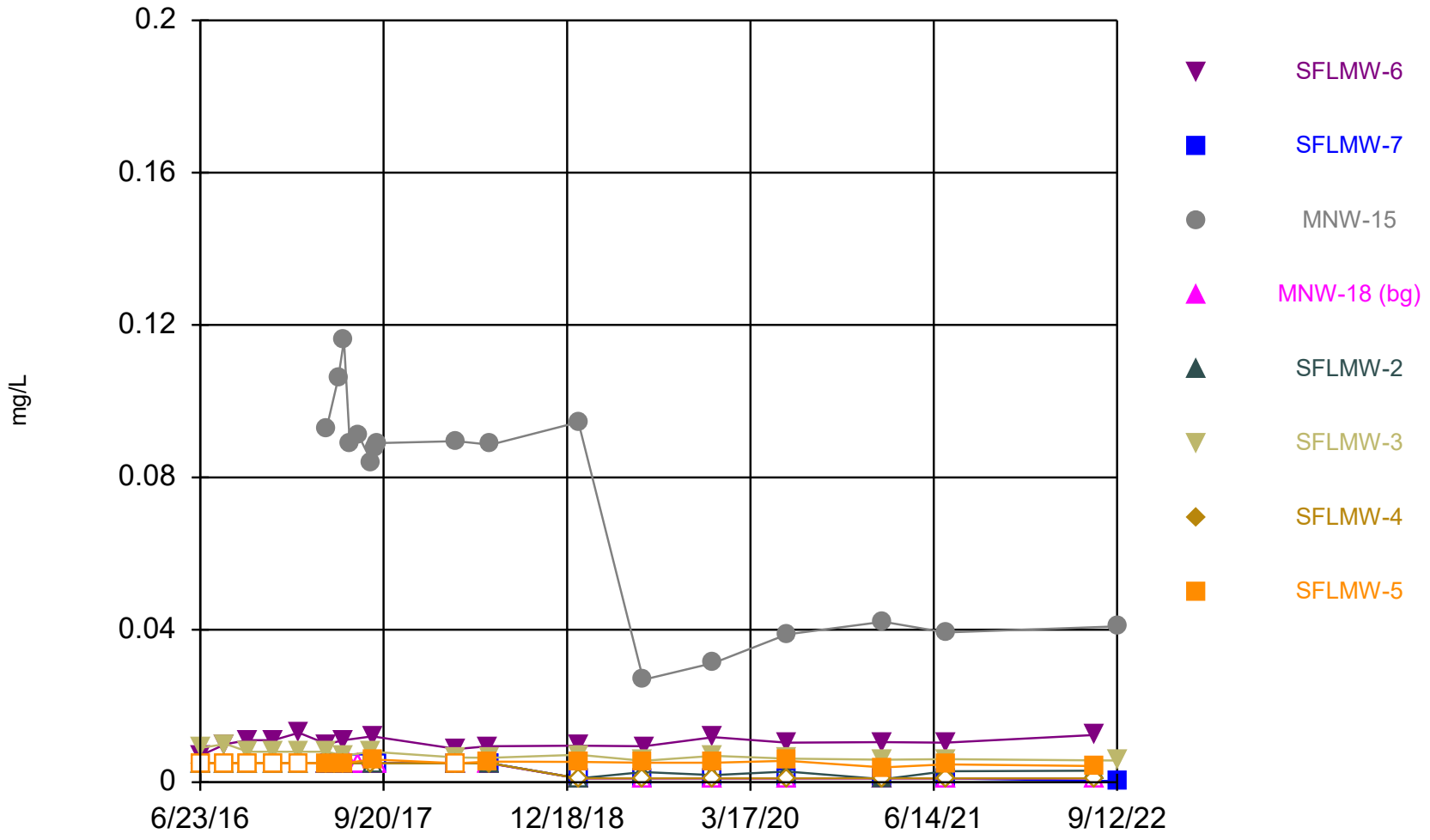


Constituent: Boron Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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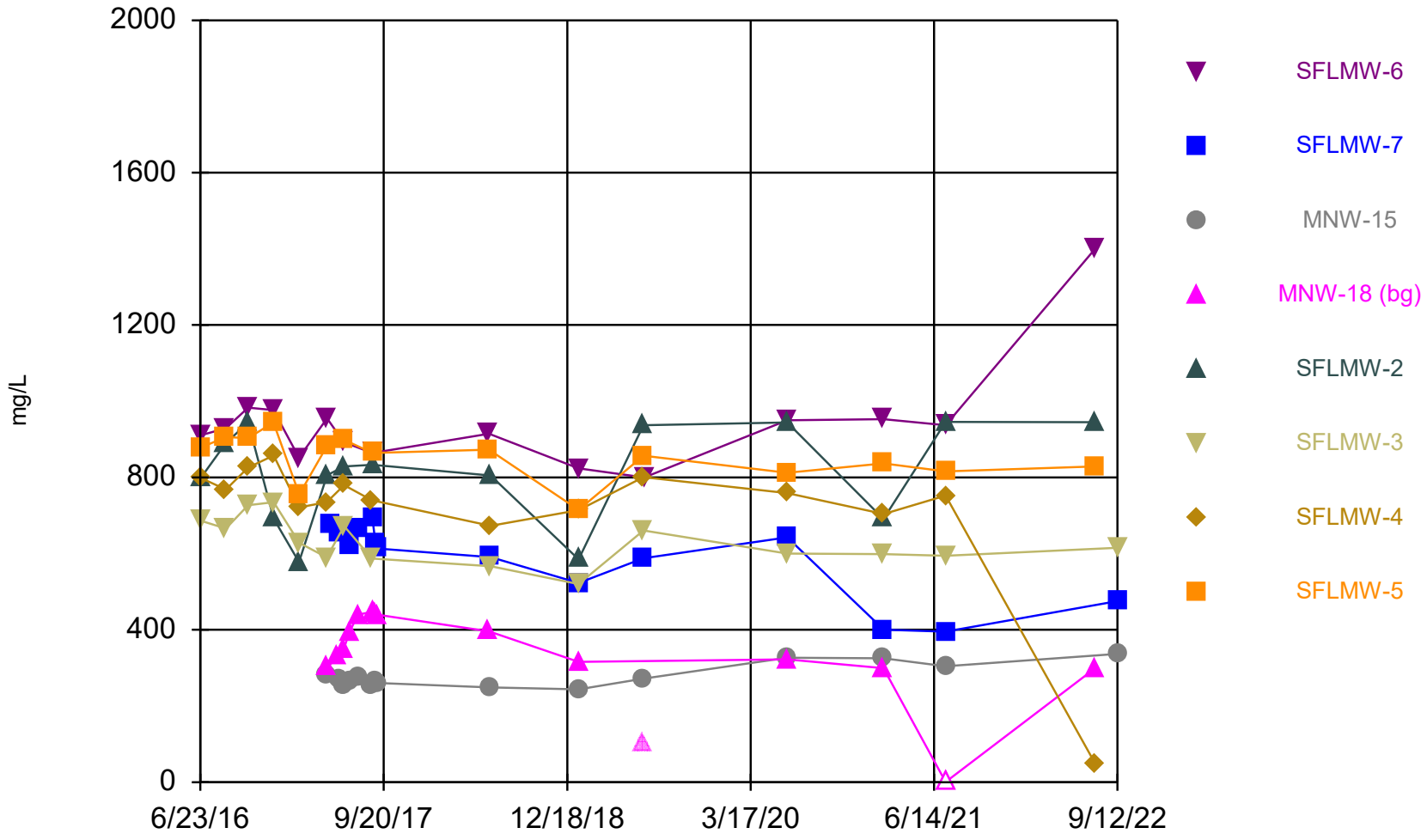
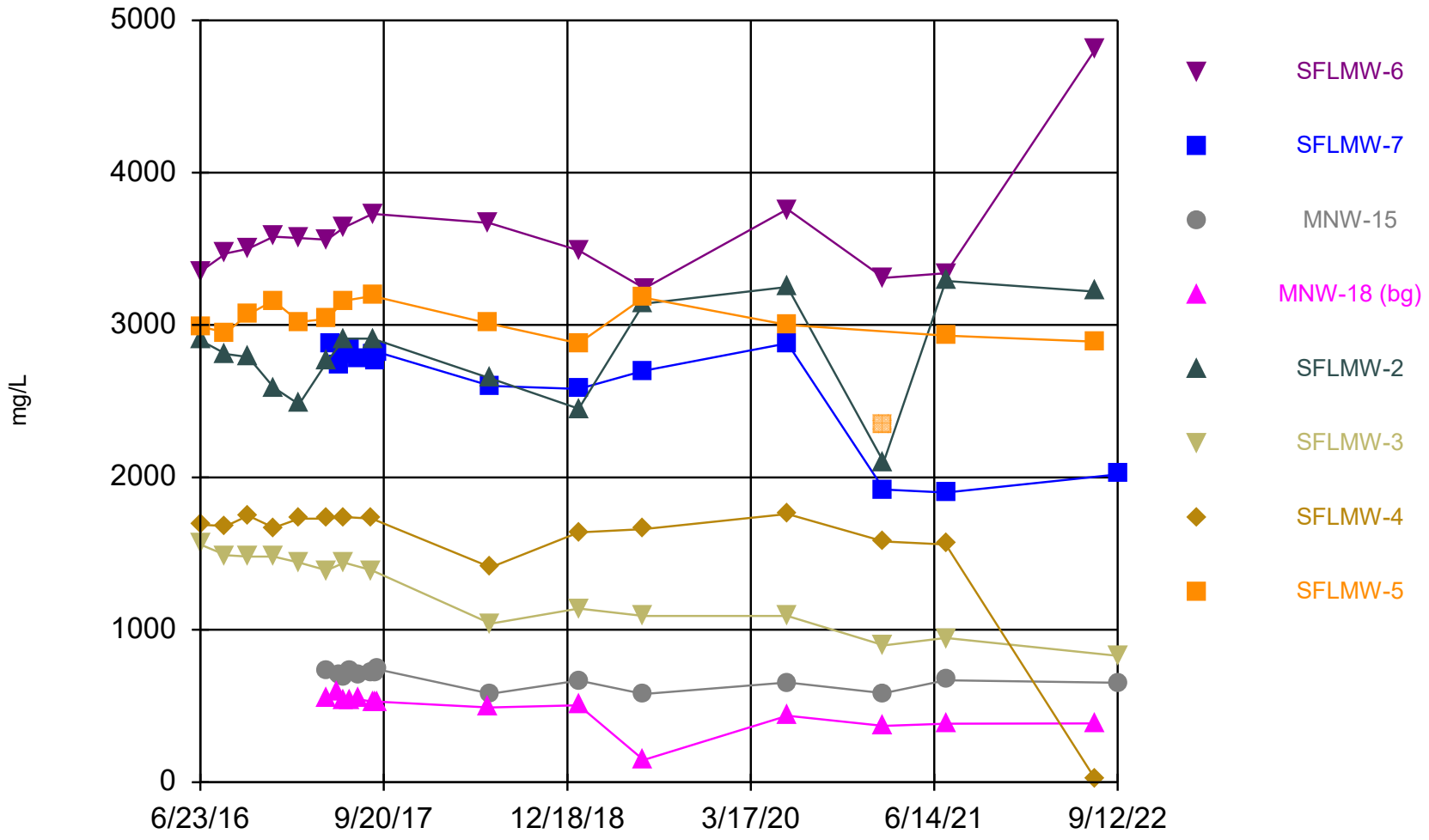
Time Series



Constituent: Calcium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: Chloride Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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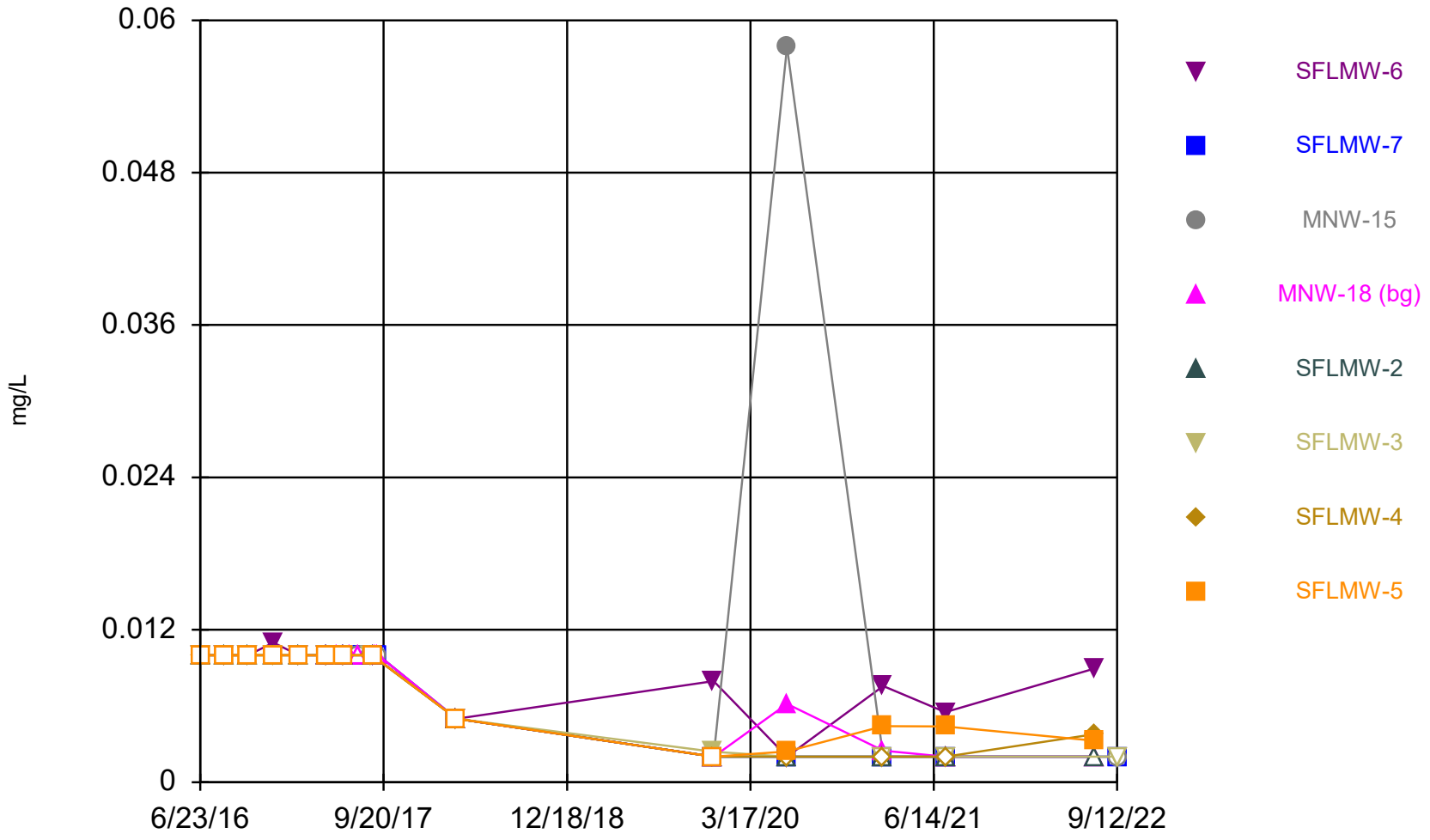
Time Series

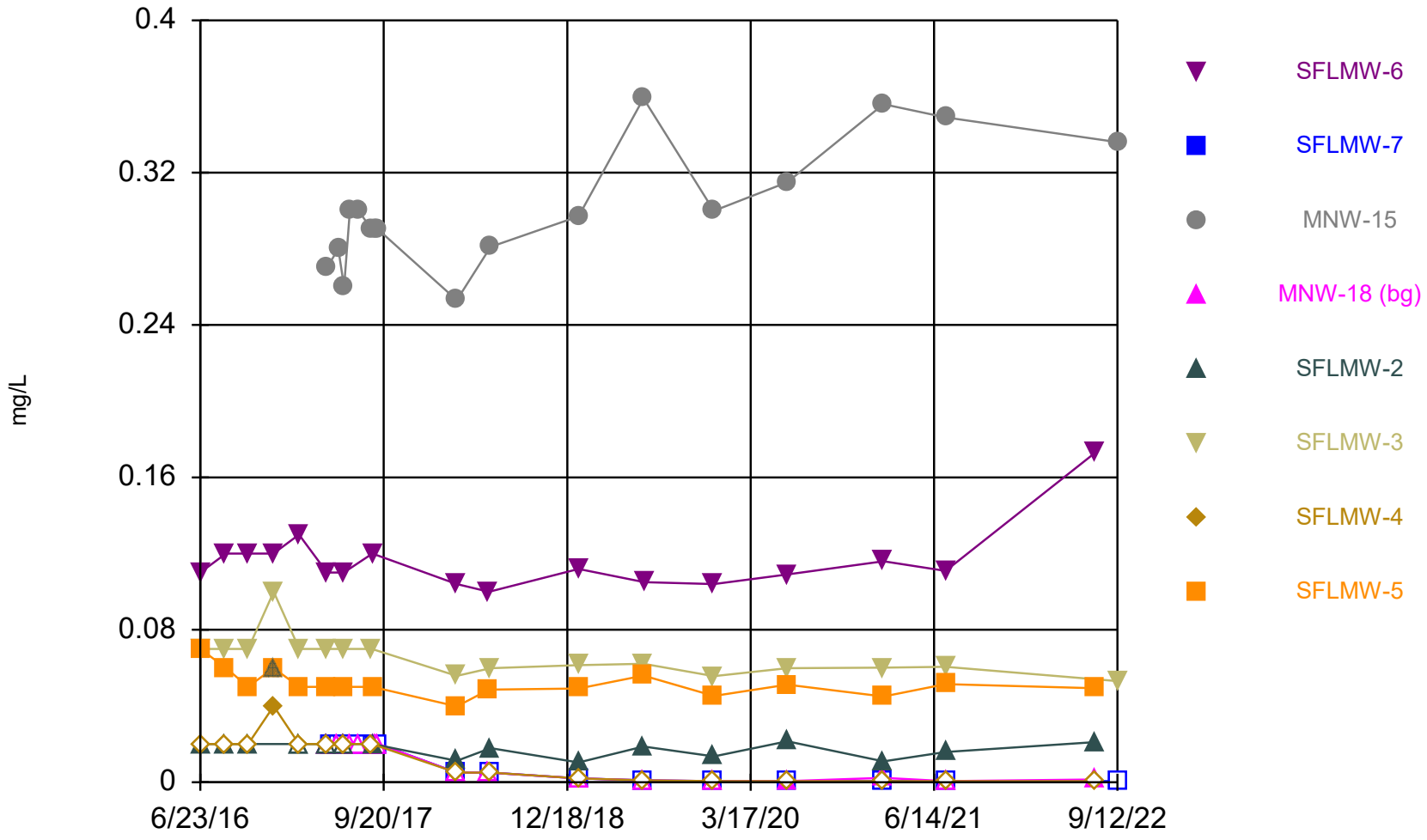


Constituent: Chromium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Cobalt Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

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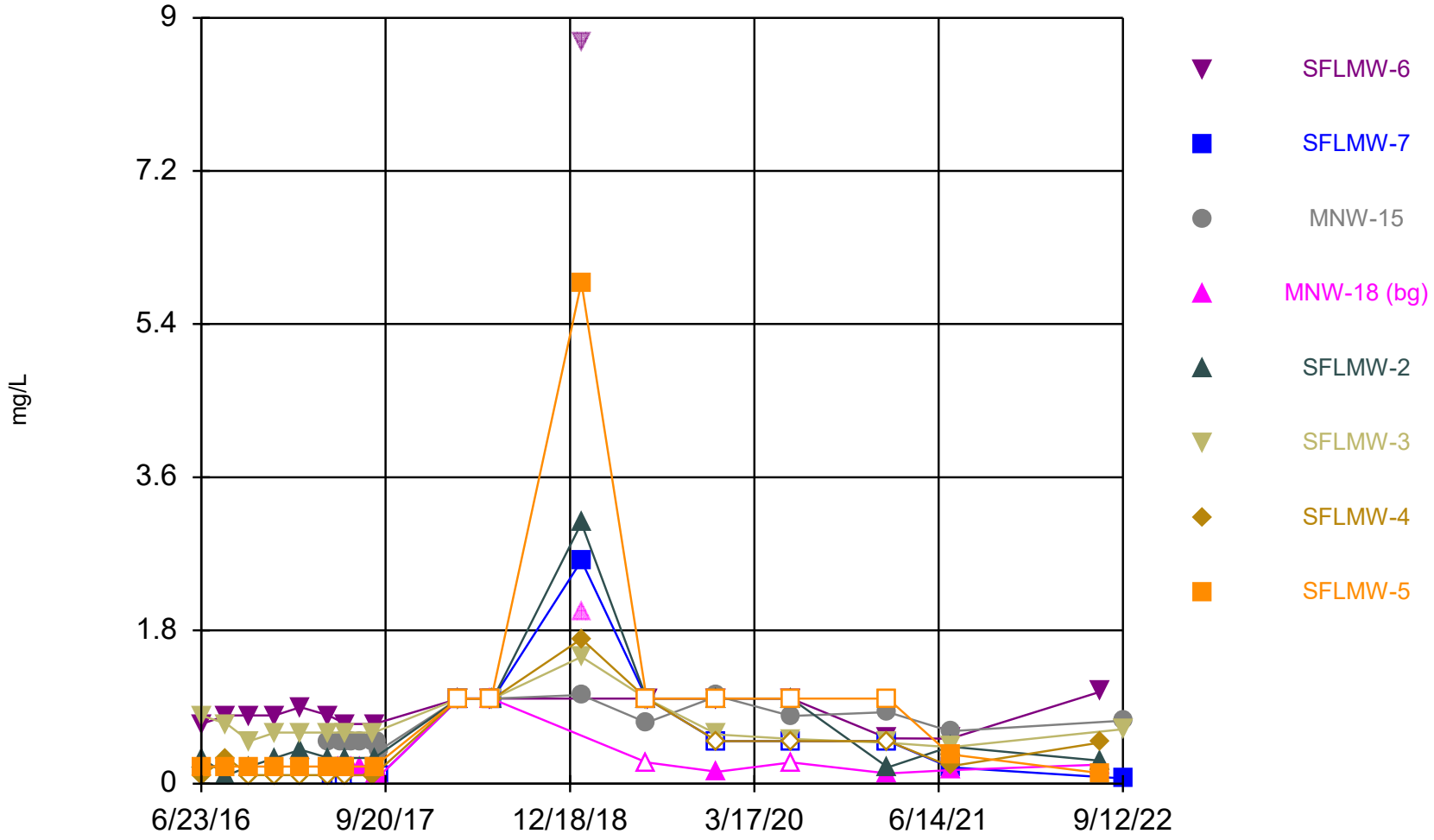

Constituent: Fluoride Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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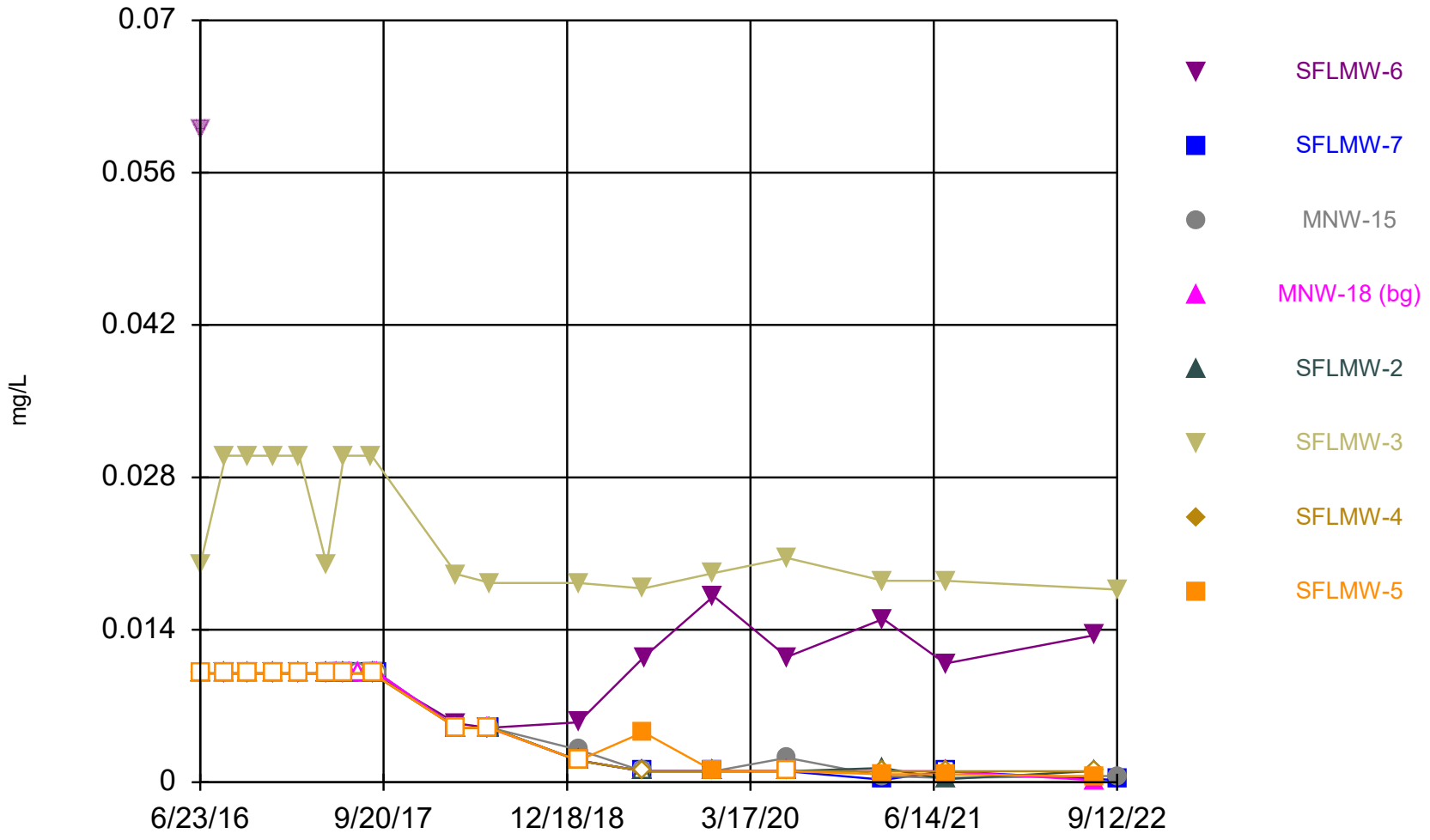
Time Series



Constituent: Lead Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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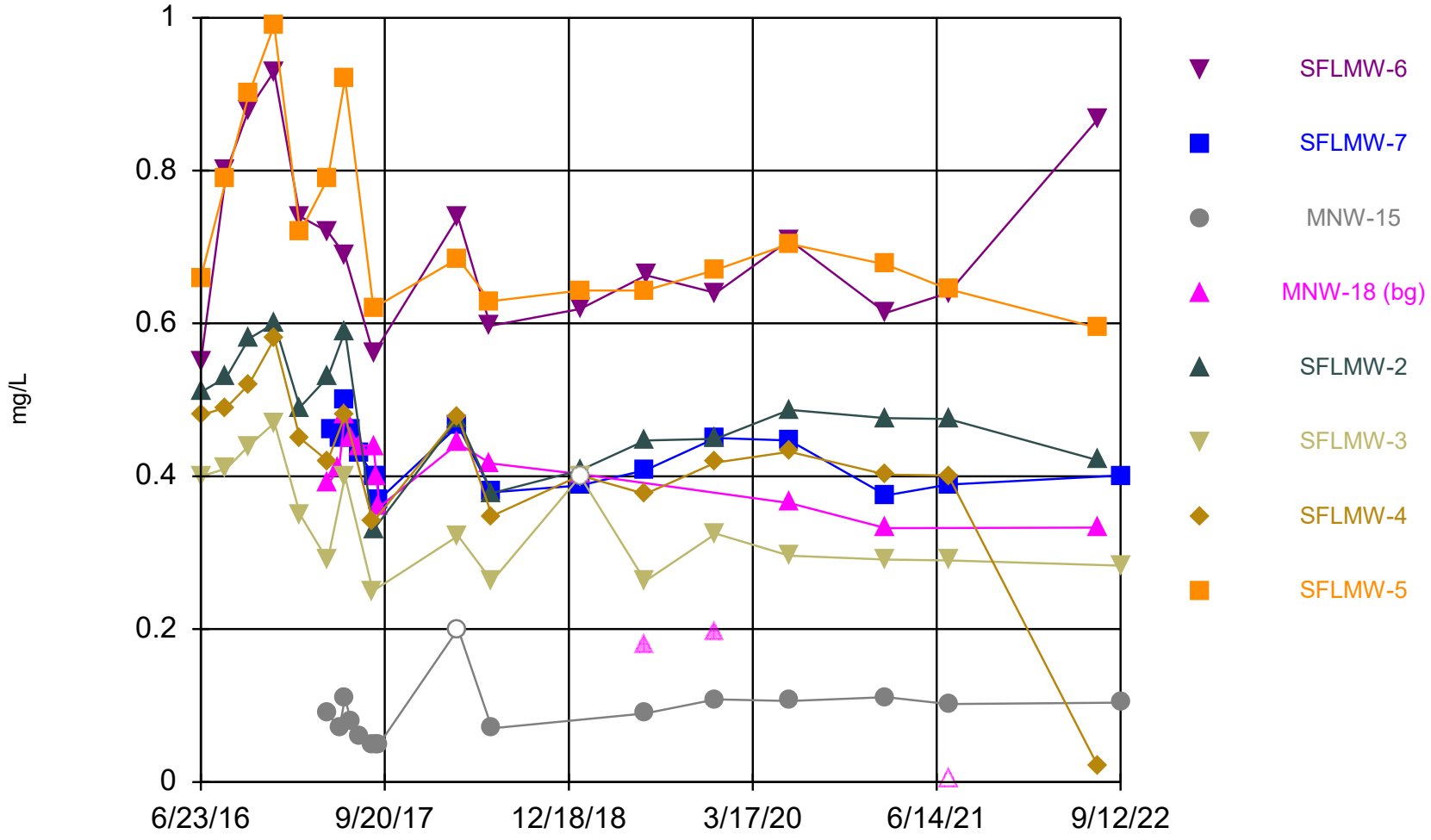
Time Series



Constituent: Lithium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

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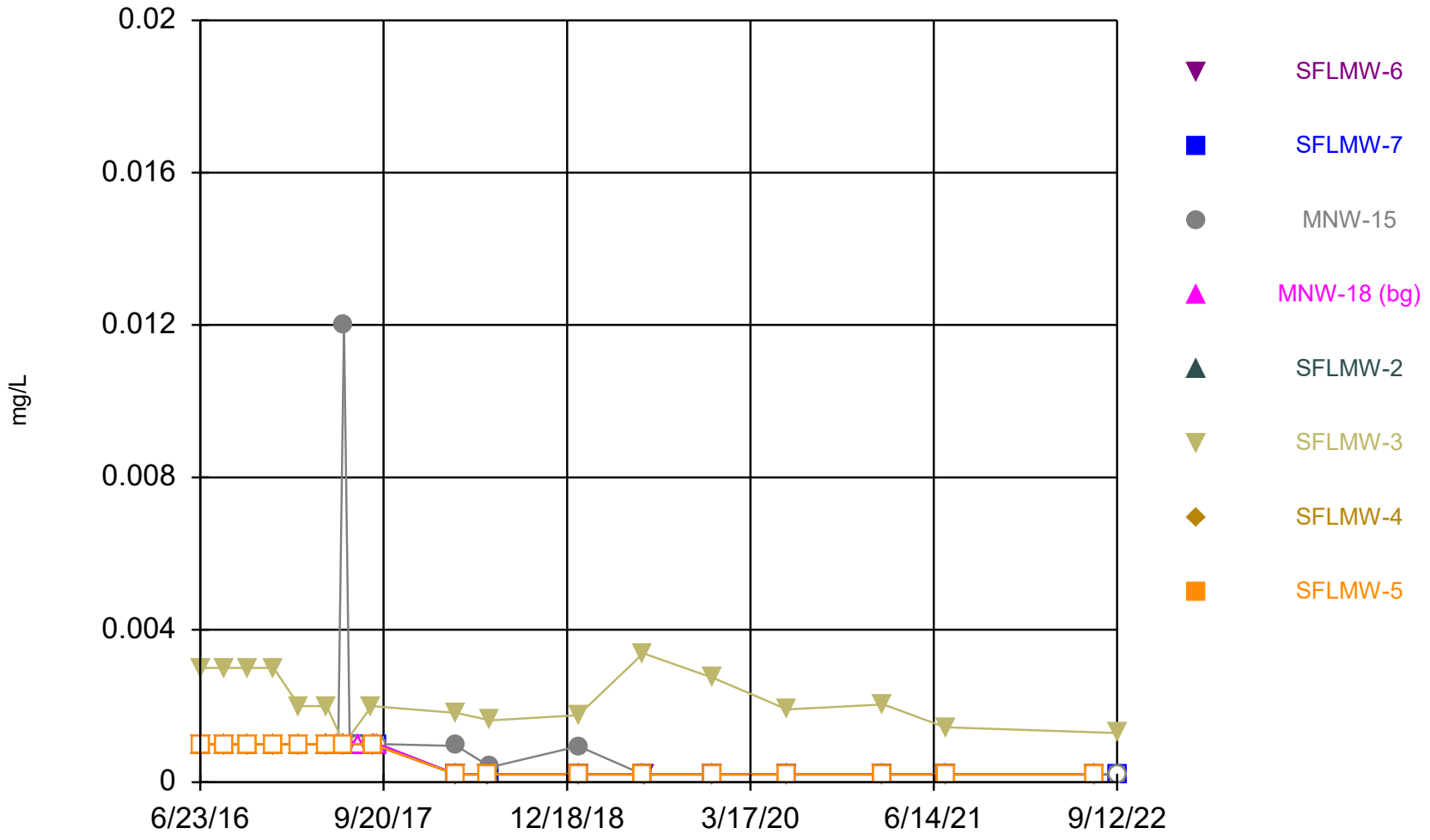
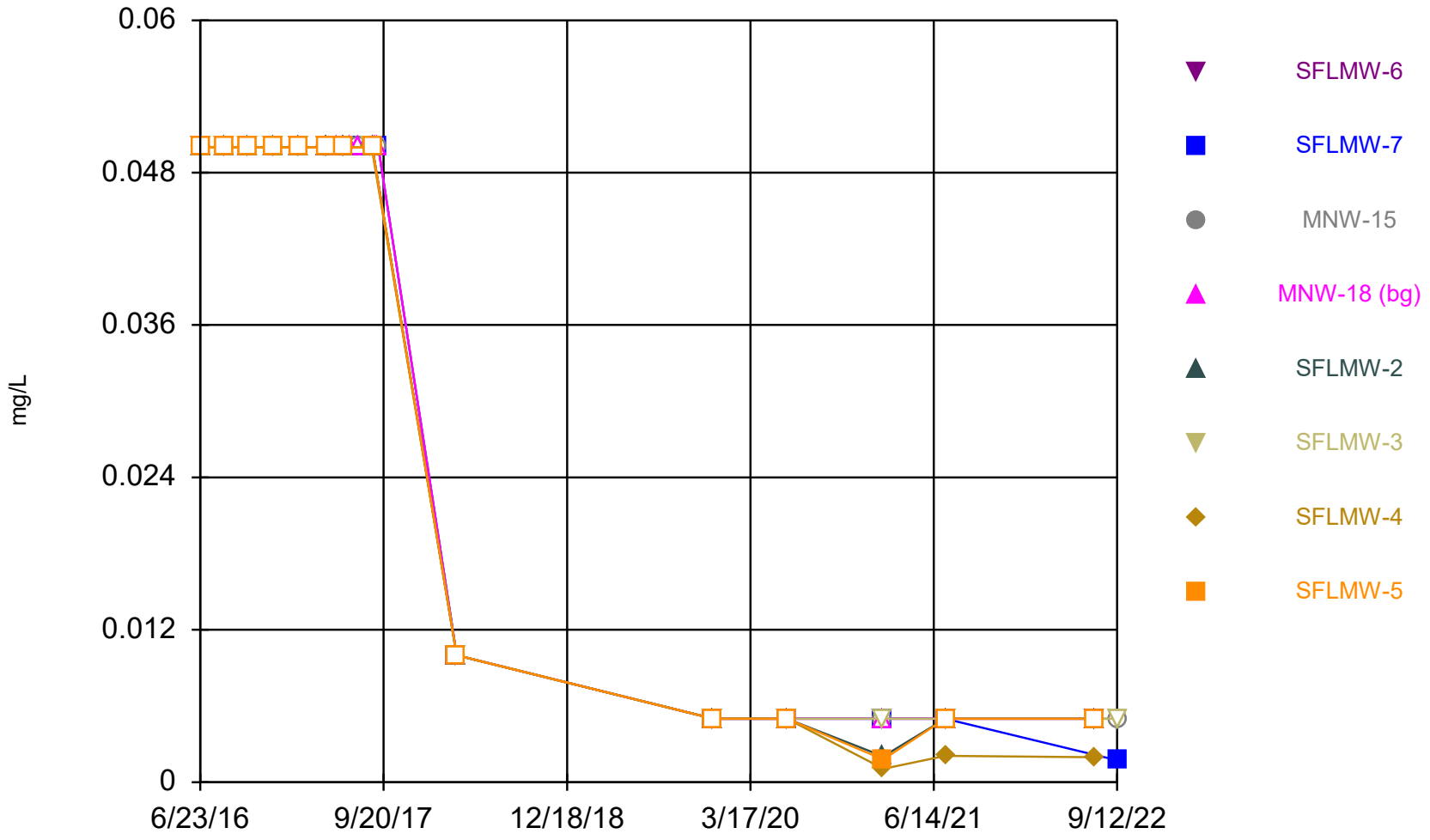


Constituent: Mercury Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

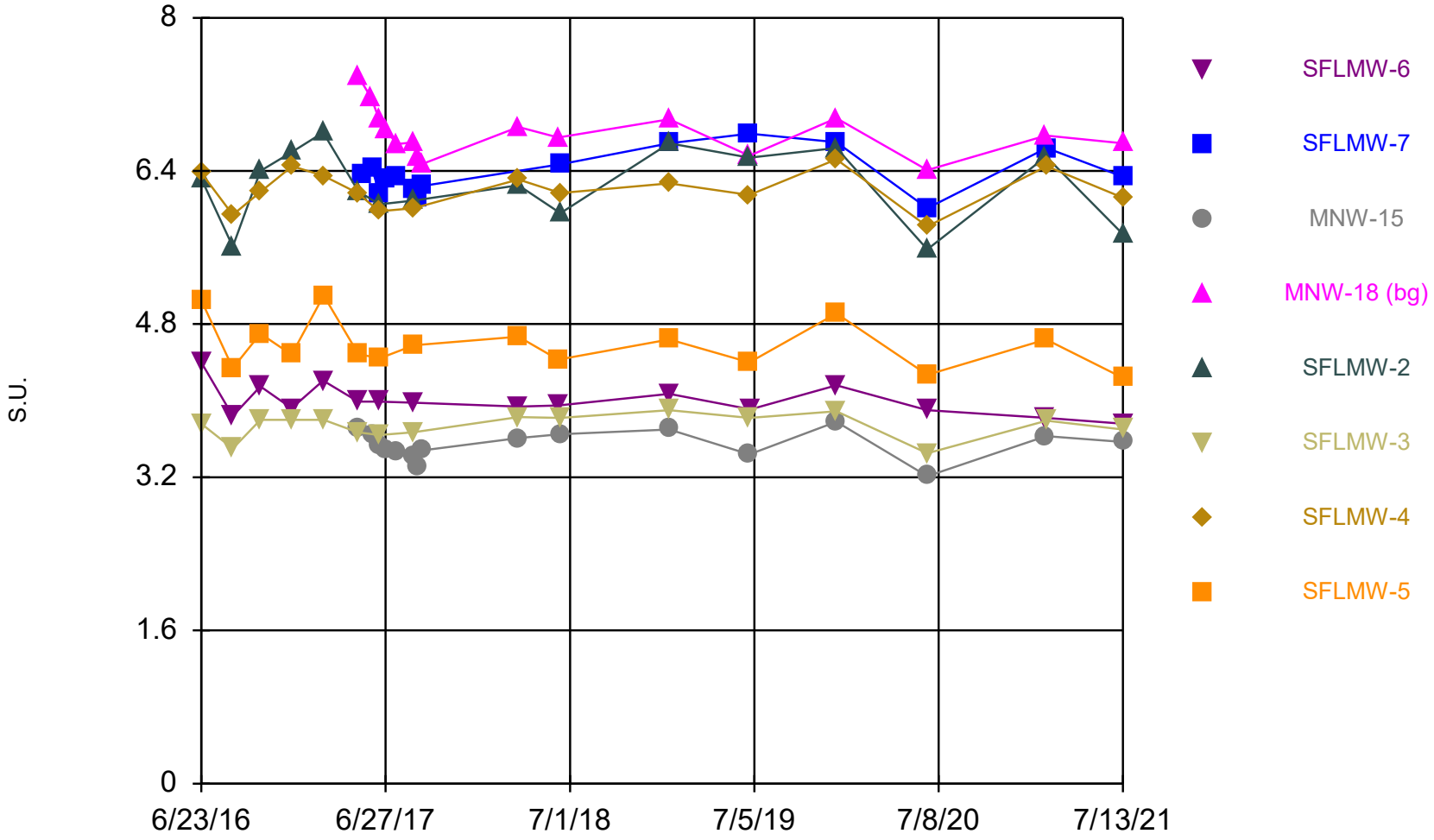
Time Series



Constituent: Molybdenum Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: pH Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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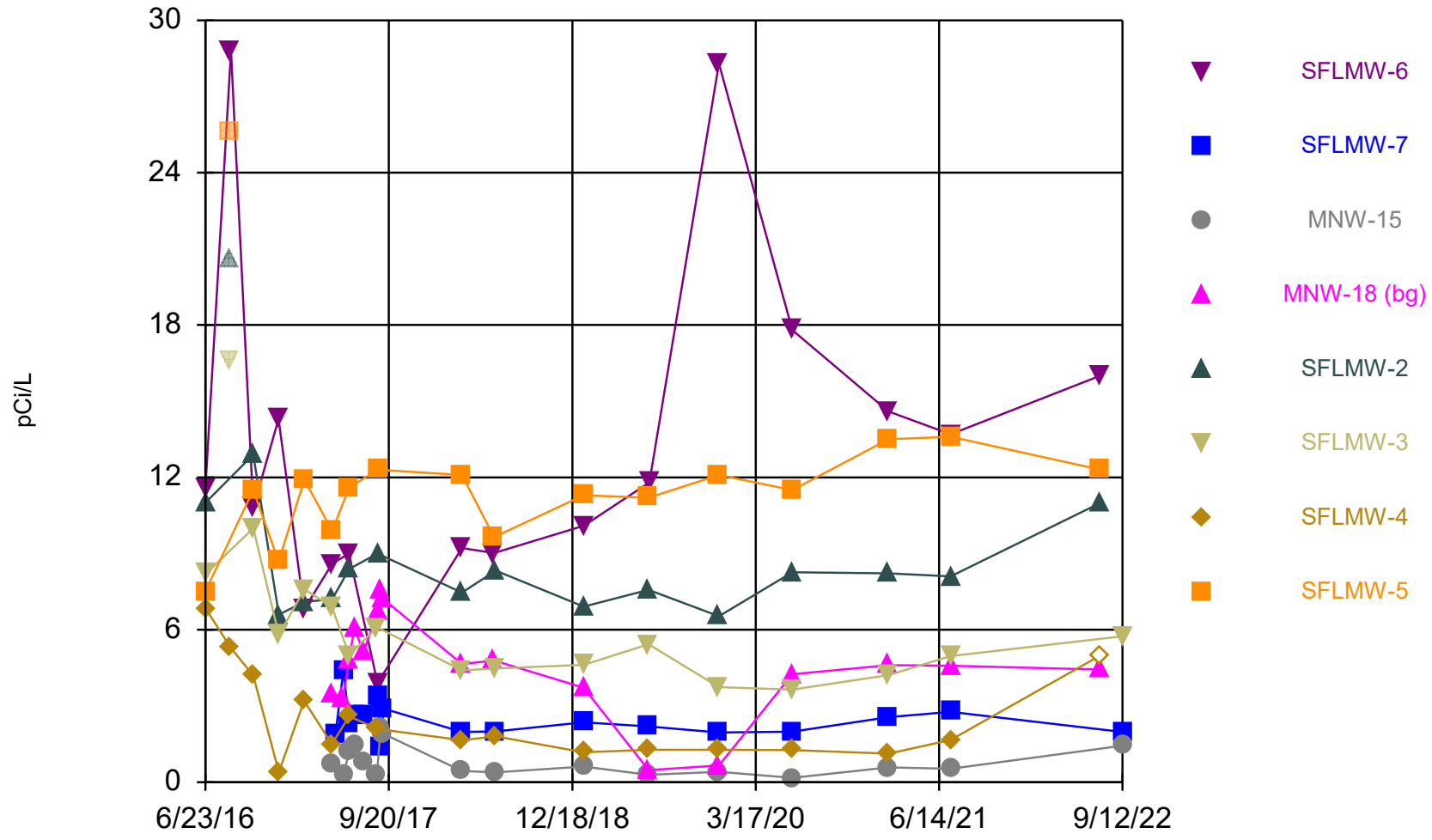
Hollow symbols indicate censored values.

Time Series



Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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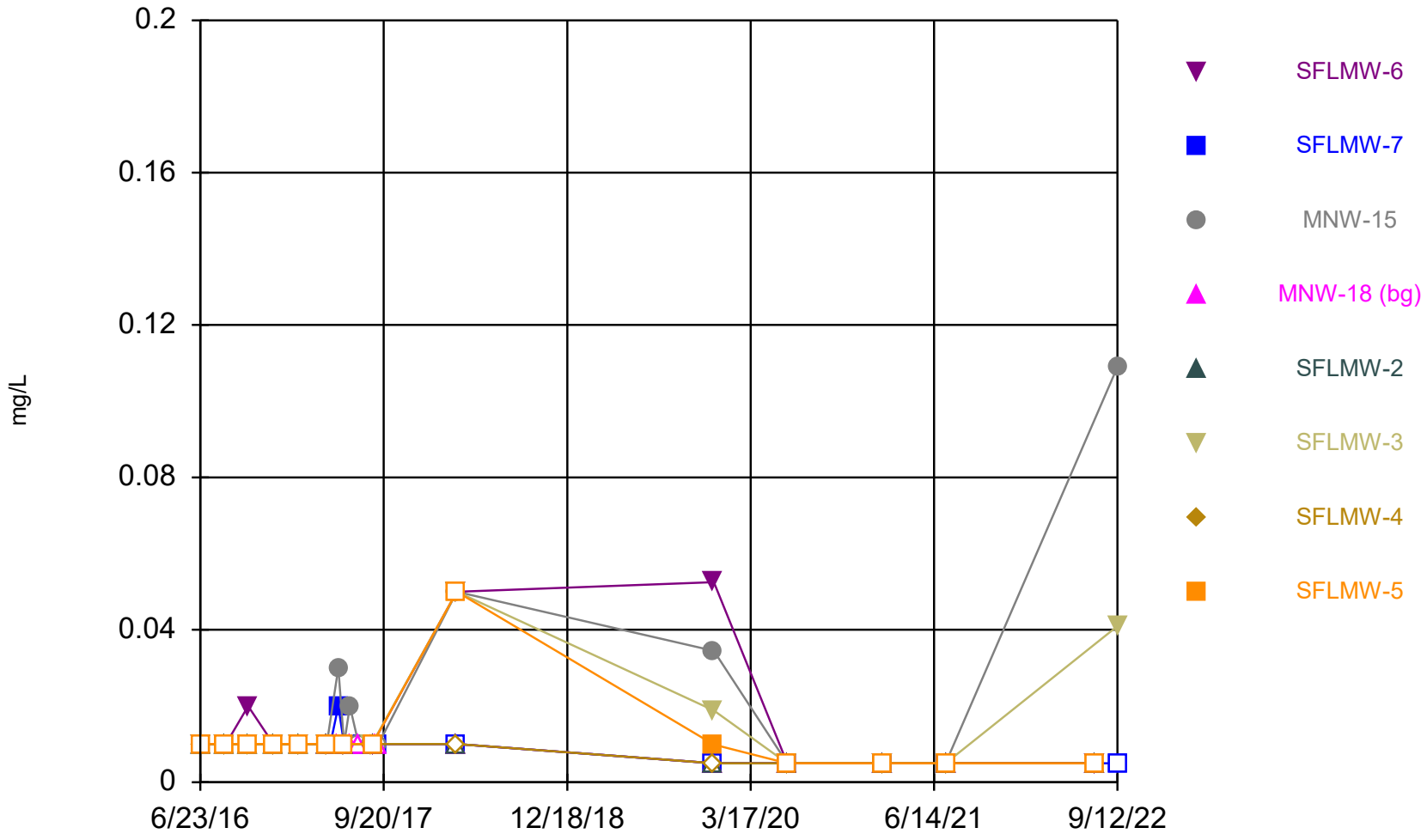
Hollow symbols indicate censored values.

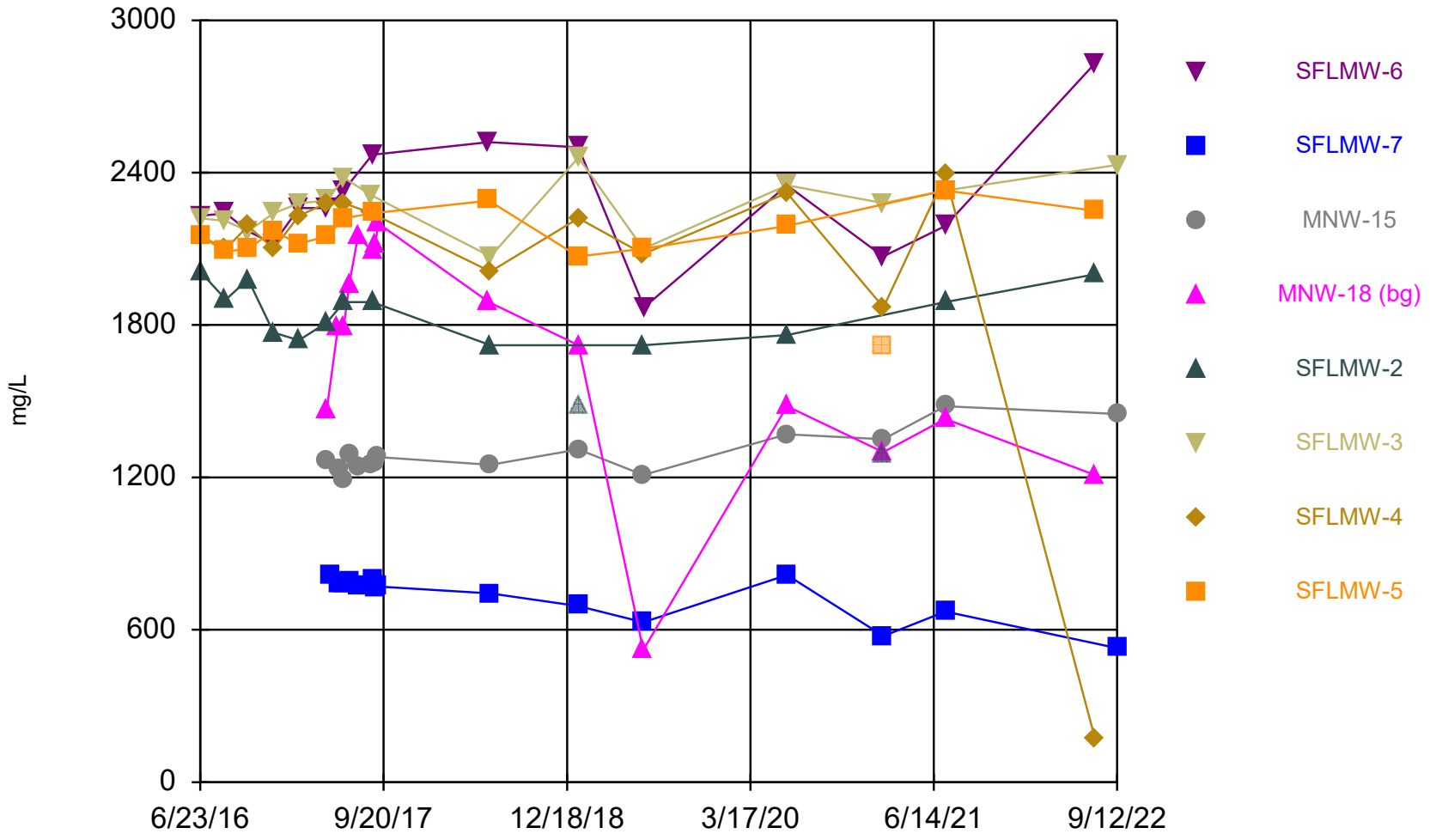
Time Series



Constituent: Selenium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

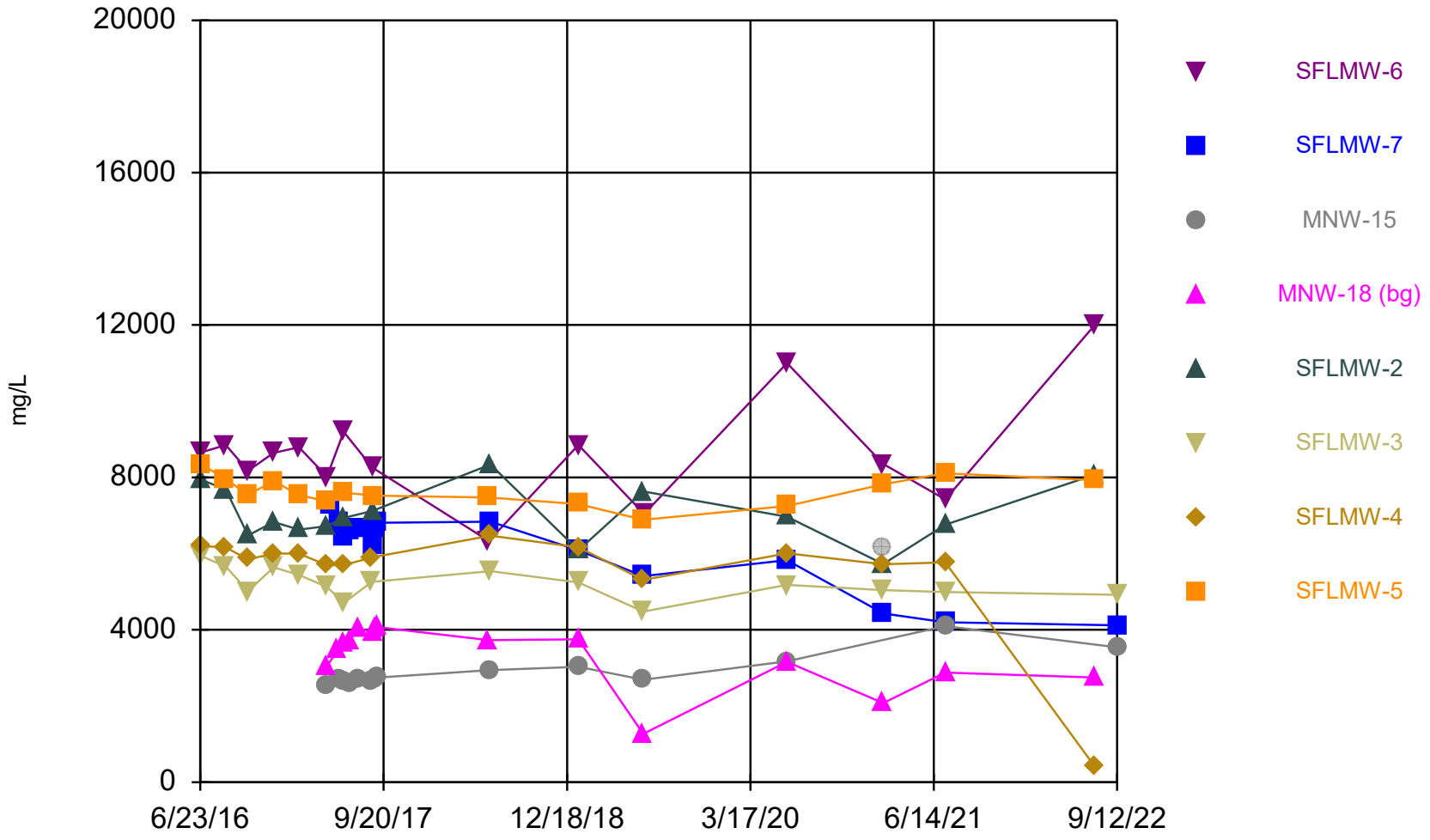
Time Series



Constituent: Sulfate Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

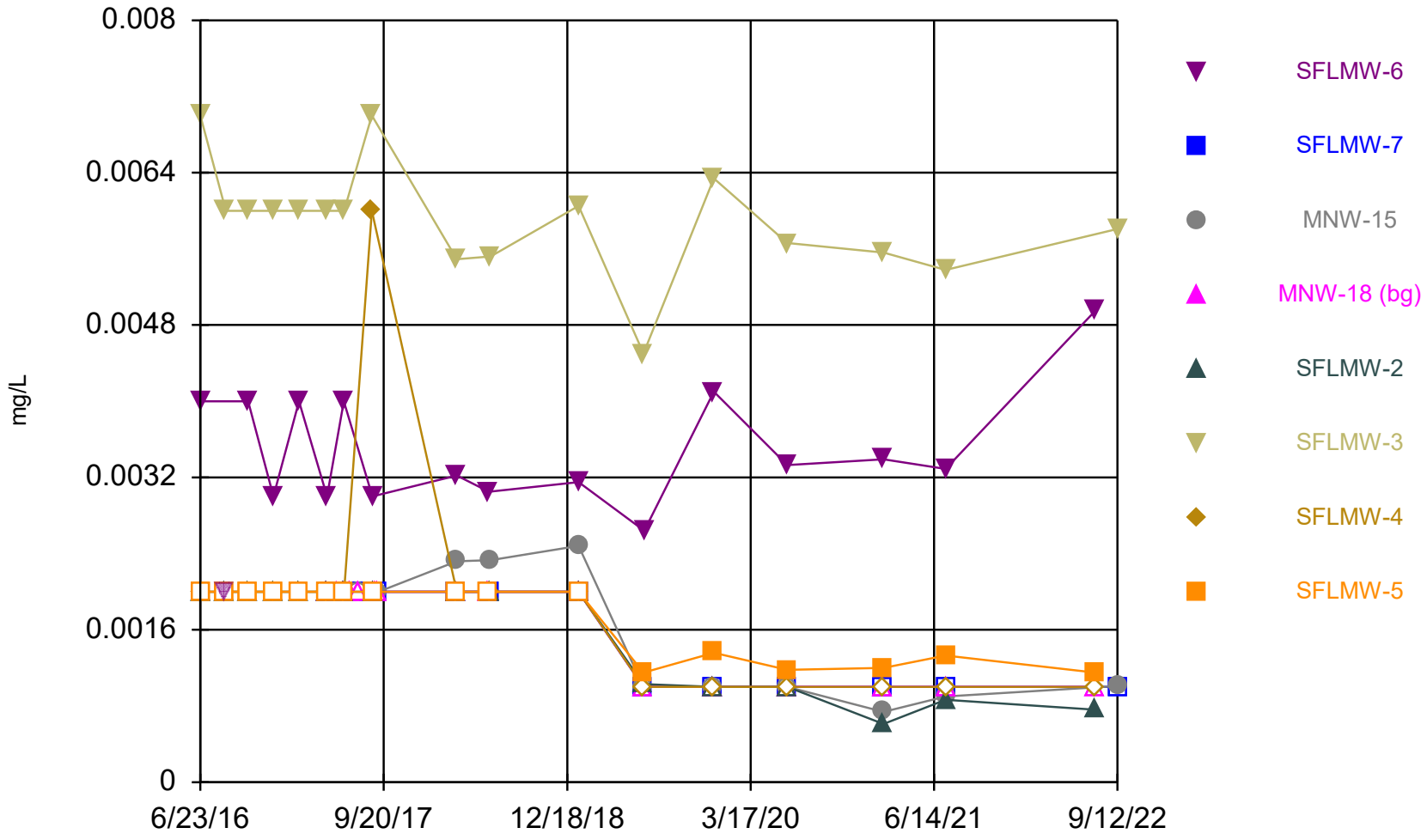


Constituent: TDS Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

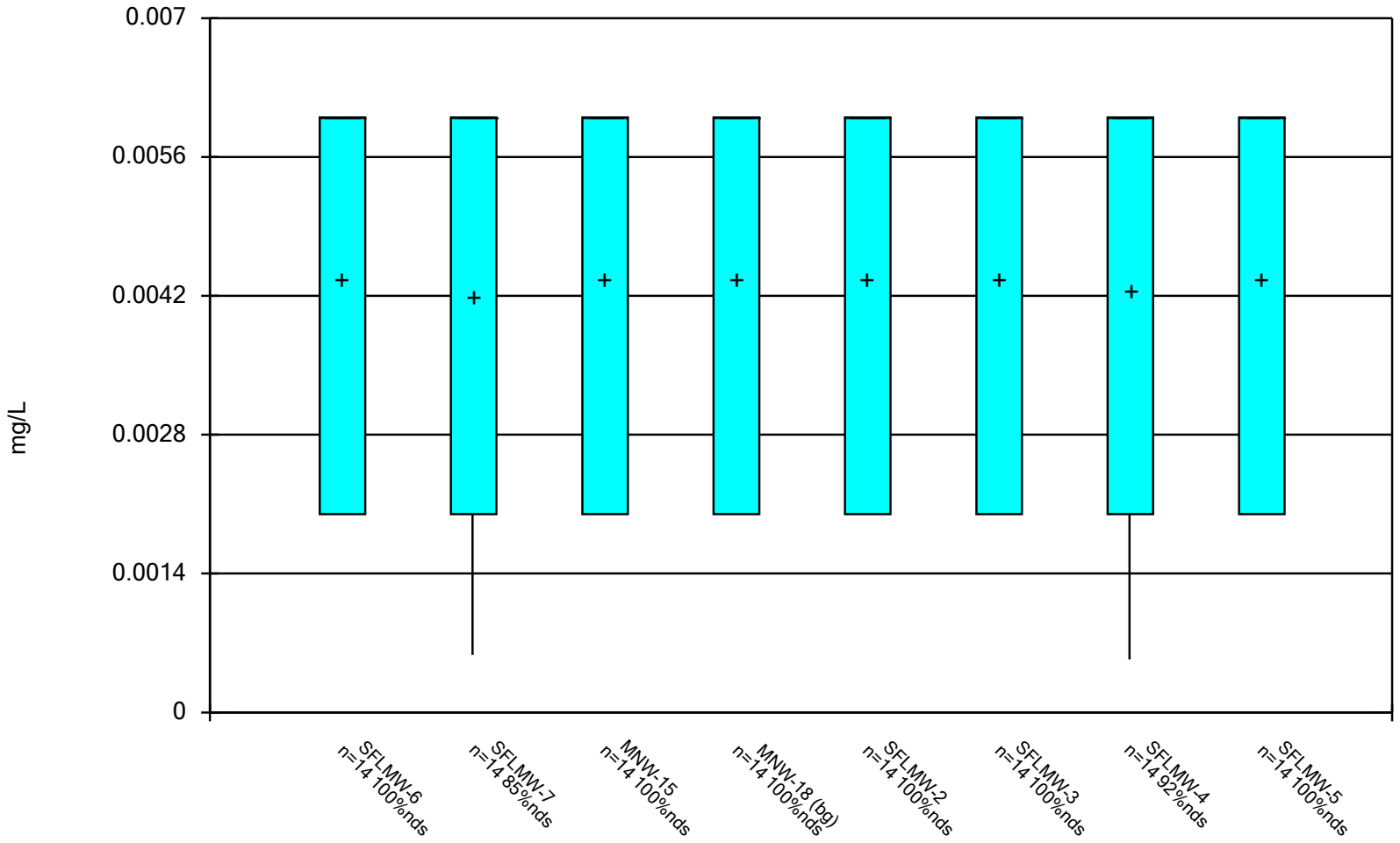
Time Series



Constituent: Thallium Analysis Run 10/19/2022 2:36 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

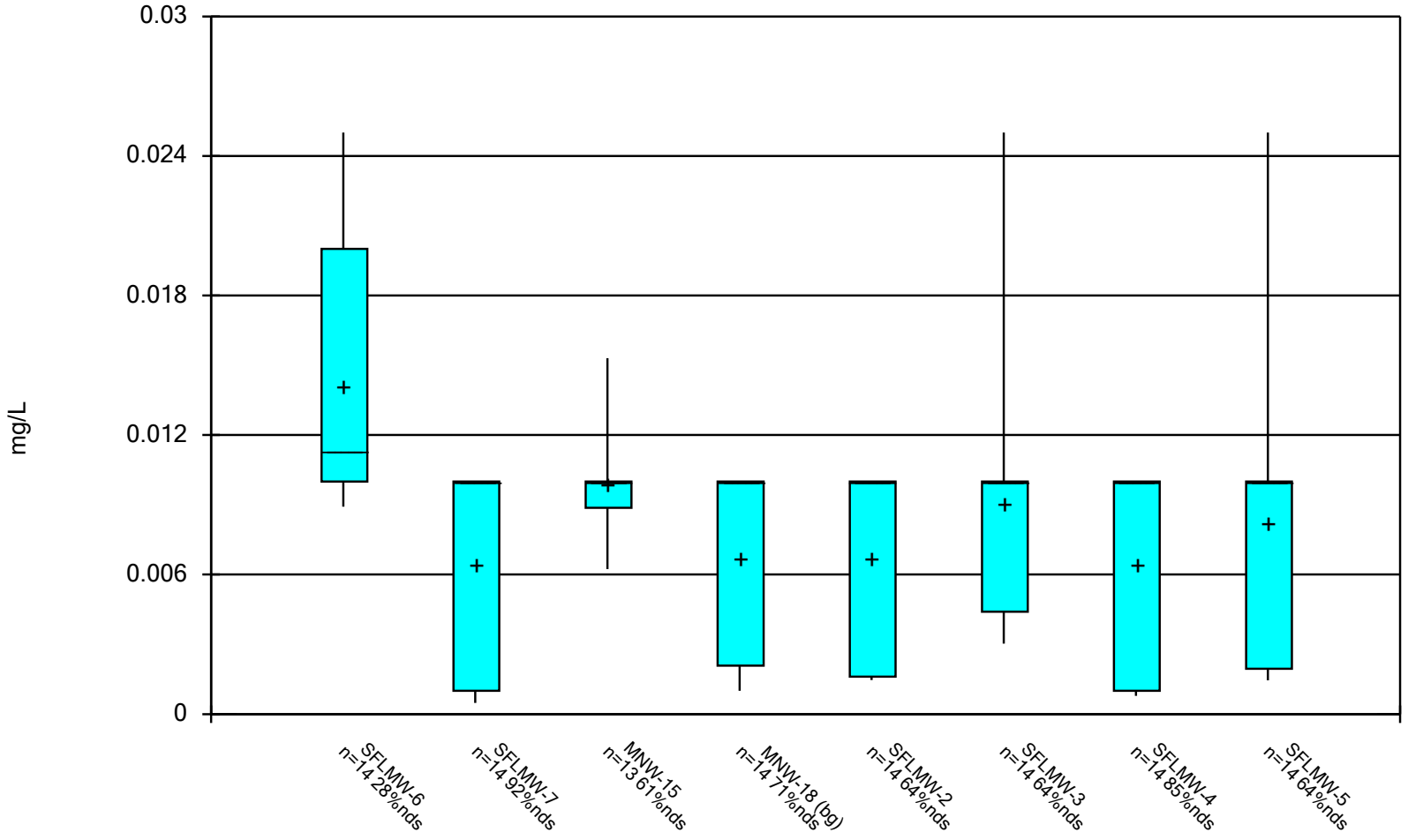
Box & Whiskers Plot



Constituent: Antimony Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

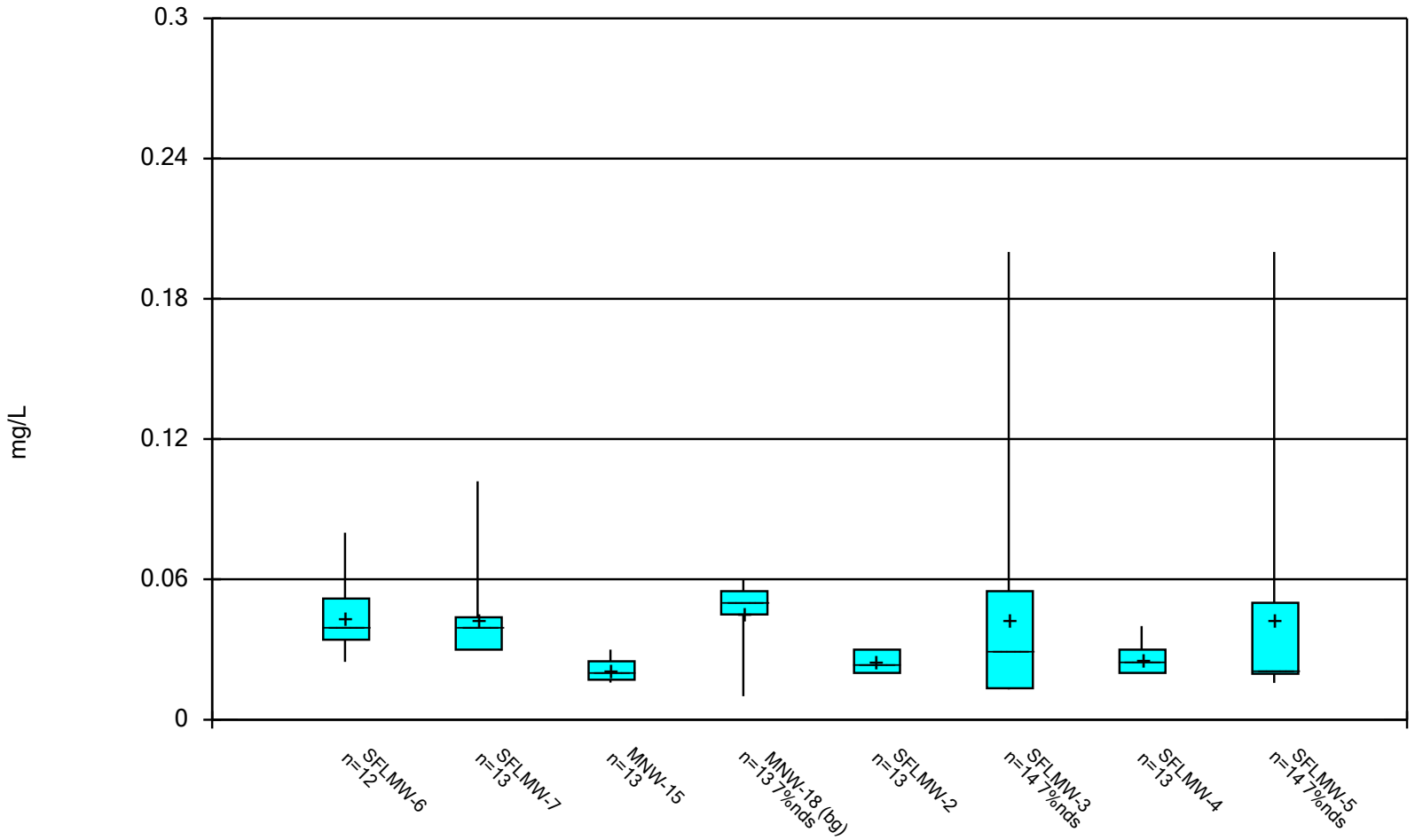
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

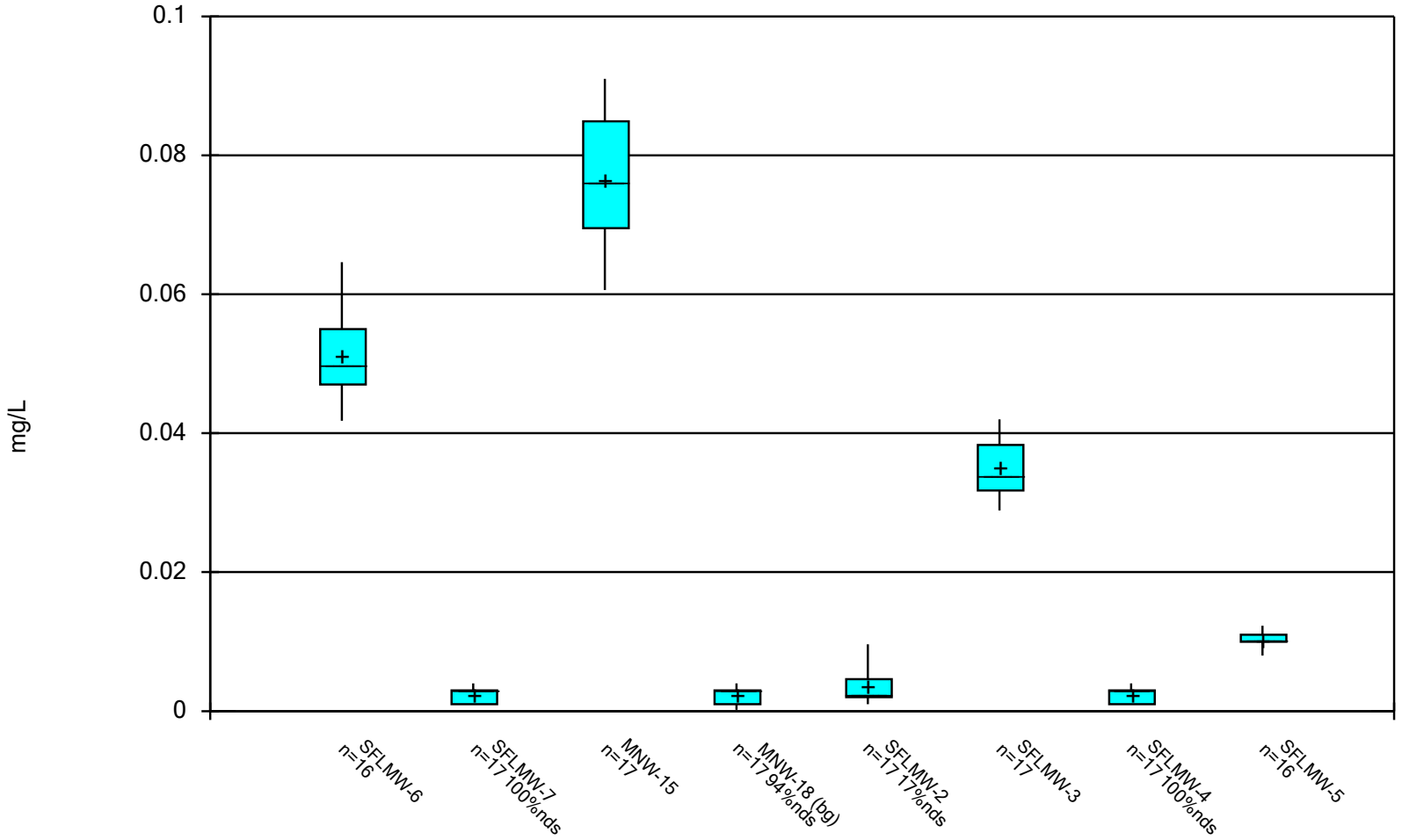
Box & Whiskers Plot



Constituent: Barium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

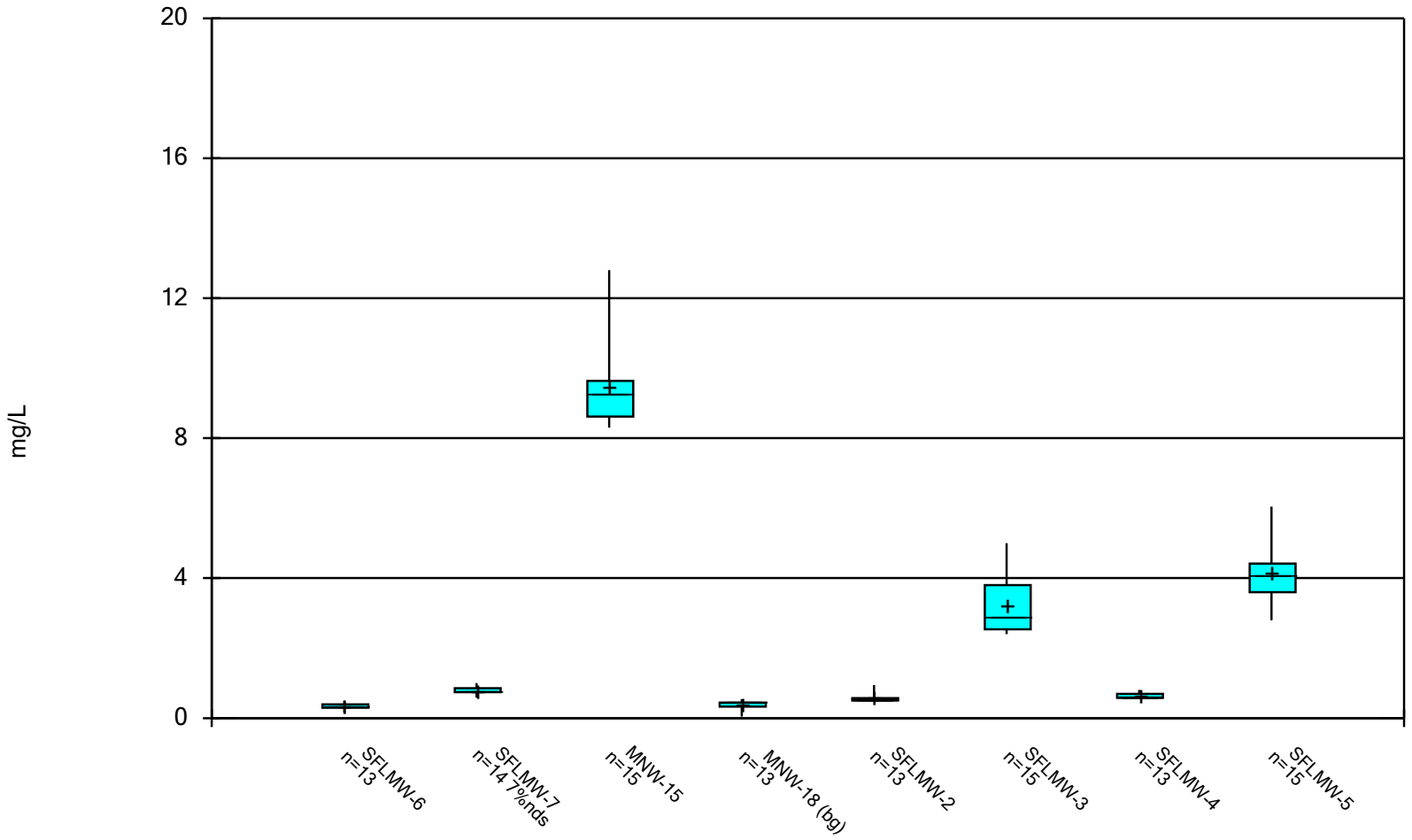
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

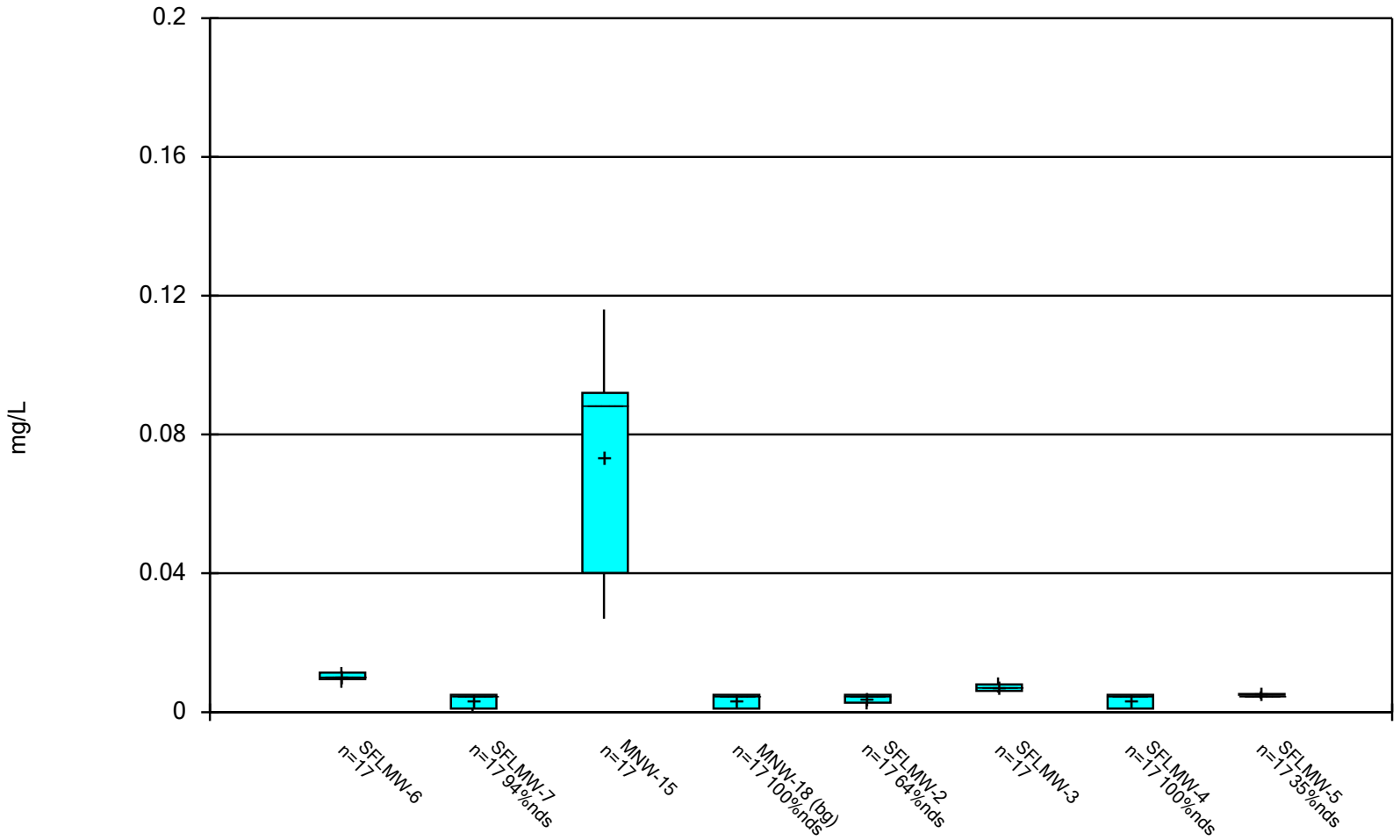
Box & Whiskers Plot



Constituent: Boron Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

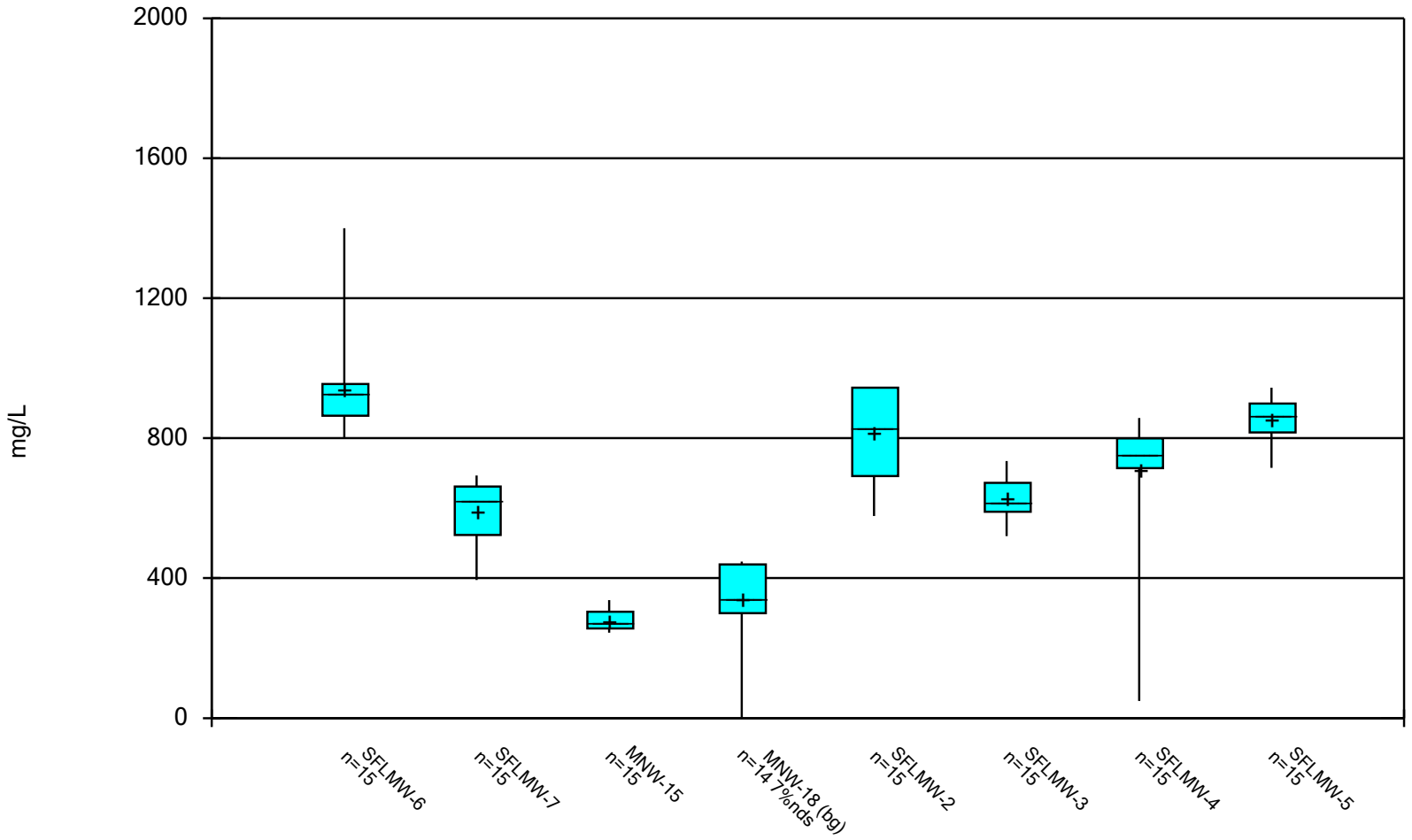
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

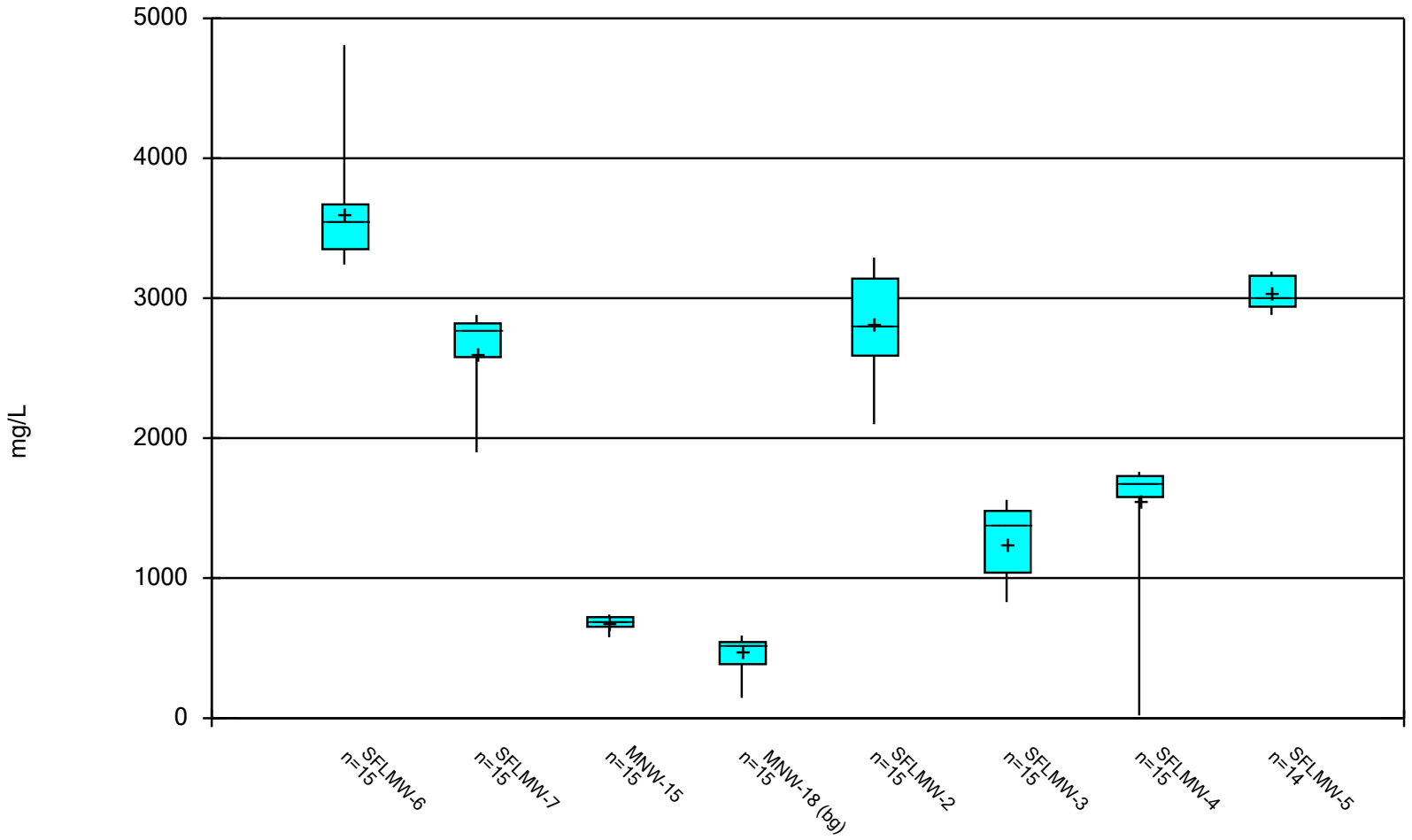
Box & Whiskers Plot



Constituent: Calcium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

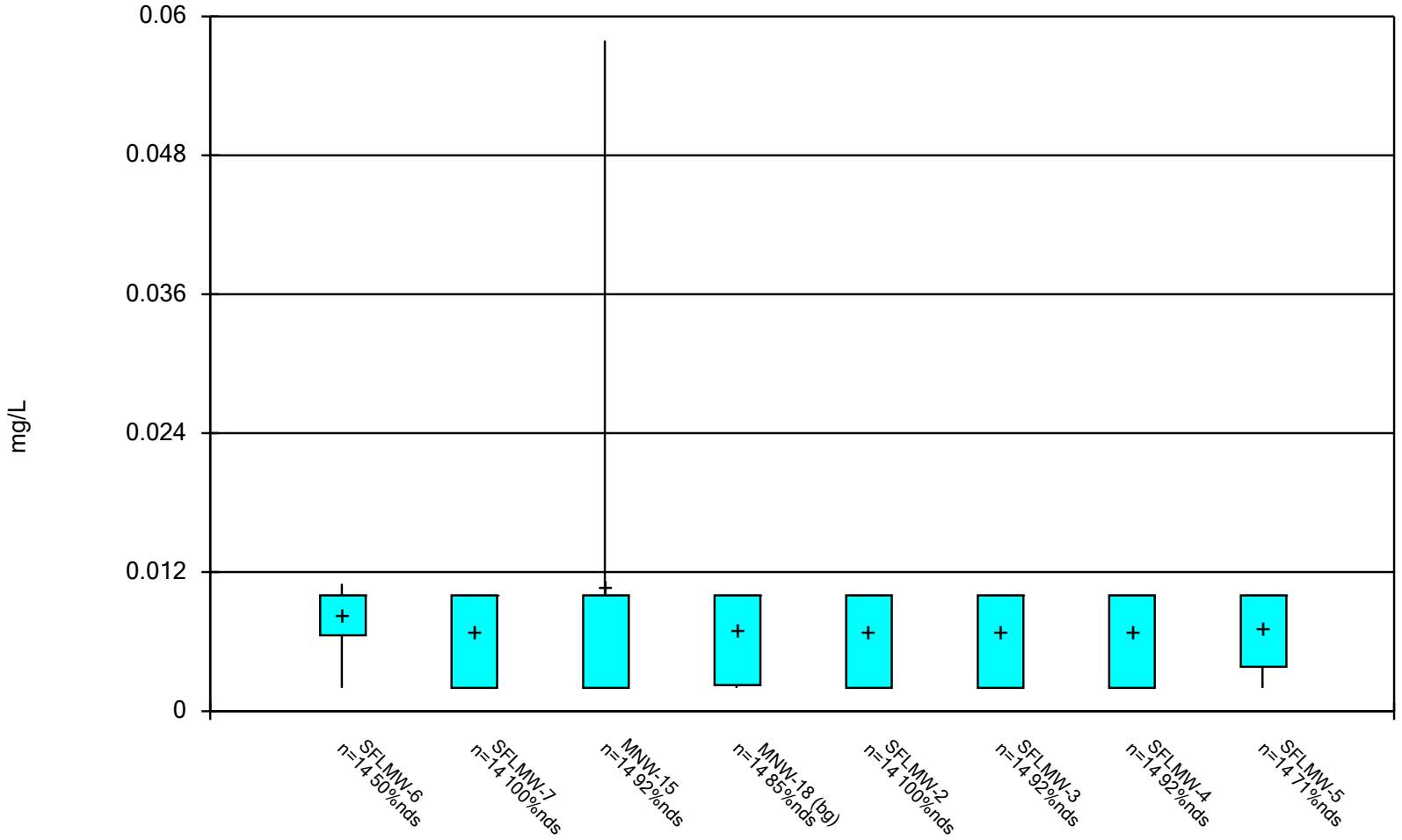
Box & Whiskers Plot



Constituent: Chloride Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

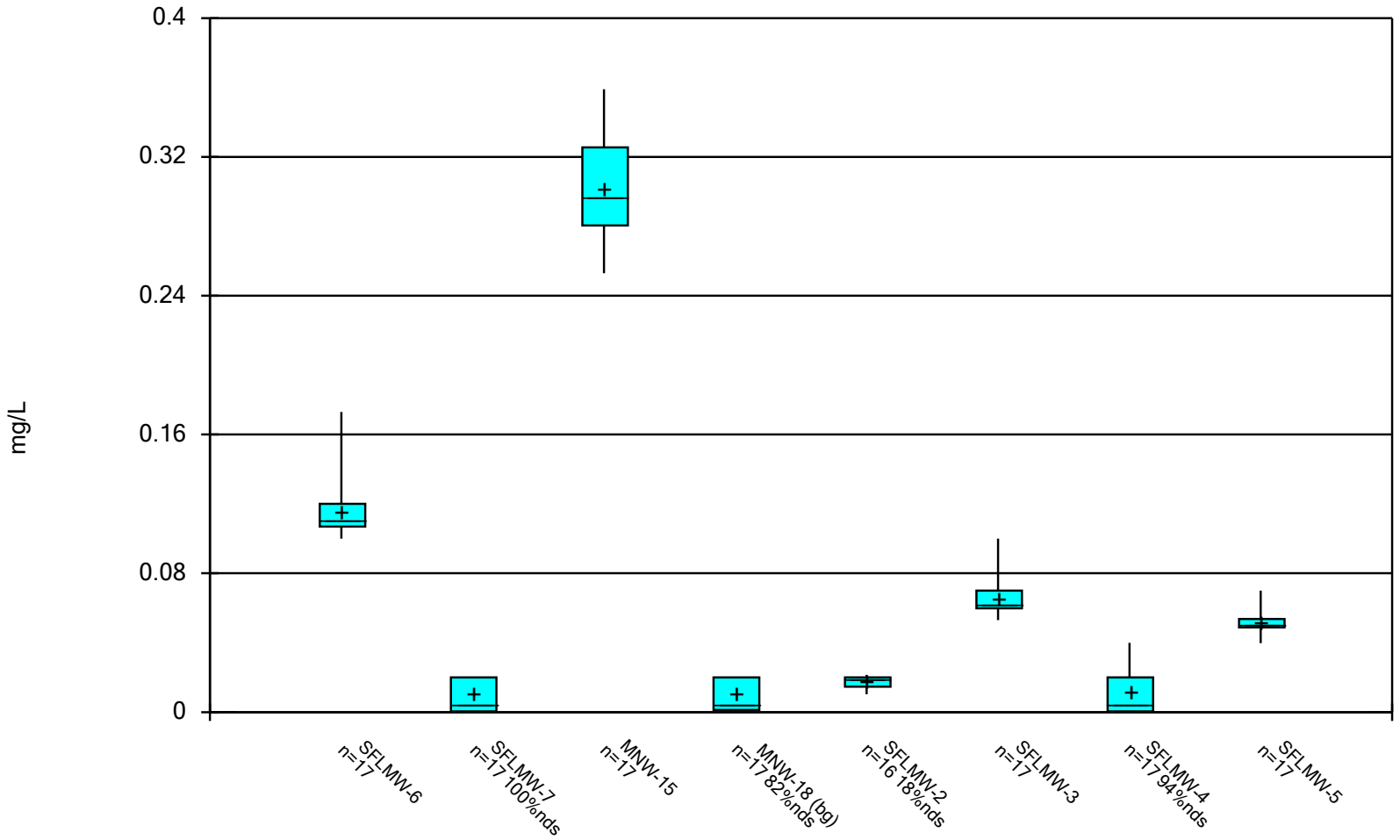
Box & Whiskers Plot



Constituent: Chromium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

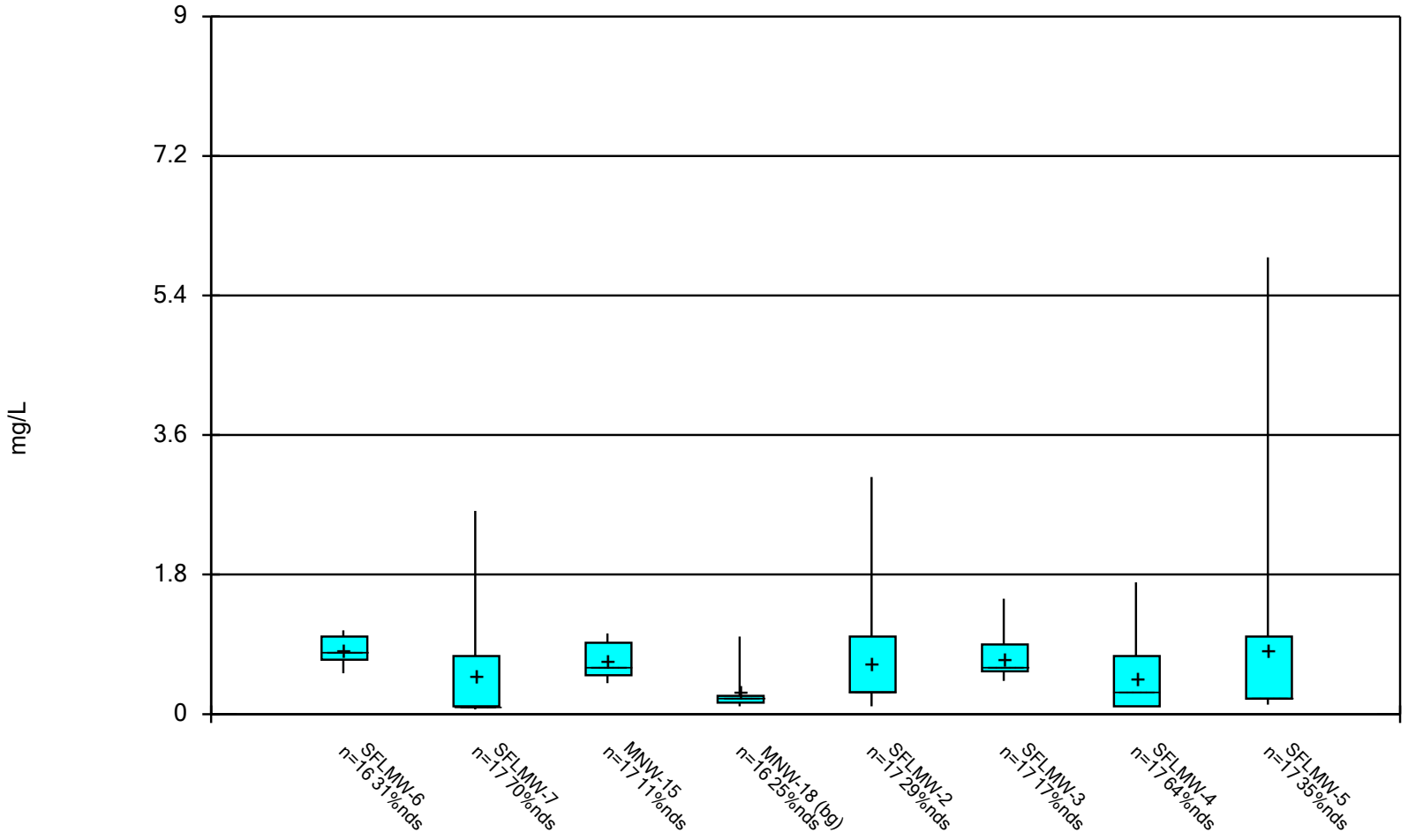
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

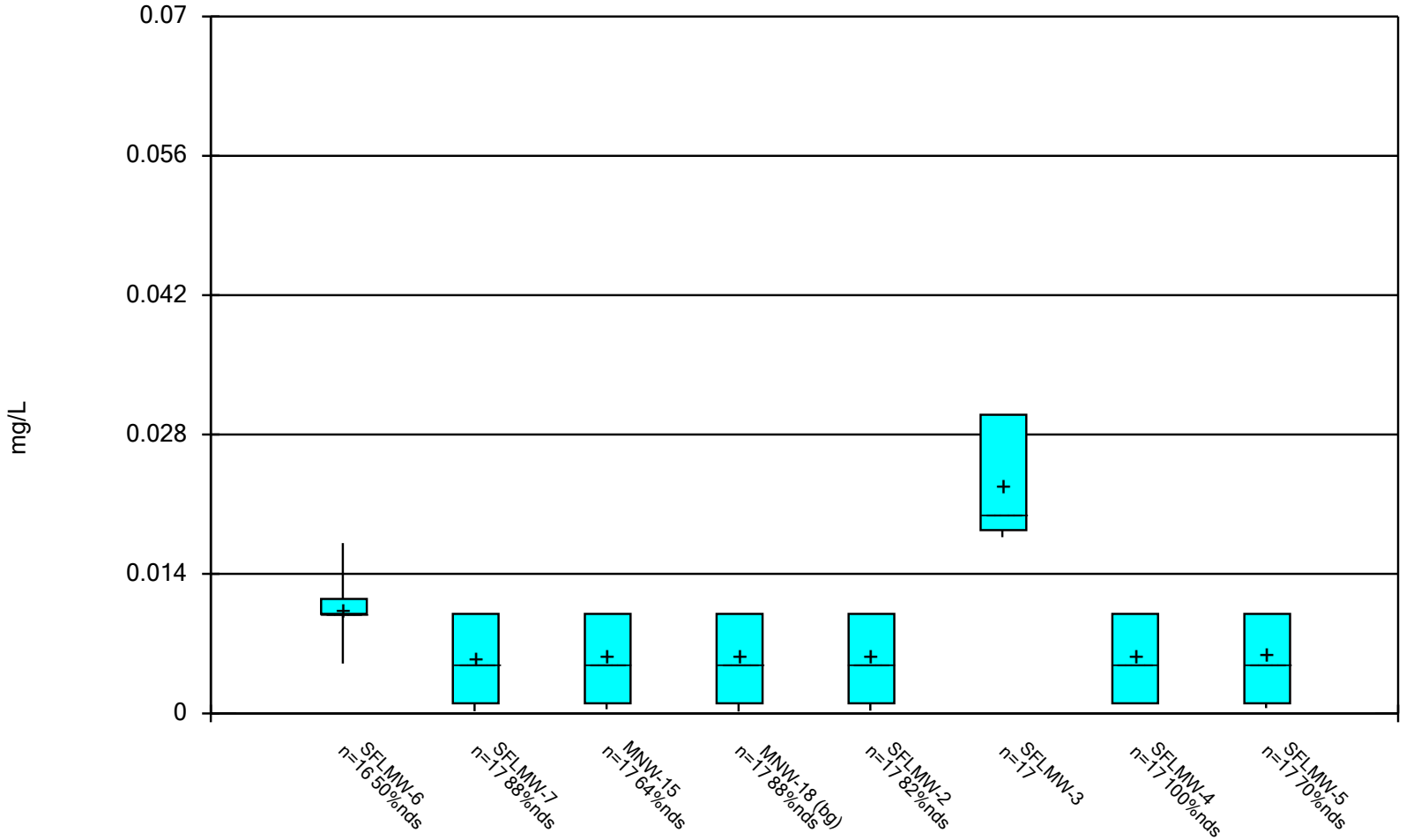
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

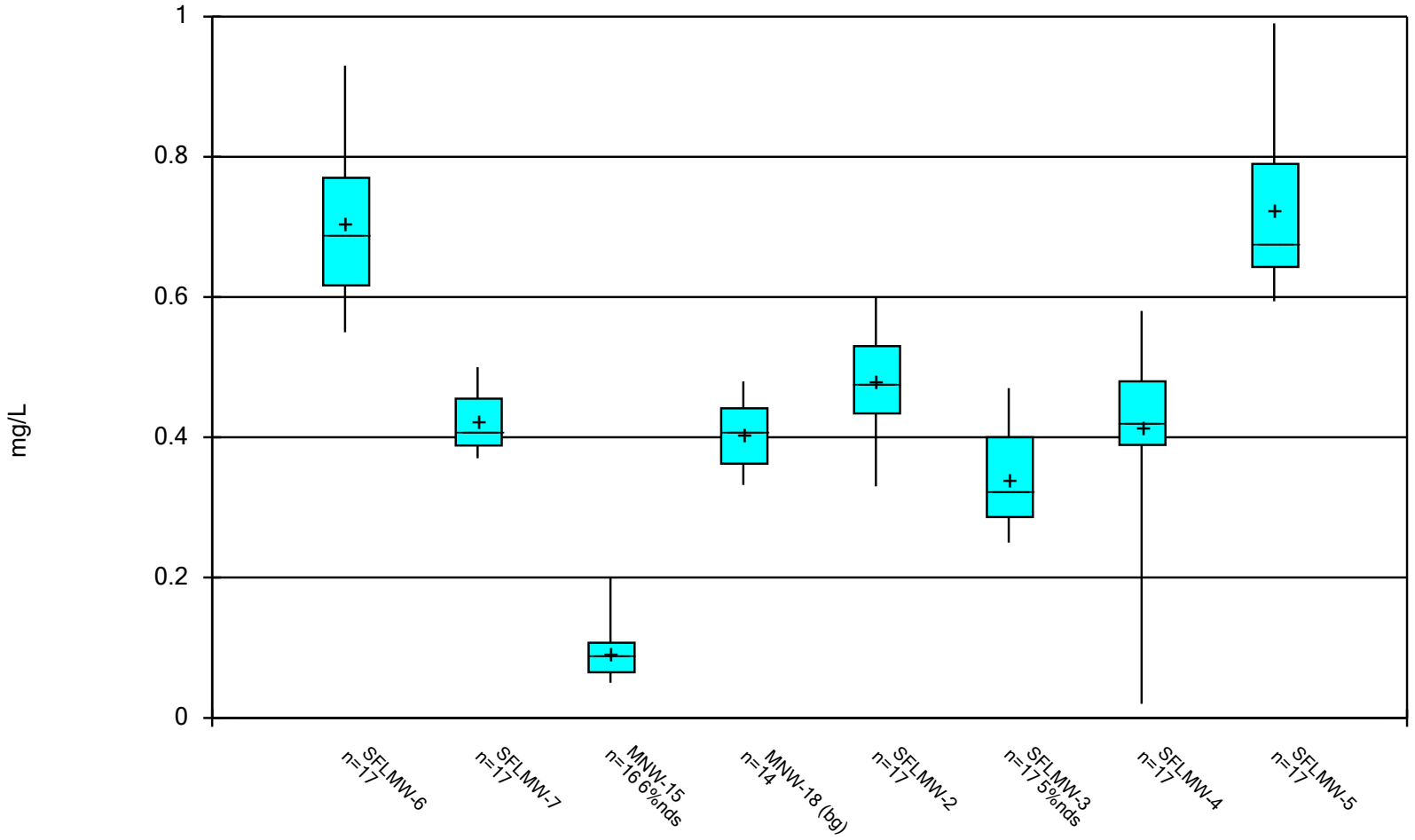
Box & Whiskers Plot



Constituent: Lead Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

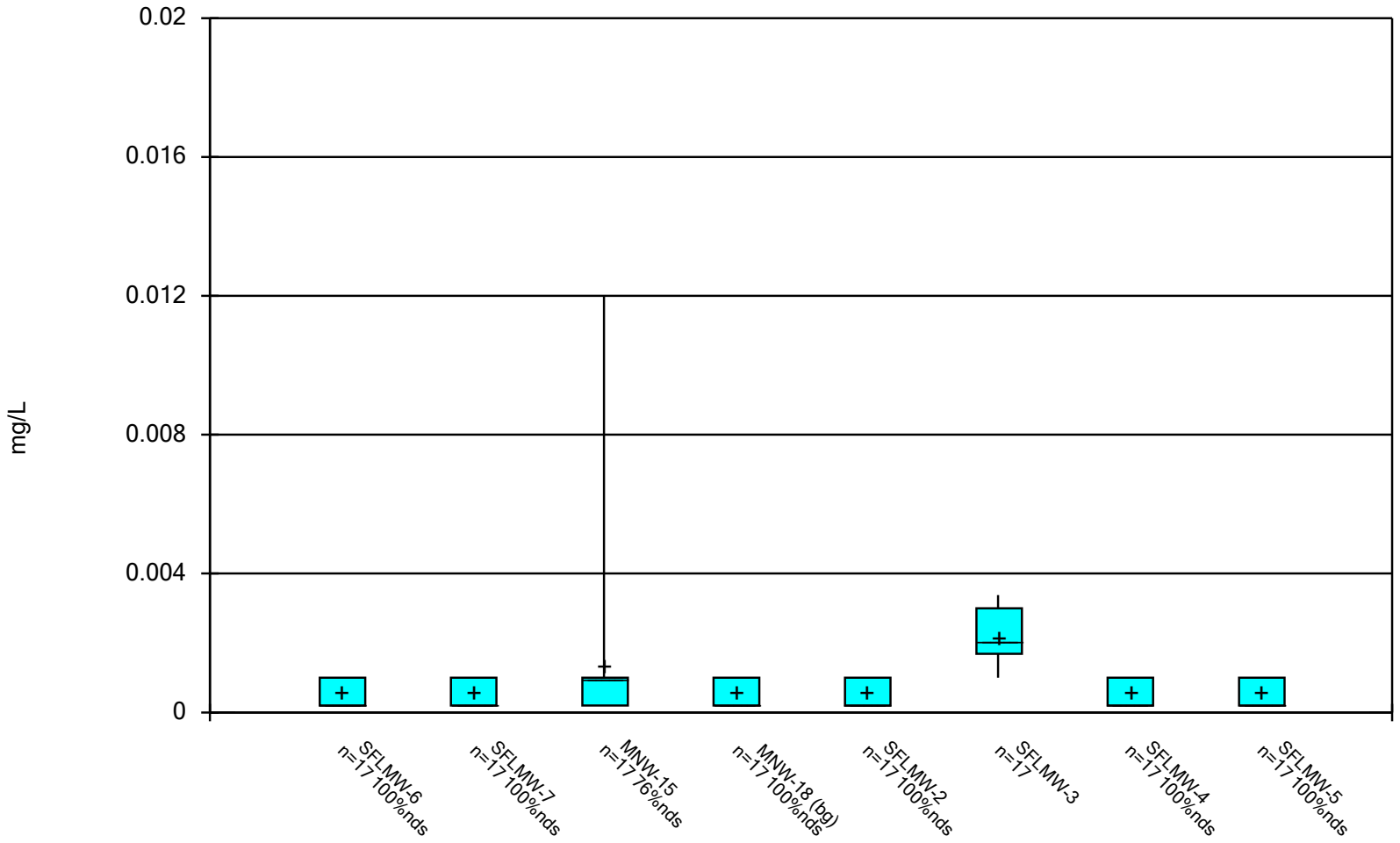
Box & Whiskers Plot



Constituent: Lithium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

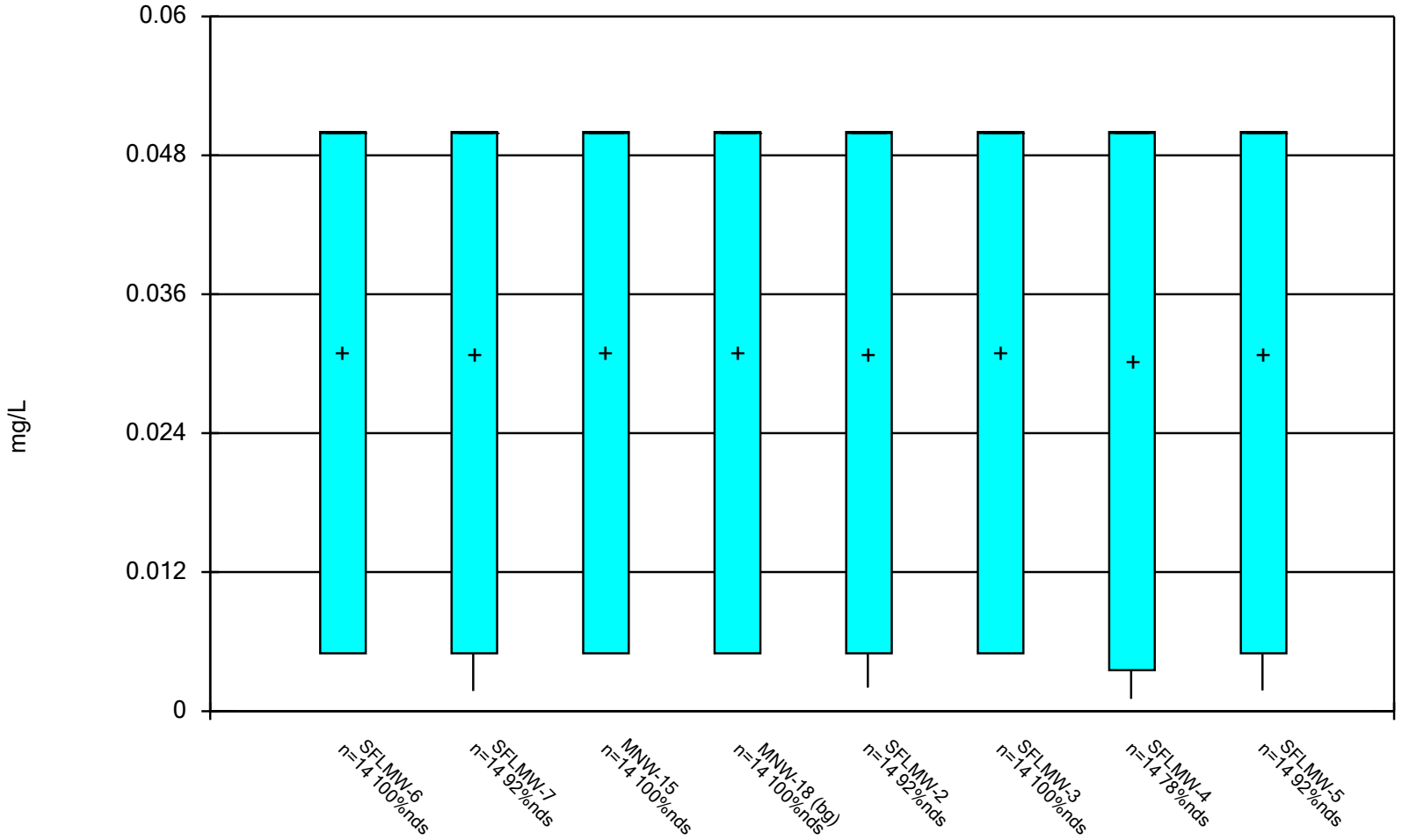
Box & Whiskers Plot



Constituent: Mercury Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

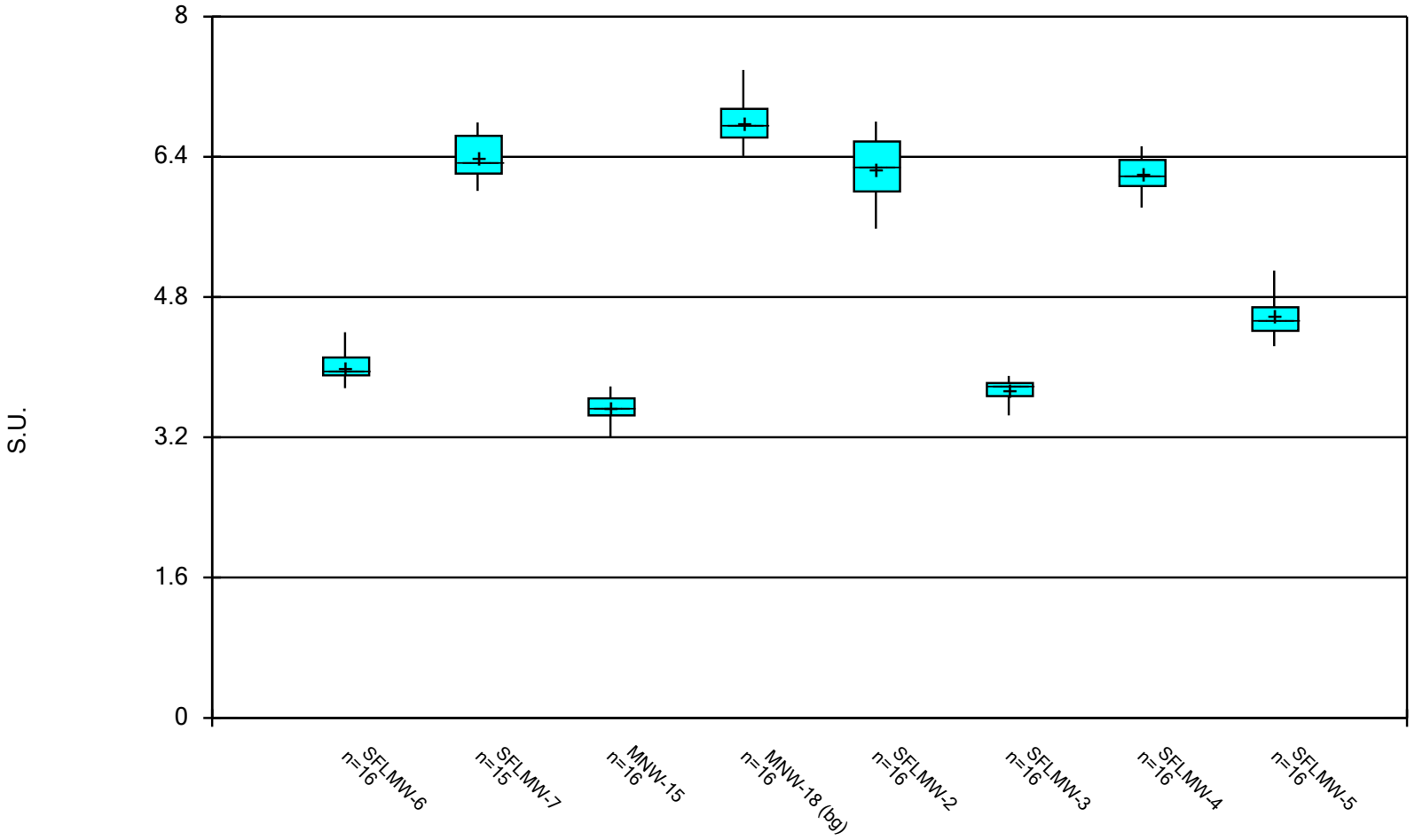
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

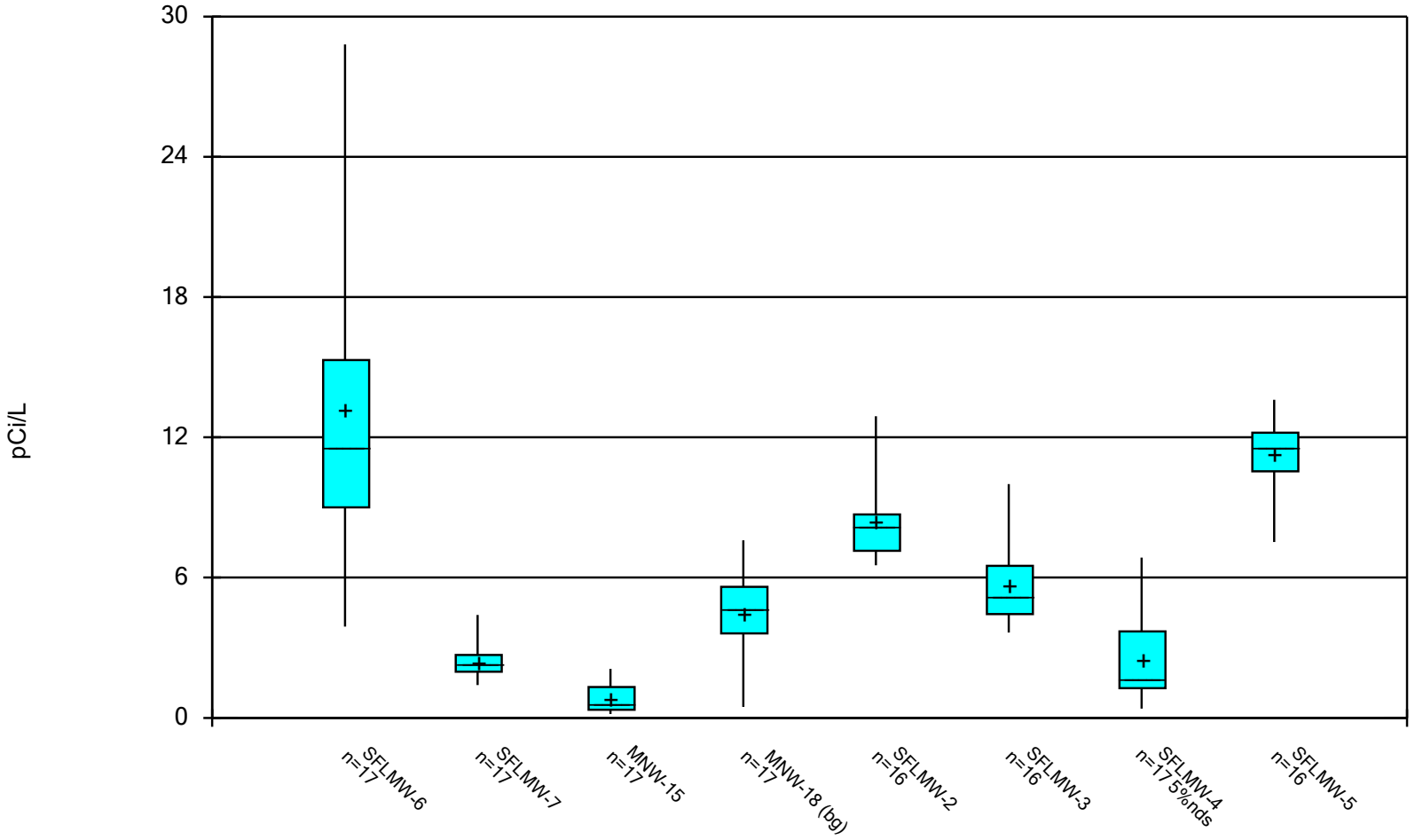
Box & Whiskers Plot



Constituent: pH Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

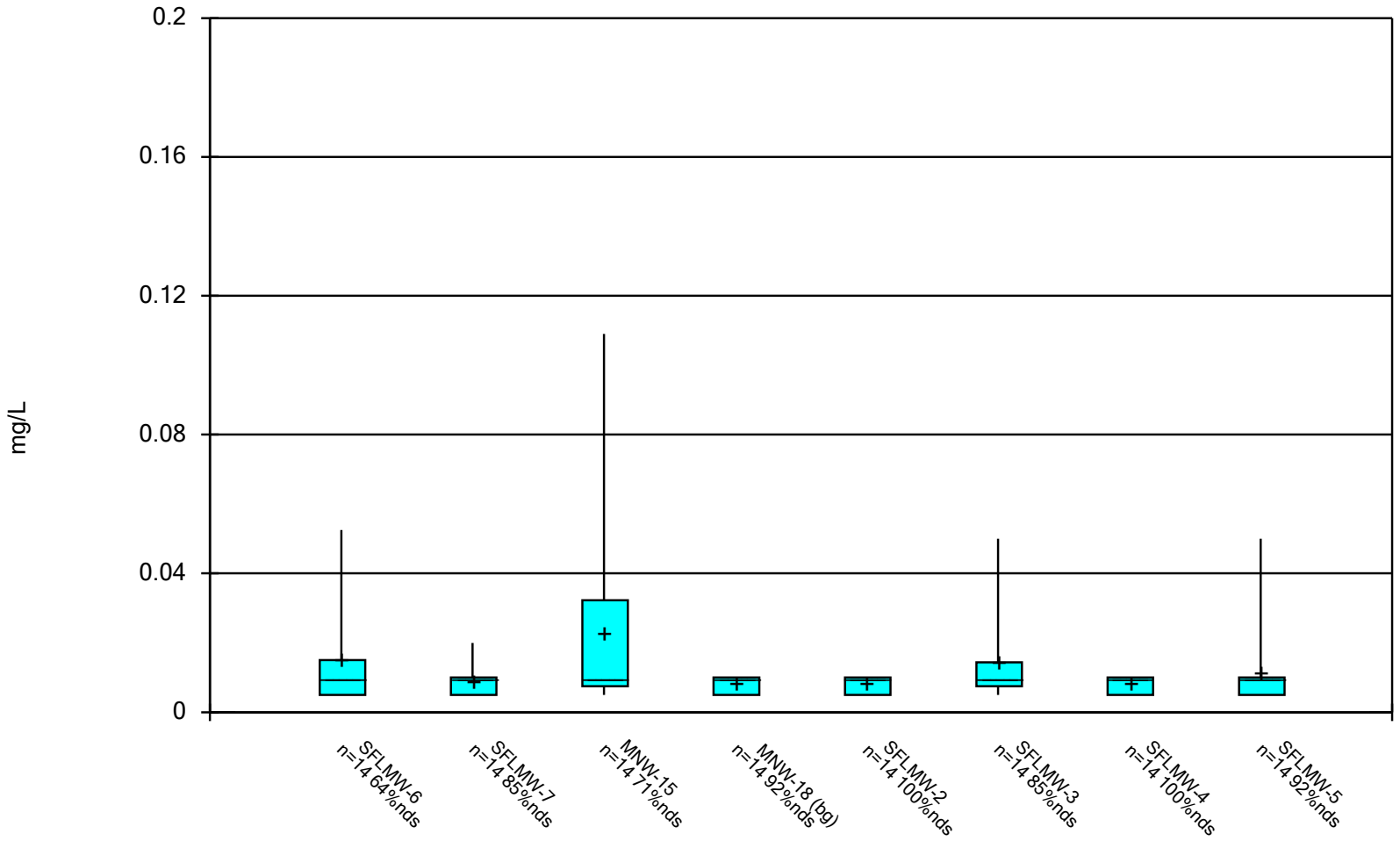
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

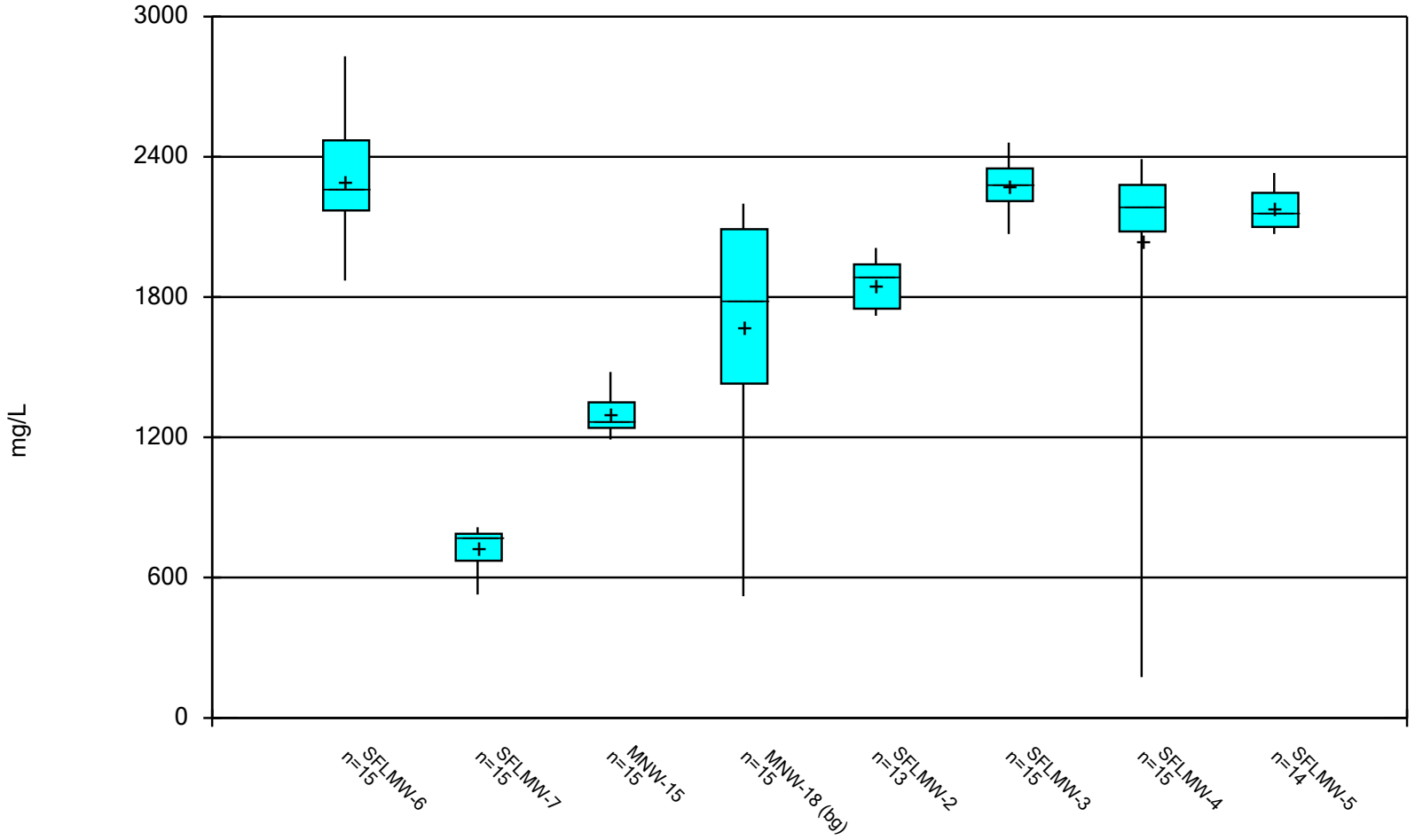
Box & Whiskers Plot



Constituent: Selenium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

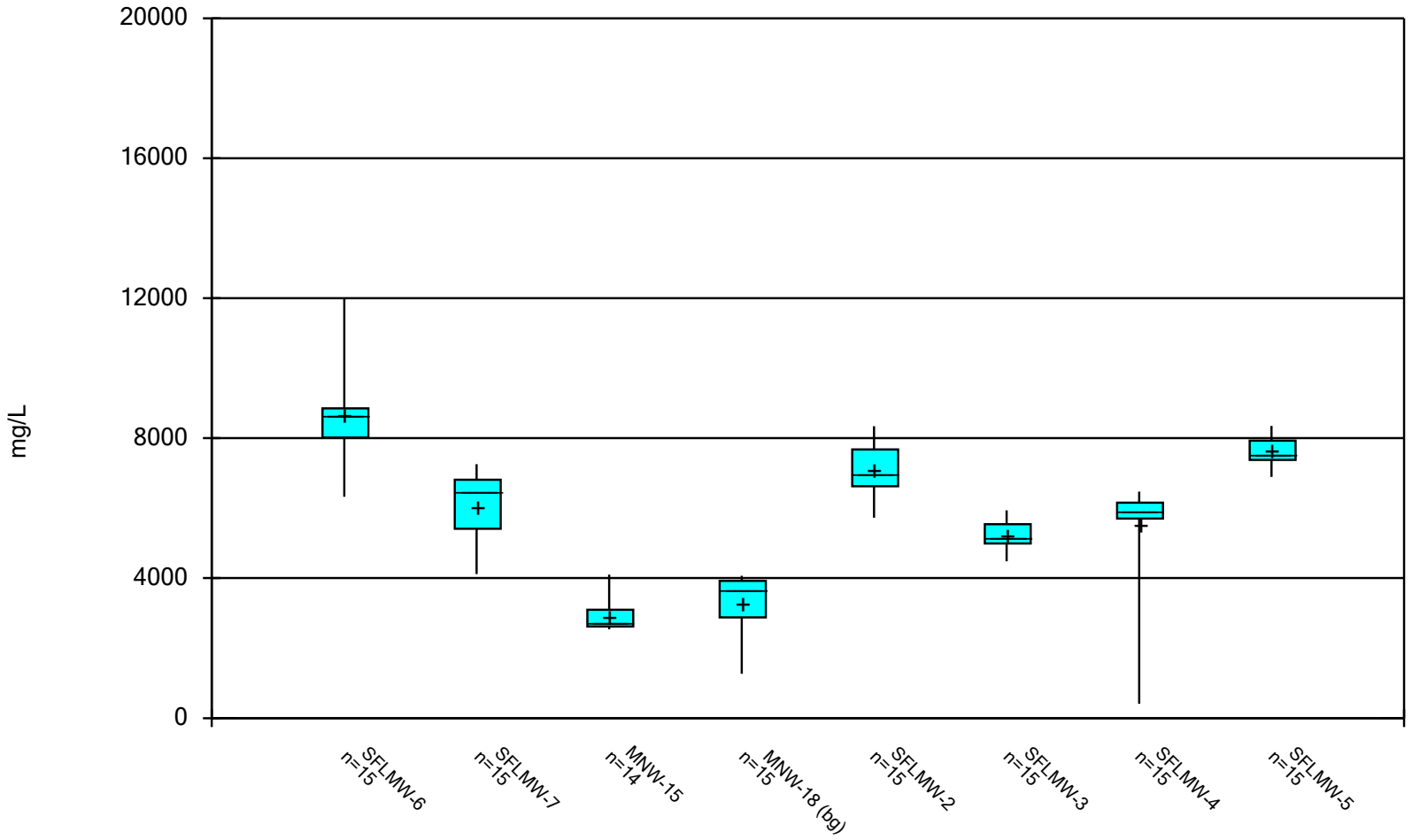
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

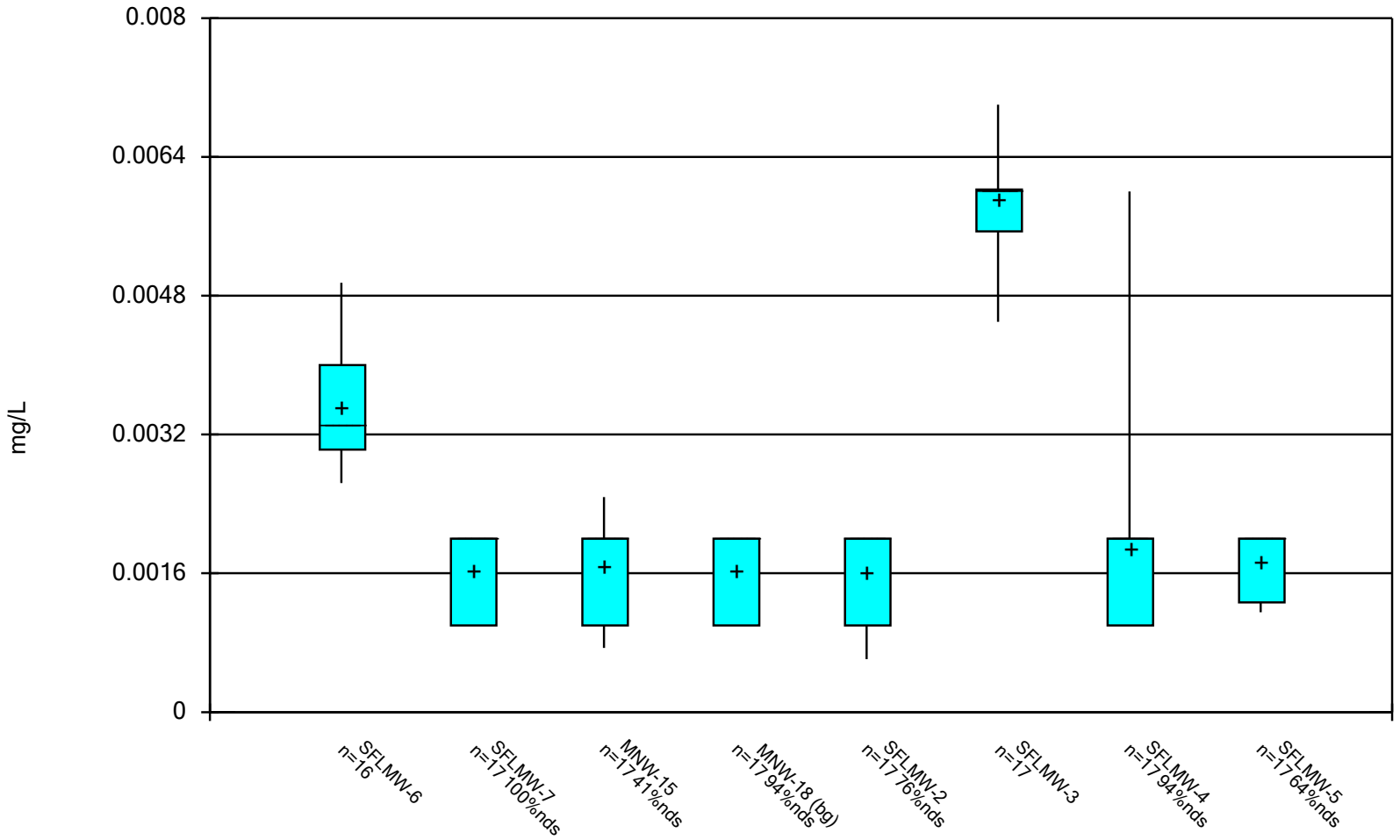
Box & Whiskers Plot



Constituent: TDS Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 10/19/2022 2:40 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:42 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	SFLMW-6	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-7	14	0.004183	0.002242	0.0005993	0.006	0.000579	0.006	85.71
Antimony (mg/L)	MNW-15	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	MNW-18 (bg)	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-2	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-3	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	SFLMW-4	14	0.004252	0.002151	0.0005747	0.006	0.000534	0.006	92.86
Antimony (mg/L)	SFLMW-5	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Arsenic (mg/L)	SFLMW-6	14	0.01413	0.005393	0.001441	0.01125	0.00892	0.025	28.57
Arsenic (mg/L)	SFLMW-7	14	0.006391	0.004449	0.001189	0.01	0.000479	0.01	92.86
Arsenic (mg/L)	MNW-15	13	0.009848	0.002162	0.0005995	0.01	0.00624	0.0153	61.54
Arsenic (mg/L)	MNW-18 (bg)	14	0.006738	0.004012	0.001072	0.01	0.001	0.01	71.43
Arsenic (mg/L)	SFLMW-2	14	0.006676	0.004075	0.001089	0.01	0.00147	0.01	64.29
Arsenic (mg/L)	SFLMW-3	14	0.009008	0.005458	0.001459	0.01	0.00303	0.025	64.29
Arsenic (mg/L)	SFLMW-4	14	0.006418	0.004413	0.001179	0.01	0.000786	0.01	85.71
Arsenic (mg/L)	SFLMW-5	14	0.008226	0.006207	0.001659	0.01	0.00145	0.025	64.29
Barium (mg/L)	SFLMW-6	12	0.04383	0.01518	0.004383	0.04	0.0247	0.08	0
Barium (mg/L)	SFLMW-7	13	0.04245	0.01912	0.005303	0.04	0.03	0.102	0
Barium (mg/L)	MNW-15	13	0.02105	0.005336	0.00148	0.02	0.0159	0.03	0
Barium (mg/L)	MNW-18 (bg)	13	0.04552	0.01577	0.004373	0.05	0.01	0.06	7.692
Barium (mg/L)	SFLMW-2	13	0.02476	0.004236	0.001175	0.0235	0.02	0.03	0
Barium (mg/L)	SFLMW-3	14	0.04264	0.04894	0.01308	0.03	0.013	0.2	7.143
Barium (mg/L)	SFLMW-4	13	0.026	0.005899	0.001636	0.0247	0.02	0.04	0
Barium (mg/L)	SFLMW-5	14	0.04249	0.04894	0.01308	0.02105	0.0157	0.2	7.143
Beryllium (mg/L)	SFLMW-6	16	0.05114	0.005835	0.001459	0.04995	0.0418	0.0646	0
Beryllium (mg/L)	SFLMW-7	17	0.002353	0.001115	0.0002704	0.003	0.001	0.004	100
Beryllium (mg/L)	MNW-15	17	0.07635	0.009389	0.002277	0.076	0.0606	0.091	0
Beryllium (mg/L)	MNW-18 (bg)	17	0.002305	0.001192	0.000289	0.003	0.000184	0.004	94.12
Beryllium (mg/L)	SFLMW-2	17	0.003475	0.002339	0.0005673	0.00247	0.001	0.00961	17.65
Beryllium (mg/L)	SFLMW-3	17	0.03517	0.003742	0.0009076	0.034	0.0289	0.042	0
Beryllium (mg/L)	SFLMW-4	17	0.002353	0.001115	0.0002704	0.003	0.001	0.004	100
Beryllium (mg/L)	SFLMW-5	16	0.01031	0.001094	0.0002736	0.0102	0.008	0.0123	0
Boron (mg/L)	SFLMW-6	13	0.3425	0.08523	0.02364	0.35	0.16	0.5	0
Boron (mg/L)	SFLMW-7	14	0.7993	0.09891	0.02643	0.7935	0.59	1	7.143
Boron (mg/L)	MNW-15	15	9.496	1.235	0.3189	9.26	8.3	12.8	0
Boron (mg/L)	MNW-18 (bg)	13	0.3913	0.124	0.03439	0.44	0.0451	0.54	0
Boron (mg/L)	SFLMW-2	13	0.5673	0.1192	0.03305	0.55	0.464	0.945	0
Boron (mg/L)	SFLMW-3	15	3.212	0.743	0.1919	2.93	2.4	5	0
Boron (mg/L)	SFLMW-4	13	0.6398	0.07515	0.02084	0.61	0.55	0.809	0
Boron (mg/L)	SFLMW-5	15	4.143	0.8534	0.2203	4.08	2.8	6.04	0
Cadmium (mg/L)	SFLMW-6	17	0.01045	0.001447	0.000351	0.0104	0.007	0.013	0
Cadmium (mg/L)	SFLMW-7	17	0.003309	0.002091	0.0005071	0.005	0.00025	0.005	94.12
Cadmium (mg/L)	MNW-15	17	0.07341	0.02921	0.007084	0.0886	0.0269	0.116	0
Cadmium (mg/L)	MNW-18 (bg)	17	0.003353	0.002029	0.0004922	0.005	0.001	0.005	100
Cadmium (mg/L)	SFLMW-2	17	0.00382	0.001563	0.0003791	0.005	0.000761	0.005	64.71
Cadmium (mg/L)	SFLMW-3	17	0.007202	0.001235	0.0002996	0.007	0.0056	0.01	0
Cadmium (mg/L)	SFLMW-4	17	0.003353	0.002029	0.0004922	0.005	0.001	0.005	100
Cadmium (mg/L)	SFLMW-5	17	0.00502	0.0004759	0.0001154	0.005	0.00385	0.006	35.29
Calcium (mg/L)	SFLMW-6	15	942.7	137.8	35.57	929	800	1400	0
Calcium (mg/L)	SFLMW-7	15	588.5	96.58	24.94	620	395	693	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:42 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Calcium (mg/L)	MNW-15	15	278.6	30.11	7.775	269	244	337	0
Calcium (mg/L)	MNW-18 (bg)	14	341.3	114.1	30.5	340	0.5	447	7.143
Calcium (mg/L)	SFLMW-2	15	814.8	127.7	32.98	829	578	946	0
Calcium (mg/L)	SFLMW-3	15	629.9	60.12	15.52	615	520	735	0
Calcium (mg/L)	SFLMW-4	15	711.9	189.7	48.99	752	48.9	858	0
Calcium (mg/L)	SFLMW-5	15	851.4	59.92	15.47	864	715	944	0
Chloride (mg/L)	SFLMW-6	15	3601	368.3	95.09	3560	3240	4810	0
Chloride (mg/L)	SFLMW-7	15	2603	351.2	90.67	2770	1900	2880	0
Chloride (mg/L)	MNW-15	15	674.9	56.15	14.5	688	578	740	0
Chloride (mg/L)	MNW-18 (bg)	15	470.2	112.5	29.05	521	146	590	0
Chloride (mg/L)	SFLMW-2	15	2817	332.5	85.86	2810	2100	3290	0
Chloride (mg/L)	SFLMW-3	15	1247	249.6	64.45	1390	829	1560	0
Chloride (mg/L)	SFLMW-4	15	1557	435.2	112.4	1680	19.1	1760	0
Chloride (mg/L)	SFLMW-5	14	3034	105.6	28.22	3015	2880	3190	0
Chromium (mg/L)	SFLMW-6	14	0.008429	0.002583	0.0006903	0.01	0.002	0.011	50
Chromium (mg/L)	SFLMW-7	14	0.006786	0.003926	0.001049	0.01	0.002	0.01	100
Chromium (mg/L)	MNW-15	14	0.01078	0.01405	0.003756	0.01	0.002	0.0579	92.86
Chromium (mg/L)	MNW-18 (bg)	14	0.007119	0.003636	0.0009717	0.01	0.002	0.01	85.71
Chromium (mg/L)	SFLMW-2	14	0.006786	0.003926	0.001049	0.01	0.002	0.01	100
Chromium (mg/L)	SFLMW-3	14	0.006814	0.00389	0.00104	0.01	0.002	0.01	92.86
Chromium (mg/L)	SFLMW-4	14	0.006914	0.003785	0.001011	0.01	0.002	0.01	92.86
Chromium (mg/L)	SFLMW-5	14	0.007249	0.003381	0.0009035	0.01	0.002	0.01	71.43
Cobalt (mg/L)	SFLMW-6	17	0.1161	0.01653	0.004009	0.111	0.1	0.173	0
Cobalt (mg/L)	SFLMW-7	17	0.01032	0.009502	0.002304	0.005	0.0005	0.02	100
Cobalt (mg/L)	MNW-15	17	0.3015	0.0319	0.007736	0.297	0.253	0.359	0
Cobalt (mg/L)	MNW-18 (bg)	17	0.01048	0.009339	0.002265	0.005	0.0005	0.02	82.35
Cobalt (mg/L)	SFLMW-2	16	0.01756	0.003872	0.0009681	0.02	0.0103	0.0214	18.75
Cobalt (mg/L)	SFLMW-3	17	0.06578	0.01068	0.00259	0.0622	0.053	0.1	0
Cobalt (mg/L)	SFLMW-4	17	0.0115	0.01175	0.002849	0.005	0.0005	0.04	94.12
Cobalt (mg/L)	SFLMW-5	17	0.05152	0.006863	0.001664	0.05	0.0398	0.07	0
Fluoride (mg/L)	SFLMW-6	16	0.8336	0.1727	0.04317	0.8	0.527	1.08	31.25
Fluoride (mg/L)	SFLMW-7	17	0.4806	0.6523	0.1582	0.1	0.0599	2.62	70.59
Fluoride (mg/L)	MNW-15	17	0.6869	0.2248	0.05453	0.617	0.4	1.04	11.76
Fluoride (mg/L)	MNW-18 (bg)	16	0.2837	0.2835	0.07087	0.2	0.1	1	25
Fluoride (mg/L)	SFLMW-2	17	0.6559	0.7073	0.1715	0.3	0.1	3.06	29.41
Fluoride (mg/L)	SFLMW-3	17	0.7141	0.2696	0.06539	0.6	0.427	1.49	17.65
Fluoride (mg/L)	SFLMW-4	17	0.464	0.462	0.1121	0.3	0.1	1.7	64.71
Fluoride (mg/L)	SFLMW-5	17	0.8208	1.362	0.3304	0.2	0.122	5.89	35.29
Lead (mg/L)	SFLMW-6	16	0.01034	0.003242	0.0008105	0.01	0.005	0.0171	50
Lead (mg/L)	SFLMW-7	17	0.005672	0.00441	0.00107	0.005	0.000208	0.01	88.24
Lead (mg/L)	MNW-15	17	0.005809	0.004279	0.001038	0.005	0.000404	0.01	64.71
Lead (mg/L)	MNW-18 (bg)	17	0.005717	0.004355	0.001056	0.005	0.000183	0.01	88.24
Lead (mg/L)	SFLMW-2	17	0.005743	0.004324	0.001049	0.005	0.000272	0.01	82.35
Lead (mg/L)	SFLMW-3	17	0.02282	0.005515	0.001338	0.02	0.0177	0.03	0
Lead (mg/L)	SFLMW-4	17	0.005765	0.004294	0.001042	0.005	0.001	0.01	100
Lead (mg/L)	SFLMW-5	17	0.005917	0.004208	0.001021	0.005	0.000527	0.01	70.59
Lithium (mg/L)	SFLMW-6	17	0.7035	0.1124	0.02727	0.69	0.55	0.93	0
Lithium (mg/L)	SFLMW-7	17	0.4219	0.03855	0.00935	0.408	0.37	0.5	0
Lithium (mg/L)	MNW-15	16	0.09068	0.03692	0.009231	0.0899	0.05	0.2	6.25
Lithium (mg/L)	MNW-18 (bg)	14	0.4045	0.04481	0.01198	0.4065	0.332	0.48	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:42 PM

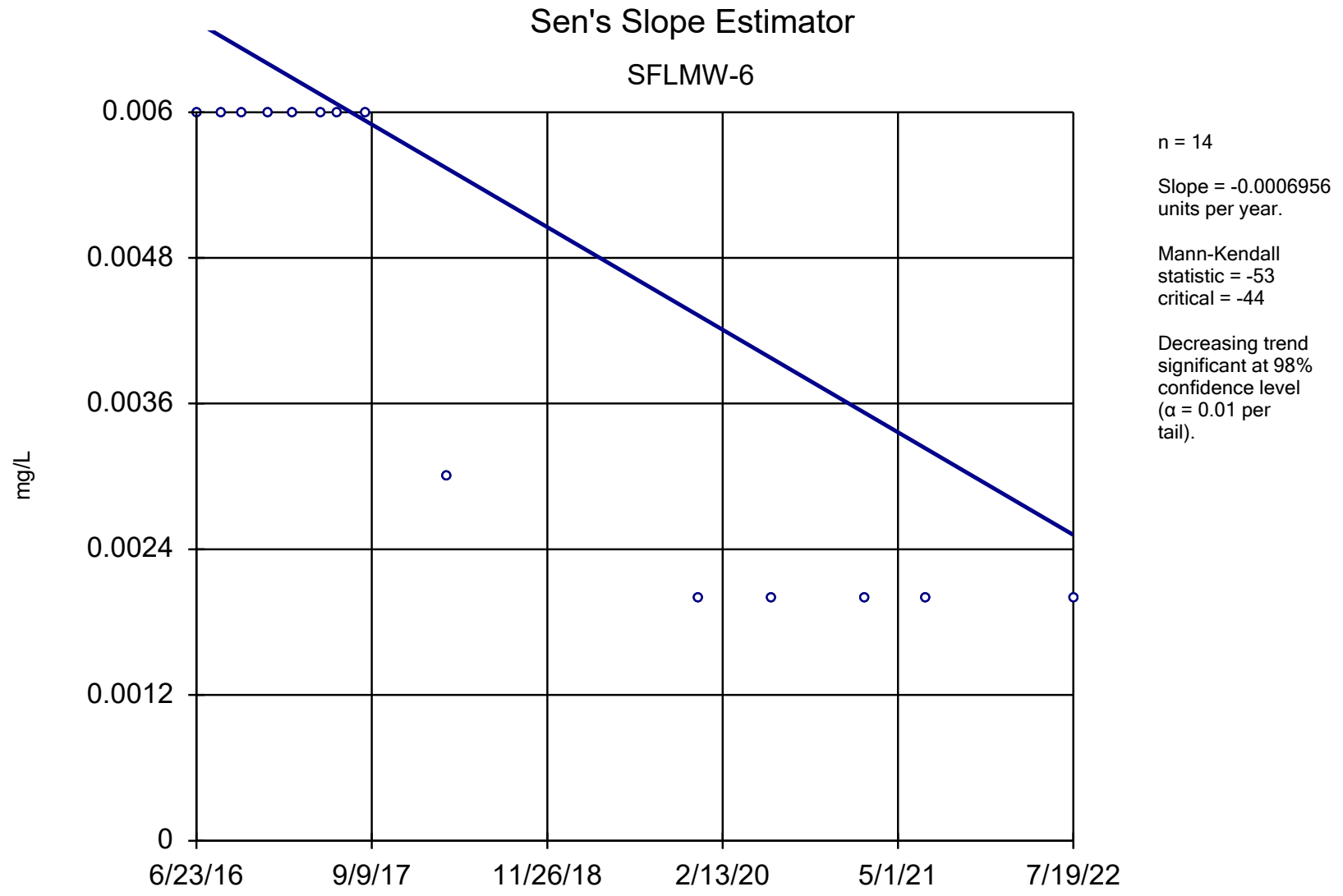
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Lithium (mg/L)	SFLMW-2	17	0.481	0.0734	0.0178	0.476	0.33	0.6	0
Lithium (mg/L)	SFLMW-3	17	0.3378	0.06879	0.01668	0.322	0.25	0.47	5.882
Lithium (mg/L)	SFLMW-4	17	0.4139	0.1188	0.02882	0.42	0.02	0.58	0
Lithium (mg/L)	SFLMW-5	17	0.7224	0.1162	0.02819	0.677	0.594	0.99	0
Mercury (mg/L)	SFLMW-6	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	SFLMW-7	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	MNW-15	17	0.001323	0.002778	0.0006737	0.000949	0.0002	0.012	76.47
Mercury (mg/L)	MNW-18 (bg)	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	SFLMW-2	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	SFLMW-3	17	0.002176	0.0007059	0.0001712	0.002	0.001	0.00338	0
Mercury (mg/L)	SFLMW-4	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	SFLMW-5	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Molybdenum (mg/L)	SFLMW-6	14	0.03107	0.02272	0.006071	0.05	0.005	0.05	100
Molybdenum (mg/L)	SFLMW-7	14	0.03084	0.02302	0.006153	0.05	0.00173	0.05	92.86
Molybdenum (mg/L)	MNW-15	14	0.03107	0.02272	0.006071	0.05	0.005	0.05	100
Molybdenum (mg/L)	MNW-18 (bg)	14	0.03107	0.02272	0.006071	0.05	0.005	0.05	100
Molybdenum (mg/L)	SFLMW-2	14	0.03086	0.02299	0.006145	0.05	0.00202	0.05	92.86
Molybdenum (mg/L)	SFLMW-3	14	0.03107	0.02272	0.006071	0.05	0.005	0.05	100
Molybdenum (mg/L)	SFLMW-4	14	0.03036	0.02362	0.006312	0.05	0.00106	0.05	78.57
Molybdenum (mg/L)	SFLMW-5	14	0.03084	0.02301	0.006151	0.05	0.0018	0.05	92.86
pH (S.U.)	SFLMW-6	16	3.999	0.1641	0.04102	3.965	3.76	4.4	0
pH (S.U.)	SFLMW-7	15	6.389	0.2319	0.05988	6.34	6.01	6.79	0
pH (S.U.)	MNW-15	16	3.539	0.1506	0.03765	3.55	3.21	3.78	0
pH (S.U.)	MNW-18 (bg)	16	6.792	0.254	0.06349	6.76	6.41	7.39	0
pH (S.U.)	SFLMW-2	16	6.251	0.3868	0.0967	6.285	5.58	6.8	0
pH (S.U.)	SFLMW-3	16	3.74	0.128	0.032	3.795	3.45	3.9	0
pH (S.U.)	SFLMW-4	16	6.204	0.2011	0.05027	6.175	5.82	6.52	0
pH (S.U.)	SFLMW-5	16	4.586	0.2571	0.06426	4.535	4.24	5.1	0
Radium 226 + 228 (pCi/L)	SFLMW-6	17	13.2	6.723	1.631	11.6	3.9	28.8	0
Radium 226 + 228 (pCi/L)	SFLMW-7	17	2.429	0.6916	0.1677	2.3	1.4	4.4	0
Radium 226 + 228 (pCi/L)	MNW-15	17	0.804	0.5985	0.1452	0.577	0.167	2.1	0
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	17	4.499	1.92	0.4656	4.61	0.47	7.6	0
Radium 226 + 228 (pCi/L)	SFLMW-2	16	8.412	1.788	0.4469	8.16	6.53	12.9	0
Radium 226 + 228 (pCi/L)	SFLMW-3	16	5.678	1.743	0.4358	5.215	3.65	10	0
Radium 226 + 228 (pCi/L)	SFLMW-4	17	2.492	1.801	0.4369	1.66	0.4	6.85	5.882
Radium 226 + 228 (pCi/L)	SFLMW-5	16	11.29	1.626	0.4066	11.55	7.52	13.6	0
Selenium (mg/L)	SFLMW-6	14	0.01518	0.01576	0.004213	0.01	0.005	0.0525	64.29
Selenium (mg/L)	SFLMW-7	14	0.008929	0.004009	0.001071	0.01	0.005	0.02	85.71
Selenium (mg/L)	MNW-15	14	0.02275	0.02815	0.007523	0.01	0.005	0.109	71.43
Selenium (mg/L)	MNW-18 (bg)	14	0.008214	0.002486	0.0006645	0.01	0.005	0.01	92.86
Selenium (mg/L)	SFLMW-2	14	0.008214	0.002486	0.0006645	0.01	0.005	0.01	100
Selenium (mg/L)	SFLMW-3	14	0.01463	0.01363	0.003642	0.01	0.005	0.05	85.71
Selenium (mg/L)	SFLMW-4	14	0.008214	0.002486	0.0006645	0.01	0.005	0.01	100
Selenium (mg/L)	SFLMW-5	14	0.01142	0.01134	0.003031	0.01	0.005	0.05	92.86
Sulfate (mg/L)	SFLMW-6	15	2294	225.5	58.23	2260	1870	2830	0
Sulfate (mg/L)	SFLMW-7	15	728.2	89	22.98	770	528	816	0
Sulfate (mg/L)	MNW-15	15	1295	84	21.69	1270	1190	1480	0
Sulfate (mg/L)	MNW-18 (bg)	15	1675	451.9	116.7	1790	520	2200	0
Sulfate (mg/L)	SFLMW-2	13	1852	105.8	29.33	1890	1720	2010	0
Sulfate (mg/L)	SFLMW-3	15	2275	110.7	28.58	2280	2070	2460	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:42 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Sulfate (mg/L)	SFLMW-4	15	2042	533.2	137.7	2190	174	2390	0
Sulfate (mg/L)	SFLMW-5	14	2176	79.96	21.37	2160	2070	2330	0
TDS (mg/L)	SFLMW-6	15	8638	1402	361.9	8640	6330	12000	0
TDS (mg/L)	SFLMW-7	15	6027	1025	264.6	6460	4120	7260	0
TDS (mg/L)	MNW-15	14	2906	439.6	117.5	2710	2540	4100	0
TDS (mg/L)	MNW-18 (bg)	15	3303	798.3	206.1	3670	1270	4070	0
TDS (mg/L)	SFLMW-2	15	7063	740.4	191.2	6940	5730	8340	0
TDS (mg/L)	SFLMW-3	15	5212	385.2	99.45	5180	4480	5940	0
TDS (mg/L)	SFLMW-4	15	5558	1450	374.4	5900	411	6470	0
TDS (mg/L)	SFLMW-5	15	7637	376.4	97.19	7530	6890	8350	0
Thallium (mg/L)	SFLMW-6	16	0.003508	0.0006022	0.0001506	0.00331	0.00264	0.00495	0
Thallium (mg/L)	SFLMW-7	17	0.001647	0.0004926	0.0001195	0.002	0.001	0.002	100
Thallium (mg/L)	MNW-15	17	0.001693	0.0005925	0.0001437	0.002	0.000739	0.00248	41.18
Thallium (mg/L)	MNW-18 (bg)	17	0.001647	0.0004926	0.0001195	0.002	0.001	0.002	94.12
Thallium (mg/L)	SFLMW-2	17	0.001604	0.0005605	0.0001359	0.002	0.000612	0.002	76.47
Thallium (mg/L)	SFLMW-3	17	0.005901	0.000582	0.0001412	0.006	0.0045	0.007	0
Thallium (mg/L)	SFLMW-4	17	0.001882	0.001166	0.0002829	0.002	0.001	0.006	94.12
Thallium (mg/L)	SFLMW-5	17	0.001728	0.0003836	0.0000...	0.002	0.00115	0.002	64.71

Hollow symbols indicate censored values.

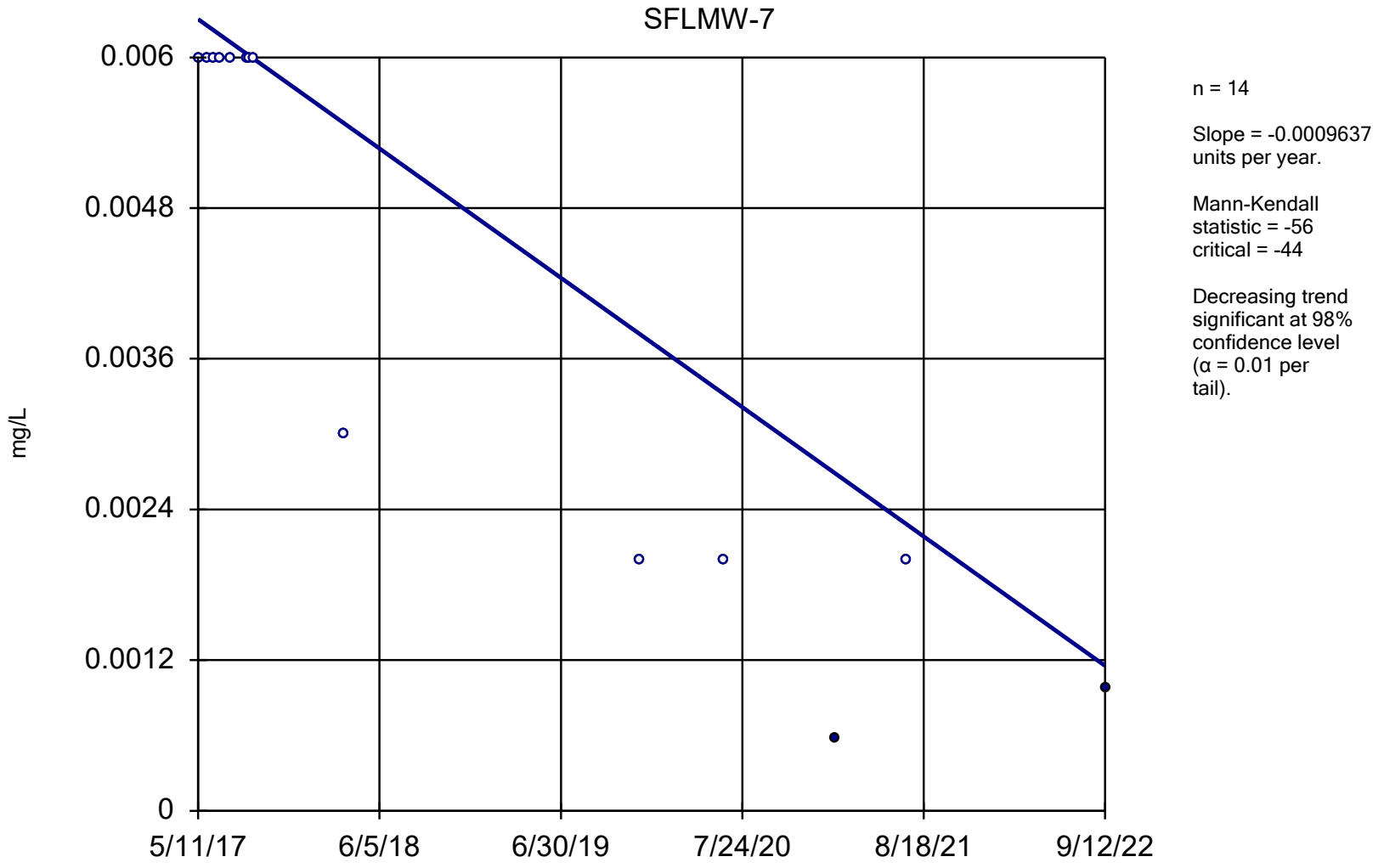


Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

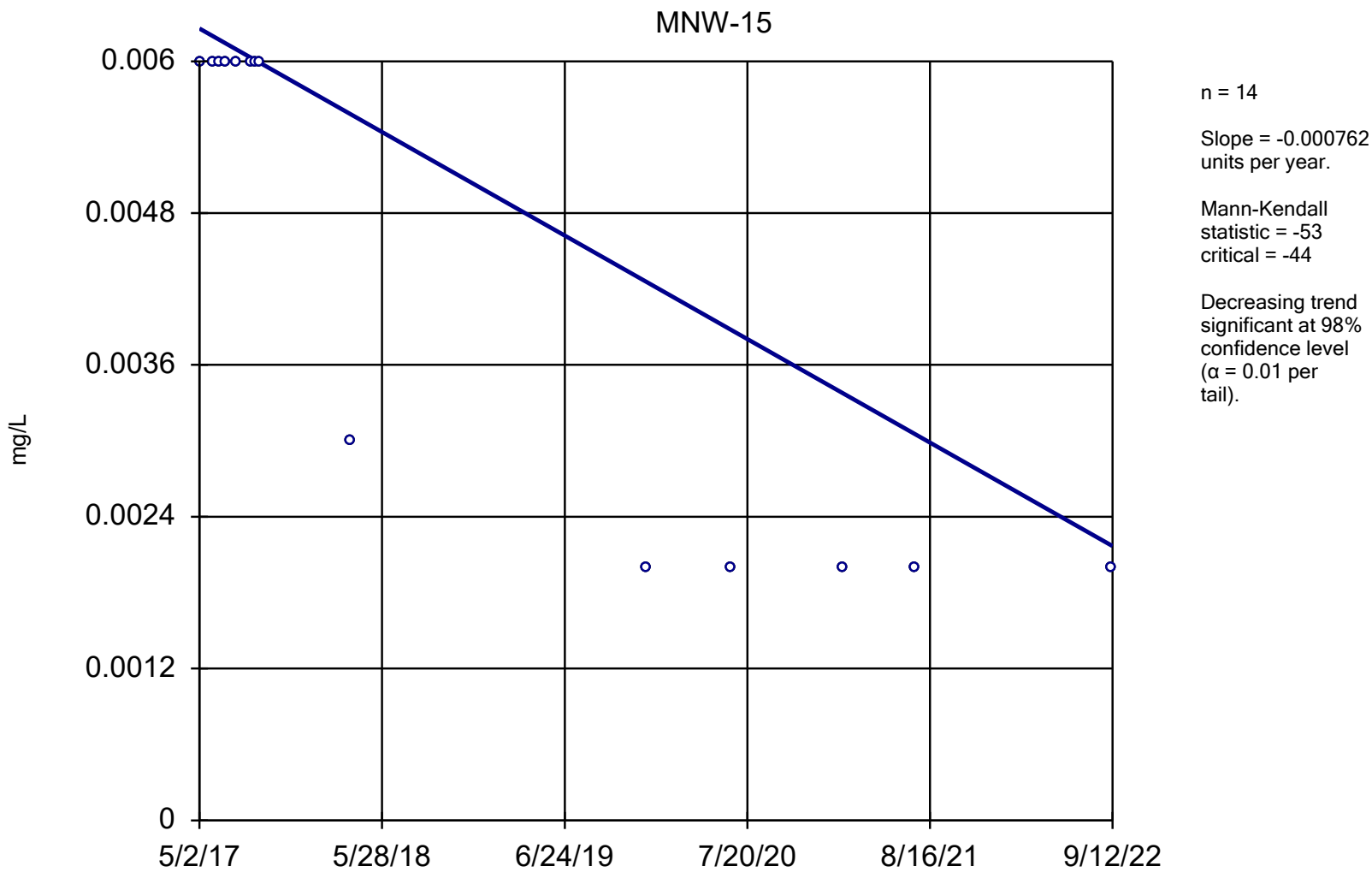


Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

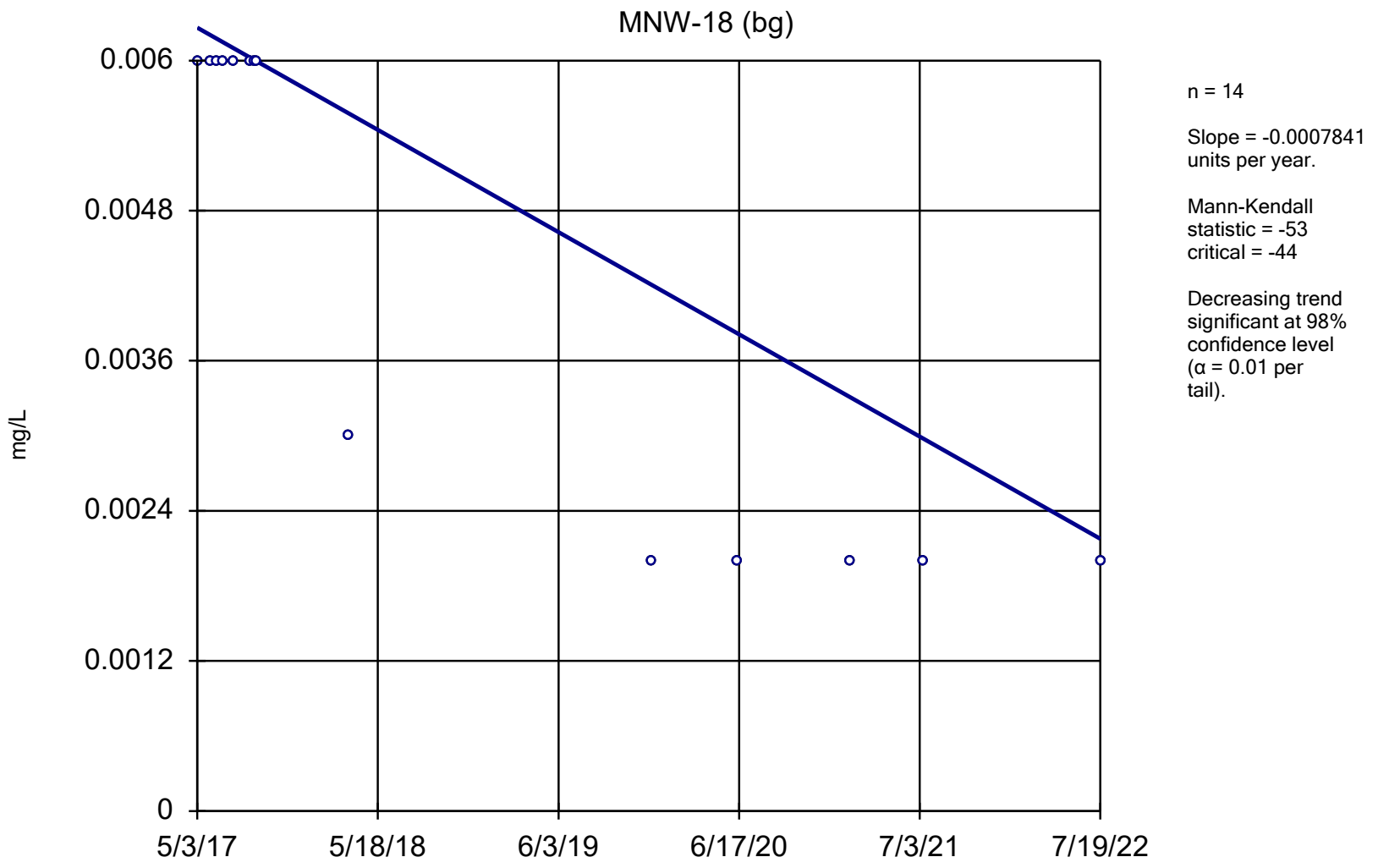


Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

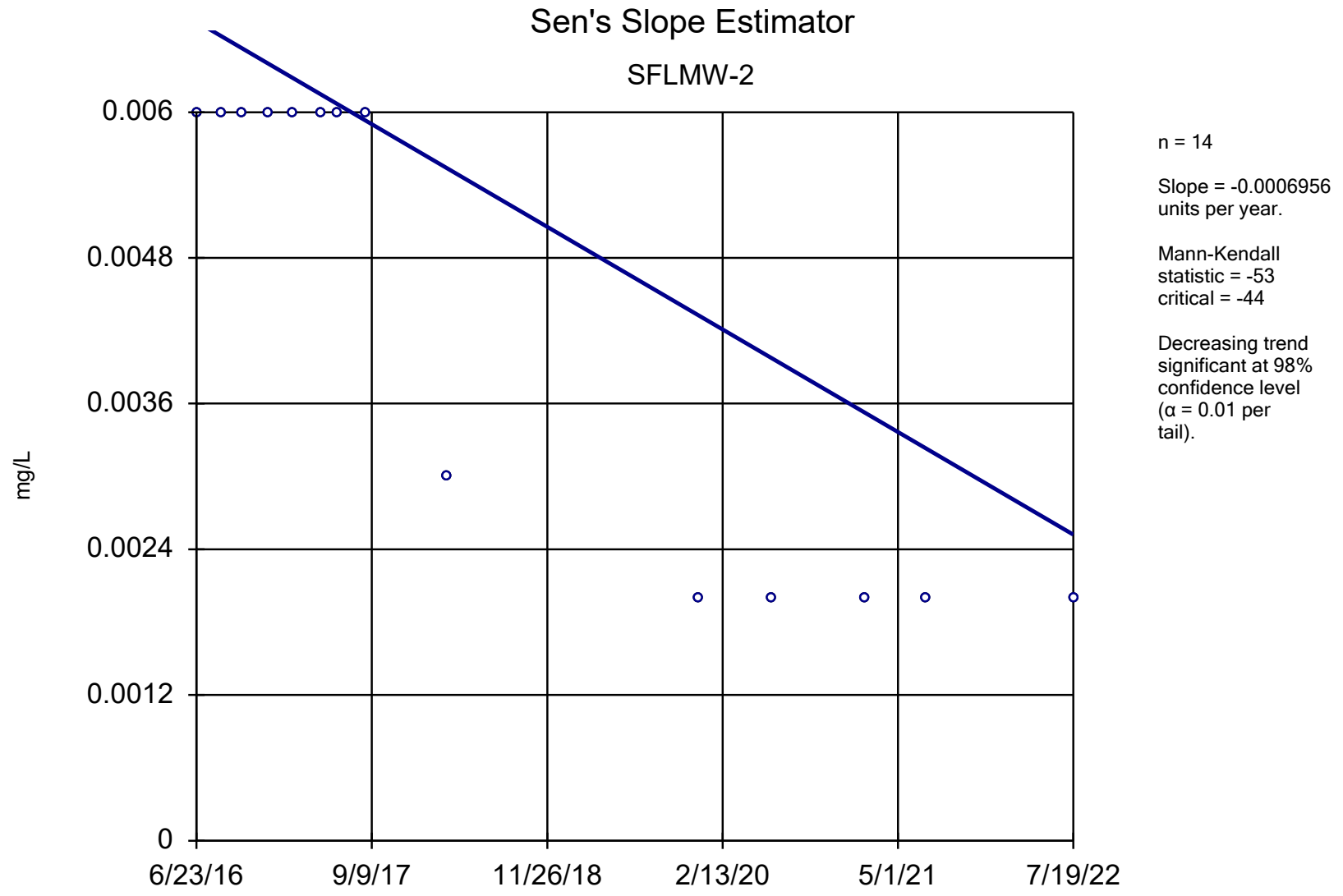
Sen's Slope Estimator



Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

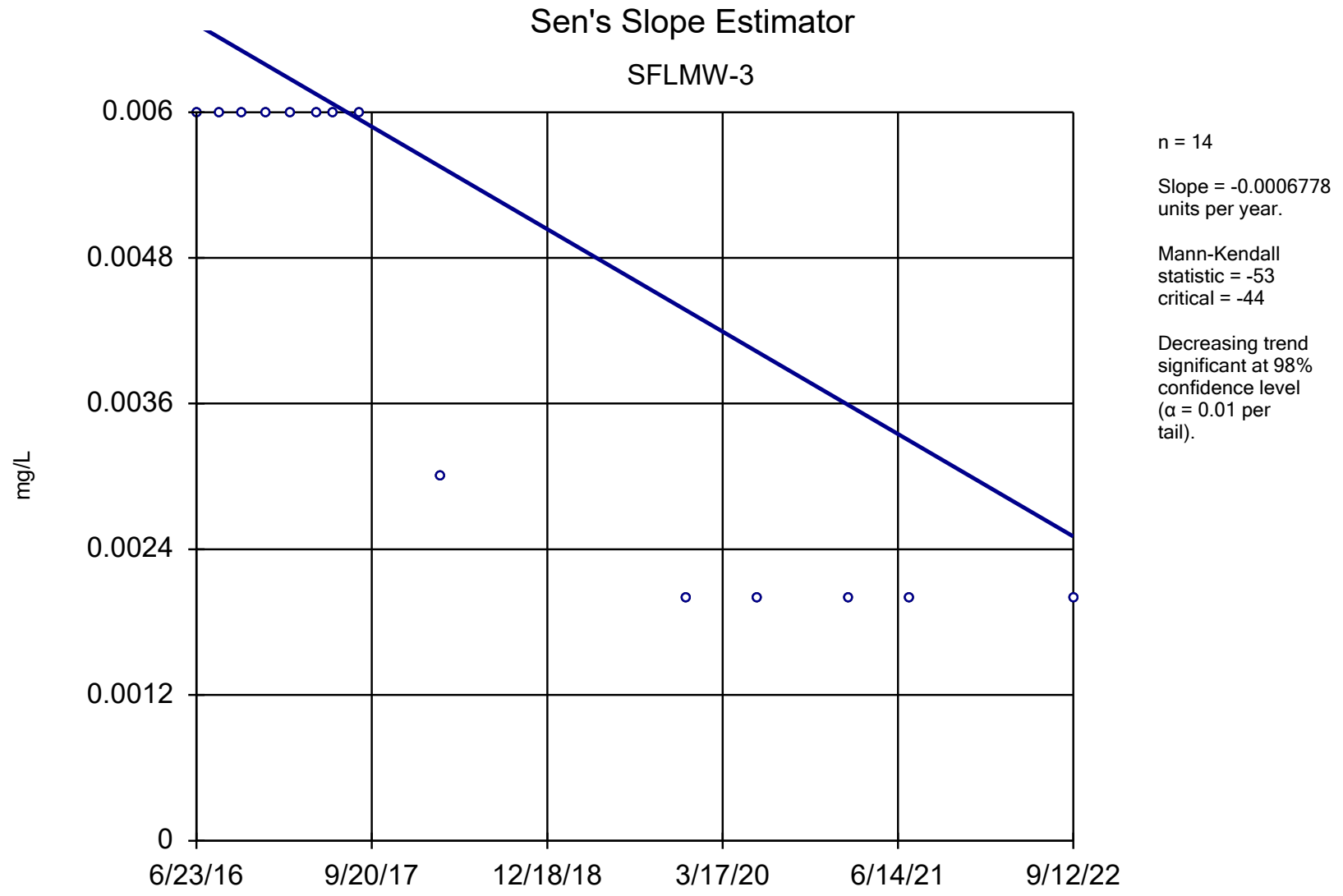
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

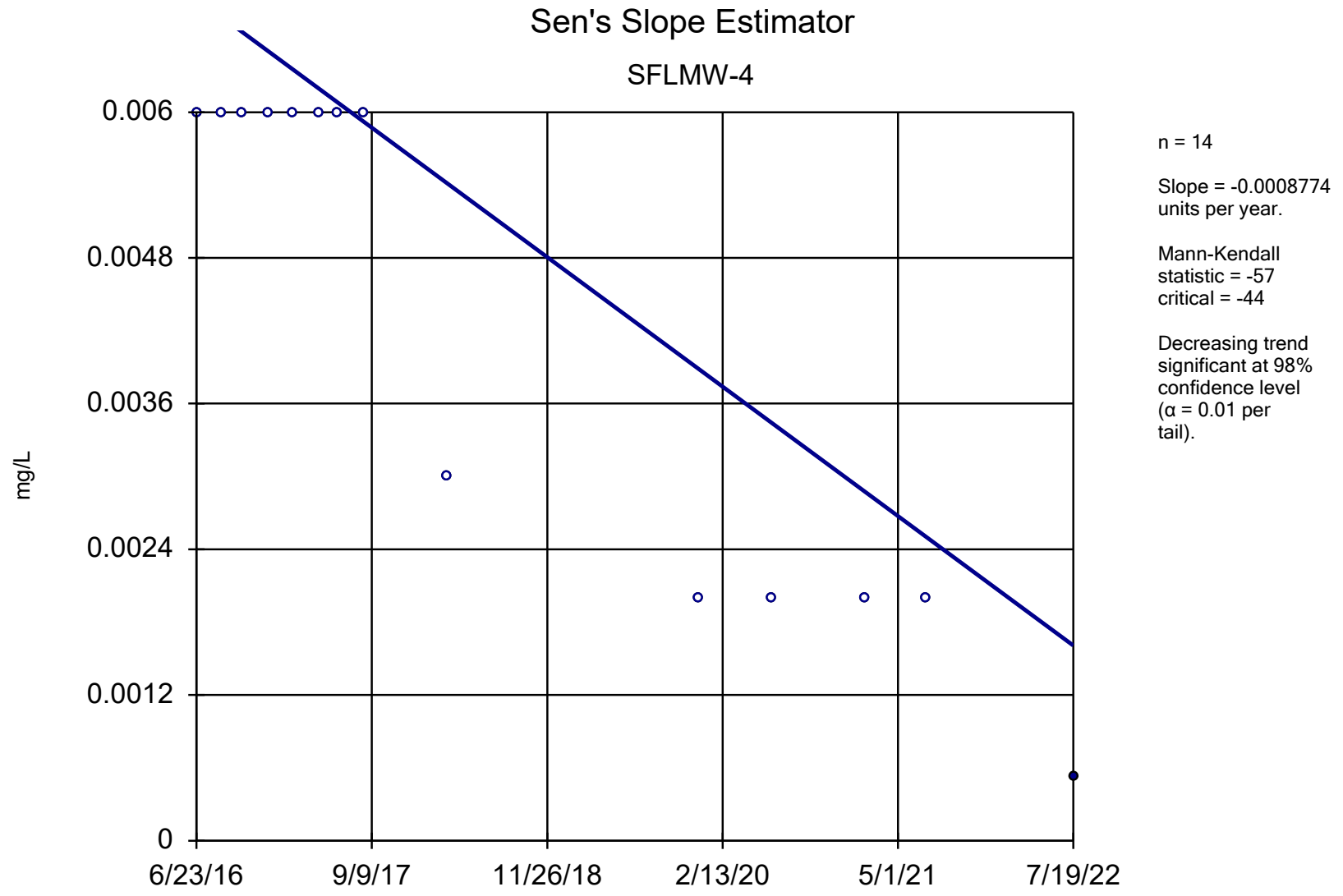
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

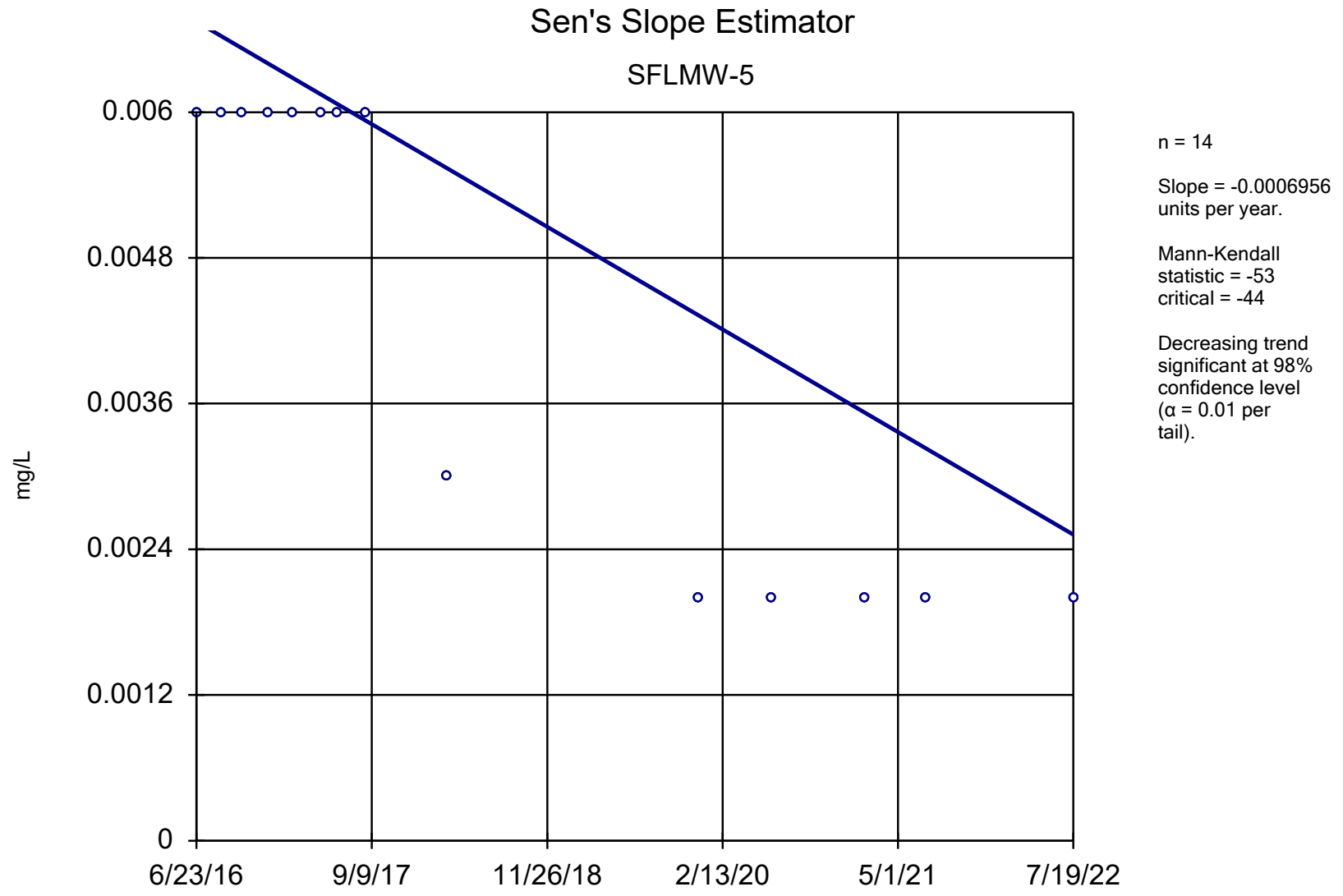
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



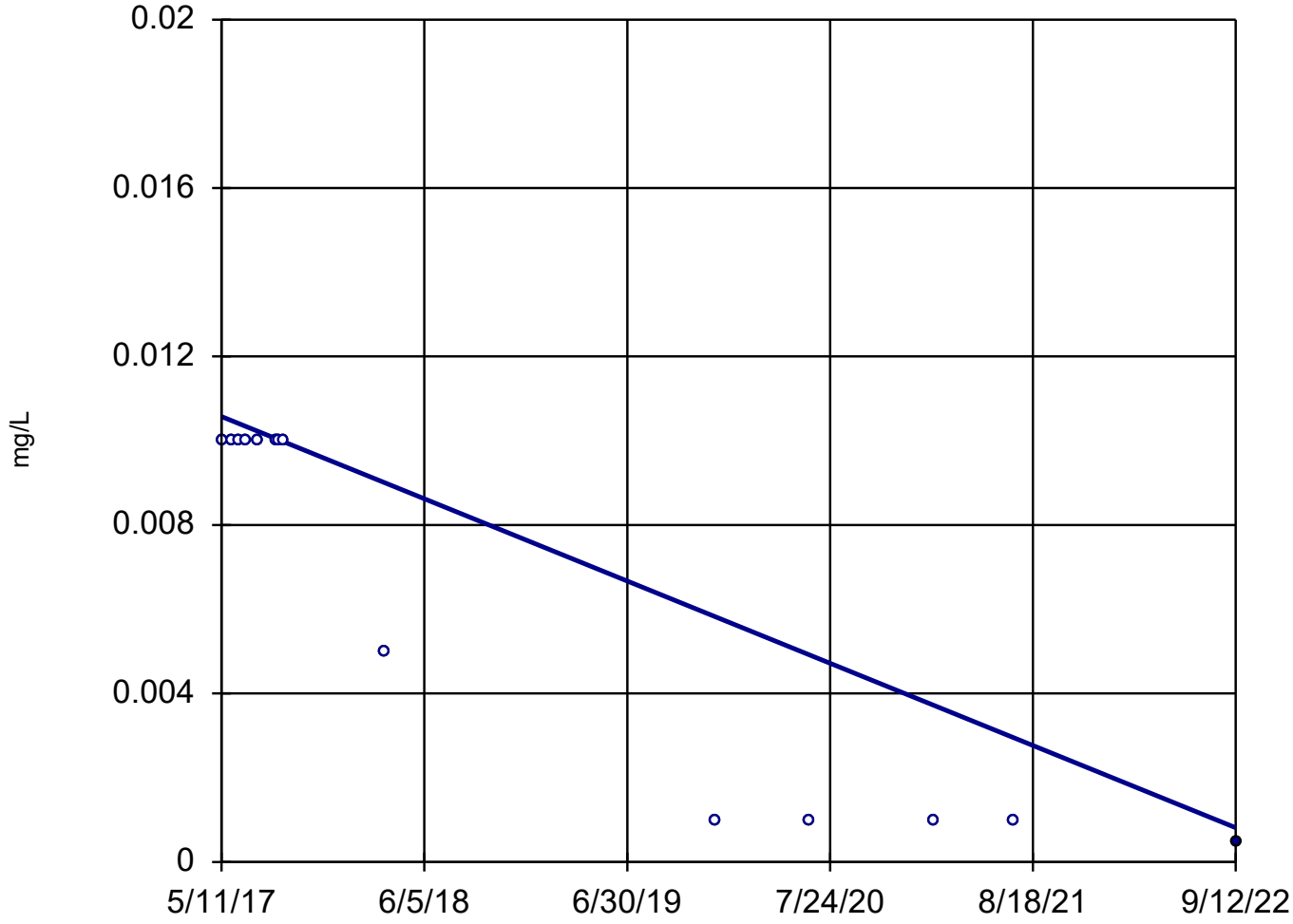
Constituent: Antimony Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -0.001827 units per year.

Mann-Kendall statistic = -57
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

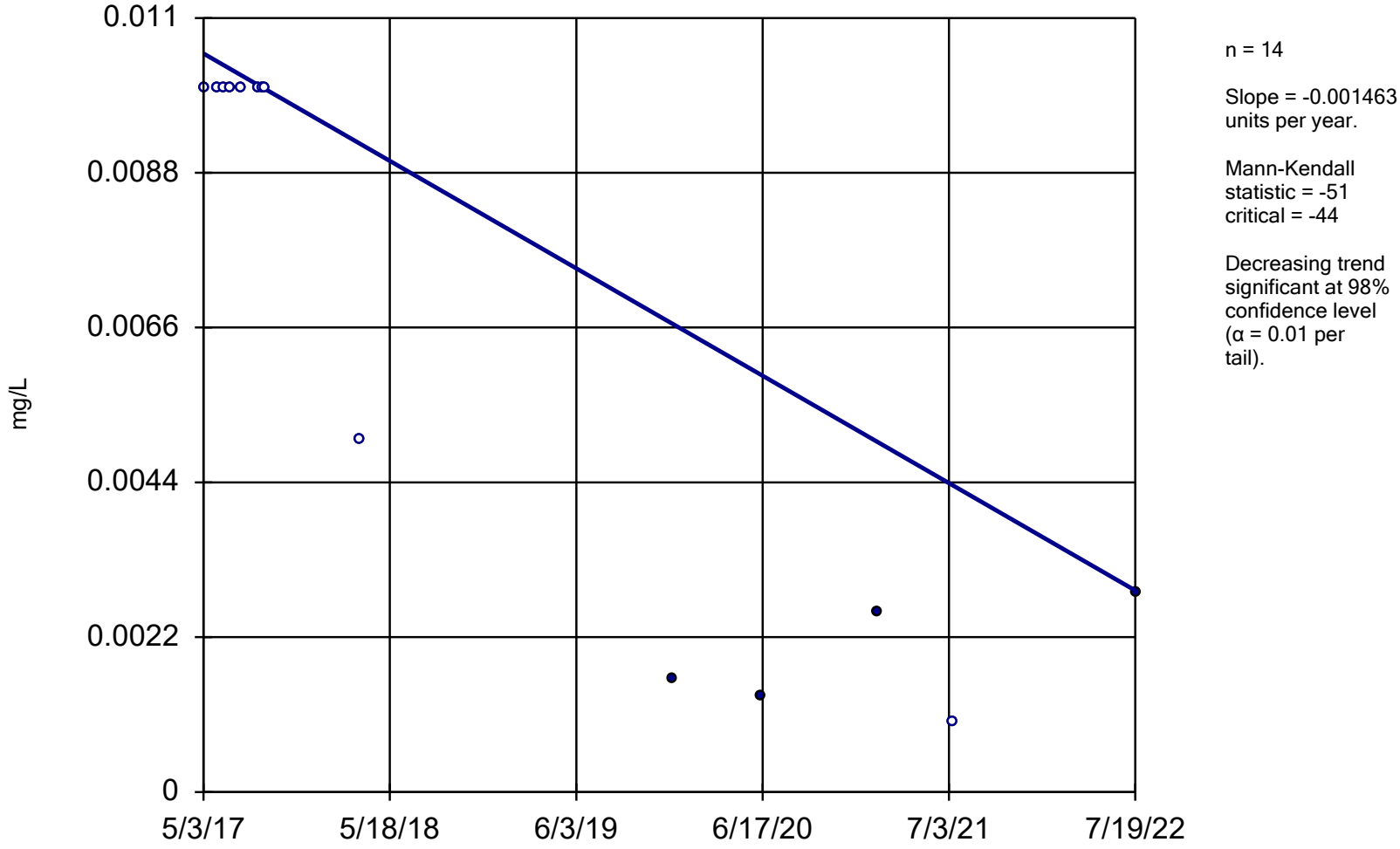
Constituent: Arsenic Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 14

Slope = -0.001463 units per year.

Mann-Kendall statistic = -51
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

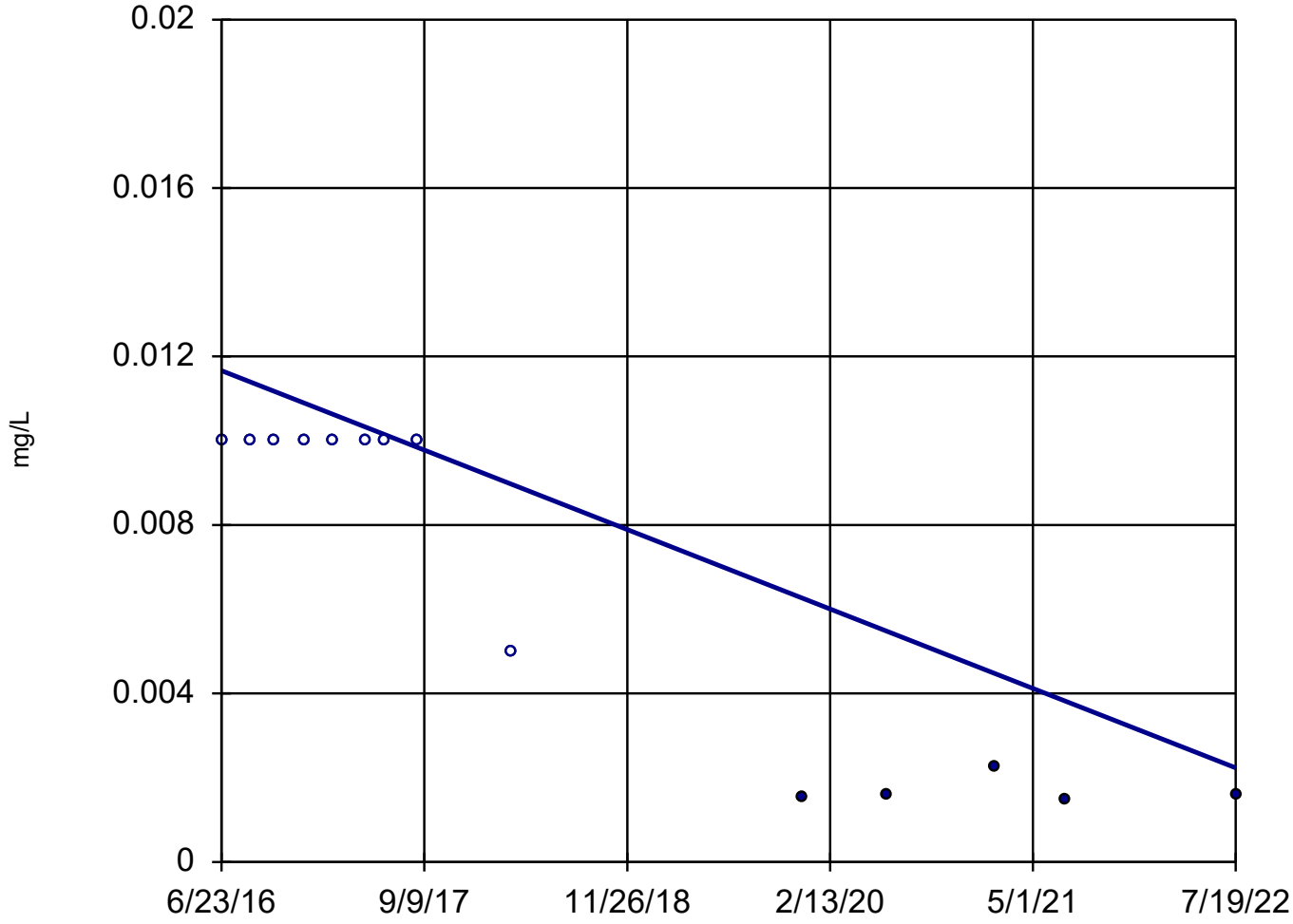
Constituent: Arsenic Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 14

Slope = -0.001552 units per year.

Mann-Kendall statistic = -51
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

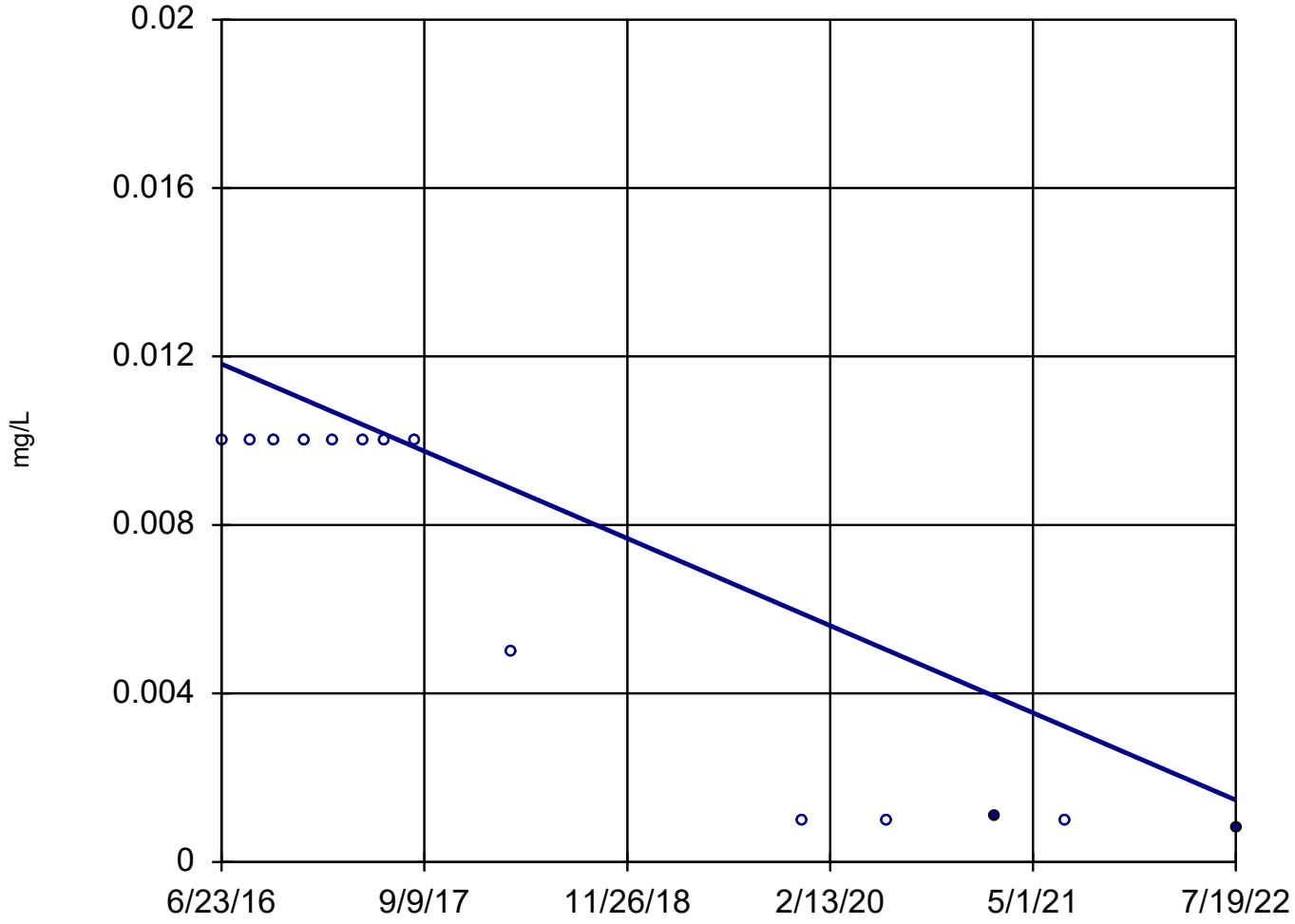
Constituent: Arsenic Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 14

Slope = -0.001705 units per year.

Mann-Kendall statistic = -56
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

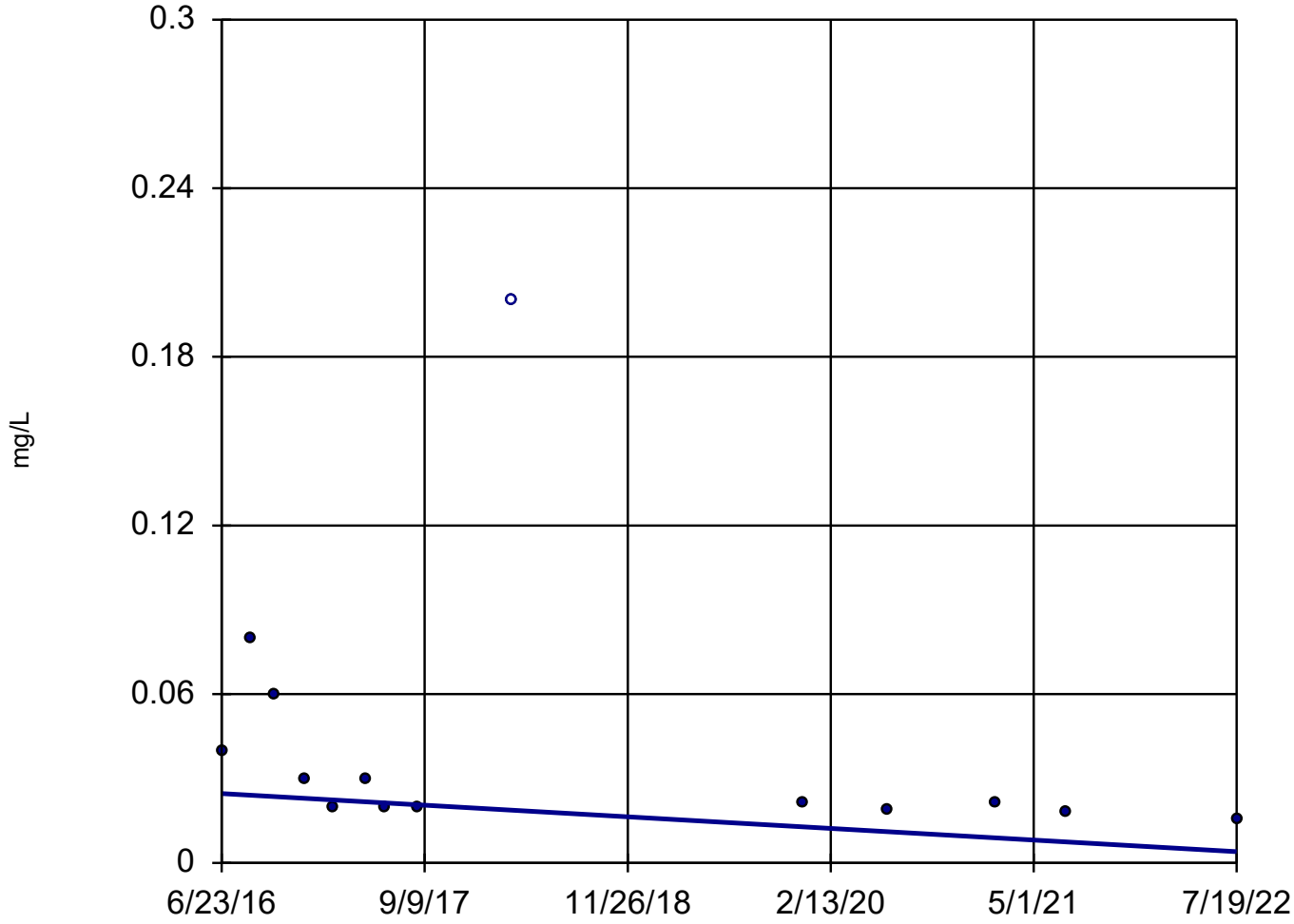
Constituent: Arsenic Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 14

Slope = -0.003409 units per year.

Mann-Kendall statistic = -49
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

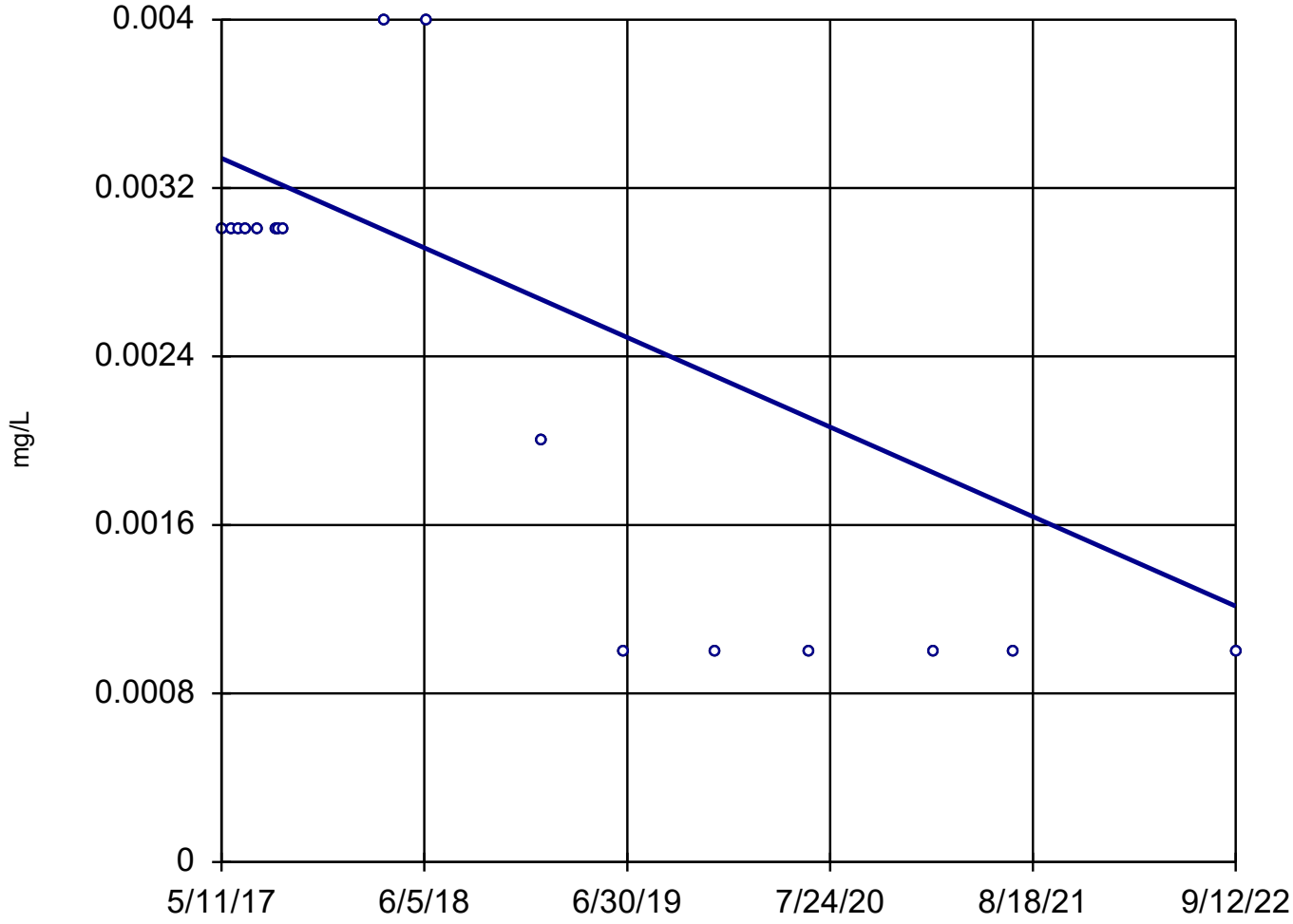
Constituent: Barium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 17

Slope = -0.0003979 units per year.

Mann-Kendall statistic = -60
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

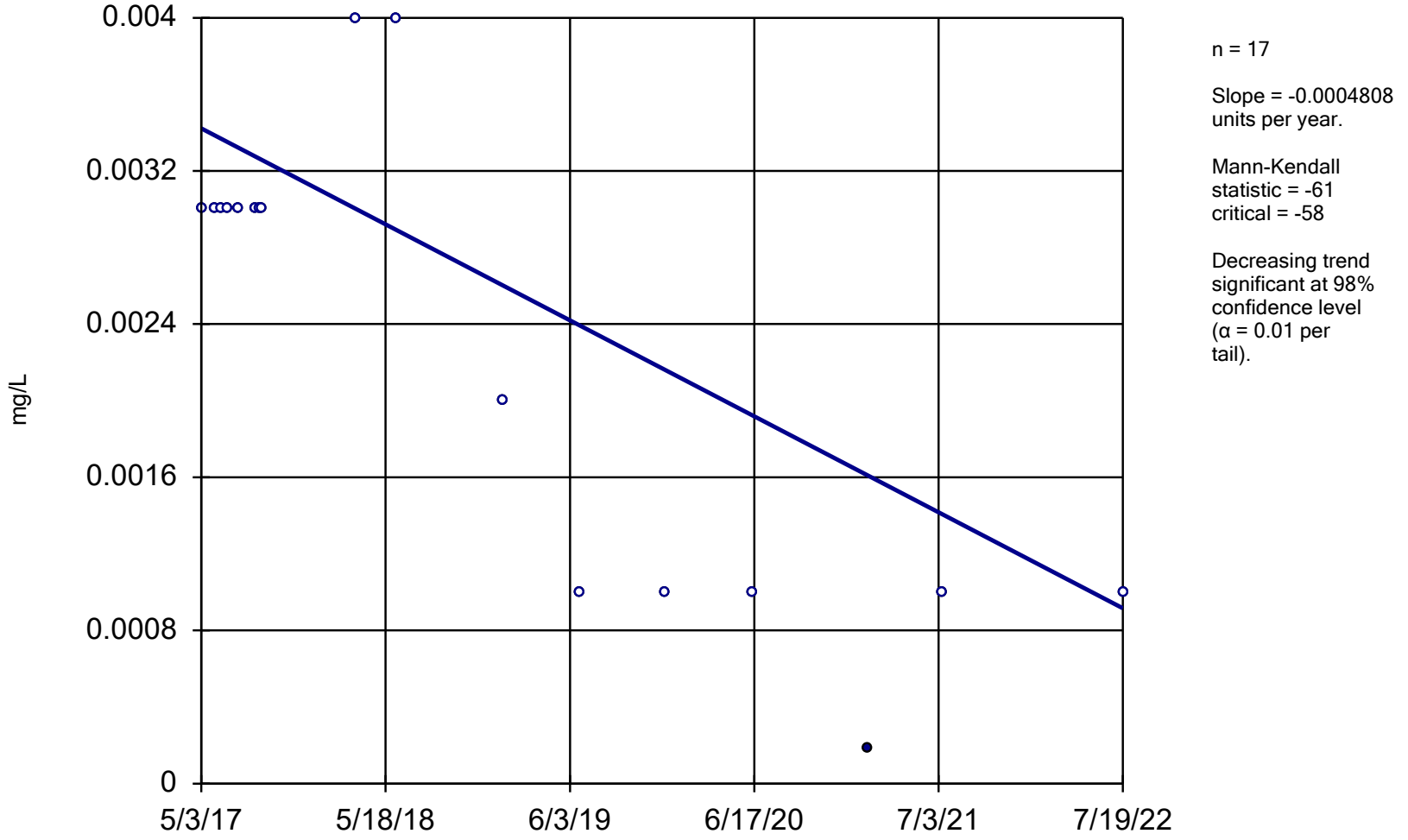
Constituent: Beryllium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 17

Slope = -0.0004808 units per year.

Mann-Kendall statistic = -61
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

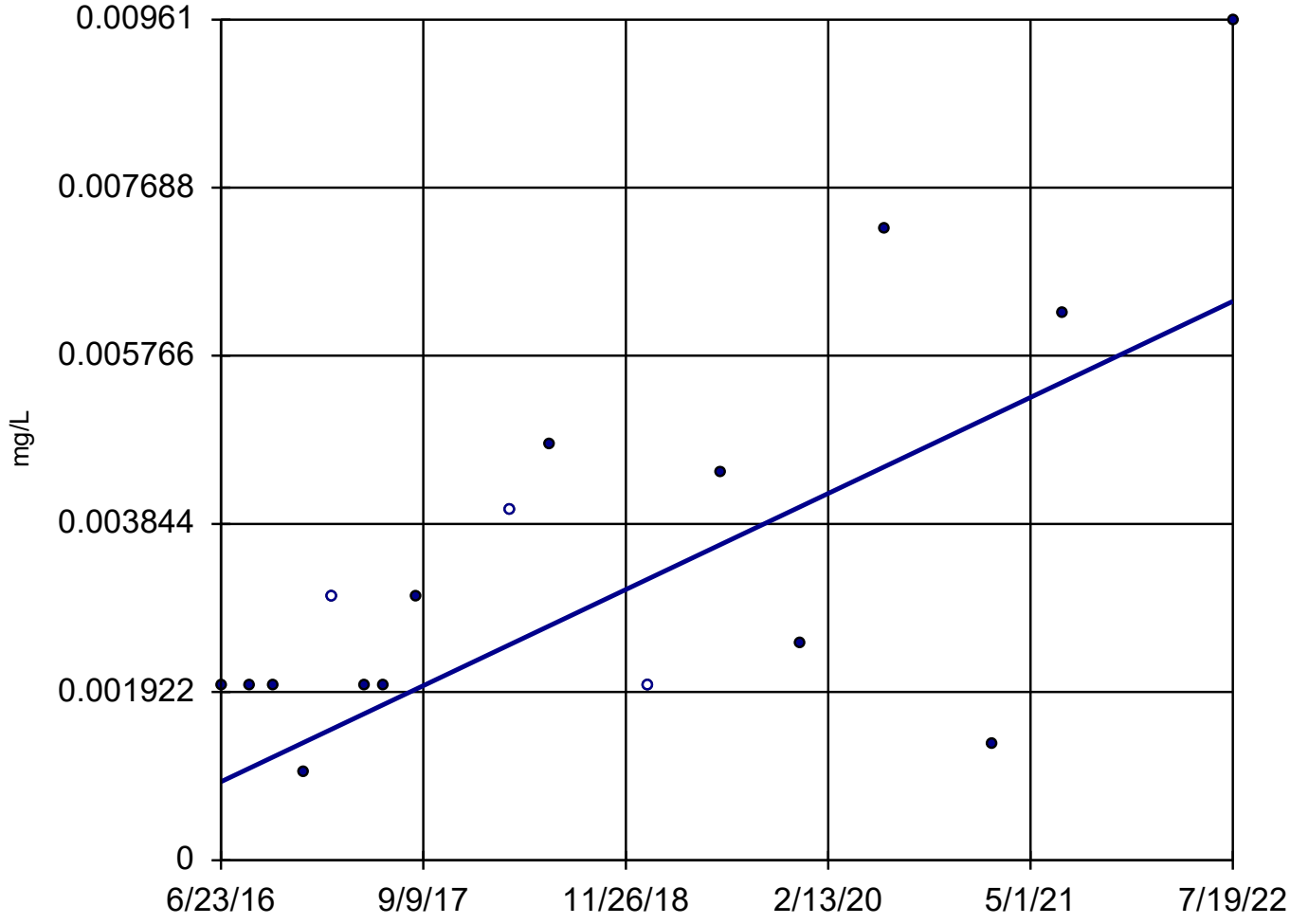
Constituent: Beryllium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 17

Slope = 0.0009043 units per year.

Mann-Kendall statistic = 62
critical = 58

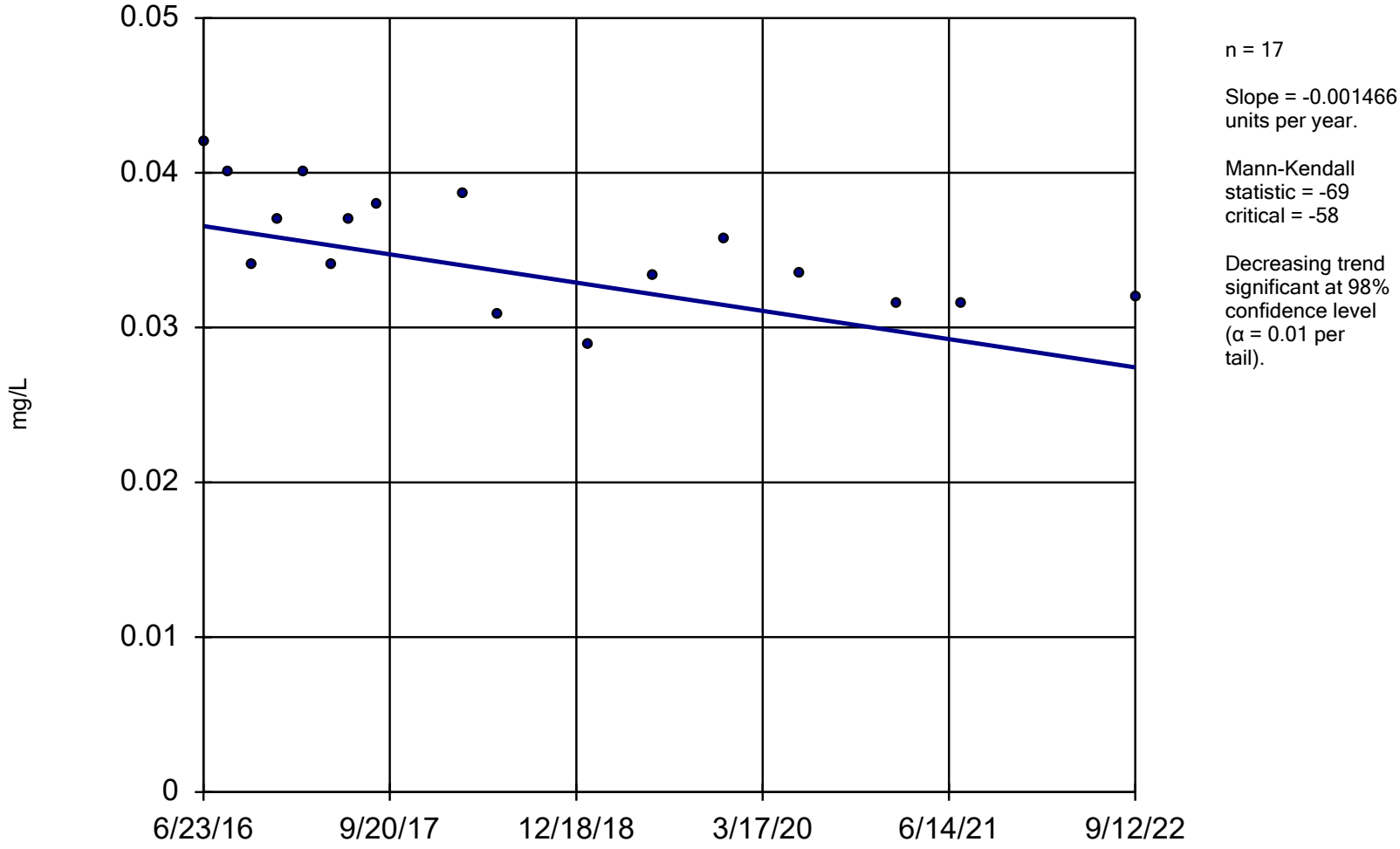
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.001466 units per year.

Mann-Kendall statistic = -69
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

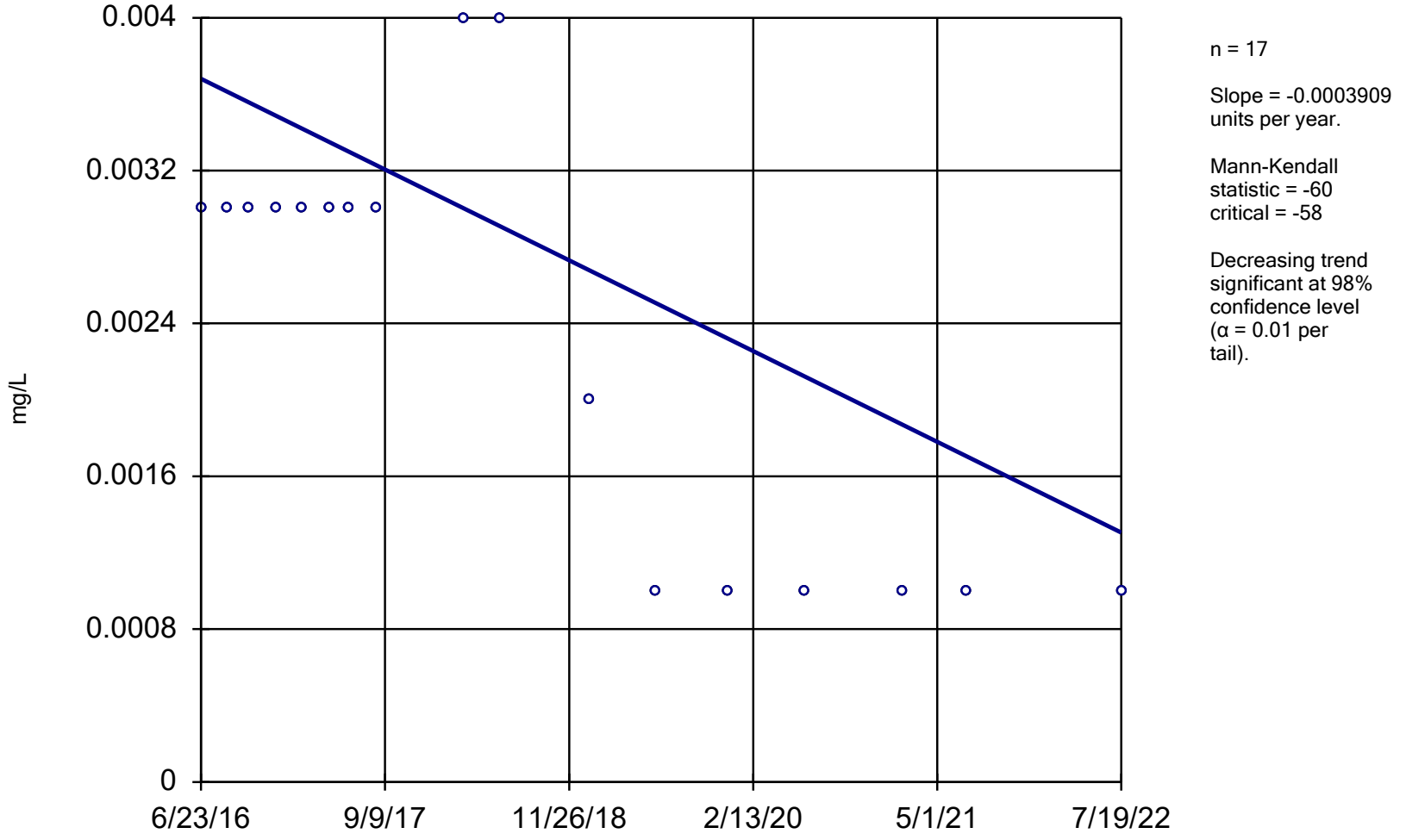
Constituent: Beryllium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.0003909 units per year.

Mann-Kendall statistic = -60
critical = -58

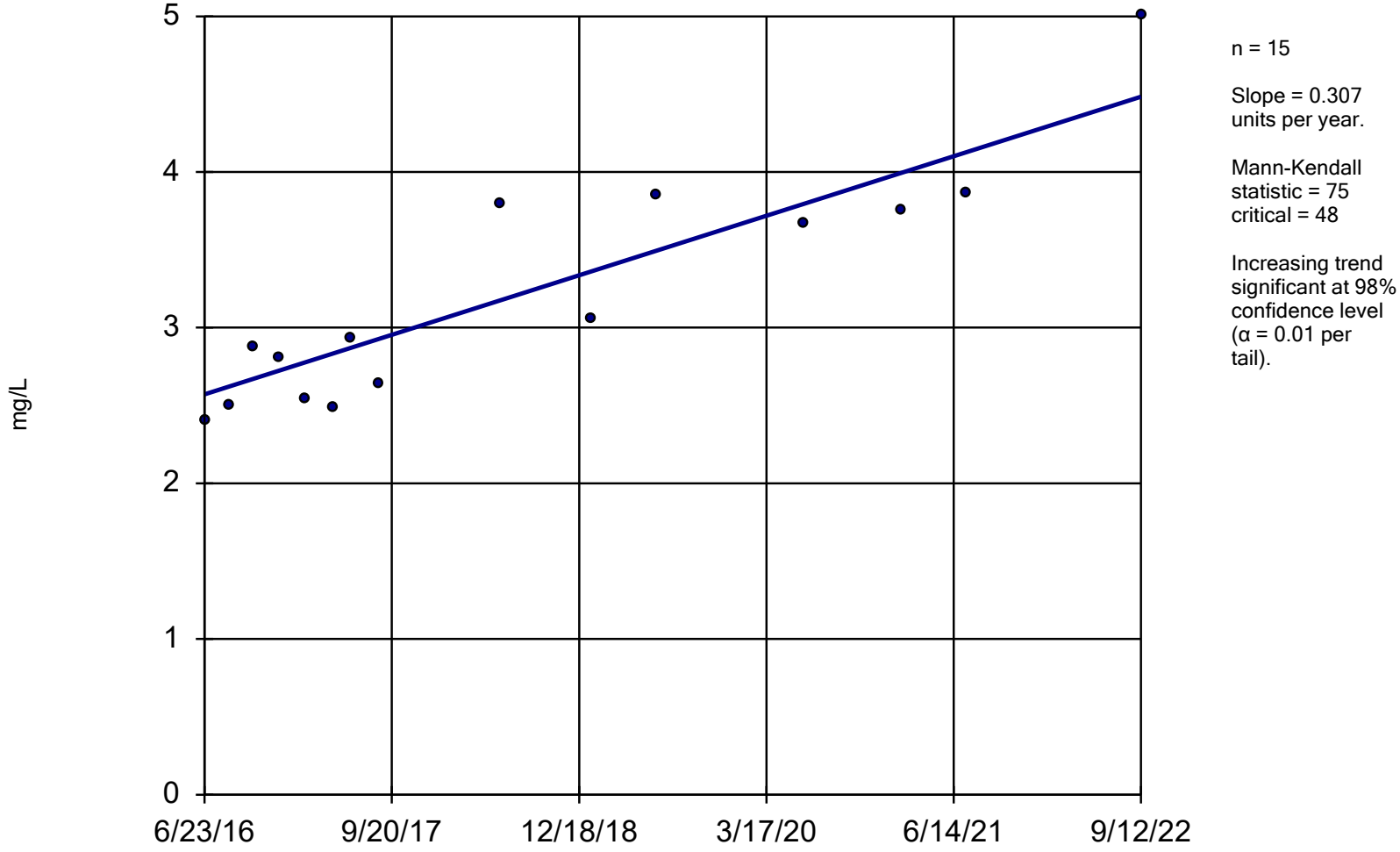
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 15

Slope = 0.307 units per year.

Mann-Kendall statistic = 75
critical = 48

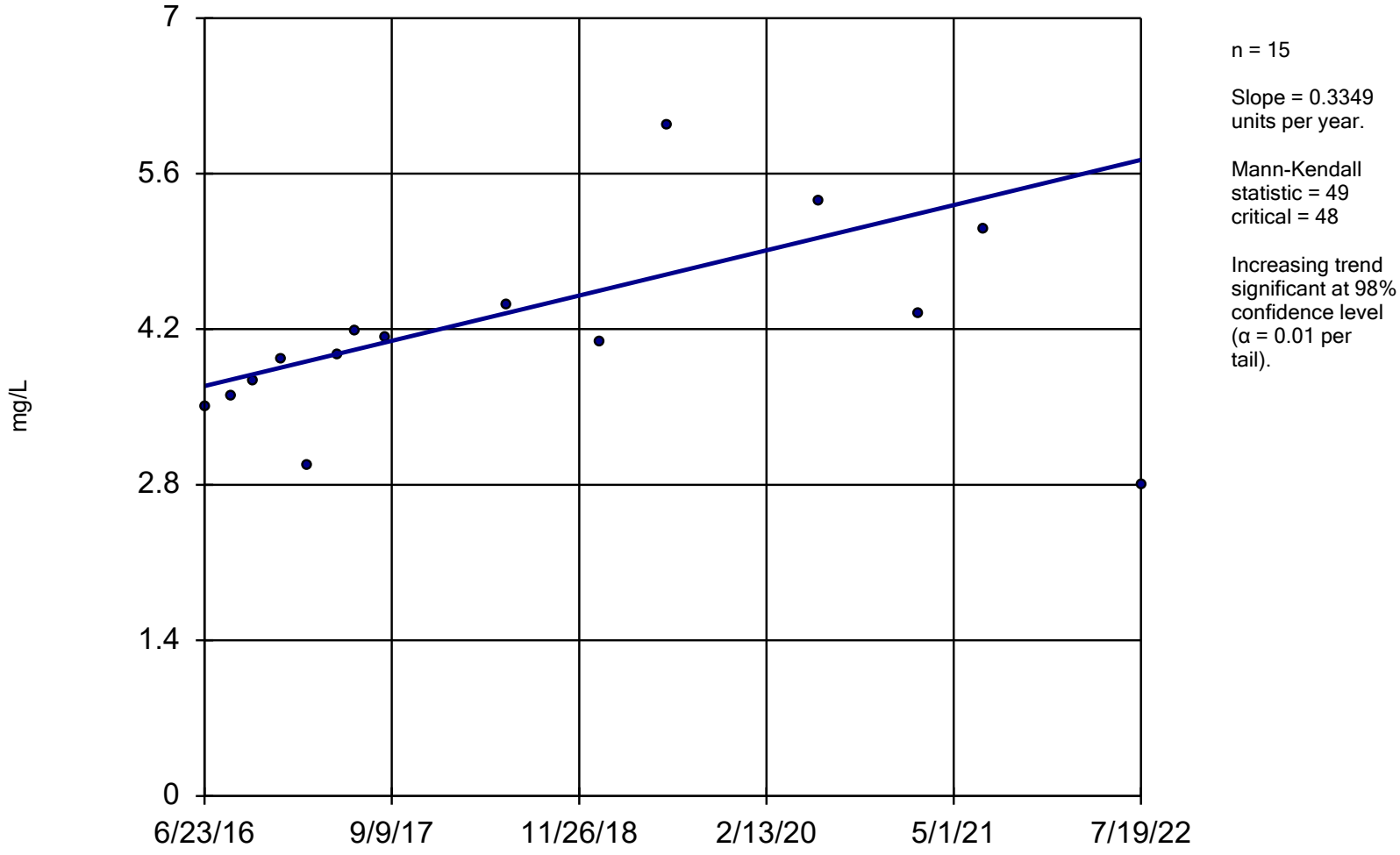
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 15

Slope = 0.3349 units per year.

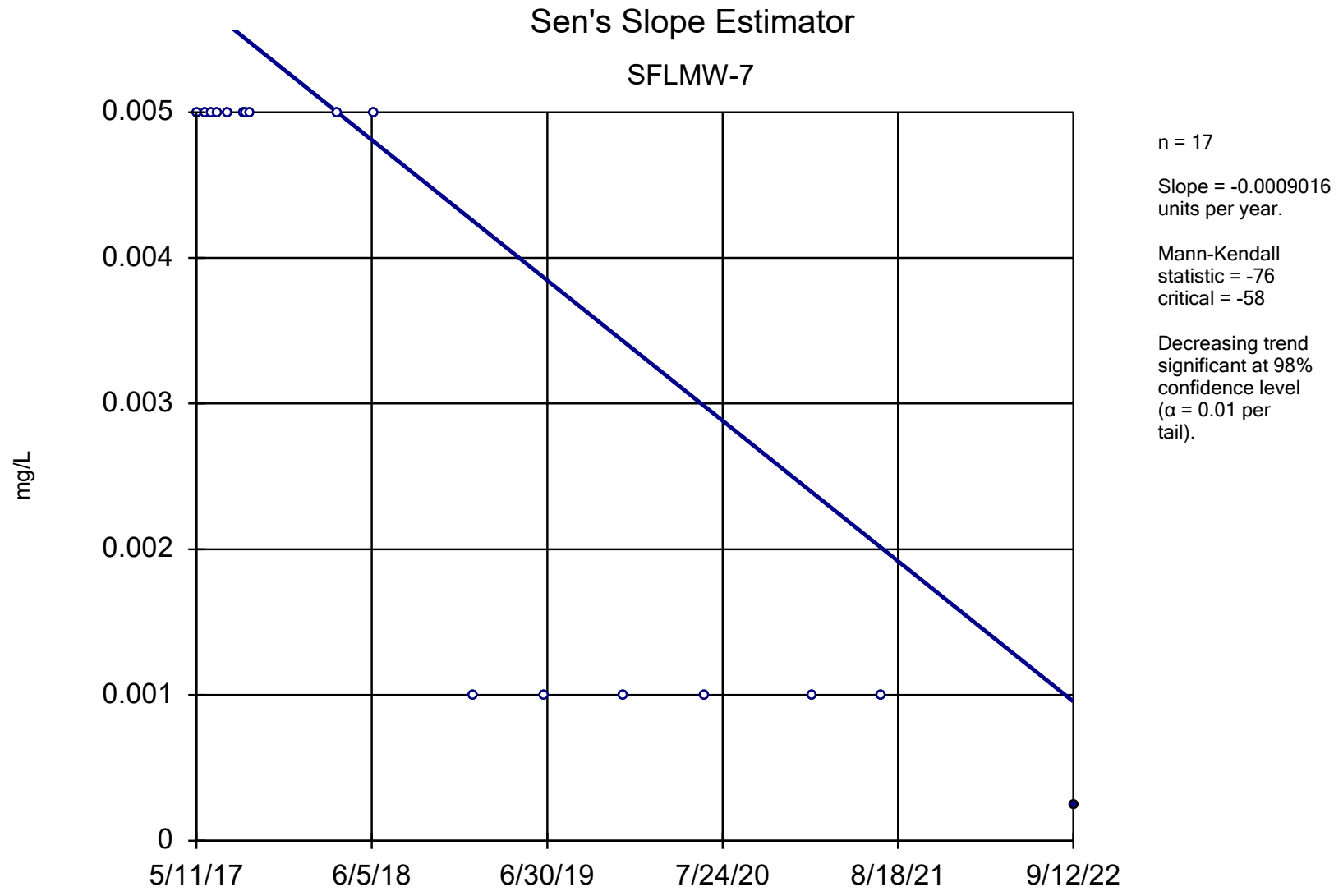
Mann-Kendall statistic = 49
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

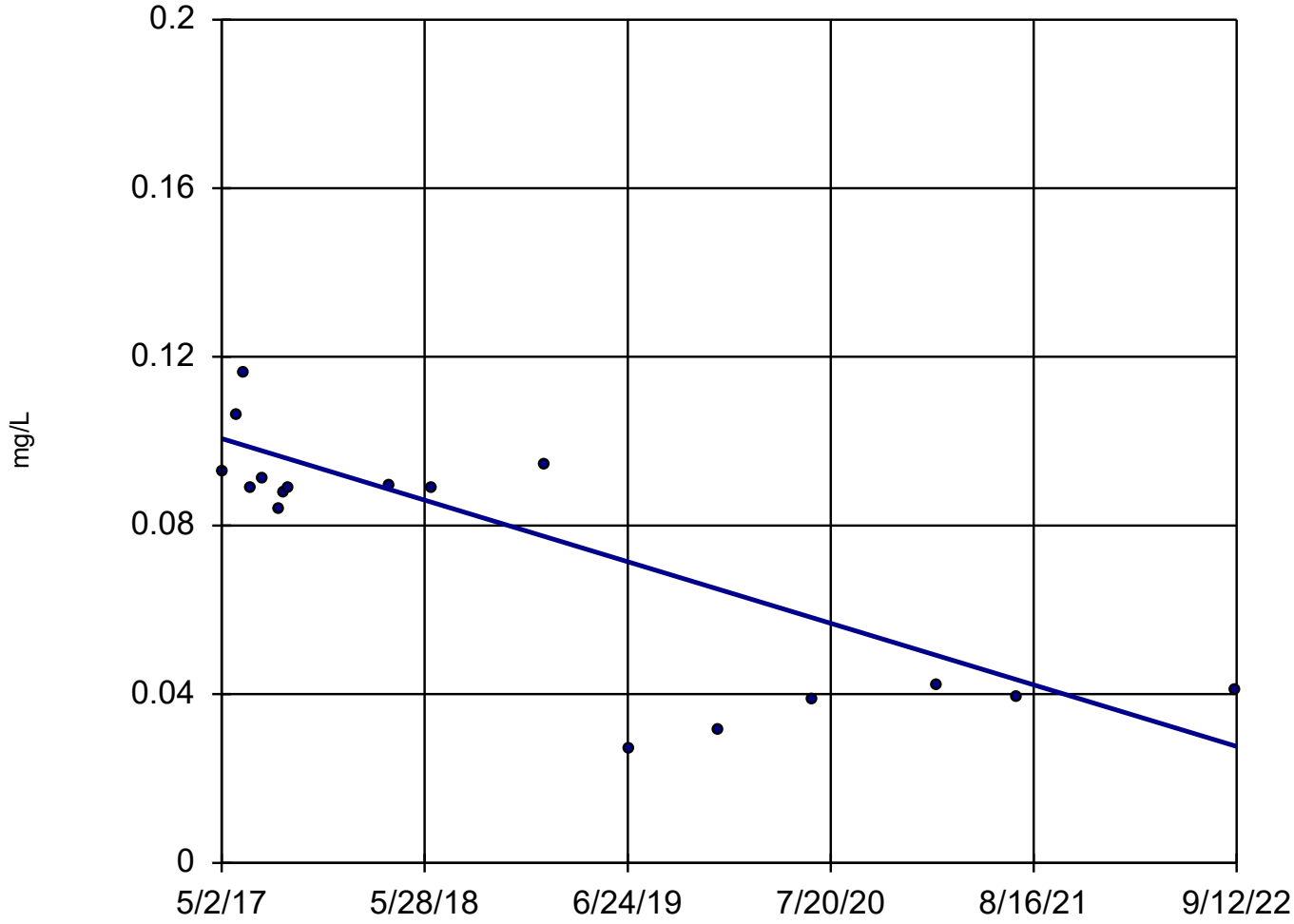


Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 17

Slope = -0.0136 units per year.

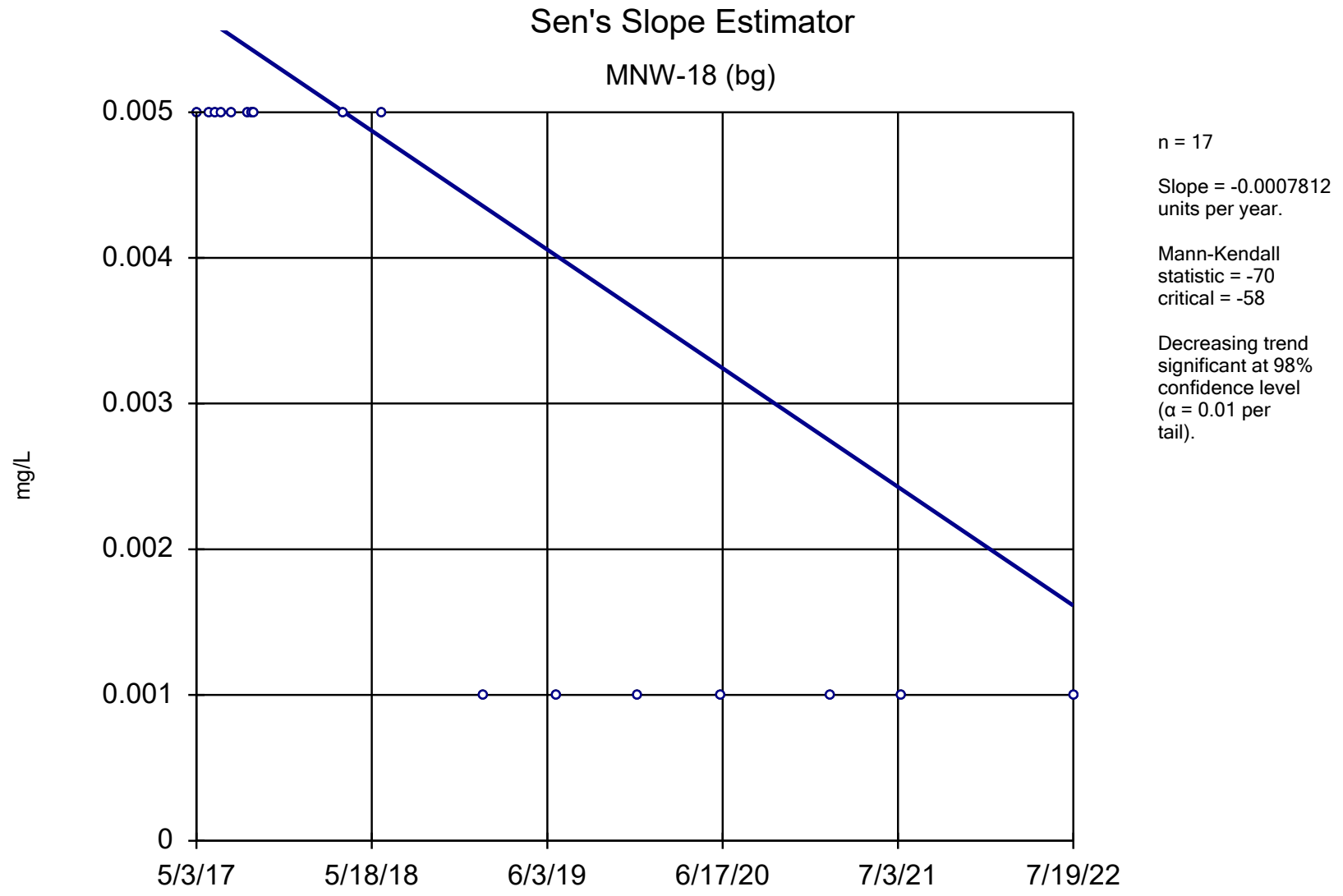
Mann-Kendall statistic = -67
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

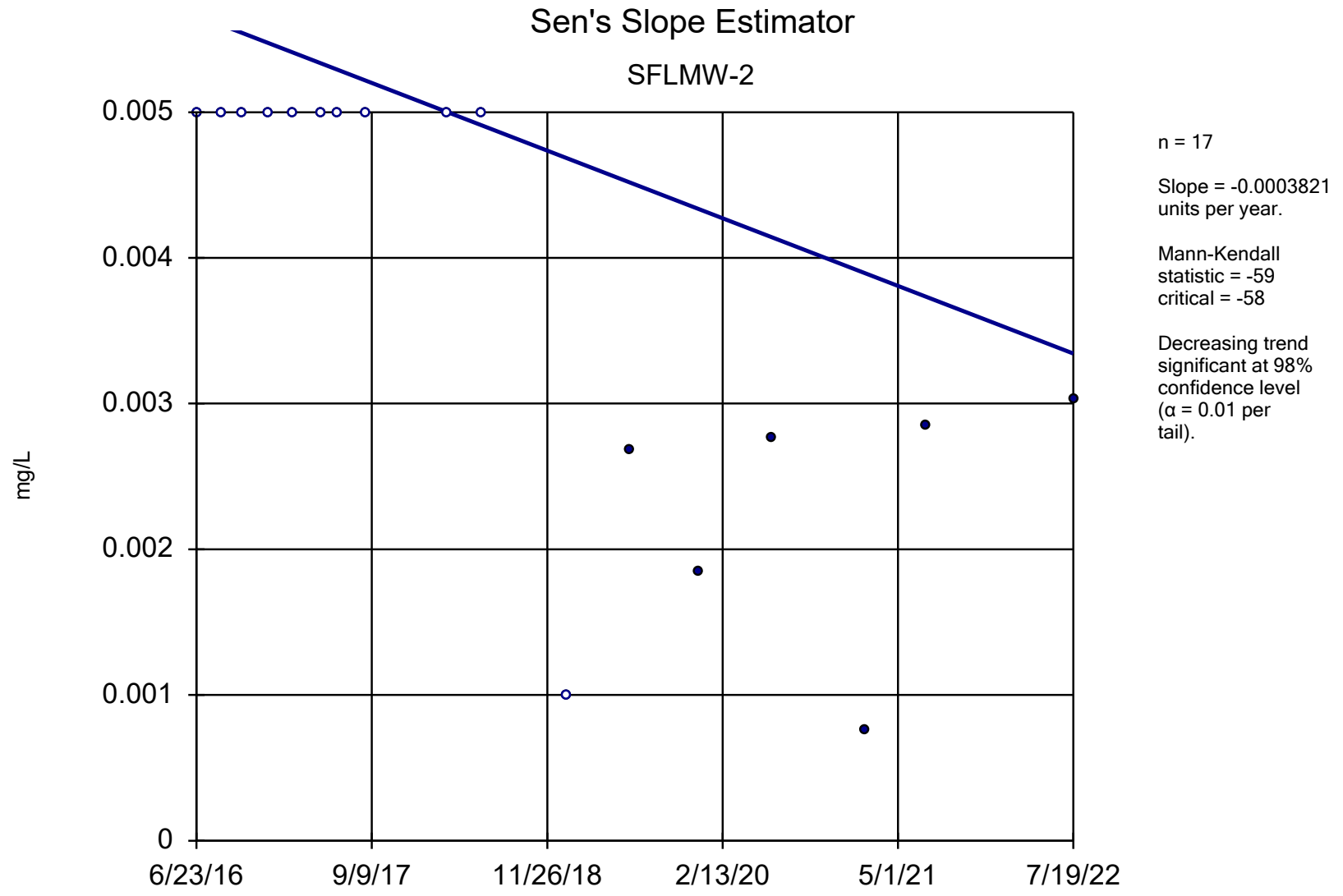
Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

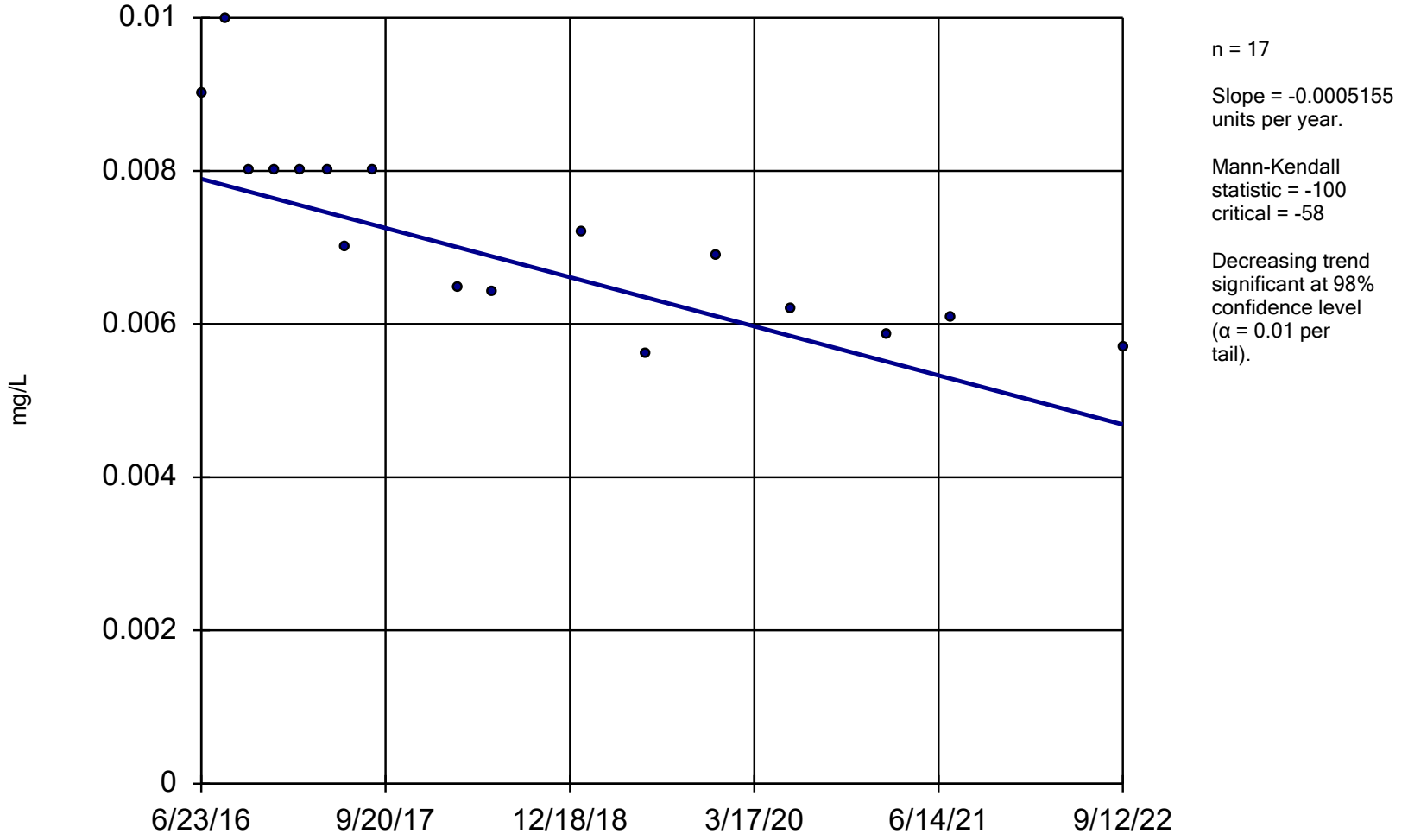


Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.0005155 units per year.

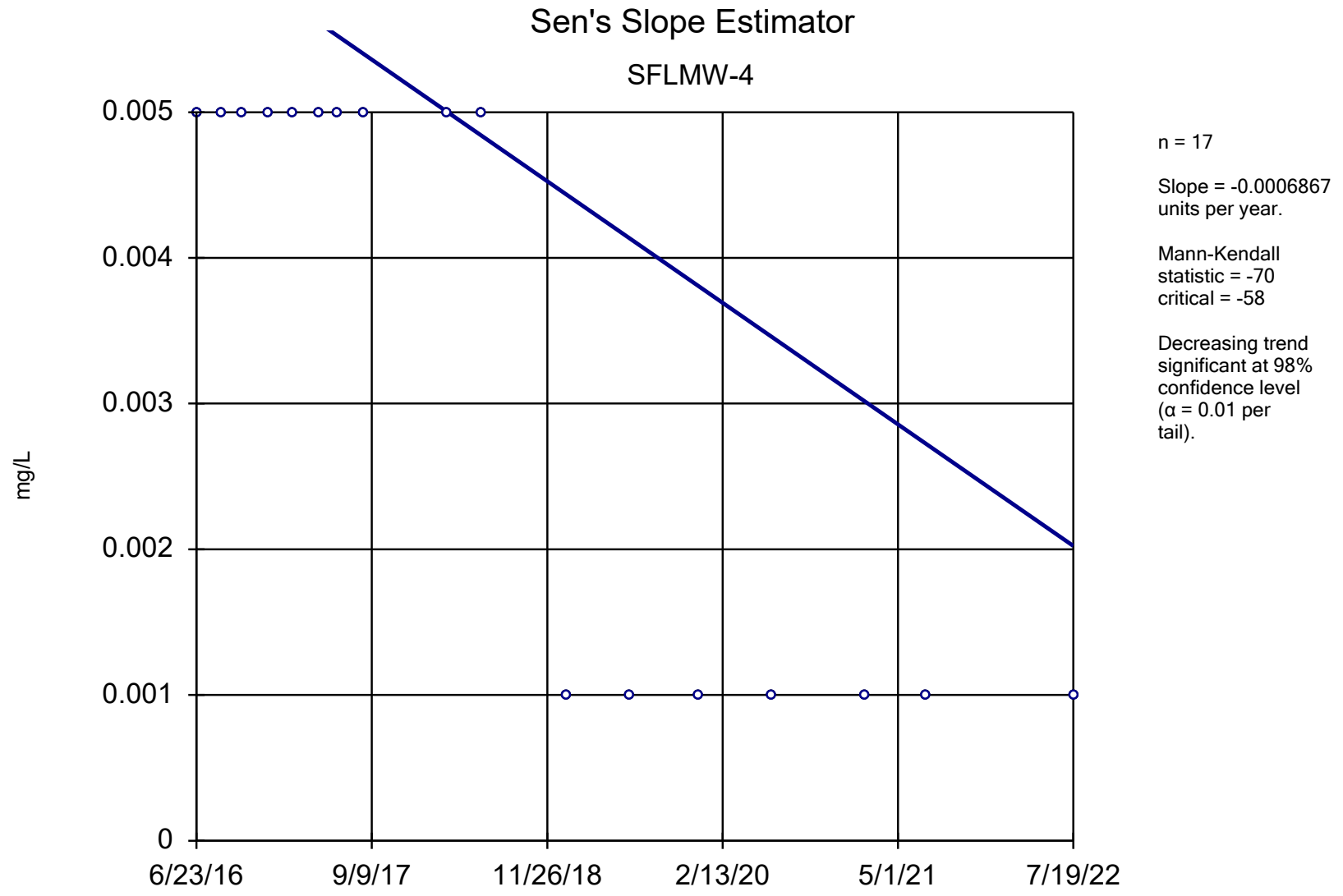
Mann-Kendall statistic = -100
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

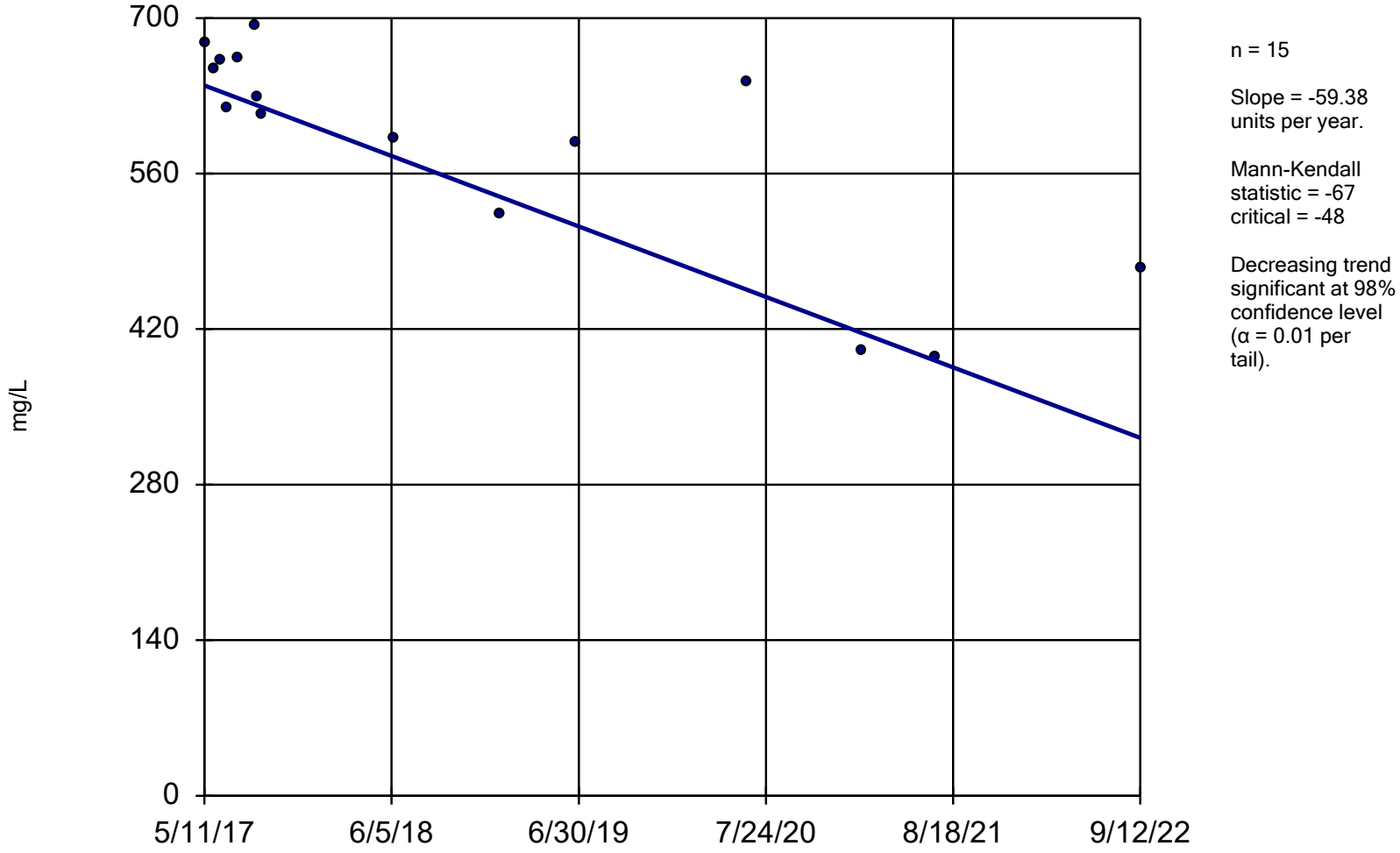


Constituent: Cadmium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -59.38 units per year.

Mann-Kendall statistic = -67
critical = -48

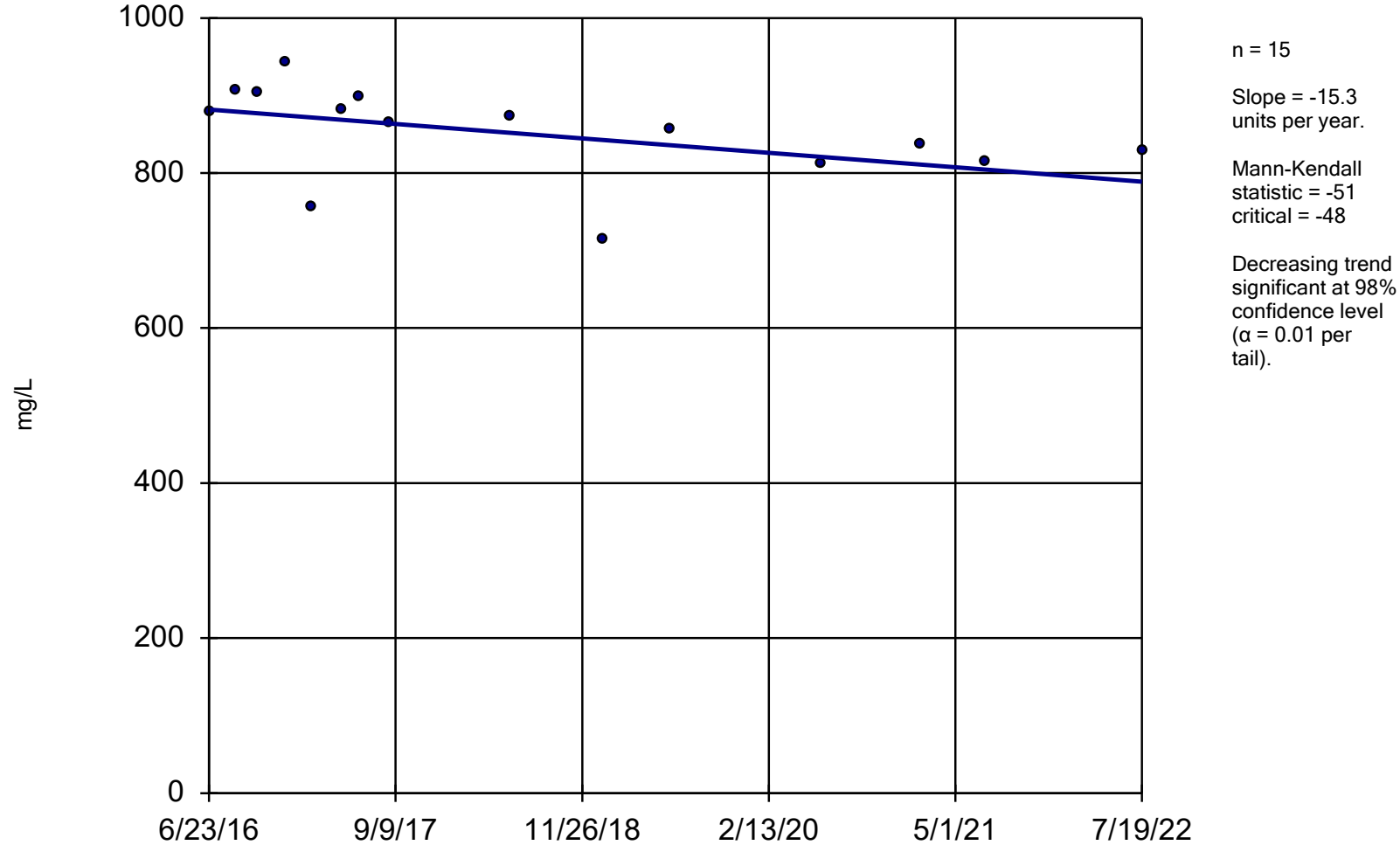
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 15

Slope = -15.3 units per year.

Mann-Kendall statistic = -51
critical = -48

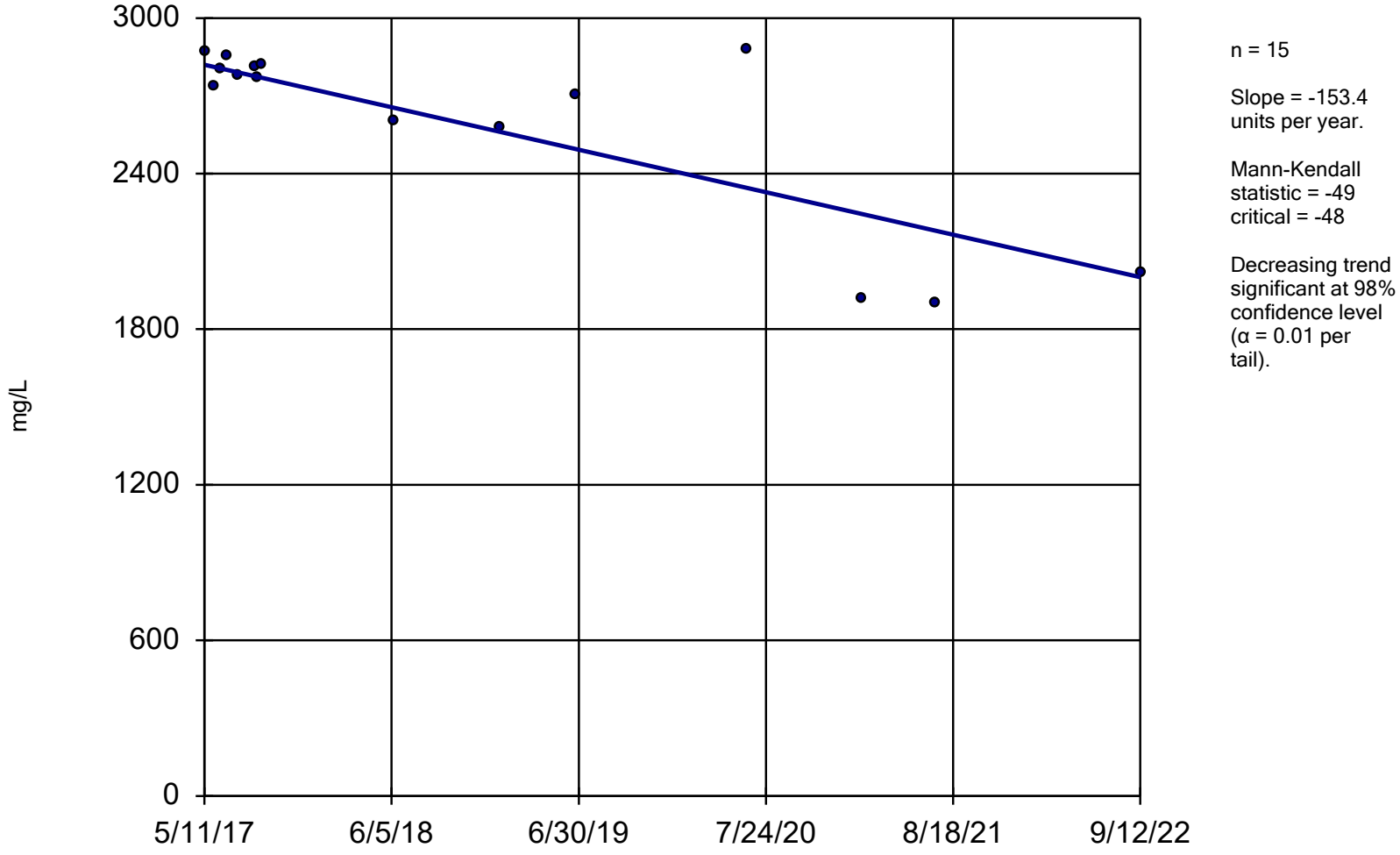
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 10/19/2022 2:43 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -153.4 units per year.

Mann-Kendall statistic = -49
critical = -48

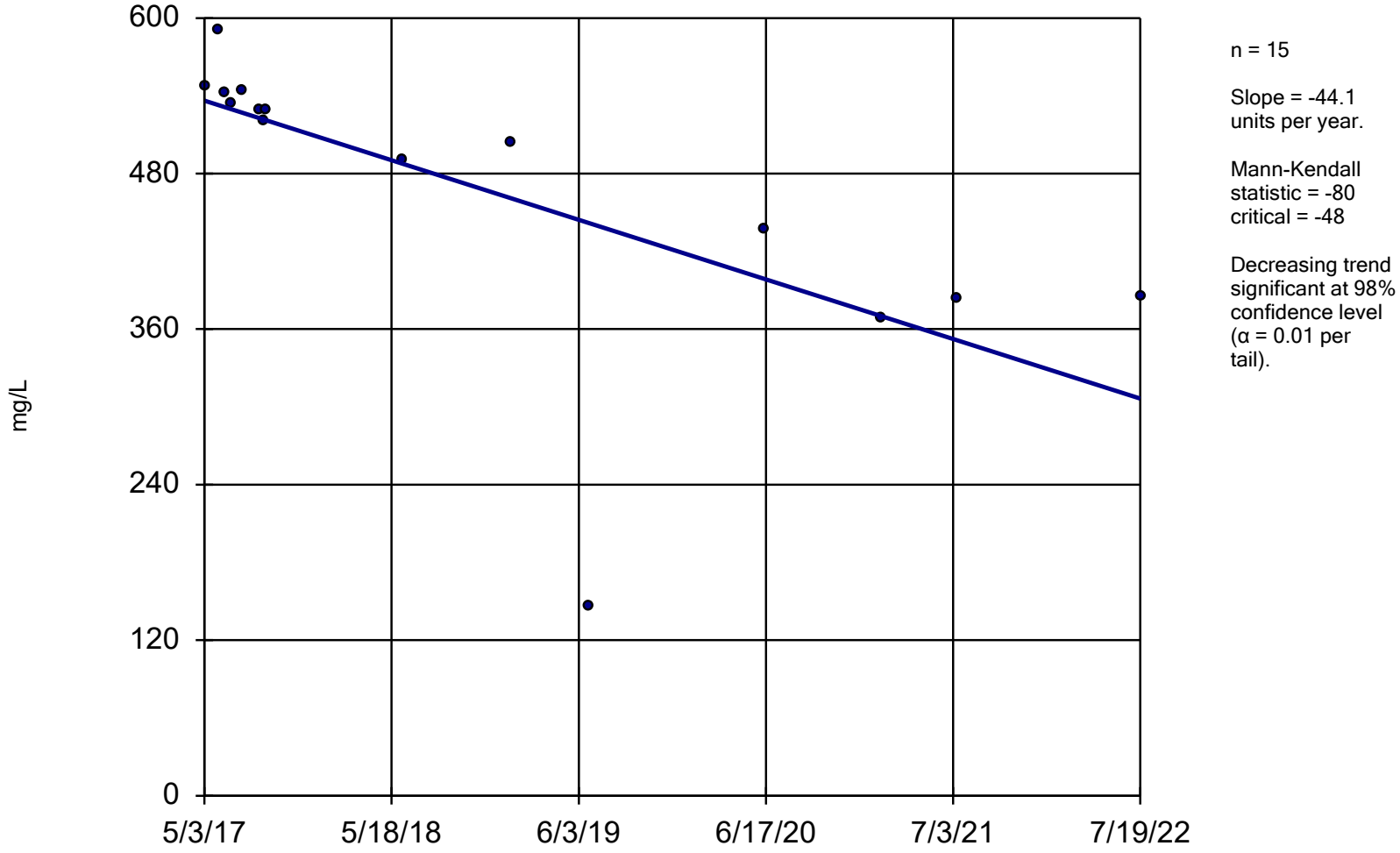
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-18 (bg)



n = 15

Slope = -44.1 units per year.

Mann-Kendall statistic = -80
critical = -48

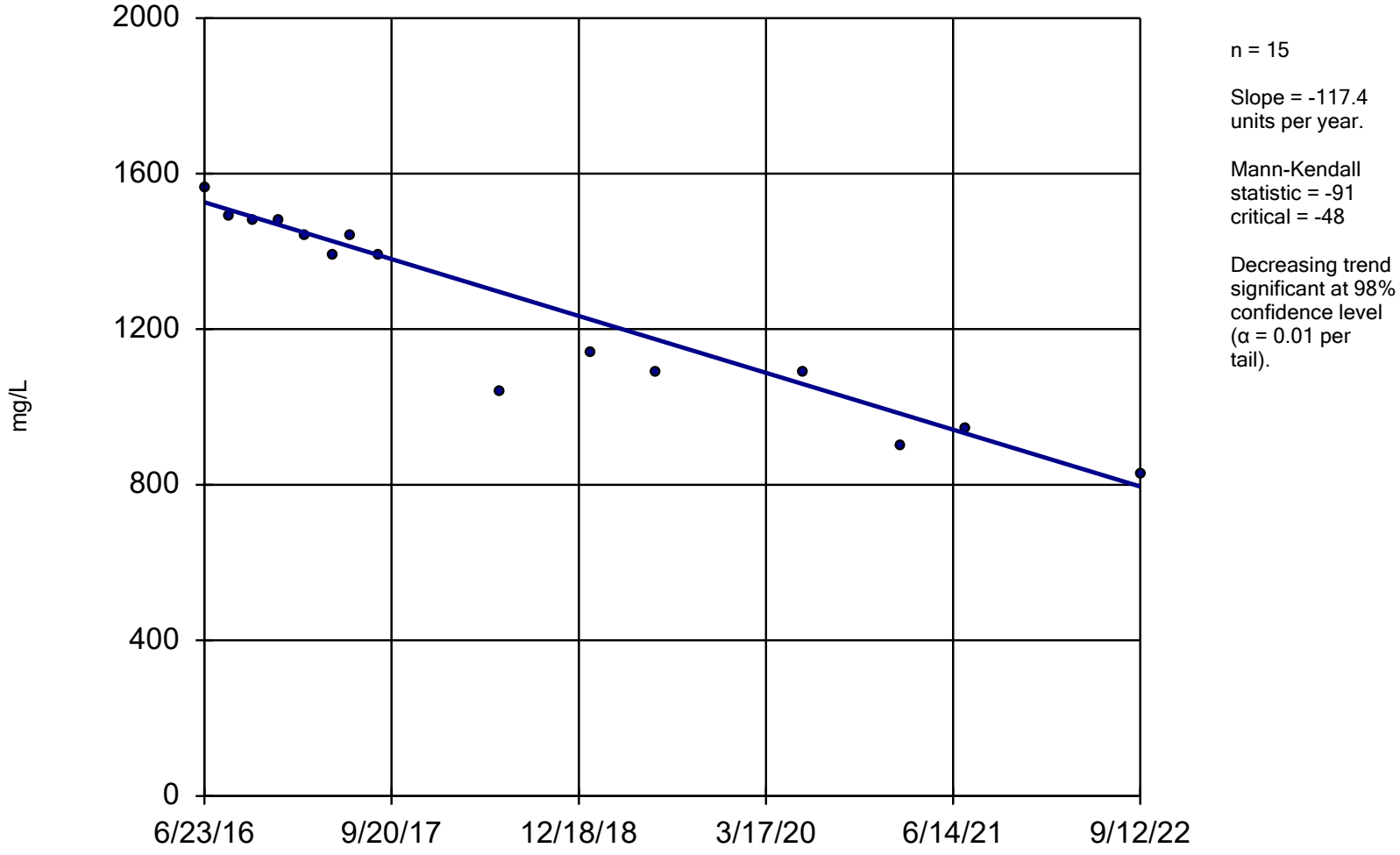
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 15

Slope = -117.4 units per year.

Mann-Kendall statistic = -91
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

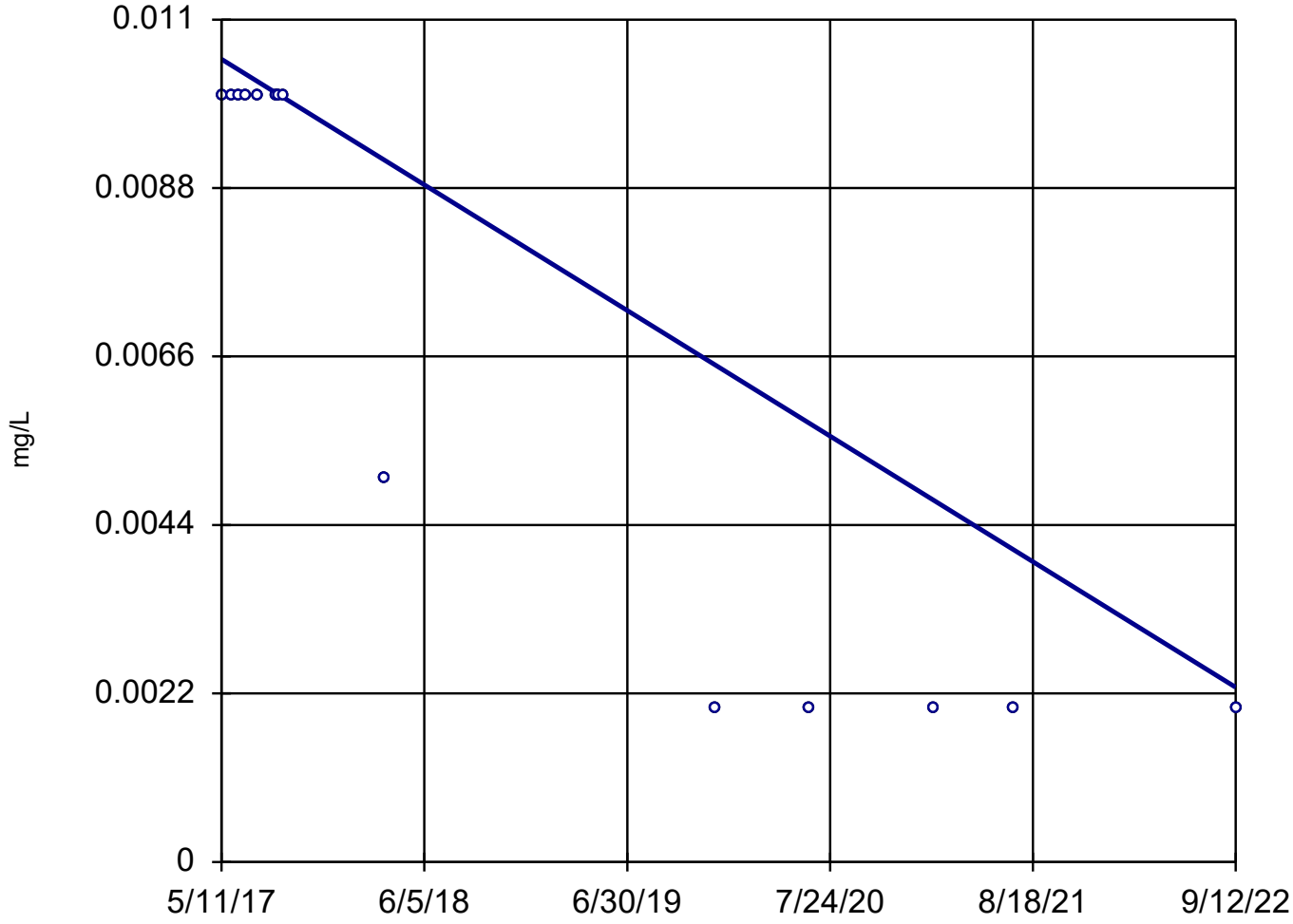
Constituent: Chloride Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -0.001535 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

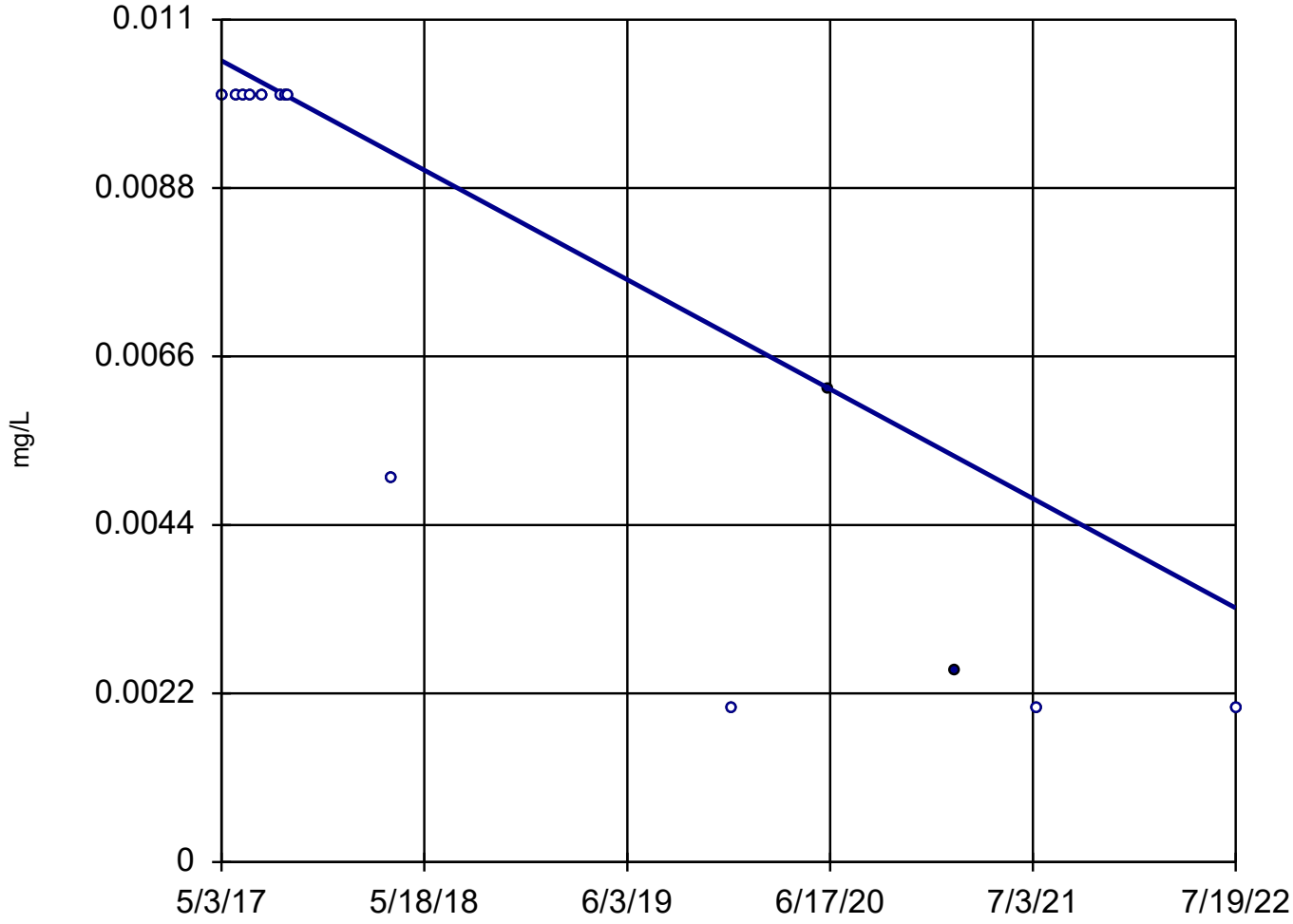
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 14

Slope = -0.001371 units per year.

Mann-Kendall statistic = -54
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

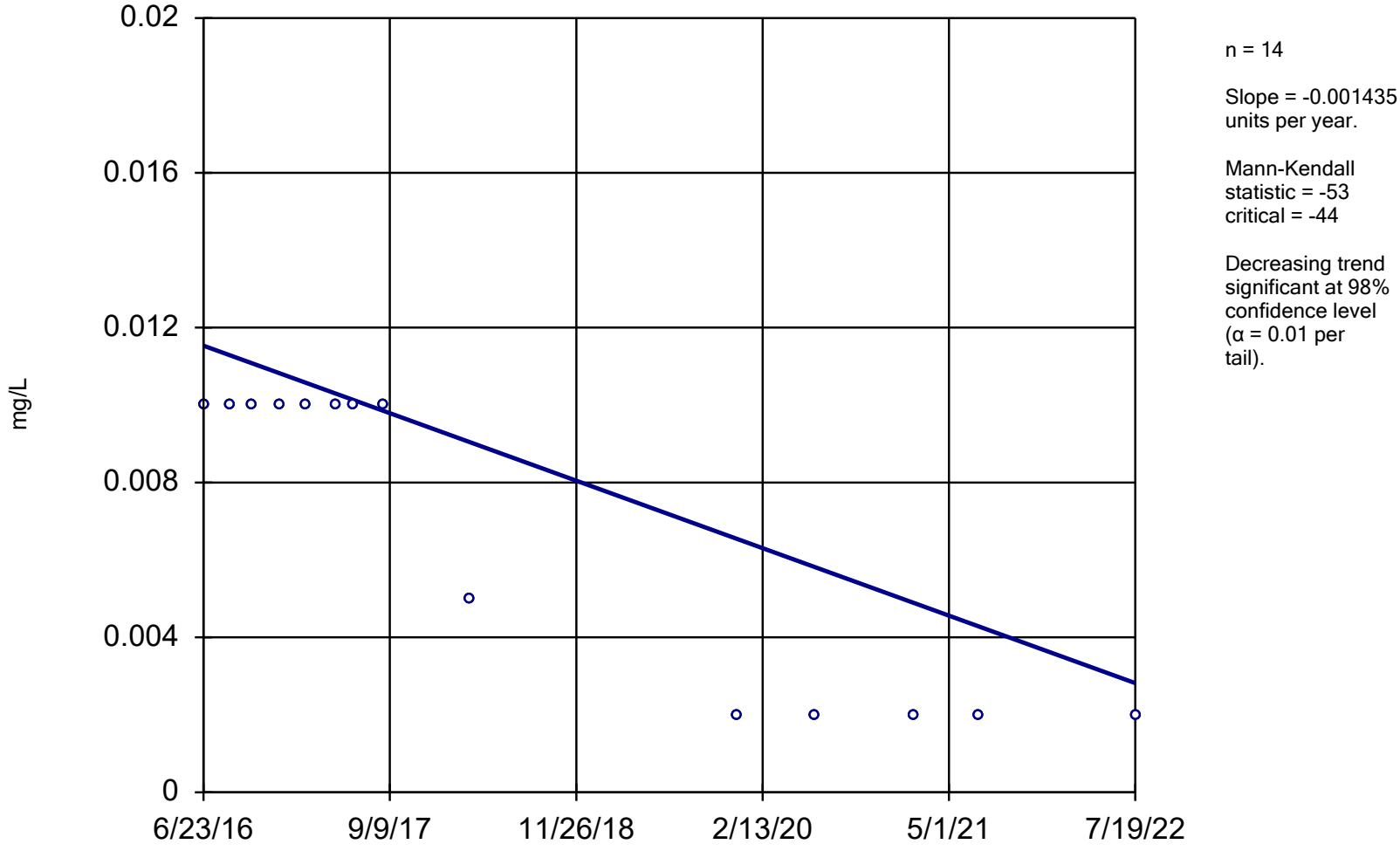
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 14

Slope = -0.001435 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

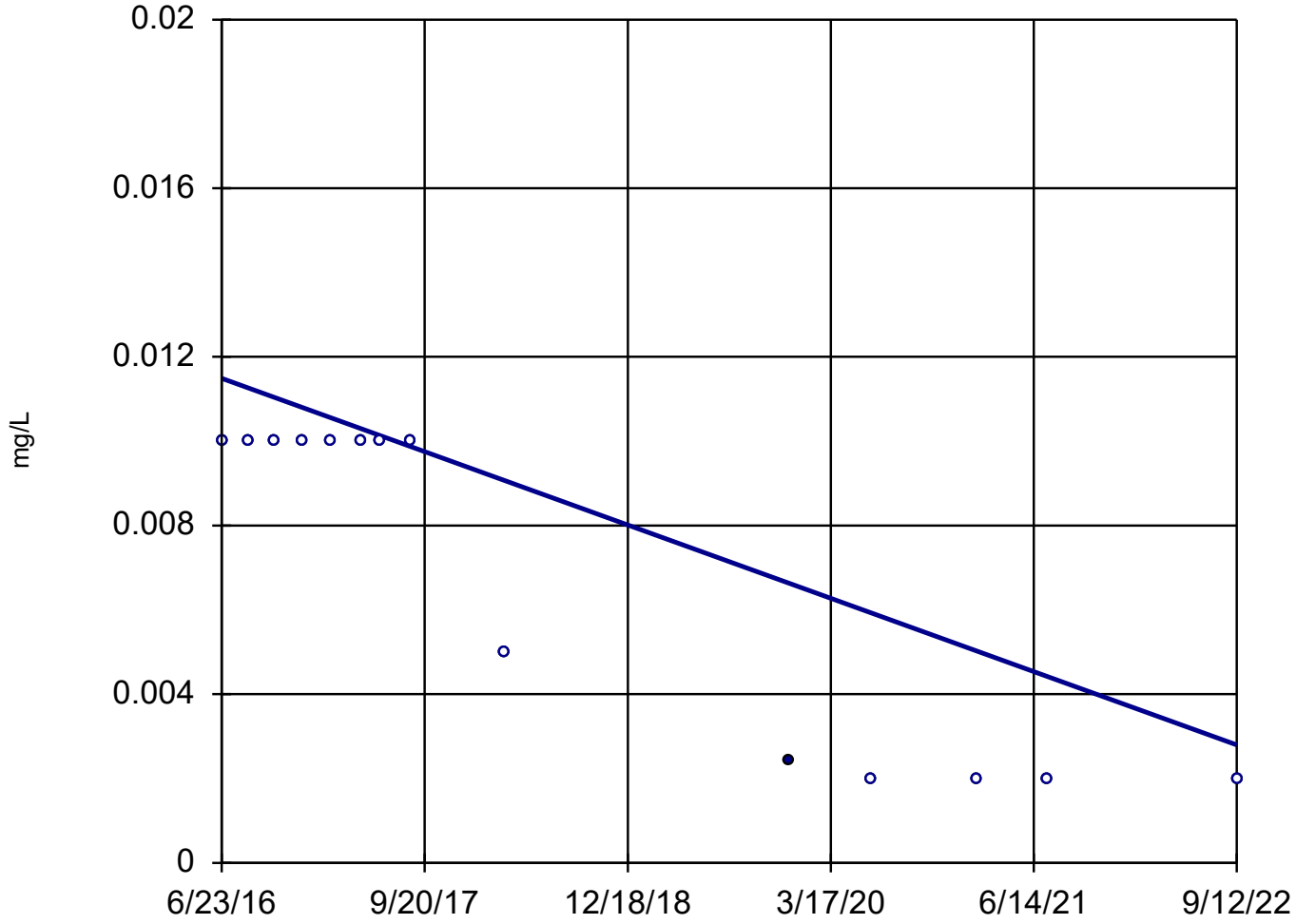
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 14

Slope = -0.001397 units per year.

Mann-Kendall statistic = -57
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

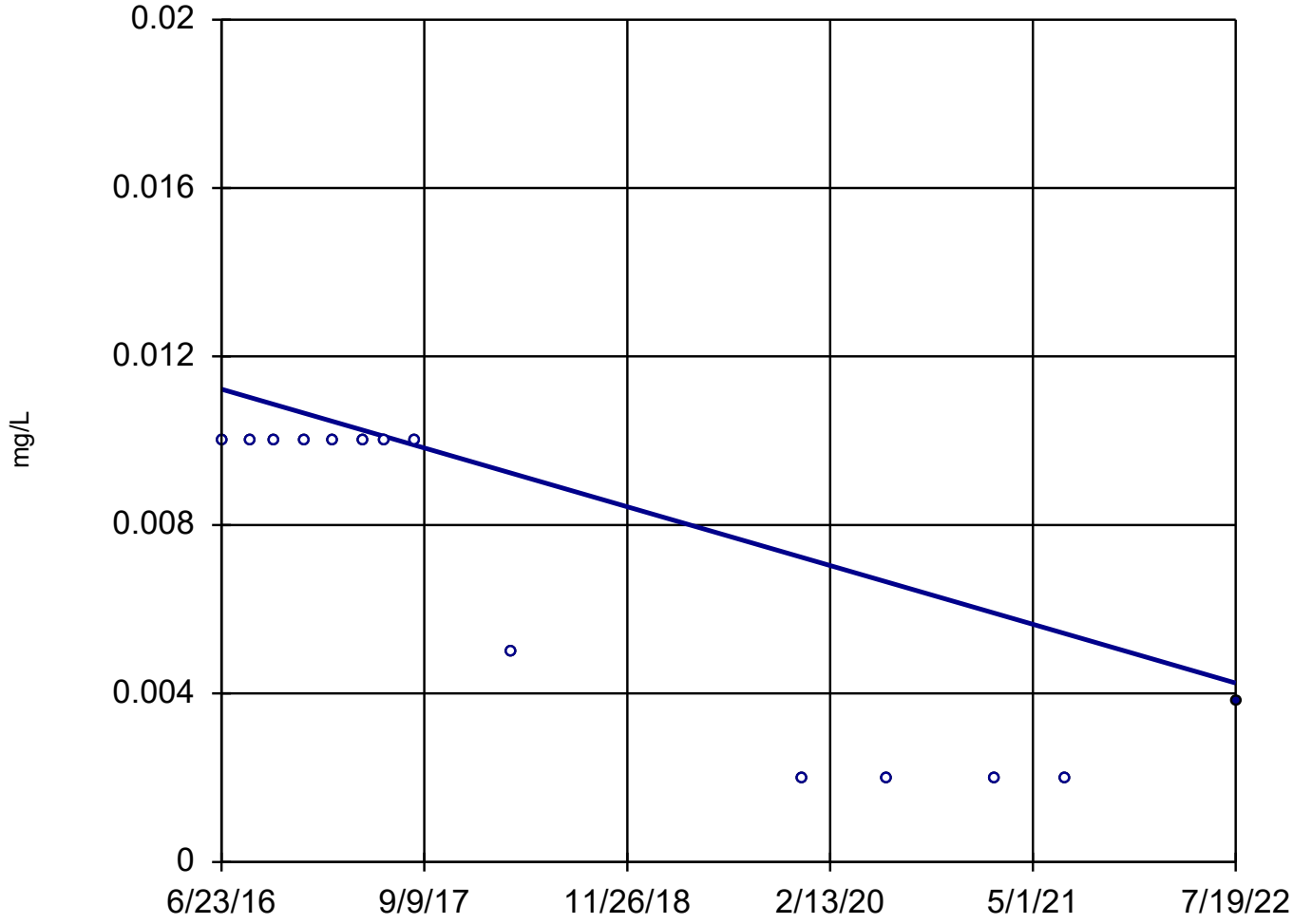
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 14

Slope = -0.001149 units per year.

Mann-Kendall statistic = -49
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

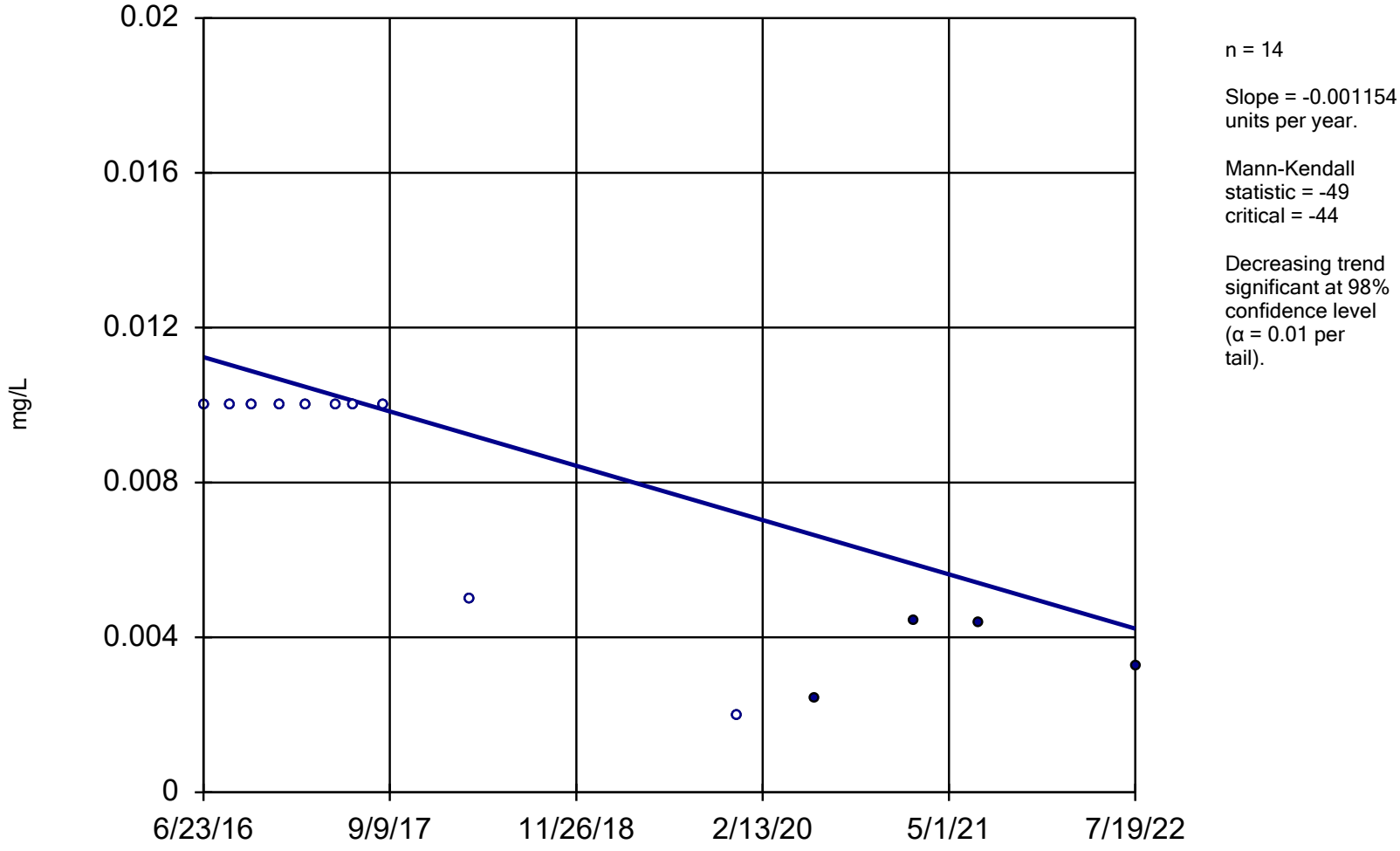
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 14

Slope = -0.001154 units per year.

Mann-Kendall statistic = -49
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

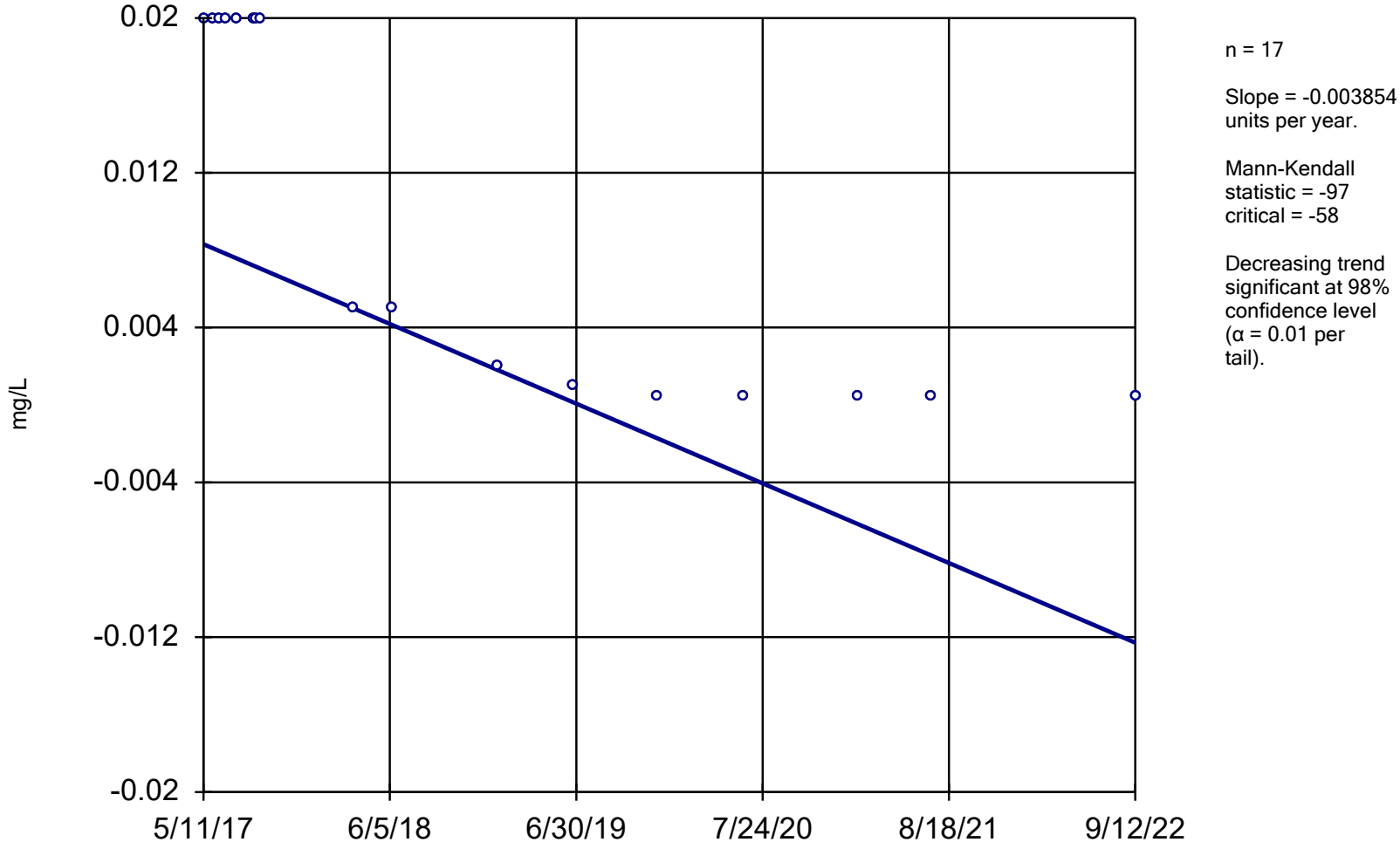
Constituent: Chromium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 17

Slope = -0.003854 units per year.

Mann-Kendall statistic = -97
critical = -58

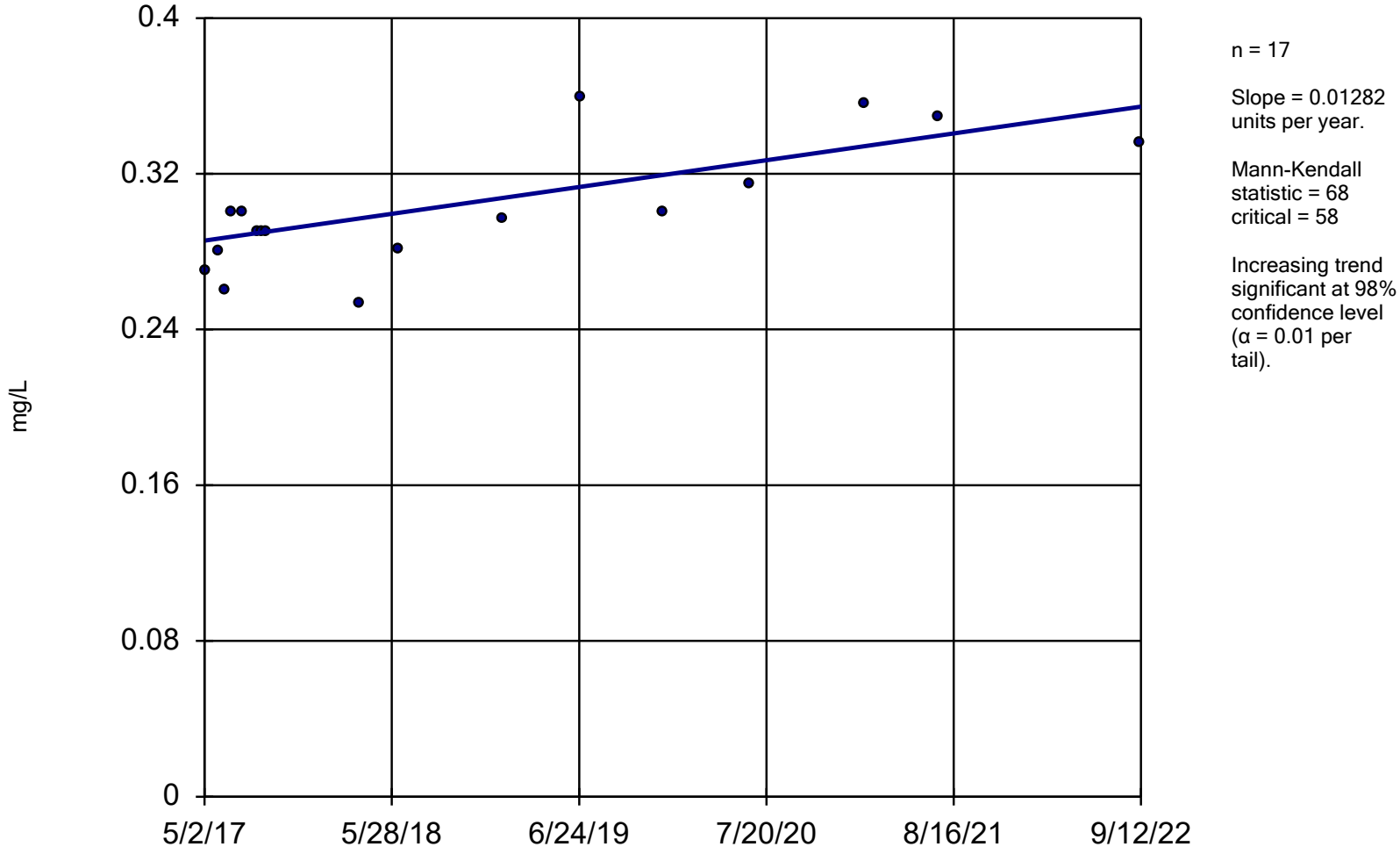
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 17

Slope = 0.01282 units per year.

Mann-Kendall statistic = 68
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

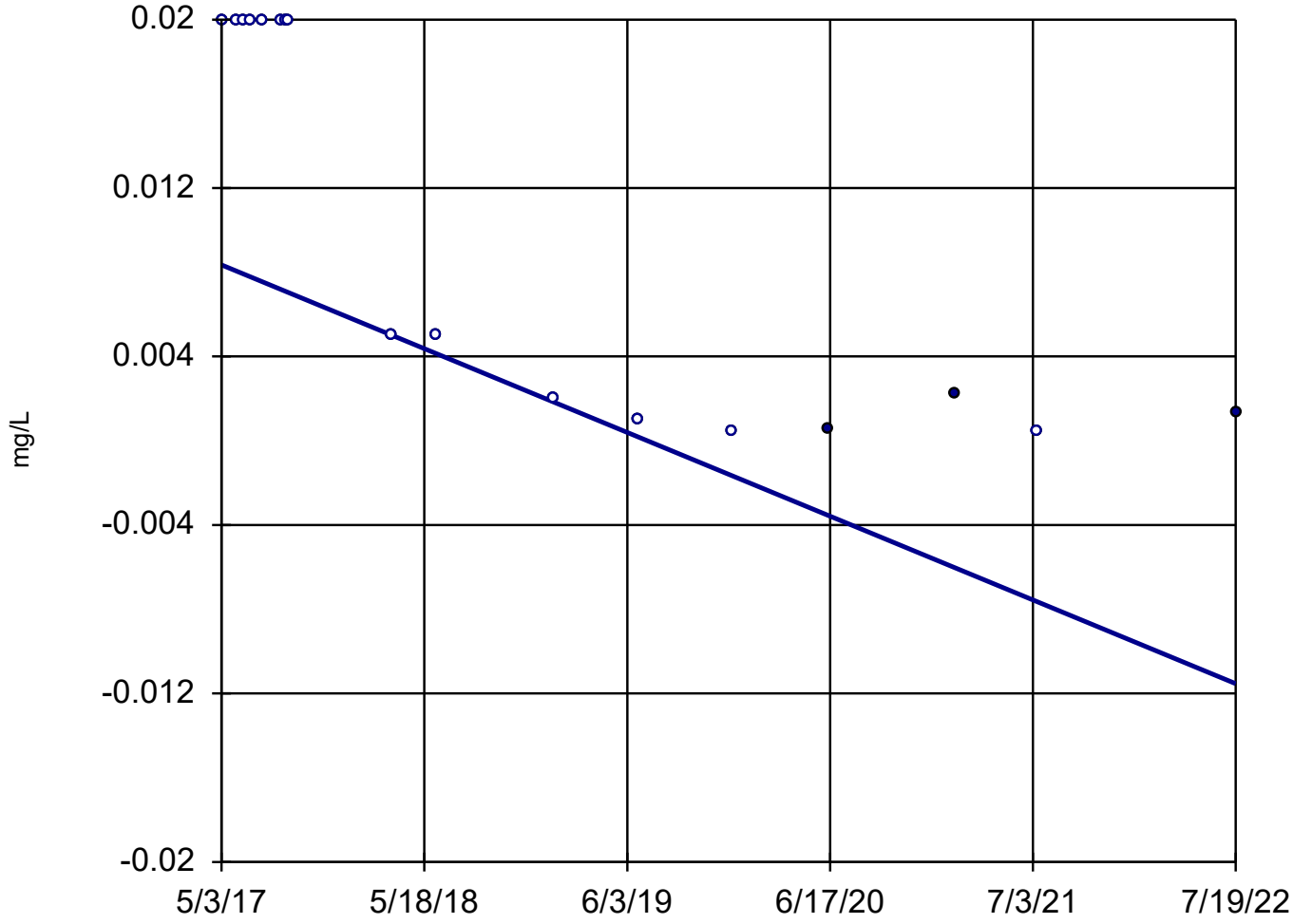
Constituent: Cobalt Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 17

Slope = -0.003815 units per year.

Mann-Kendall statistic = -88
critical = -58

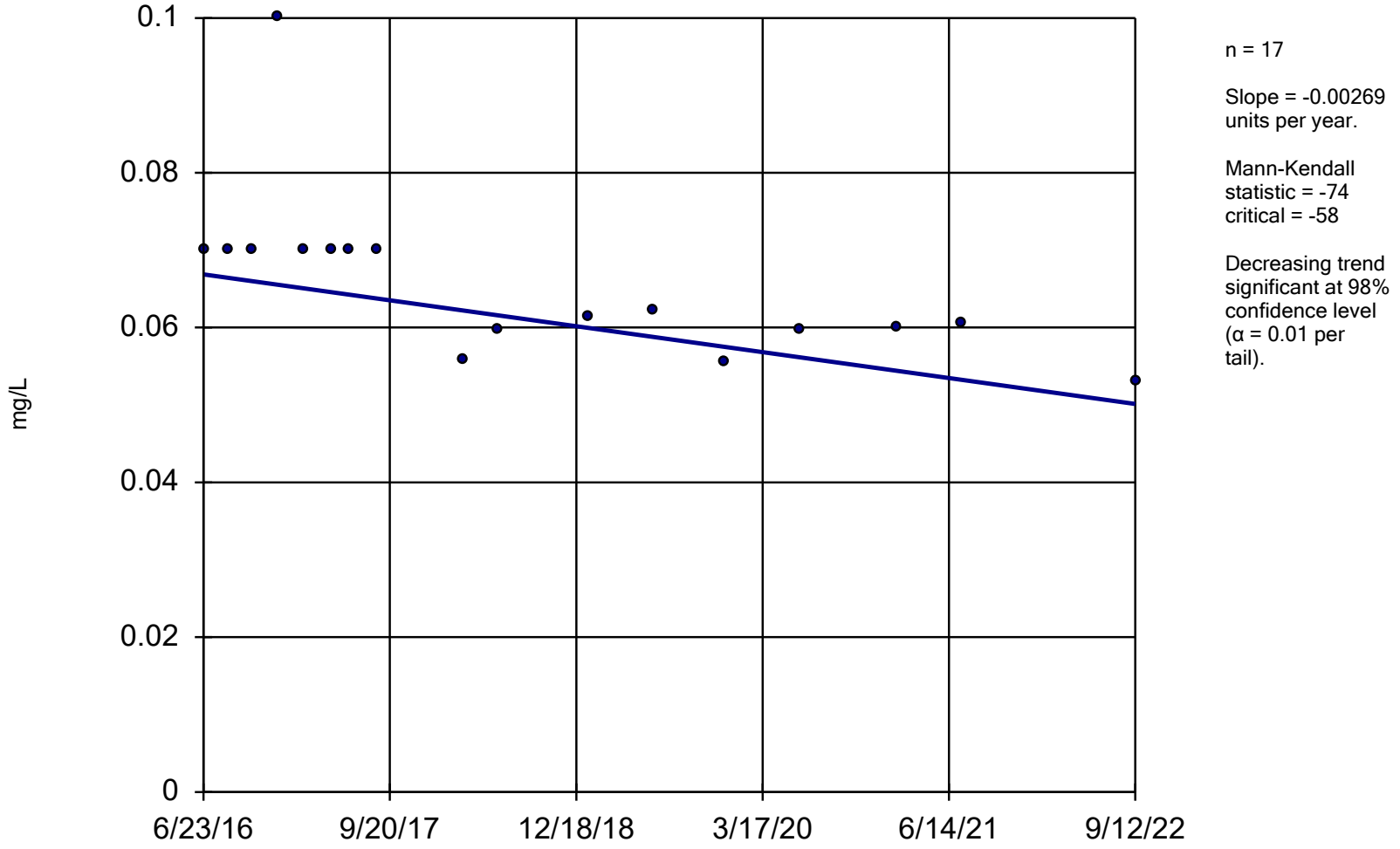
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.00269 units per year.

Mann-Kendall statistic = -74
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

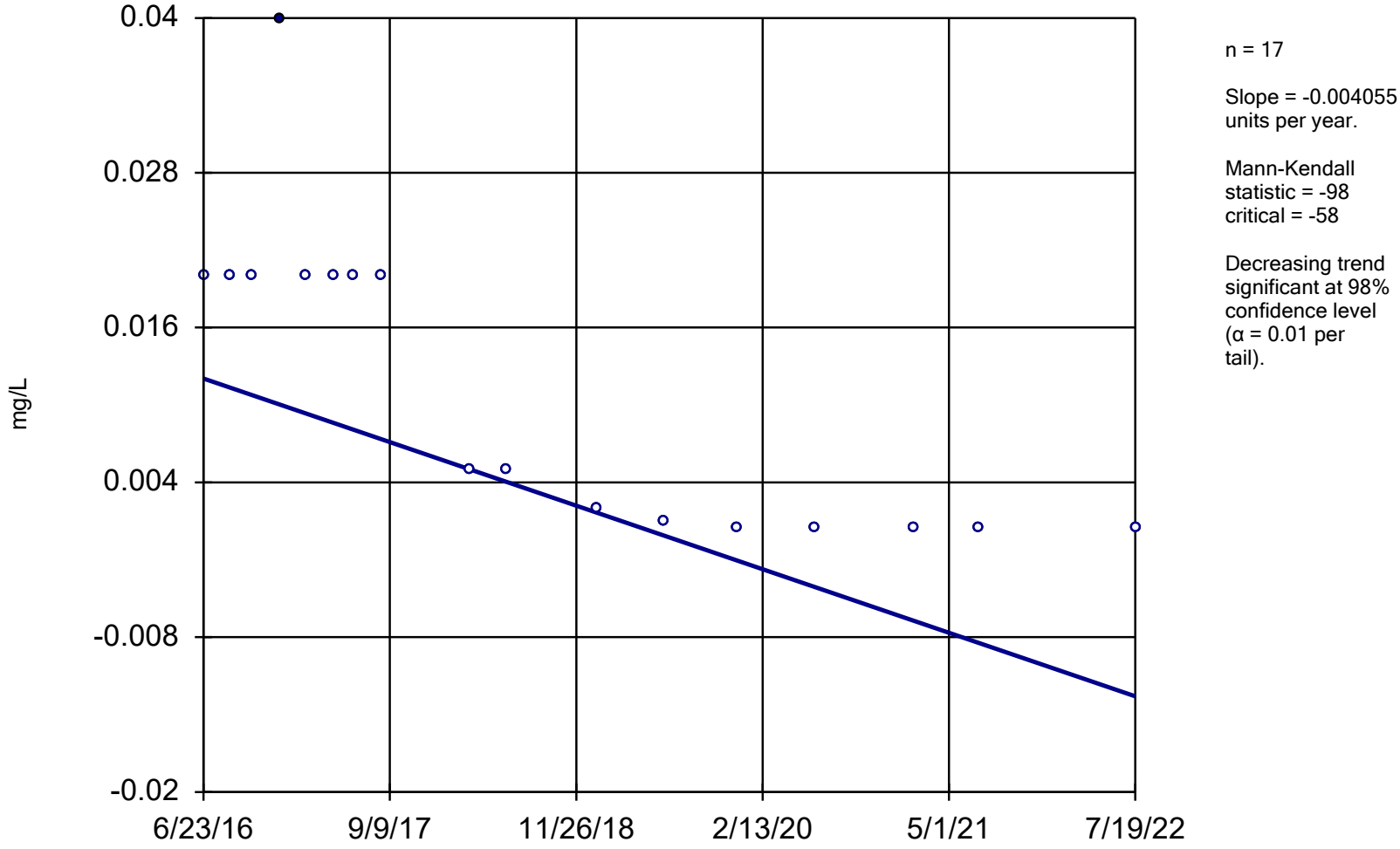
Constituent: Cobalt Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.004055 units per year.

Mann-Kendall statistic = -98
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

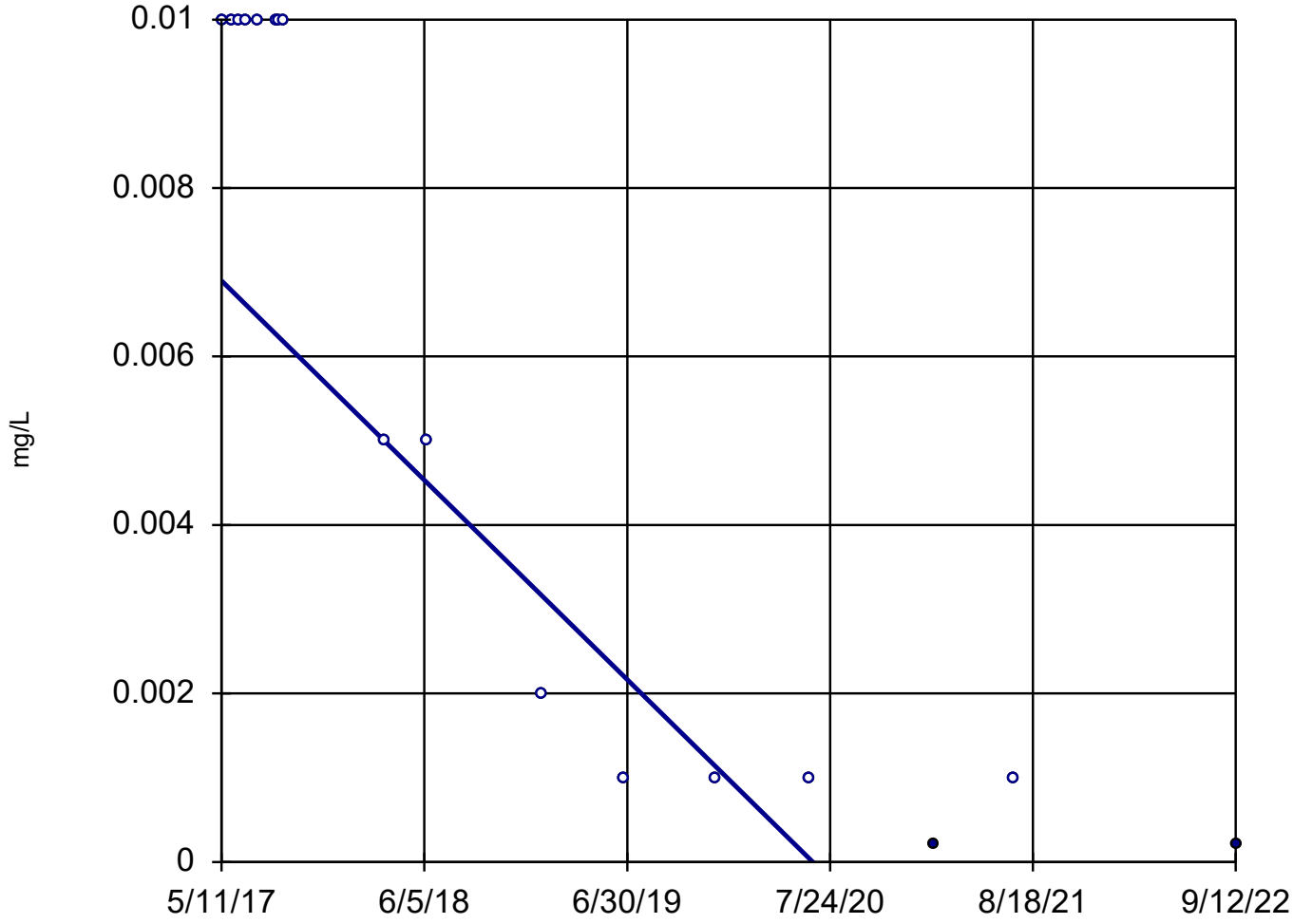
Constituent: Cobalt Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 17

Slope = -0.002215 units per year.

Mann-Kendall statistic = -99
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

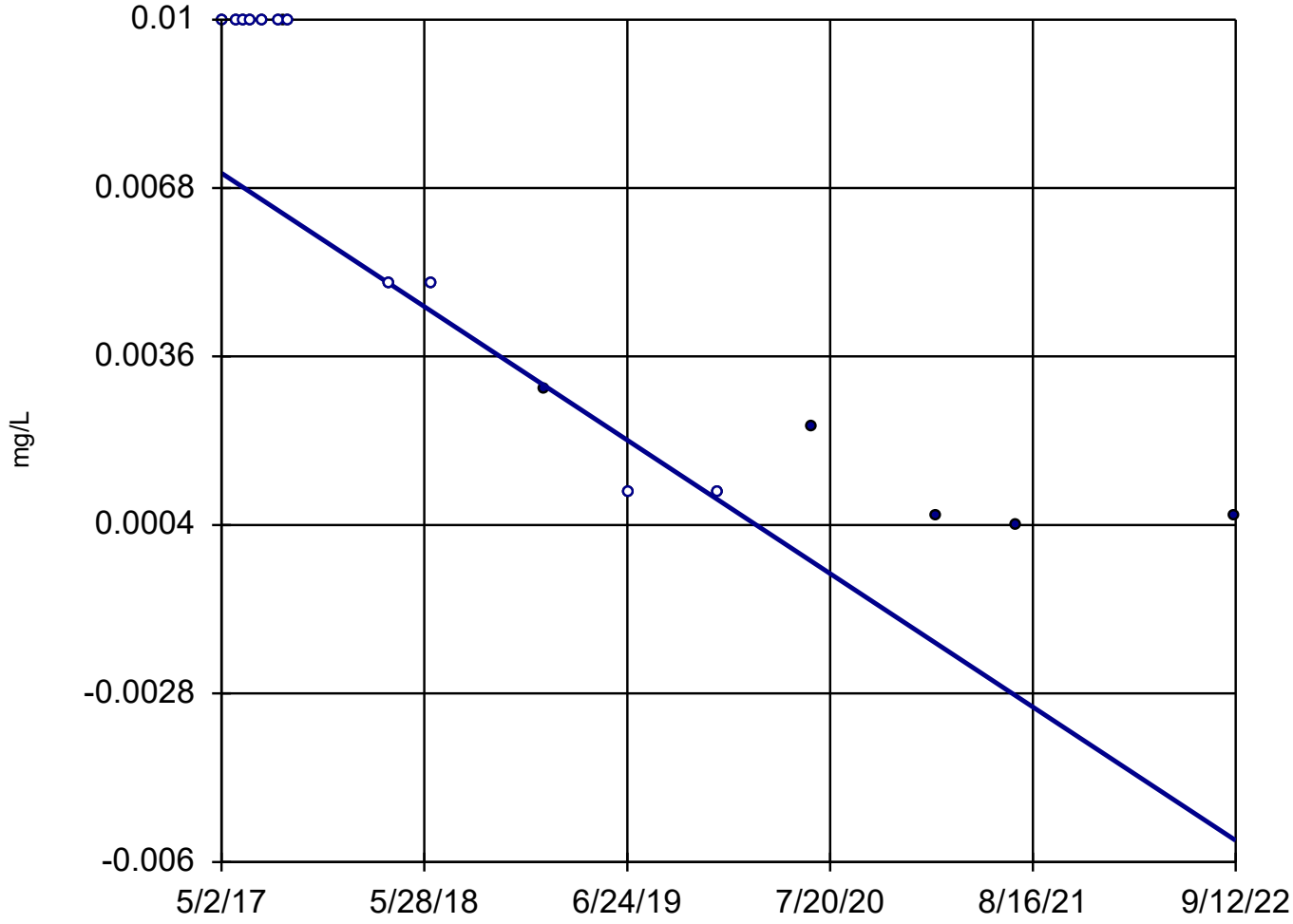
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 17

Slope = -0.002362 units per year.

Mann-Kendall statistic = -98
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

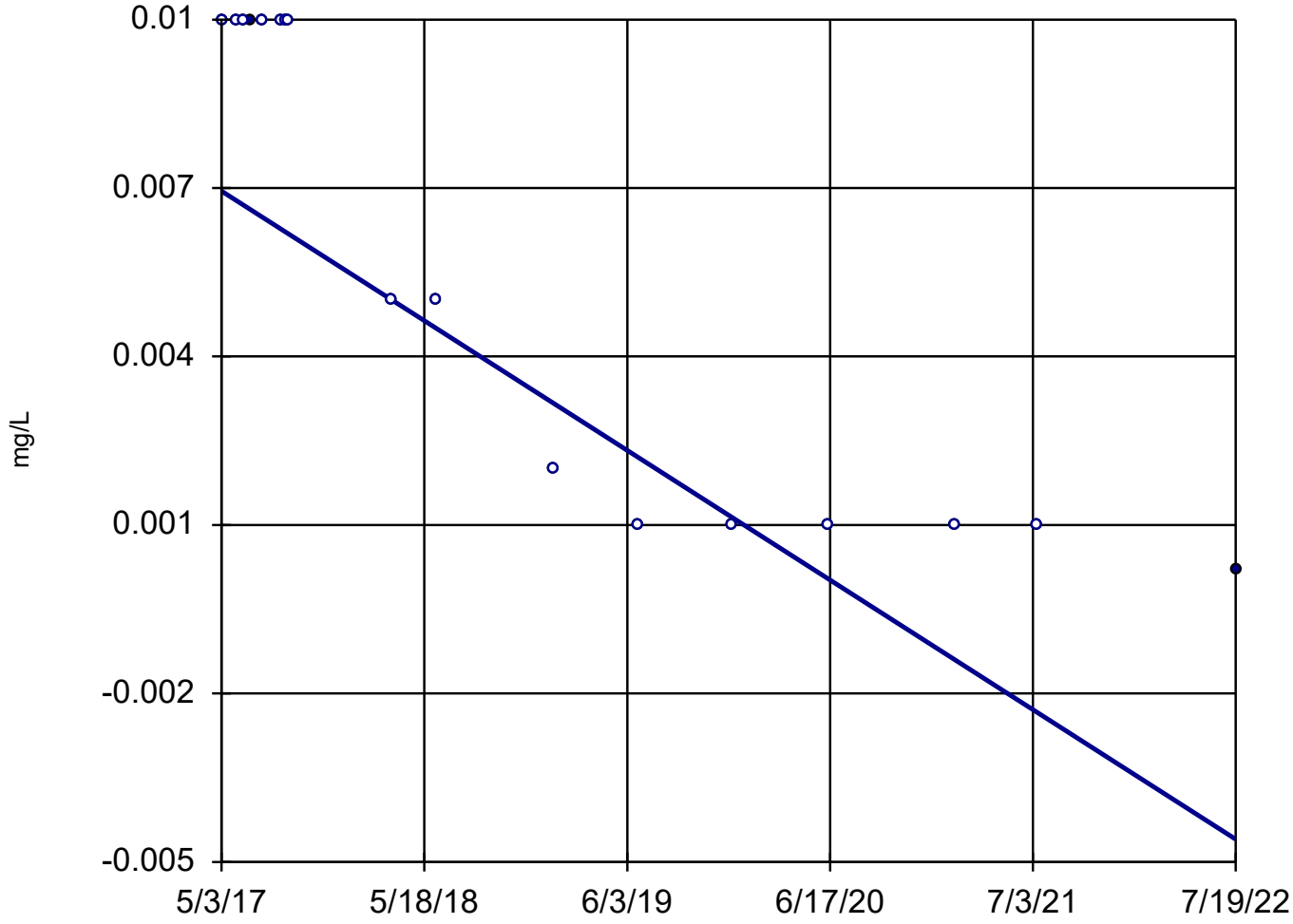
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 17

Slope = -0.002214 units per year.

Mann-Kendall statistic = -97
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

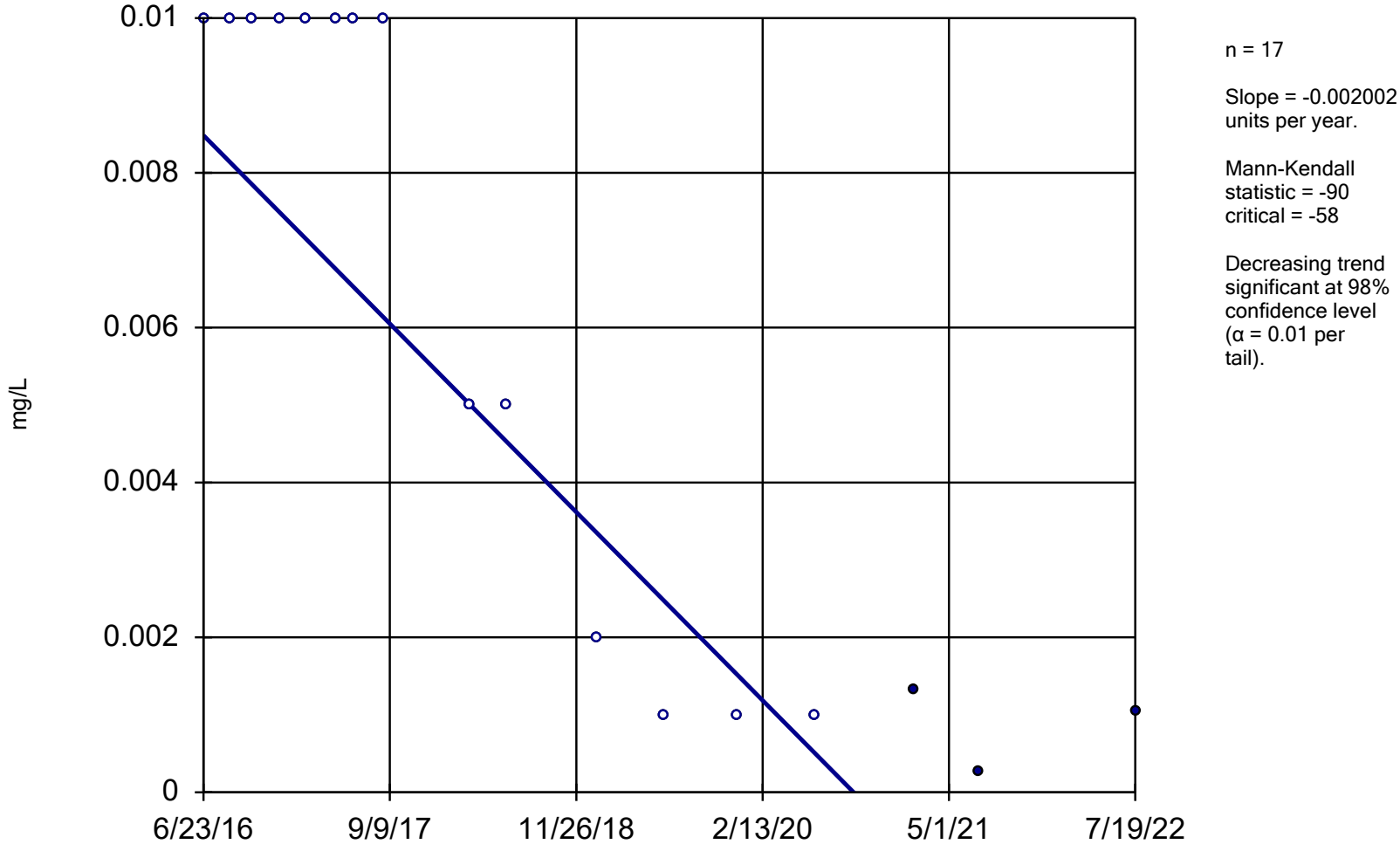
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 17

Slope = -0.002002 units per year.

Mann-Kendall statistic = -90
critical = -58

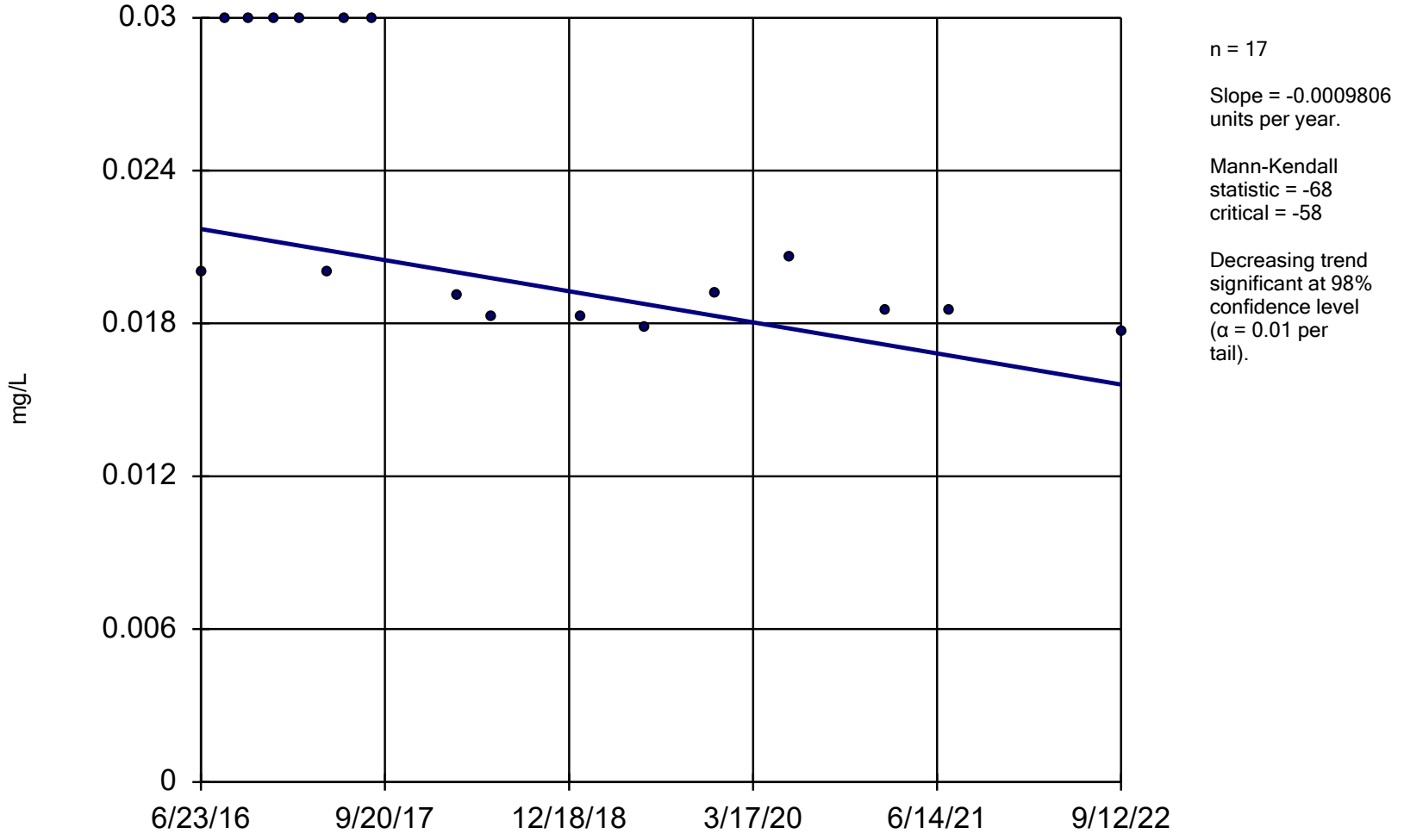
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.0009806 units per year.

Mann-Kendall statistic = -68
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

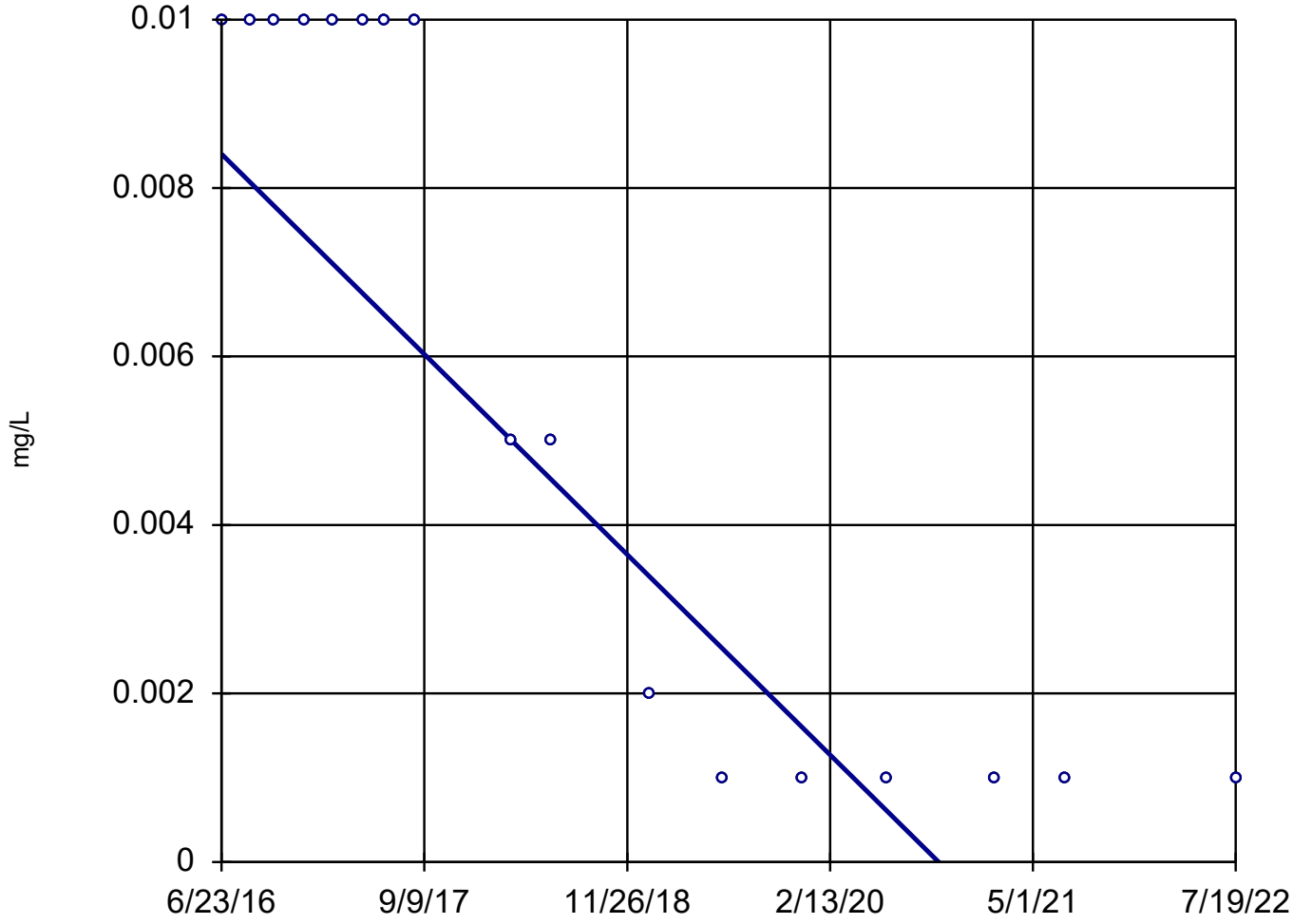
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.001957 units per year.

Mann-Kendall statistic = -92
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

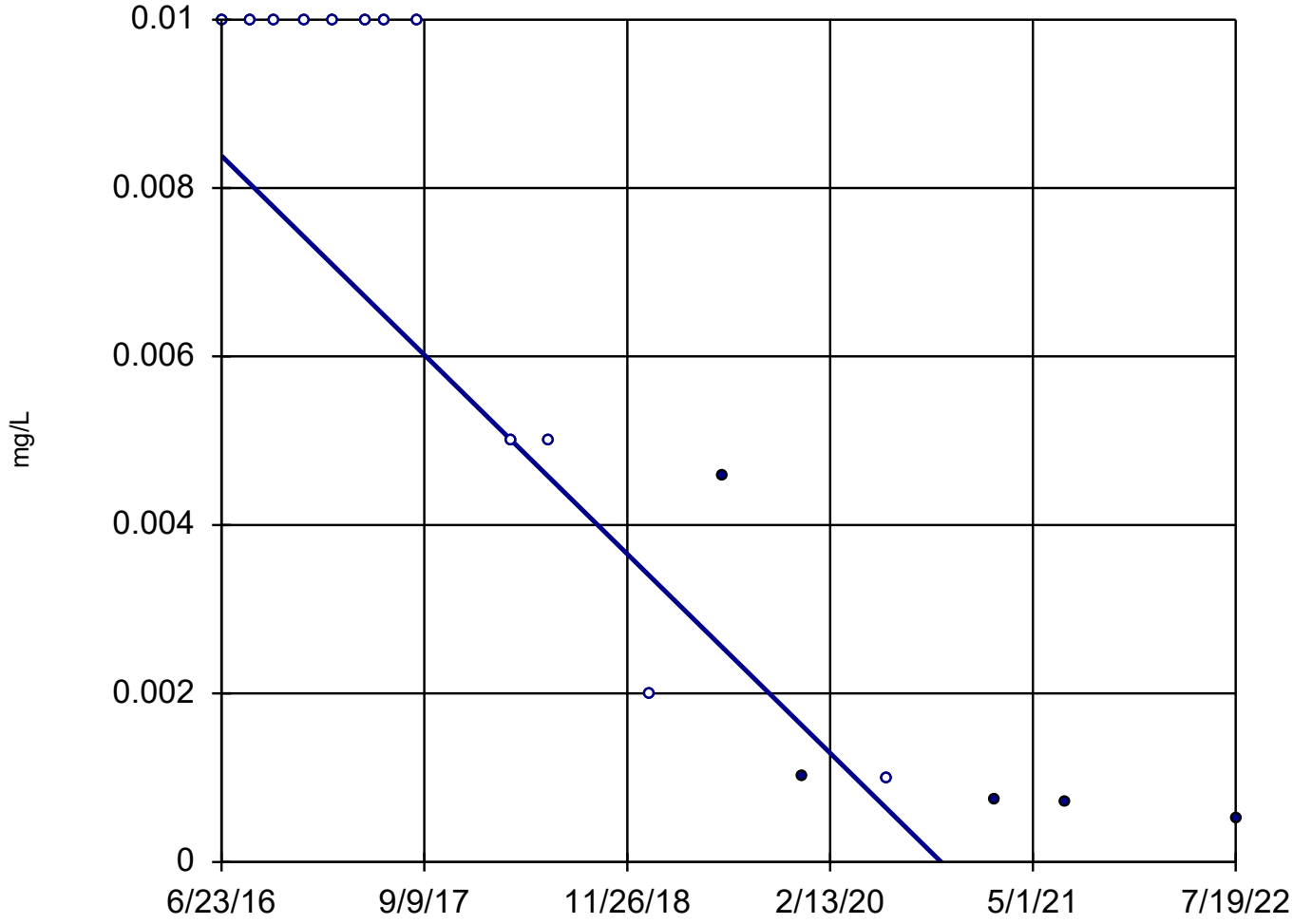
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 17

Slope = -0.001945 units per year.

Mann-Kendall statistic = -105
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

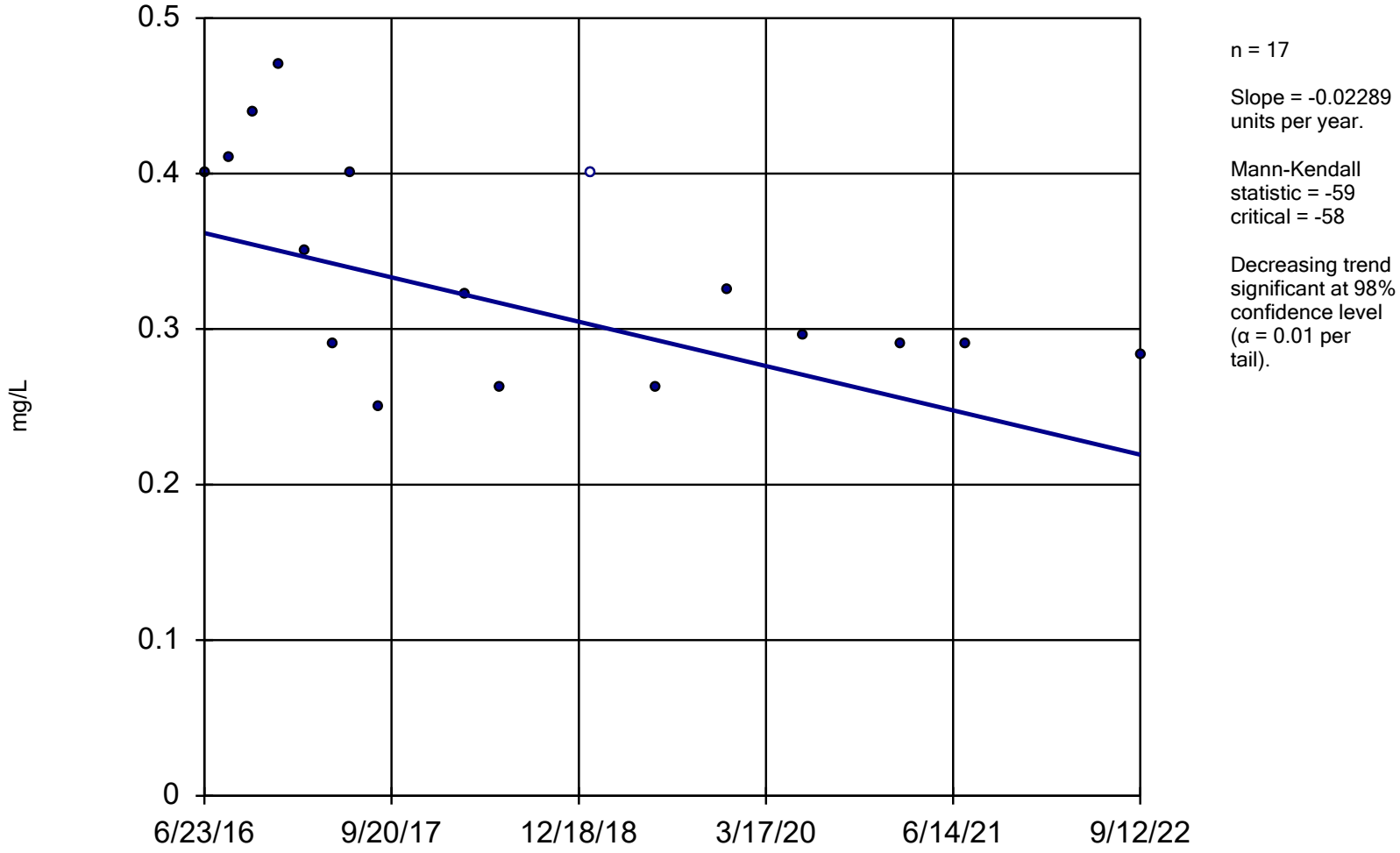
Constituent: Lead Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.02289 units per year.

Mann-Kendall statistic = -59
critical = -58

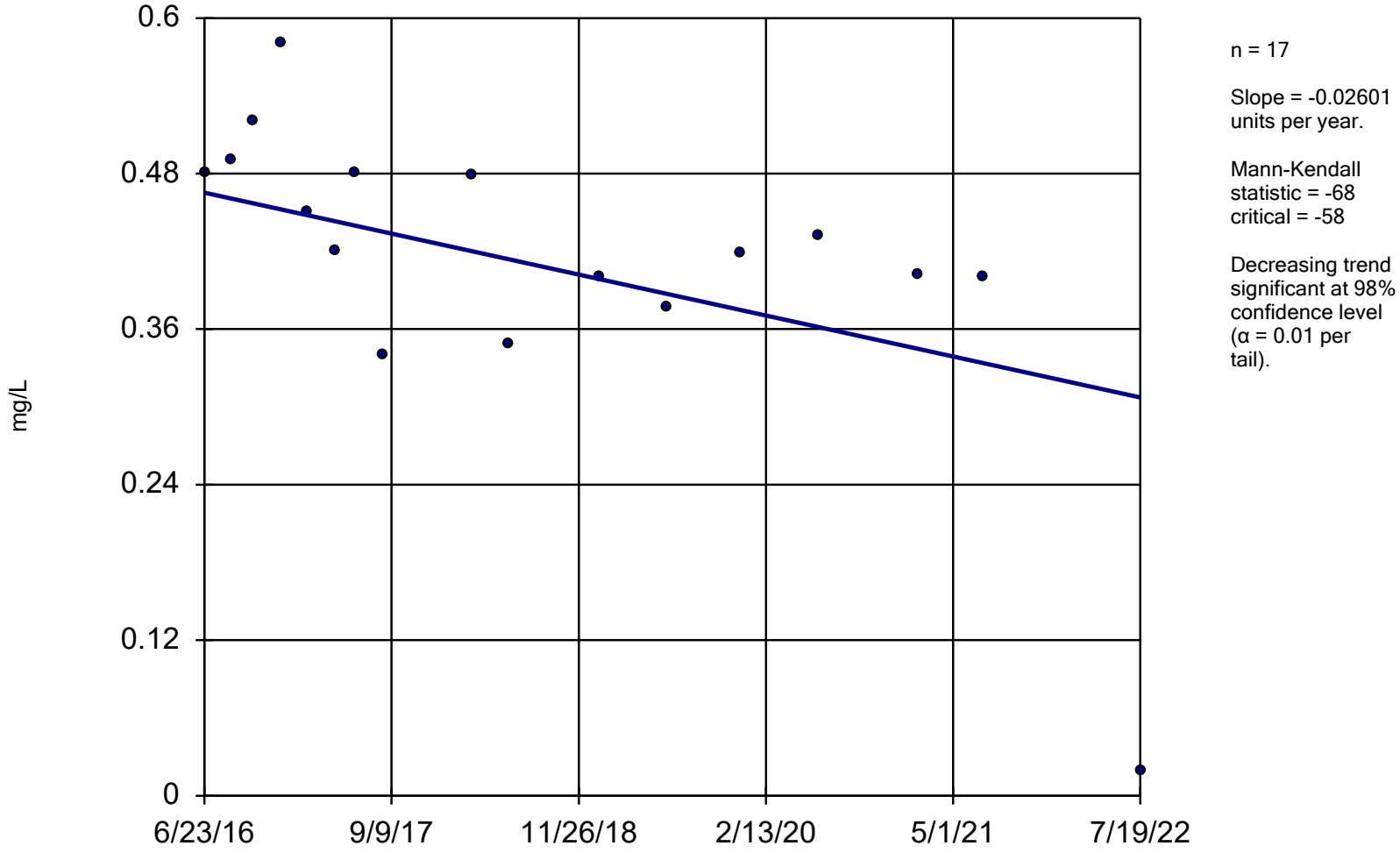
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.02601 units per year.

Mann-Kendall statistic = -68
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

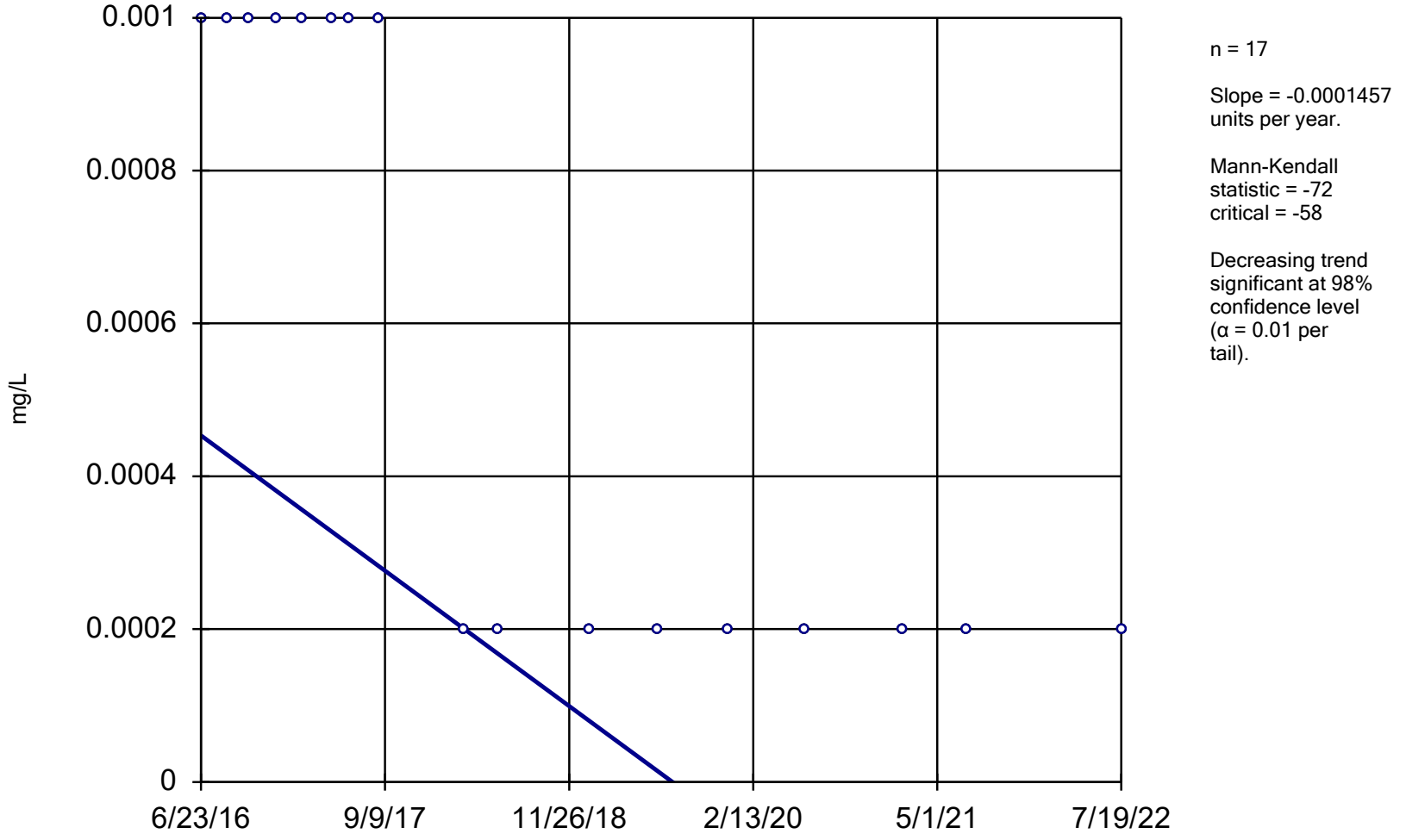
Constituent: Lithium Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

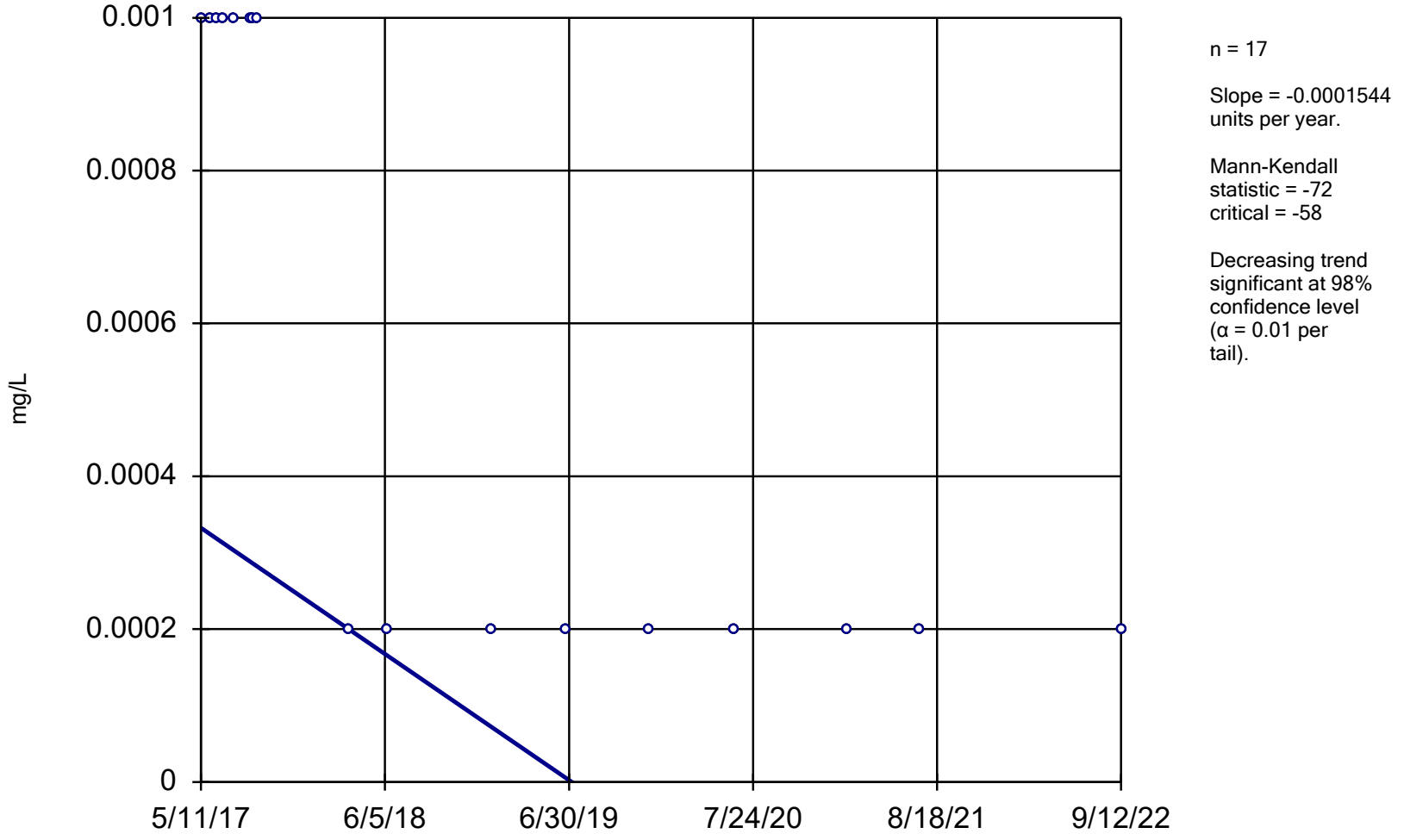
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 17

Slope = -0.0001544 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

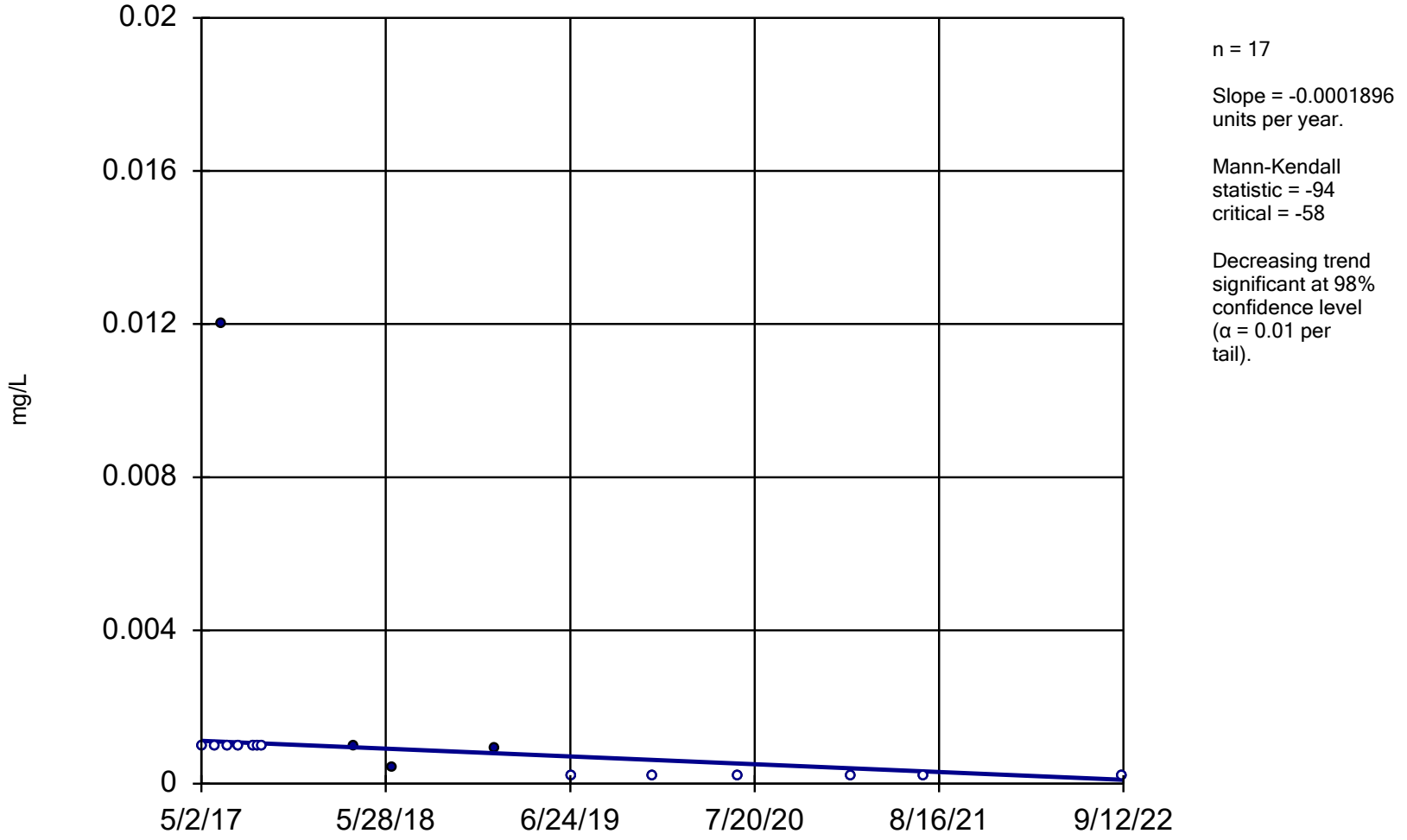
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 17

Slope = -0.0001896 units per year.

Mann-Kendall statistic = -94
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

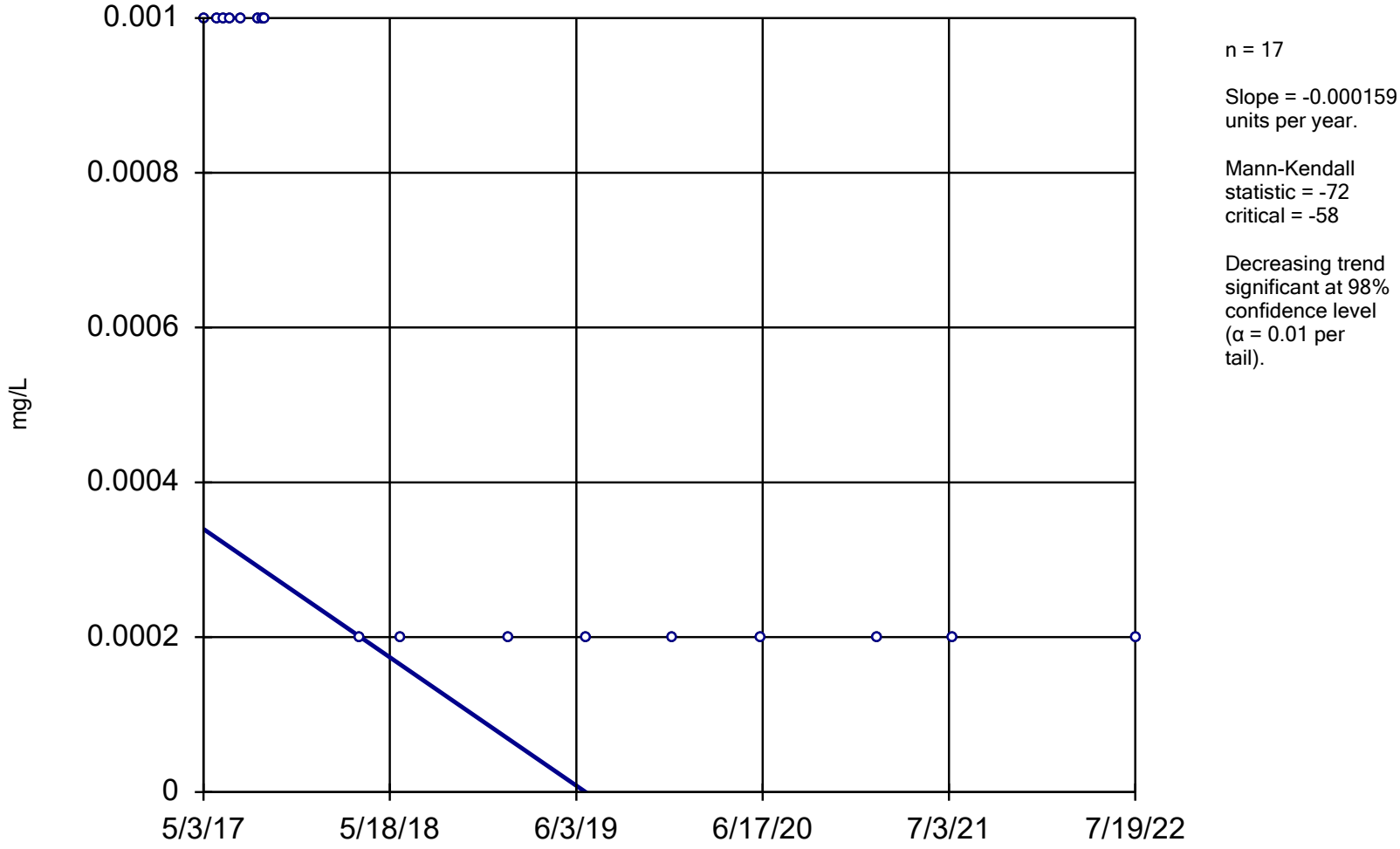
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 17

Slope = -0.000159 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

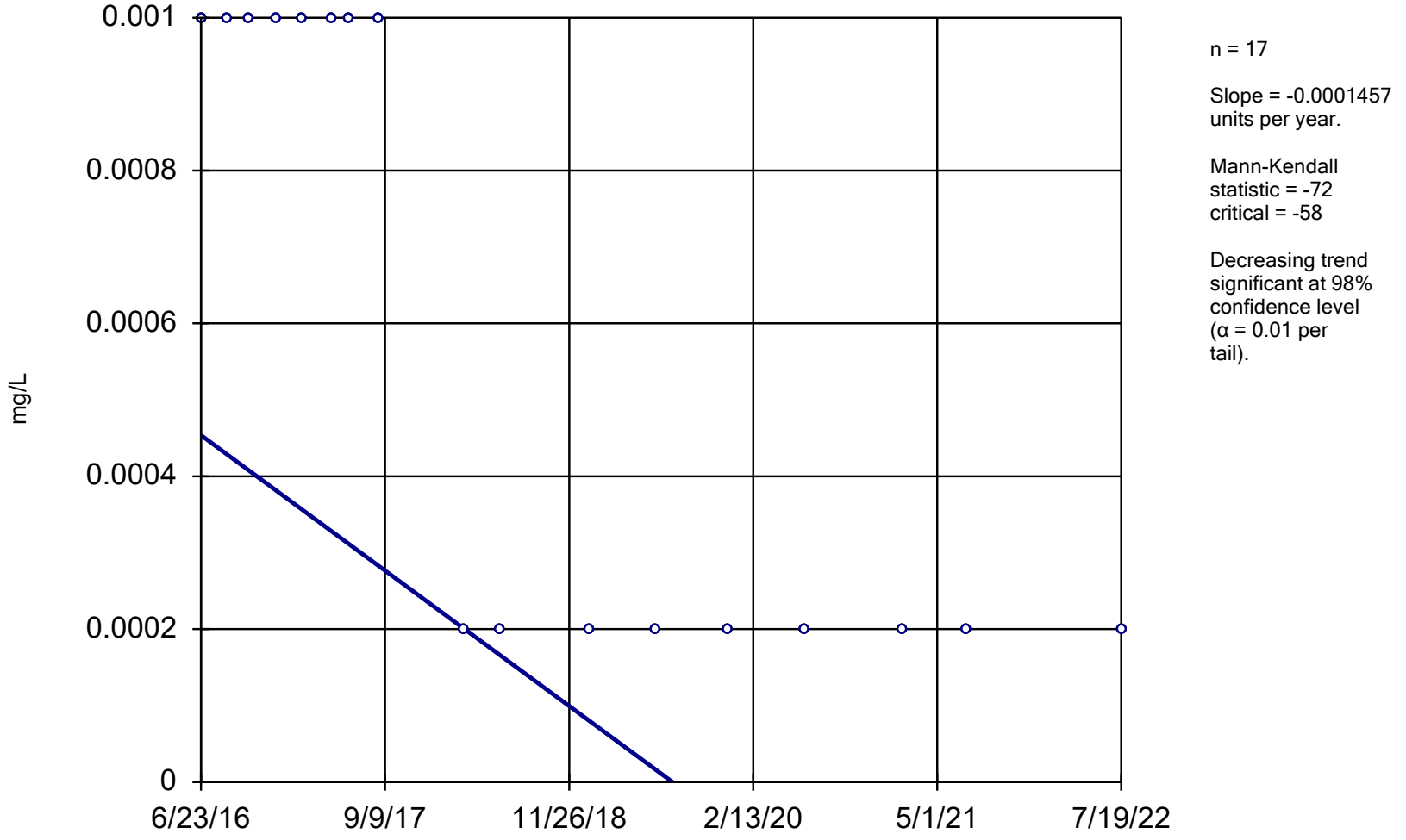
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

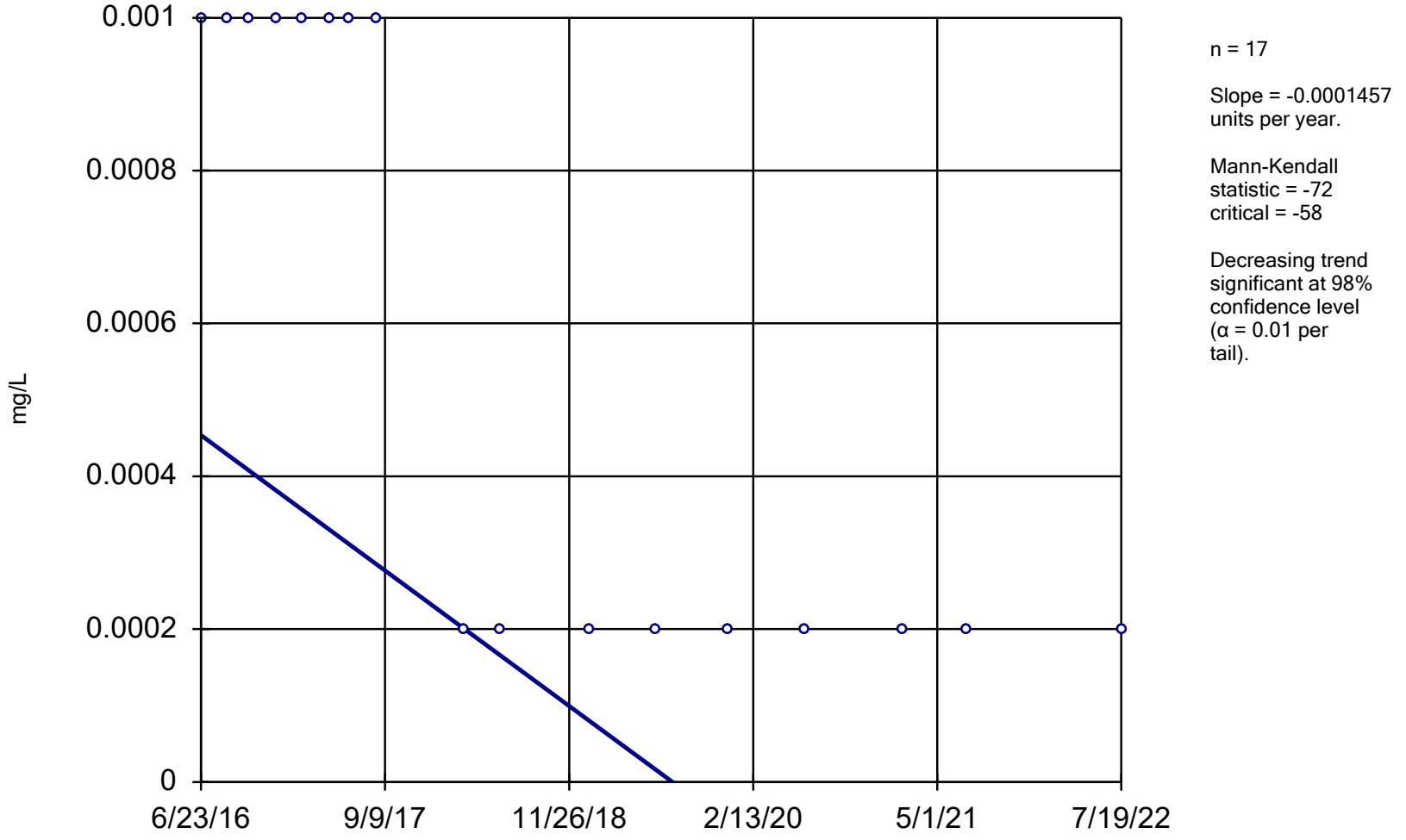
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

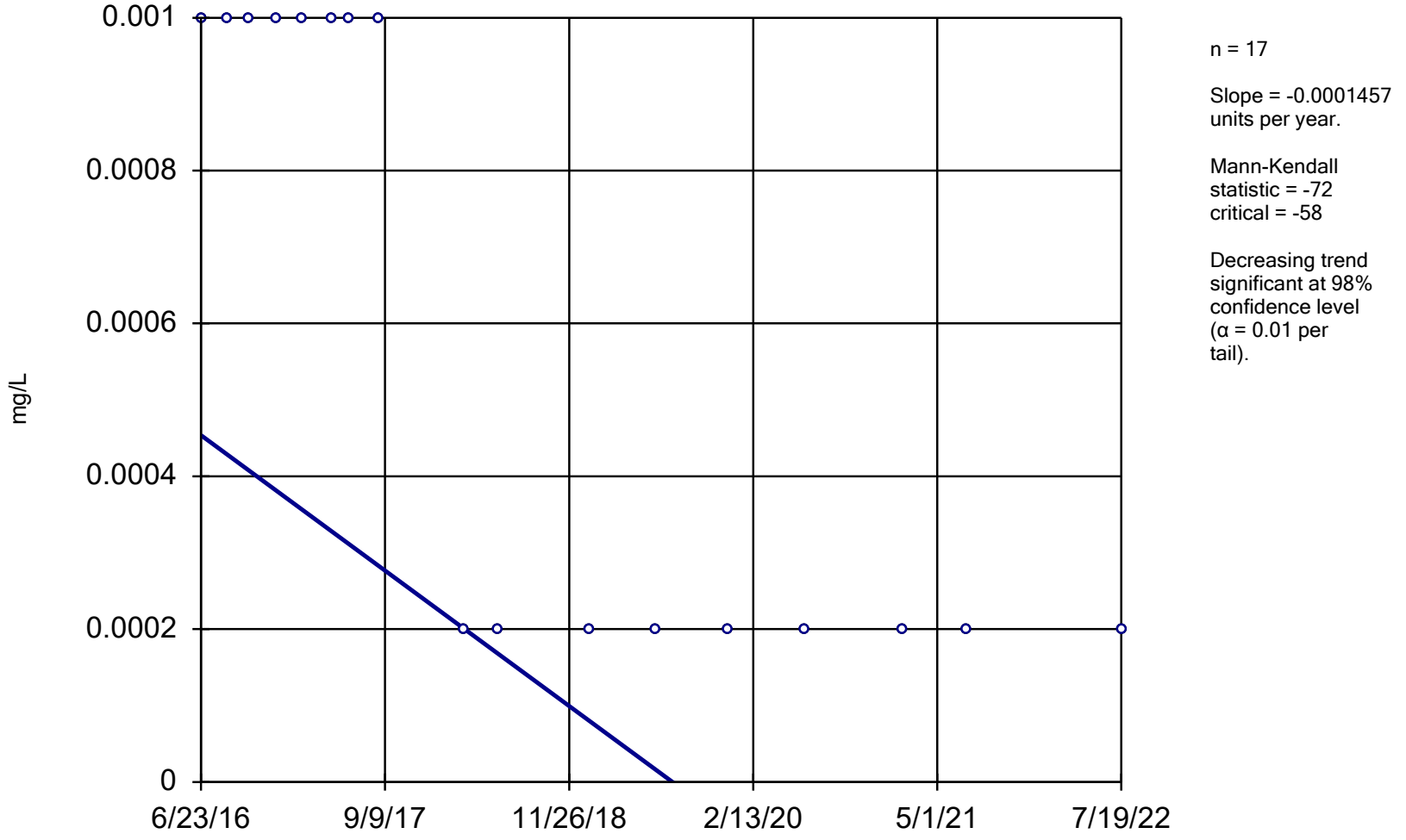
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

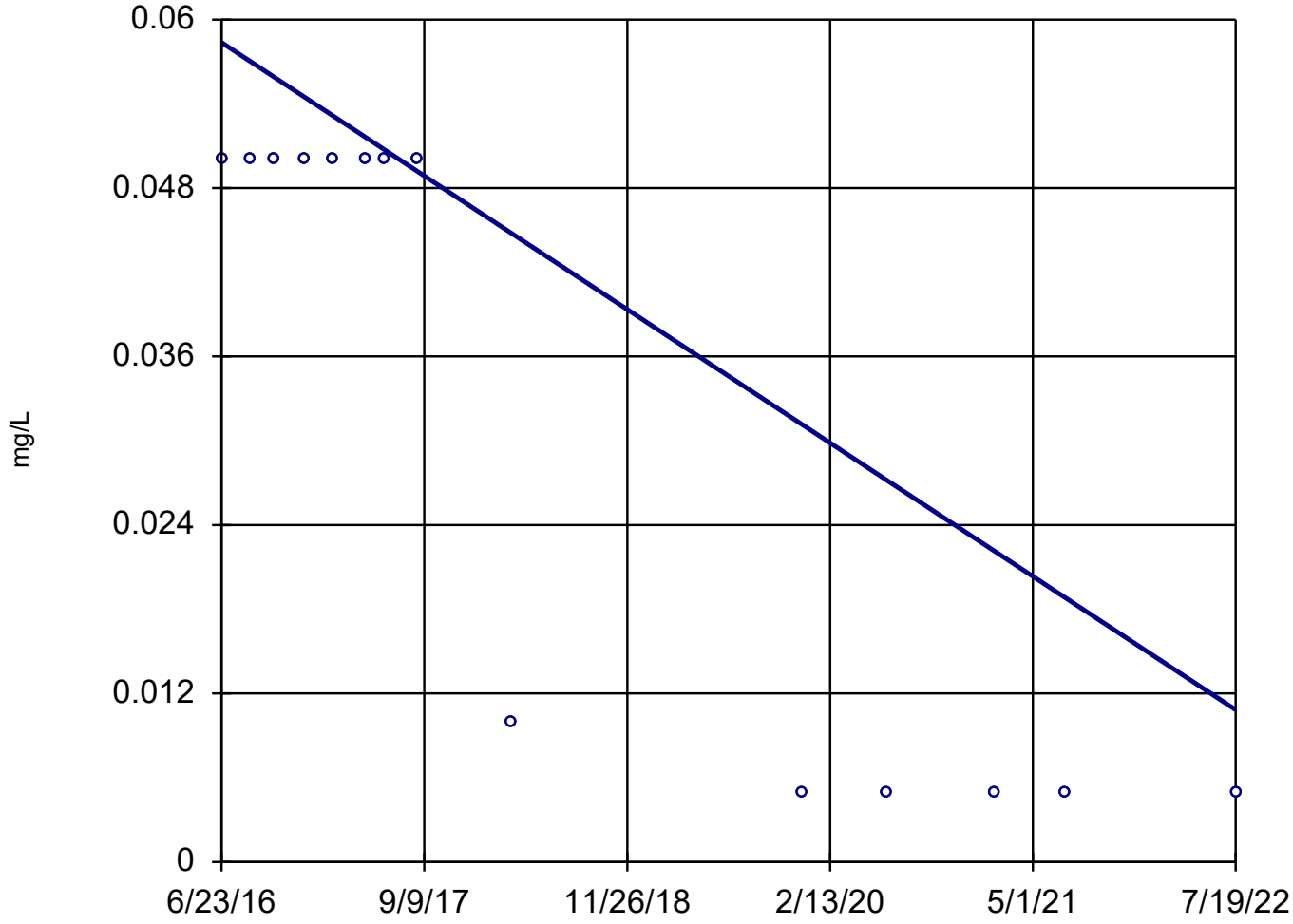
Constituent: Mercury Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 14

Slope = -0.007825 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

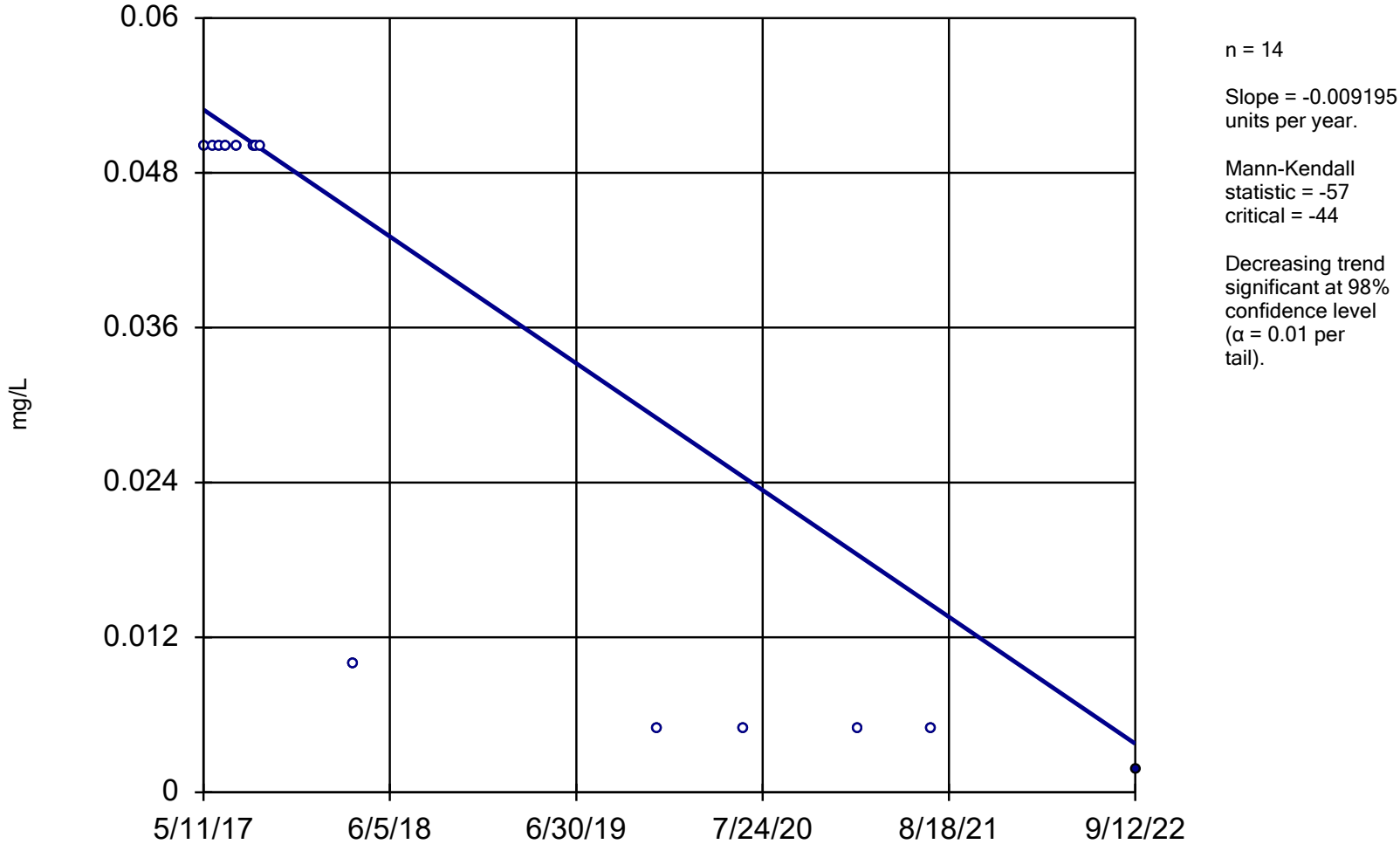
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -0.009195 units per year.

Mann-Kendall statistic = -57
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

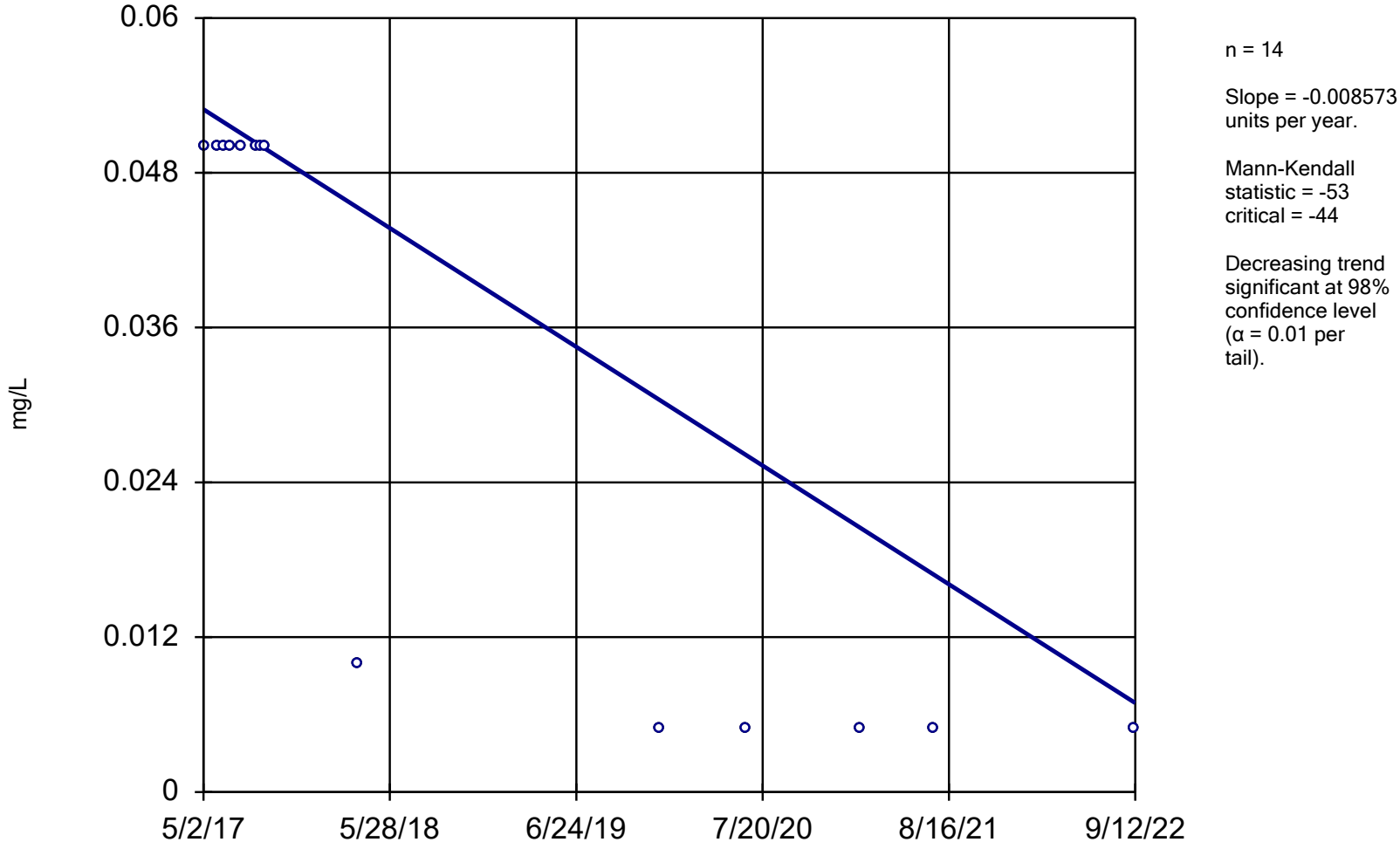
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 14

Slope = -0.008573 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

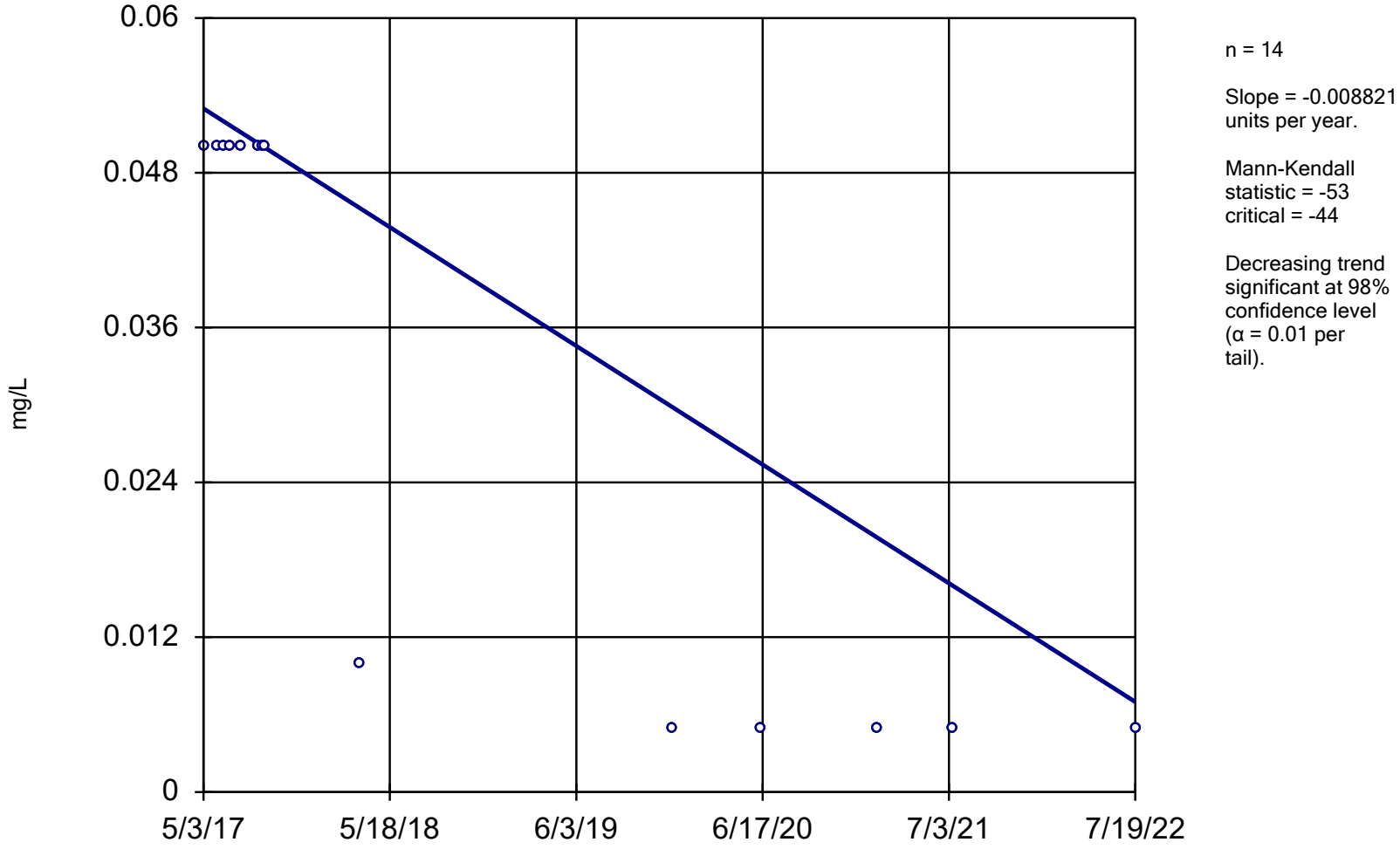
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 14

Slope = -0.008821 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

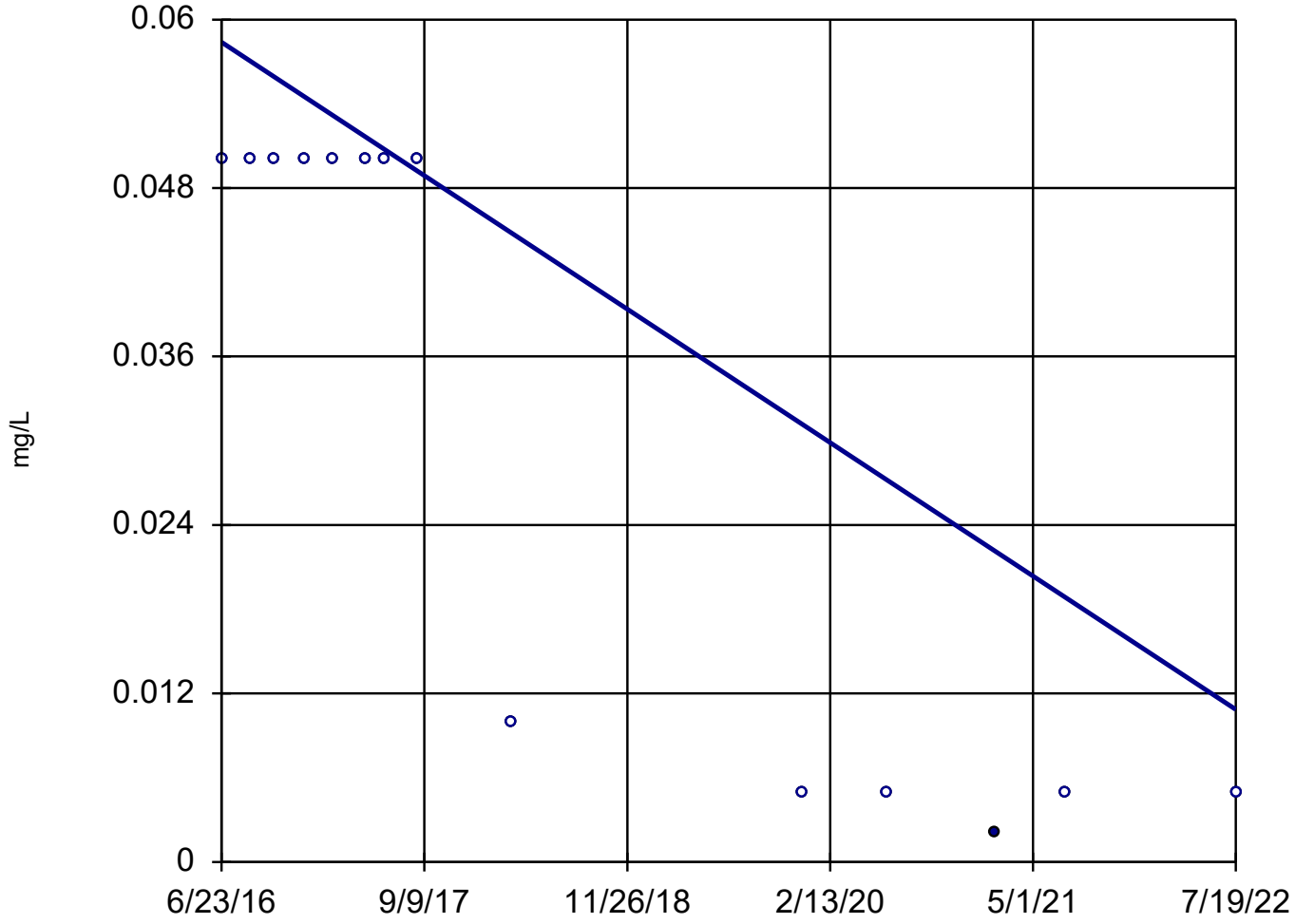
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 14

Slope = -0.007825 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

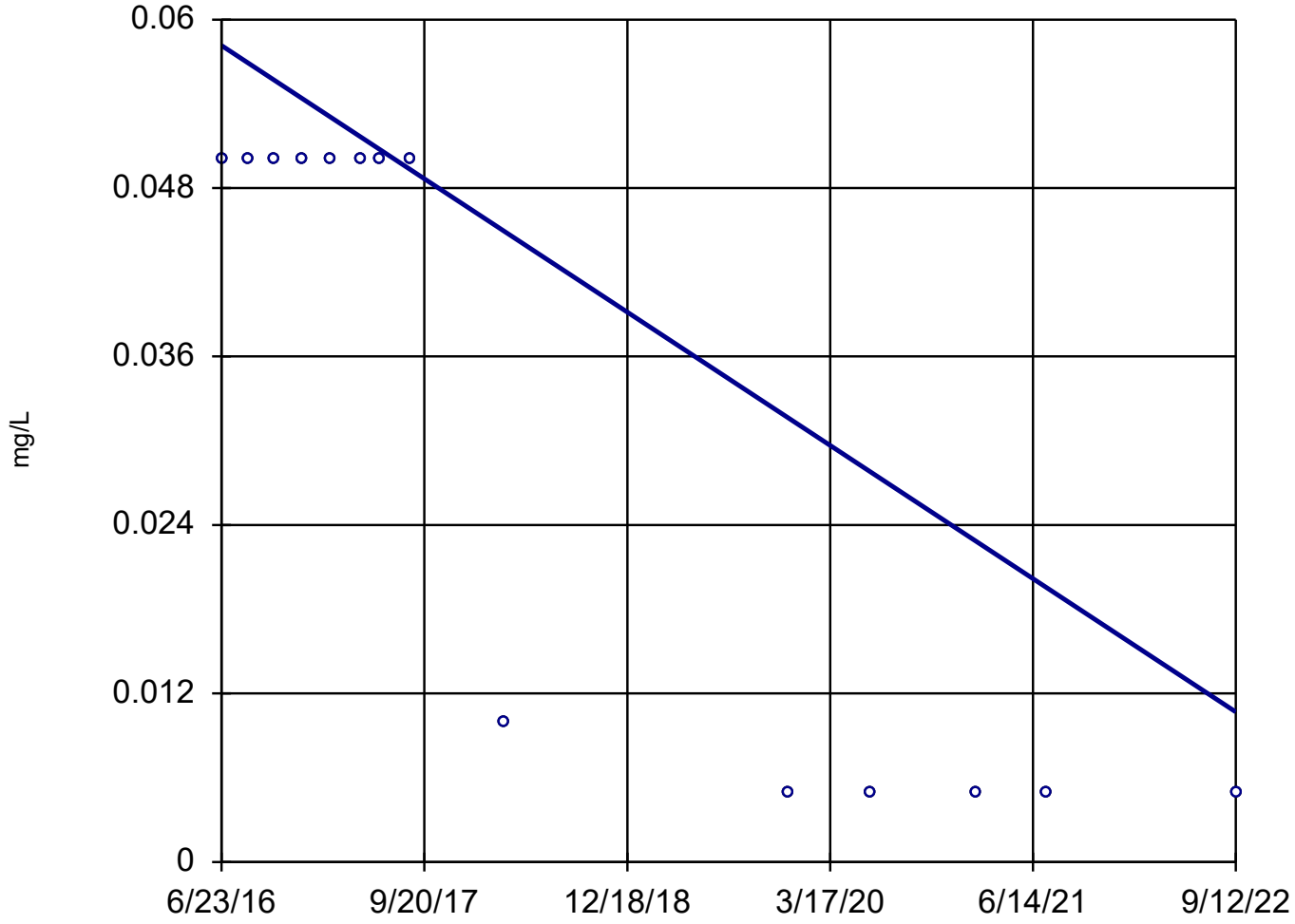
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 14

Slope = -0.007625 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

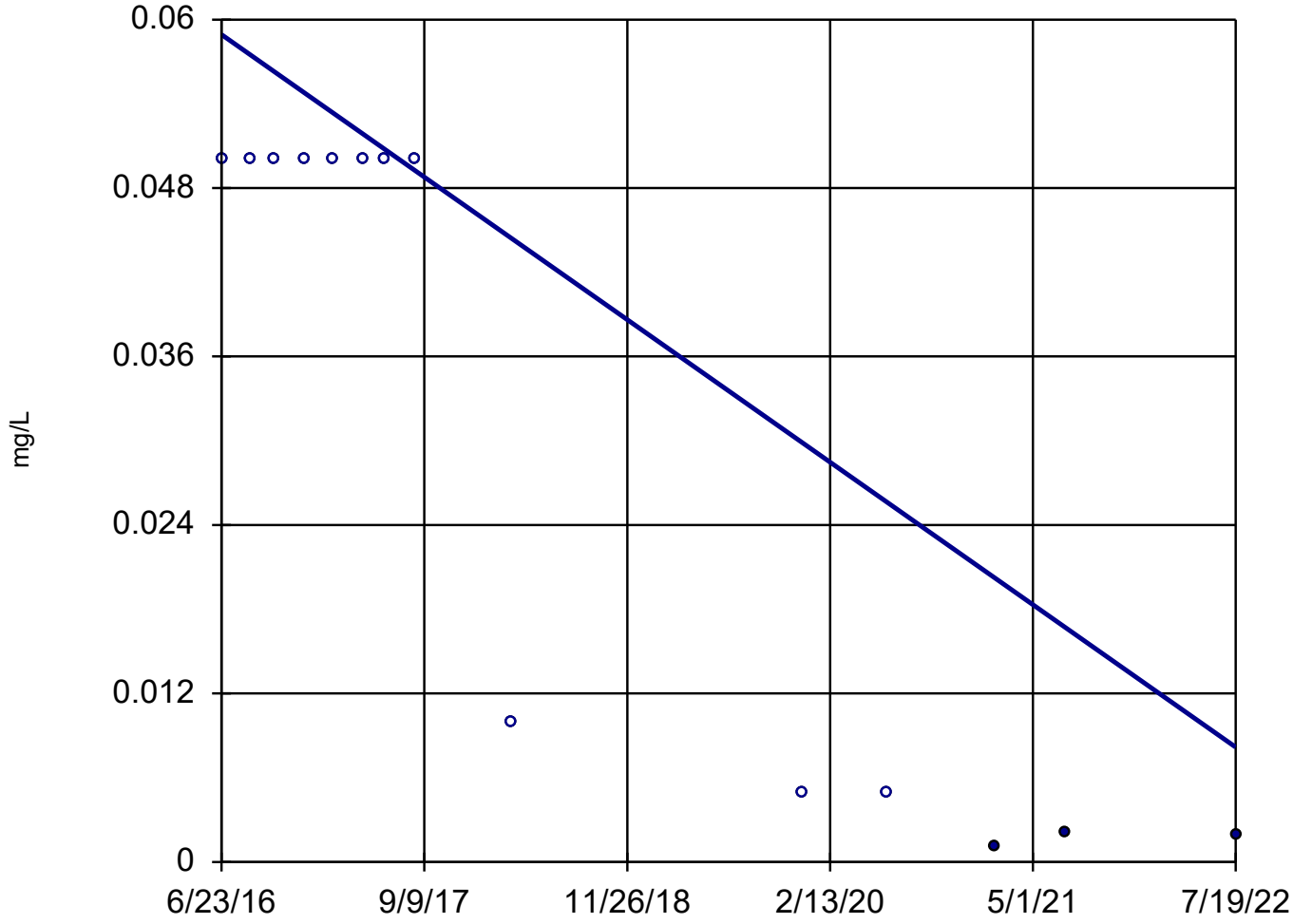
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 14

Slope = -0.008354 units per year.

Mann-Kendall statistic = -58
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

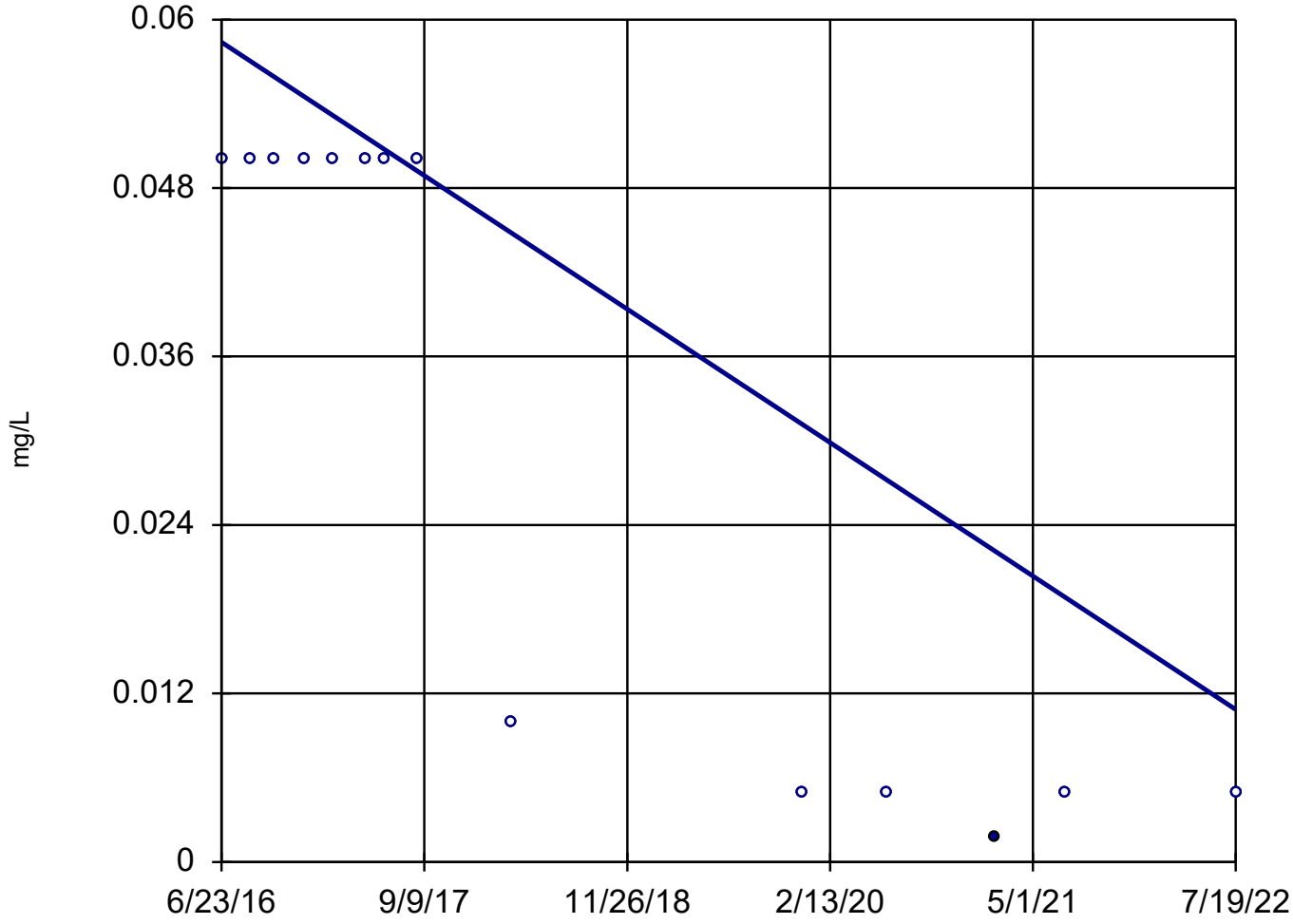
Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 14

Slope = -0.007825 units per year.

Mann-Kendall statistic = -53
critical = -44

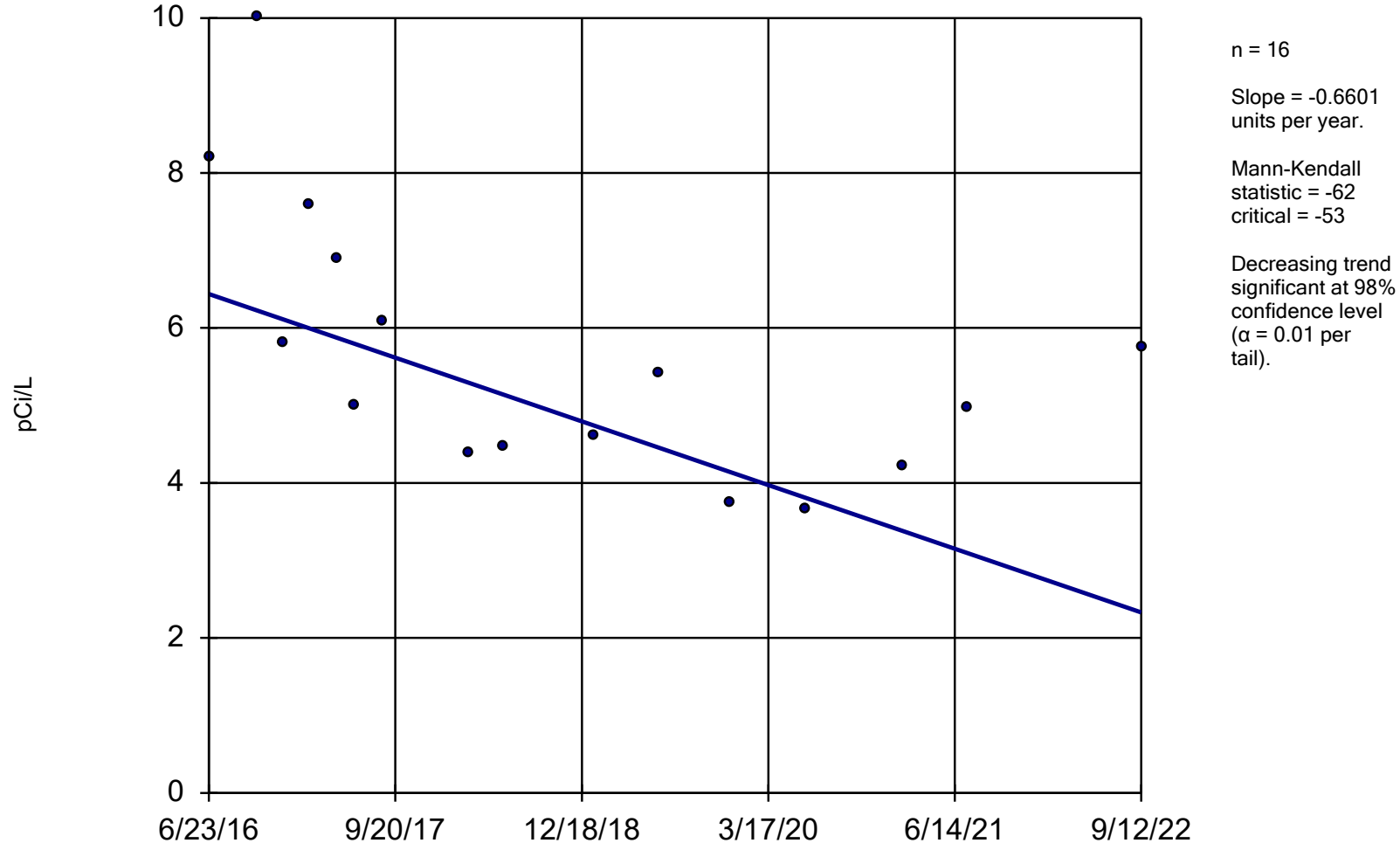
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 10/19/2022 2:44 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 16

Slope = -0.6601 units per year.

Mann-Kendall statistic = -62
critical = -53

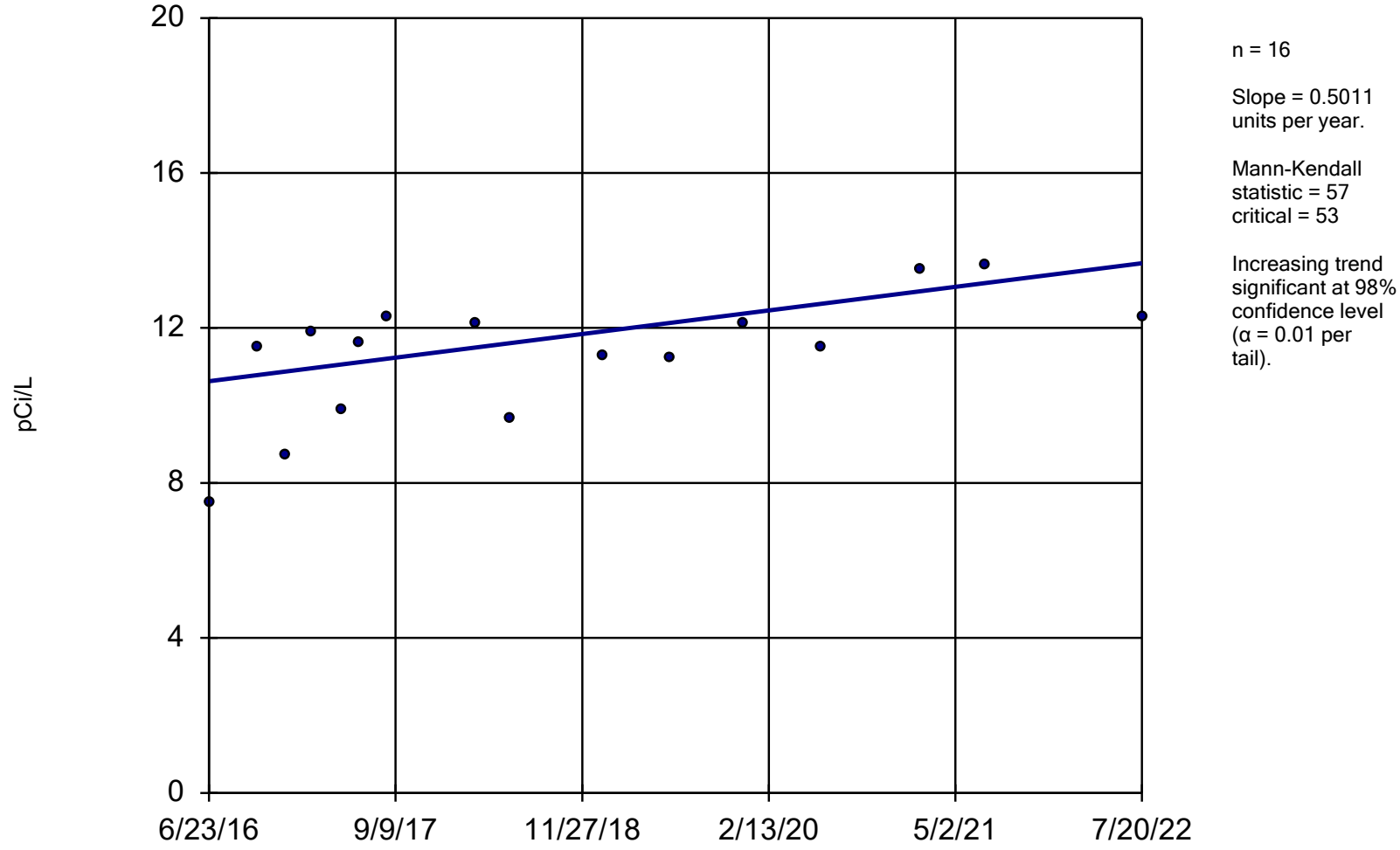
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 16

Slope = 0.5011 units per year.

Mann-Kendall statistic = 57
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

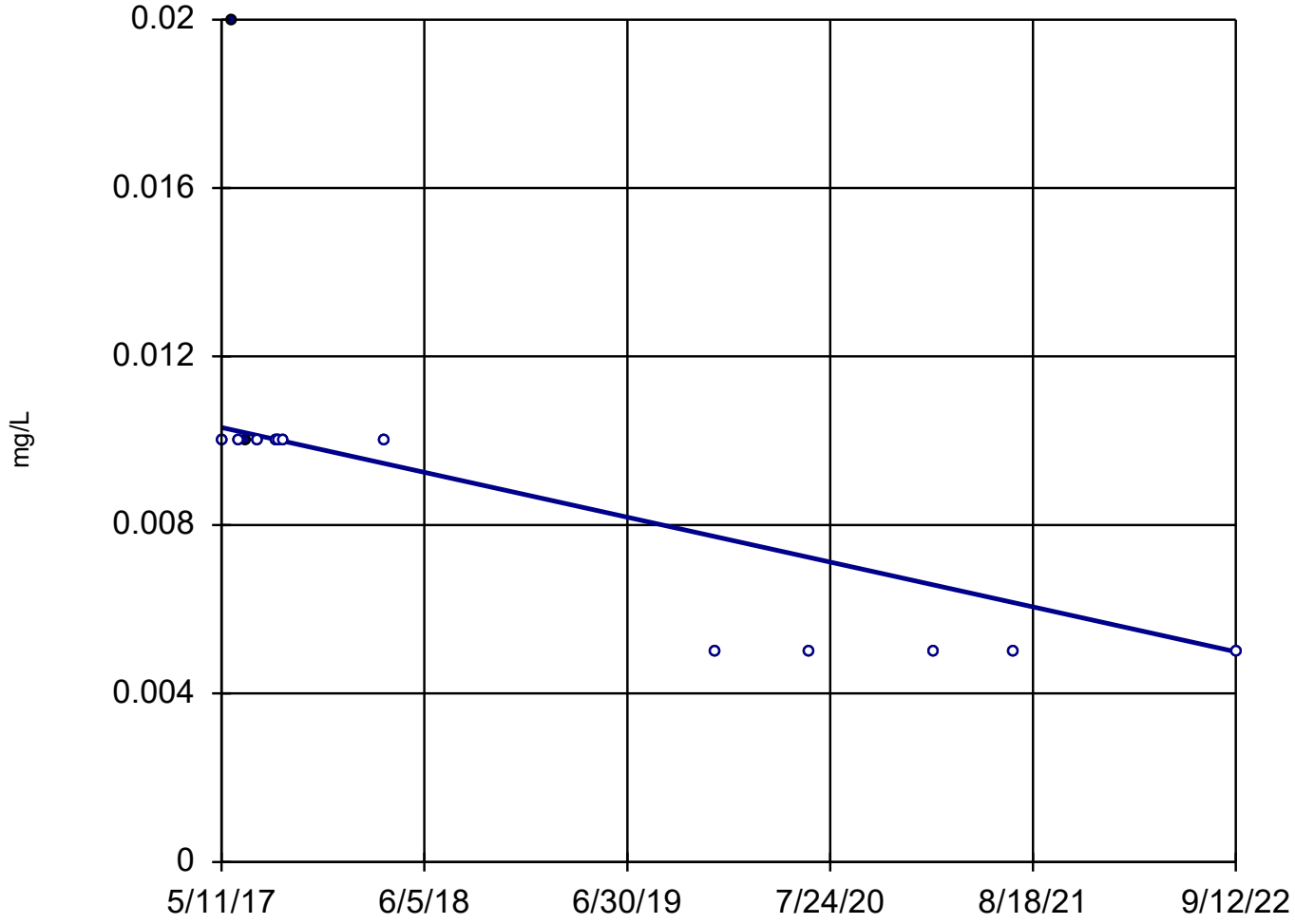
Constituent: Radium 226 + 228 Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 14

Slope = -0.0009967 units per year.

Mann-Kendall statistic = -51
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

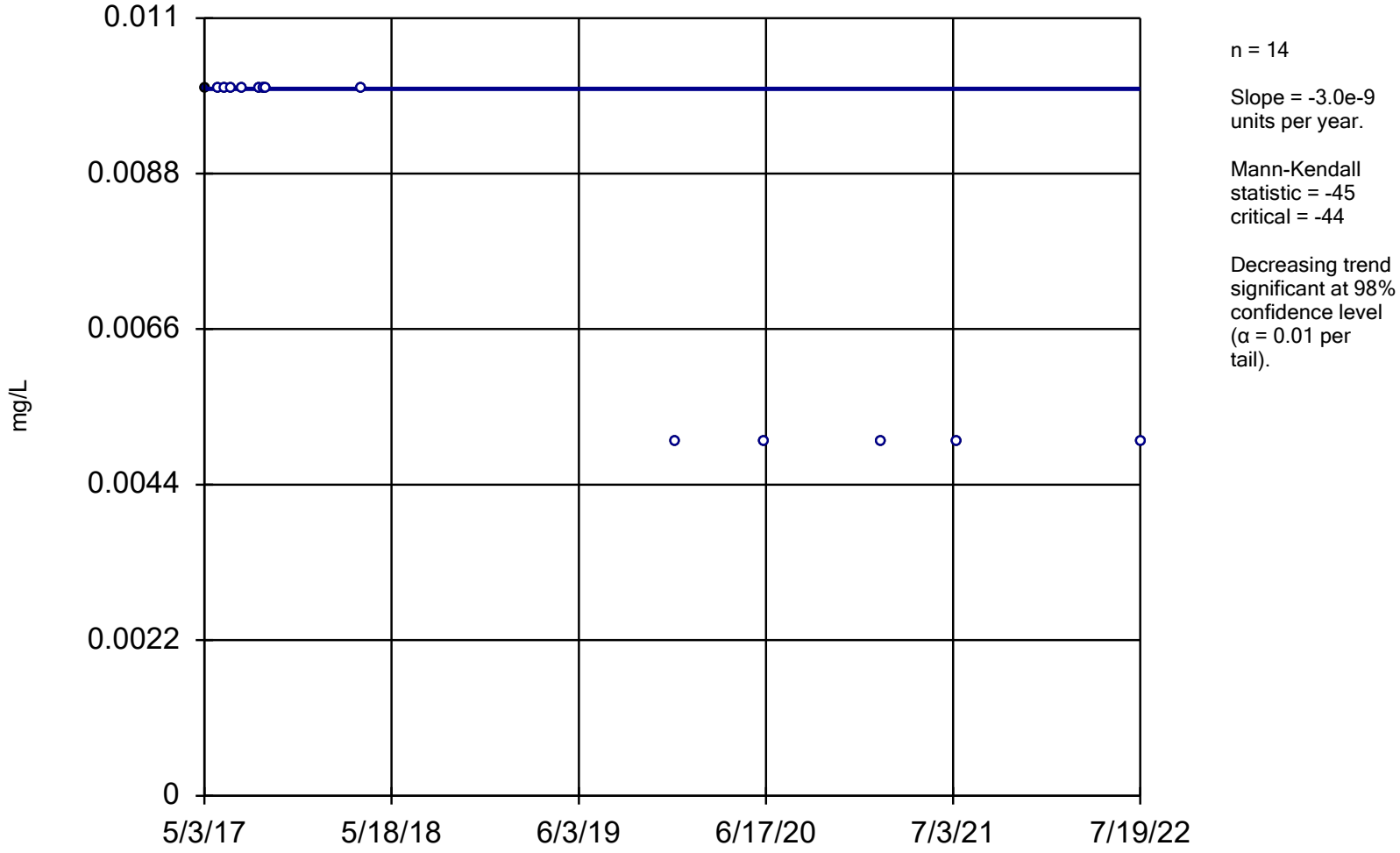
Constituent: Selenium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 14

Slope = -3.0e-9 units per year.

Mann-Kendall statistic = -45
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

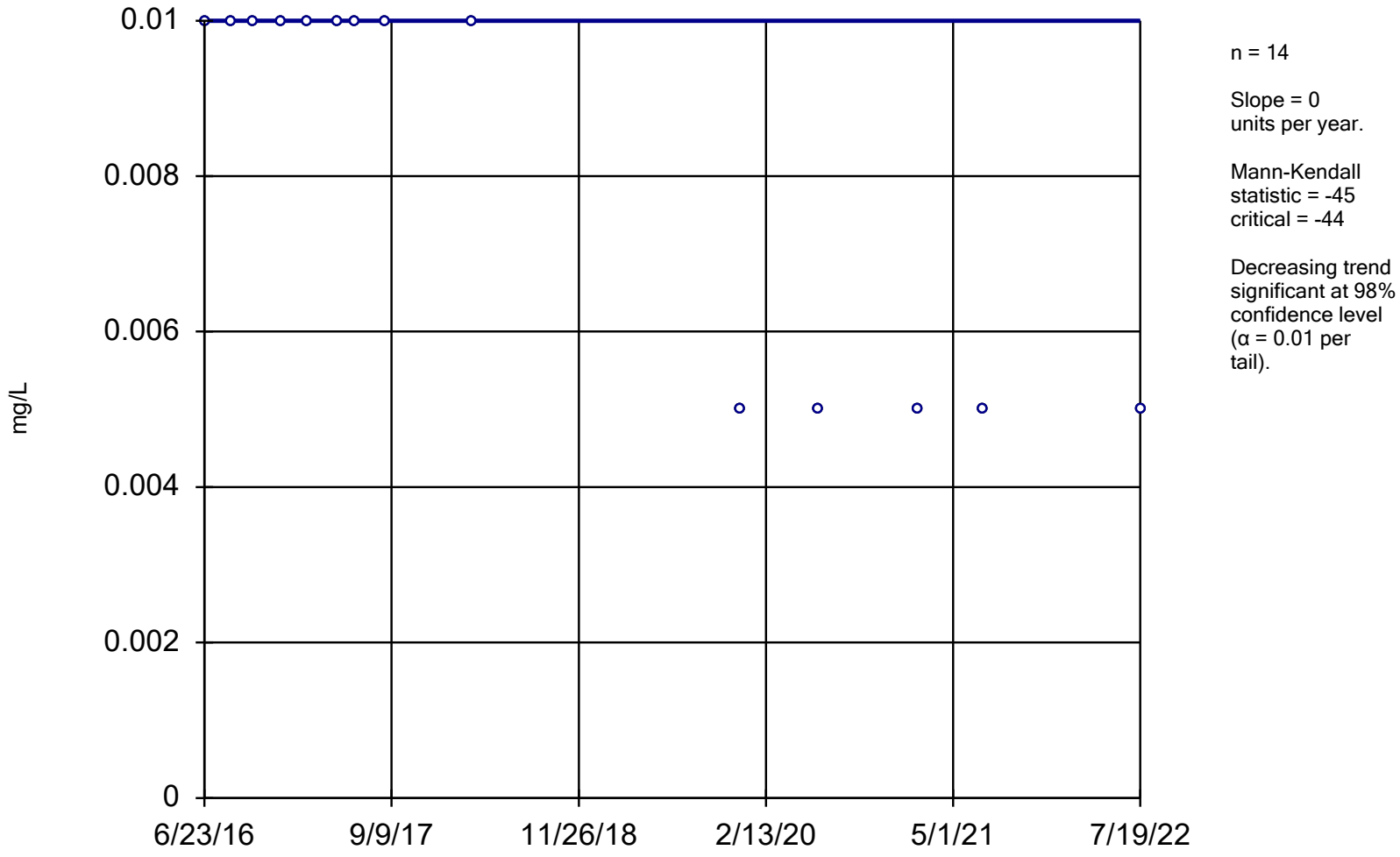
Constituent: Selenium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 14

Slope = 0
units per year.

Mann-Kendall
statistic = -45
critical = -44

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

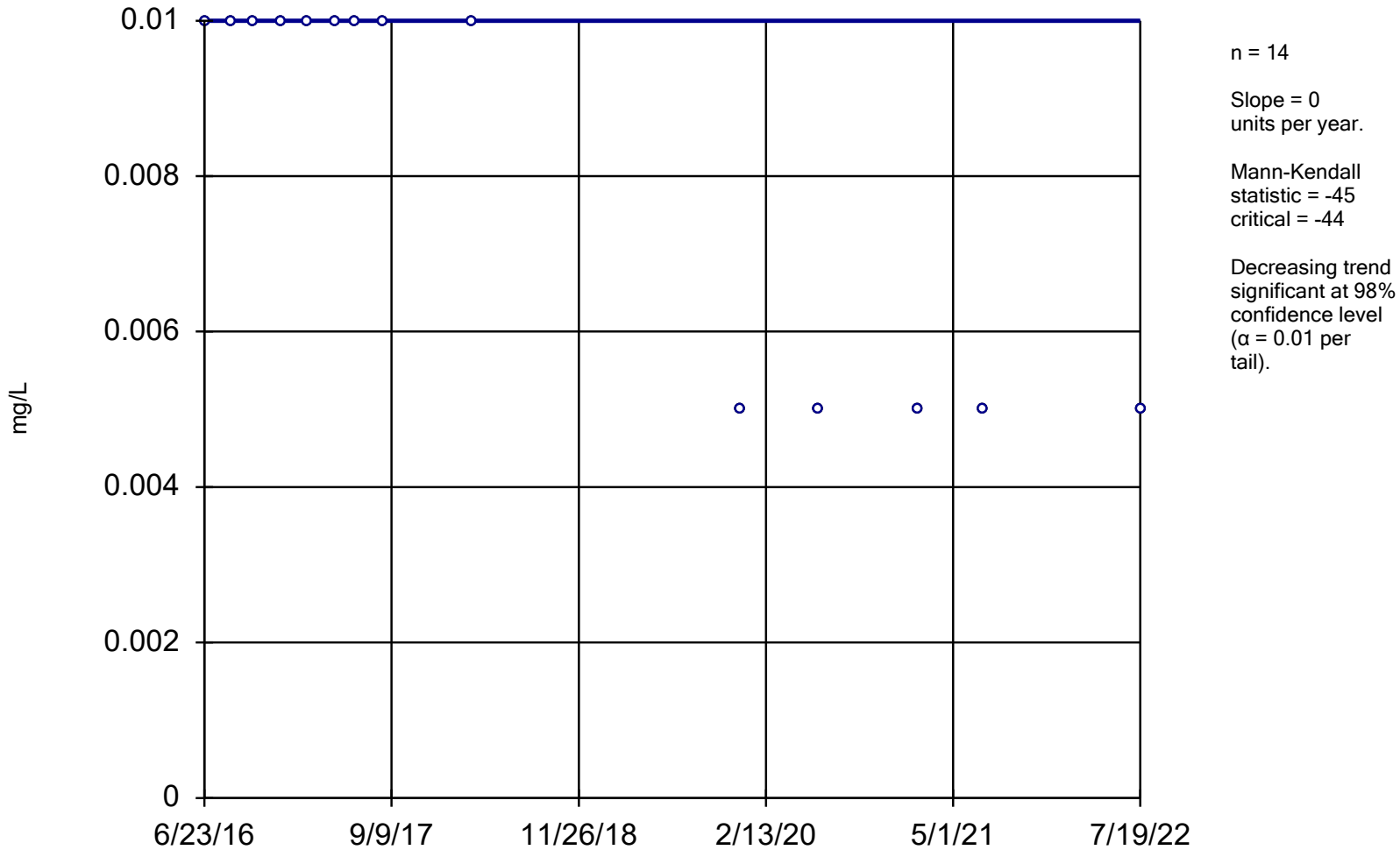
Constituent: Selenium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 14

Slope = 0
units per year.

Mann-Kendall
statistic = -45
critical = -44

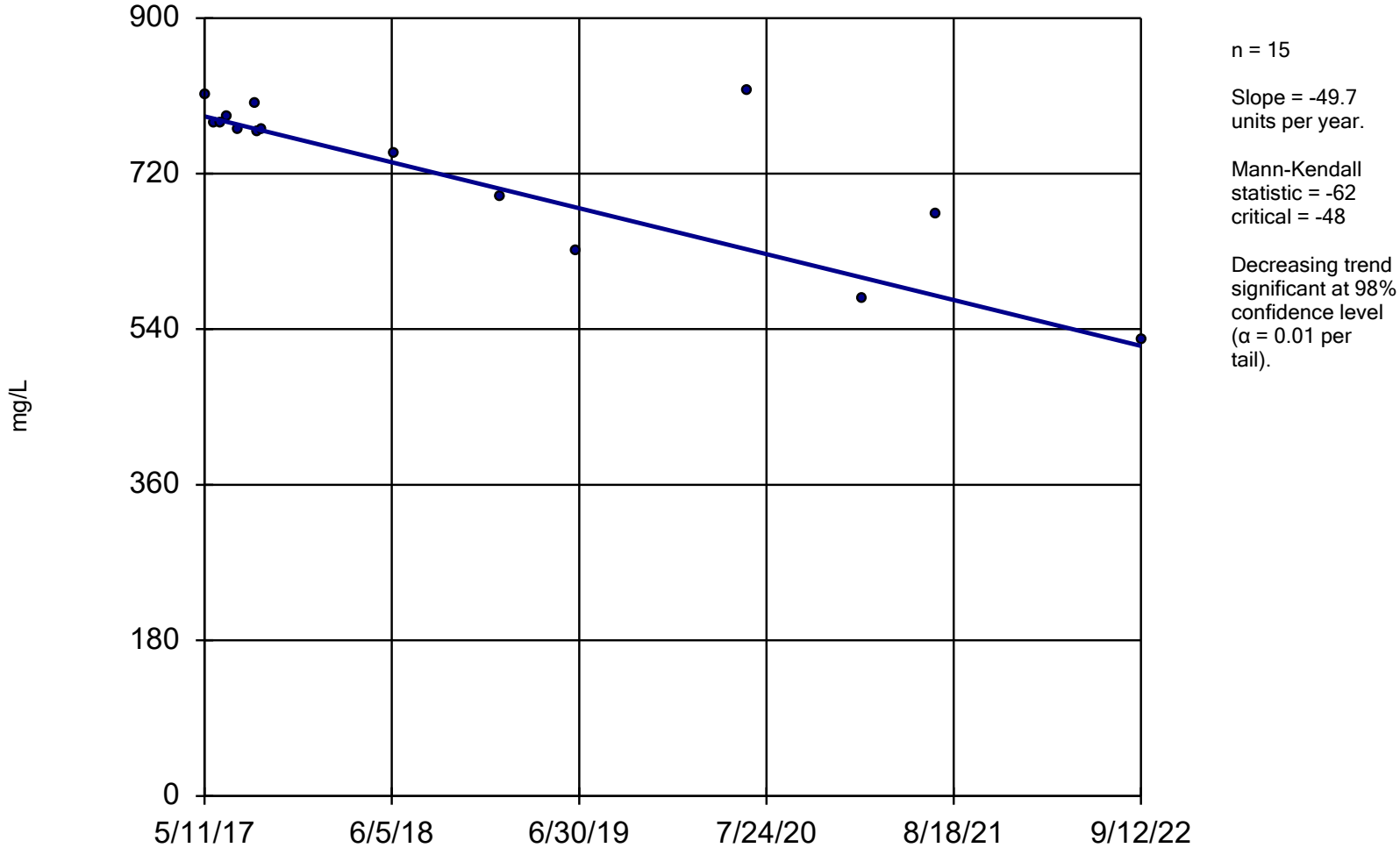
Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Selenium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -49.7 units per year.

Mann-Kendall statistic = -62
critical = -48

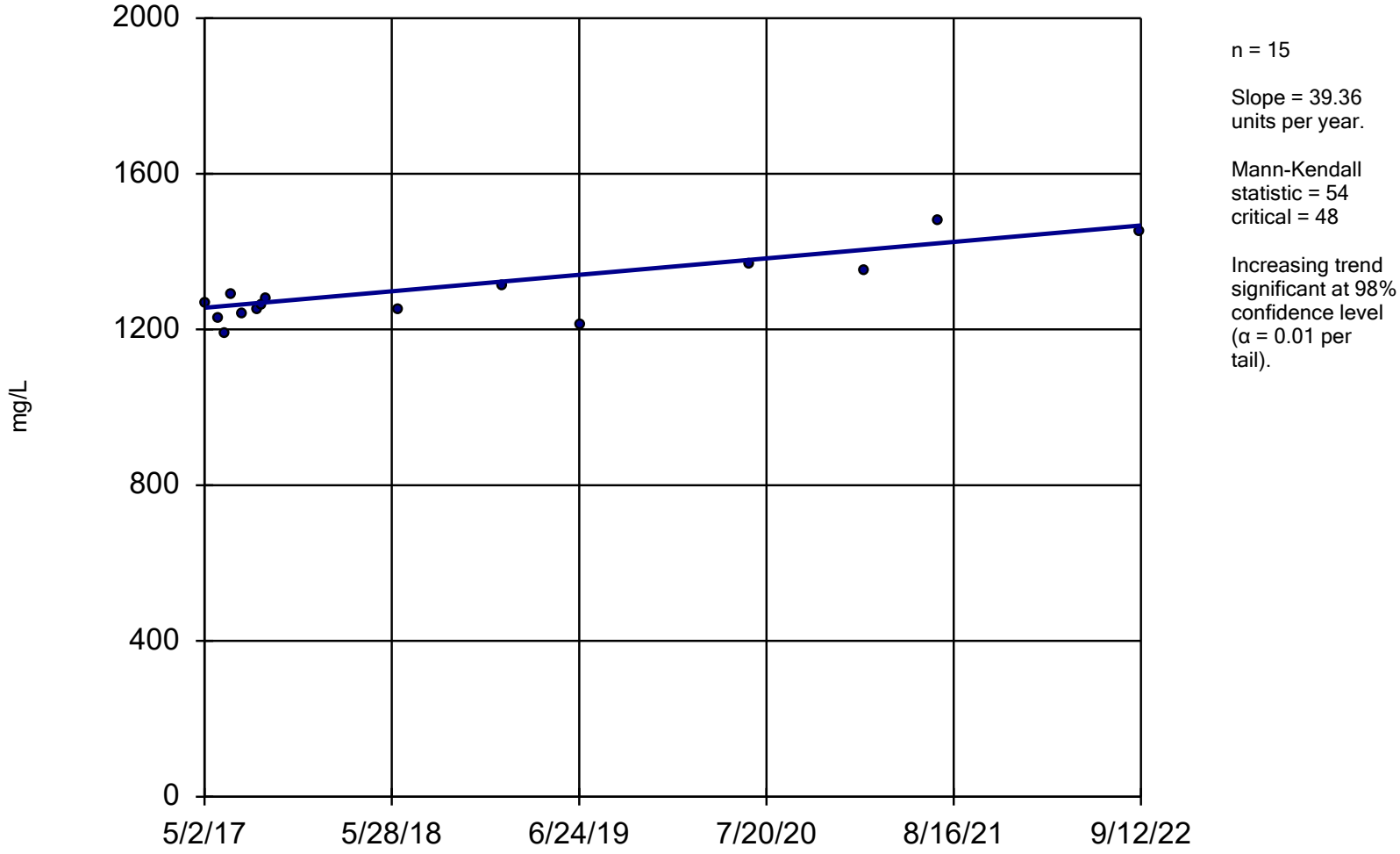
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 15

Slope = 39.36 units per year.

Mann-Kendall statistic = 54
critical = 48

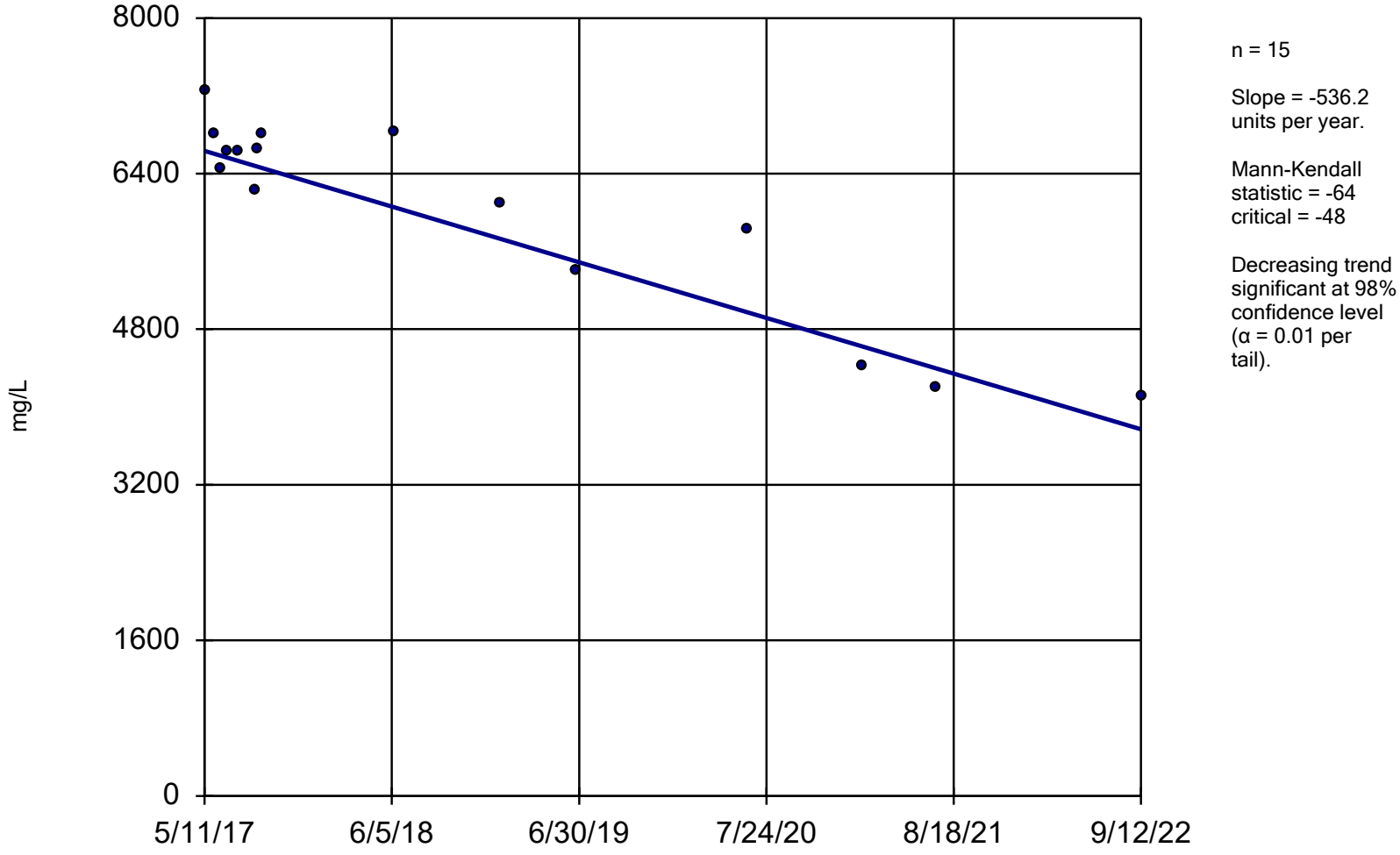
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -536.2 units per year.

Mann-Kendall statistic = -64
critical = -48

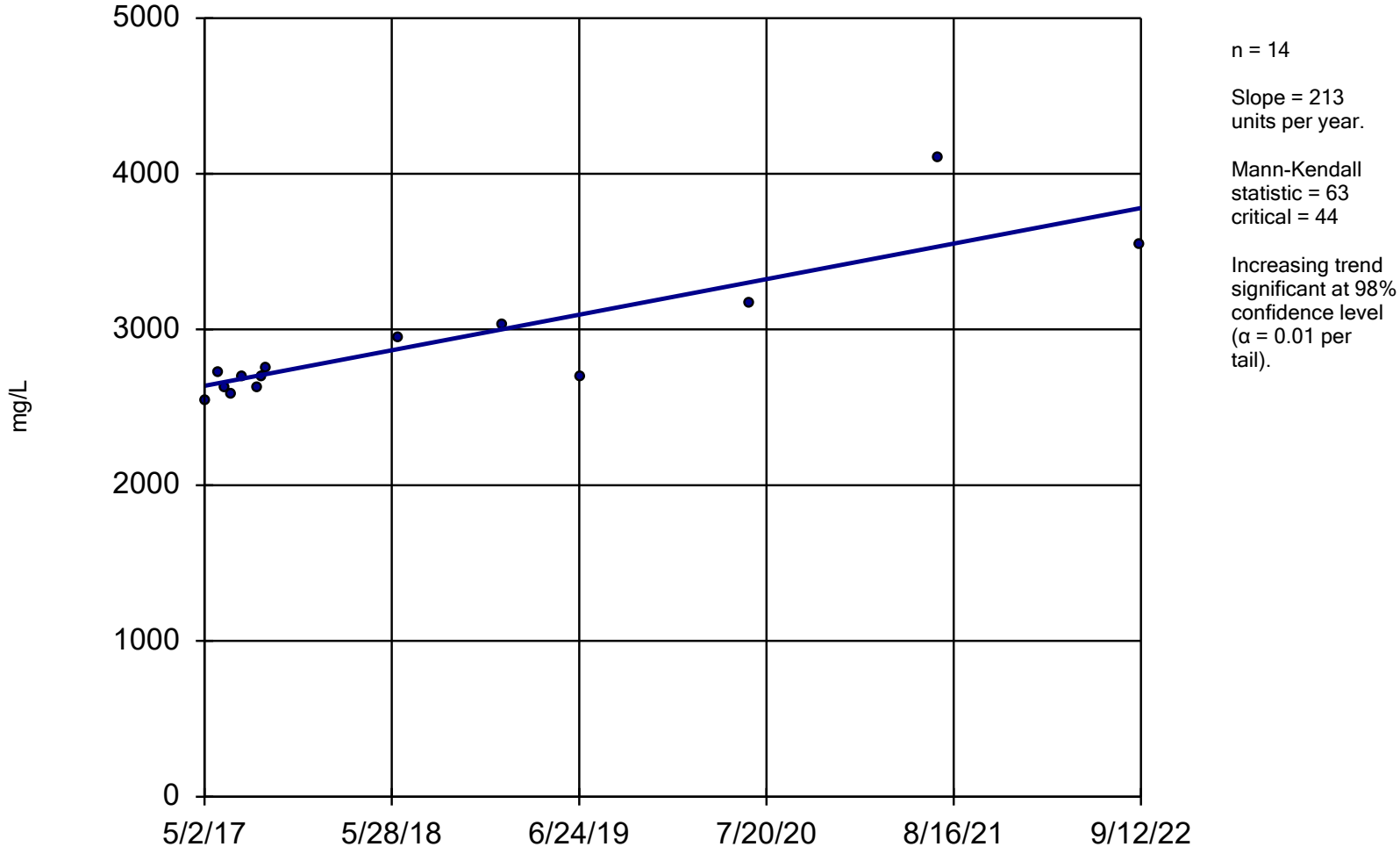
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 14

Slope = 213 units per year.

Mann-Kendall statistic = 63
critical = 44

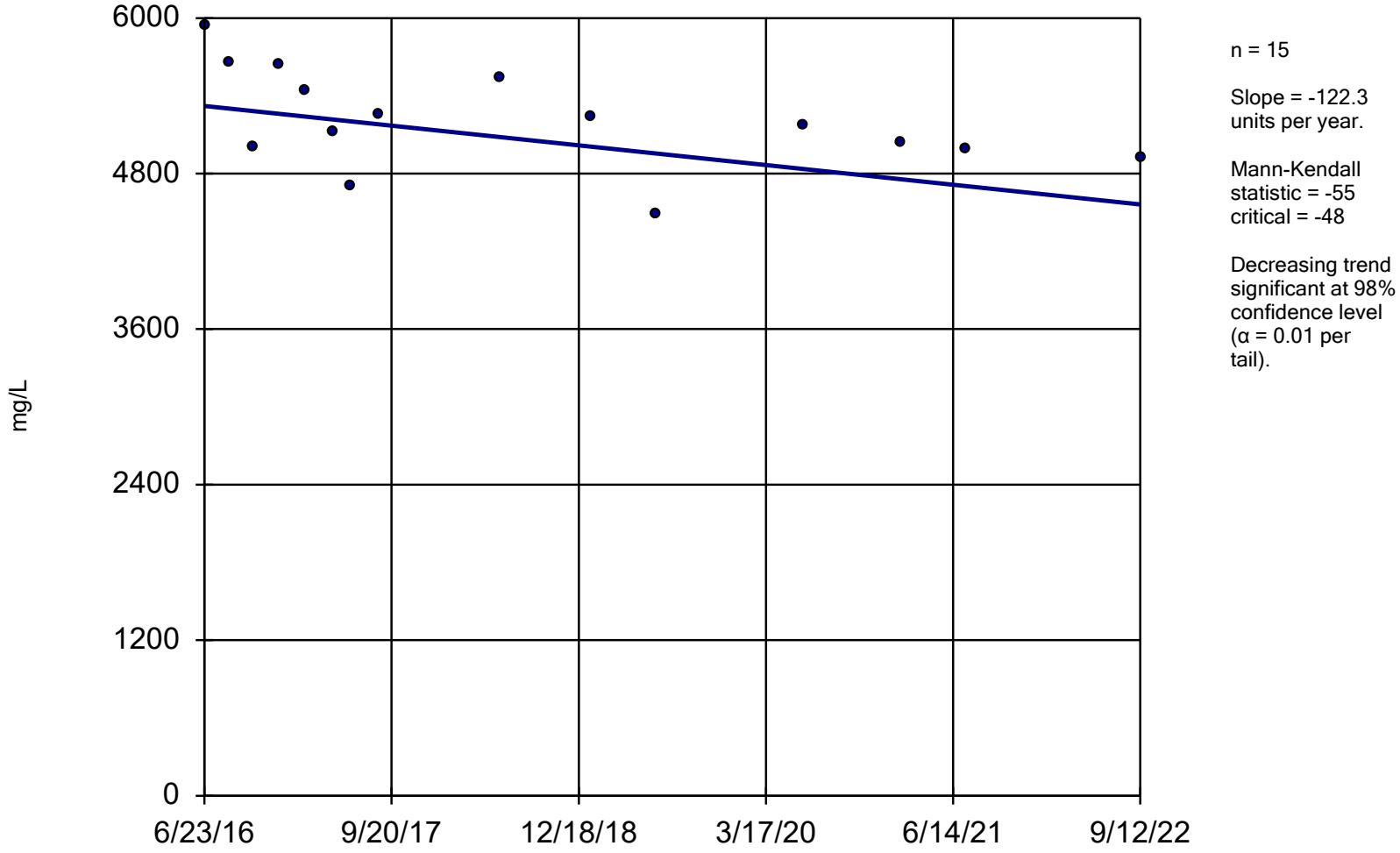
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 15

Slope = -122.3 units per year.

Mann-Kendall statistic = -55
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

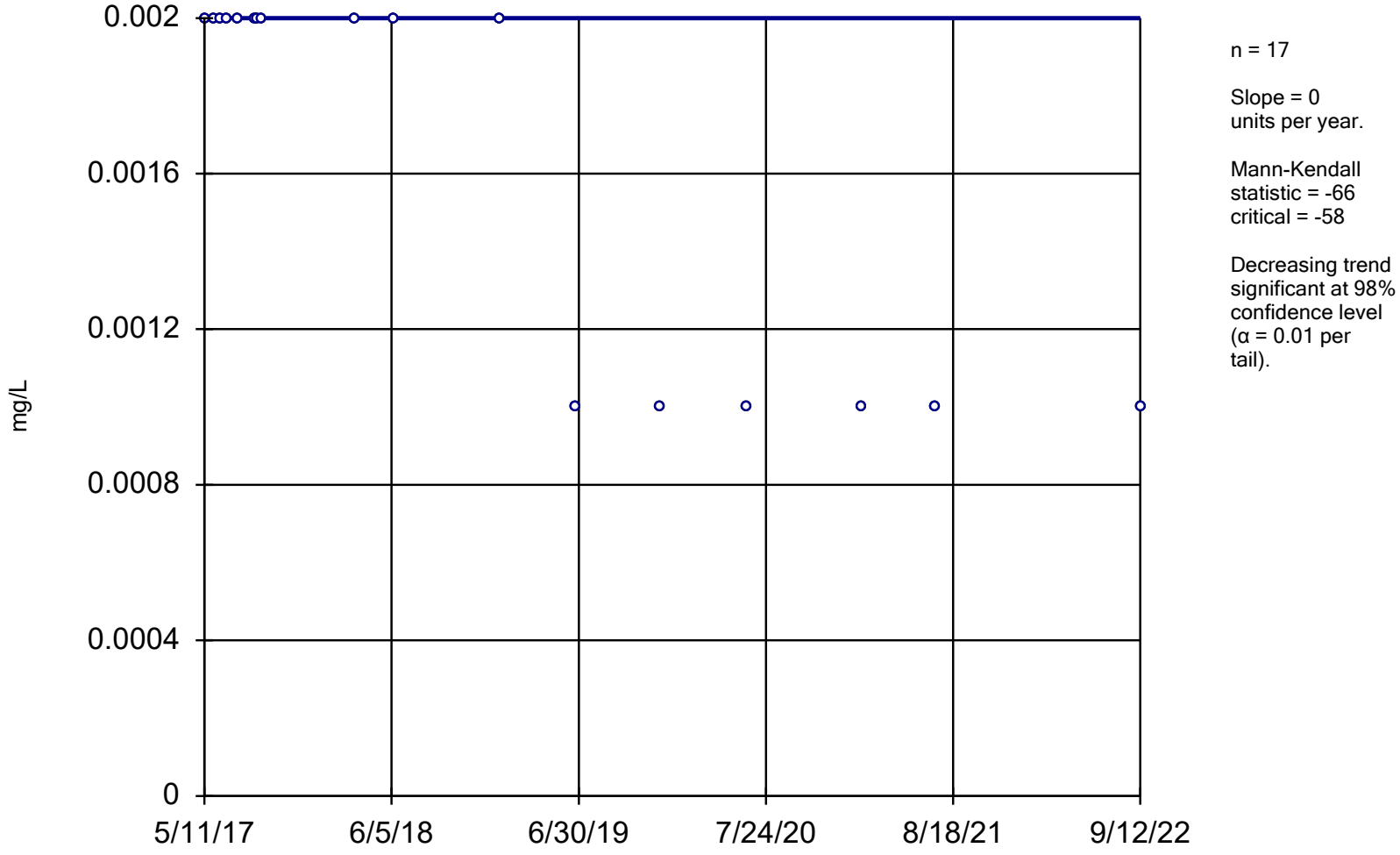
Constituent: TDS Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 17

Slope = 0
units per year.

Mann-Kendall
statistic = -66
critical = -58

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

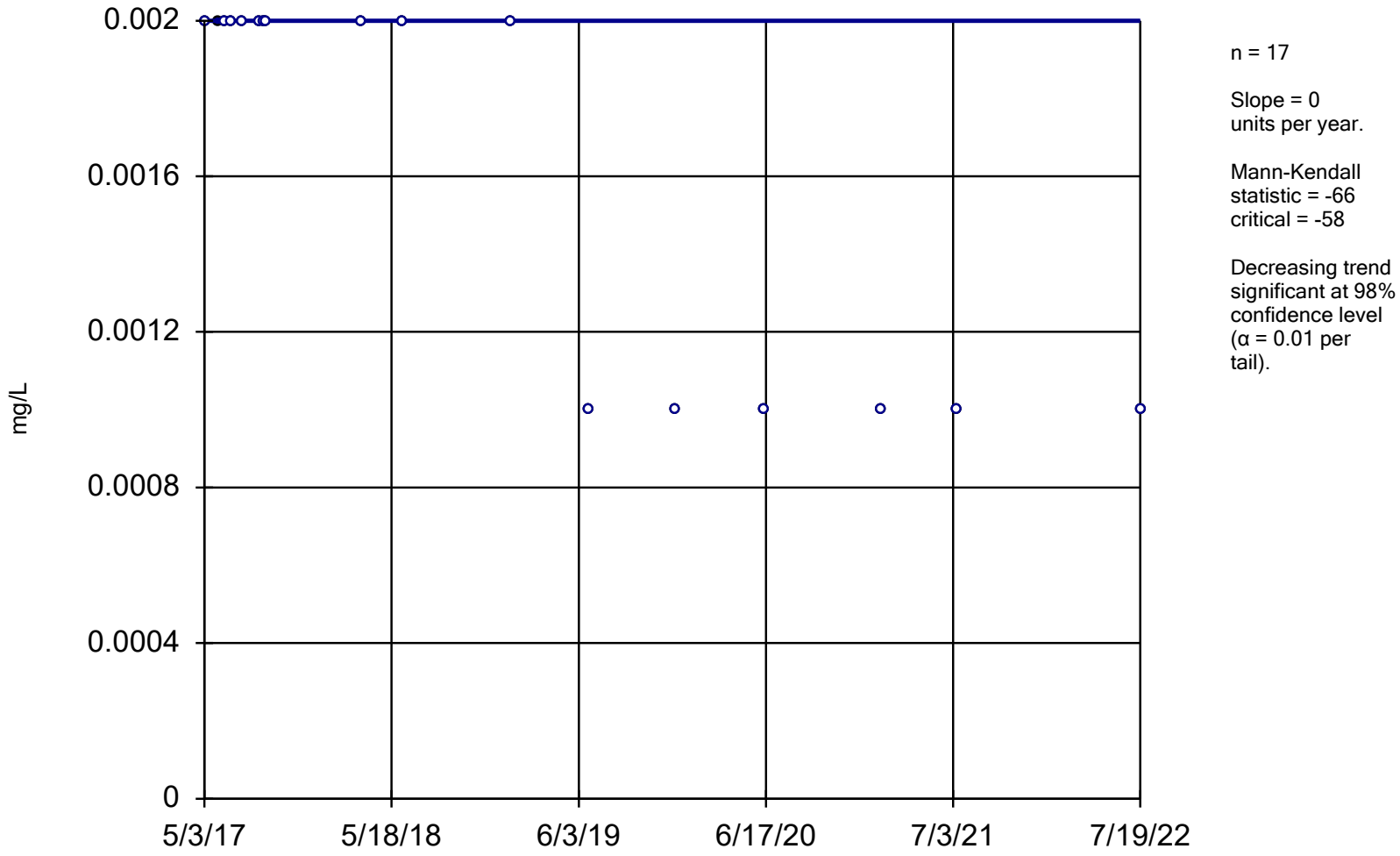
Constituent: Thallium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 17

Slope = 0
units per year.

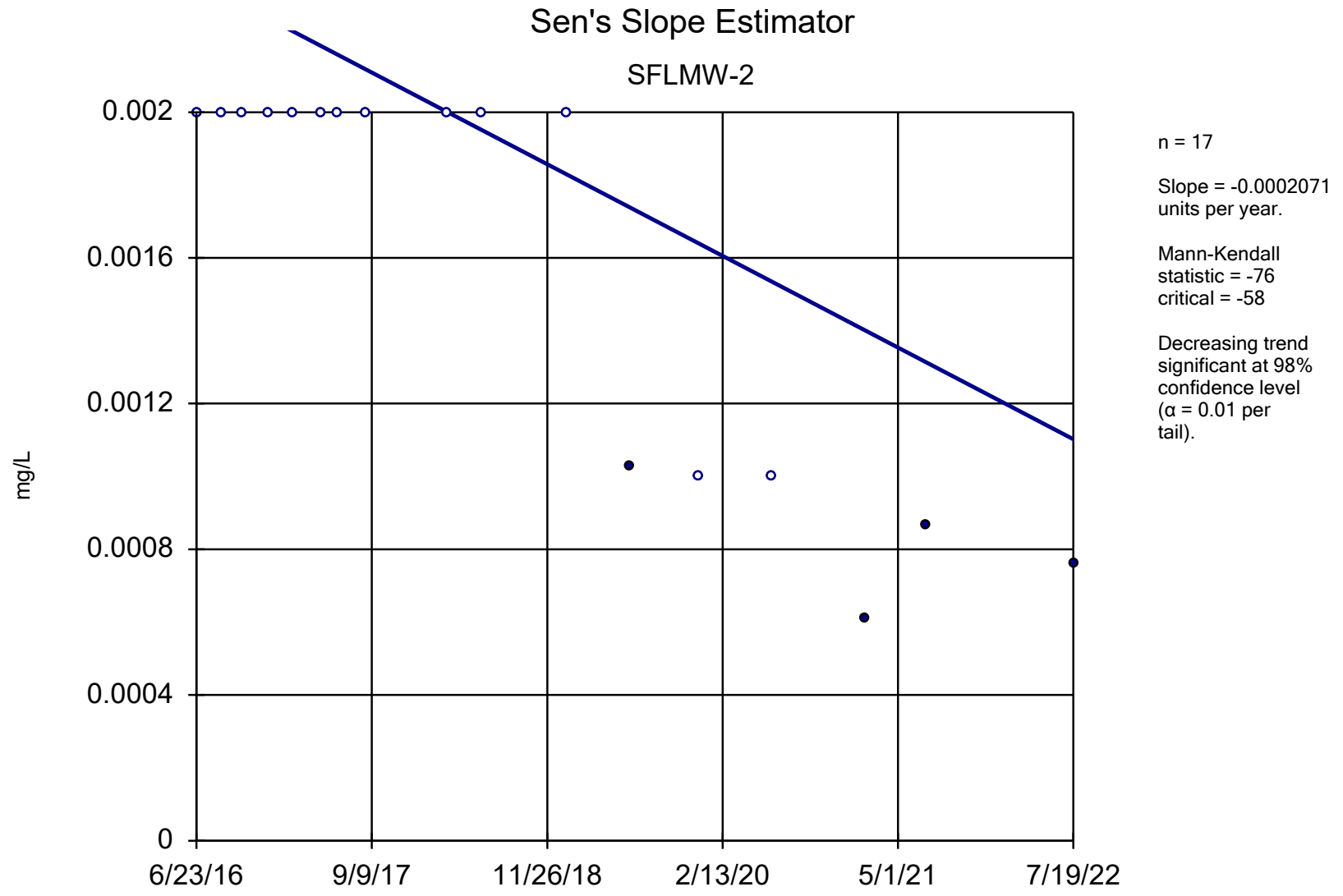
Mann-Kendall
statistic = -66
critical = -58

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Thallium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



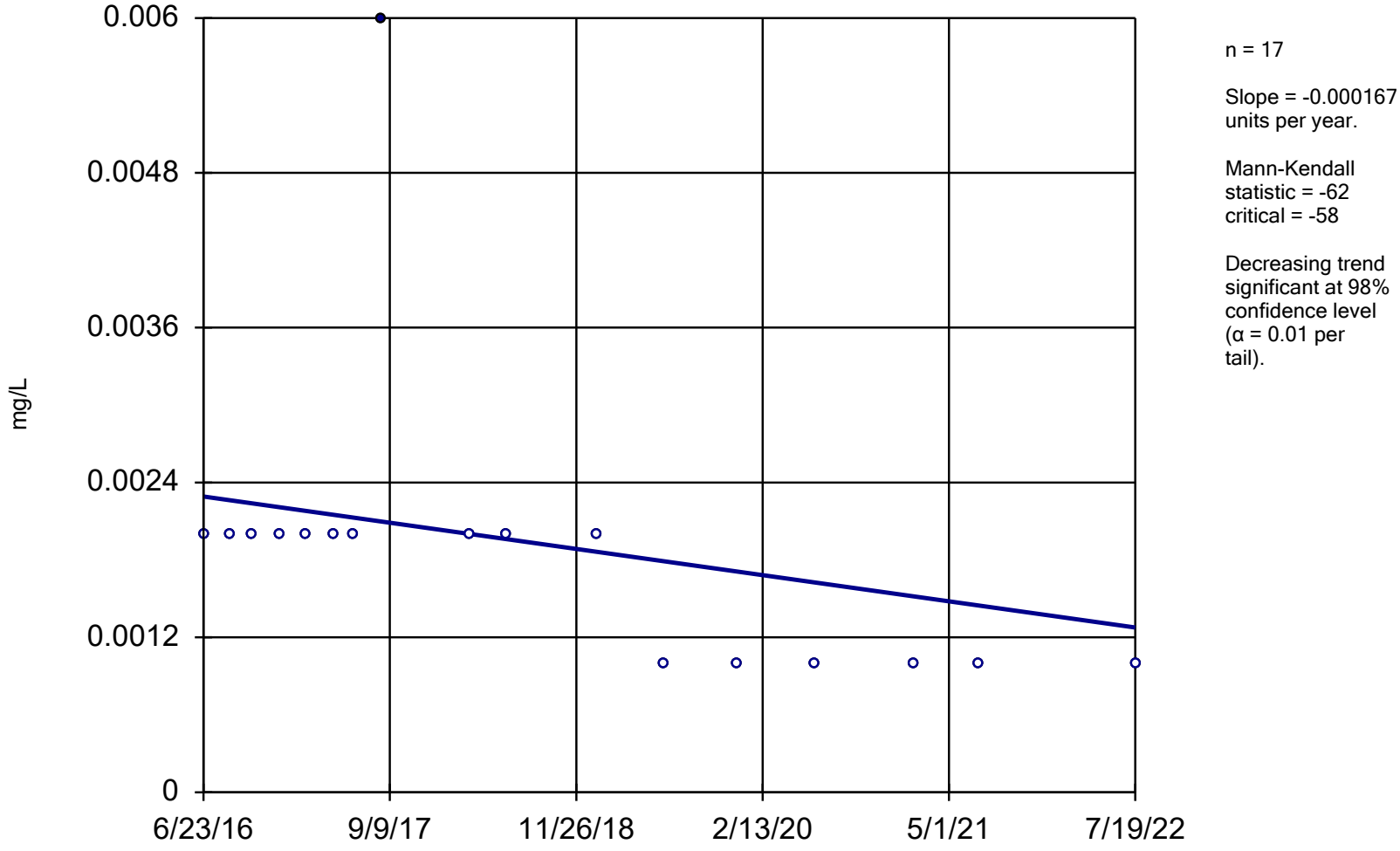
Constituent: Thallium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 17

Slope = -0.000167 units per year.

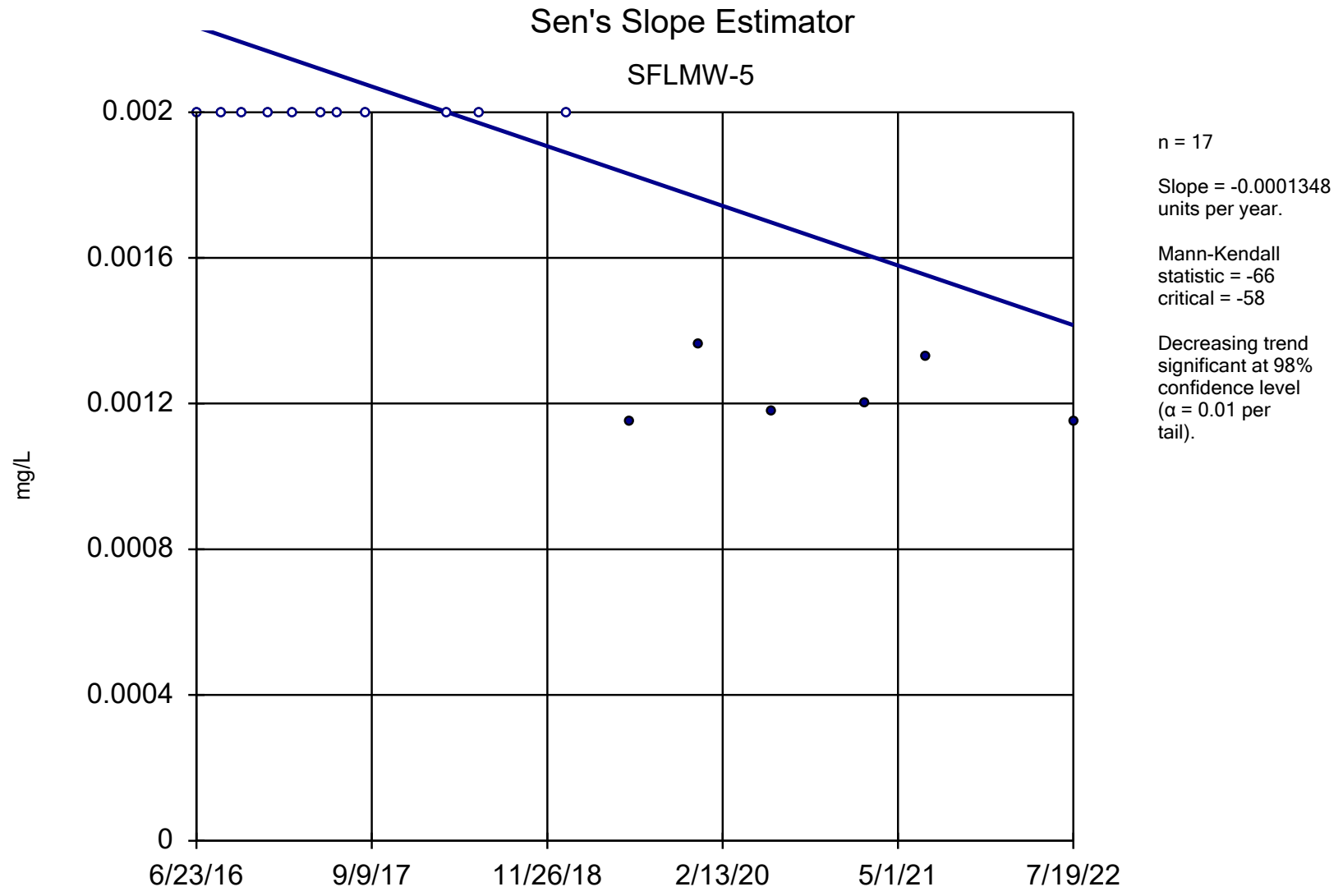
Mann-Kendall statistic = -62
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Thallium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 10/19/2022 2:45 PM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	**SFLMW-6**	**-0.0006956**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-7**	**-0.0009637**	**-56**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-15**	**-0.000762**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-18 (bg)**	**-0.0007841**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-2**	**-0.0006956**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-3**	**-0.0006778**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-4**	**-0.0008774**	**-57**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-5**	**-0.0006956**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-6	1.1e-9	13	44	No	14	28.57	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-7**	**-0.001827**	**-57**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	MNW-15	0	-6	-39	No	13	61.54	n/a	n/a	0.02	NP
Arsenic (mg/L)	**MNW-18 (bg)**	**-0.001463**	**-51**	**-44**	**Yes**	**14**	**71.43**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**SFLMW-2**	**-0.001552**	**-51**	**-44**	**Yes**	**14**	**64.29**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-3	-0.0006609	-38	-44	No	14	64.29	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-4**	**-0.001705**	**-56**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-5	-0.001428	-37	-44	No	14	64.29	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-6	-0.003127	-27	-35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-7	0.001941	26	39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	MNW-15	-0.0007228	-36	-39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	MNW-18 (bg)	-0.001363	-39	-39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-2	0	-11	-39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-3	-0.004496	-38	-44	No	14	7.143	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-4	-0.001341	-25	-39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	**SFLMW-5**	**-0.003409**	**-49**	**-44**	**Yes**	**14**	**7.143**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-6	-0.0000112	-2	-53	No	16	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SFLMW-7**	**-0.0003979**	**-60**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	MNW-15	0.003332	42	58	No	17	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	**MNW-18 (bg)**	**-0.0004808**	**-61**	**-58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SFLMW-2**	**0.0009043**	**62**	**58**	**Yes**	**17**	**17.65**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SFLMW-3**	**-0.001466**	**-69**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SFLMW-4**	**-0.0003909**	**-60**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-5	0.00004766	15	53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-6	-0.01276	-24	-39	No	13	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-7	0.01118	20	44	No	14	7.143	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-15	-0.04609	-7	-48	No	15	0	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-18 (bg)	-0.01859	-32	-39	No	13	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-2	-0.007381	-10	-39	No	13	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-3**	**0.307**	**75**	**48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	SFLMW-4	0.01752	24	39	No	13	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-5**	**0.3349**	**49**	**48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-6	0.0001303	19	58	No	17	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	**SFLMW-7**	**-0.0009016**	**-76**	**-58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-15**	**-0.0136**	**-67**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-18 (bg)**	**-0.0007812**	**-70**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-2**	**-0.0003821**	**-59**	**-58**	**Yes**	**17**	**64.71**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-3**	**-0.0005155**	**-100**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-4**	**-0.0006867**	**-70**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-5	0	-2	-58	No	17	35.29	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-6	1.638	1	48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-7**	**-59.38**	**-67**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MNW-15	9.762	23	48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MNW-18 (bg)	-13.92	-26	-44	No	14	7.143	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-2	16.57	28	48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-3	-18.97	-41	-48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-4	-20.75	-41	-48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-5**	**-15.3**	**-51**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-6	57.31	19	48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**SFLMW-7**	**-153.4**	**-49**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	MNW-15	-16.07	-42	-48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**MNW-18 (bg)**	**-44.1**	**-80**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-2	73.2	20	48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**SFLMW-3**	**-117.4**	**-91**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-4	-32.12	-38	-48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SFLMW-5	-11.86	-14	-44	No	14	0	n/a	n/a	0.02	NP
Chromium (mg/L)	SFLMW-6	-0.0005635	-44	-44	No	14	50	n/a	n/a	0.02	NP
Chromium (mg/L)	**SFLMW-7**	**-0.001535**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	MNW-15	-0.0009042	-37	-44	No	14	92.86	n/a	n/a	0.02	NP
Chromium (mg/L)	**MNW-18 (bg)**	**-0.001371**	**-54**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-2**	**-0.001435**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-3**	**-0.001397**	**-57**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-4**	**-0.001149**	**-49**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-5**	**-0.001154**	**-49**	**-44**	**Yes**	**14**	**71.43**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-6	-0.0003668	-16	-58	No	17	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-7**	**-0.003854**	**-97**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-15**	**0.01282**	**68**	**58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-18 (bg)**	**-0.003815**	**-88**	**-58**	**Yes**	**17**	**82.35**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-2	-0.0002878	-25	-53	No	16	18.75	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-3**	**-0.00269**	**-74**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**SFLMW-4**	**-0.004055**	**-98**	**-58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-5	-0.001335	-47	-58	No	17	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-6	0.02815	25	53	No	16	31.25	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-7	3.2e-8	30	58	No	17	70.59	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-15	0.04594	50	58	No	17	11.76	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-18 (bg)	0	4	53	No	16	25	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-2	0.03338	36	58	No	17	29.41	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-3	-0.008959	-21	-58	No	17	17.65	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-4	0.02895	41	58	No	17	64.71	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-5	0	39	58	No	17	35.29	n/a	n/a	0.02	NP
Lead (mg/L)	SFLMW-6	0.0003125	38	53	No	16	50	n/a	n/a	0.02	NP
Lead (mg/L)	**SFLMW-7**	**-0.002215**	**-99**	**-58**	**Yes**	**17**	**88.24**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-15**	**-0.002362**	**-98**	**-58**	**Yes**	**17**	**64.71**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-18 (bg)**	**-0.002214**	**-97**	**-58**	**Yes**	**17**	**88.24**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-2**	**-0.002002**	**-90**	**-58**	**Yes**	**17**	**82.35**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-3**	**-0.0009806**	**-68**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-4**	**-0.001957**	**-92**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-5**	**-0.001945**	**-105**	**-58**	**Yes**	**17**	**70.59**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SFLMW-6	-0.01948	-23	-58	No	17	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-7	-0.01067	-45	-58	No	17	0	n/a	n/a	0.02	NP
Lithium (mg/L)	MNW-15	0.005756	27	53	No	16	6.25	n/a	n/a	0.02	NP
Lithium (mg/L)	MNW-18 (bg)	-0.02311	-40	-44	No	14	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	SFLMW-2	-0.01617	-48	-58	No	17	0	n/a	n/a	0.02	NP
Lithium (mg/L)	**SFLMW-3**	**-0.02289**	**-59**	**-58**	**Yes**	**17**	**5.882**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	**SFLMW-4**	**-0.02601**	**-68**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SFLMW-5	-0.02952	-48	-58	No	17	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-6**	**-0.0001457**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-7**	**-0.0001544**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-15**	**-0.0001896**	**-94**	**-58**	**Yes**	**17**	**76.47**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-18 (bg)**	**-0.000159**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-2**	**-0.0001457**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	SFLMW-3	-0.0001421	-53	-58	No	17	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-4**	**-0.0001457**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-5**	**-0.0001457**	**-72**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-6**	**-0.007825**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-7**	**-0.009195**	**-57**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-15**	**-0.008573**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-18 (bg)**	**-0.008821**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-2**	**-0.007825**	**-53**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-3**	**-0.007625**	**-53**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-4**	**-0.008354**	**-58**	**-44**	**Yes**	**14**	**78.57**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-5**	**-0.007825**	**-53**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SFLMW-6	-0.04323	-49	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-7	0.06371	18	48	No	15	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-15	-0.005103	-4	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-18 (bg)	-0.1042	-39	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-2	-0.03207	-6	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-3	0.01035	17	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-4	-0.01154	-8	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-5	-0.04545	-31	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-6	0.9515	34	58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-7	-0.03009	-16	-58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	MNW-15	-0.04542	-19	-58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	-0.1231	-24	-58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-2	-0.02662	-3	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	**SFLMW-3**	**-0.6601**	**-62**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 (pCi/L)	SFLMW-4	-0.3521	-53	-58	No	17	5.882	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**0.5011**	**57**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SFLMW-6	-2.0e-9	-26	-44	No	14	64.29	n/a	n/a	0.02	NP
Selenium (mg/L)	**SFLMW-7**	**-0.0009967**	**-51**	**-44**	**Yes**	**14**	**85.71**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	MNW-15	0	-9	-44	No	14	71.43	n/a	n/a	0.02	NP
Selenium (mg/L)	**MNW-18 (bg)**	**-3.0e-9**	**-45**	**-44**	**Yes**	**14**	**92.86**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	**SFLMW-2**	**0**	**-45**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SFLMW-3	0	-4	-44	No	14	85.71	n/a	n/a	0.02	NP
Selenium (mg/L)	**SFLMW-4**	**0**	**-45**	**-44**	**Yes**	**14**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SFLMW-5	-0.0000368	-41	-44	No	14	92.86	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-6	49.18	26	48	No	15	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**SFLMW-7**	**-49.7**	**-62**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**MNW-15**	**39.36**	**54**	**48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	MNW-18 (bg)	-131	-34	-48	No	15	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-2	-13.91	-16	-39	No	13	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-3	32.63	40	48	No	15	0	n/a	n/a	0.02	NP

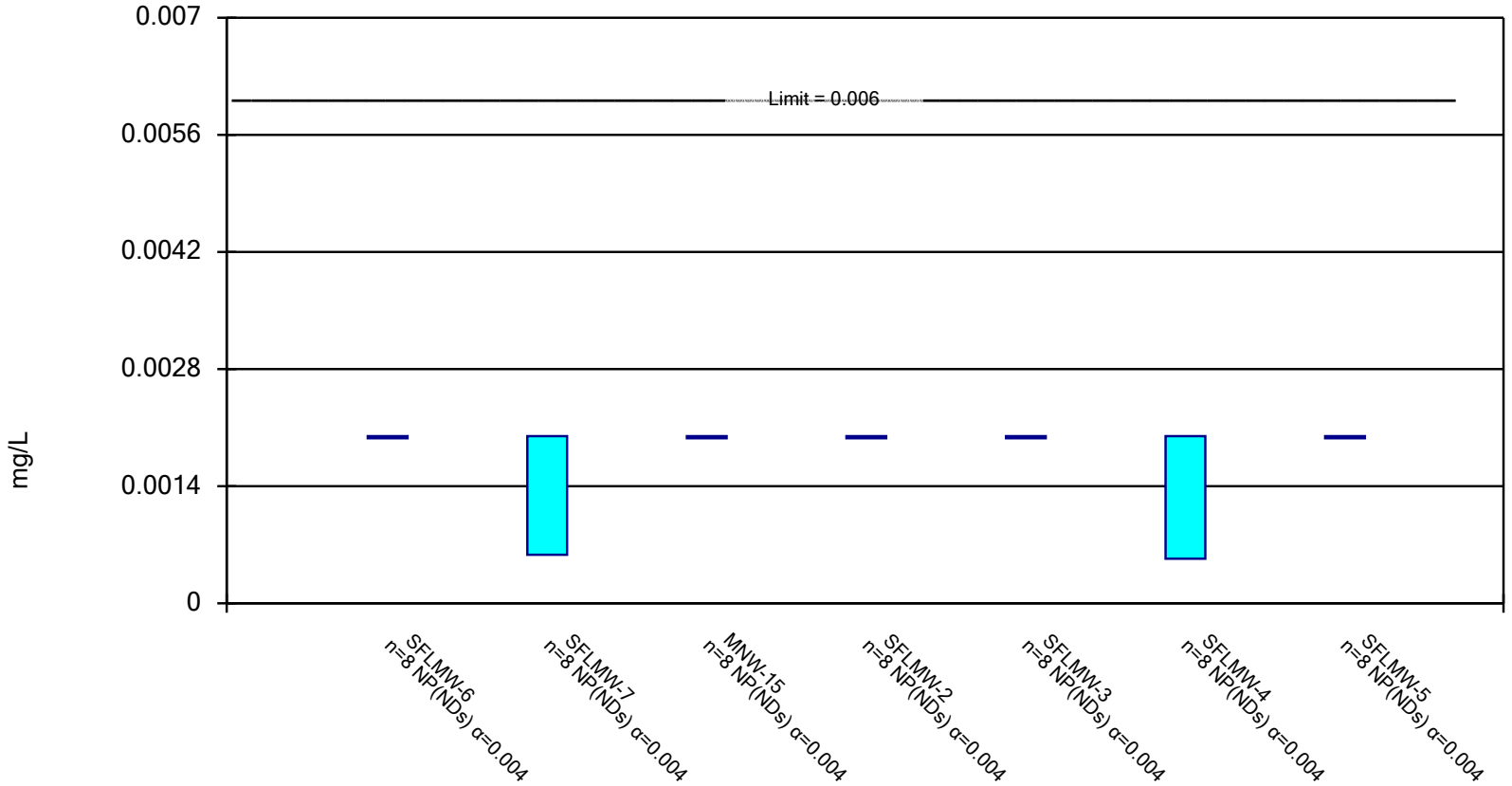
Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 2:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	SFLMW-4	0	-1	-48	No	15	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-5	27.11	37	44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-6	25.95	2	48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-7**	**-536.2**	**-64**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	**MNW-15**	**213**	**63**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	MNW-18 (bg)	-183.7	-21	-48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-2	-15.35	-1	-48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-3**	**-122.3**	**-55**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SFLMW-4	-150.2	-35	-48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-5	-69.15	-26	-48	No	15	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SFLMW-6	0.0000249	11	53	No	16	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SFLMW-7**	**0**	**-66**	**-58**	**Yes**	**17**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	MNW-15	-0.0001724	-39	-58	No	17	41.18	n/a	n/a	0.02	NP
Thallium (mg/L)	**MNW-18 (bg)**	**0**	**-66**	**-58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SFLMW-2**	**-0.0002071**	**-76**	**-58**	**Yes**	**17**	**76.47**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	SFLMW-3	-0.0001023	-44	-58	No	17	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SFLMW-4**	**-0.000167**	**-62**	**-58**	**Yes**	**17**	**94.12**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SFLMW-5**	**-0.0001348**	**-66**	**-58**	**Yes**	**17**	**64.71**	**n/a**	**n/a**	**0.02**	**NP**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

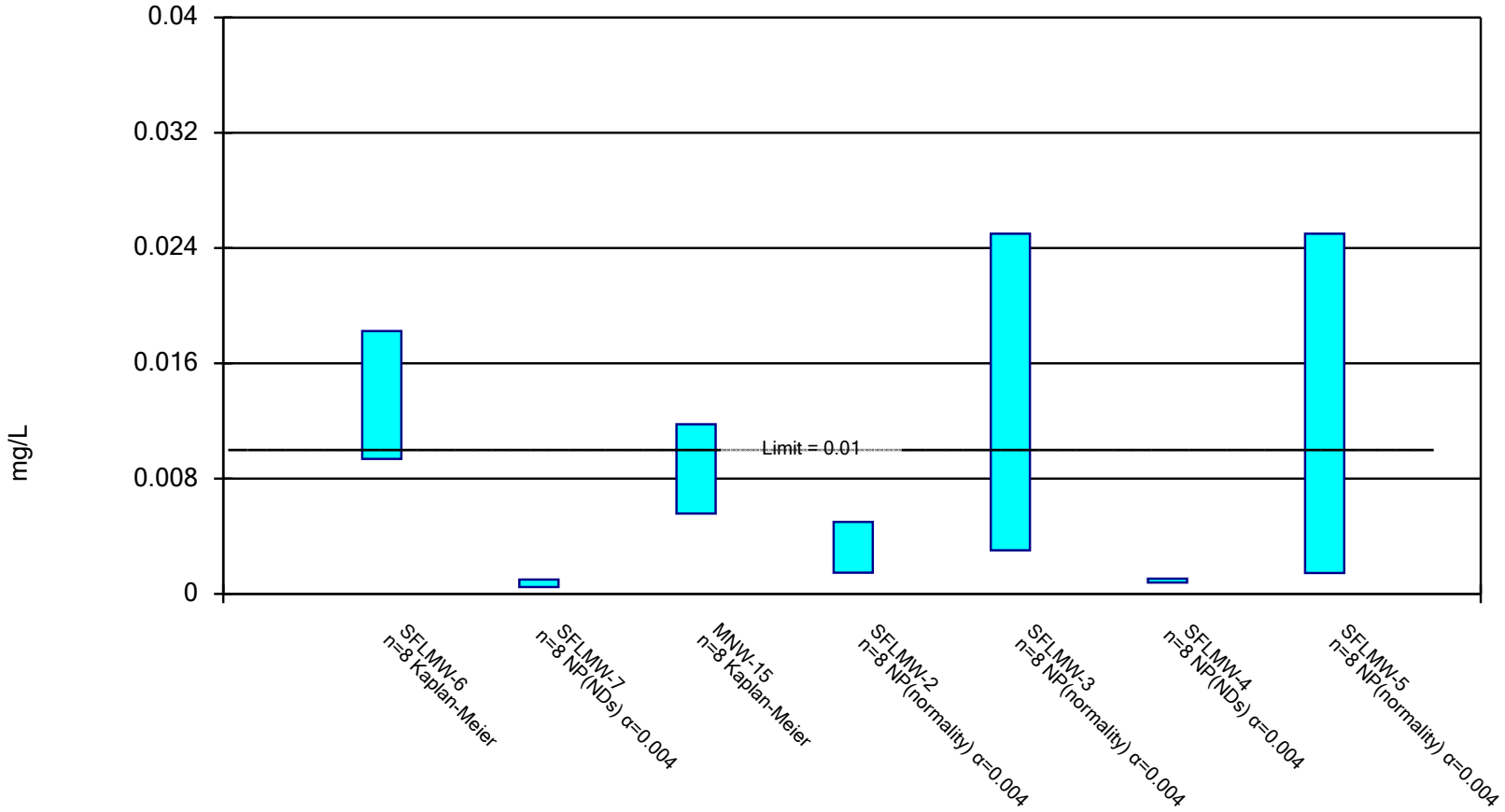


Constituent: Antimony Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

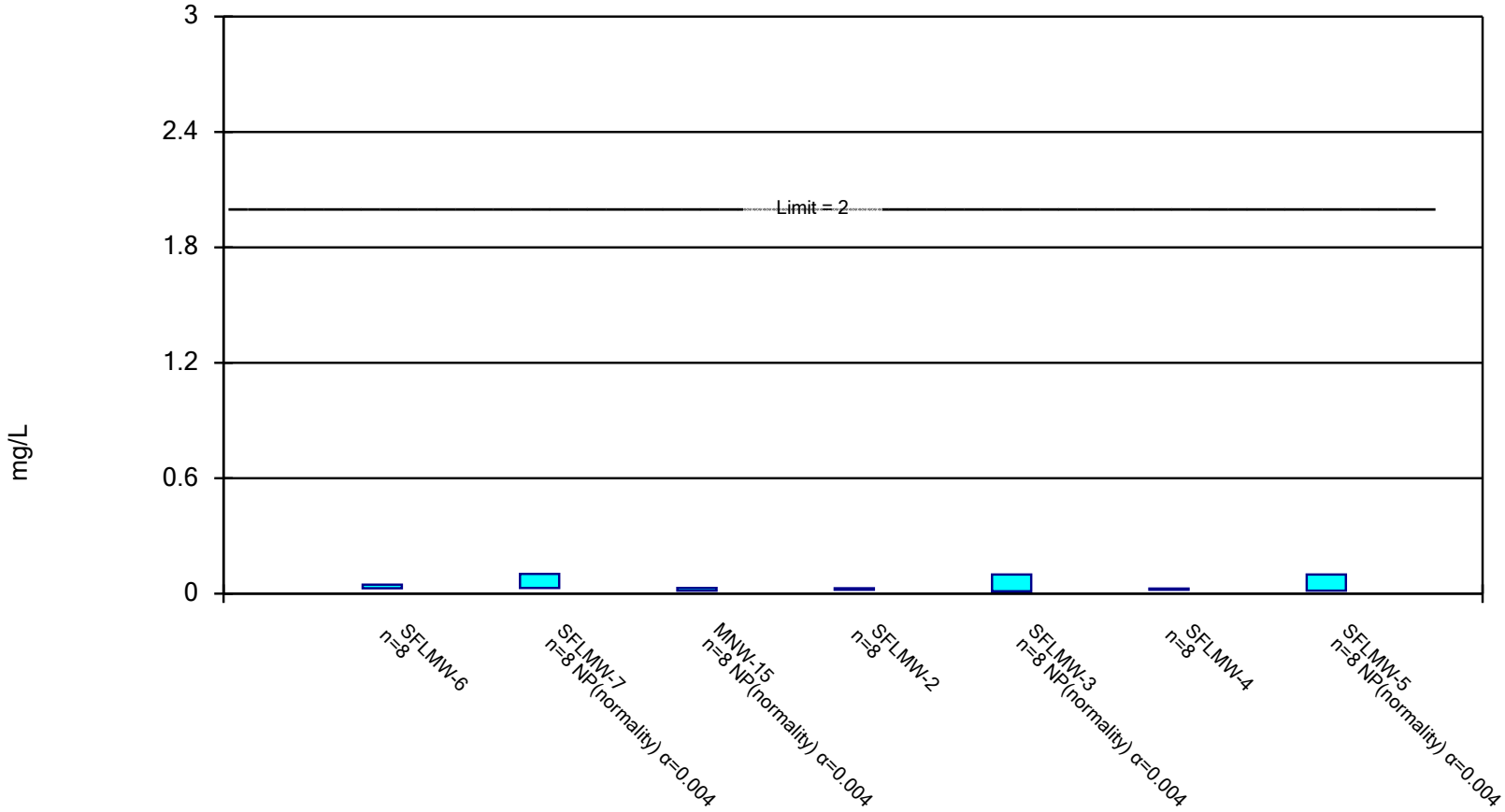


Constituent: Arsenic Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

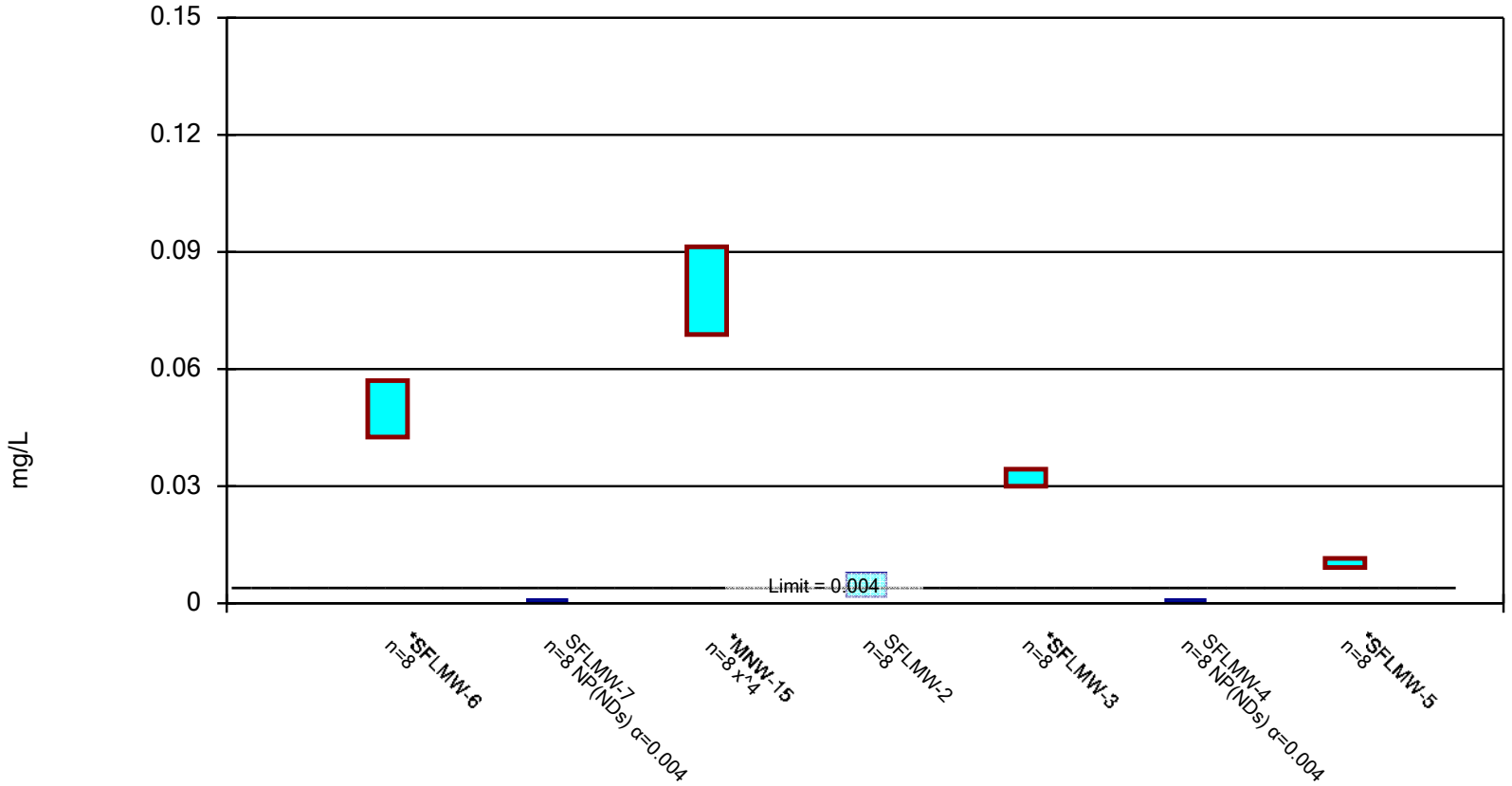


Constituent: Barium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

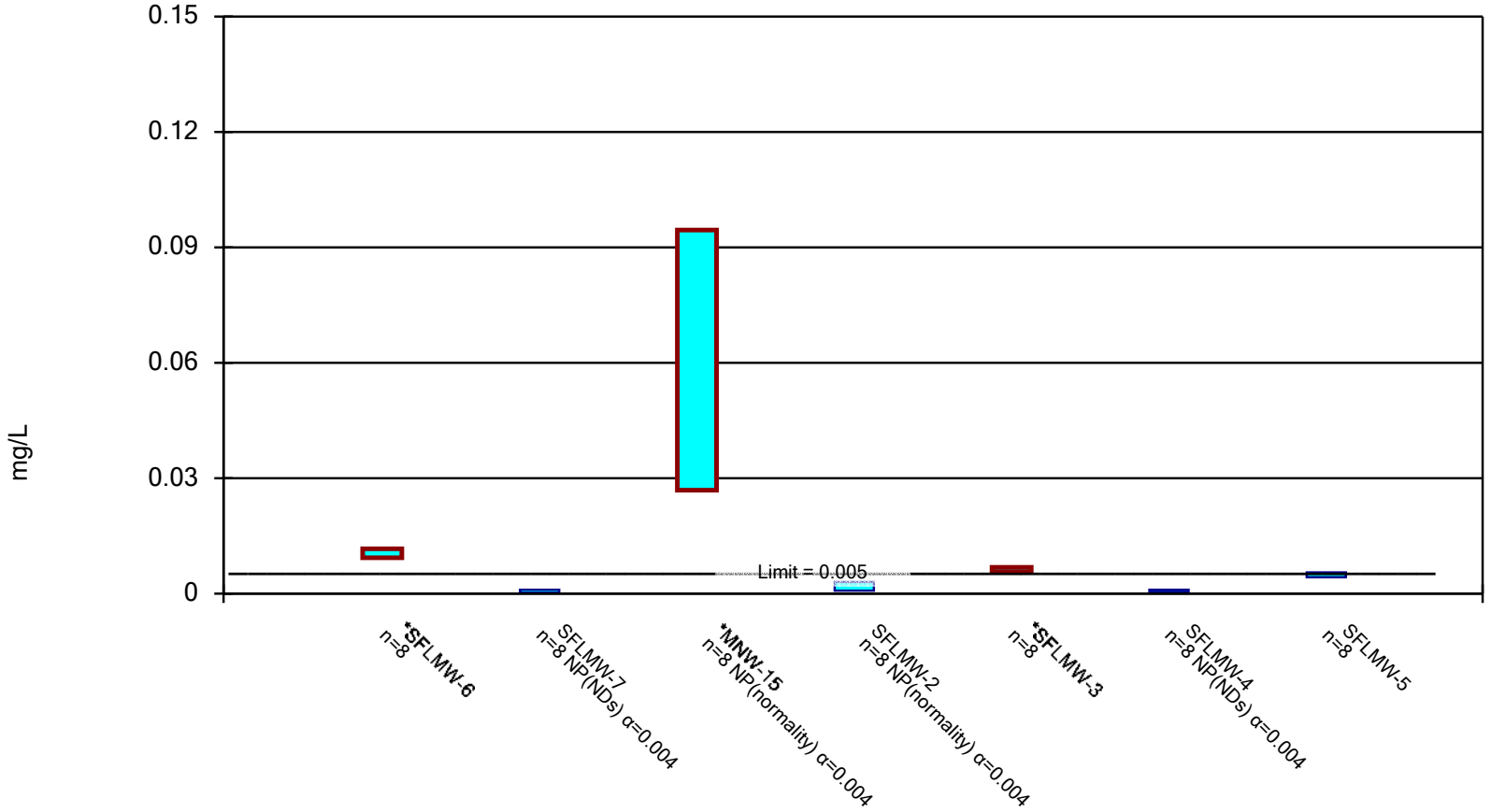


Constituent: Beryllium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

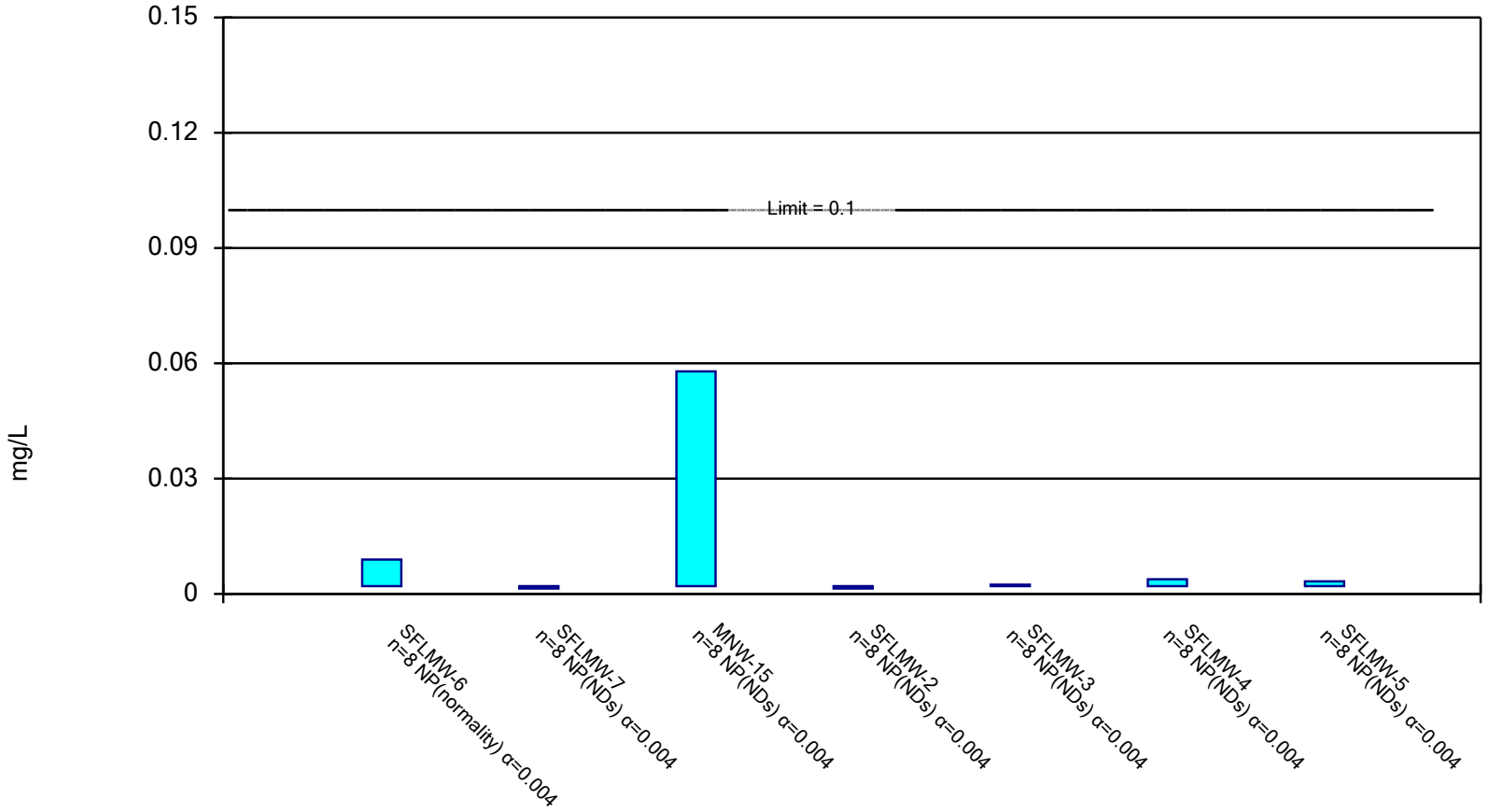


Constituent: Cadmium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

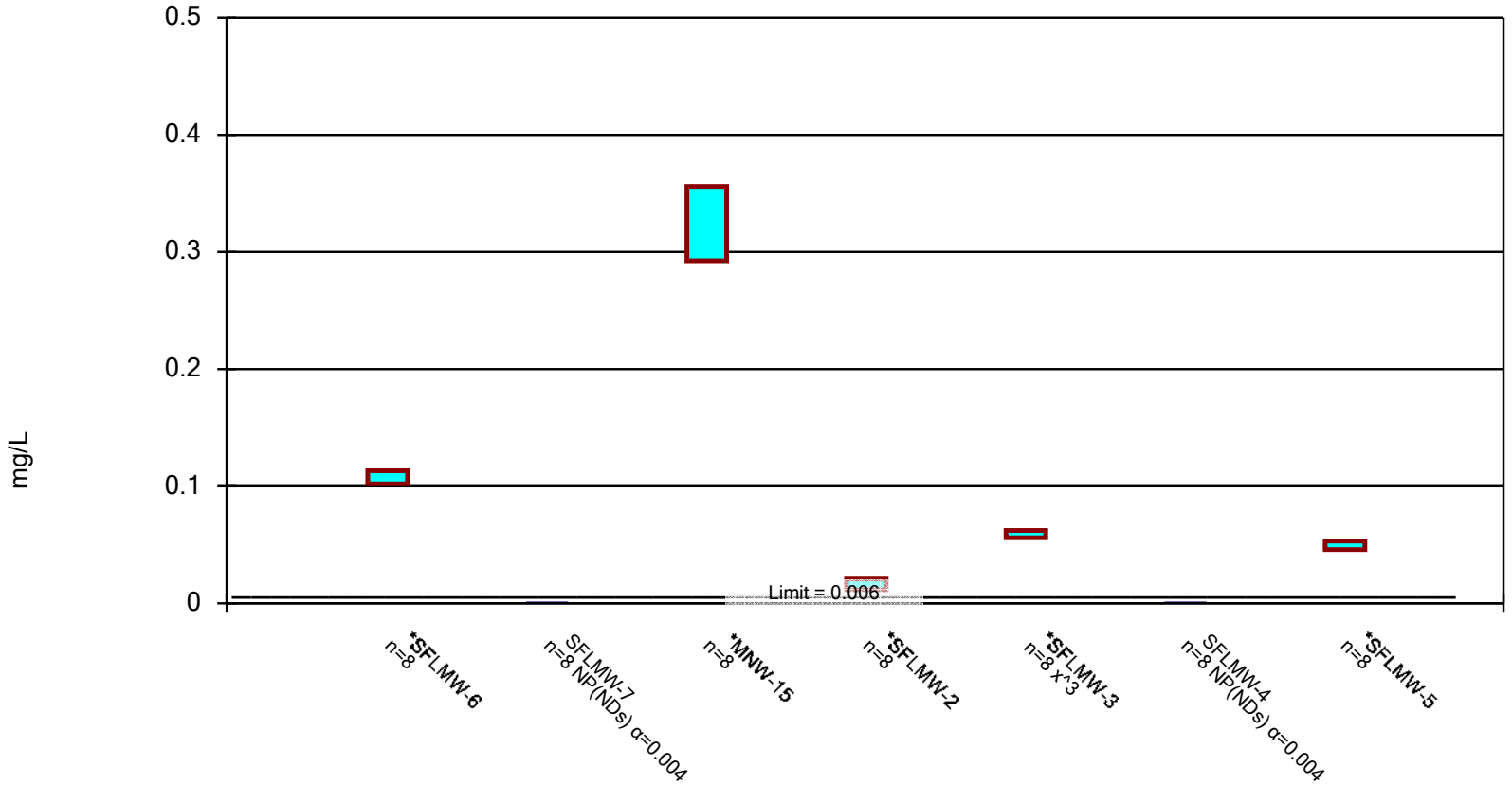


Constituent: Chromium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

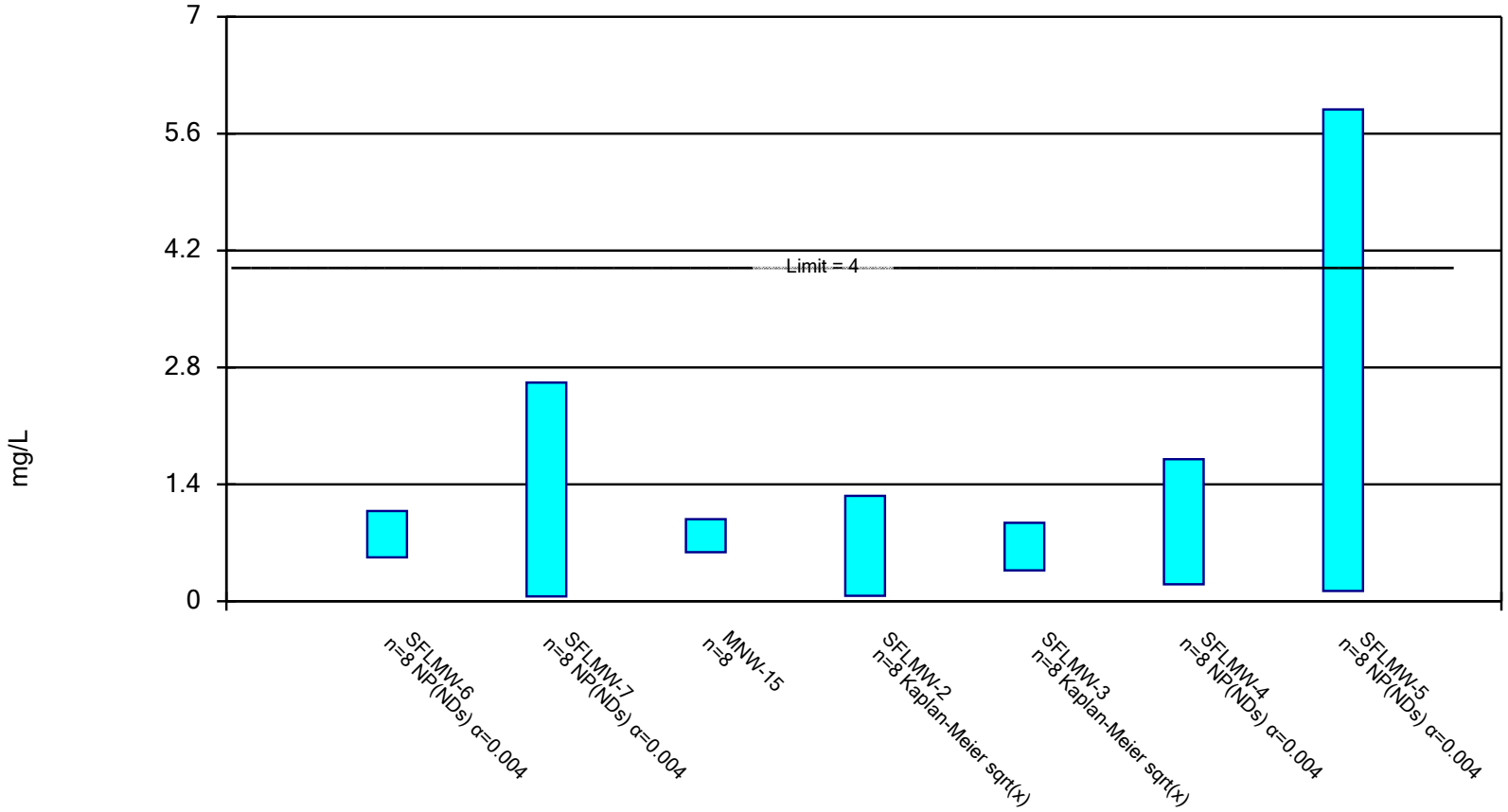


Constituent: Cobalt Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

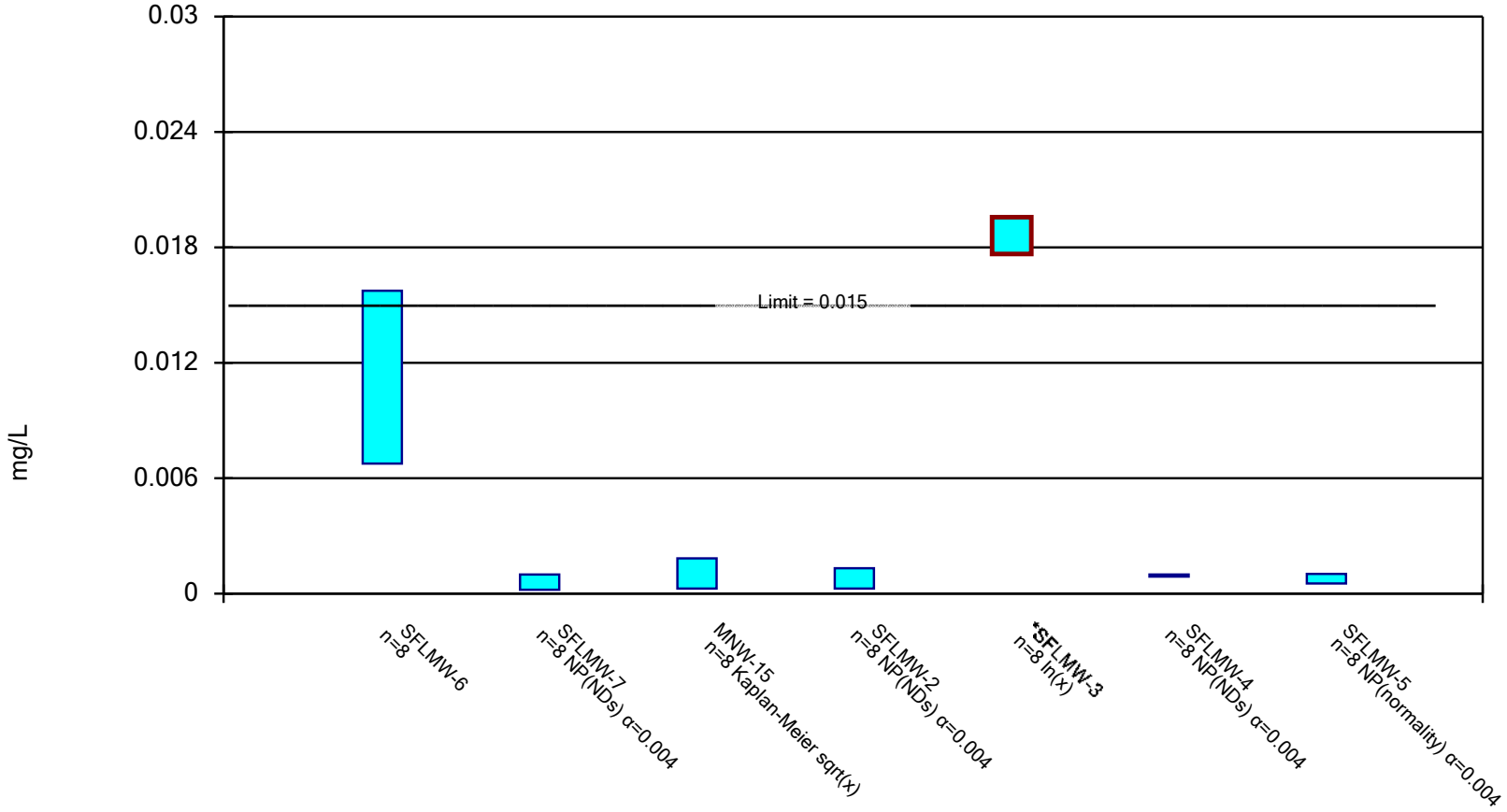


Constituent: Fluoride Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

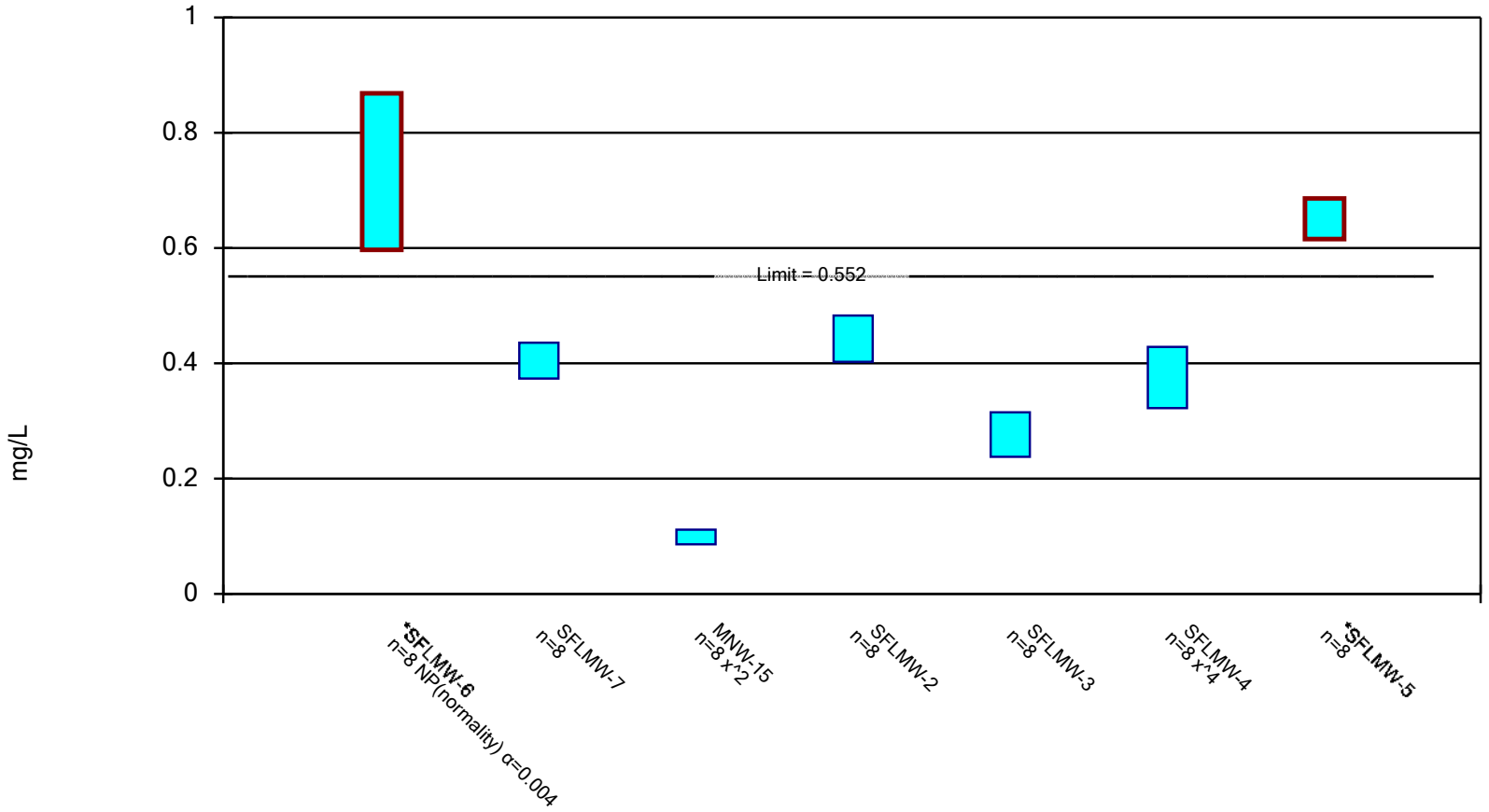


Constituent: Lead Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

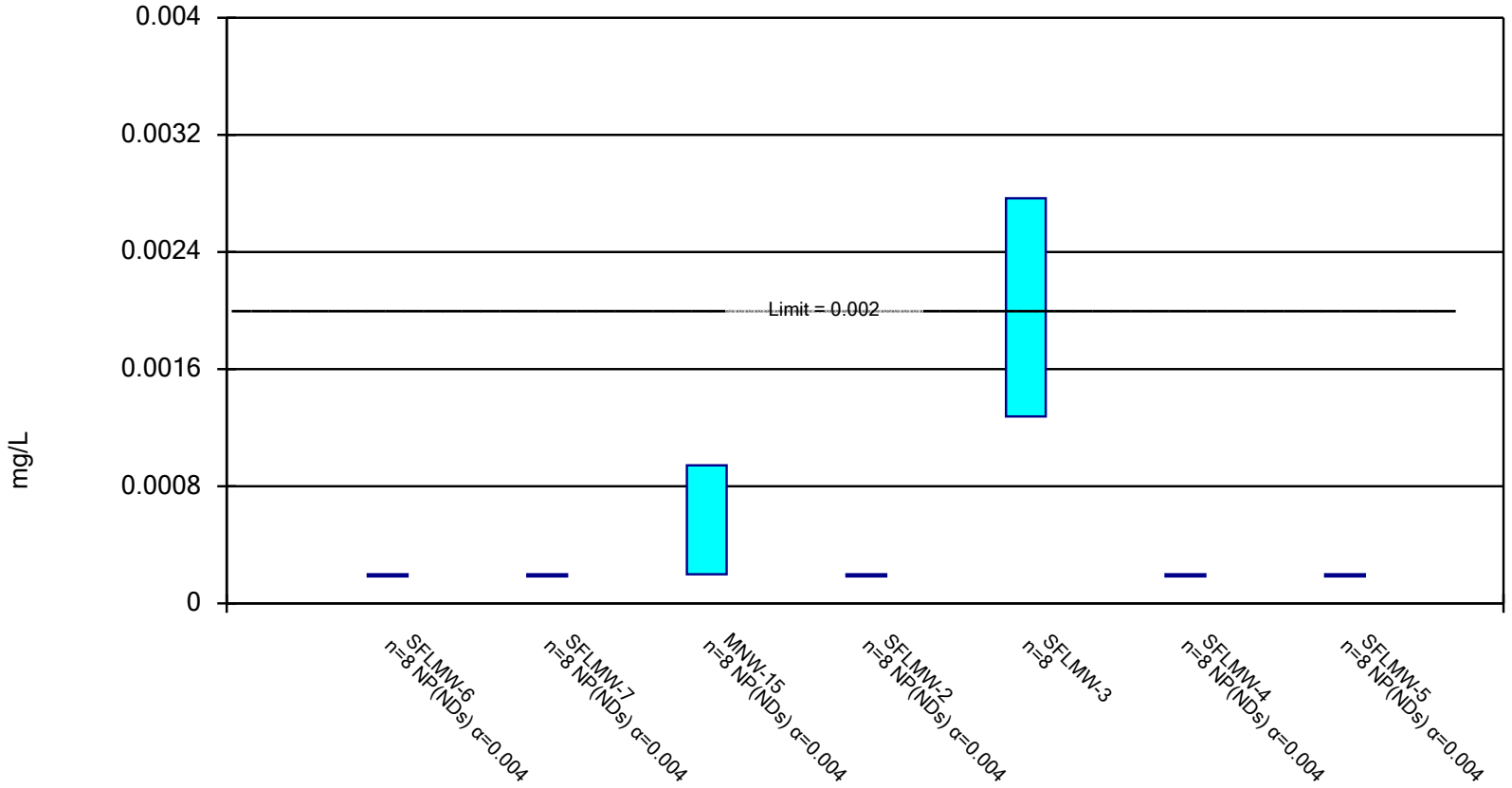


Constituent: Lithium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

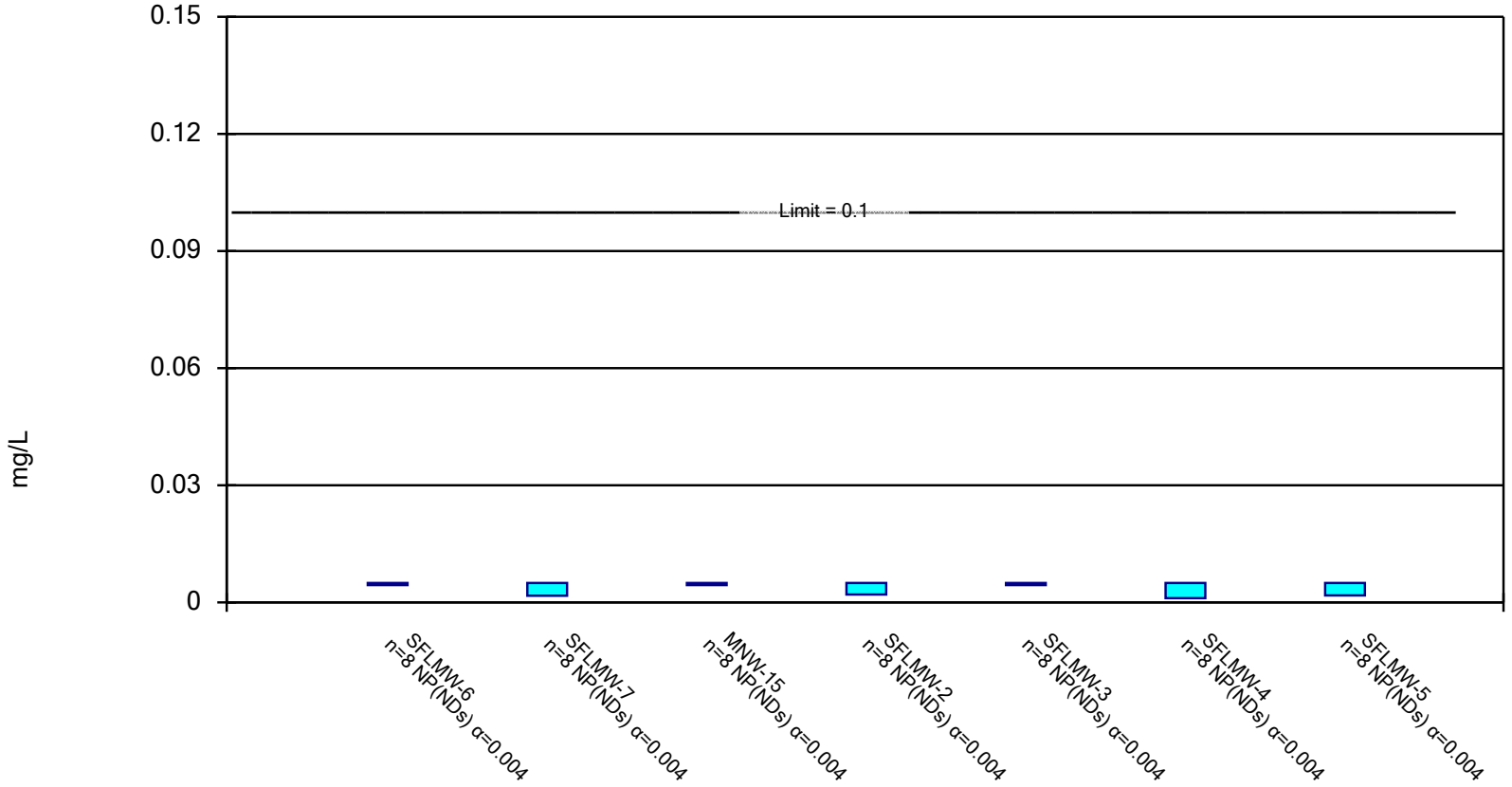


Constituent: Mercury Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

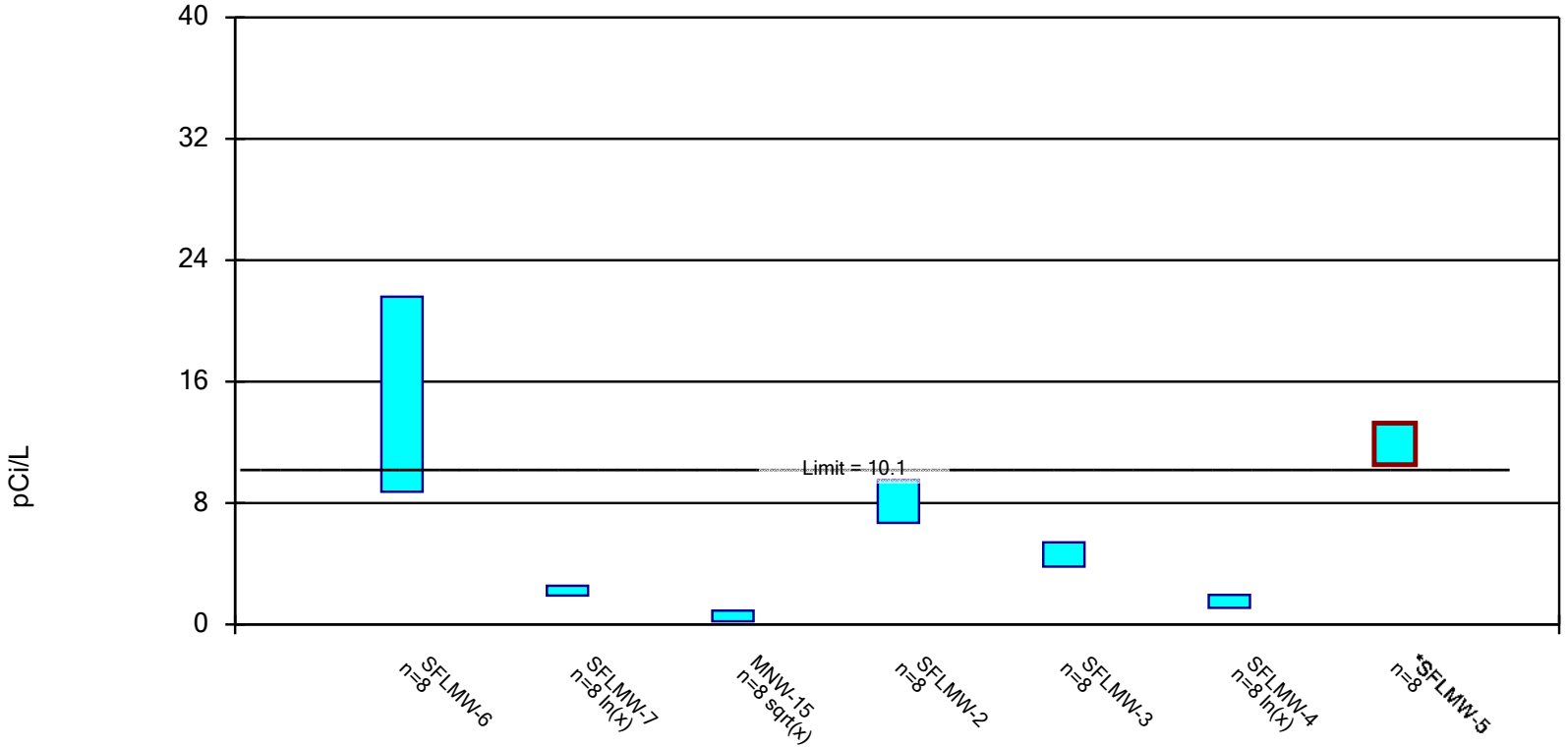


Constituent: Molybdenum Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

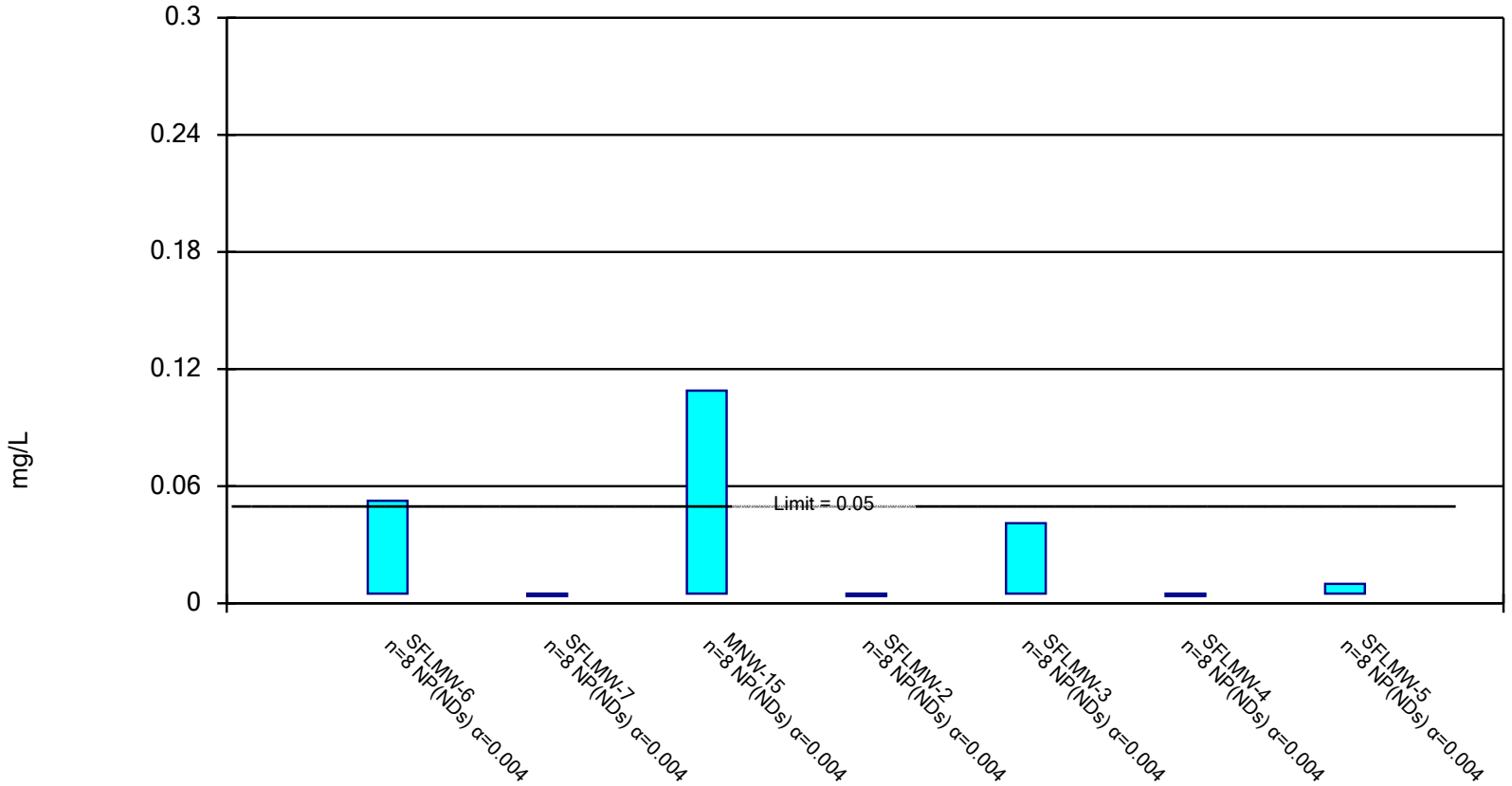


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

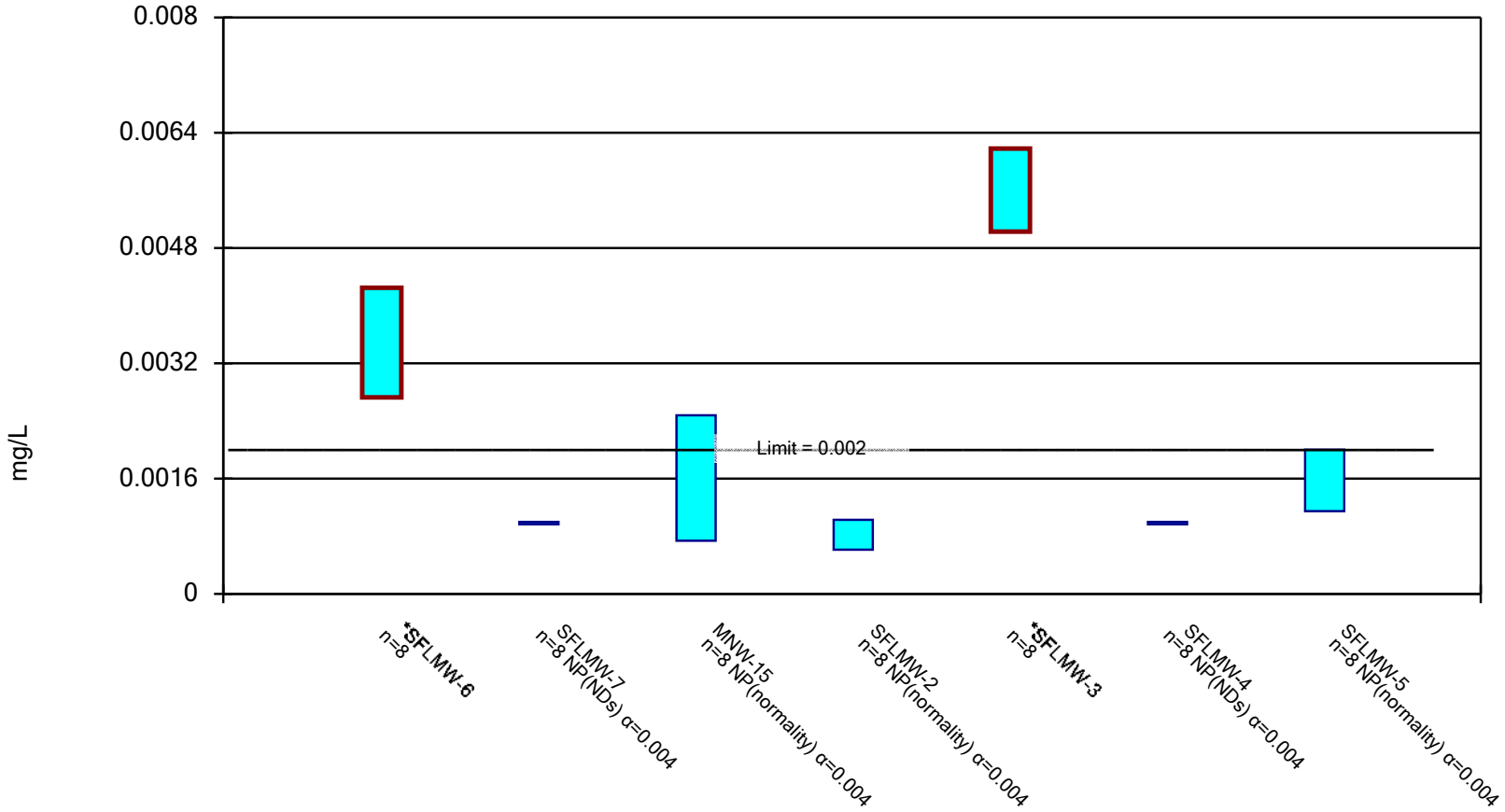


Constituent: Selenium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Thallium Analysis Run 1/23/2023 11:54 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:55 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SFLMW-6	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-7	0.002	0.000579	0.006	No	8	75	No	0.004	NP (NDs)
Antimony (mg/L)	MNW-15	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-2	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-3	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-4	0.002	0.000534	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-5	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Arsenic (mg/L)	SFLMW-6	0.01824	0.009368	0.01	No	8	25	No	0.01	Param.
Arsenic (mg/L)	SFLMW-7	0.001	0.000479	0.01	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MNW-15	0.01177	0.005566	0.01	No	8	37.5	No	0.01	Param.
Arsenic (mg/L)	SFLMW-2	0.005	0.00147	0.01	No	8	37.5	No	0.004	NP (normality)
Arsenic (mg/L)	SFLMW-3	0.025	0.00303	0.01	No	8	37.5	No	0.004	NP (normality)
Arsenic (mg/L)	SFLMW-4	0.00106	0.000786	0.01	No	8	75	No	0.004	NP (NDs)
Arsenic (mg/L)	SFLMW-5	0.025	0.00145	0.01	No	8	37.5	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-6	0.04629	0.02769	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-7	0.102	0.03	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MNW-15	0.03	0.0159	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-2	0.02763	0.02034	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-3	0.1	0.013	2	No	8	12.5	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-4	0.02725	0.01975	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-5	0.1	0.0157	2	No	8	12.5	No	0.004	NP (normality)
Beryllium (mg/L)	**SFLMW-6**	**0.05702**	**0.04258**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-7	0.001	0.001	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	**MNW-15**	**0.09127**	**0.06885**	**0.004**	**Yes**	**8**	**0**	**x^4**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-2	0.007773	0.001744	0.004	No	8	12.5	No	0.01	Param.
Beryllium (mg/L)	**SFLMW-3**	**0.03433**	**0.03**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-4	0.001	0.001	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	**SFLMW-5**	**0.01153**	**0.009204**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	**SFLMW-6**	**0.01166**	**0.009323**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-7	0.001	0.00025	0.005	No	8	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	**MNW-15**	**0.0945**	**0.0269**	**0.005**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Cadmium (mg/L)	SFLMW-2	0.00303	0.000761	0.005	No	8	25	No	0.004	NP (normality)
Cadmium (mg/L)	**SFLMW-3**	**0.006846**	**0.005641**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-4	0.001	0.001	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	SFLMW-5	0.00556	0.004275	0.005	No	8	0	No	0.01	Param.
Chromium (mg/L)	SFLMW-6	0.00895	0.002	0.1	No	8	50	No	0.004	NP (normality)
Chromium (mg/L)	SFLMW-7	0.002	0.002	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	MNW-15	0.0579	0.002	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-2	0.002	0.002	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-3	0.0024	0.002	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-4	0.00379	0.002	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-5	0.00327	0.002	0.1	No	8	75	No	0.004	NP (NDs)
Cobalt (mg/L)	**SFLMW-6**	**0.1132**	**0.102**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SFLMW-7	0.0005	0.0005	0.006	No	8	100	No	0.004	NP (NDs)
Cobalt (mg/L)	**MNW-15**	**0.3558**	**0.2924**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-2**	**0.02077**	**0.01168**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-3**	**0.06219**	**0.05589**	**0.006**	**Yes**	**8**	**0**	**x^3**	**0.01**	**Param.**
Cobalt (mg/L)	SFLMW-4	0.0005	0.0005	0.006	No	8	100	No	0.004	NP (NDs)
Cobalt (mg/L)	**SFLMW-5**	**0.05323**	**0.04577**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SFLMW-6	1.08	0.527	4	No	8	62.5	No	0.004	NP (NDs)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:55 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SFLMW-7	2.62	0.0599	4	No	8	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	MNW-15	0.9826	0.5866	4	No	8	12.5	No	0.01	Param.
Fluoride (mg/L)	SFLMW-2	1.262	0.06462	4	No	8	50	sqrt(x)	0.01	Param.
Fluoride (mg/L)	SFLMW-3	0.938	0.3688	4	No	8	25	sqrt(x)	0.01	Param.
Fluoride (mg/L)	SFLMW-4	1.7	0.204	4	No	8	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	SFLMW-5	5.89	0.122	4	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	SFLMW-6	0.01574	0.006755	0.015	No	8	12.5	No	0.01	Param.
Lead (mg/L)	SFLMW-7	0.001	0.000208	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	MNW-15	0.001843	0.0002687	0.015	No	8	37.5	sqrt(x)	0.01	Param.
Lead (mg/L)	SFLMW-2	0.00132	0.000272	0.015	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	**SFLMW-3**	**0.01957**	**0.01766**	**0.015**	**Yes**	**8**	**0**	**ln(x)**	**0.01**	**Param.**
Lead (mg/L)	SFLMW-4	0.001	0.001	0.015	No	8	100	No	0.004	NP (NDs)
Lead (mg/L)	SFLMW-5	0.00102	0.000527	0.015	No	8	50	No	0.004	NP (normality)
Lithium (mg/L)	**SFLMW-6**	**0.868**	**0.597**	**0.552**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Lithium (mg/L)	SFLMW-7	0.4355	0.3738	0.552	No	8	0	No	0.01	Param.
Lithium (mg/L)	MNW-15	0.1116	0.08597	0.552	No	8	12.5	x^2	0.01	Param.
Lithium (mg/L)	SFLMW-2	0.4828	0.4025	0.552	No	8	0	No	0.01	Param.
Lithium (mg/L)	SFLMW-3	0.3152	0.2376	0.552	No	8	12.5	No	0.01	Param.
Lithium (mg/L)	SFLMW-4	0.4286	0.322	0.552	No	8	0	x^4	0.01	Param.
Lithium (mg/L)	**SFLMW-5**	**0.6859**	**0.6154**	**0.552**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Mercury (mg/L)	SFLMW-6	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-7	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	MNW-15	0.000942	0.0002	0.002	No	8	75	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-2	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-3	0.002767	0.001276	0.002	No	8	0	No	0.01	Param.
Mercury (mg/L)	SFLMW-4	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-5	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-6	0.005	0.005	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-7	0.005	0.00173	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	MNW-15	0.005	0.005	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-2	0.005	0.00202	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-3	0.005	0.005	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-4	0.005	0.00106	0.1	No	8	62.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-5	0.005	0.0018	0.1	No	8	87.5	No	0.004	NP (NDs)
Radium 226 + 228 (pCi/L)	SFLMW-6	21.59	8.738	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-7	2.545	1.919	10.1	No	8	0	ln(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	MNW-15	0.9176	0.2149	10.1	No	8	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-2	9.542	6.69	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-3	5.4	3.812	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-4	1.949	1.091	10.1	No	8	12.5	ln(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**13.27**	**10.52**	**10.1**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Selenium (mg/L)	SFLMW-6	0.0525	0.005	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-7	0.005	0.005	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	MNW-15	0.109	0.005	0.05	No	8	75	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-2	0.005	0.005	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-3	0.041	0.005	0.05	No	8	75	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-4	0.005	0.005	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-5	0.00989	0.005	0.05	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	**SFLMW-6**	**0.004249**	**0.002726**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-7	0.001	0.001	0.002	No	8	100	No	0.004	NP (NDs)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:55 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	MNW-15	0.00248	0.000739	0.002	No	8	37.5	No	0.004	NP (normality)
Thallium (mg/L)	SFLMW-2	0.00103	0.000612	0.002	No	8	50	No	0.004	NP (normality)
Thallium (mg/L)	**SFLMW-3**	**0.006178**	**0.005027**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-4	0.001	0.001	0.002	No	8	100	No	0.004	NP (NDs)
Thallium (mg/L)	SFLMW-5	0.002	0.00115	0.002	No	8	25	No	0.004	NP (normality)

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Attachment A-3

Statistical Analysis

-December 2022

-Site F Landfill

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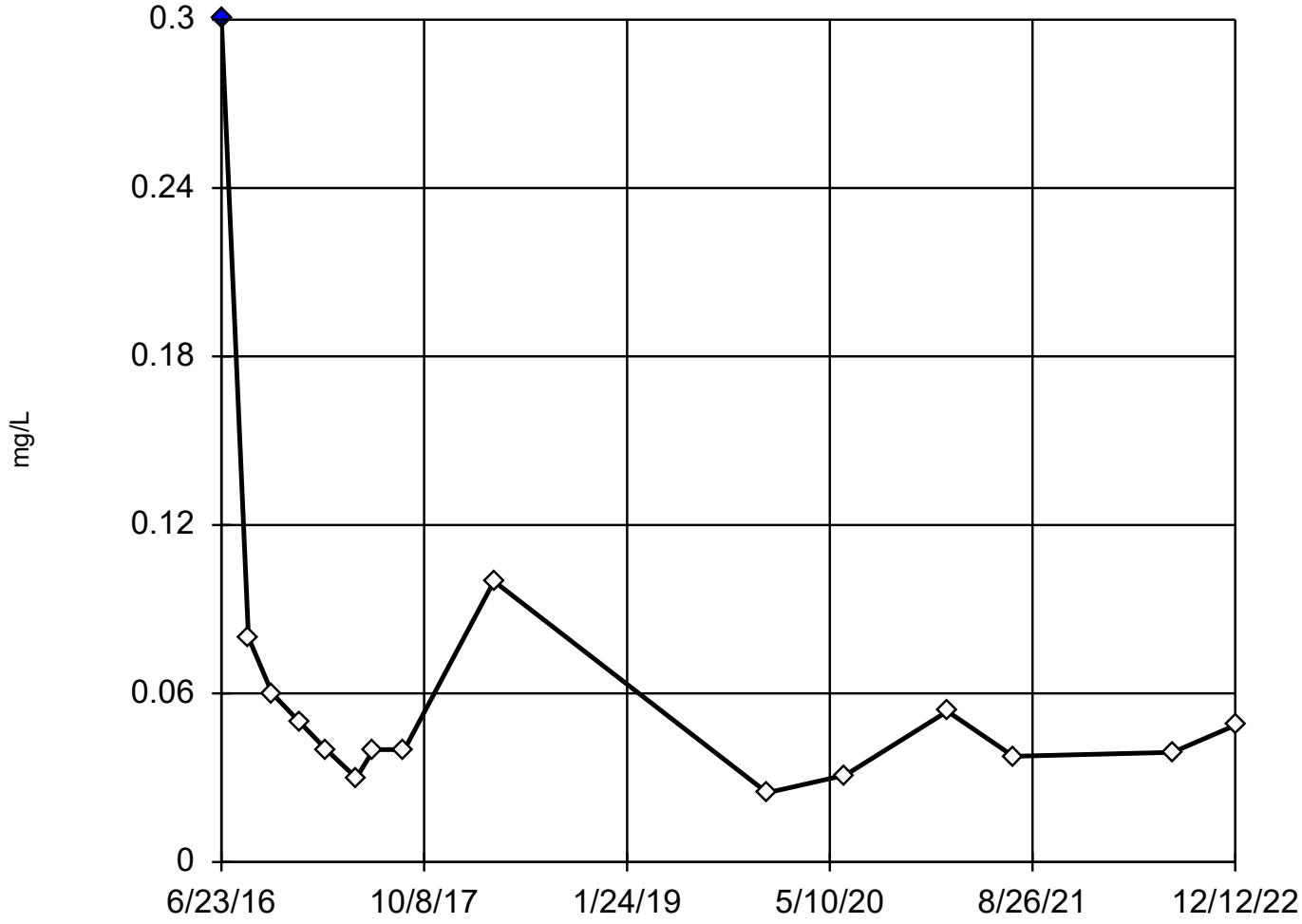
Dixon's Outlier Test

SFLMW-6



n = 15

Statistical outlier is drawn as solid.
2 values manually flagged as outliers.
Testing for 1 high outlier.
Mean = 0.06497.
Std. Dev. = 0.06795.
0.3 (o): c = 0.5815
tabl = 0.525.
Alpha = 0.05.

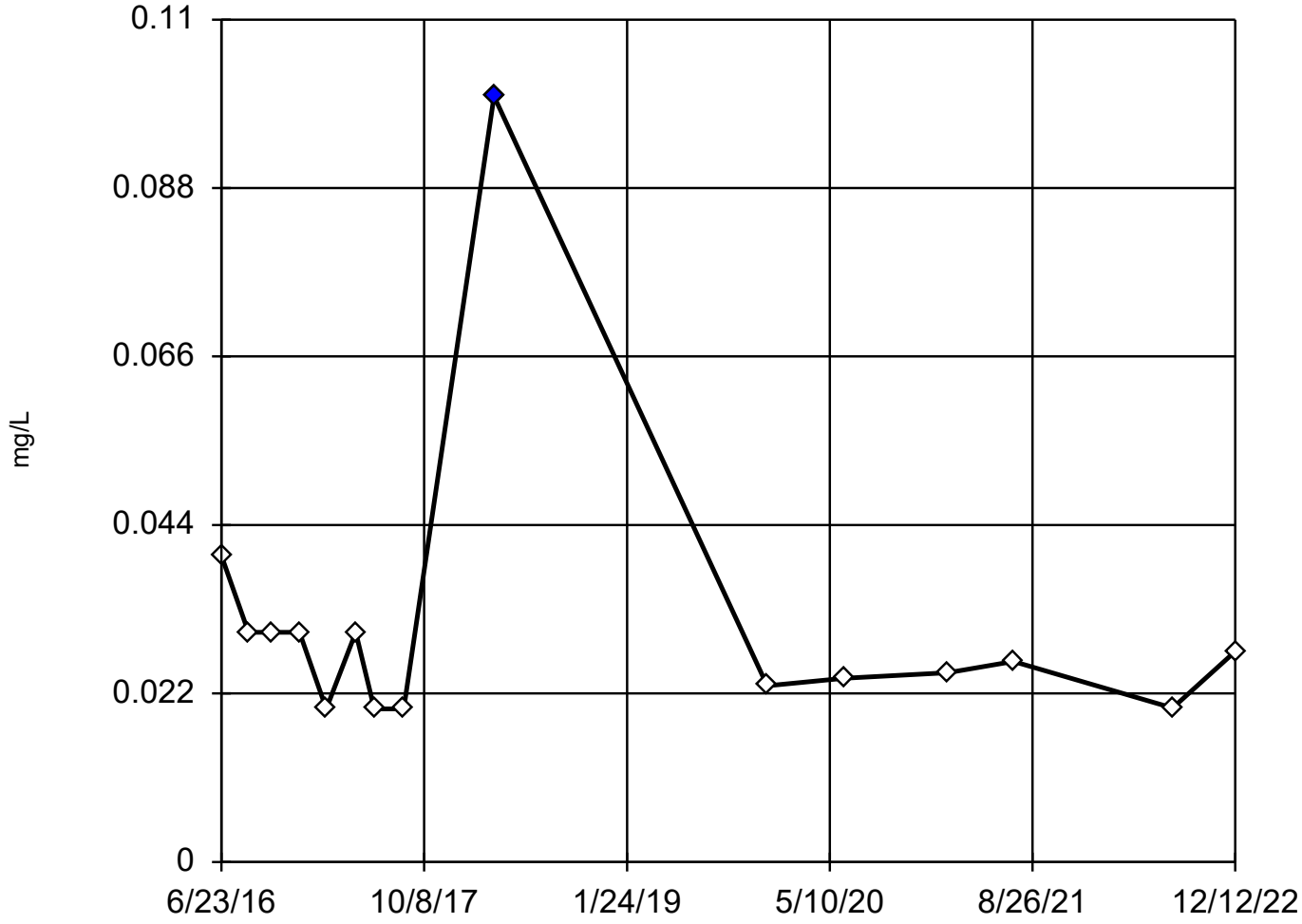
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9544
Critical = 0.874 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Barium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.03103.
Std. Dev. = 0.01985.
<0.2 (o): c = 0.875
tabl = 0.525.
Alpha = 0.05.

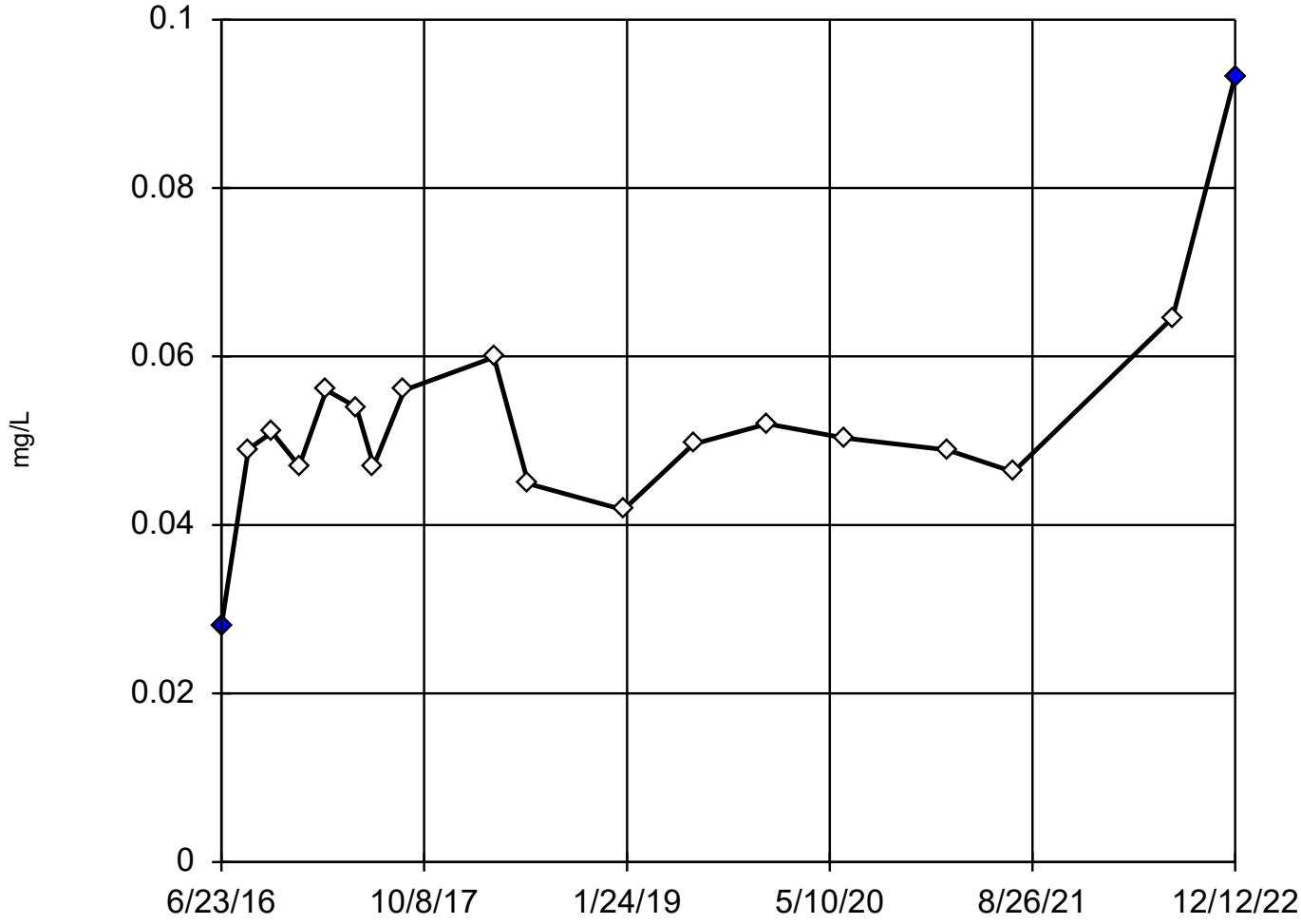
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8805
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 18

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 0.0522.
Std. Dev. = 0.01284.
0.0933: c = 0.6901
tabl = 0.475.
0.028 (o): c = 0.5298
tabl = 0.475.
Alpha = 0.05.

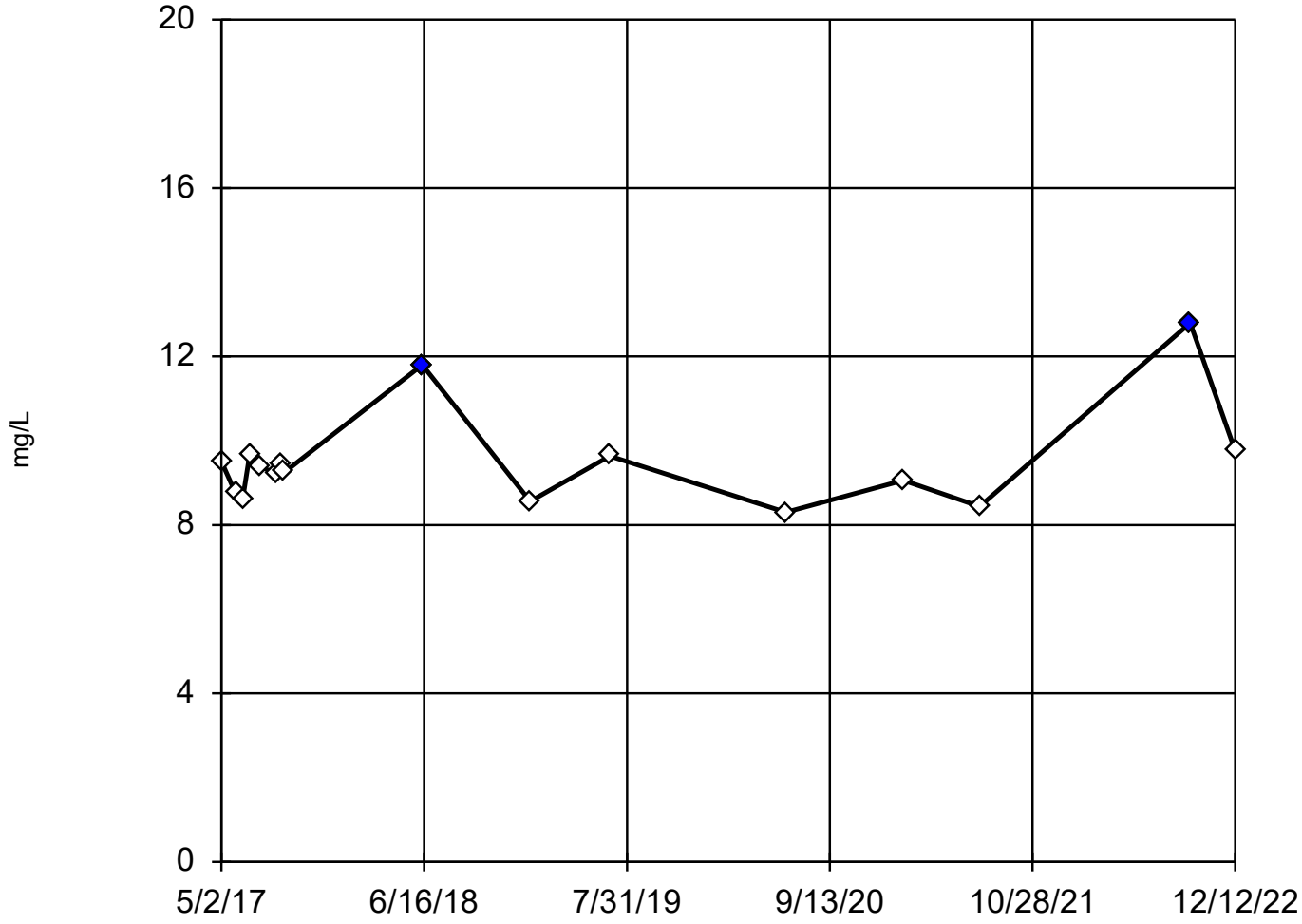
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9573
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Beryllium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 16

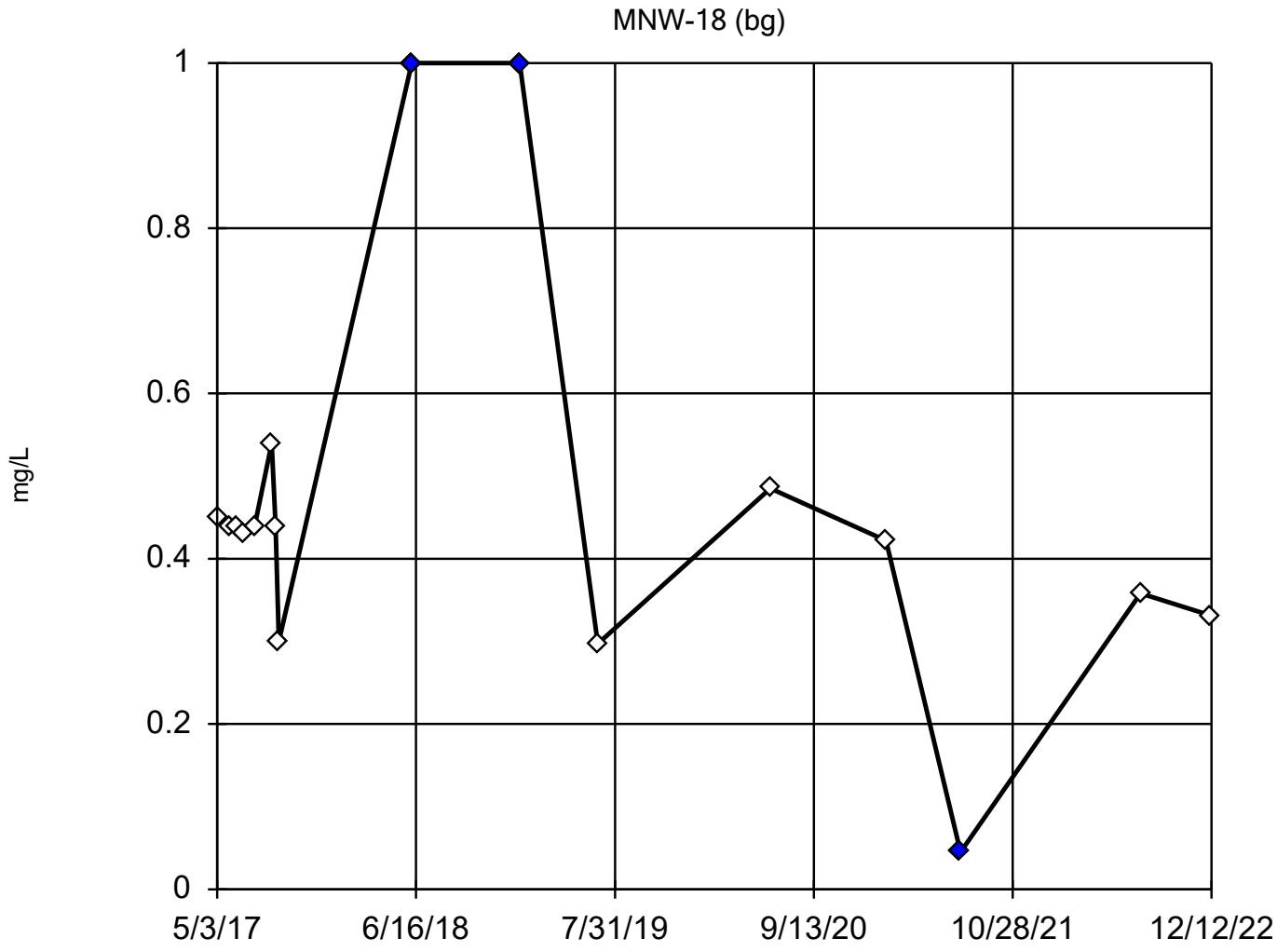
Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 9.513.
Std. Dev. = 1.195.
11.8: c = 0.6574
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9228
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening



n = 16

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

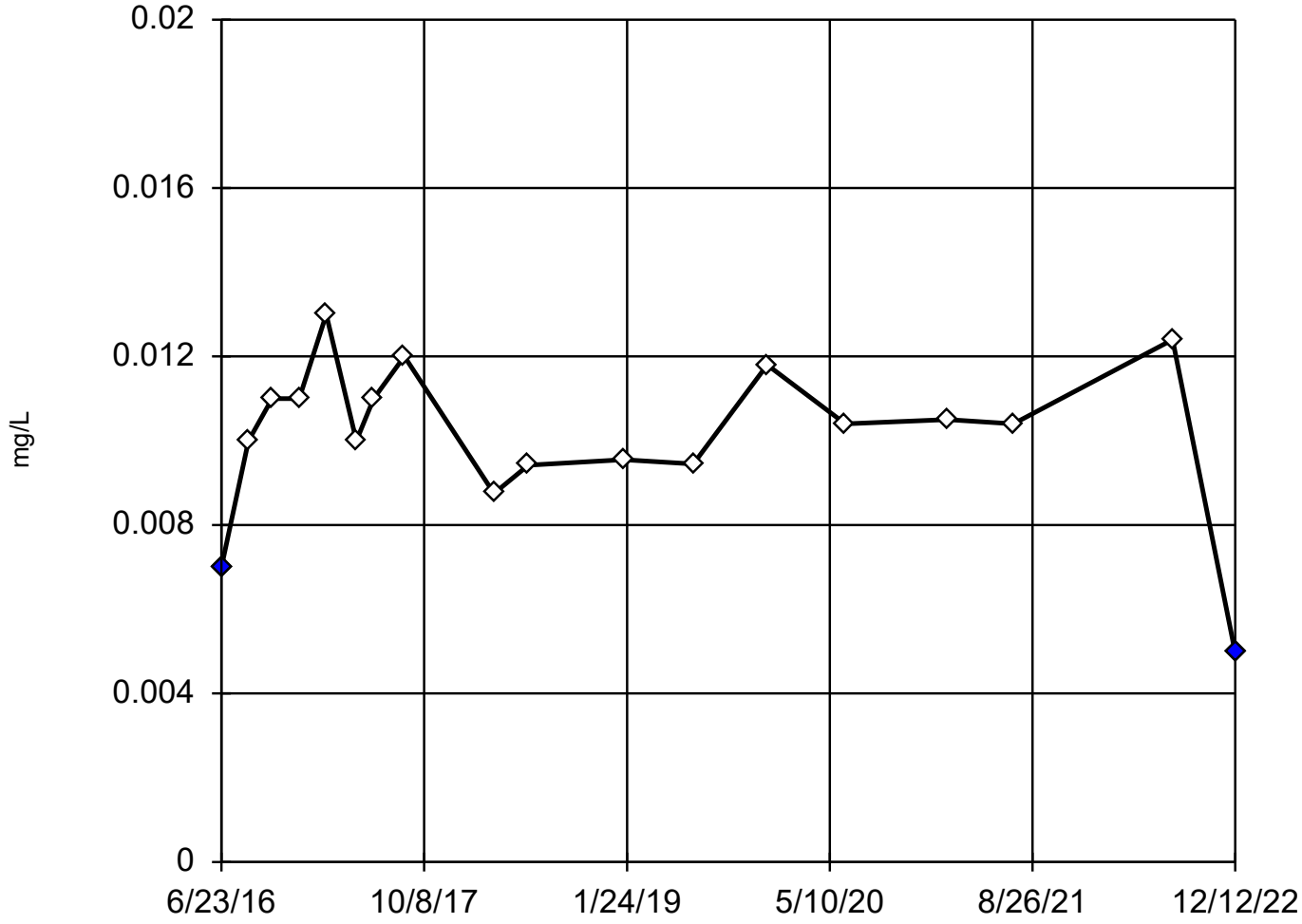
High cutoff = 0.9487, low cutoff = 0.08789, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 18

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 0.01015.
Std. Dev. = 0.001908.
0.007: c = 0.484
tabl = 0.475.
Alpha = 0.05.

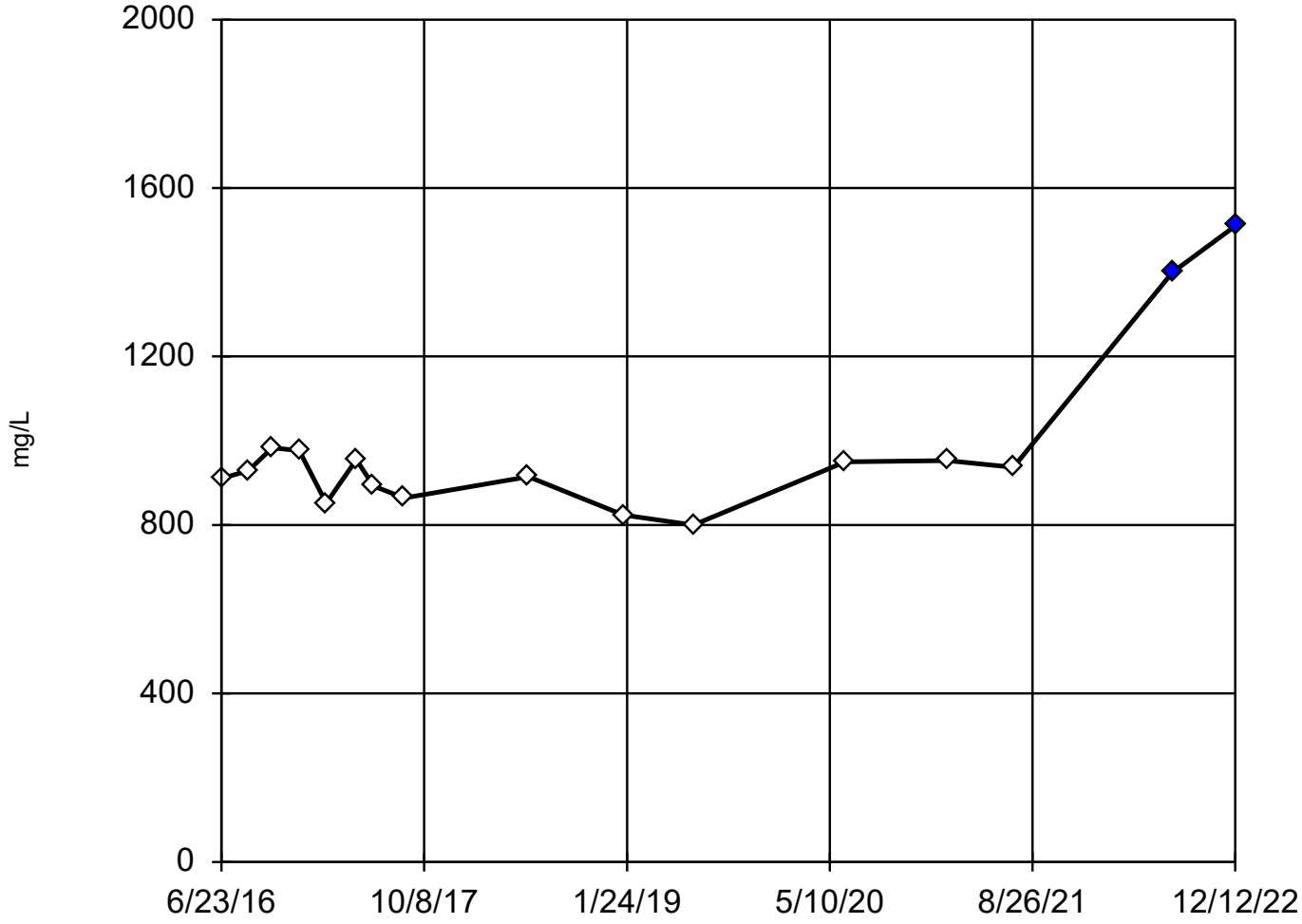
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.967
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Cadmium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 16

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 978.2.
Std. Dev. = 194.5.
1400: c = 0.7719
tabl = 0.507.
Alpha = 0.05.

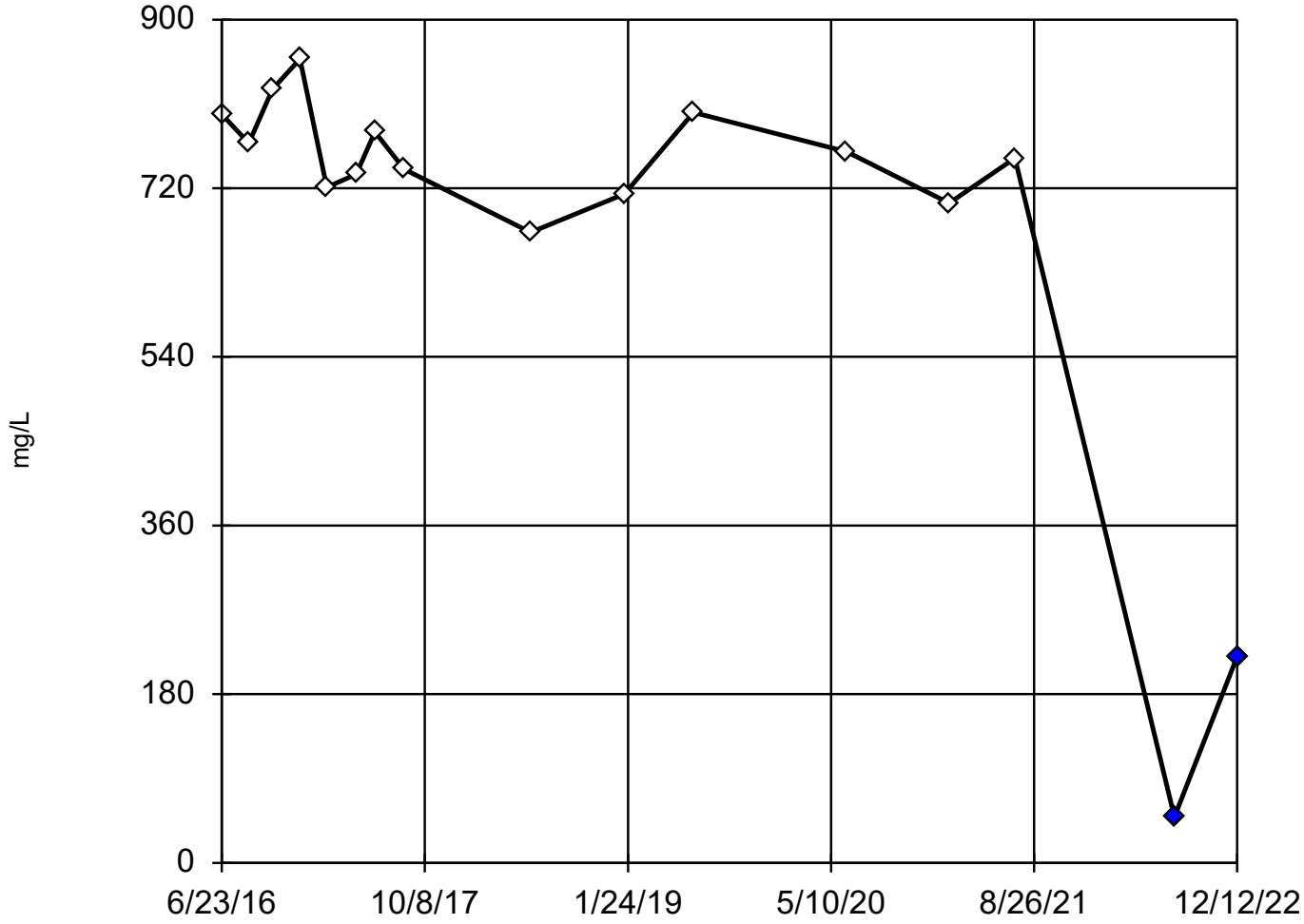
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9374
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 681.2.
Std. Dev. = 220.7.
220: c = 0.833
tabl = 0.507.
Alpha = 0.05.

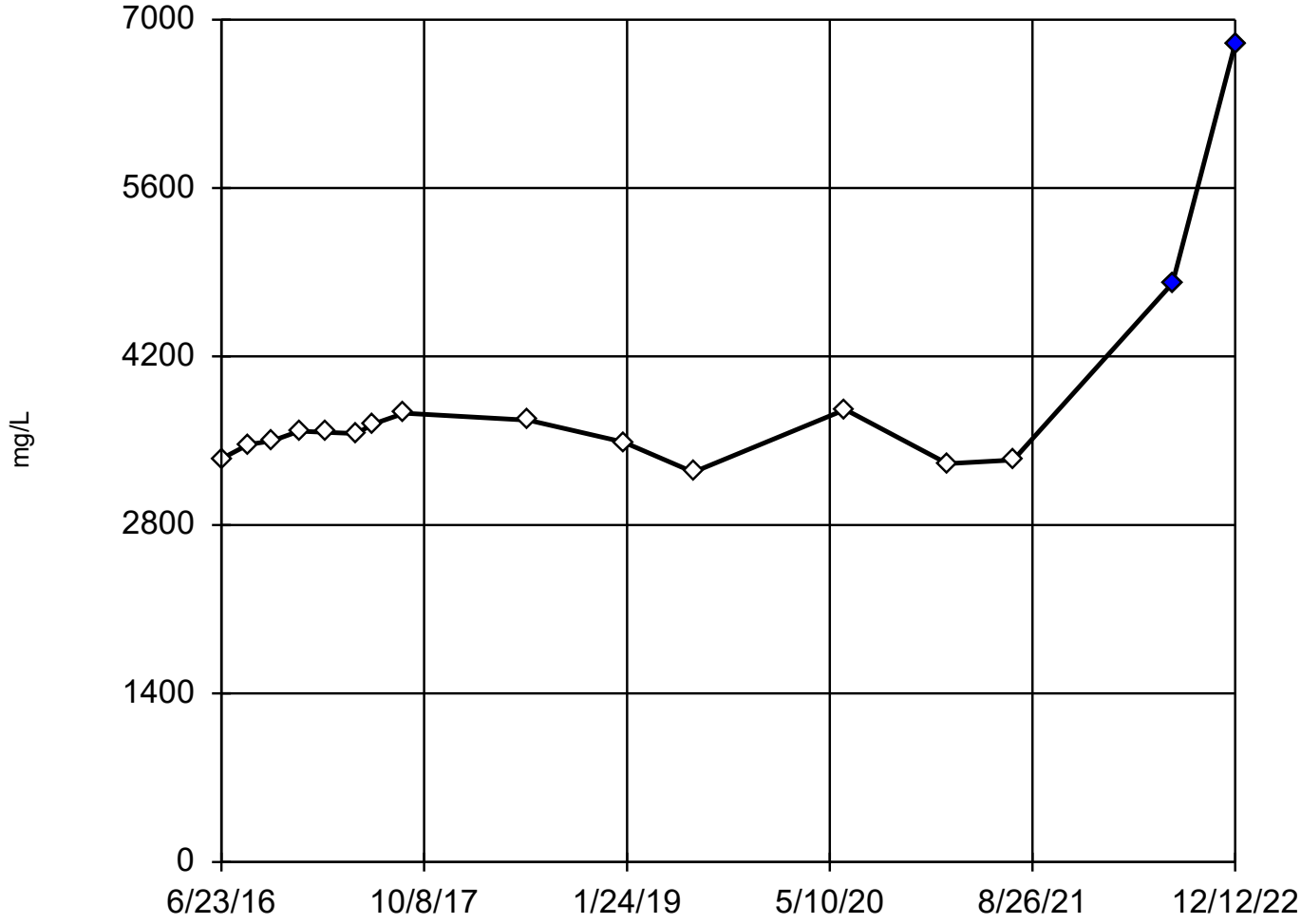
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9897
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 16

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 3801.
Std. Dev. = 875.2.
4810: c = 0.7347
tabl = 0.507.
Alpha = 0.05.

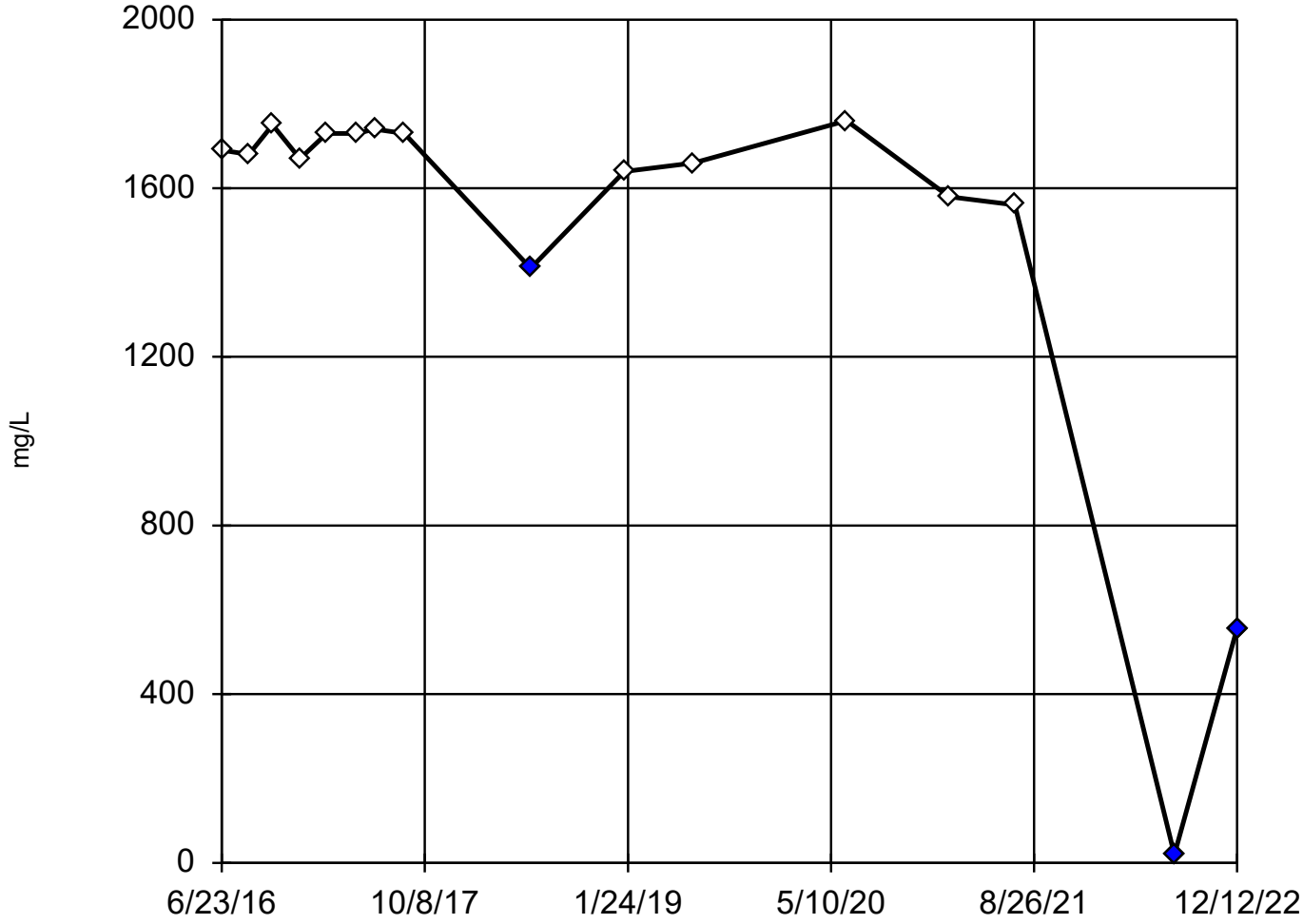
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.963
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/23/2023 8:32 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 1494.
Std. Dev. = 489.3.
1410: c = 0.5152
tabl = 0.507.
Alpha = 0.05.

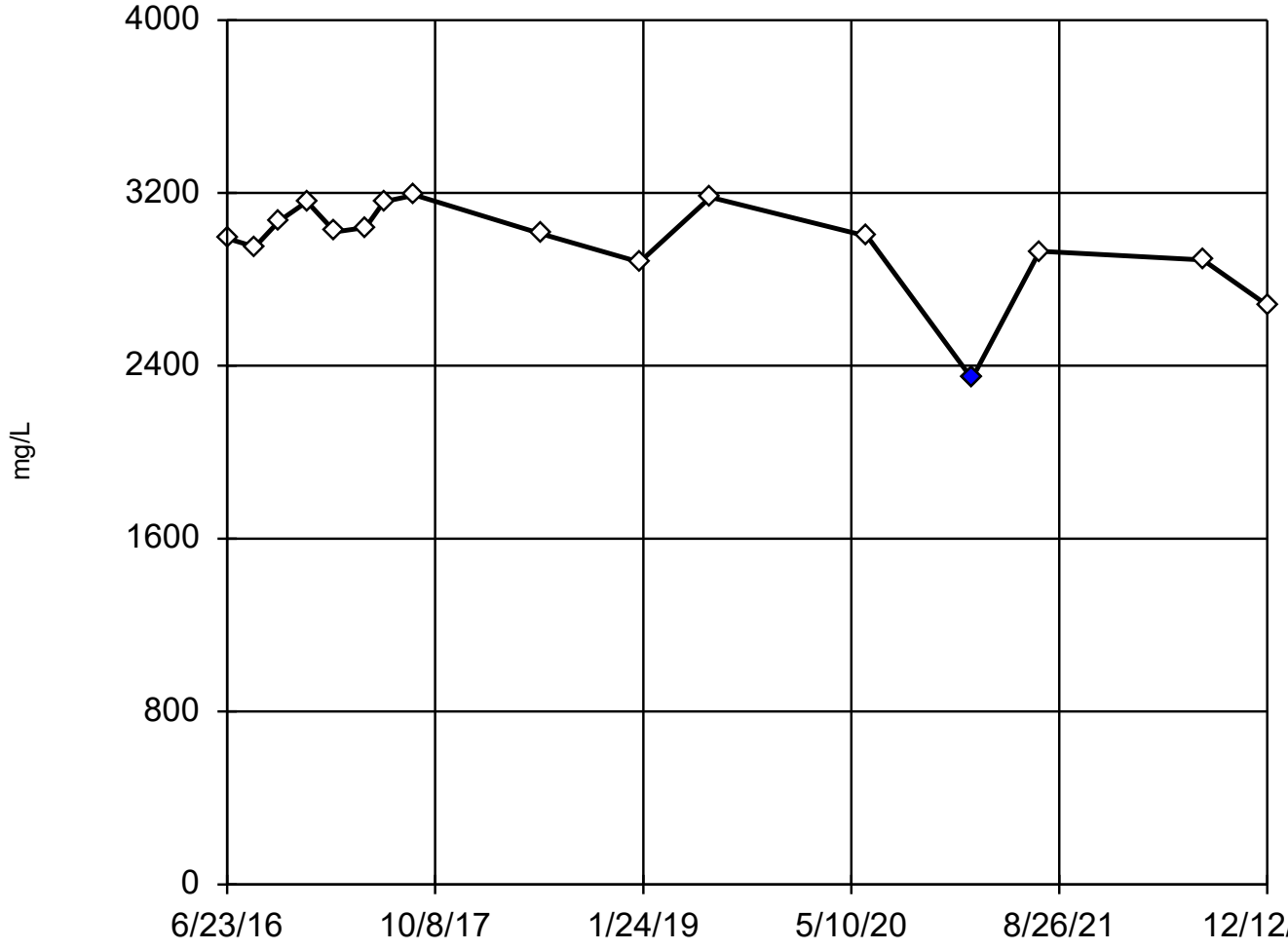
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.901
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 16

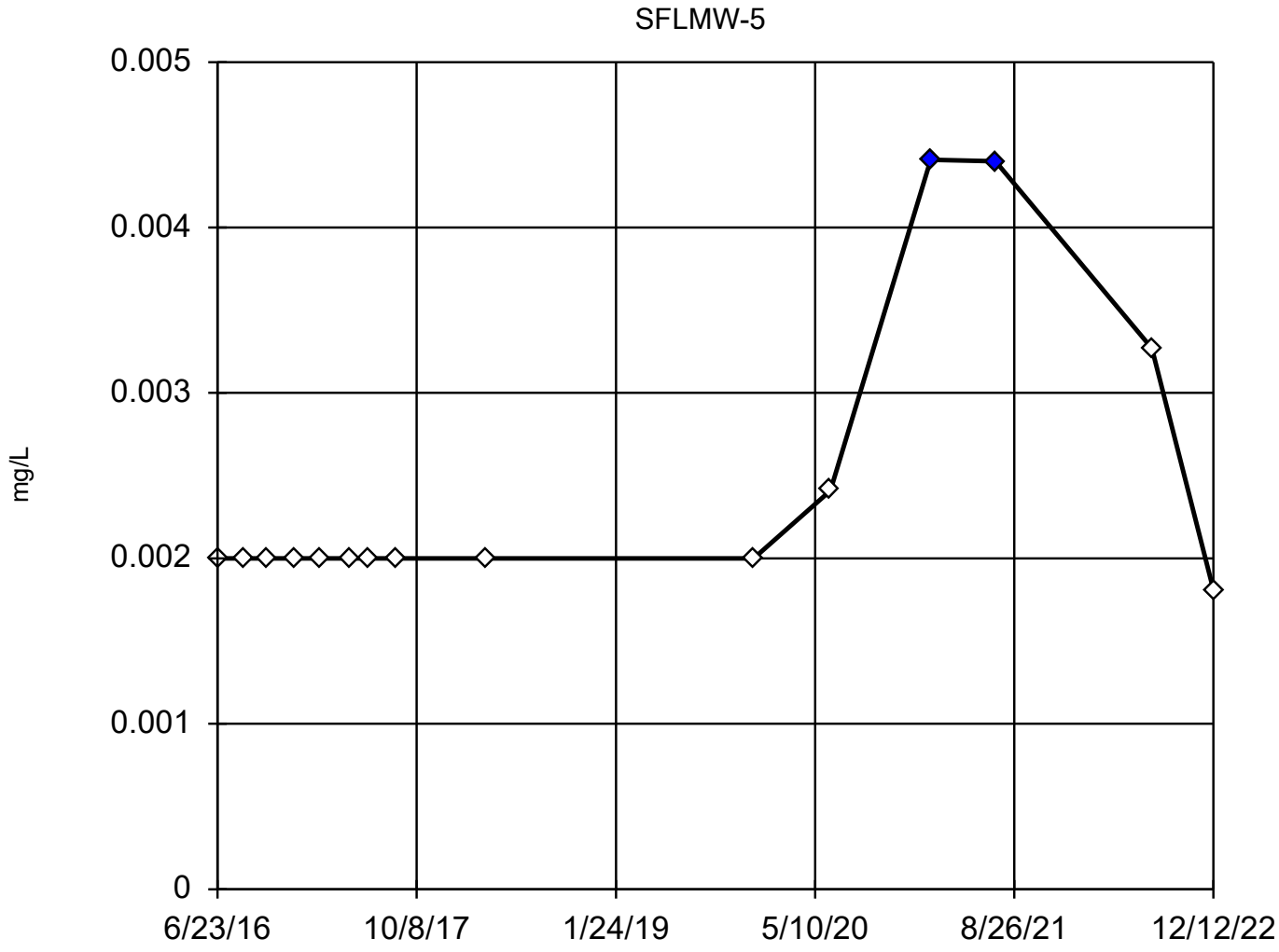
Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 2 low outliers.
Mean = 2968.
Std. Dev. = 213.3.
2680 (^2): c = 0.4375
tabl = 0.507.
Alpha = 0.05.
2340 (o): c = 0.6585
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9324
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening



n = 15

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

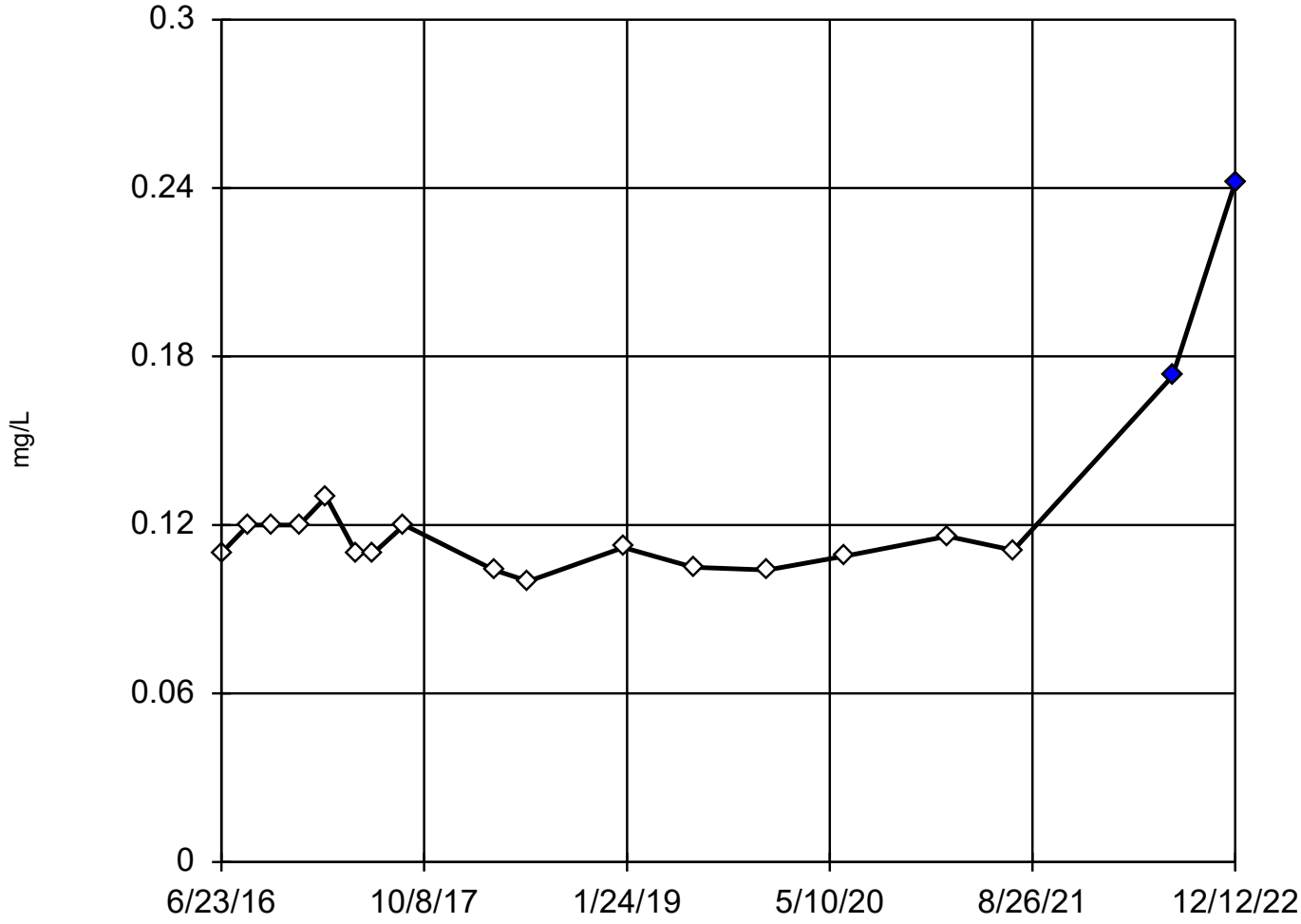
High cutoff = 0.004217, low cutoff = 0.001143, based on IQR multiplier of 3.

Constituent: Chromium Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 18

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 0.1231.
Std. Dev. = 0.03373.
0.173: c = 0.7681
tabl = 0.475.
Alpha = 0.05.

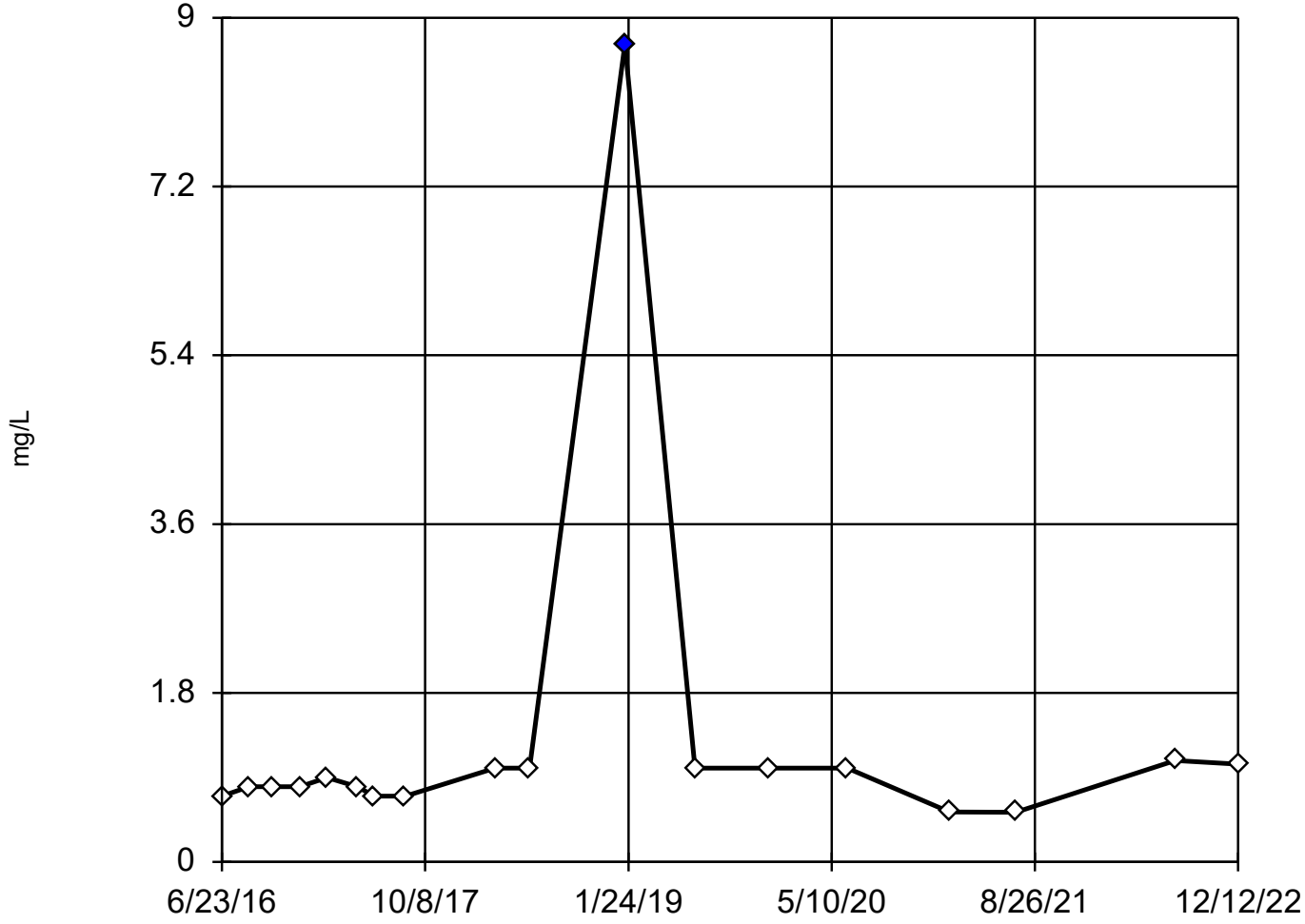
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9449
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Cobalt Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.283.
Std. Dev. = 1.864.
8.72 (o): c = 0.9576
tabl = 0.475.
Alpha = 0.05.

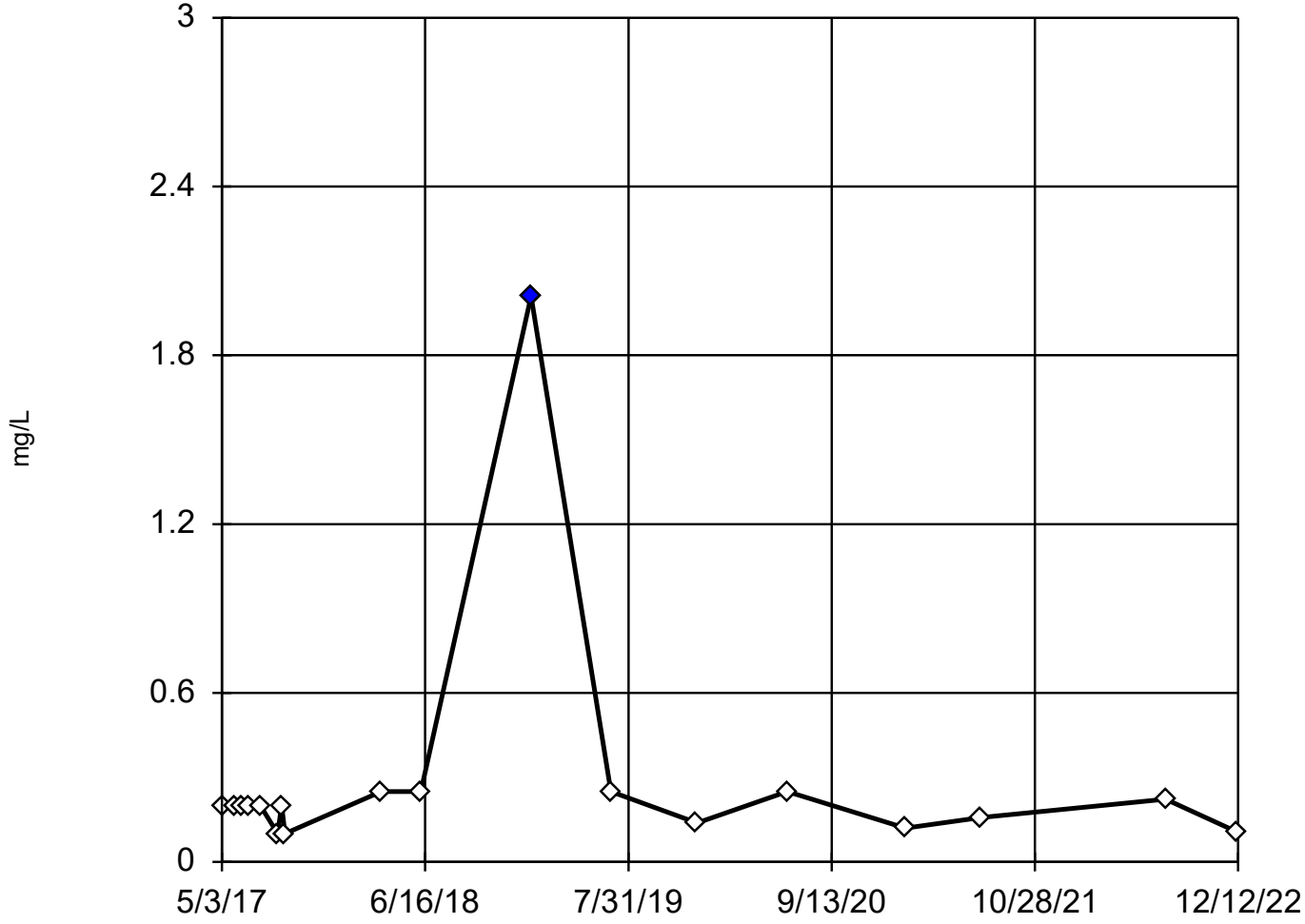
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9025
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-18 (bg)



n = 18

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

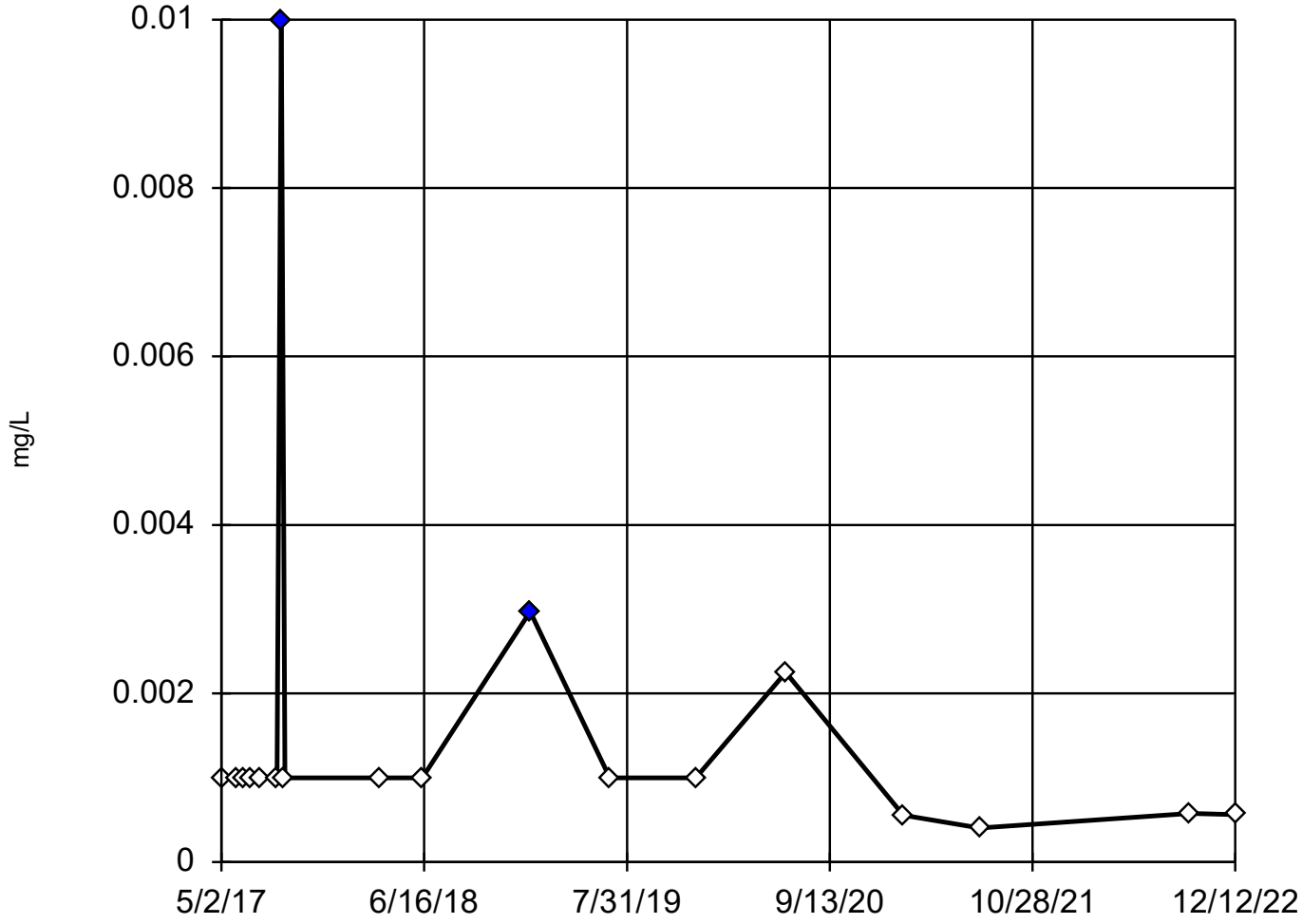
High cutoff = 1.833, low cutoff = 0.01755, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-15



n = 18

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

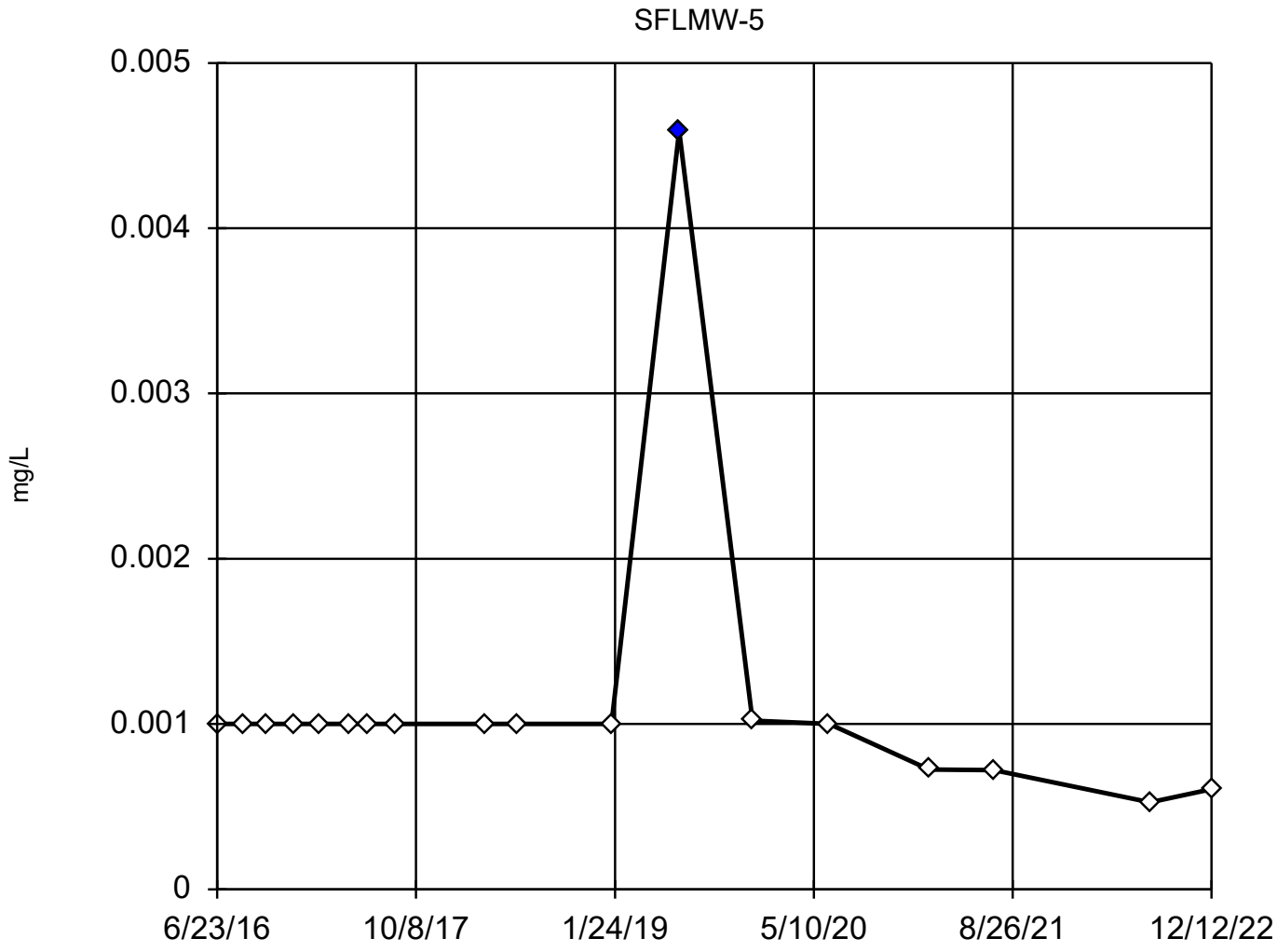
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.002282, low cutoff = 0.0003329, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening



n = 18

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

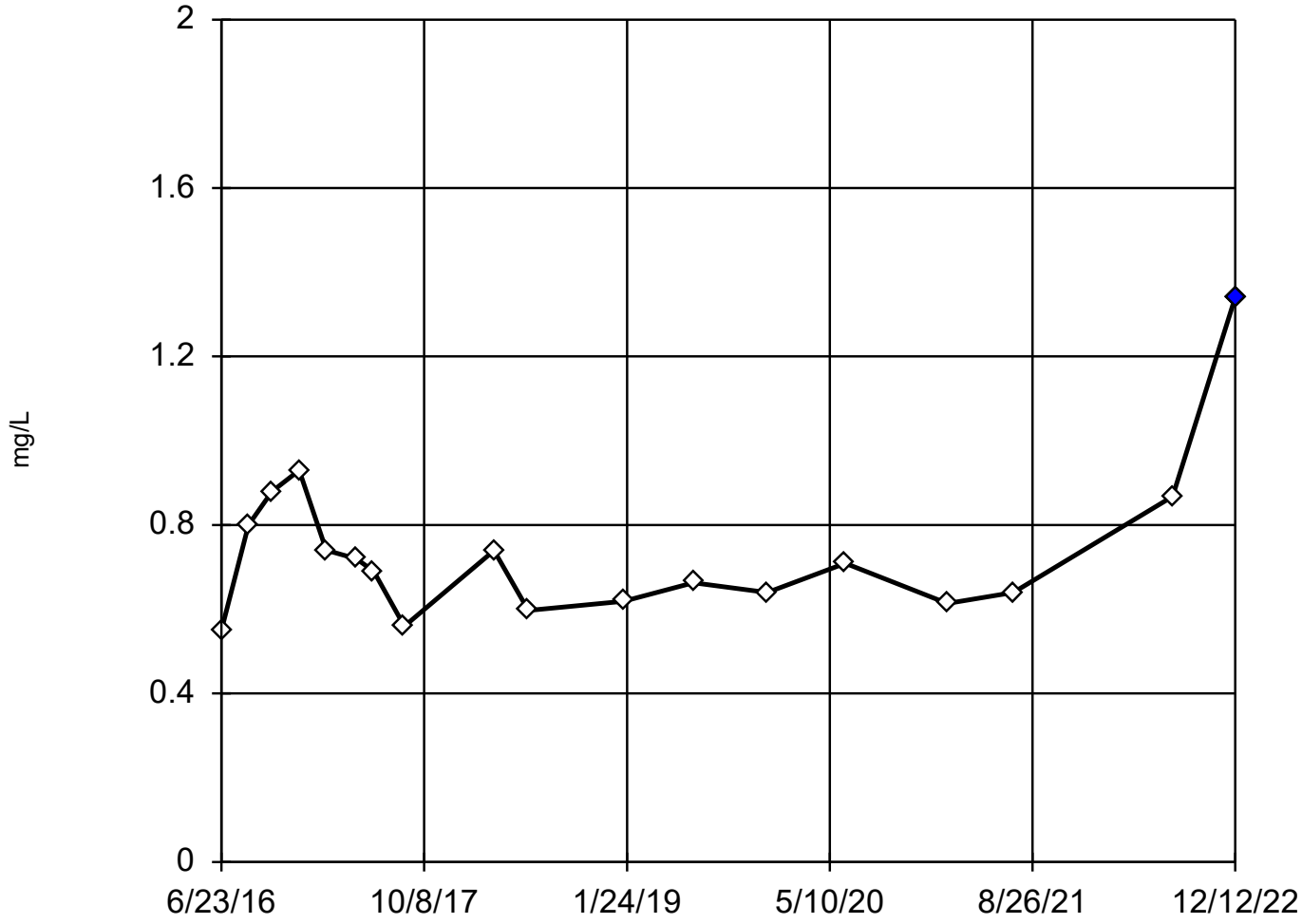
High cutoff = 0.00162, low cutoff = 0.0005256, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-6



n = 18

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.7388.
Std. Dev. = 0.1855.
1.34: c = 0.6191
tabl = 0.475.
Alpha = 0.05.

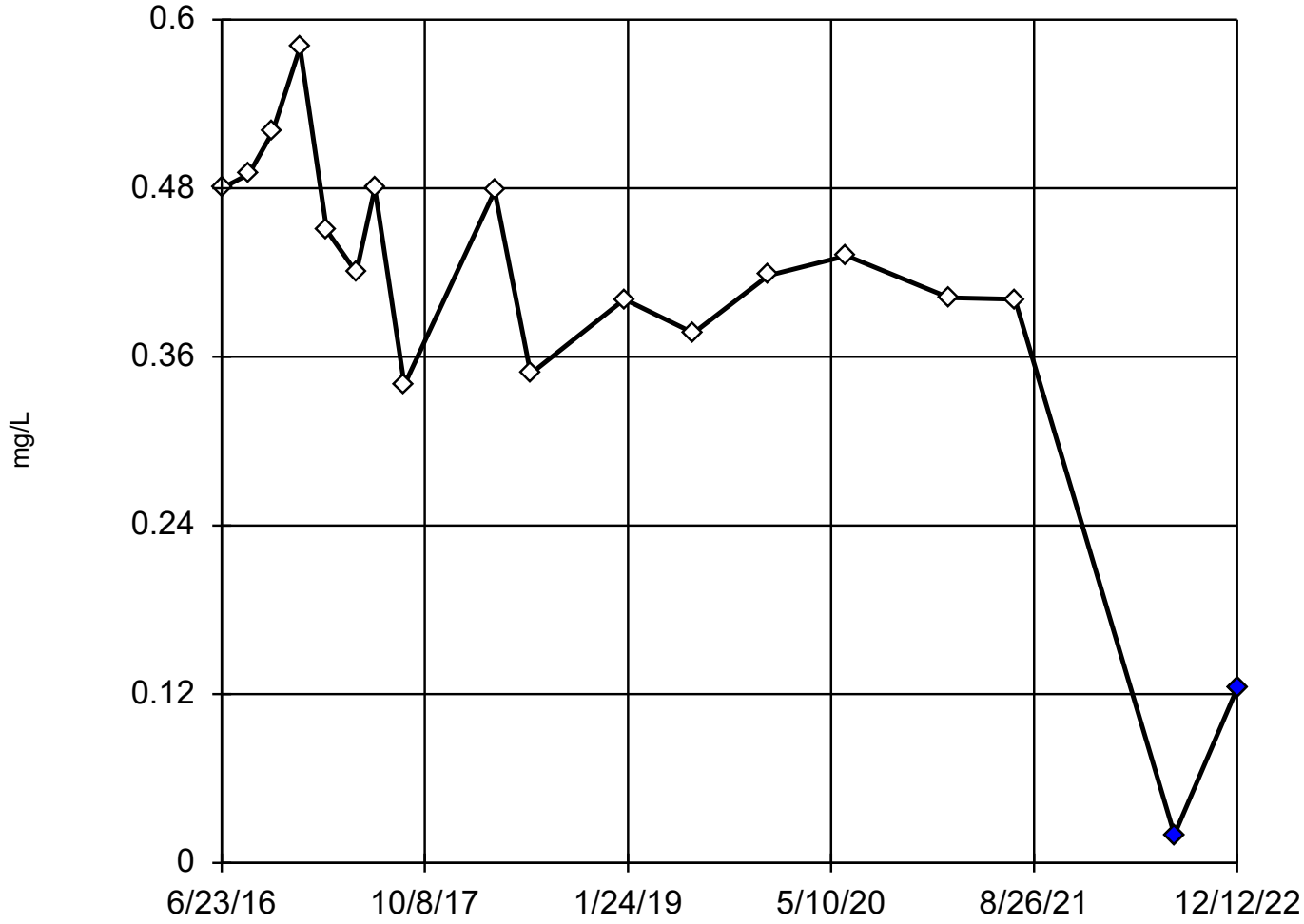
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9407
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 18

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 0.3978.
Std. Dev. = 0.134.
0.124: c = 0.612
tabl = 0.475.
Alpha = 0.05.

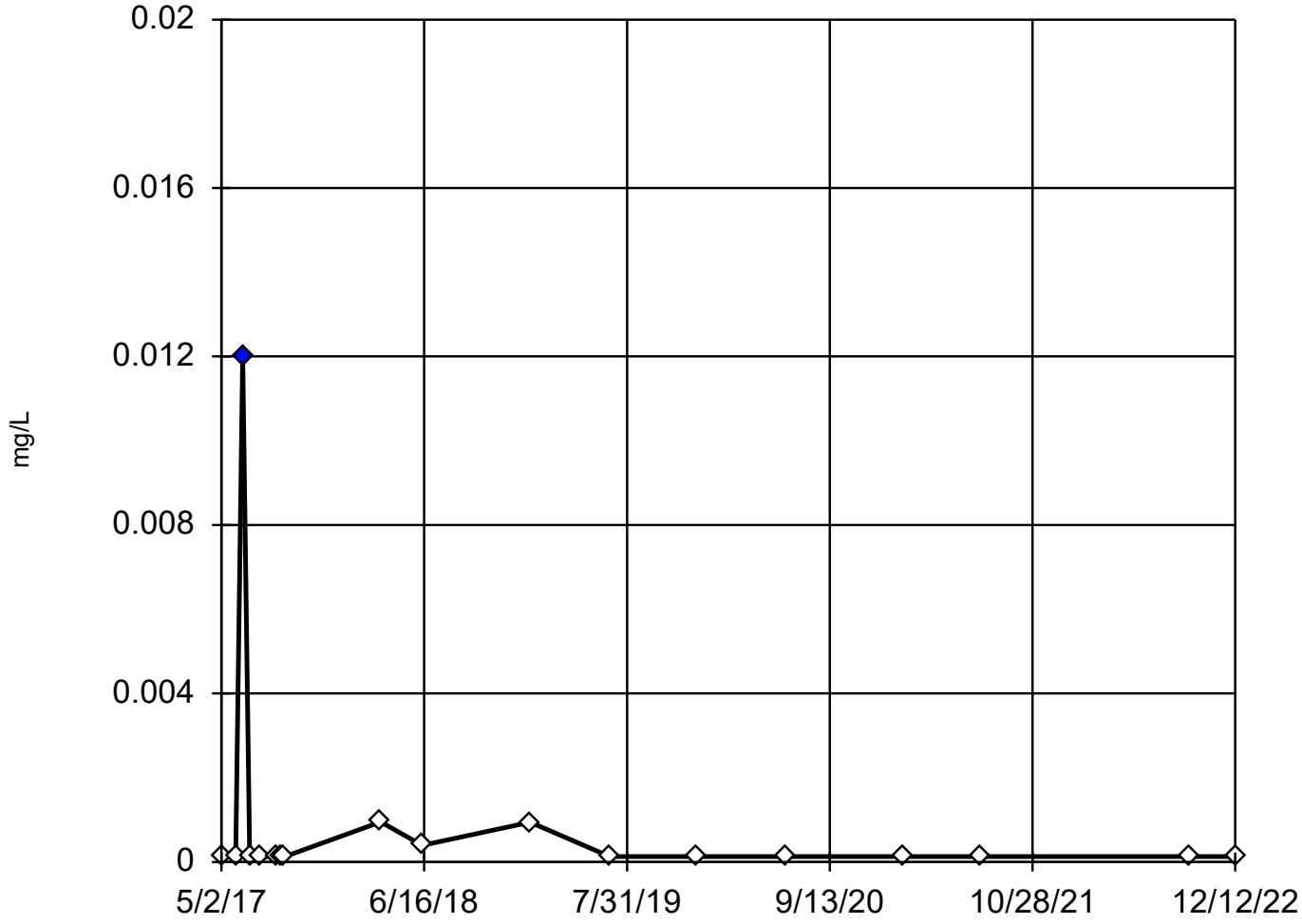
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9663
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

MNW-15



n = 18

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

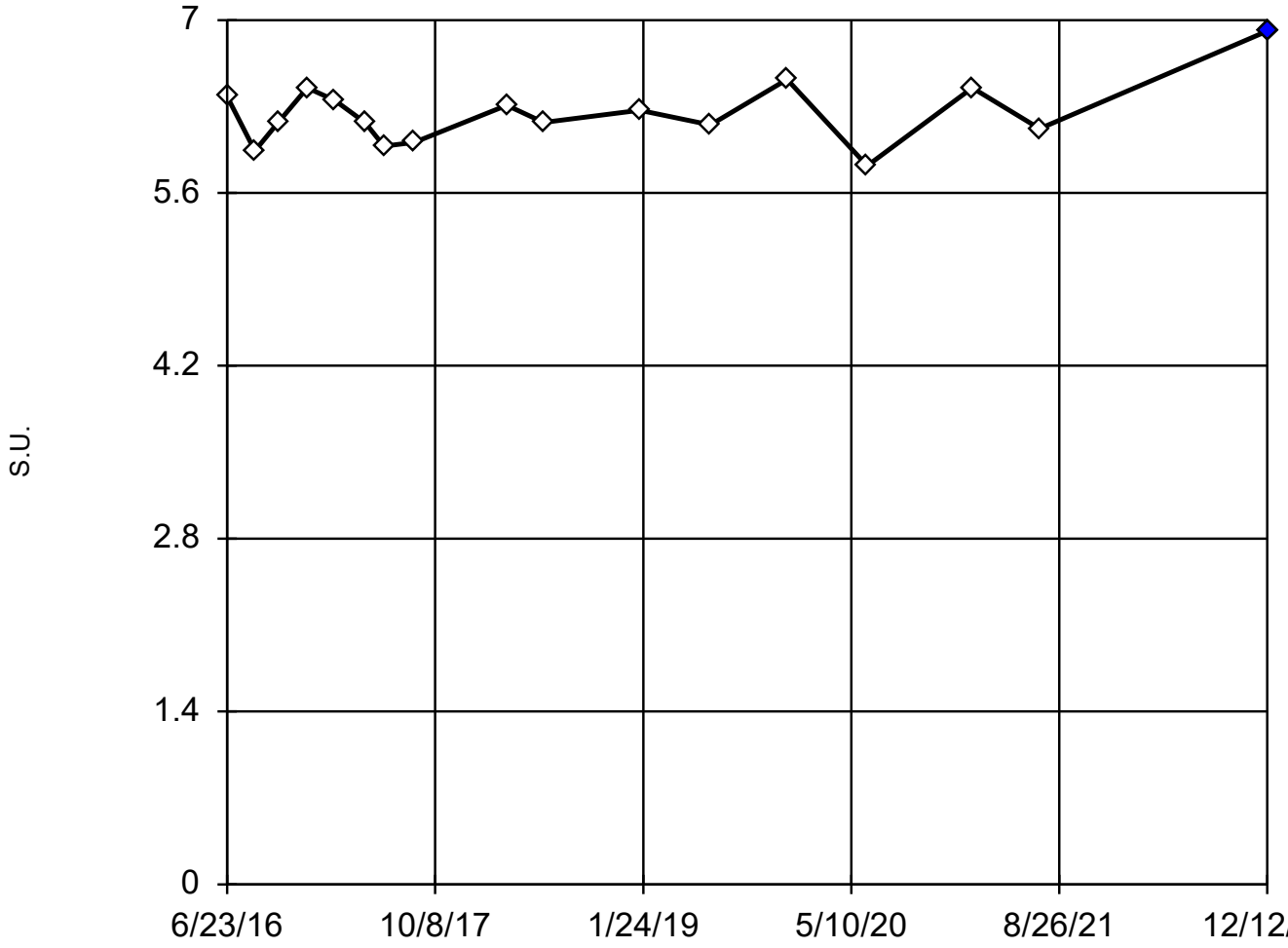
High cutoff = 0.001206, low cutoff = 0.00002445, based on IQR multiplier of 3.

Constituent: Mercury Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 17

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 6.246.
Std. Dev. = 0.2592.
6.91: c = 0.4946
tabl = 0.49.
Alpha = 0.05.

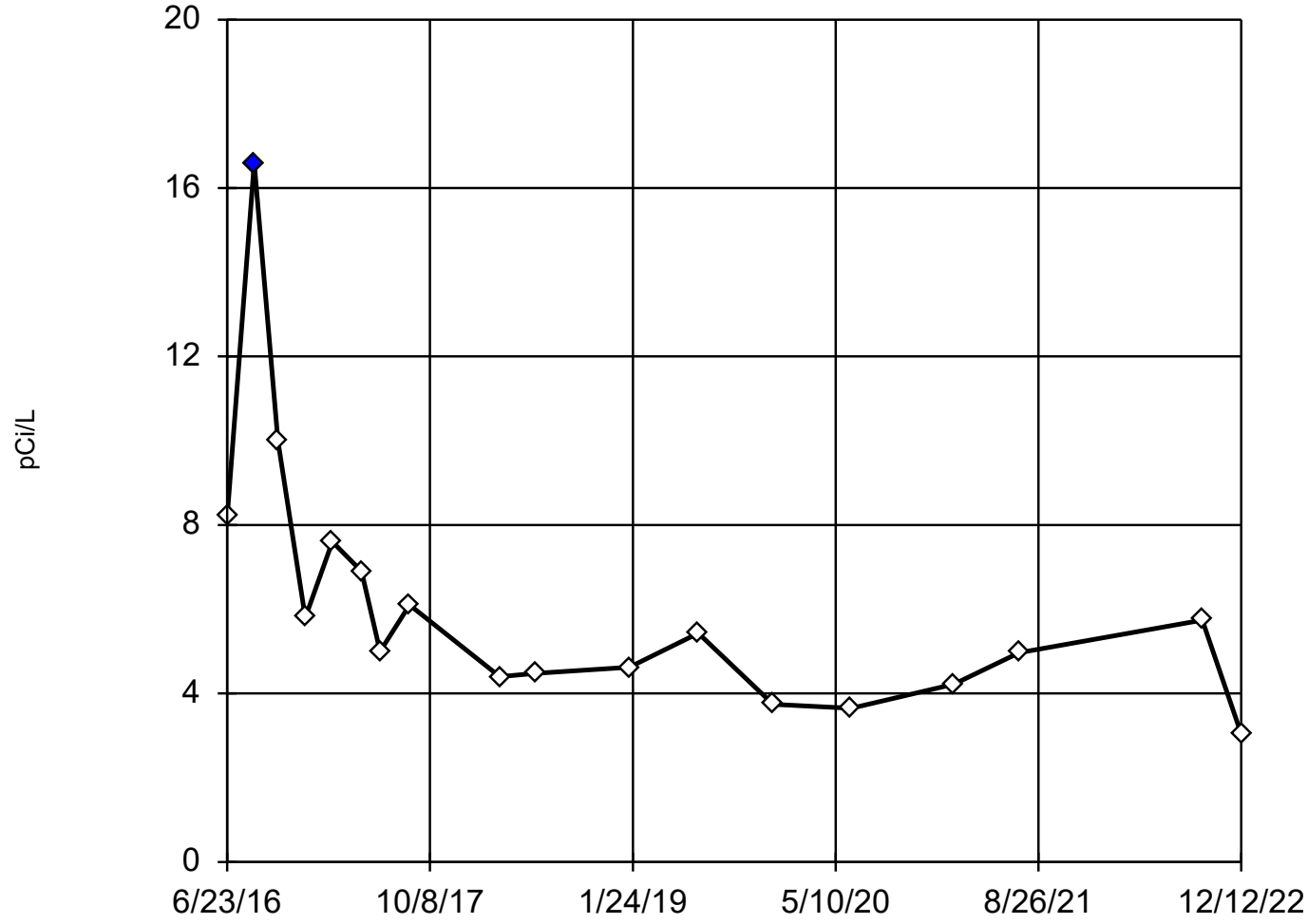
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9709
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-3



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 6.138.
Std. Dev. = 3.144.
16.6 (o): c = 0.654
tabl = 0.475.
Alpha = 0.05.

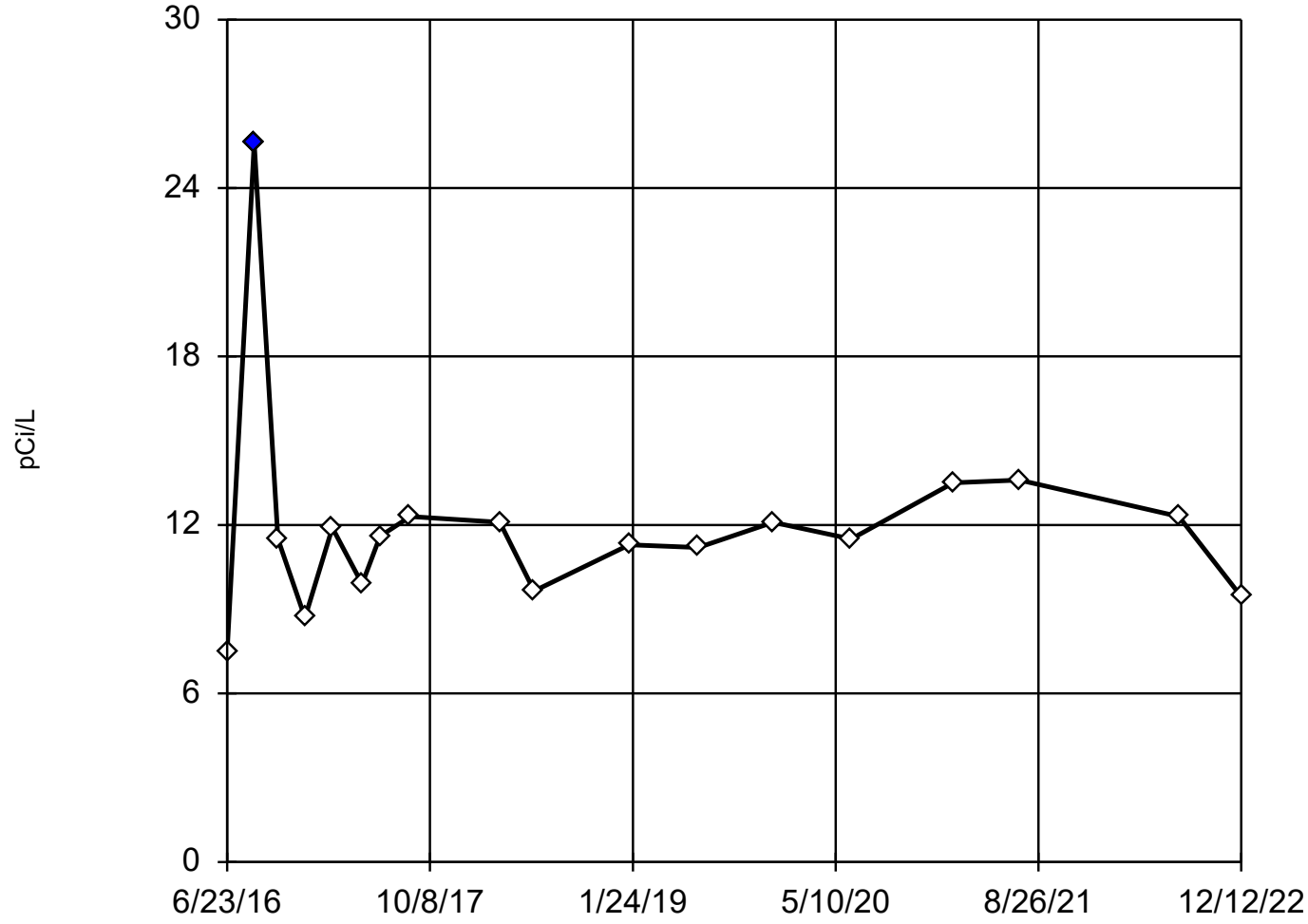
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9293
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 11.99.
Std. Dev. = 3.75.
25.6 (o): c = 0.7497
tabl = 0.475.
Alpha = 0.05.

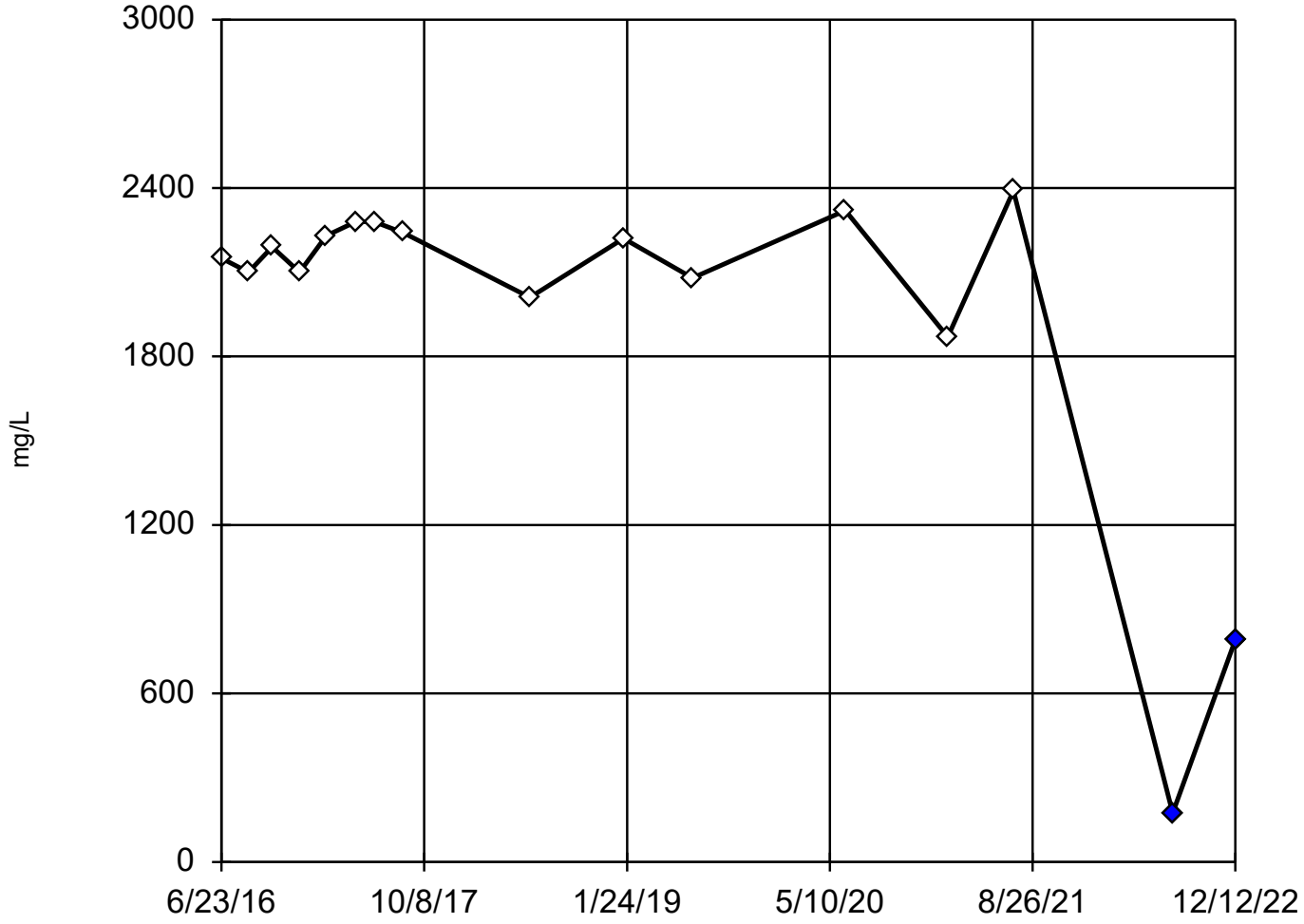
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.933
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 8:33 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 1964.
Std. Dev. = 602.6.
791: c = 0.8187
tabl = 0.507.
Alpha = 0.05.

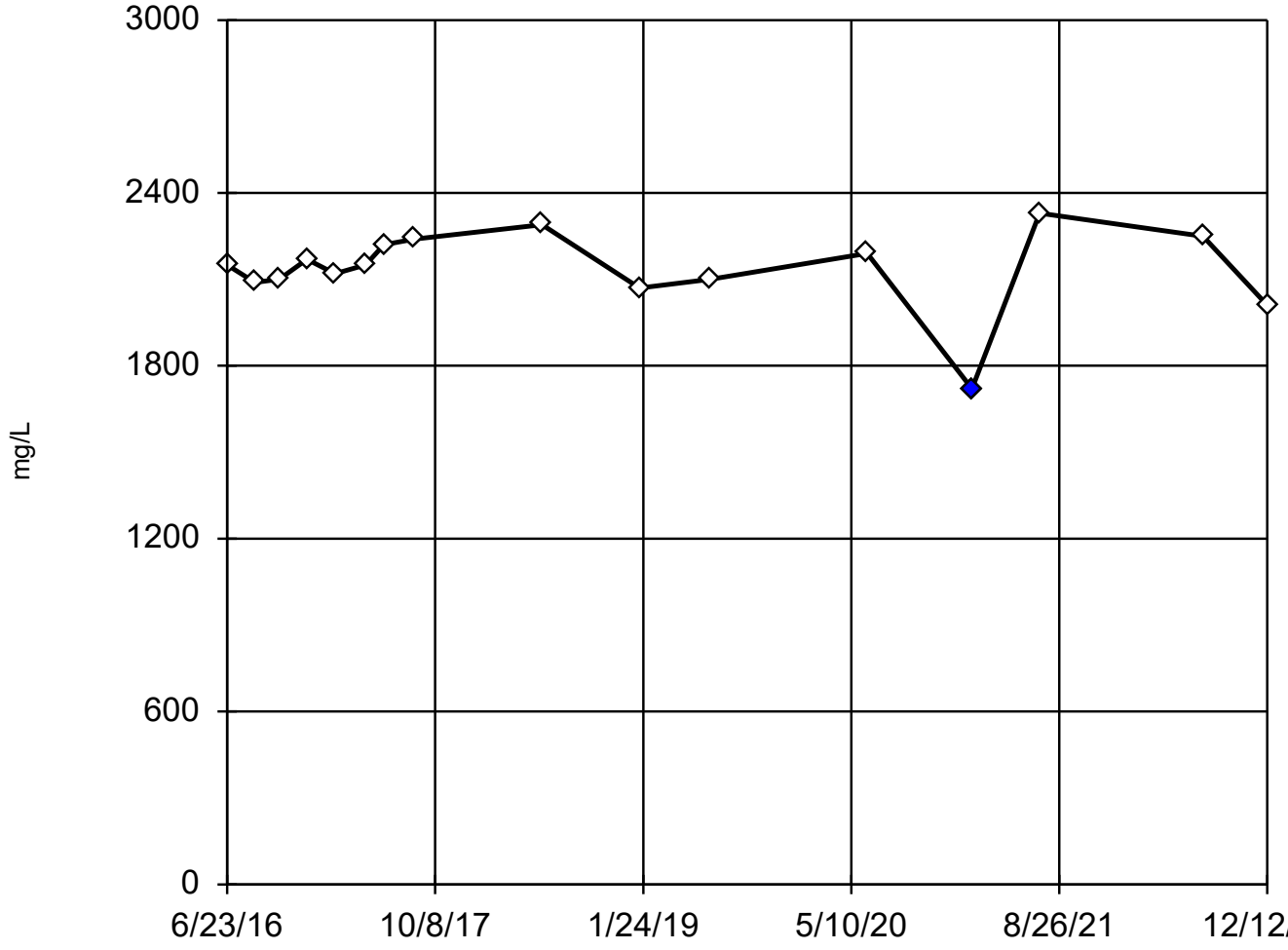
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.966
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 8:34 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-5



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 2138.
Std. Dev. = 140.2.
1720 (o): c = 0.6604
tabl = 0.507.
Alpha = 0.05.

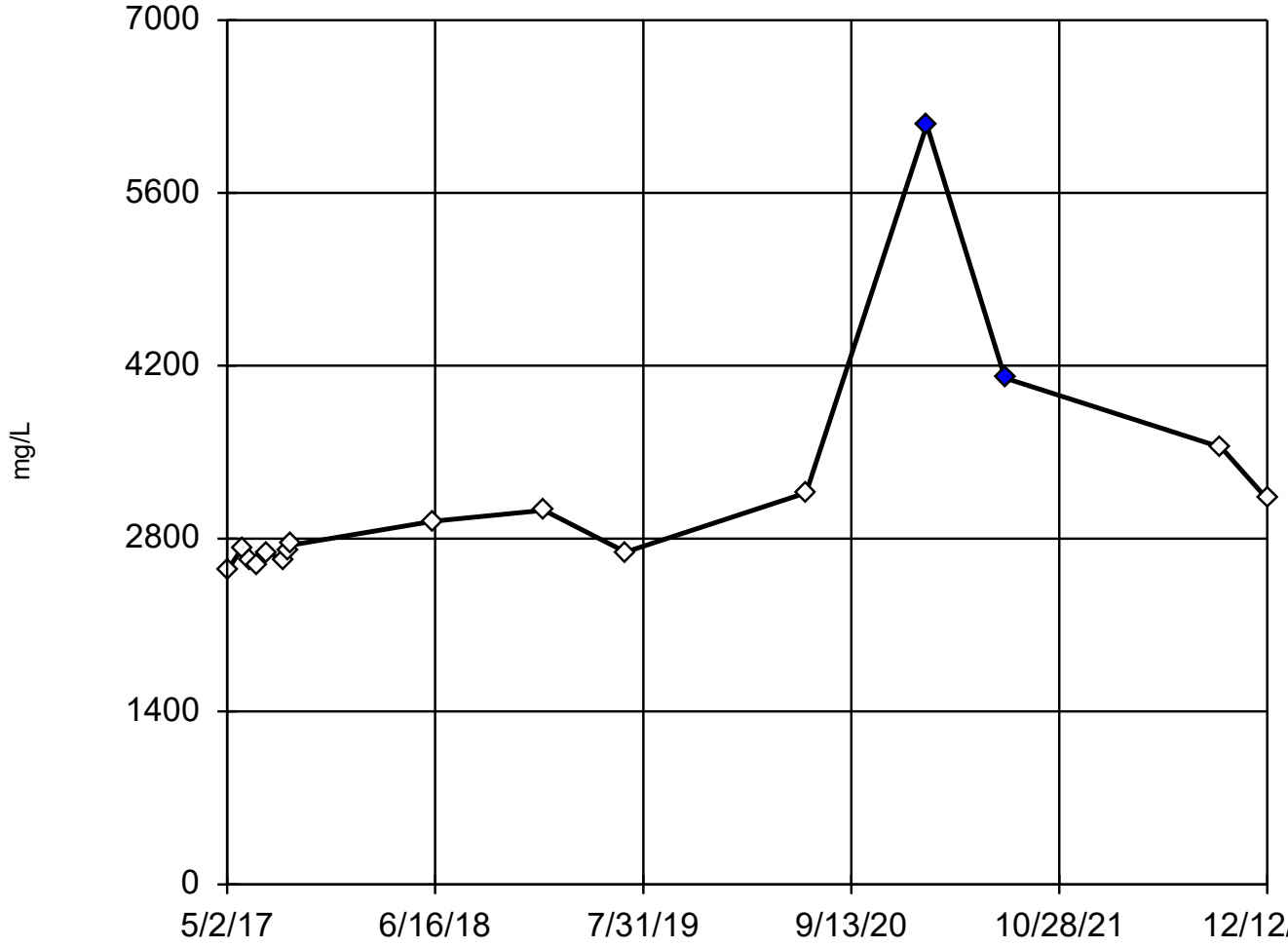
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9813
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 8:34 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

MNW-15



n = 16

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 2 high outliers.
Mean = 3123.
Std. Dev. = 906.7.
4100 (H): c = 0.5745
tabl = 0.507.
Alpha = 0.05.

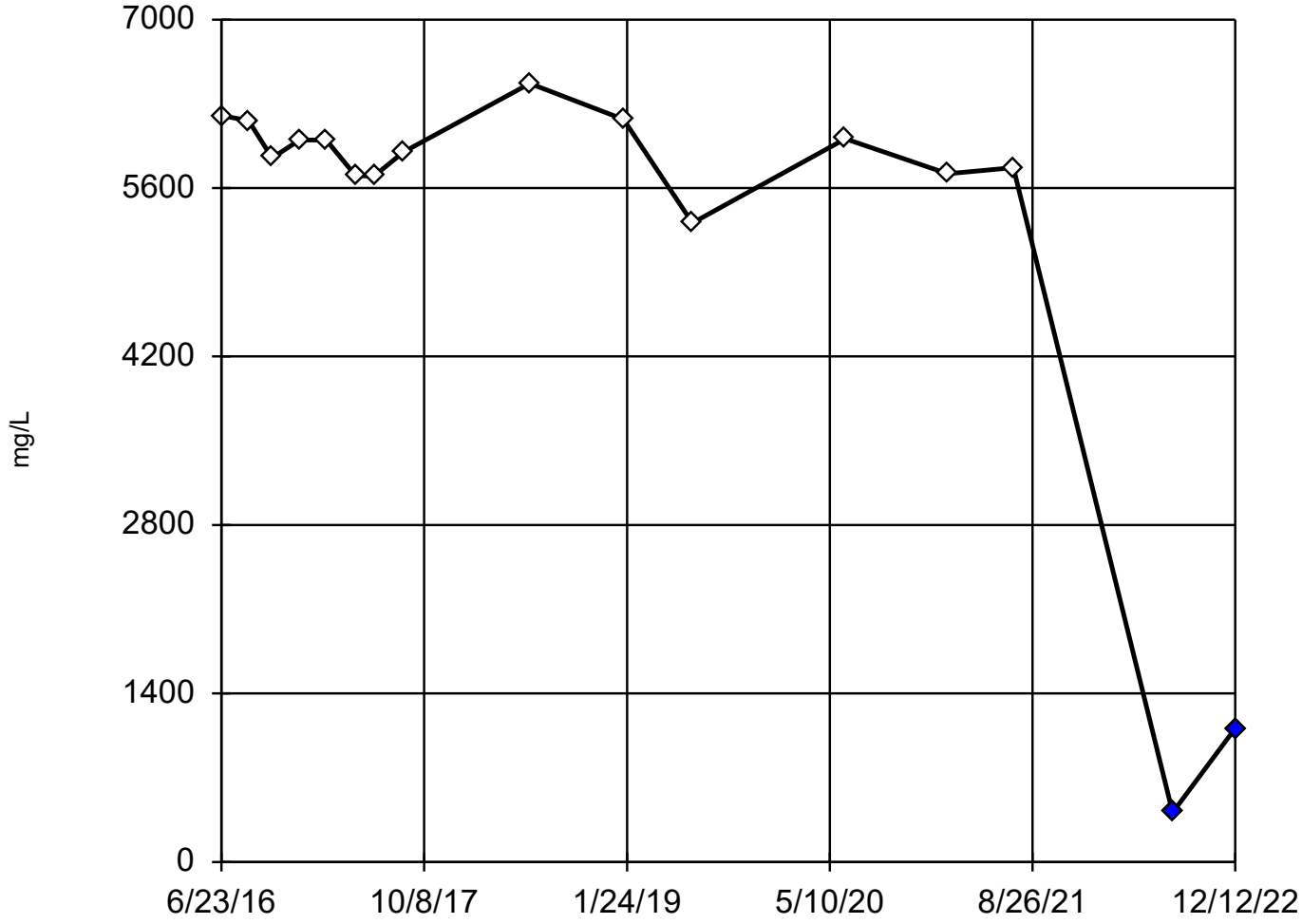
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8749
Critical = 0.874 (after natural log transformation)
The distribution, after removal of suspect values, was found to be log-normal.

Constituent: TDS Analysis Run 1/23/2023 8:34 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SFLMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 5280.
Std. Dev. = 1789.
1110: c = 0.9071
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9698
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 1/23/2023 8:34 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 8:41 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001939	0.0002375	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000...	0.000122	unknown	ShapiroWilk
Antimony (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000506	0	unknown	ShapiroWilk
Antimony (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001989	0.0000...	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001931	0.0002665	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000506	0	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001834	0.0004467	unknown	ShapiroWilk
Antimony (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001945	0.0002117	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	15	0.01853	0.007704	normal	ShapiroWilk
Arsenic (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000...	0.0000...	unknown	ShapiroWilk
Arsenic (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	15	0.01885	0.008044	unknown	ShapiroWilk
Arsenic (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	15	0.001308	0.0005898	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	15	0.003677	0.001686	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	15	0.01665	0.01061	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000...	0.0000...	unknown	ShapiroWilk
Arsenic (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	15	0.01582	0.01165	unknown	ShapiroWilk
Barium (mg/L)	**SFLMW-6**	**Yes**	**0.3**	**6/23/2016**	**Dixon`s**	**0.05**	**15**	**0.06497**	**0.06795**	**ln(x)**	**ShapiroWilk**
Barium (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	15	0.04699	0.02315	unknown	ShapiroWilk
Barium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	15	0.0261	0.02105	unknown	ShapiroWilk
Barium (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	15	0.03972	0.02108	unknown	ShapiroWilk
Barium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	15	0.02951	0.01992	unknown	ShapiroWilk
Barium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	15	0.03411	0.02586	ln(x)	ShapiroWilk
Barium (mg/L)	**SFLMW-4**	**Yes**	**0.1**	**3/20/2018**	**Dixon`s**	**0.05**	**15**	**0.03103**	**0.01985**	**normal**	**ShapiroWilk**
Barium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	15	0.03432	0.02556	unknown	ShapiroWilk
Beryllium (mg/L)	**SFLMW-6**	**Yes**	**0.0933,0.028**	**12/12/202...**	**Dixon`s**	**0.05**	**18**	**0.0522**	**0.01284**	**normal**	**ShapiroWilk**
Beryllium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000274	0	unknown	ShapiroWilk
Beryllium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	18	0.07724	0.009863	normal	ShapiroWilk
Beryllium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000269	0.0000...	unknown	ShapiroWilk
Beryllium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	18	0.003173	0.002372	ln(x)	ShapiroWilk
Beryllium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.03508	0.003649	normal	ShapiroWilk
Beryllium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000274	0	unknown	ShapiroWilk
Beryllium (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	18	0.01024	0.001051	normal	ShapiroWilk
Boron (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	0.4379	0.2382	ln(x)	ShapiroWilk
Boron (mg/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	16	0.8191	0.1079	normal	ShapiroWilk
Boron (mg/L)	**MNW-15**	**Yes**	**11.8,12.8**	**6/12/2018...**	**Dixon`s**	**0.05**	**16**	**9.513**	**1.195**	**normal**	**ShapiroWilk**
Boron (mg/L)	**MNW-18 (bg)**	**Yes**	**1,1,0.0451**	**6/8/2018,...**	**NP (nrm)**	**NaN**	**16**	**0.4636**	**0.2374**	**unknown**	**ShapiroWilk**
Boron (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.6283	0.1821	unknown	ShapiroWilk
Boron (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	3.316	0.8302	ln(x)	ShapiroWilk
Boron (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.6916	0.1405	unknown	ShapiroWilk
Boron (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	4.161	0.8273	normal	ShapiroWilk
Cadmium (mg/L)	**SFLMW-6**	**Yes**	**0.007,0.0...**	**6/23/2016...**	**Dixon`s**	**0.05**	**18**	**0.01015**	**0.001908**	**normal**	**ShapiroWilk**
Cadmium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0000...	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	18	0.07163	0.02932	unknown	ShapiroWilk
Cadmium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000217	0	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.001422	0.0008117	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.007108	0.001262	normal	ShapiroWilk
Cadmium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000217	0	unknown	ShapiroWilk
Cadmium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	18	0.004957	0.0005342	unknown	ShapiroWilk
Calcium (mg/L)	**SFLMW-6**	**Yes**	**1400,1510**	**7/19/2022...**	**Dixon`s**	**0.05**	**16**	**978.2**	**194.5**	**normal**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	579.9	99.44	unknown	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 8:41 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Calcium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	16	281.7	31.6	unknown	ShapiroWilk
Calcium (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	313.8	130.3	unknown	ShapiroWilk
Calcium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	808.3	126.1	normal	ShapiroWilk
Calcium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	629.1	58.17	normal	ShapiroWilk
Calcium (mg/L)	**SFLMW-4**	**Yes**	**220,48.9**	**12/12/202...**	**Dixon`s**	**0.05**	**16**	**681.2**	**220.7**	**normal**	**ShapiroWilk**
Calcium (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	848.9	58.72	normal	ShapiroWilk
Chloride (mg/L)	**SFLMW-6**	**Yes**	**4810,6800**	**7/19/2022...**	**Dixon`s**	**0.05**	**16**	**3801**	**875.2**	**normal**	**ShapiroWilk**
Chloride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	2559	382	unknown	ShapiroWilk
Chloride (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	672.3	55.3	normal	ShapiroWilk
Chloride (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	452.6	129.6	unknown	ShapiroWilk
Chloride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	2786	343.5	normal	ShapiroWilk
Chloride (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	16	1219	266.4	unknown	ShapiroWilk
Chloride (mg/L)	**SFLMW-4**	**Yes**	**1410,19.1...**	**6/12/2018...**	**Dixon`s**	**0.05**	**16**	**1494**	**489.3**	**normal**	**ShapiroWilk**
Chloride (mg/L)	**SFLMW-5**	**Yes**	**2340**	**2/9/2021**	**Dixon`s**	**0.05**	**16**	**2968**	**213.3**	**normal**	**ShapiroWilk**
Chromium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	15	0.005395	0.003574	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00153	0	unknown	ShapiroWilk
Chromium (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	15	0.005288	0.01455	unknown	ShapiroWilk
Chromium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001903	0.001206	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00153	0	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001588	0.0002246	unknown	ShapiroWilk
Chromium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001681	0.0005835	unknown	ShapiroWilk
Chromium (mg/L)	**SFLMW-5**	**Yes**	**0.00441,0...**	**2/9/2021,...**	**NP (nrm)**	**NaN**	**15**	**0.00242**	**0.0008758**	**unknown**	**ShapiroWilk**
Cobalt (mg/L)	**SFLMW-6**	**Yes**	**0.173,0.242**	**7/19/2022...**	**Dixon`s**	**0.05**	**18**	**0.1231**	**0.03373**	**normal**	**ShapiroWilk**
Cobalt (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000261	0	unknown	ShapiroWilk
Cobalt (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	18	0.3022	0.03106	normal	ShapiroWilk
Cobalt (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0005221	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.01952	0.01087	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.06511	0.01074	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002469	0.009367	unknown	ShapiroWilk
Cobalt (mg/L)	SFLMW-5	No	n/a	n/a	Dixon`s	0.05	18	0.0512	0.006793	normal	ShapiroWilk
Fluoride (mg/L)	**SFLMW-6**	**Yes**	**8.72**	**1/16/2019**	**Dixon`s**	**0.05**	**18**	**1.283**	**1.864**	**normal**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	18	0.5088	0.5569	unknown	ShapiroWilk
Fluoride (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	18	0.6269	0.1916	unknown	ShapiroWilk
Fluoride (mg/L)	**MNW-18 (bg)**	**Yes**	**2.01**	**1/16/2019**	**NP (nrm)**	**NaN**	**18**	**0.2863**	**0.4334**	**unknown**	**ShapiroWilk**
Fluoride (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	18	0.631	0.6943	ln(x)	ShapiroWilk
Fluoride (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.7064	0.2636	unknown	ShapiroWilk
Fluoride (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.4835	0.3358	unknown	ShapiroWilk
Fluoride (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	18	0.7822	1.332	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	18	0.01118	0.01286	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0000...	unknown	ShapiroWilk
Lead (mg/L)	**MNW-15**	**Yes**	**0.01,0.00297**	**8/31/2017...**	**NP (nrm)**	**NaN**	**18**	**0.001573**	**0.002189**	**unknown**	**ShapiroWilk**
Lead (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.002317	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0002656	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.02259	0.005442	unknown	ShapiroWilk
Lead (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000167	0	unknown	ShapiroWilk
Lead (mg/L)	**SFLMW-5**	**Yes**	**0.00459**	**6/26/2019**	**NP (nrm)**	**NaN**	**18**	**0.001122**	**0.0008797**	**unknown**	**ShapiroWilk**
Lithium (mg/L)	**SFLMW-6**	**Yes**	**1.34**	**12/12/2022**	**Dixon`s**	**0.05**	**18**	**0.7388**	**0.1855**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	18	0.4228	0.03757	normal	ShapiroWilk
Lithium (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	18	0.09799	0.04334	ln(x)	ShapiroWilk
Lithium (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	18	0.3475	0.1236	unknown	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 8:41 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lithium (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	18	0.4813	0.07123	normal	ShapiroWilk
Lithium (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.3252	0.07225	normal	ShapiroWilk
Lithium (mg/L)	**SFLMW-4**	**Yes**	**0.124,0.02**	**12/12/202...**	**Dixon`s**	**0.05**	**18**	**0.3978**	**0.134**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	18	0.7209	0.1129	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Mercury (mg/L)	**MNW-15**	**Yes**	**0.012**	**6/14/2017**	**NP (nrm)**	**NaN**	**18**	**0.000...**	**0.002784**	**unknown**	**ShapiroWilk**
Mercury (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.002162	0.0006875	normal	ShapiroWilk
Mercury (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Mercury (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	18	0.00013	0	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-6	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00061	0	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000...	0.0002892	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-15	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00061	0	unknown	ShapiroWilk
Molybdenum (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00061	0	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.004571	0.001135	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00061	0	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-4	No	n/a	n/a	NP (nrm)	NaN	15	0.004163	0.00146	unknown	ShapiroWilk
Molybdenum (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.004522	0.00127	unknown	ShapiroWilk
pH (S.U.)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	17	3.993	0.1611	normal	ShapiroWilk
pH (S.U.)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	16	6.393	0.2246	normal	ShapiroWilk
pH (S.U.)	MNW-15	No	n/a	n/a	EPA 1989	0.05	17	3.527	0.1536	normal	ShapiroWilk
pH (S.U.)	MNW-18 (bg)	No	n/a	n/a	EPA 1989	0.05	17	6.82	0.2719	normal	ShapiroWilk
pH (S.U.)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	17	6.261	0.3768	normal	ShapiroWilk
pH (S.U.)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	17	3.726	0.1359	normal	ShapiroWilk
pH (S.U.)	**SFLMW-4**	**Yes**	**6.91**	**12/12/2022**	**Dixon`s**	**0.05**	**17**	**6.246**	**0.2592**	**normal**	**ShapiroWilk**
pH (S.U.)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	17	4.578	0.2511	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	18	13.27	6.53	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-7	No	n/a	n/a	EPA 1989	0.05	18	2.469	0.6916	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	18	0.8136	0.582	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	No	n/a	n/a	Dixon`s	0.05	18	4.305	2.037	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	18	8.997	3.37	unknown	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-3**	**Yes**	**16.6**	**8/25/2016**	**Dixon`s**	**0.05**	**18**	**6.138**	**3.144**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SFLMW-4	No	n/a	n/a	EPA 1989	0.05	18	2.257	1.674	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**Yes**	**25.6**	**8/25/2016**	**Dixon`s**	**0.05**	**18**	**11.99**	**3.75**	**normal**	**ShapiroWilk**
Selenium (mg/L)	SFLMW-6	No	n/a	n/a	NP (nrm)	NaN	15	0.007326	0.01378	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00264	0.005362	unknown	ShapiroWilk
Selenium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	15	0.01344	0.02887	unknown	ShapiroWilk
Selenium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001356	0.002391	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000739	0	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.008065	0.009857	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000739	0	unknown	ShapiroWilk
Selenium (mg/L)	SFLMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001349	0.002363	unknown	ShapiroWilk
Sulfate (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	2288	219.1	normal	ShapiroWilk
Sulfate (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	724.1	87.56	unknown	ShapiroWilk
Sulfate (mg/L)	MNW-15	No	n/a	n/a	EPA 1989	0.05	16	1299	82.29	normal	ShapiroWilk
Sulfate (mg/L)	MNW-18 (bg)	No	n/a	n/a	Dixon`s	0.05	16	1611	506.4	normal	ShapiroWilk
Sulfate (mg/L)	SFLMW-2	No	n/a	n/a	NP (nrm)	NaN	16	1766	211.9	unknown	ShapiroWilk
Sulfate (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	2274	107	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 8:41 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Sulfate (mg/L)	**SFLMW-4**	**Yes**	**791,174**	**12/12/202...**	**Dixon`s**	**0.05**	**16**	**1964**	**602.6**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**SFLMW-5**	**Yes**	**1720**	**2/9/2021**	**Dixon`s**	**0.05**	**16**	**2138**	**140.2**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	16	8992	1959	ln(x)	ShapiroWilk
TDS (mg/L)	SFLMW-7	No	n/a	n/a	NP (nrm)	NaN	16	5910	1094	unknown	ShapiroWilk
TDS (mg/L)	**MNW-15**	**Yes**	**4100,6150**	**7/13/2021...**	**Dixon`s**	**0.05**	**16**	**3123**	**906.7**	**ln(x)**	**ShapiroWilk**
TDS (mg/L)	MNW-18 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	3194	885.8	unknown	ShapiroWilk
TDS (mg/L)	SFLMW-2	No	n/a	n/a	EPA 1989	0.05	16	6985	779.9	normal	ShapiroWilk
TDS (mg/L)	SFLMW-3	No	n/a	n/a	EPA 1989	0.05	16	5184	388.9	normal	ShapiroWilk
TDS (mg/L)	**SFLMW-4**	**Yes**	**1110,411**	**12/12/202...**	**Dixon`s**	**0.05**	**16**	**5280**	**1789**	**normal**	**ShapiroWilk**
TDS (mg/L)	SFLMW-5	No	n/a	n/a	EPA 1989	0.05	16	7631	364.4	normal	ShapiroWilk
Thallium (mg/L)	SFLMW-6	No	n/a	n/a	EPA 1989	0.05	18	0.003501	0.0007524	normal	ShapiroWilk
Thallium (mg/L)	SFLMW-7	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000472	0	unknown	ShapiroWilk
Thallium (mg/L)	MNW-15	No	n/a	n/a	NP (nrm)	NaN	18	0.001431	0.0006154	unknown	ShapiroWilk
Thallium (mg/L)	MNW-18 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0003602	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-2	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0001315	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.005888	0.000567	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.001303	unknown	ShapiroWilk
Thallium (mg/L)	SFLMW-5	No	n/a	n/a	NP (nrm)	NaN	18	0.001701	0.0003888	unknown	ShapiroWilk

Site F Landfill Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:09 AM

	MNW-15 Arsenic (mg/L)	SFLMW-6 Barium (mg/L)	SFLMW-7 Barium (mg/L)	MNW-15 Barium (mg/L)	MNW-18 Barium (mg/L)	SFLMW-2 Barium (mg/L)	SFLMW-4 Barium (mg/L)	SFLMW-6 Beryllium (mg/L)	SFLMW-5 Beryllium (mg/L)	SFLMW-6 Boron (mg/L)
6/23/2016		0.3 (o)						0.028 (o)		
8/25/2016										
6/14/2017										
8/31/2017										
3/20/2018	<0.025 (o)	<0.2 (o)	<0.2 (o)	<0.2 (o)	<0.01 (o)	<0.2 (o)	<0.2 (o)		<0.02 (o)	
6/8/2018										<2 (o)
6/12/2018										
1/16/2019										<2 (o)
6/26/2019										
12/17/2019										
2/9/2021										
7/13/2021										
7/19/2022										
9/12/2022										

	SFLMW-7 Boron (mg/L)	MNW-18 Boron (mg/L)	SFLMW-2 Boron (mg/L)	SFLMW-4 Boron (mg/L)	MNW-18 Calcium (mg/L)	SFLMW-4 Chloride (mg/L)	SFLMW-5 Chloride (mg/L)	SFLMW-5 Chromium (mg/L)	SFLMW-6 Cobalt (mg/L)	SFLMW-6 Fluoride (mg/L)
6/23/2016										
8/25/2016										
6/14/2017										
8/31/2017										
3/20/2018										
6/8/2018		<2 (o)								
6/12/2018			<2 (o)	<2 (o)						
1/16/2019	<2 (o)	<2 (o)	<2 (o)	<2 (o)						8.72 (o)
6/26/2019					104 (o)					
12/17/2019										
2/9/2021							2340 (o)	0.00441 (o)		
7/13/2021								0.0044 (o)		
7/19/2022						19.1 (o)			0.173 (o)	
9/12/2022										

Site F Landfill Outlier Summary

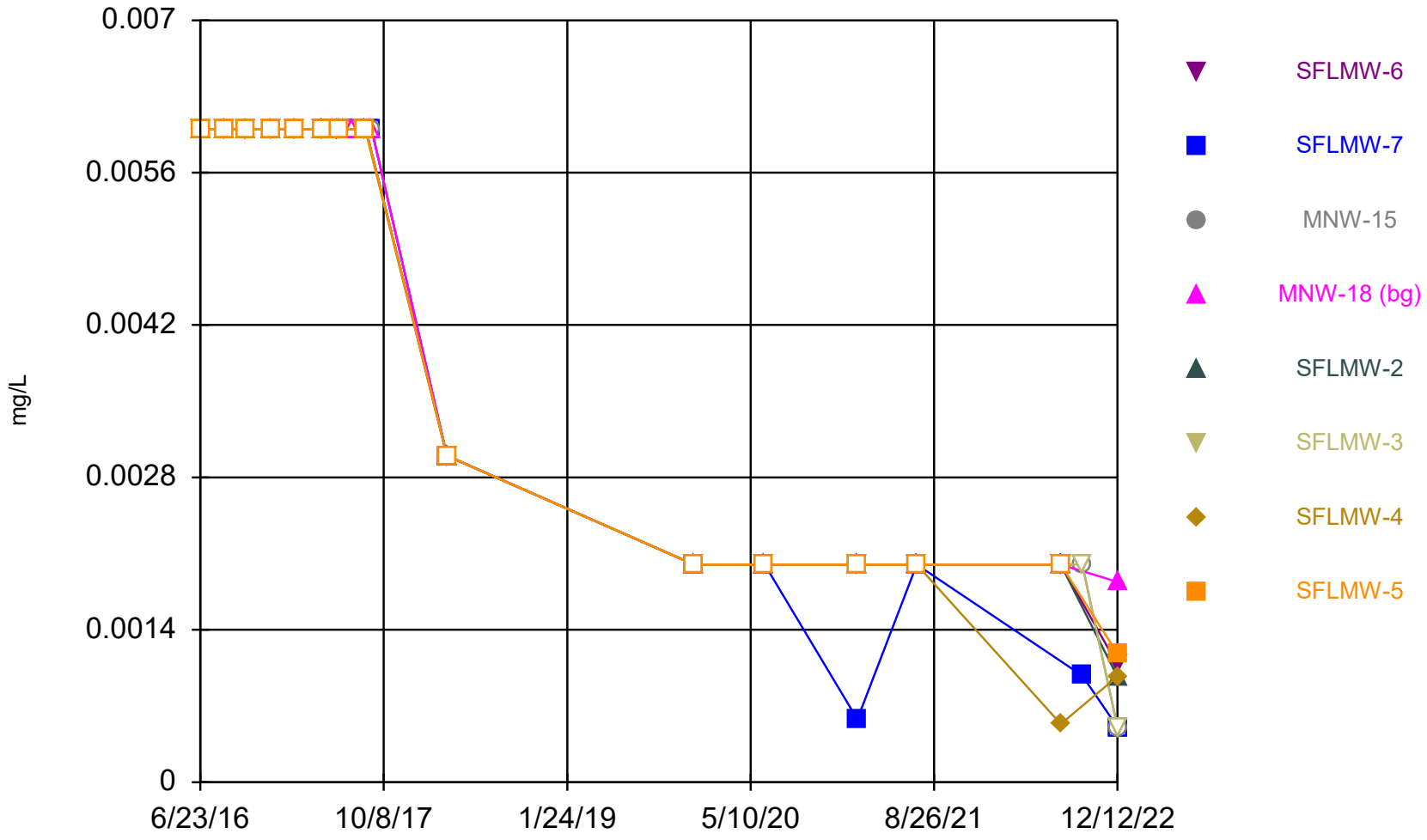
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:09 AM

	MNW-18 Fluoride (mg/L)	MNW-15 Lead (mg/L)	SFLMW-5 Lead (mg/L)	MNW-15 Lithium (mg/L)	MNW-18 Lithium (mg/L)	MNW-15 Mercury (mg/L)	SFLMW-3 Radium 226 + 228 (pCi/L)	SFLMW-5 Radium 226 + 228 (pCi/L)	SFLMW-5 Sulfate (mg/L)	MNW-15 TDS (mg/L)
6/23/2016										
8/25/2016							16.6 (o)	25.6 (o)		
6/14/2017						0.012 (o)				
8/31/2017		0.01 (o)								
3/20/2018										
6/8/2018										
6/12/2018										
1/16/2019	2.01 (o)			<0.4 (o)						
6/26/2019			0.00459 (o)		0.179 (o)					
12/17/2019					0.197 (o)					
2/9/2021									1720 (o)	6150 (o)
7/13/2021					<0.005 (o)					
7/19/2022										
9/12/2022										3540 (o)

	SFLMW-6 Thallium (mg/L)
6/23/2016	
8/25/2016	0.002 (o)
6/14/2017	
8/31/2017	
3/20/2018	
6/8/2018	
6/12/2018	
1/16/2019	
6/26/2019	
12/17/2019	
2/9/2021	
7/13/2021	
7/19/2022	
9/12/2022	

Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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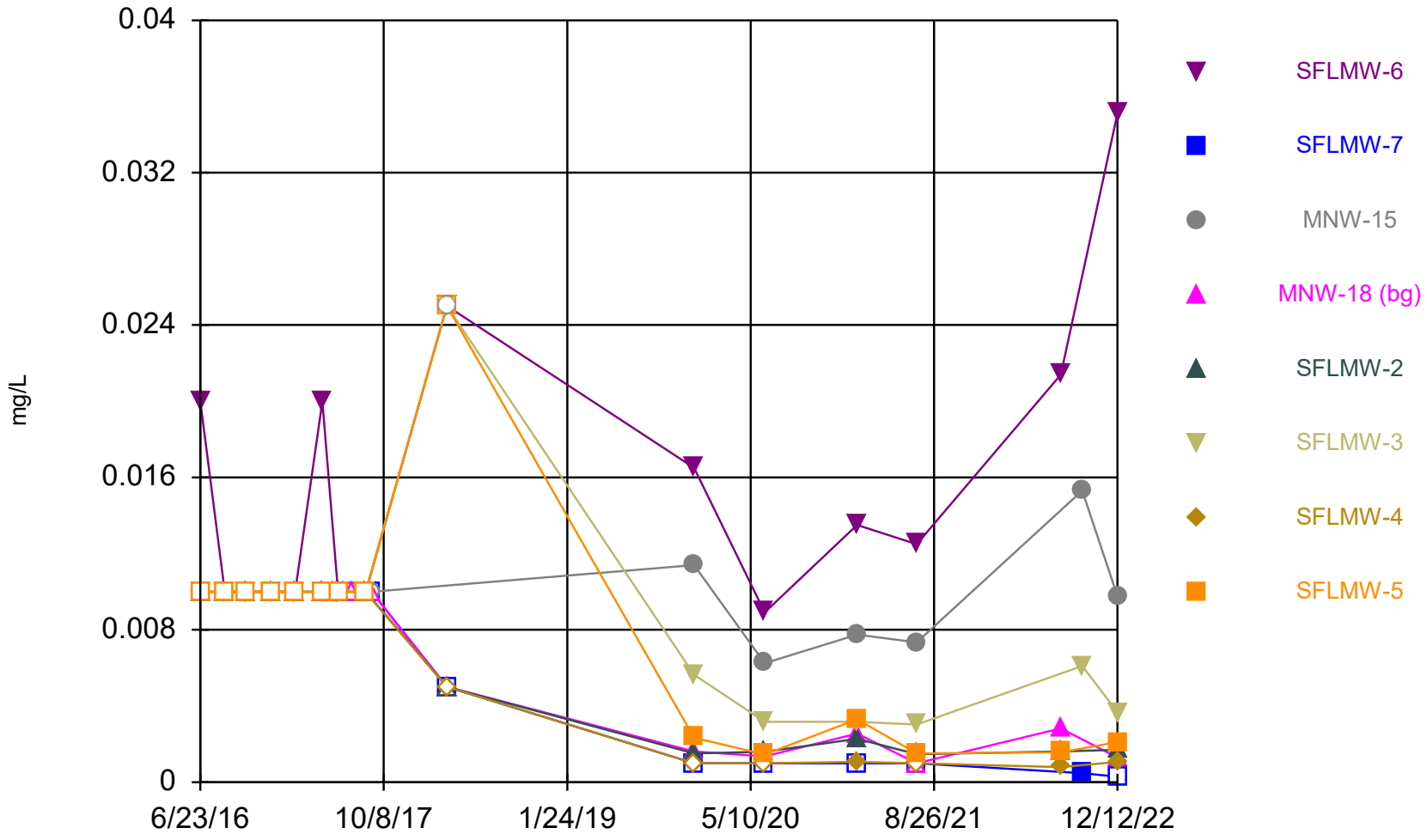
Time Series

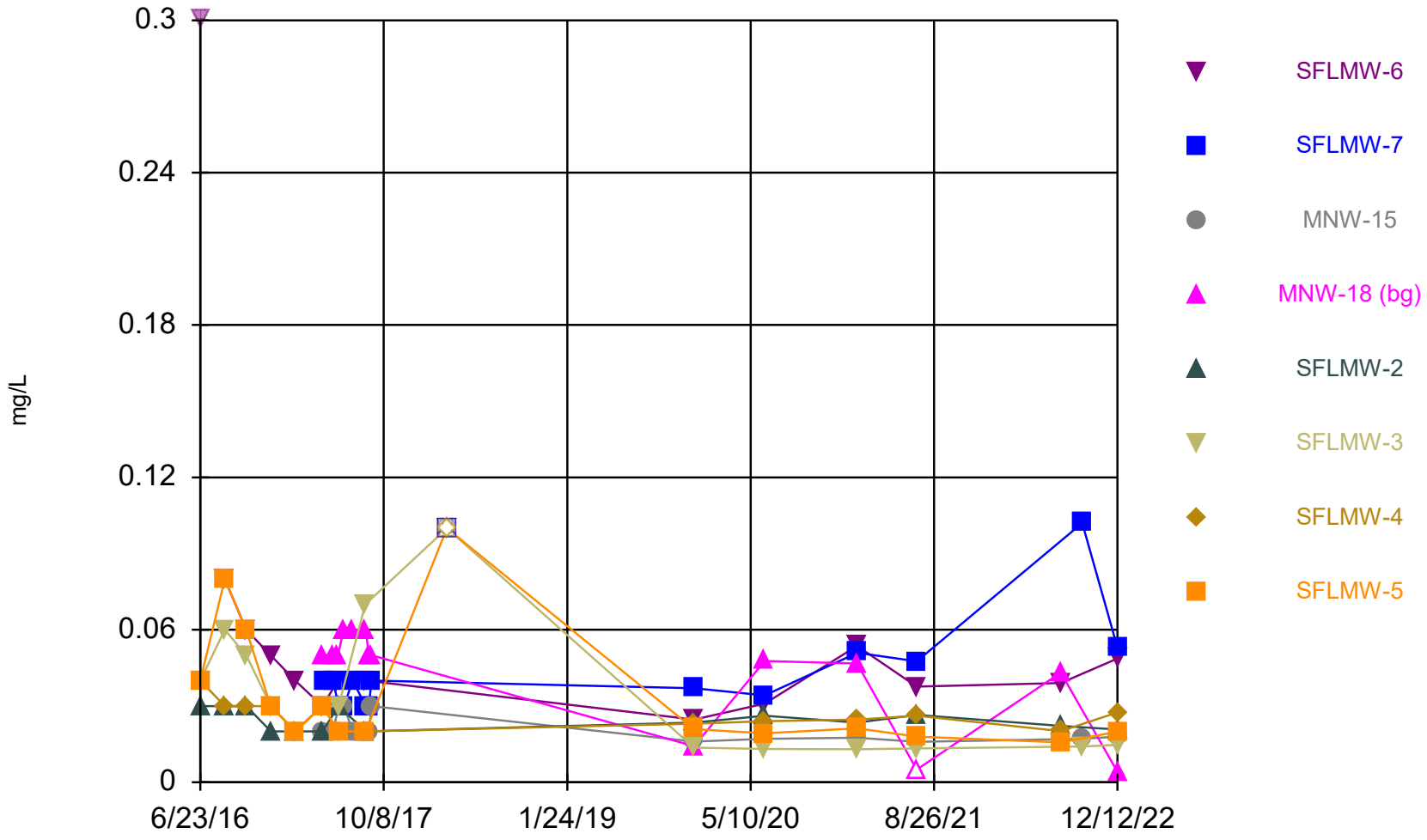


Constituent: Arsenic Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

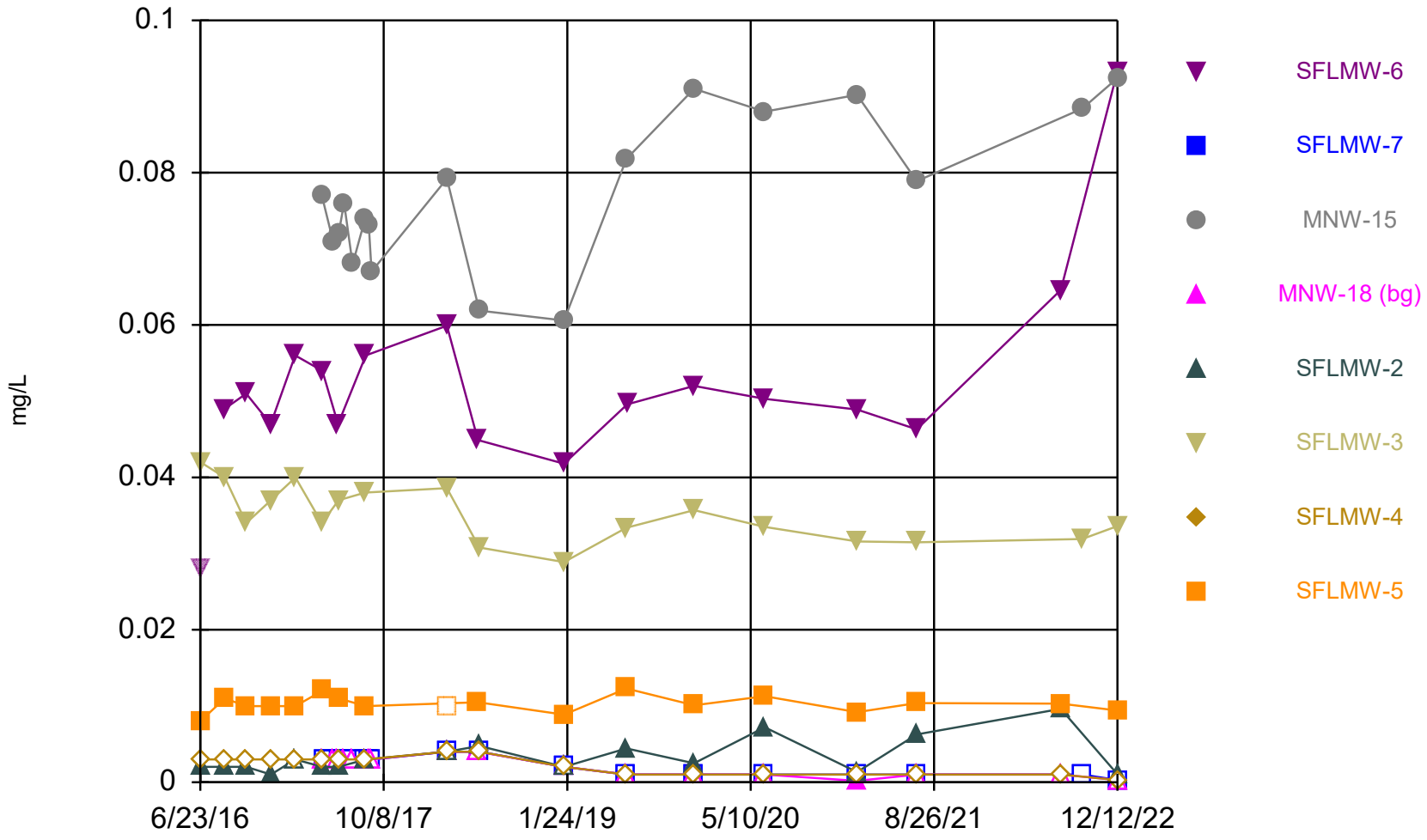


Constituent: Barium Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

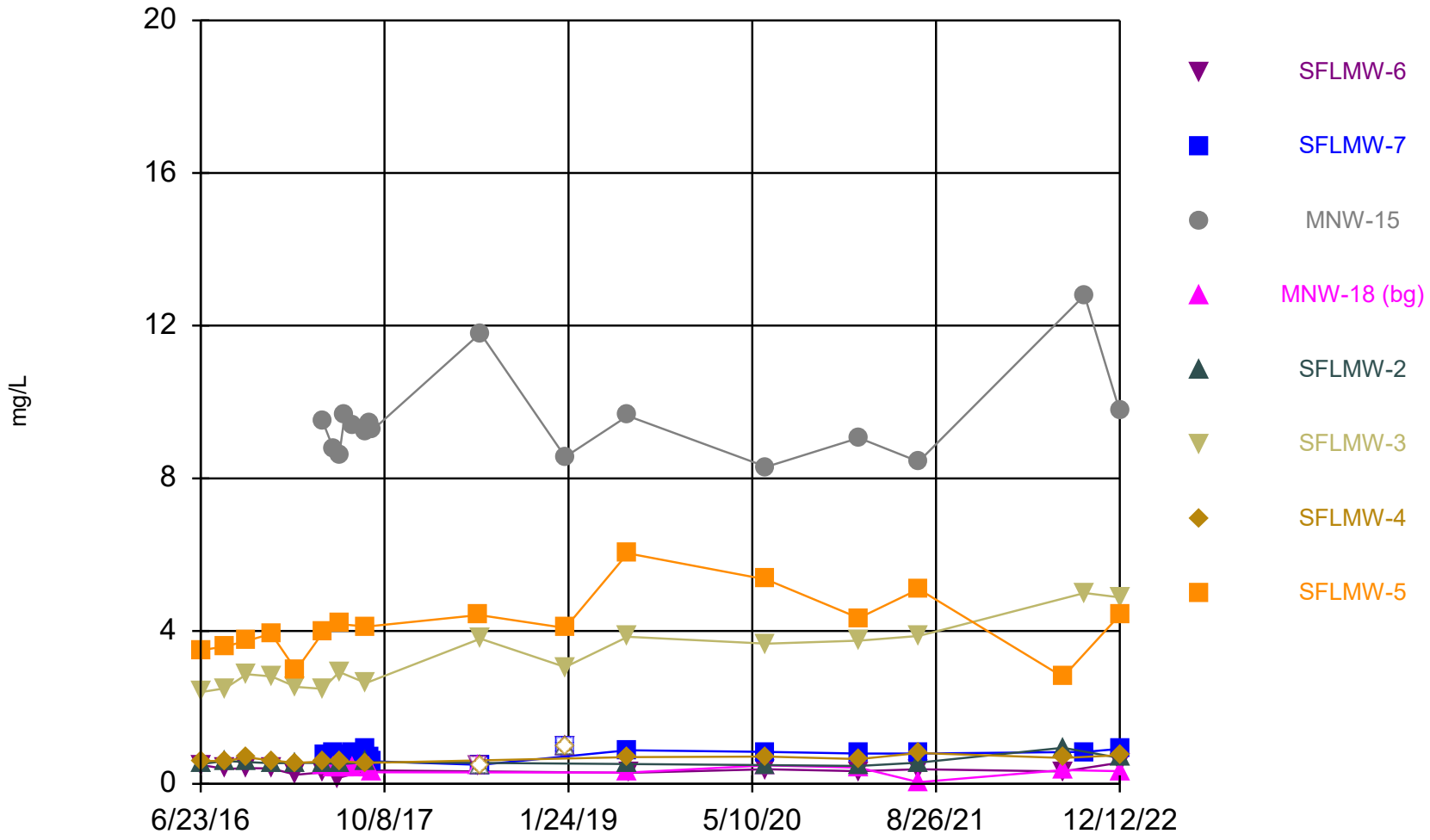


Constituent: Beryllium Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

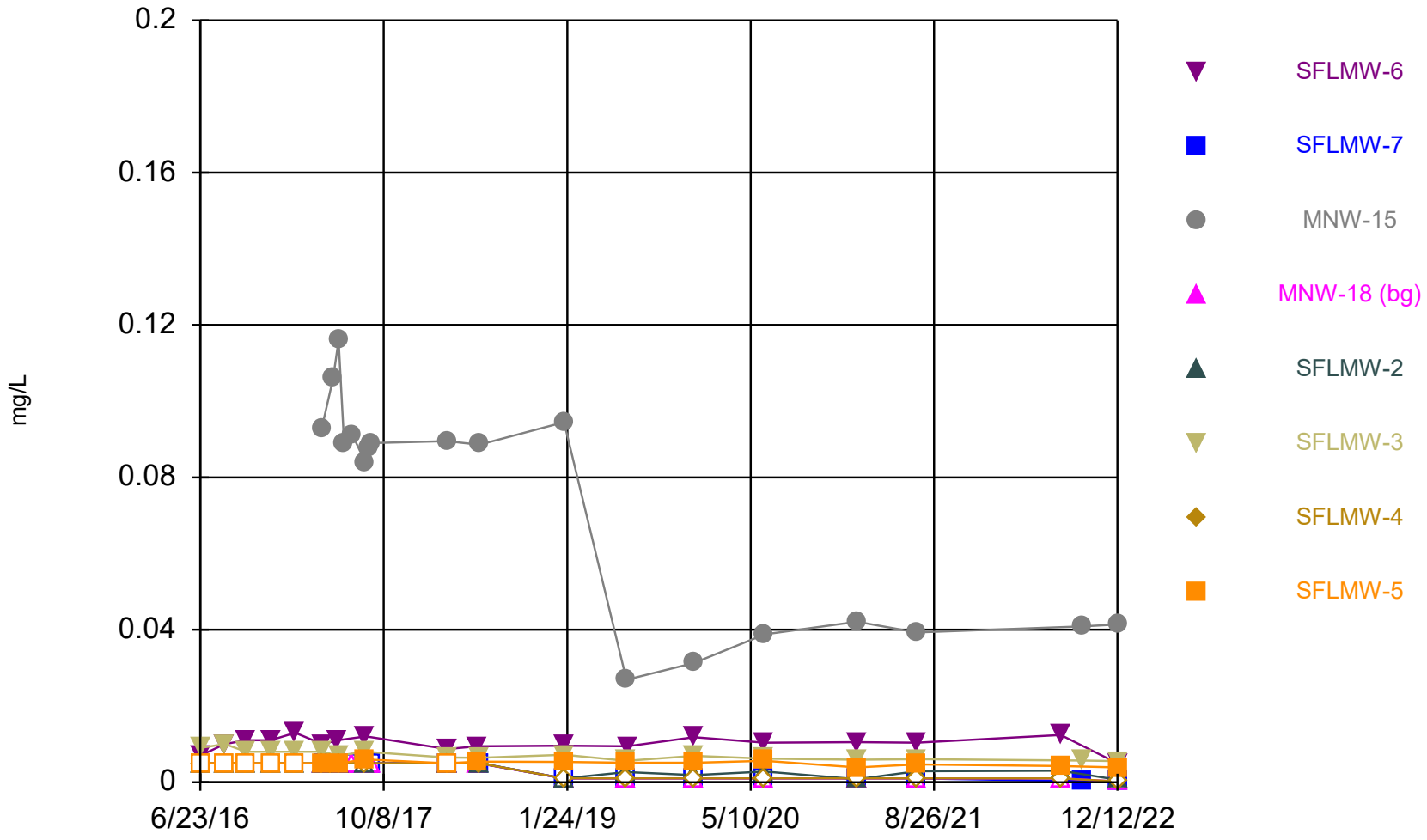


Constituent: Boron Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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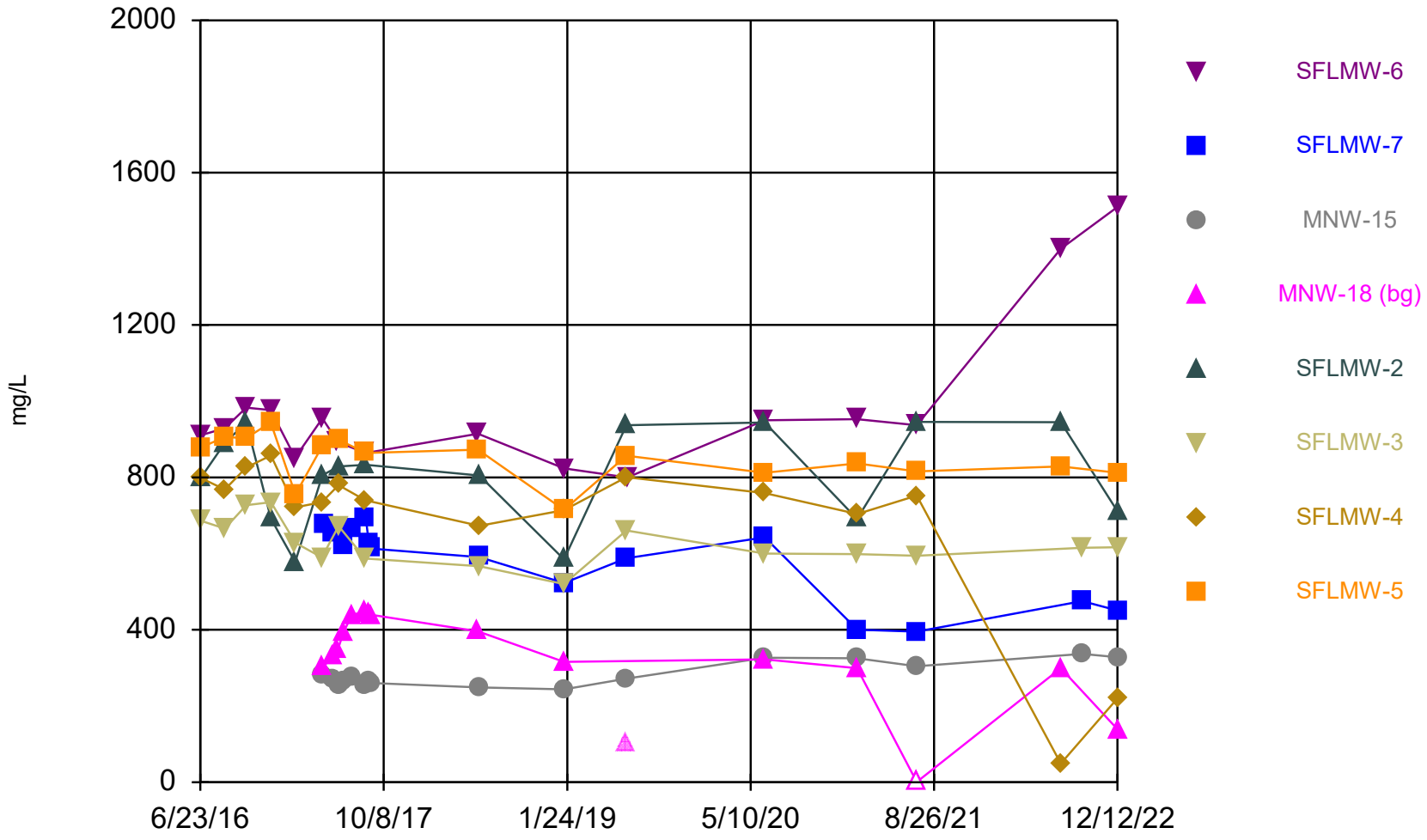
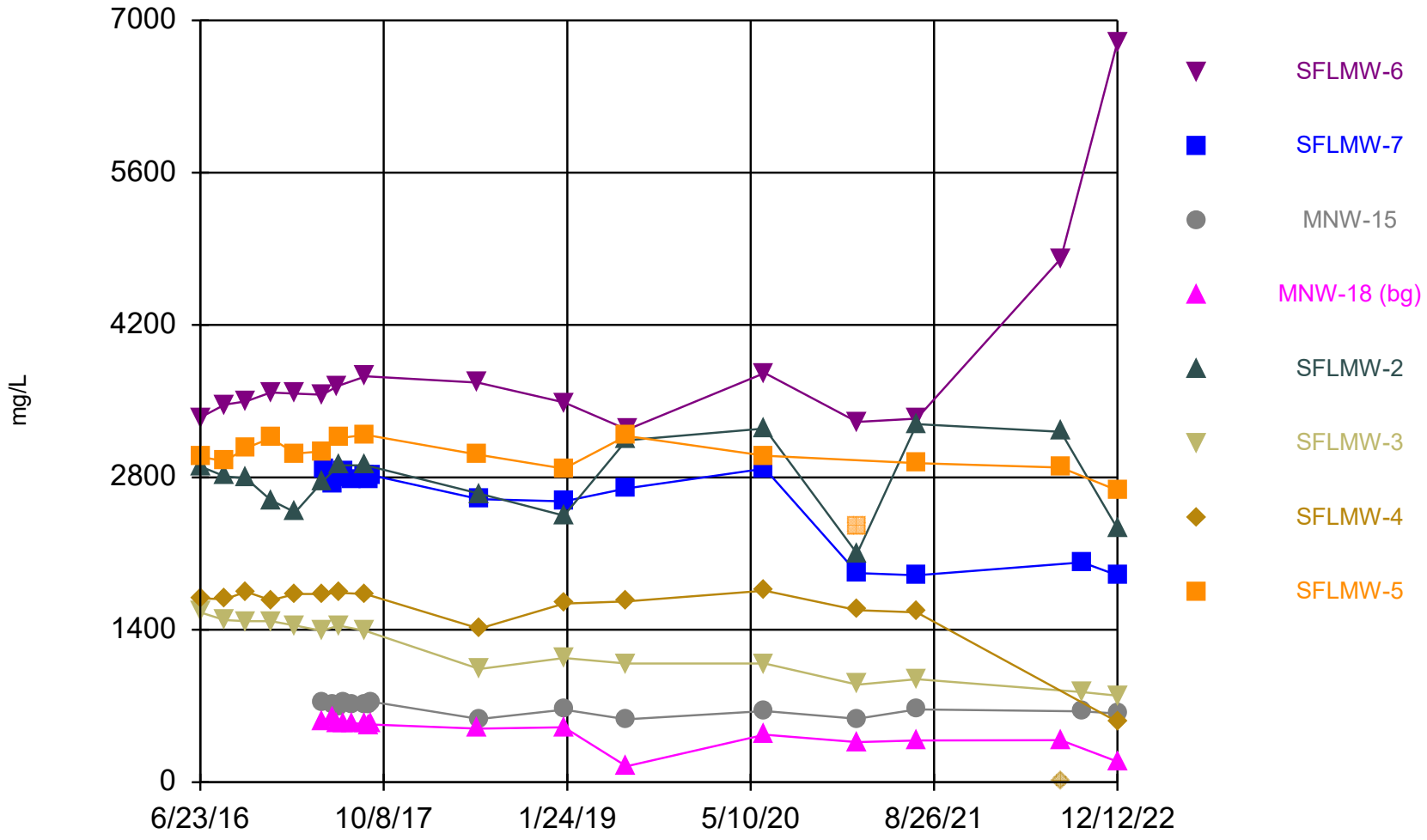
Time Series



Constituent: Calcium Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

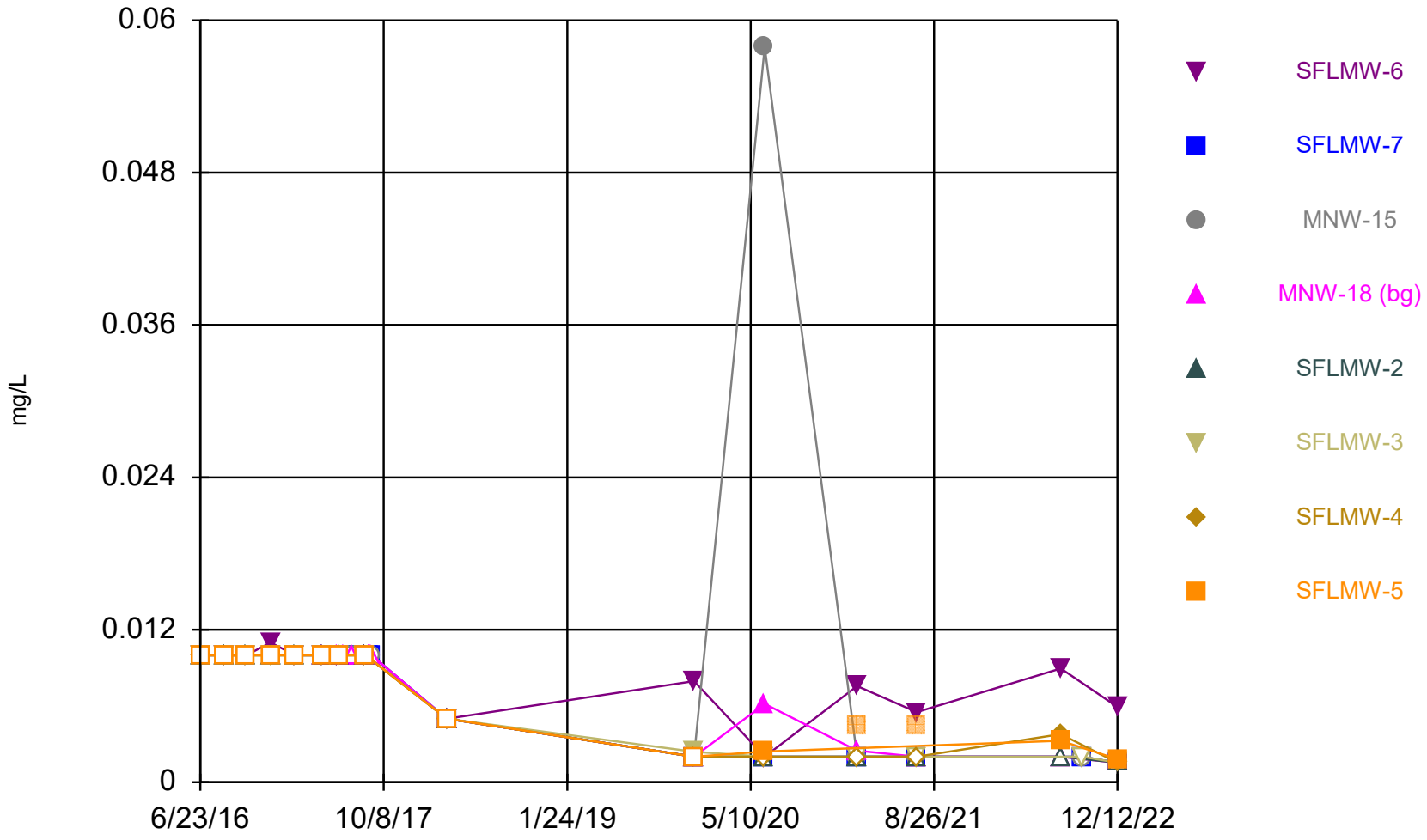


Constituent: Chloride Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

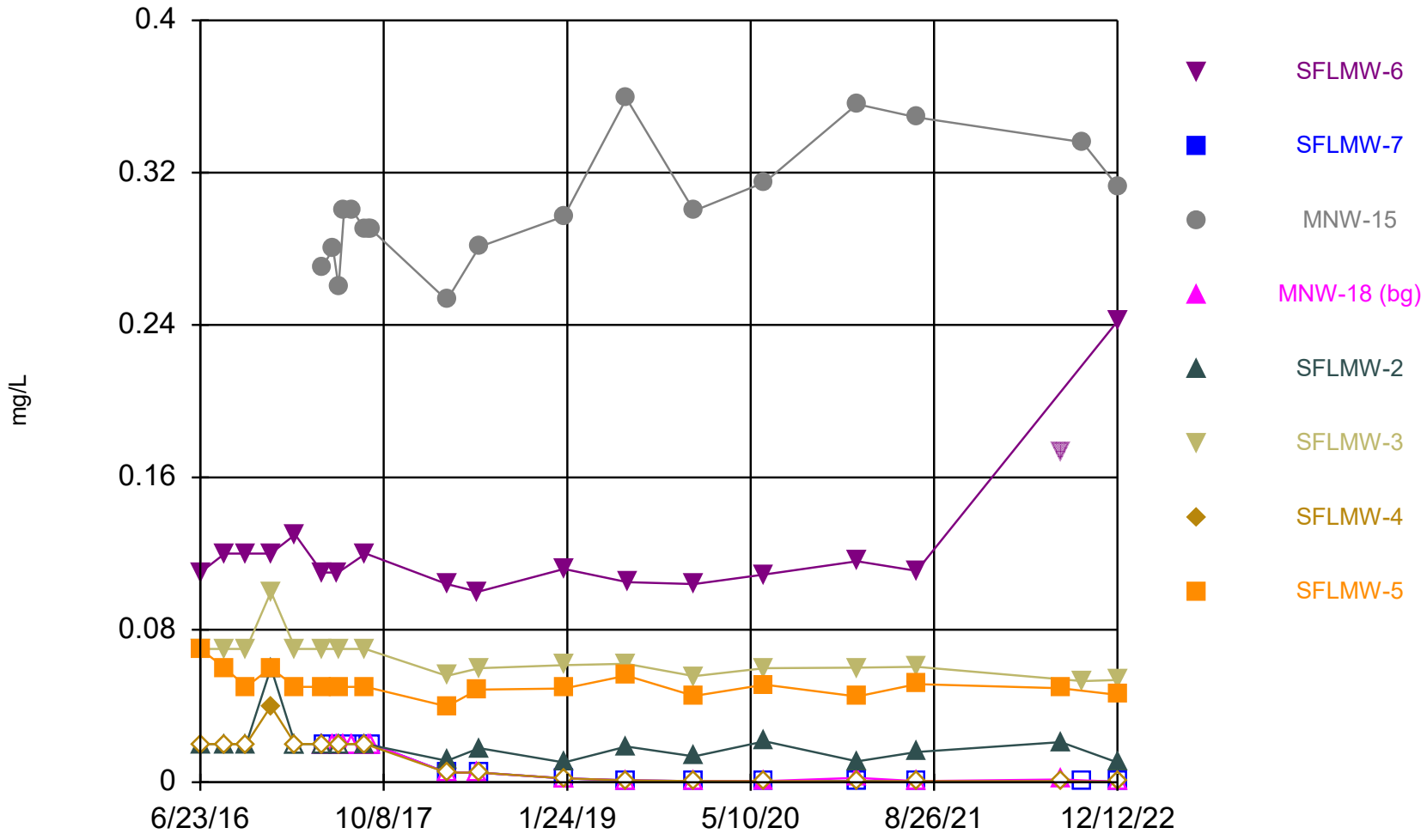


Constituent: Chromium Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

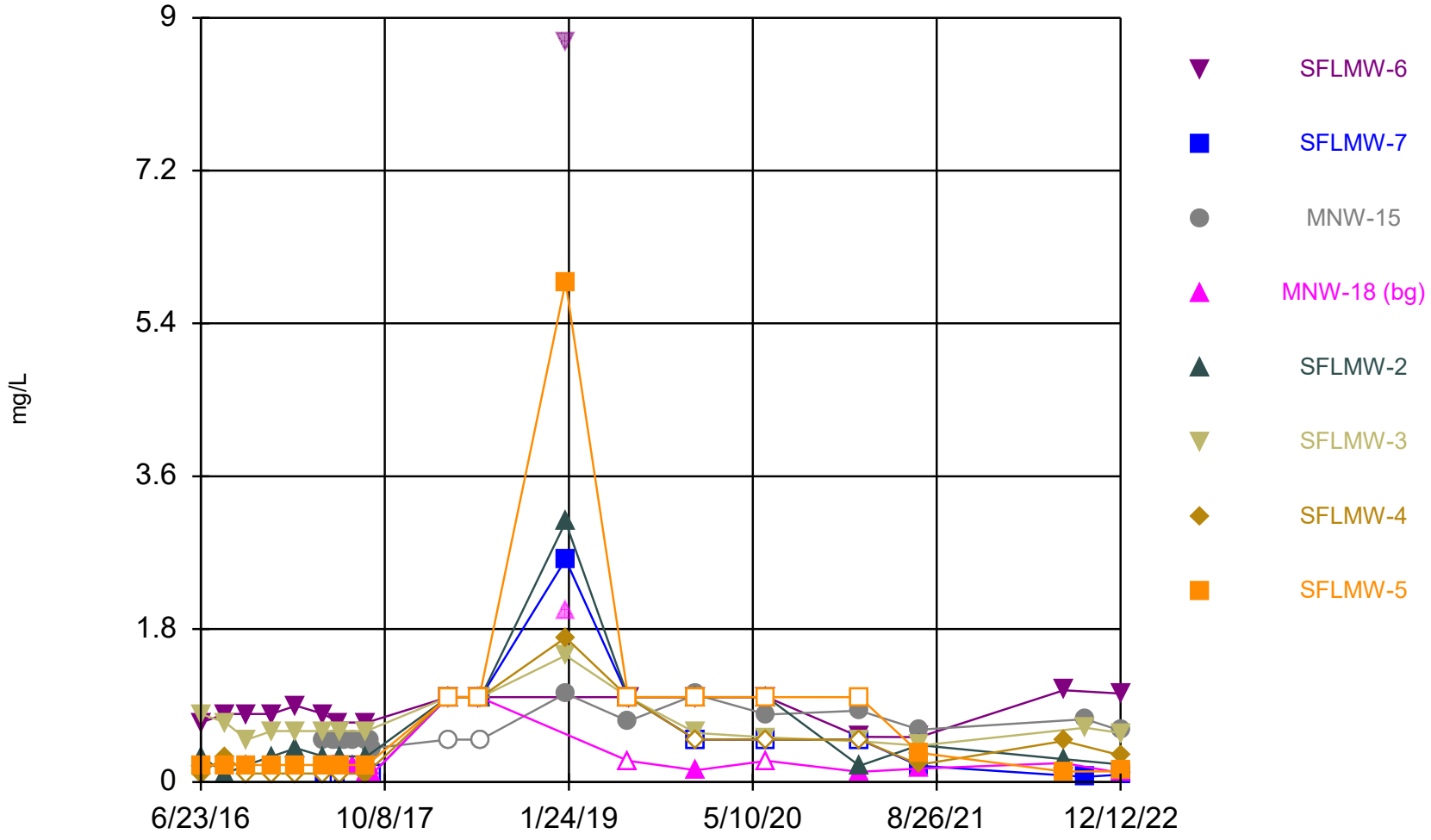


Constituent: Cobalt Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

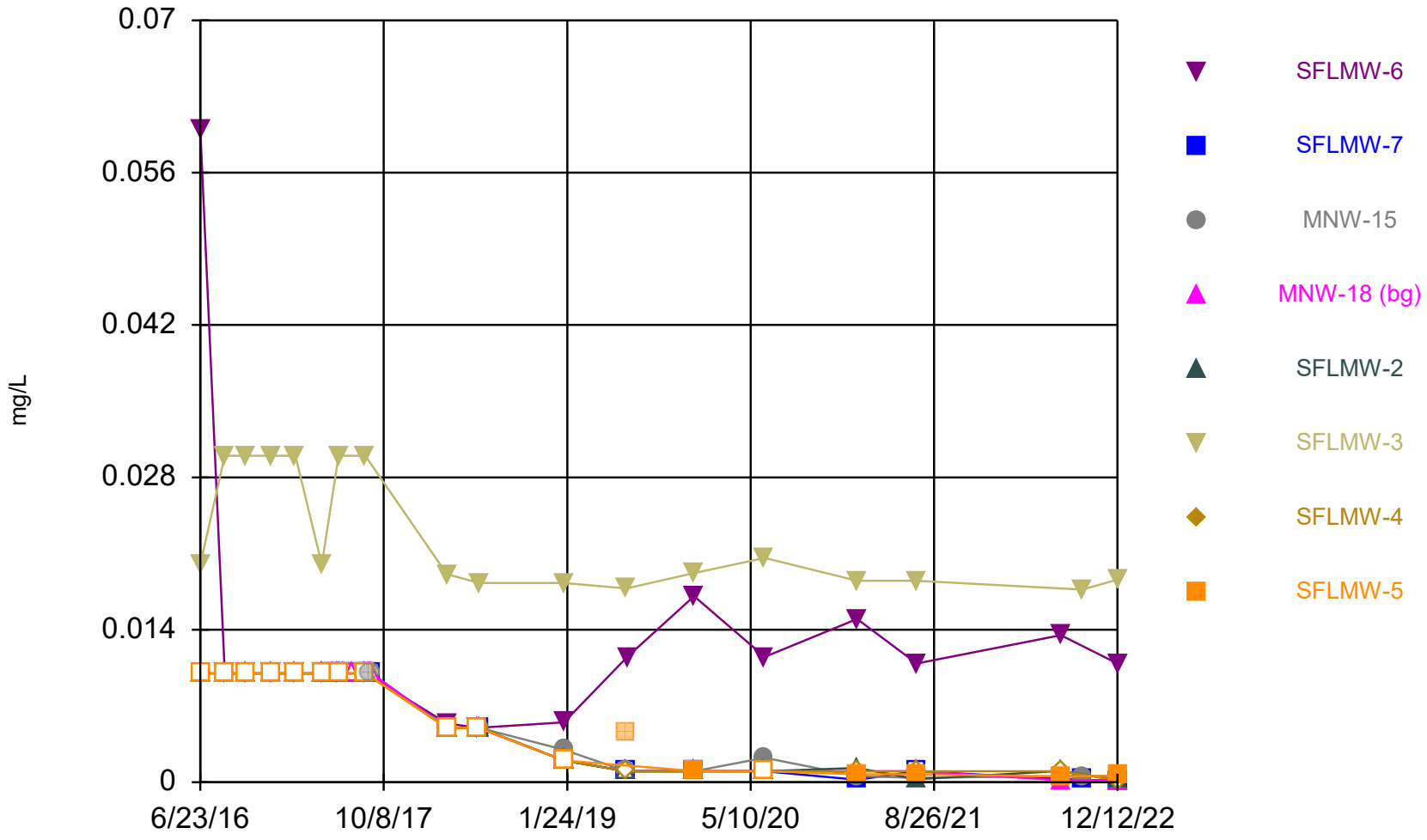


Constituent: Fluoride Analysis Run 1/23/2023 9:11 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

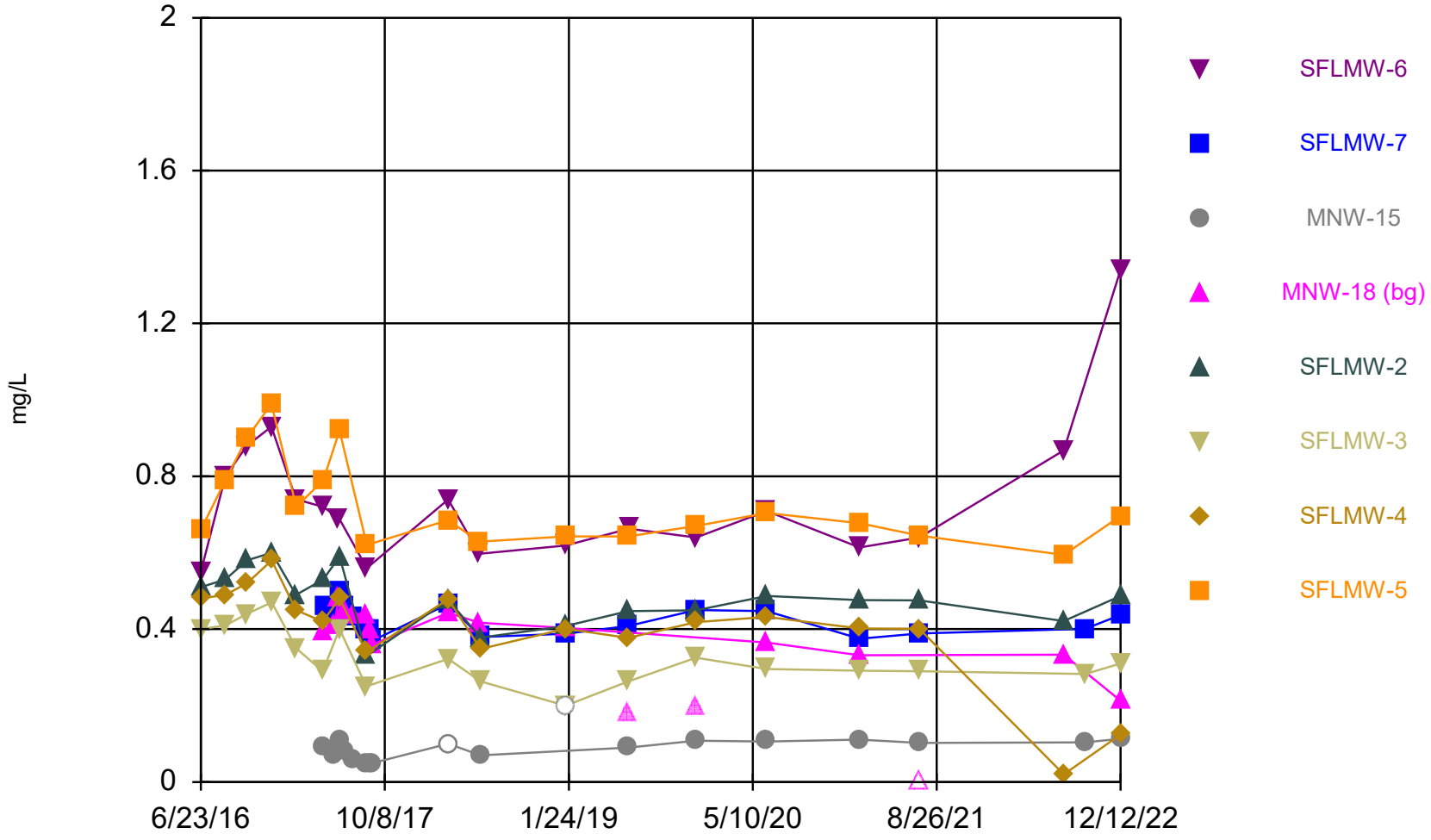


Constituent: Lead Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

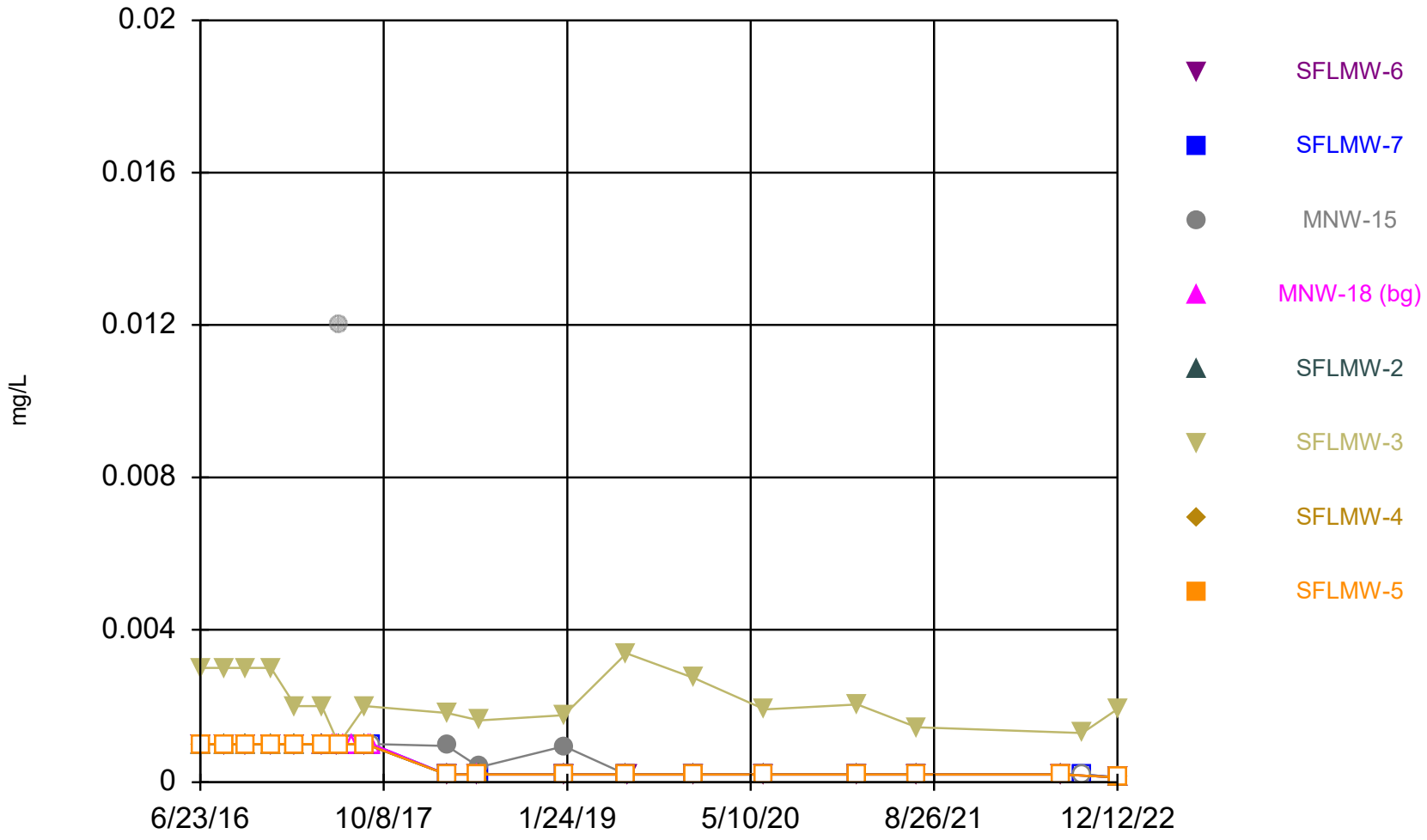


Constituent: Lithium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

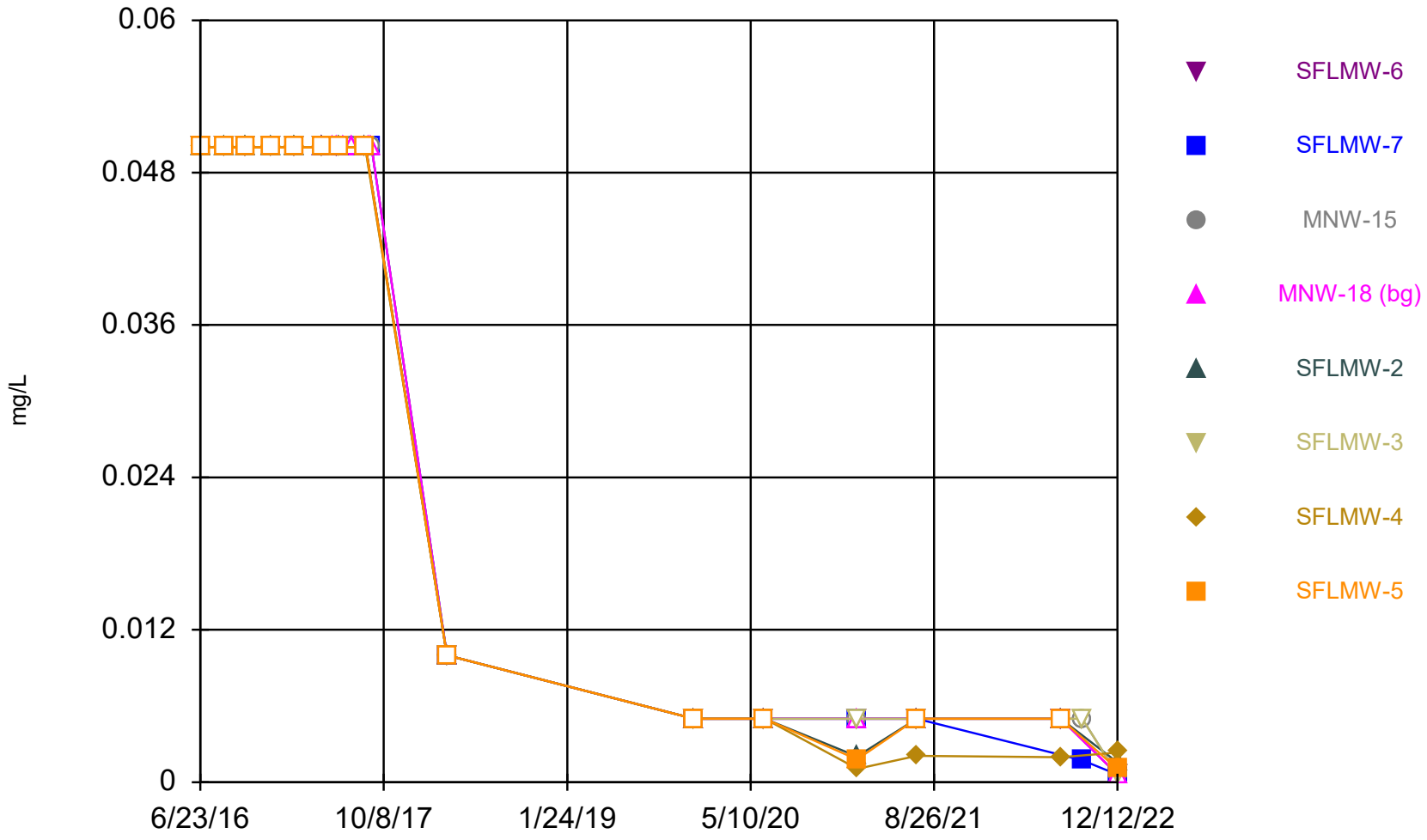


Constituent: Mercury Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

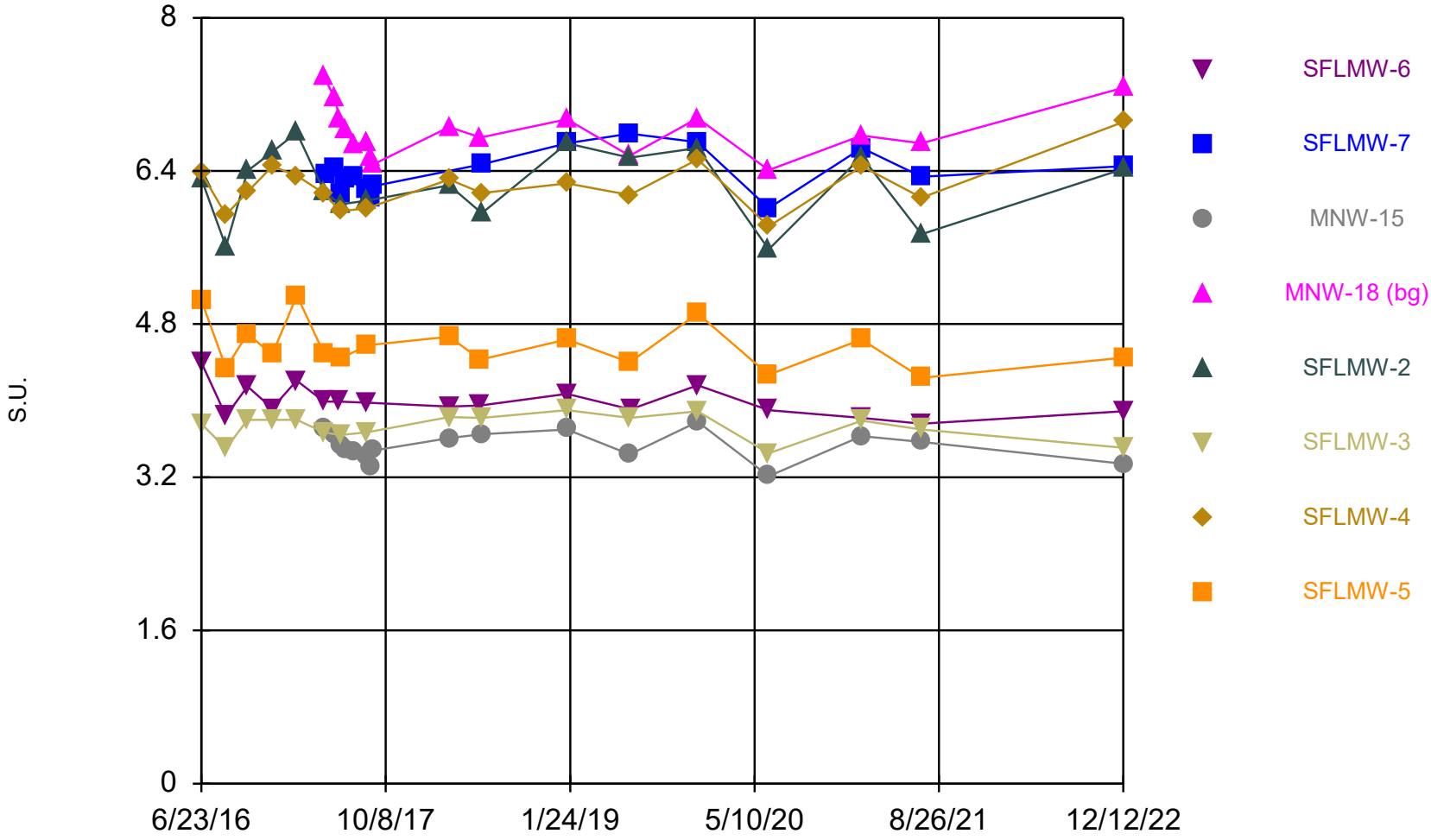
Time Series



Constituent: Molybdenum Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

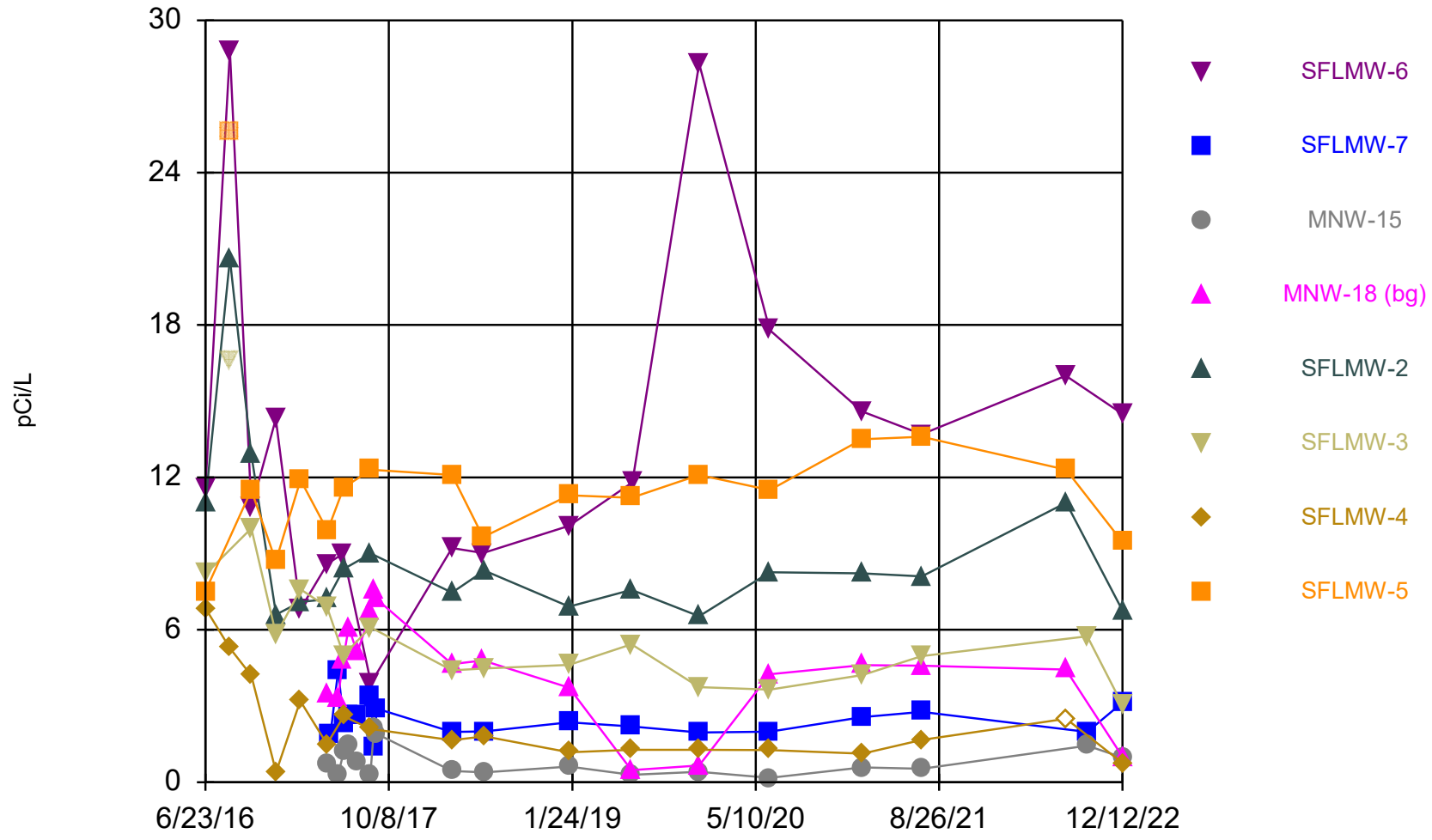


Constituent: pH Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

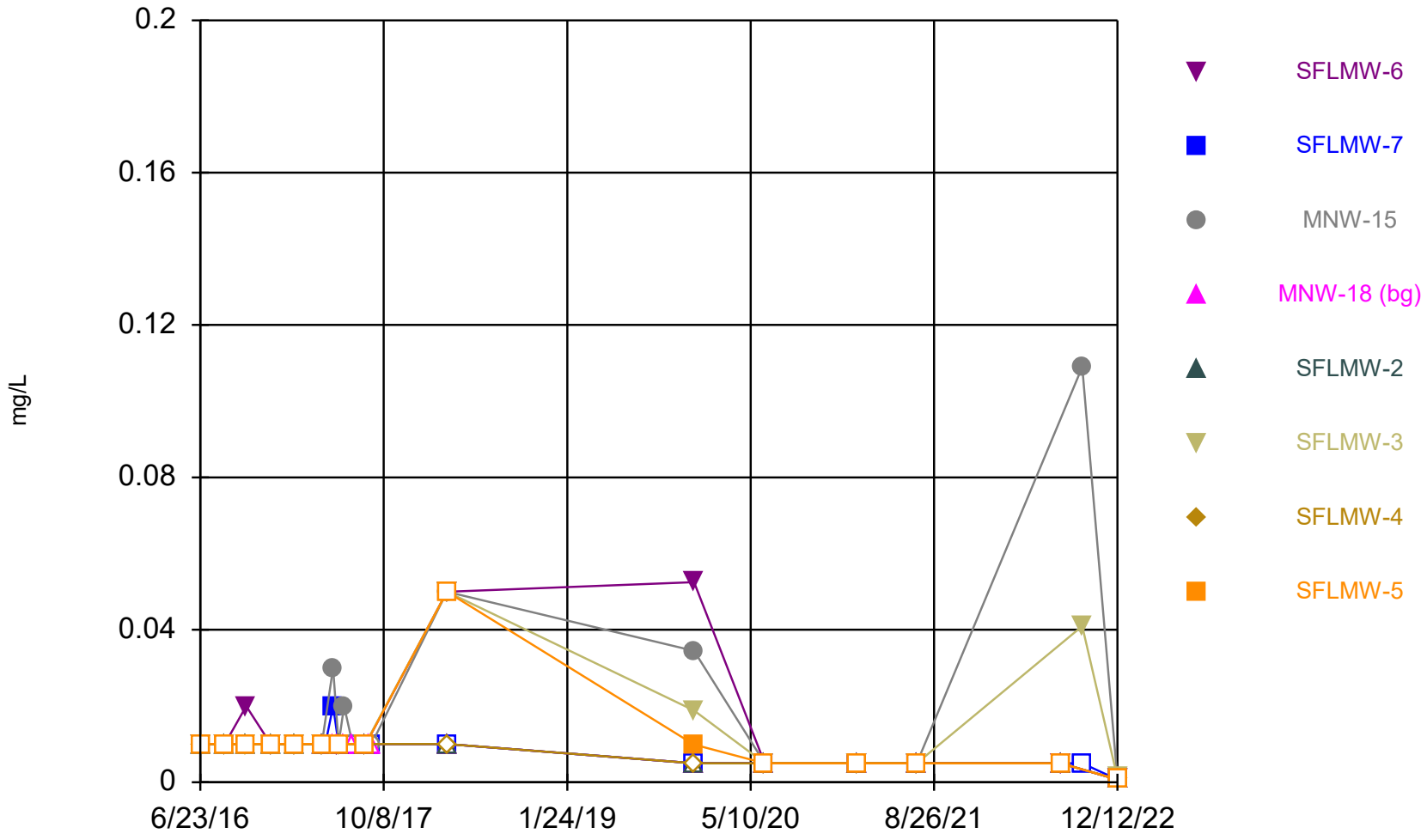


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

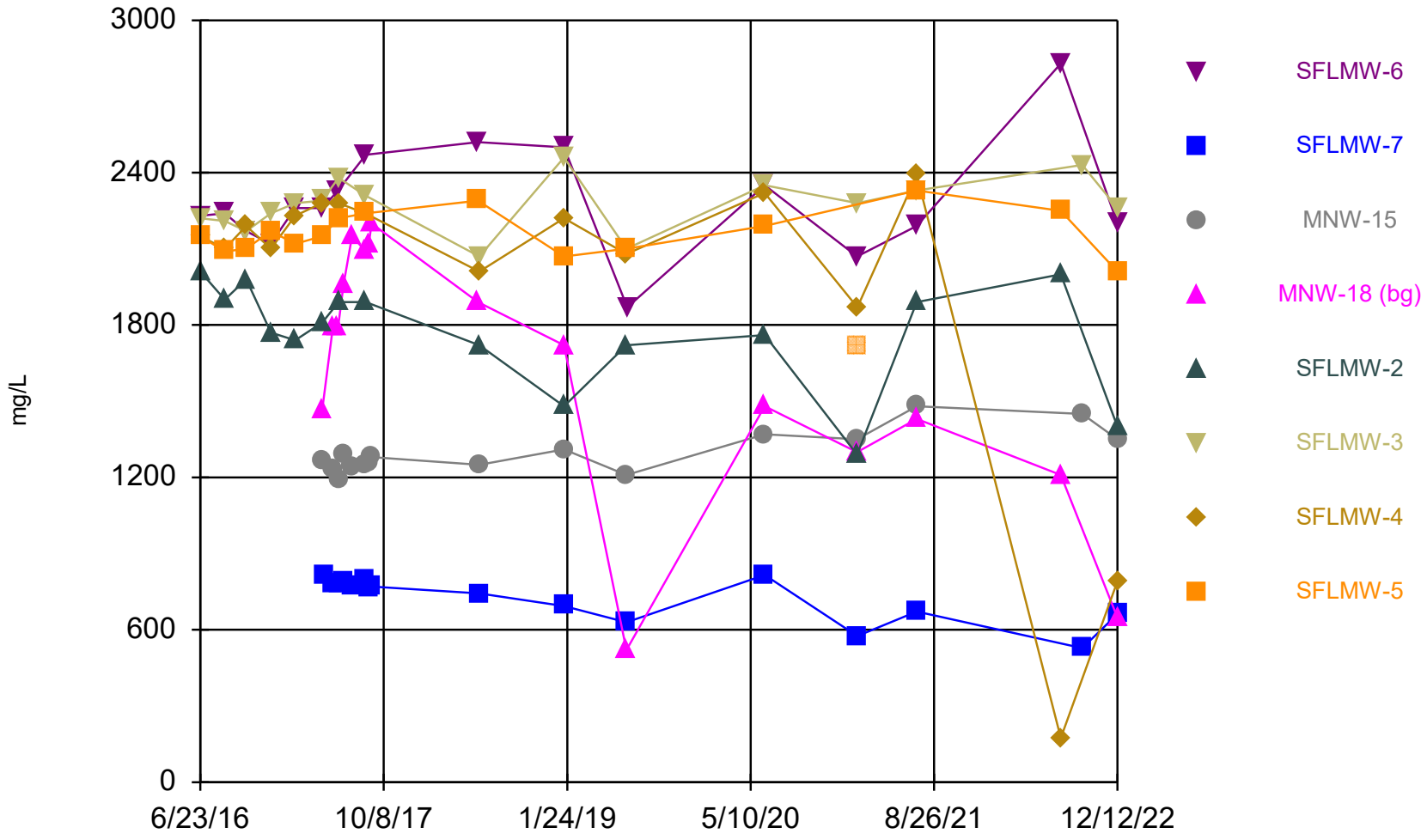
Time Series



Constituent: Selenium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

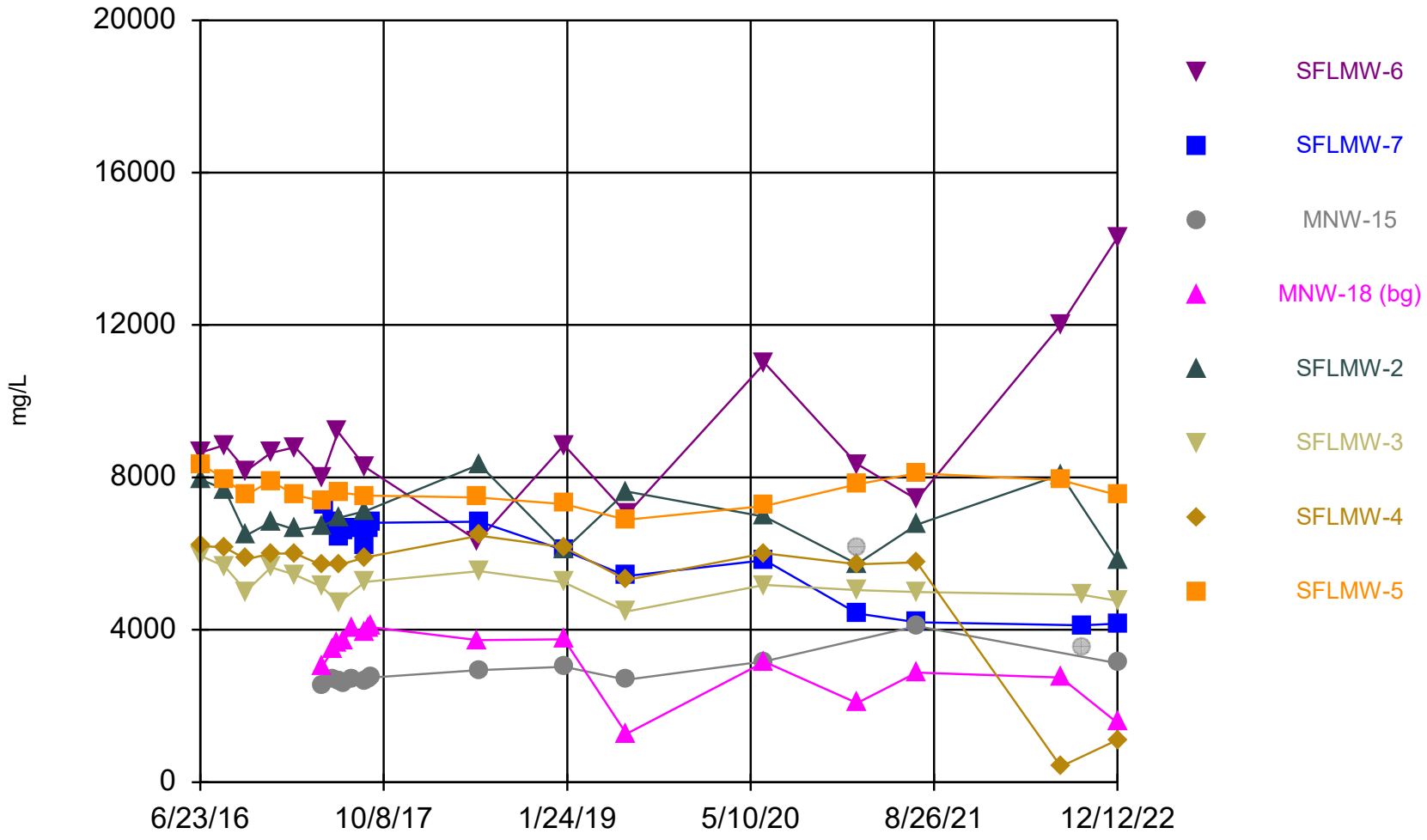
Time Series



Constituent: Sulfate Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

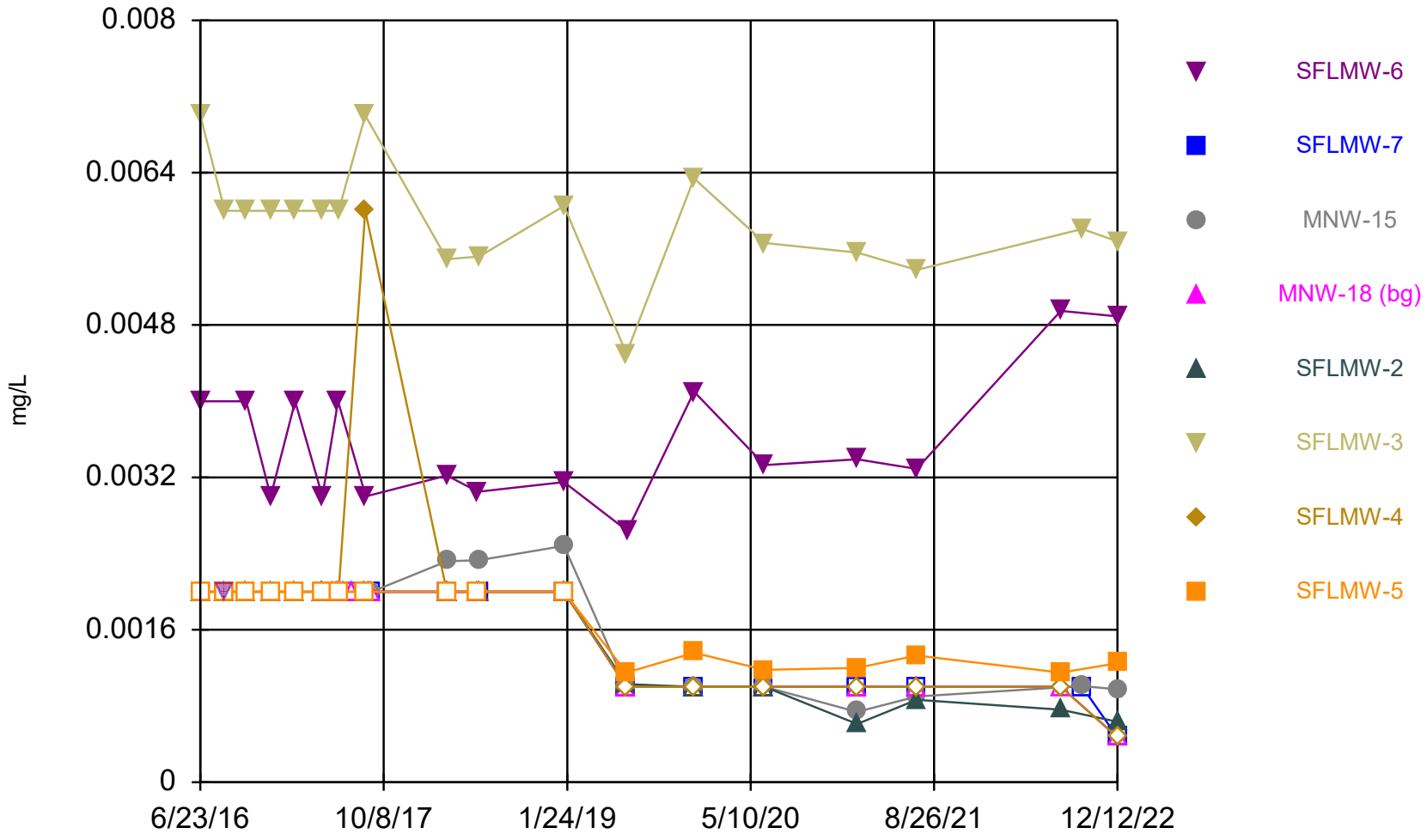


Constituent: TDS Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

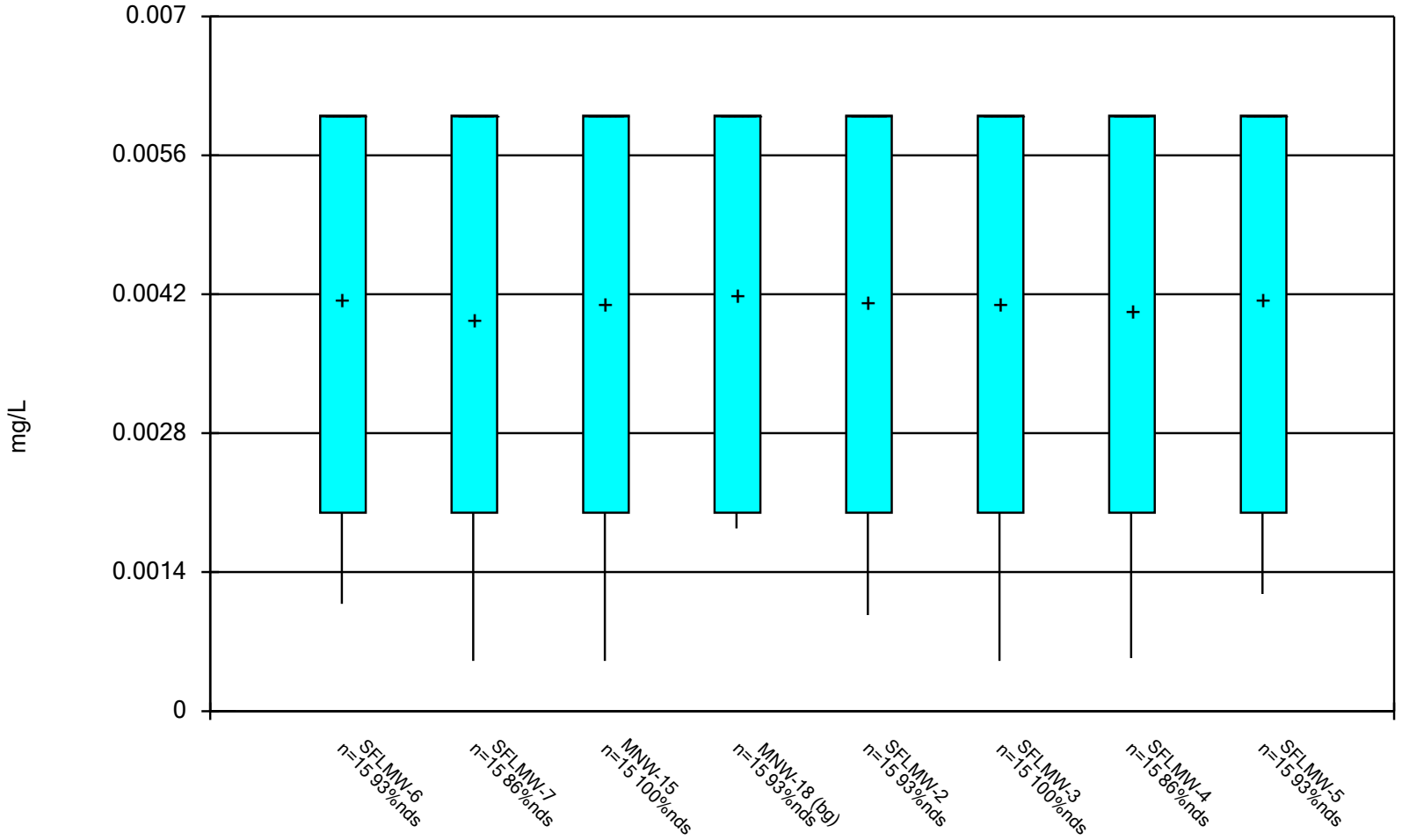
Time Series



Constituent: Thallium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

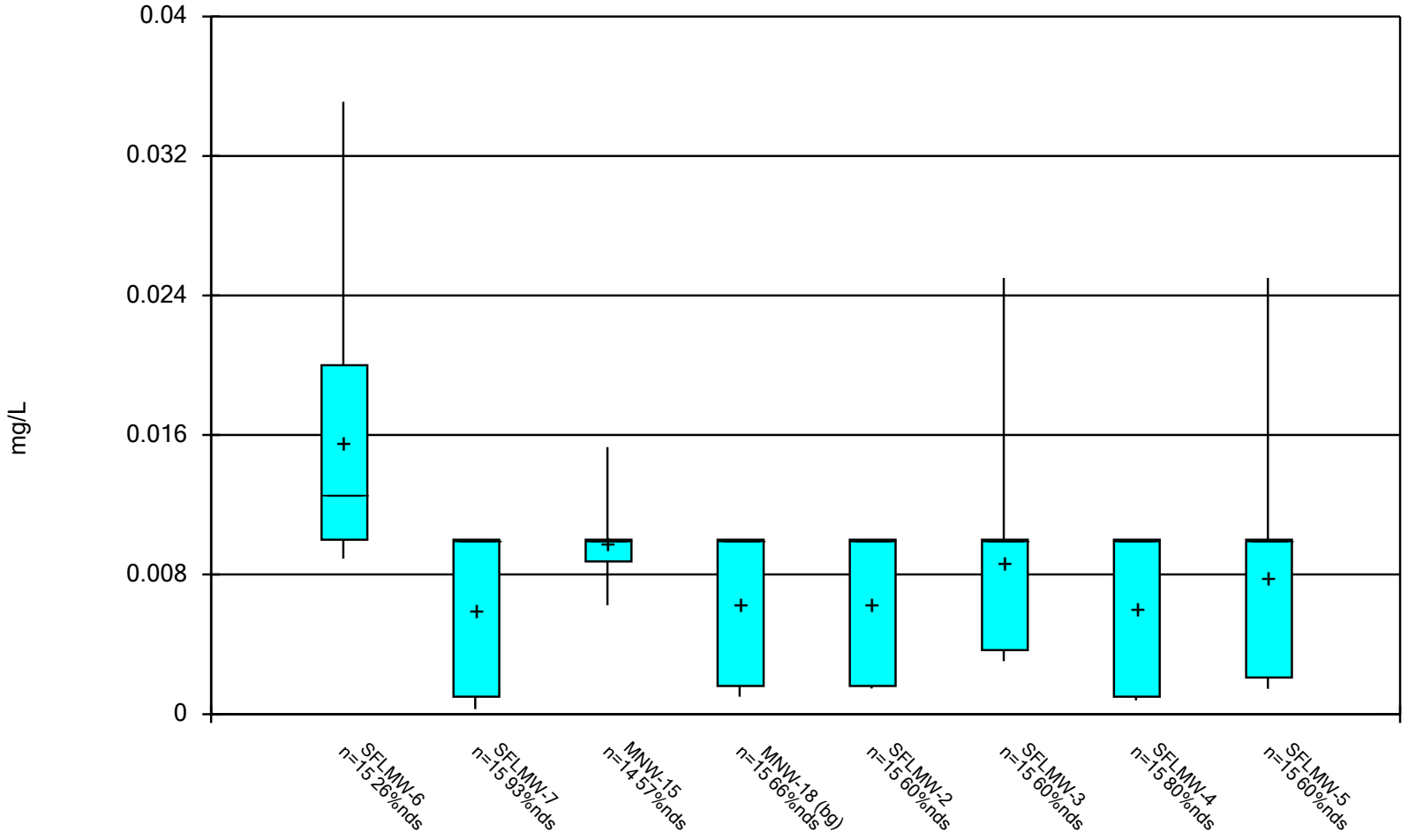
Box & Whiskers Plot



Constituent: Antimony Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

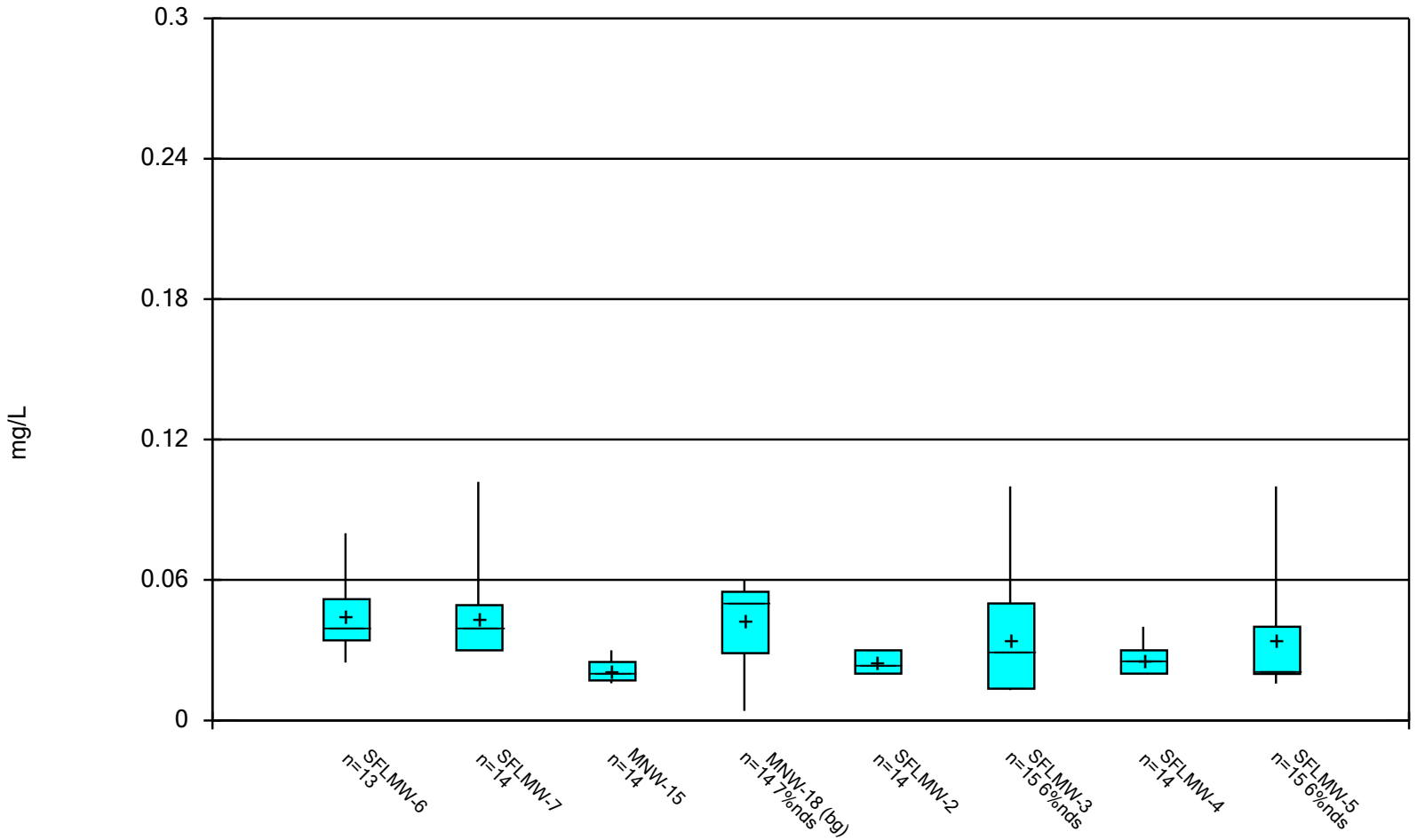
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

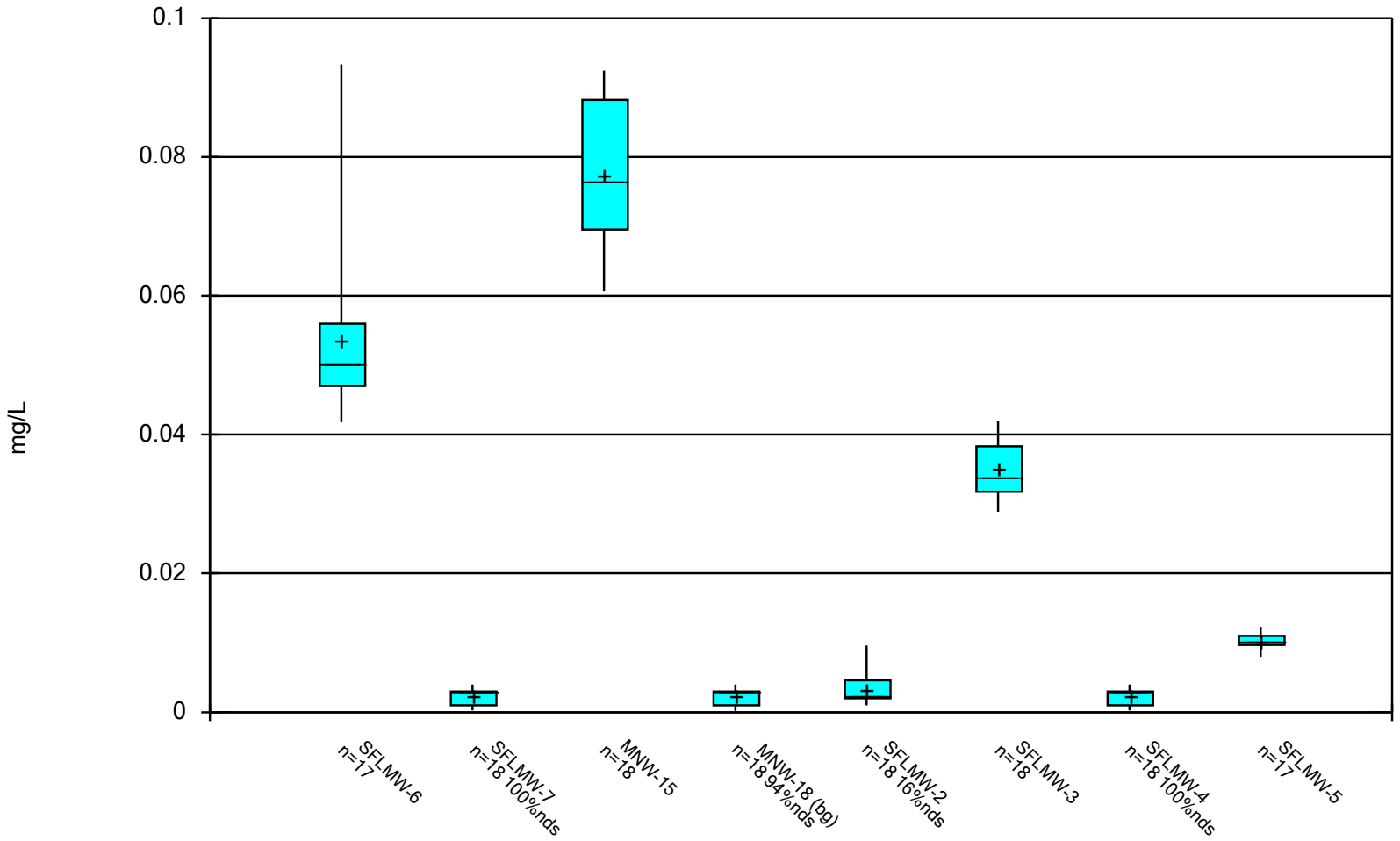
Box & Whiskers Plot



Constituent: Barium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

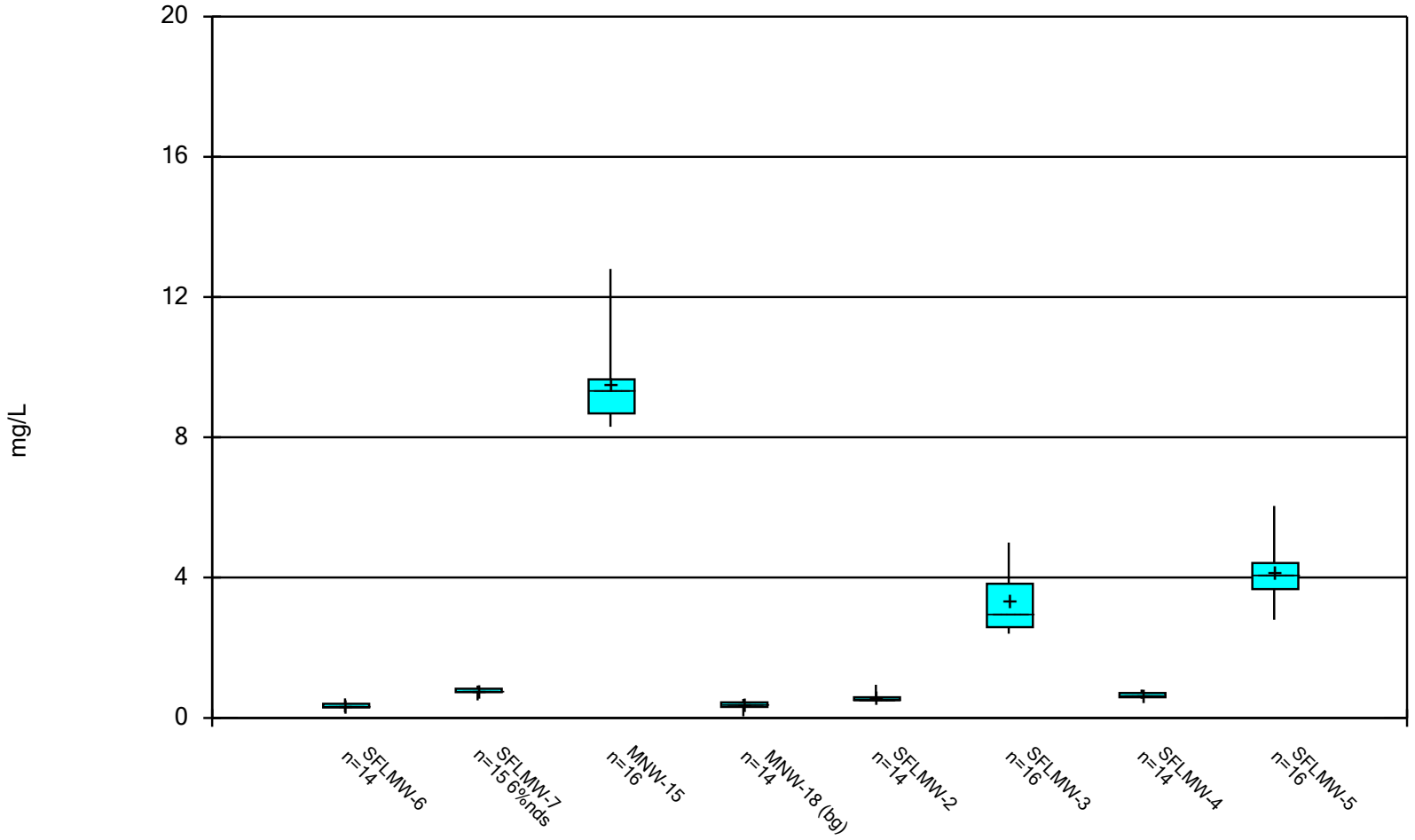
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

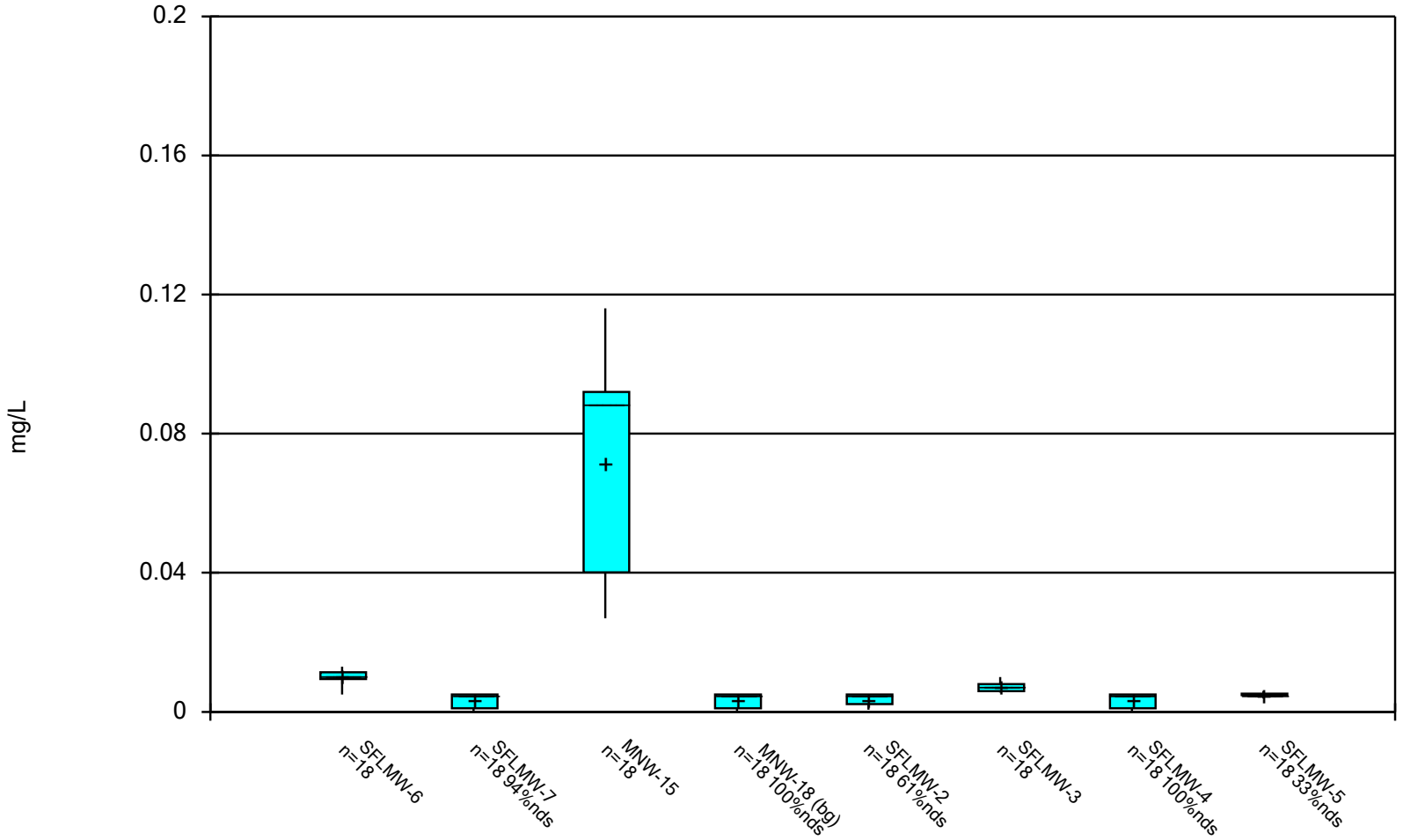
Box & Whiskers Plot



Constituent: Boron Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

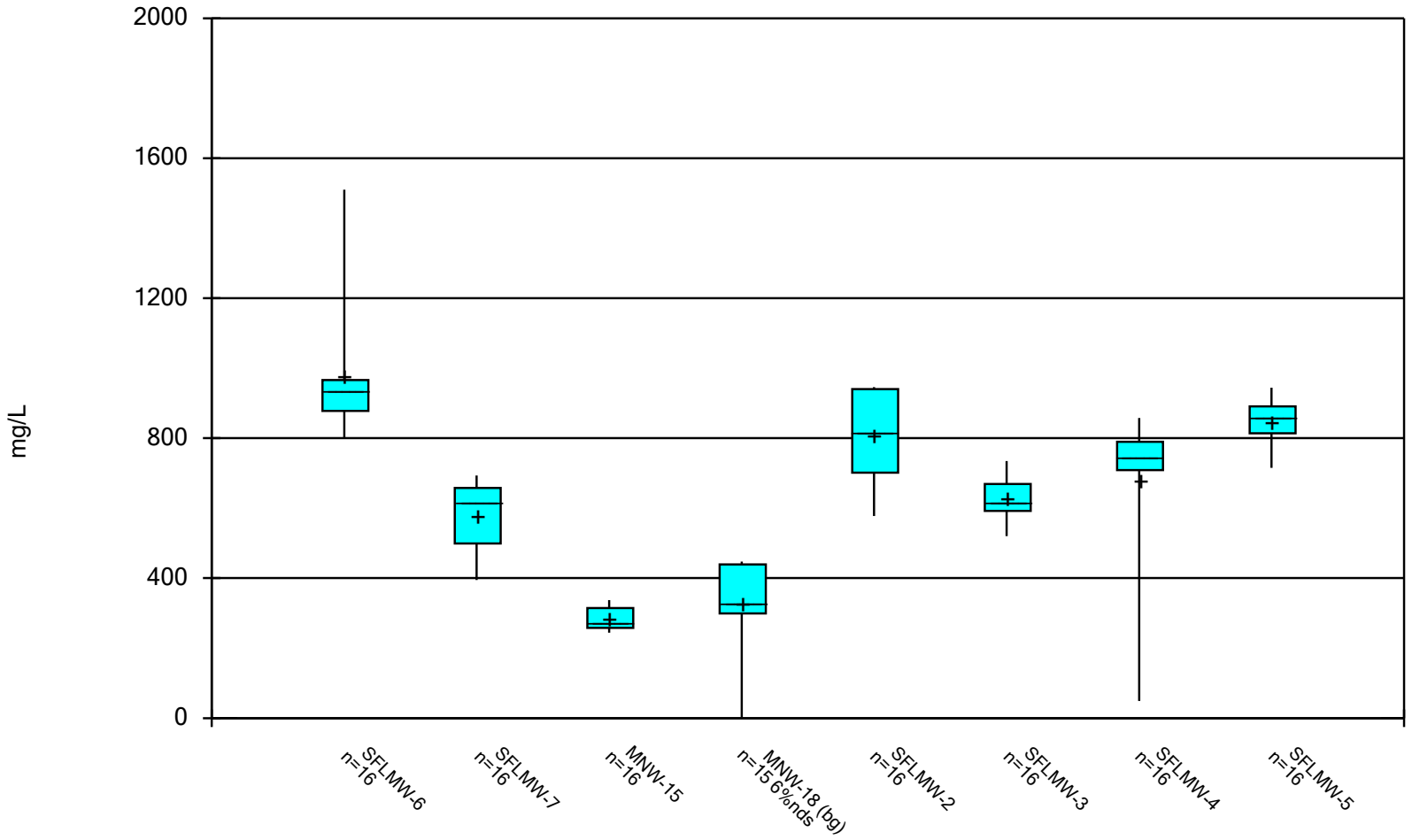
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

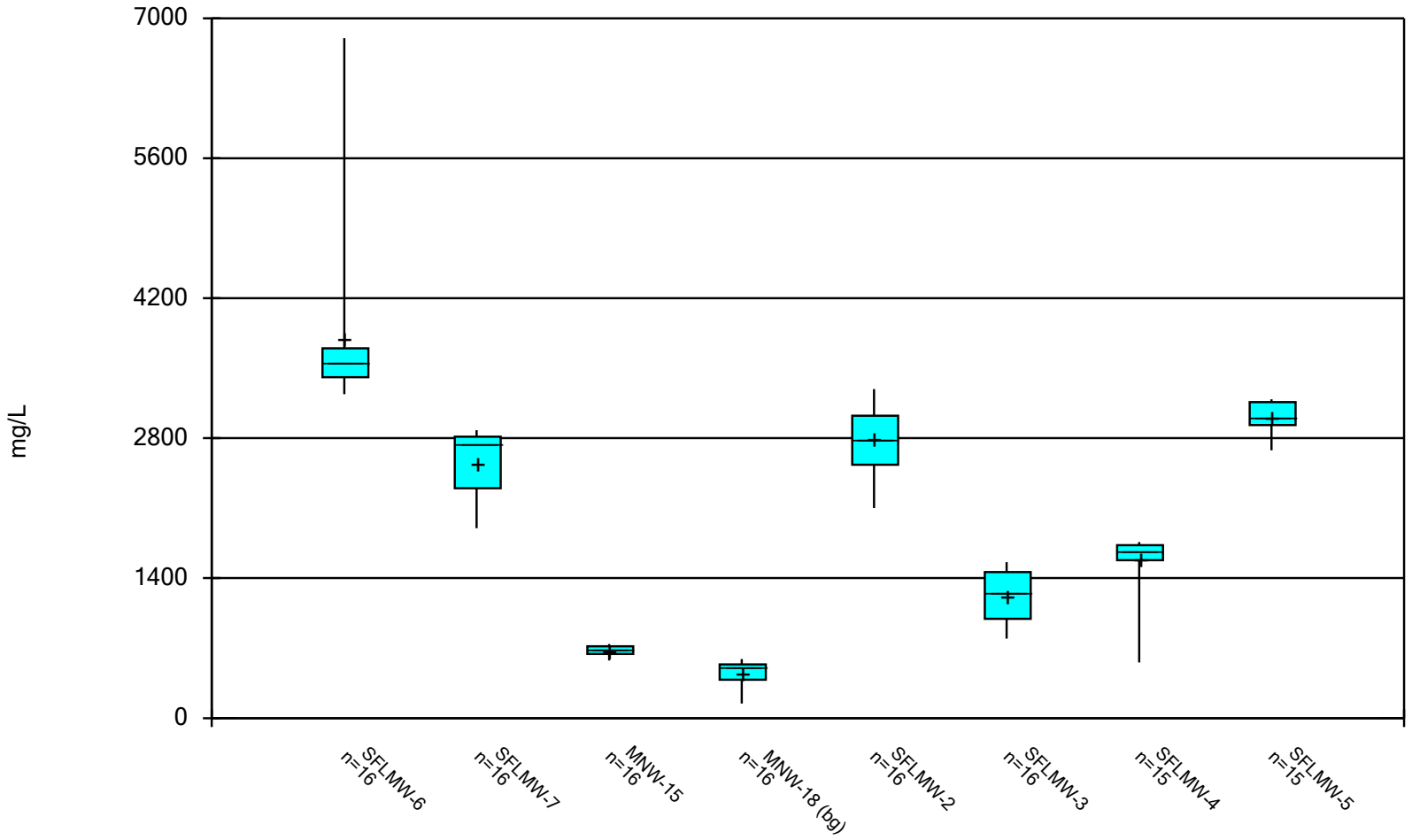
Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

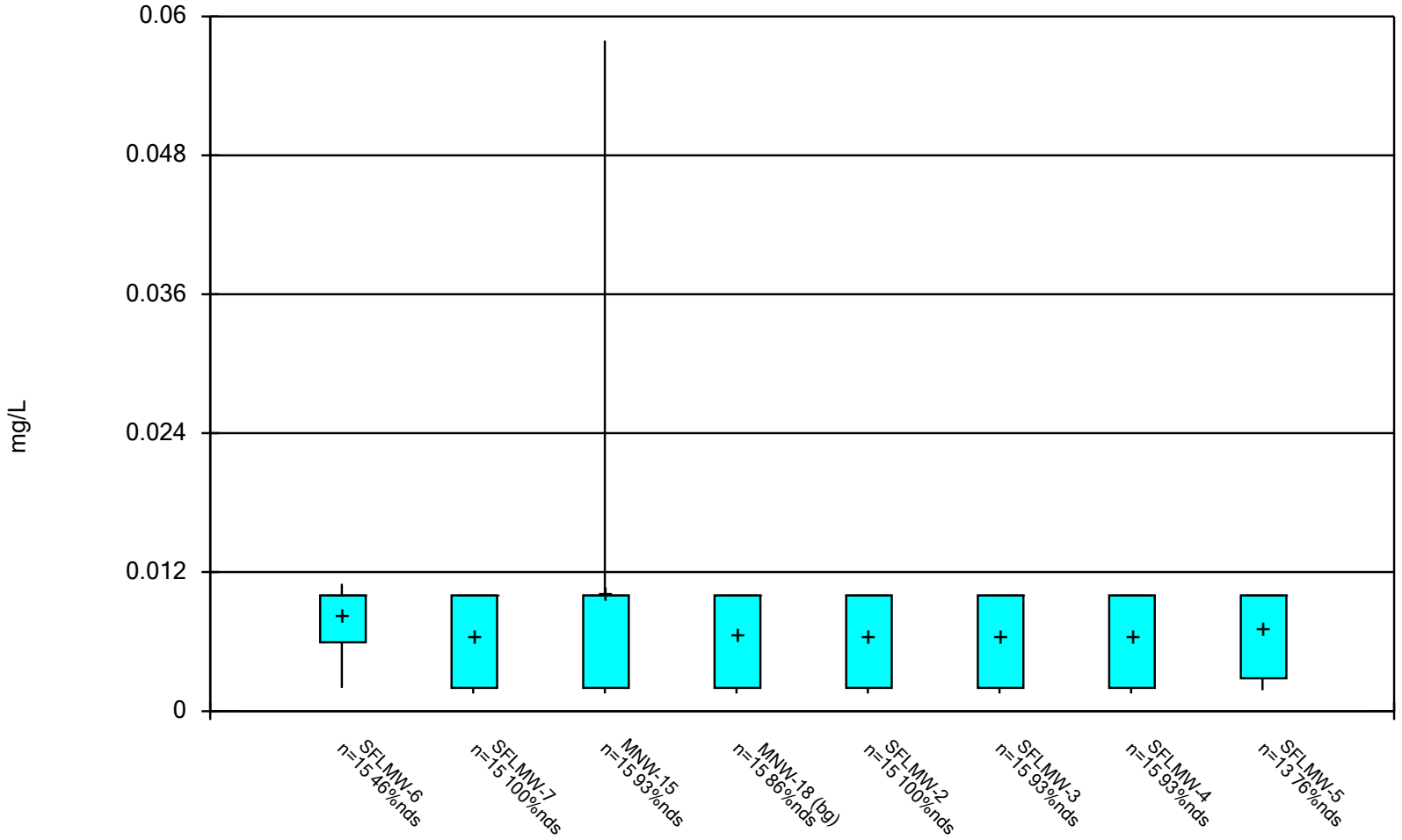
Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

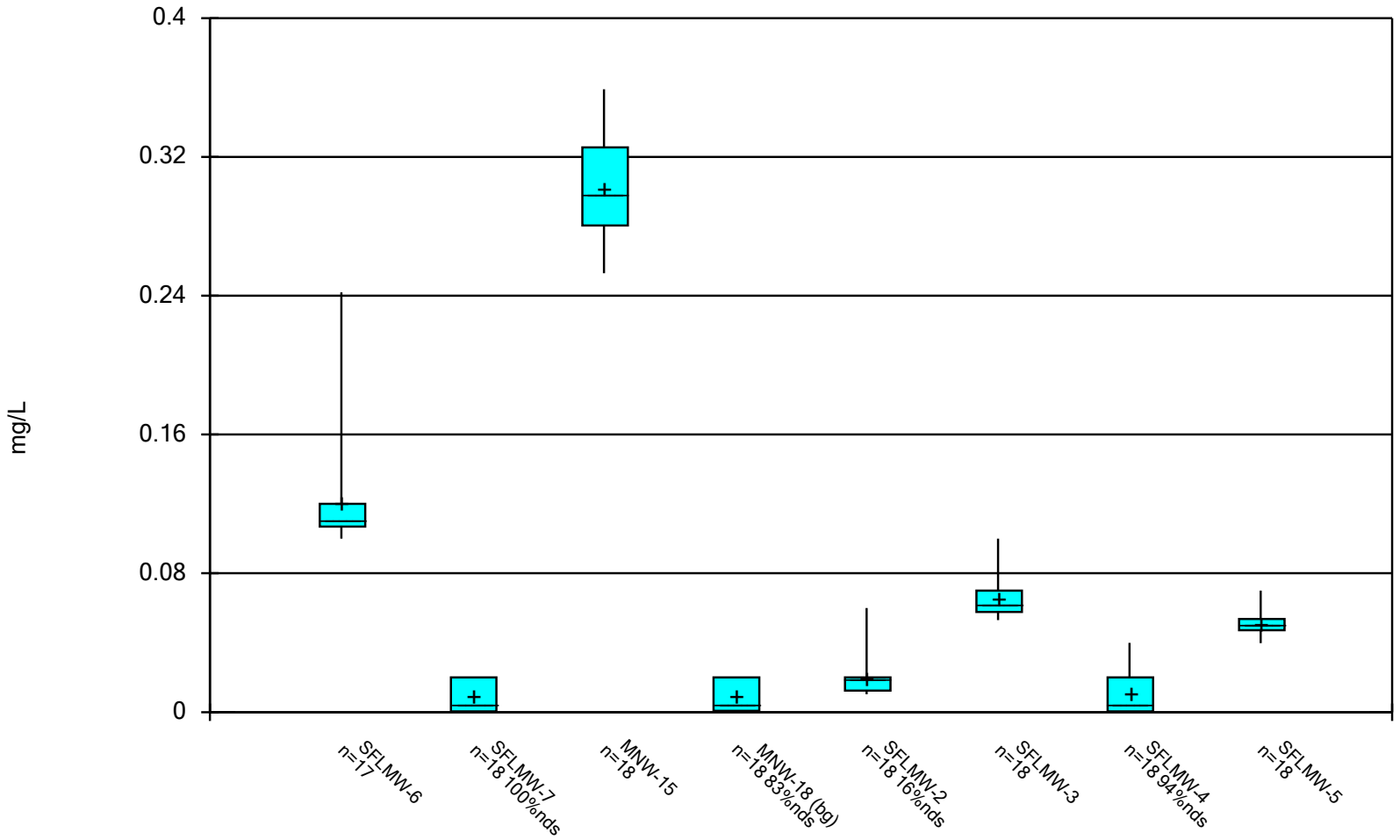
Box & Whiskers Plot



Constituent: Chromium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

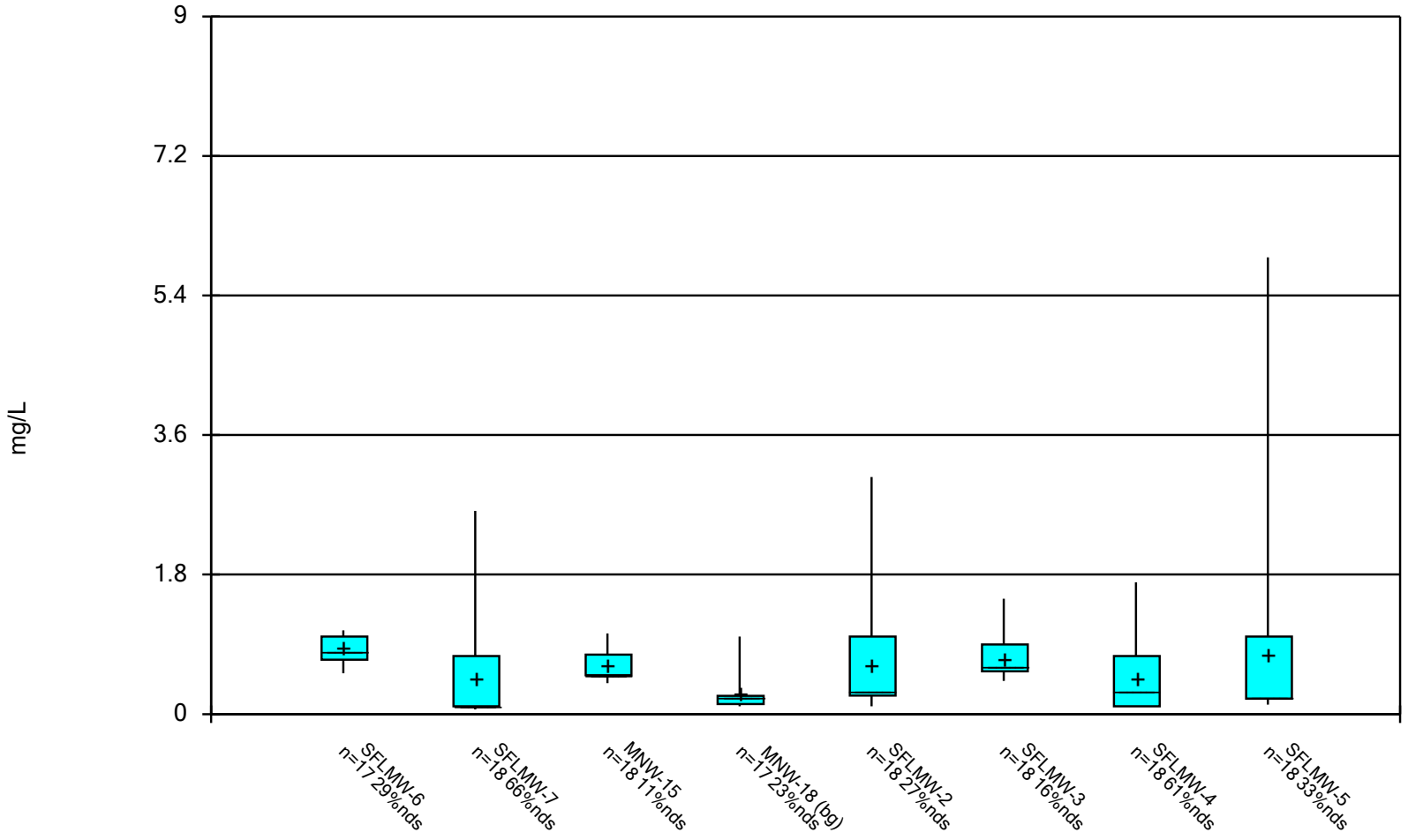
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

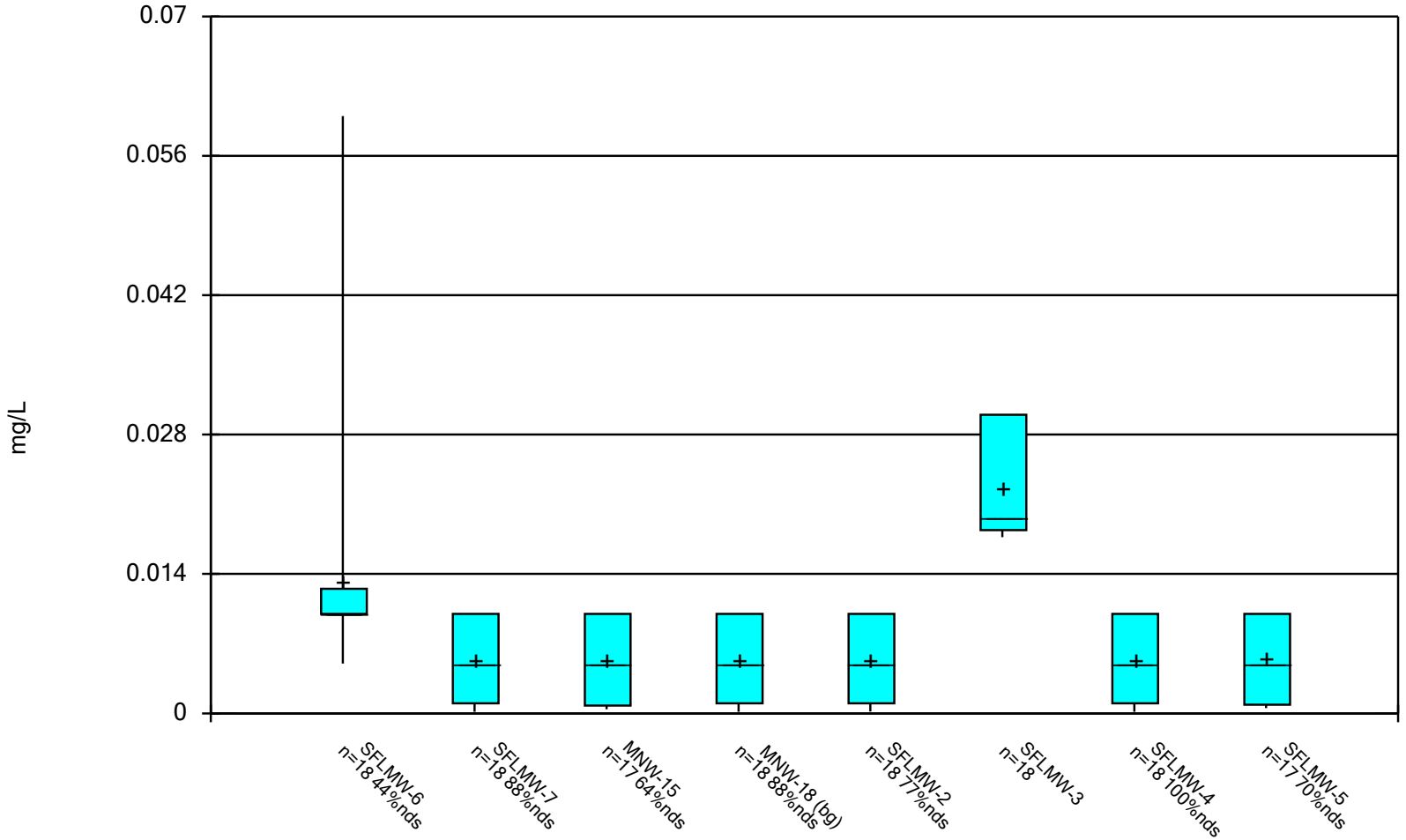
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

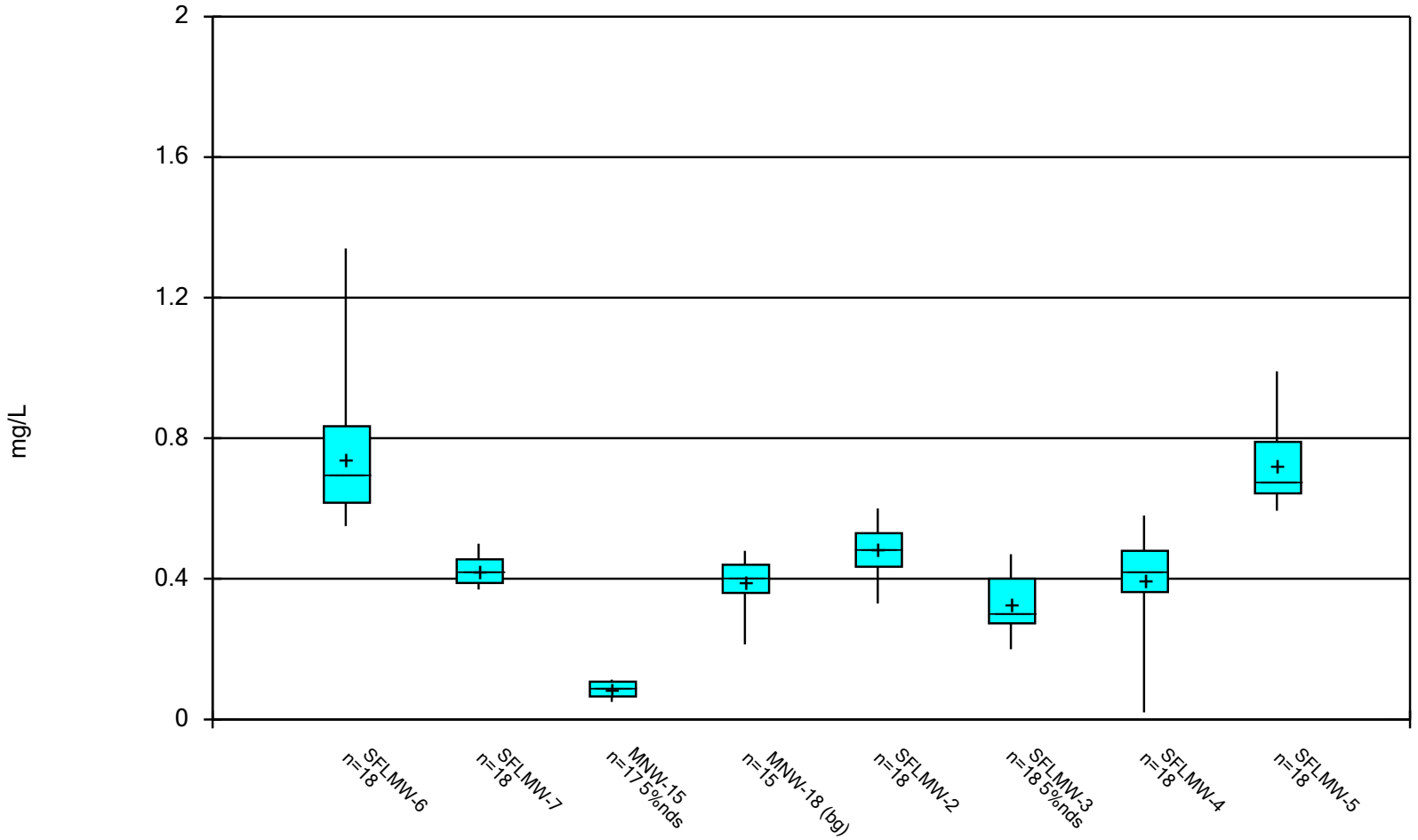
Box & Whiskers Plot



Constituent: Lead Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

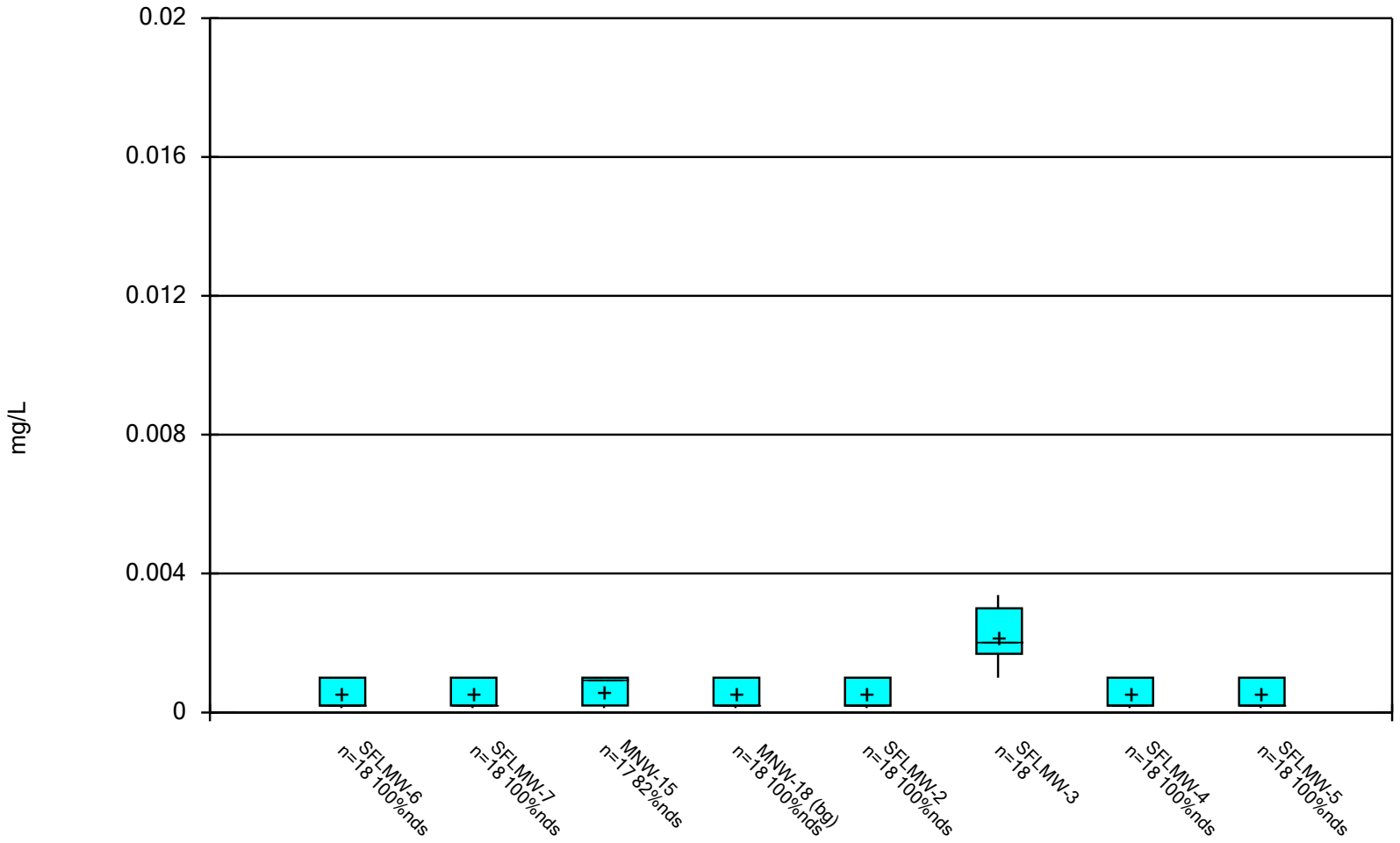
Box & Whiskers Plot



Constituent: Lithium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

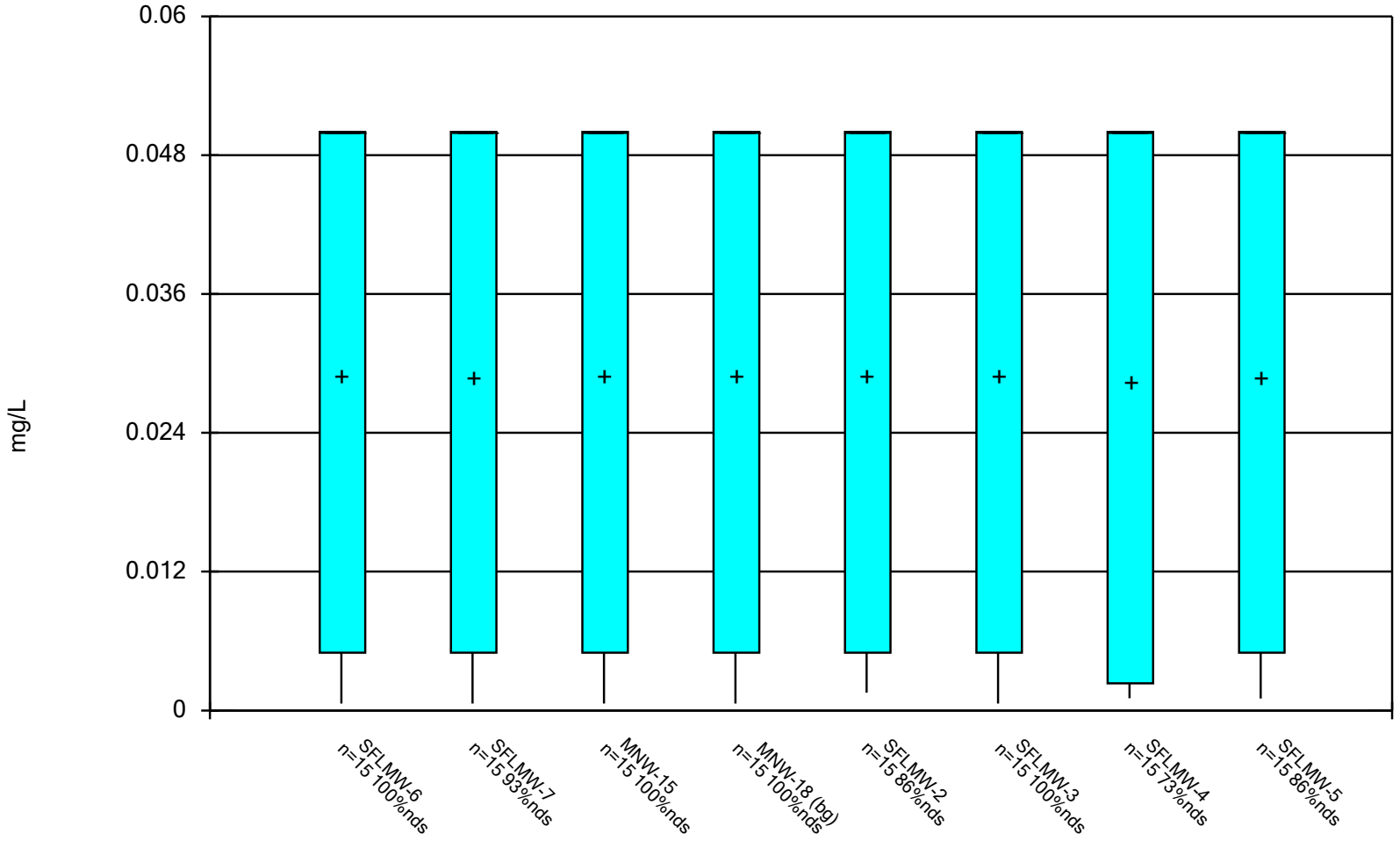
Box & Whiskers Plot



Constituent: Mercury Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

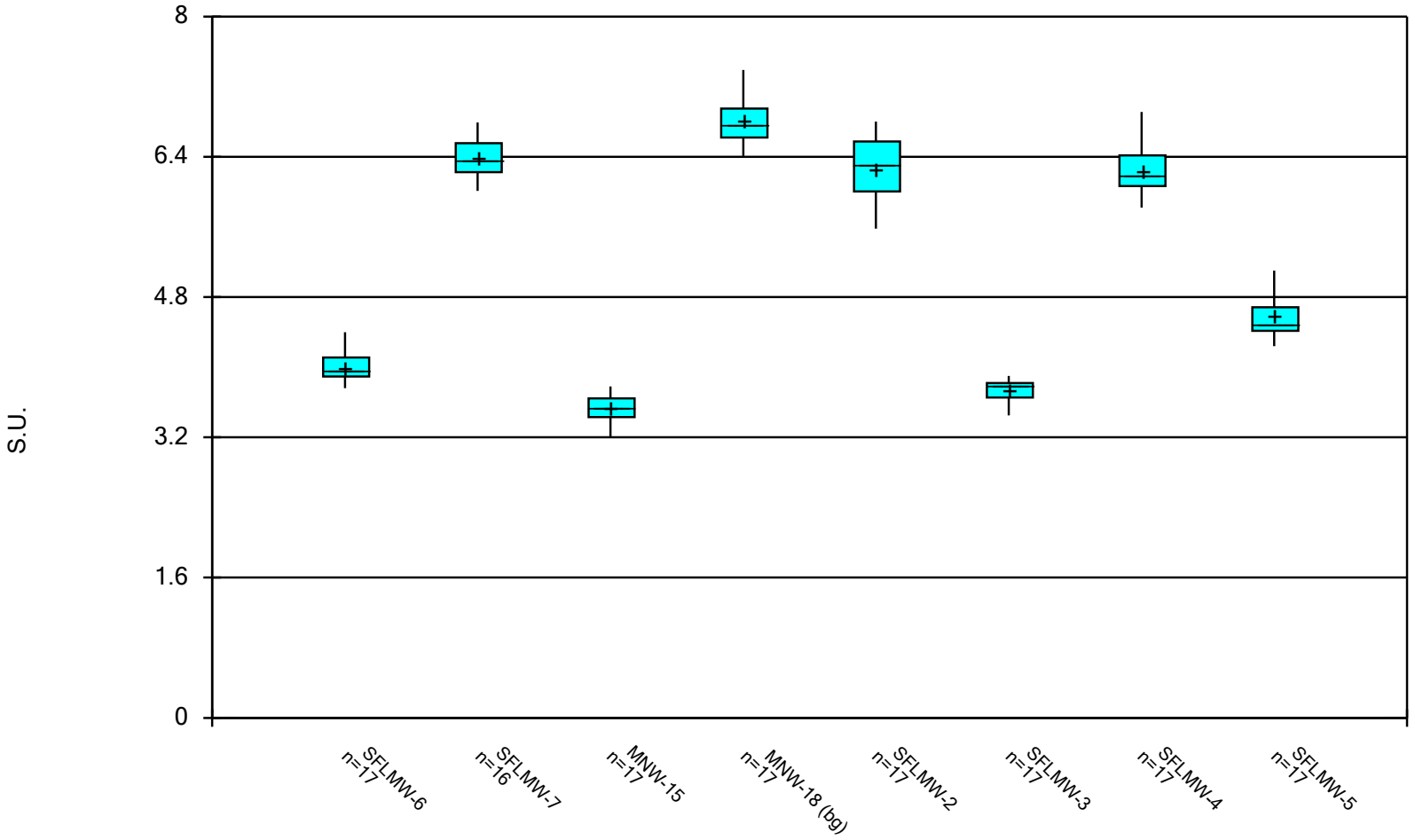
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

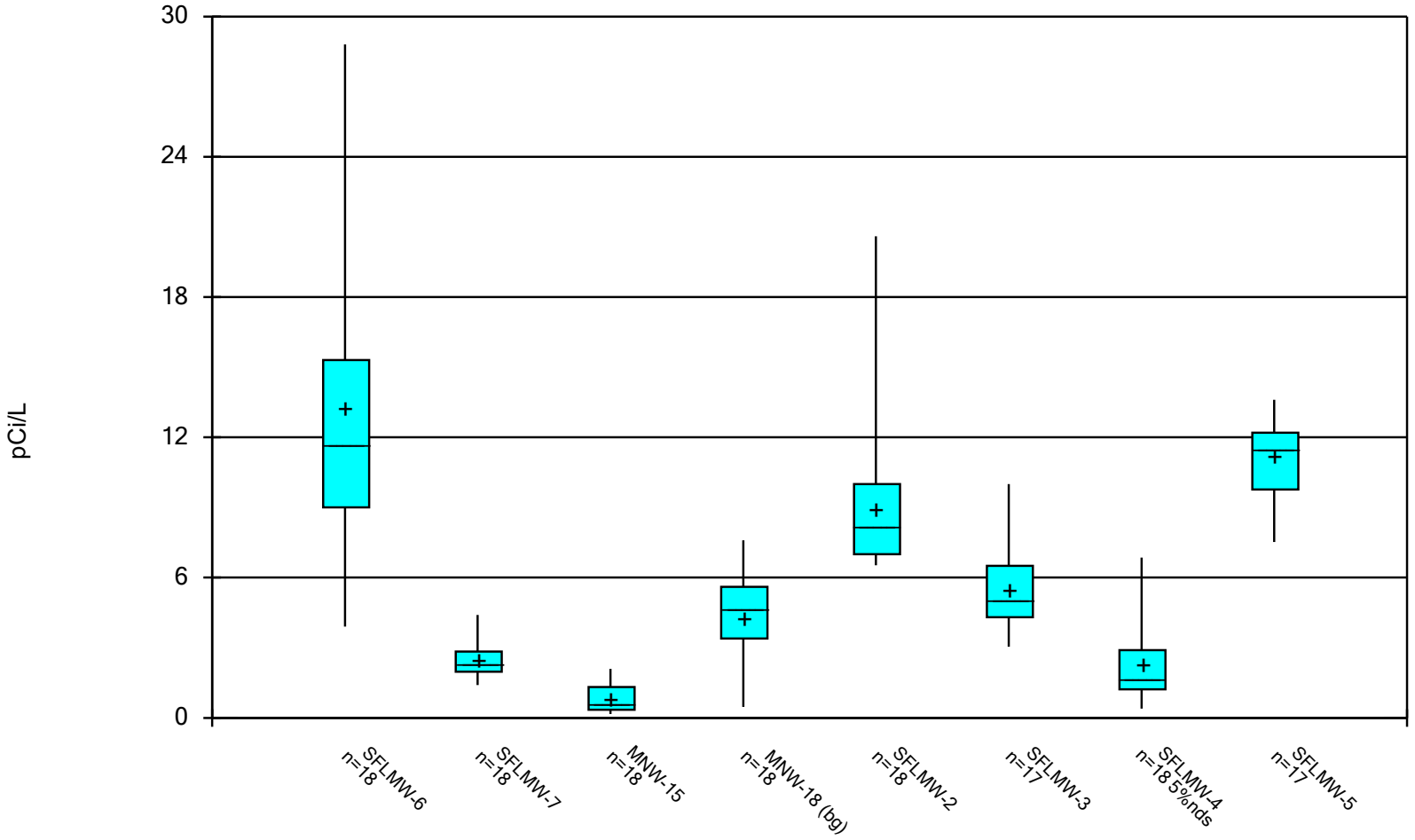
Box & Whiskers Plot



Constituent: pH Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

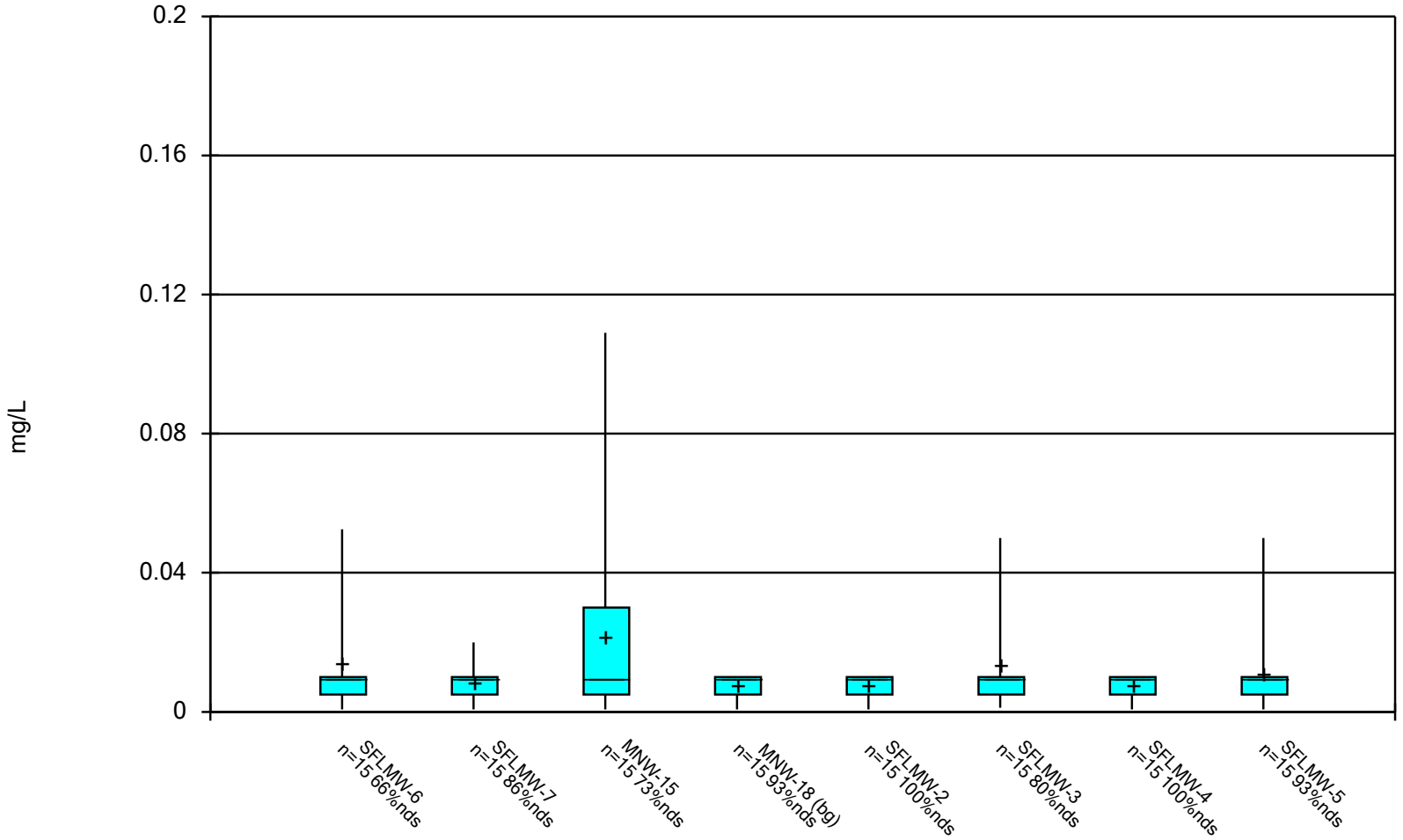
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

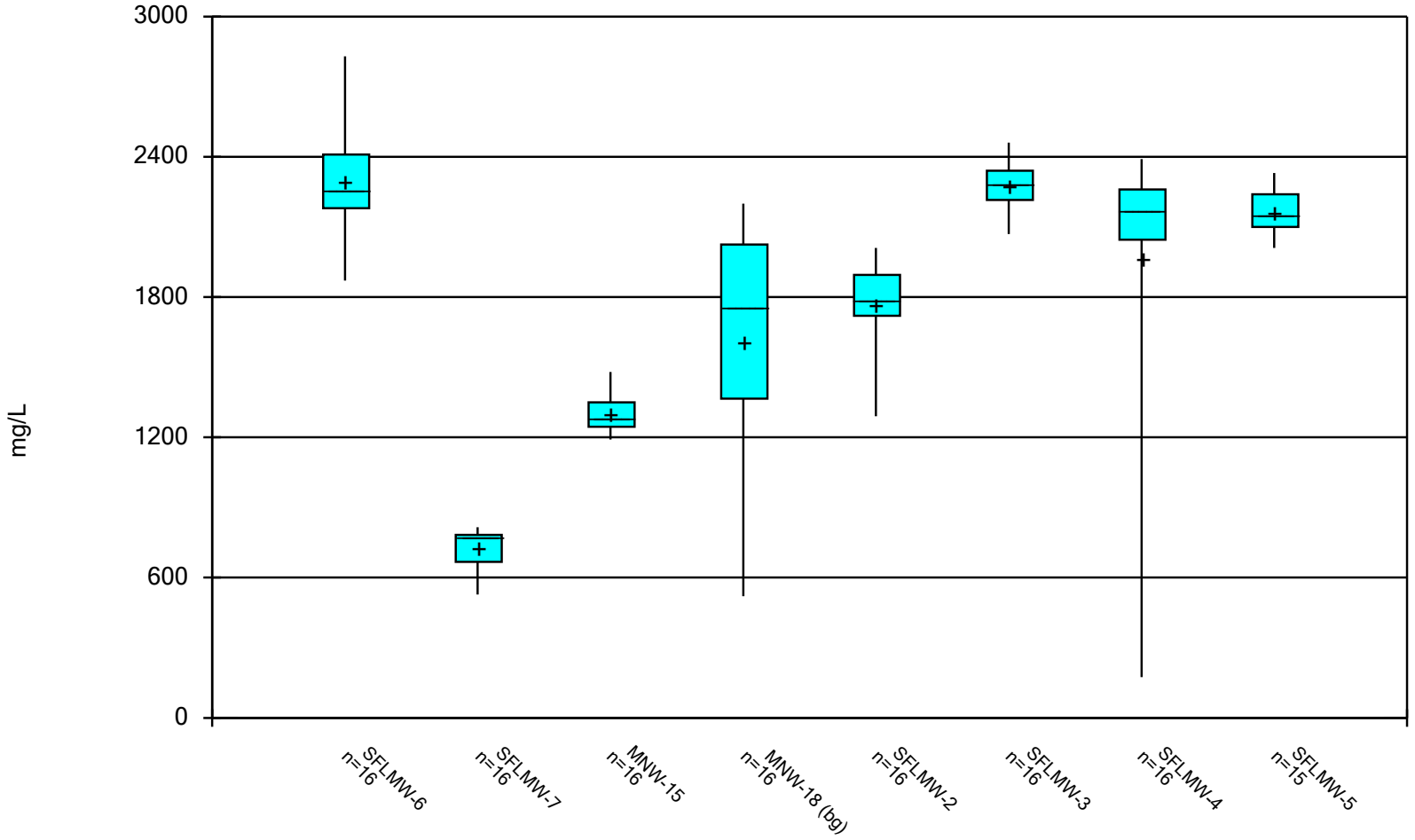
Box & Whiskers Plot



Constituent: Selenium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

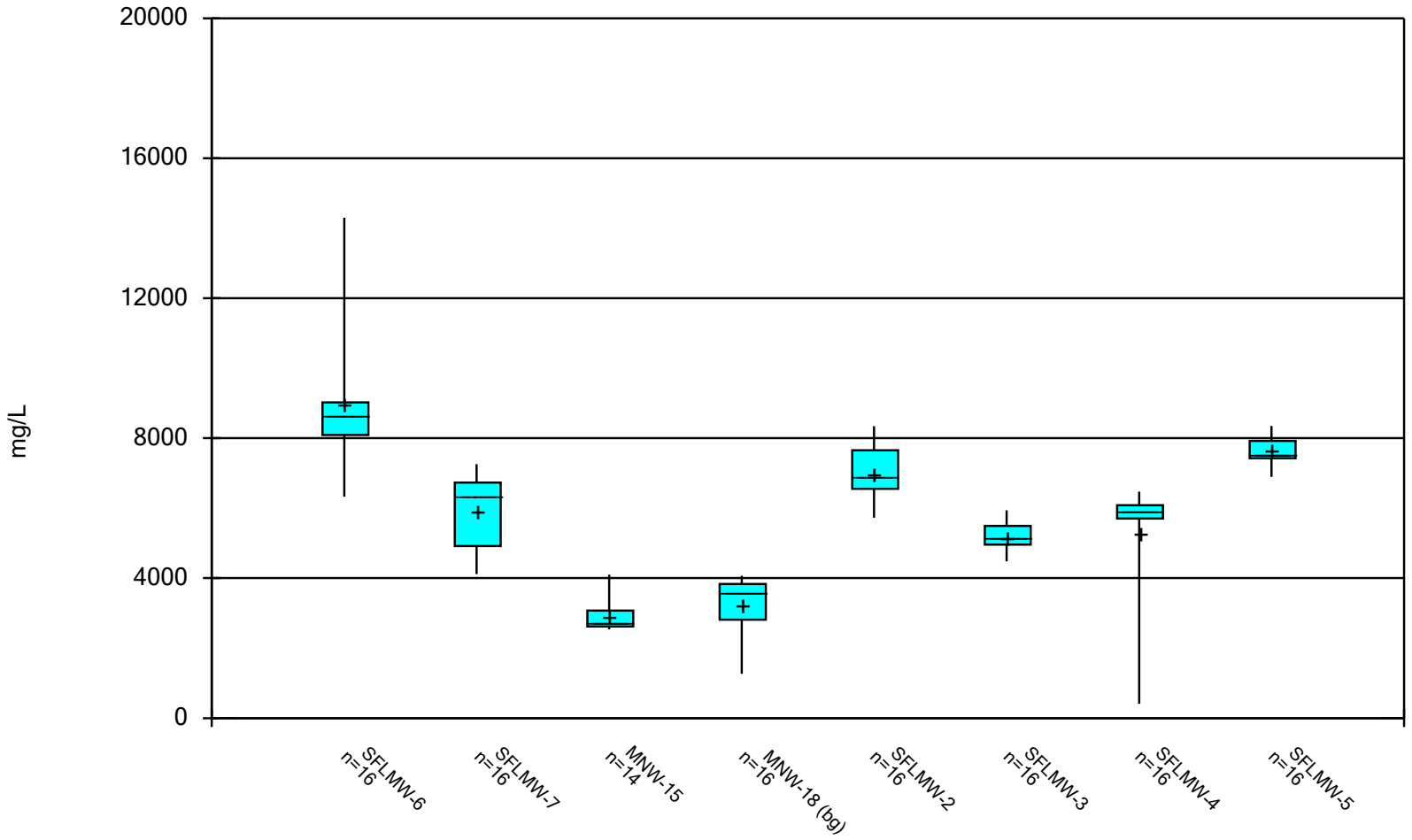
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

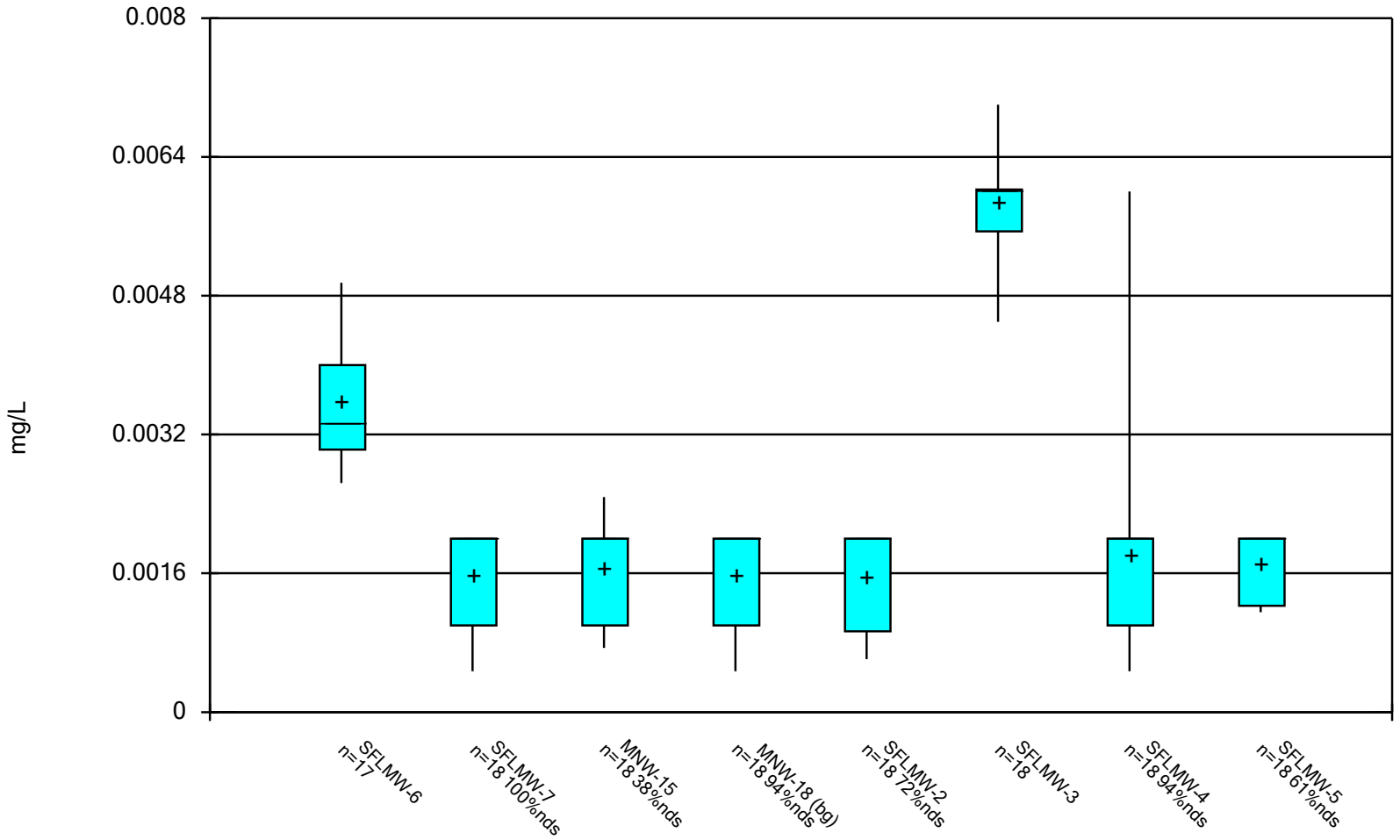
Box & Whiskers Plot



Constituent: TDS Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 1/23/2023 9:12 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:13 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	SFLMW-6	15	0.004139	0.002091	0.00054	0.006	0.00108	0.006	93.33
Antimony (mg/L)	SFLMW-7	15	0.003938	0.00236	0.0006094	0.006	0.000506	0.006	86.67
Antimony (mg/L)	MNW-15	15	0.0041	0.002156	0.0005566	0.006	0.000506	0.006	100
Antimony (mg/L)	MNW-18 (bg)	15	0.004189	0.00202	0.0005216	0.006	0.00184	0.006	93.33
Antimony (mg/L)	SFLMW-2	15	0.004131	0.002103	0.0005431	0.006	0.000968	0.006	93.33
Antimony (mg/L)	SFLMW-3	15	0.0041	0.002156	0.0005566	0.006	0.000506	0.006	100
Antimony (mg/L)	SFLMW-4	15	0.004034	0.002239	0.0005781	0.006	0.000534	0.006	86.67
Antimony (mg/L)	SFLMW-5	15	0.004145	0.002081	0.0005373	0.006	0.00118	0.006	93.33
Arsenic (mg/L)	SFLMW-6	15	0.01553	0.007505	0.001938	0.0125	0.00892	0.0351	26.67
Arsenic (mg/L)	SFLMW-7	15	0.005984	0.004568	0.00118	0.01	0.000282	0.01	93.33
Arsenic (mg/L)	MNW-15	14	0.009842	0.002077	0.0005551	0.01	0.00624	0.0153	57.14
Arsenic (mg/L)	MNW-18 (bg)	15	0.006375	0.004114	0.001062	0.01	0.001	0.01	66.67
Arsenic (mg/L)	SFLMW-2	15	0.006344	0.004131	0.001067	0.01	0.00147	0.01	60
Arsenic (mg/L)	SFLMW-3	15	0.008652	0.005437	0.001404	0.01	0.00303	0.025	60
Arsenic (mg/L)	SFLMW-4	15	0.00606	0.004472	0.001155	0.01	0.000786	0.01	80
Arsenic (mg/L)	SFLMW-5	15	0.007818	0.006186	0.001597	0.01	0.00145	0.025	60
Barium (mg/L)	SFLMW-6	13	0.0442	0.0146	0.004049	0.04	0.0247	0.08	0
Barium (mg/L)	SFLMW-7	14	0.0432	0.01859	0.004967	0.04	0.03	0.102	0
Barium (mg/L)	MNW-15	14	0.02082	0.005195	0.001388	0.02	0.0159	0.03	0
Barium (mg/L)	MNW-18 (bg)	14	0.0422	0.01947	0.005205	0.05	0.00404	0.06	7.143
Barium (mg/L)	SFLMW-2	14	0.02448	0.004205	0.001124	0.0235	0.02	0.03	0
Barium (mg/L)	SFLMW-3	15	0.03411	0.02586	0.006676	0.03	0.013	0.1	6.667
Barium (mg/L)	SFLMW-4	14	0.02611	0.005681	0.001518	0.02545	0.02	0.04	0
Barium (mg/L)	SFLMW-5	15	0.03432	0.02556	0.006601	0.0209	0.0157	0.1	6.667
Beryllium (mg/L)	SFLMW-6	17	0.05362	0.01168	0.002833	0.0503	0.0418	0.0933	0
Beryllium (mg/L)	SFLMW-7	18	0.002237	0.001187	0.0002798	0.003	0.000274	0.004	100
Beryllium (mg/L)	MNW-15	18	0.07724	0.009863	0.002325	0.0765	0.0606	0.0924	0
Beryllium (mg/L)	MNW-18 (bg)	18	0.002192	0.001251	0.0002949	0.003	0.000184	0.004	94.44
Beryllium (mg/L)	SFLMW-2	18	0.00334	0.00234	0.0005516	0.002235	0.001	0.00961	16.67
Beryllium (mg/L)	SFLMW-3	18	0.03508	0.003649	0.0008601	0.034	0.0289	0.042	0
Beryllium (mg/L)	SFLMW-4	18	0.002237	0.001187	0.0002798	0.003	0.000274	0.004	100
Beryllium (mg/L)	SFLMW-5	17	0.01026	0.001081	0.0002623	0.0101	0.008	0.0123	0
Boron (mg/L)	SFLMW-6	14	0.3576	0.0995	0.02659	0.365	0.16	0.554	0
Boron (mg/L)	SFLMW-7	15	0.7737	0.1135	0.0293	0.792	0.5	0.92	6.667
Boron (mg/L)	MNW-15	16	9.513	1.195	0.2988	9.32	8.3	12.8	0
Boron (mg/L)	MNW-18 (bg)	14	0.387	0.1202	0.03213	0.435	0.0451	0.54	0
Boron (mg/L)	SFLMW-2	14	0.5751	0.1182	0.03158	0.55	0.464	0.945	0
Boron (mg/L)	SFLMW-3	16	3.316	0.8302	0.2075	2.995	2.4	5	0
Boron (mg/L)	SFLMW-4	14	0.6475	0.07778	0.02079	0.629	0.55	0.809	0
Boron (mg/L)	SFLMW-5	16	4.161	0.8273	0.2068	4.1	2.8	6.04	0
Cadmium (mg/L)	SFLMW-6	18	0.01015	0.001908	0.0004497	0.0104	0.00497	0.013	0
Cadmium (mg/L)	SFLMW-7	18	0.003137	0.002155	0.000508	0.005	0.000217	0.005	94.44
Cadmium (mg/L)	MNW-15	18	0.07163	0.02932	0.006911	0.0883	0.0269	0.116	0
Cadmium (mg/L)	MNW-18 (bg)	18	0.003179	0.002103	0.0004956	0.005	0.000217	0.005	100
Cadmium (mg/L)	SFLMW-2	18	0.003644	0.00169	0.0003984	0.005	0.000649	0.005	61.11
Cadmium (mg/L)	SFLMW-3	18	0.007108	0.001262	0.0002975	0.00695	0.00552	0.01	0
Cadmium (mg/L)	SFLMW-4	18	0.003179	0.002103	0.0004956	0.005	0.000217	0.005	100
Cadmium (mg/L)	SFLMW-5	18	0.004957	0.0005342	0.0001259	0.005	0.00385	0.006	33.33
Calcium (mg/L)	SFLMW-6	16	978.2	194.5	48.62	933	800	1510	0
Calcium (mg/L)	SFLMW-7	16	579.9	99.44	24.86	616.5	395	693	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:13 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Calcium (mg/L)	MNW-15	16	281.7	31.6	7.901	270.5	244	337	0
Calcium (mg/L)	MNW-18 (bg)	15	327.8	121.8	31.45	330	0.25	447	6.667
Calcium (mg/L)	SFLMW-2	16	808.3	126.1	31.53	817.5	578	946	0
Calcium (mg/L)	SFLMW-3	16	629.1	58.17	14.54	616	520	735	0
Calcium (mg/L)	SFLMW-4	16	681.2	220.7	55.19	746	48.9	858	0
Calcium (mg/L)	SFLMW-5	16	848.9	58.72	14.68	860.5	715	944	0
Chloride (mg/L)	SFLMW-6	16	3801	875.2	218.8	3565	3240	6800	0
Chloride (mg/L)	SFLMW-7	16	2559	382	95.51	2755	1900	2880	0
Chloride (mg/L)	MNW-15	16	672.3	55.3	13.82	678.5	578	740	0
Chloride (mg/L)	MNW-18 (bg)	16	452.6	129.6	32.4	512.5	146	590	0
Chloride (mg/L)	SFLMW-2	16	2786	343.5	85.88	2800	2100	3290	0
Chloride (mg/L)	SFLMW-3	16	1219	266.4	66.6	1265	794	1560	0
Chloride (mg/L)	SFLMW-4	15	1592	301.2	77.77	1680	556	1760	0
Chloride (mg/L)	SFLMW-5	15	3010	136.7	35.29	3010	2680	3190	0
Chromium (mg/L)	SFLMW-6	15	0.008262	0.002571	0.0006638	0.01	0.002	0.011	46.67
Chromium (mg/L)	SFLMW-7	15	0.006435	0.004019	0.001038	0.01	0.00153	0.01	100
Chromium (mg/L)	MNW-15	15	0.01016	0.01375	0.00355	0.01	0.00153	0.0579	93.33
Chromium (mg/L)	MNW-18 (bg)	15	0.006746	0.003789	0.0009783	0.01	0.00153	0.01	86.67
Chromium (mg/L)	SFLMW-2	15	0.006435	0.004019	0.001038	0.01	0.00153	0.01	100
Chromium (mg/L)	SFLMW-3	15	0.006462	0.003989	0.00103	0.01	0.00153	0.01	93.33
Chromium (mg/L)	SFLMW-4	15	0.006555	0.003903	0.001008	0.01	0.00153	0.01	93.33
Chromium (mg/L)	SFLMW-5	13	0.007268	0.003674	0.001019	0.01	0.00181	0.01	76.92
Cobalt (mg/L)	SFLMW-6	17	0.1202	0.03231	0.007836	0.111	0.1	0.242	0
Cobalt (mg/L)	SFLMW-7	18	0.009764	0.009518	0.002243	0.005	0.000261	0.02	100
Cobalt (mg/L)	MNW-15	18	0.3022	0.03106	0.007321	0.2985	0.253	0.359	0
Cobalt (mg/L)	MNW-18 (bg)	18	0.009913	0.009375	0.00221	0.005	0.000261	0.02	83.33
Cobalt (mg/L)	SFLMW-2	18	0.01952	0.01087	0.002562	0.02	0.0103	0.06	16.67
Cobalt (mg/L)	SFLMW-3	18	0.06511	0.01074	0.002533	0.0618	0.053	0.1	0
Cobalt (mg/L)	SFLMW-4	18	0.01088	0.0117	0.002758	0.005	0.000261	0.04	94.44
Cobalt (mg/L)	SFLMW-5	18	0.0512	0.006793	0.001601	0.05	0.0398	0.07	0
Fluoride (mg/L)	SFLMW-6	17	0.8458	0.1745	0.04233	0.8	0.527	1.08	29.41
Fluoride (mg/L)	SFLMW-7	18	0.4588	0.6395	0.1507	0.1	0.0599	2.62	66.67
Fluoride (mg/L)	MNW-15	18	0.6269	0.1916	0.04516	0.5	0.4	1.04	11.11
Fluoride (mg/L)	MNW-18 (bg)	17	0.2732	0.2779	0.0674	0.2	0.1	1	23.53
Fluoride (mg/L)	SFLMW-2	18	0.631	0.6943	0.1636	0.3	0.1	3.06	27.78
Fluoride (mg/L)	SFLMW-3	18	0.7064	0.2636	0.06213	0.6	0.427	1.49	16.67
Fluoride (mg/L)	SFLMW-4	18	0.4557	0.4496	0.106	0.3075	0.1	1.7	61.11
Fluoride (mg/L)	SFLMW-5	18	0.7822	1.332	0.3139	0.2	0.122	5.89	33.33
Lead (mg/L)	SFLMW-6	18	0.01313	0.01209	0.002849	0.01	0.005	0.06	44.44
Lead (mg/L)	SFLMW-7	18	0.005366	0.004471	0.001054	0.005	0.000167	0.01	88.89
Lead (mg/L)	MNW-15	17	0.005254	0.004314	0.001046	0.005	0.000404	0.01	64.71
Lead (mg/L)	MNW-18 (bg)	18	0.005408	0.004423	0.001042	0.005	0.000167	0.01	88.89
Lead (mg/L)	SFLMW-2	18	0.005435	0.004394	0.001036	0.005	0.000199	0.01	77.78
Lead (mg/L)	SFLMW-3	18	0.02259	0.005442	0.001283	0.0196	0.0177	0.03	0
Lead (mg/L)	SFLMW-4	18	0.005454	0.00437	0.00103	0.005	0.000167	0.01	100
Lead (mg/L)	SFLMW-5	17	0.005682	0.004393	0.001066	0.005	0.000527	0.01	70.59
Lithium (mg/L)	SFLMW-6	18	0.7388	0.1855	0.04372	0.6995	0.55	1.34	0
Lithium (mg/L)	SFLMW-7	18	0.4228	0.03757	0.008855	0.419	0.37	0.5	0
Lithium (mg/L)	MNW-15	17	0.08611	0.02336	0.005665	0.09	0.05	0.113	5.882
Lithium (mg/L)	MNW-18 (bg)	15	0.3917	0.06564	0.01695	0.403	0.213	0.48	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:13 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Lithium (mg/L)	SFLMW-2	18	0.4813	0.07123	0.01679	0.4815	0.33	0.6	0
Lithium (mg/L)	SFLMW-3	18	0.3252	0.07225	0.01703	0.303	0.2	0.47	5.556
Lithium (mg/L)	SFLMW-4	18	0.3978	0.134	0.03159	0.419	0.02	0.58	0
Lithium (mg/L)	SFLMW-5	18	0.7209	0.1129	0.02661	0.681	0.594	0.99	0
Mercury (mg/L)	SFLMW-6	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Mercury (mg/L)	SFLMW-7	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Mercury (mg/L)	MNW-15	17	0.000...	0.0004009	0.0000...	0.000942	0.00013	0.001	82.35
Mercury (mg/L)	MNW-18 (bg)	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Mercury (mg/L)	SFLMW-2	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Mercury (mg/L)	SFLMW-3	18	0.002162	0.0006875	0.000162	0.002	0.001	0.00338	0
Mercury (mg/L)	SFLMW-4	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Mercury (mg/L)	SFLMW-5	18	0.000...	0.0004129	0.0000...	0.0002	0.00013	0.001	100
Molybdenum (mg/L)	SFLMW-6	15	0.02904	0.02326	0.006006	0.05	0.00061	0.05	100
Molybdenum (mg/L)	SFLMW-7	15	0.02882	0.02352	0.006072	0.05	0.00061	0.05	93.33
Molybdenum (mg/L)	MNW-15	15	0.02904	0.02326	0.006006	0.05	0.00061	0.05	100
Molybdenum (mg/L)	MNW-18 (bg)	15	0.02904	0.02326	0.006006	0.05	0.00061	0.05	100
Molybdenum (mg/L)	SFLMW-2	15	0.0289	0.02341	0.006045	0.05	0.00155	0.05	86.67
Molybdenum (mg/L)	SFLMW-3	15	0.02904	0.02326	0.006006	0.05	0.00061	0.05	100
Molybdenum (mg/L)	SFLMW-4	15	0.0285	0.02388	0.006166	0.05	0.00106	0.05	73.33
Molybdenum (mg/L)	SFLMW-5	15	0.02886	0.02347	0.006061	0.05	0.00103	0.05	86.67
pH (S.U.)	SFLMW-6	17	3.993	0.1611	0.03907	3.95	3.76	4.4	0
pH (S.U.)	SFLMW-7	16	6.393	0.2246	0.05614	6.355	6.01	6.79	0
pH (S.U.)	MNW-15	17	3.527	0.1536	0.03725	3.53	3.21	3.78	0
pH (S.U.)	MNW-18 (bg)	17	6.82	0.2719	0.06594	6.77	6.41	7.39	0
pH (S.U.)	SFLMW-2	17	6.261	0.3768	0.09138	6.32	5.58	6.8	0
pH (S.U.)	SFLMW-3	17	3.726	0.1359	0.03297	3.79	3.45	3.9	0
pH (S.U.)	SFLMW-4	17	6.246	0.2592	0.06287	6.18	5.82	6.91	0
pH (S.U.)	SFLMW-5	17	4.578	0.2511	0.0609	4.49	4.24	5.1	0
Radium 226 + 228 (pCi/L)	SFLMW-6	18	13.27	6.53	1.539	11.7	3.9	28.8	0
Radium 226 + 228 (pCi/L)	SFLMW-7	18	2.469	0.6916	0.163	2.33	1.4	4.4	0
Radium 226 + 228 (pCi/L)	MNW-15	18	0.8136	0.582	0.1372	0.598	0.167	2.1	0
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	18	4.305	2.037	0.4801	4.6	0.47	7.6	0
Radium 226 + 228 (pCi/L)	SFLMW-2	18	8.997	3.37	0.7943	8.16	6.53	20.6	0
Radium 226 + 228 (pCi/L)	SFLMW-3	17	5.522	1.805	0.4378	5	3.04	10	0
Radium 226 + 228 (pCi/L)	SFLMW-4	18	2.257	1.674	0.3947	1.655	0.4	6.85	5.556
Radium 226 + 228 (pCi/L)	SFLMW-5	17	11.18	1.636	0.3969	11.5	7.52	13.6	0
Selenium (mg/L)	SFLMW-6	15	0.01422	0.01564	0.004039	0.01	0.000739	0.0525	66.67
Selenium (mg/L)	SFLMW-7	15	0.008383	0.004404	0.001137	0.01	0.000739	0.02	86.67
Selenium (mg/L)	MNW-15	15	0.02128	0.02771	0.007156	0.01	0.000739	0.109	73.33
Selenium (mg/L)	MNW-18 (bg)	15	0.007716	0.003077	0.0007944	0.01	0.000739	0.01	93.33
Selenium (mg/L)	SFLMW-2	15	0.007716	0.003077	0.0007944	0.01	0.000739	0.01	100
Selenium (mg/L)	SFLMW-3	15	0.01373	0.01358	0.003507	0.01	0.00117	0.05	80
Selenium (mg/L)	SFLMW-4	15	0.007716	0.003077	0.0007944	0.01	0.000739	0.01	100
Selenium (mg/L)	SFLMW-5	15	0.01071	0.01127	0.00291	0.01	0.000739	0.05	93.33
Sulfate (mg/L)	SFLMW-6	16	2288	219.1	54.78	2250	1870	2830	0
Sulfate (mg/L)	SFLMW-7	16	724.1	87.56	21.89	769	528	816	0
Sulfate (mg/L)	MNW-15	16	1299	82.29	20.57	1275	1190	1480	0
Sulfate (mg/L)	MNW-18 (bg)	16	1611	506.4	126.6	1755	520	2200	0
Sulfate (mg/L)	SFLMW-2	16	1766	211.9	52.97	1790	1290	2010	0
Sulfate (mg/L)	SFLMW-3	16	2274	107	26.75	2280	2070	2460	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:13 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Sulfate (mg/L)	SFLMW-4	16	1964	602.6	150.7	2170	174	2390	0
Sulfate (mg/L)	SFLMW-5	15	2165	88.23	22.78	2150	2010	2330	0
TDS (mg/L)	SFLMW-6	16	8992	1959	489.7	8645	6330	14300	0
TDS (mg/L)	SFLMW-7	16	5910	1094	273.6	6345	4120	7260	0
TDS (mg/L)	MNW-15	14	2876	406.1	108.5	2710	2540	4100	0
TDS (mg/L)	MNW-18 (bg)	16	3194	885.8	221.5	3565	1270	4070	0
TDS (mg/L)	SFLMW-2	16	6985	779.9	195	6885	5730	8340	0
TDS (mg/L)	SFLMW-3	16	5184	388.9	97.22	5155	4480	5940	0
TDS (mg/L)	SFLMW-4	16	5280	1789	447.2	5875	411	6470	0
TDS (mg/L)	SFLMW-5	16	7631	364.4	91.11	7535	6890	8350	0
Thallium (mg/L)	SFLMW-6	17	0.003589	0.0006726	0.0001631	0.00333	0.00264	0.00495	0
Thallium (mg/L)	SFLMW-7	18	0.001582	0.0005523	0.0001302	0.002	0.000472	0.002	100
Thallium (mg/L)	MNW-15	18	0.001653	0.0005991	0.0001412	0.002	0.000739	0.00248	38.89
Thallium (mg/L)	MNW-18 (bg)	18	0.001582	0.0005523	0.0001302	0.002	0.000472	0.002	94.44
Thallium (mg/L)	SFLMW-2	18	0.00155	0.0005899	0.000139	0.002	0.000612	0.002	72.22
Thallium (mg/L)	SFLMW-3	18	0.005888	0.000567	0.0001337	0.006	0.0045	0.007	0
Thallium (mg/L)	SFLMW-4	18	0.001804	0.001179	0.000278	0.002	0.000472	0.006	94.44
Thallium (mg/L)	SFLMW-5	18	0.001701	0.0003888	0.0000...	0.002	0.00115	0.002	61.11

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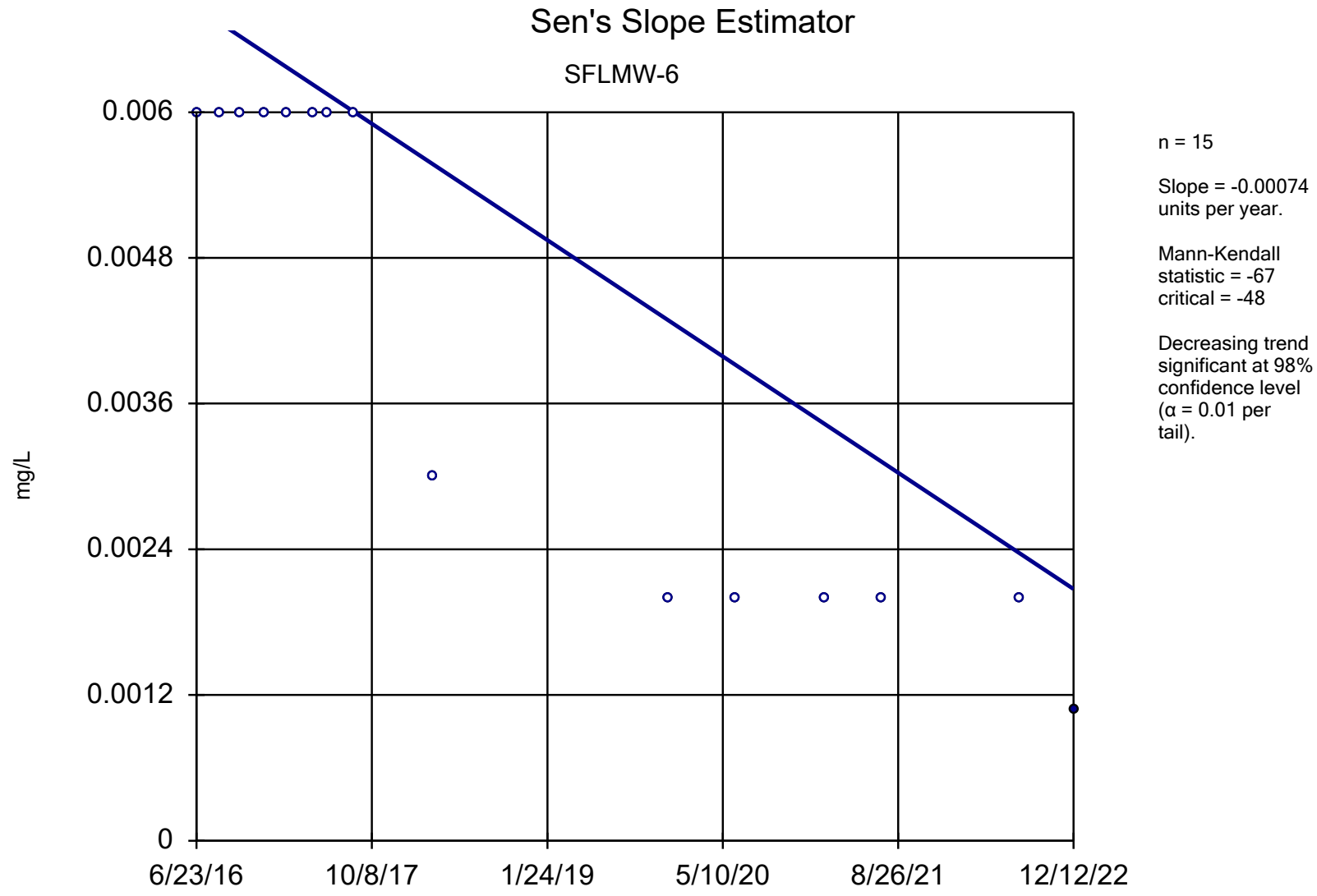
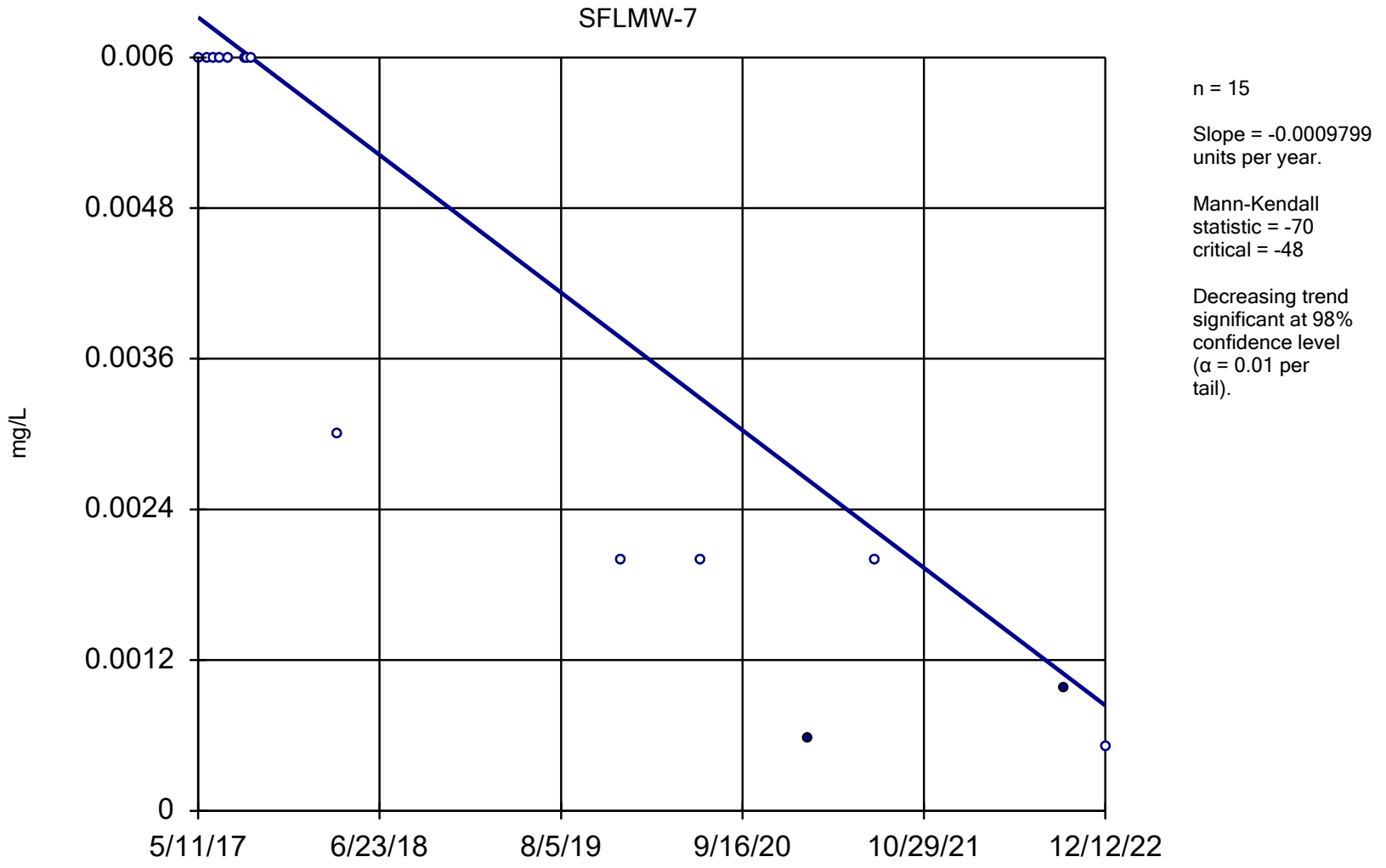


Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

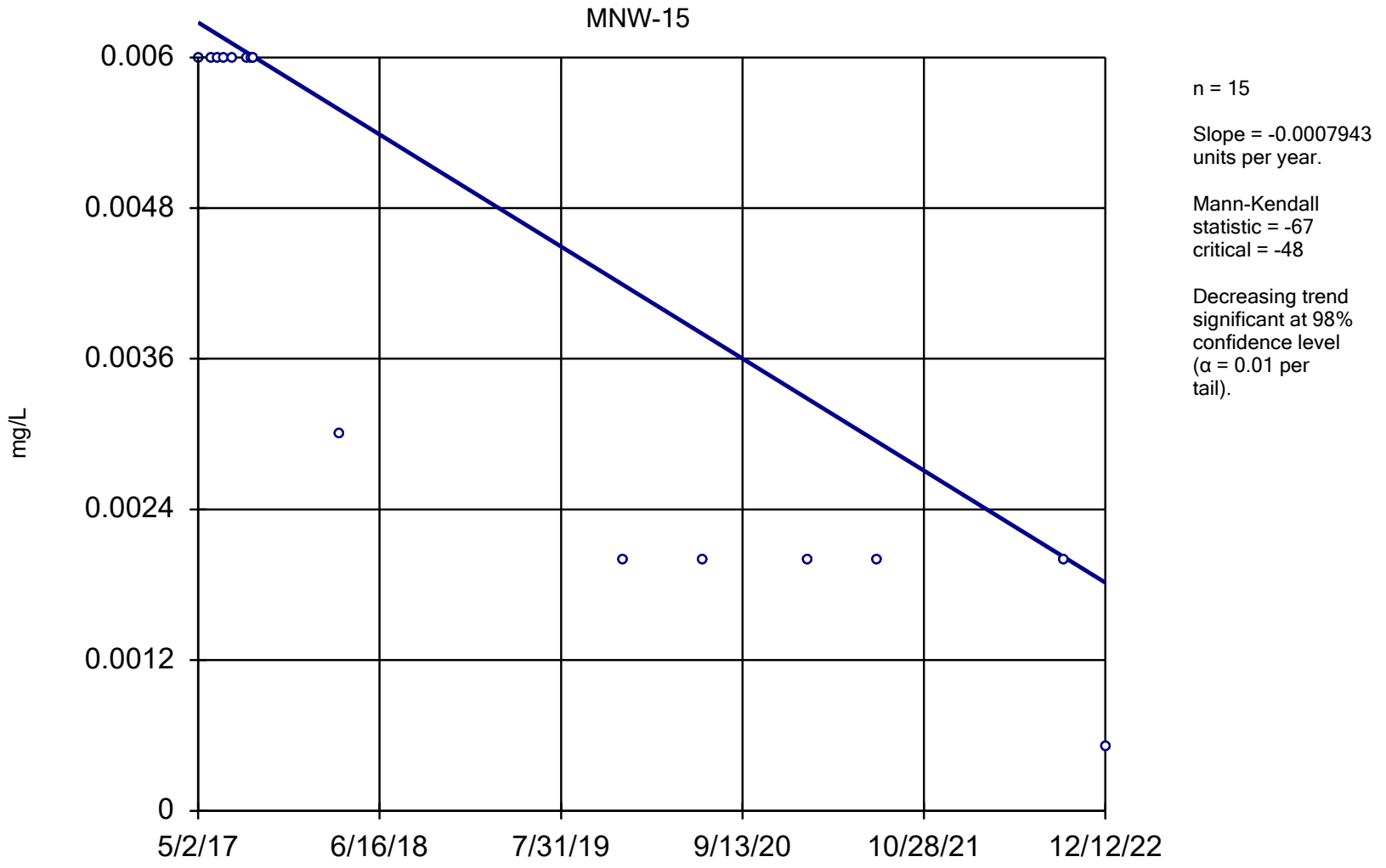


Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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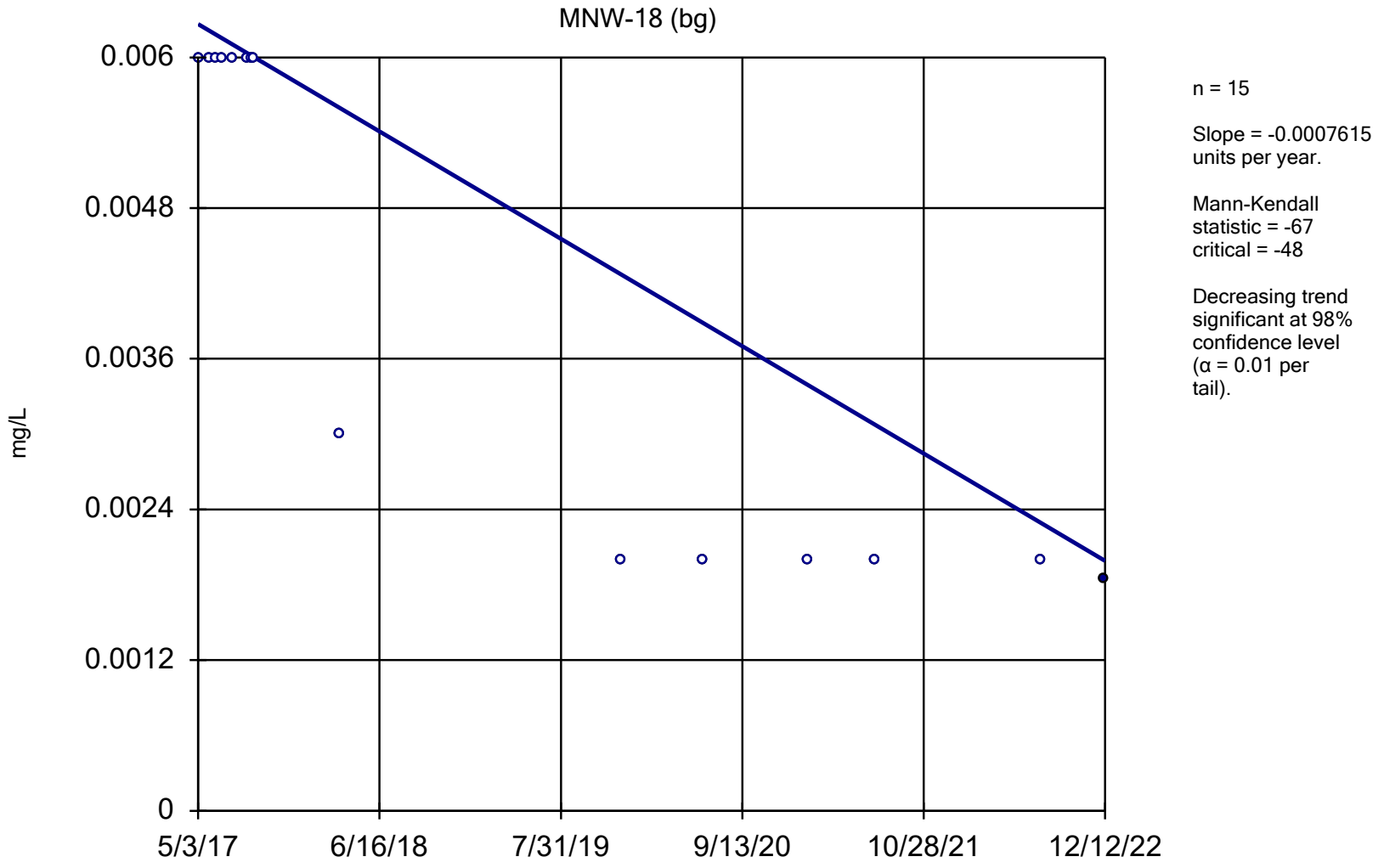
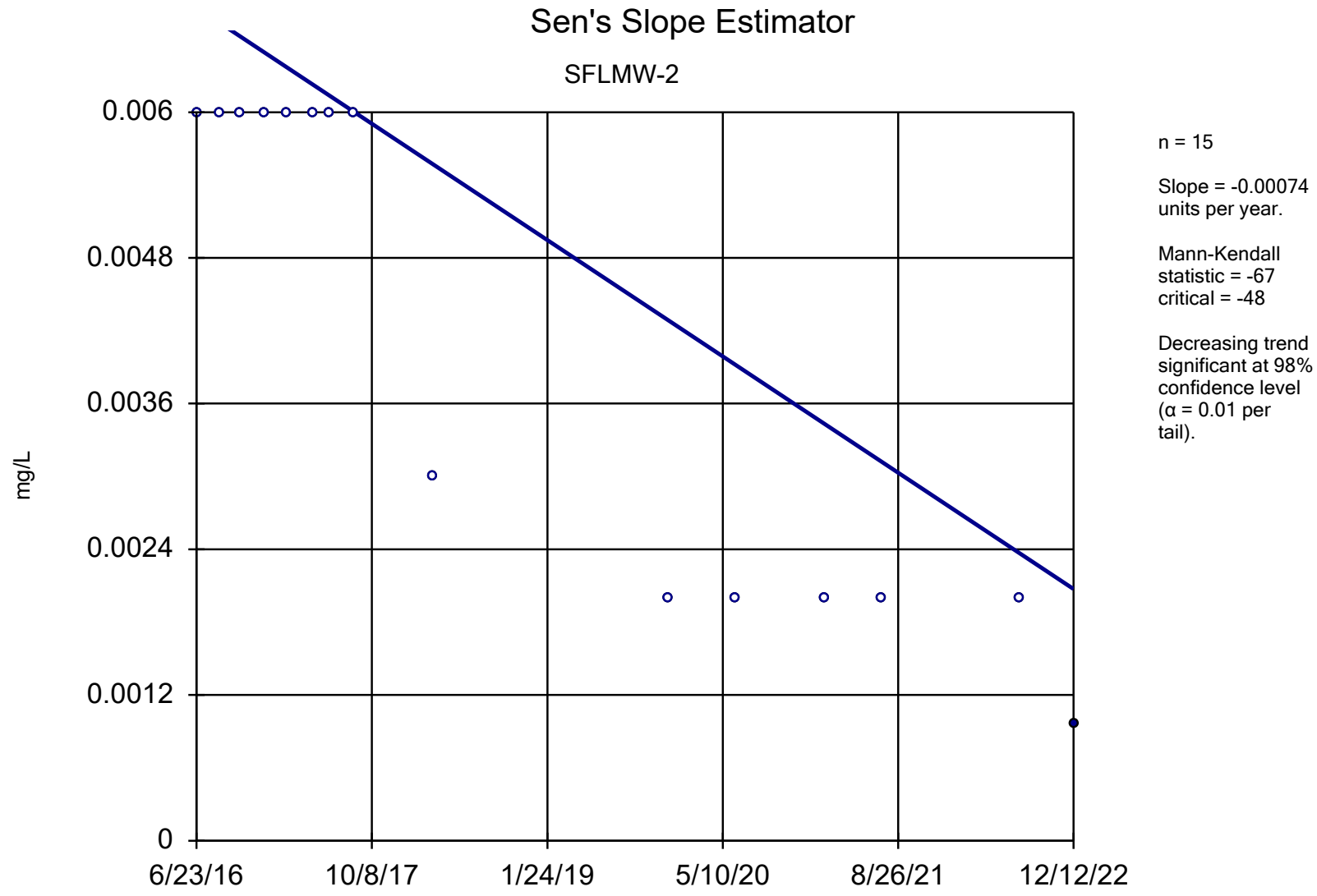
Sen's Slope Estimator



Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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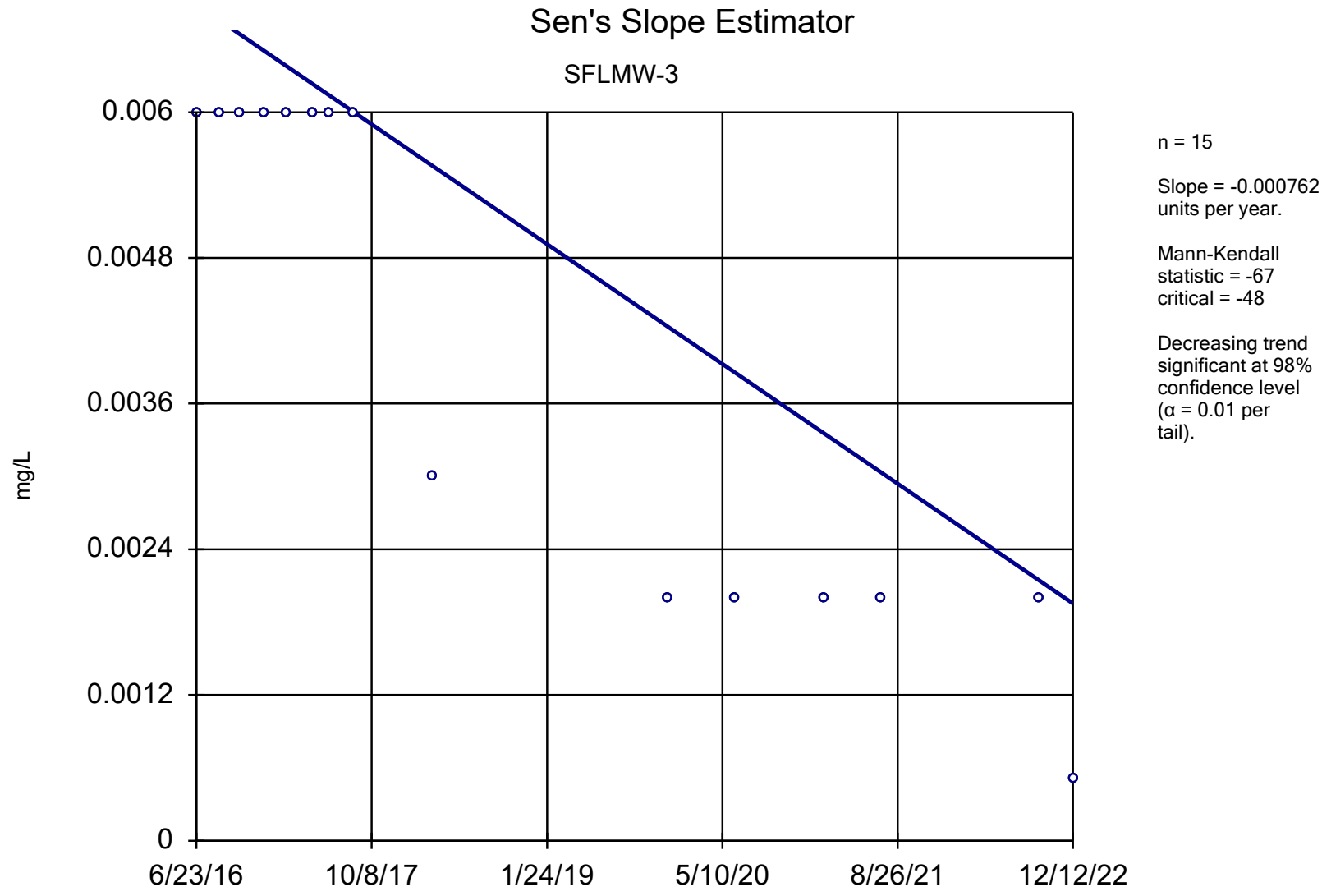
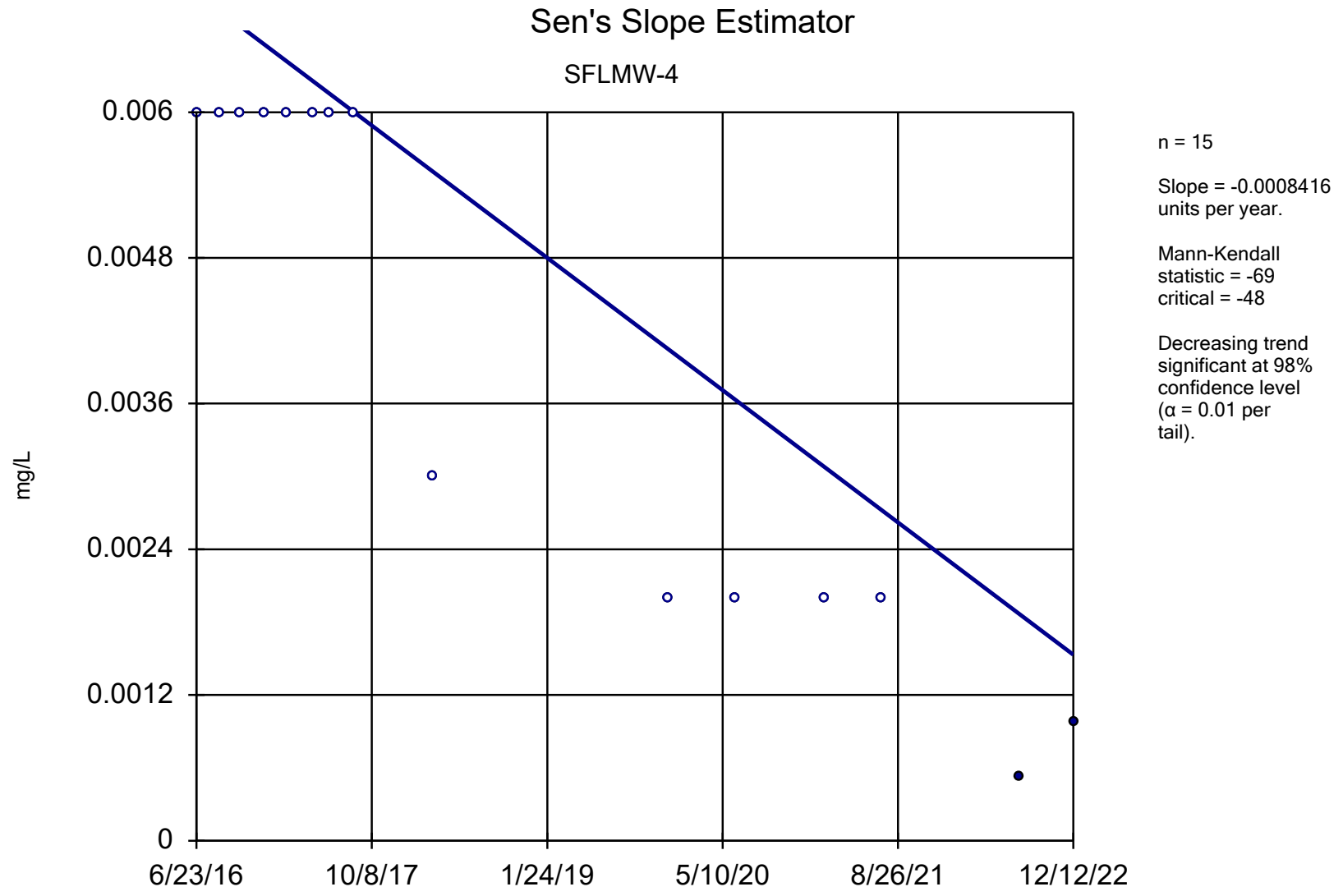


Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

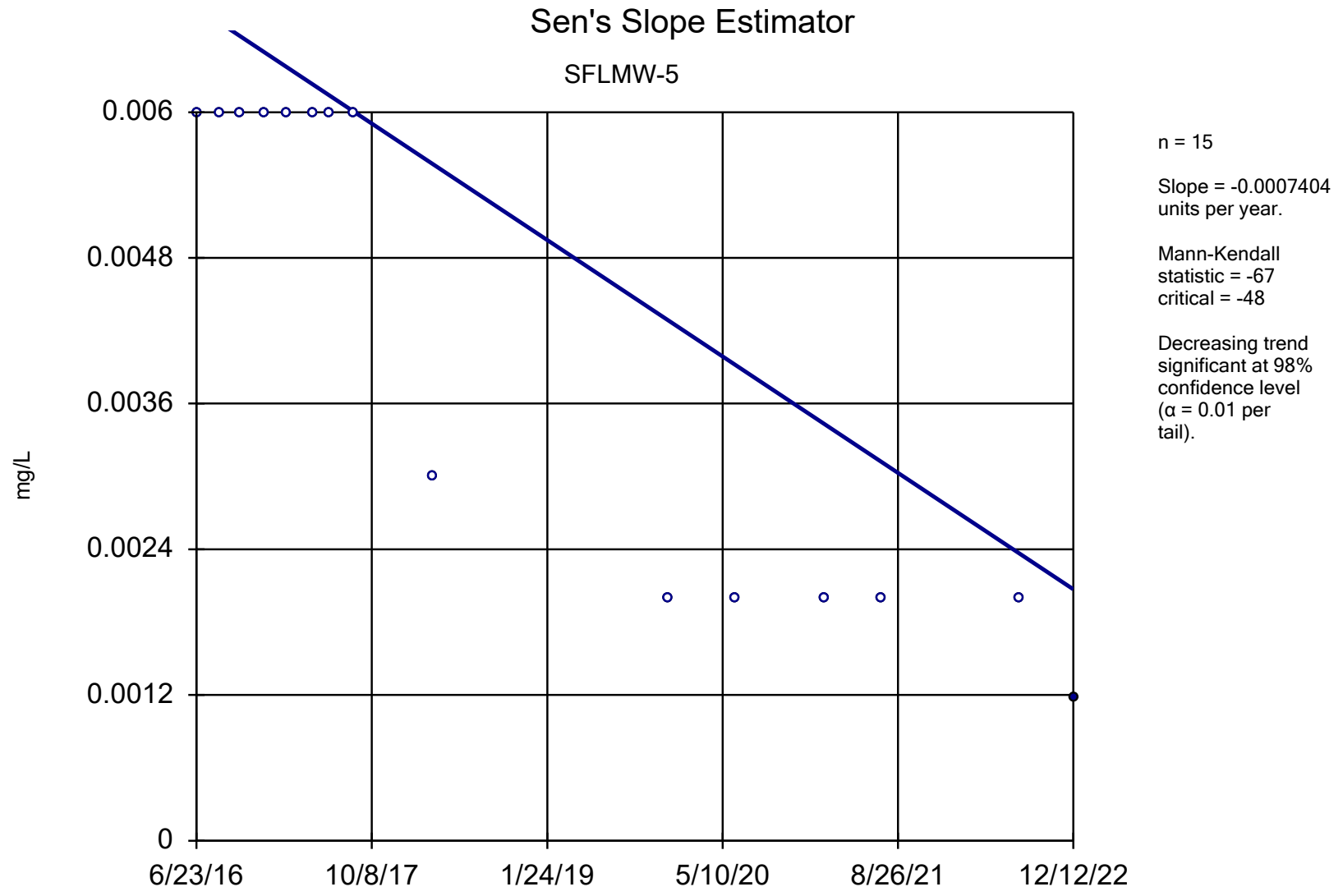
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

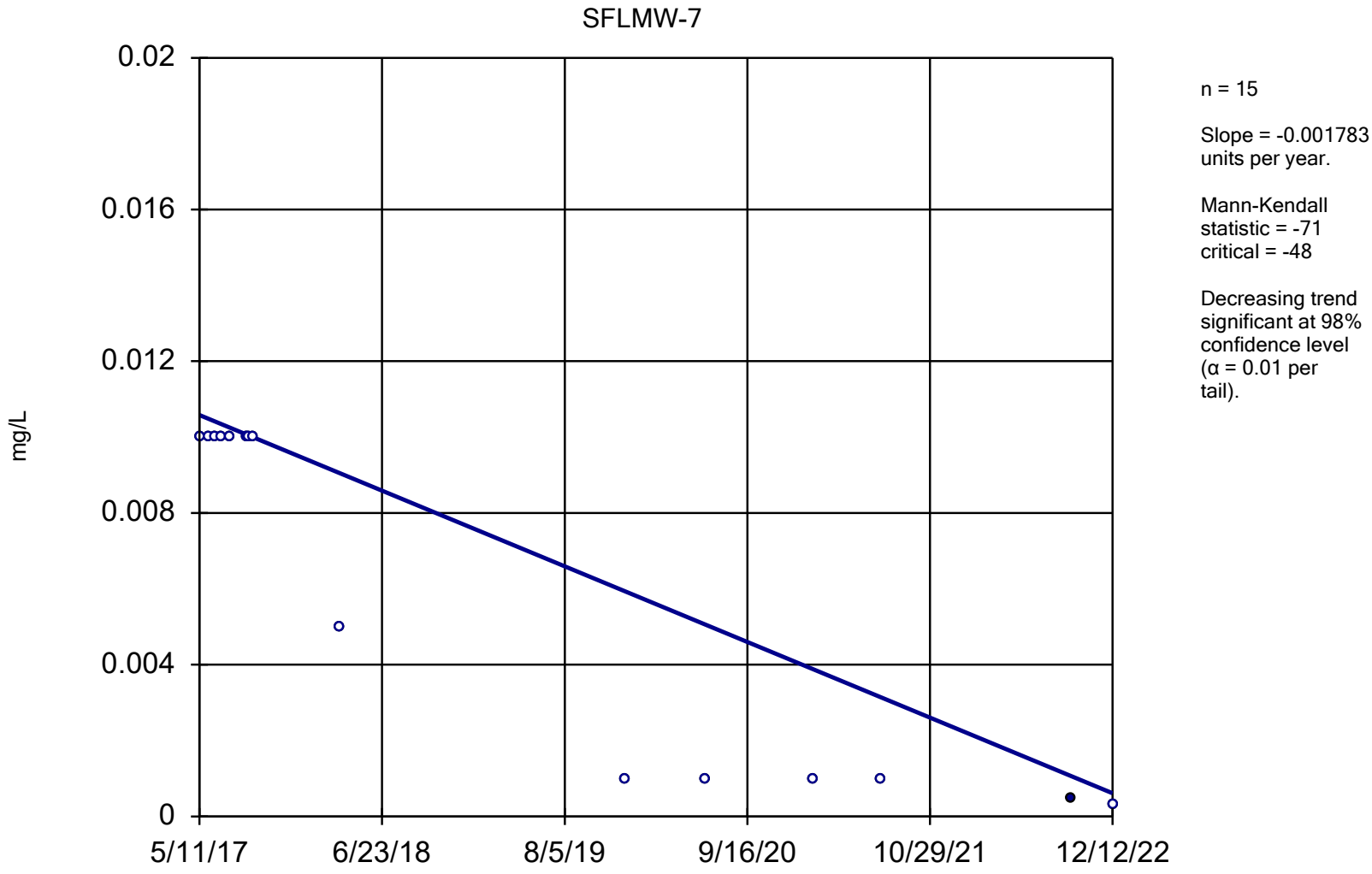


Constituent: Antimony Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

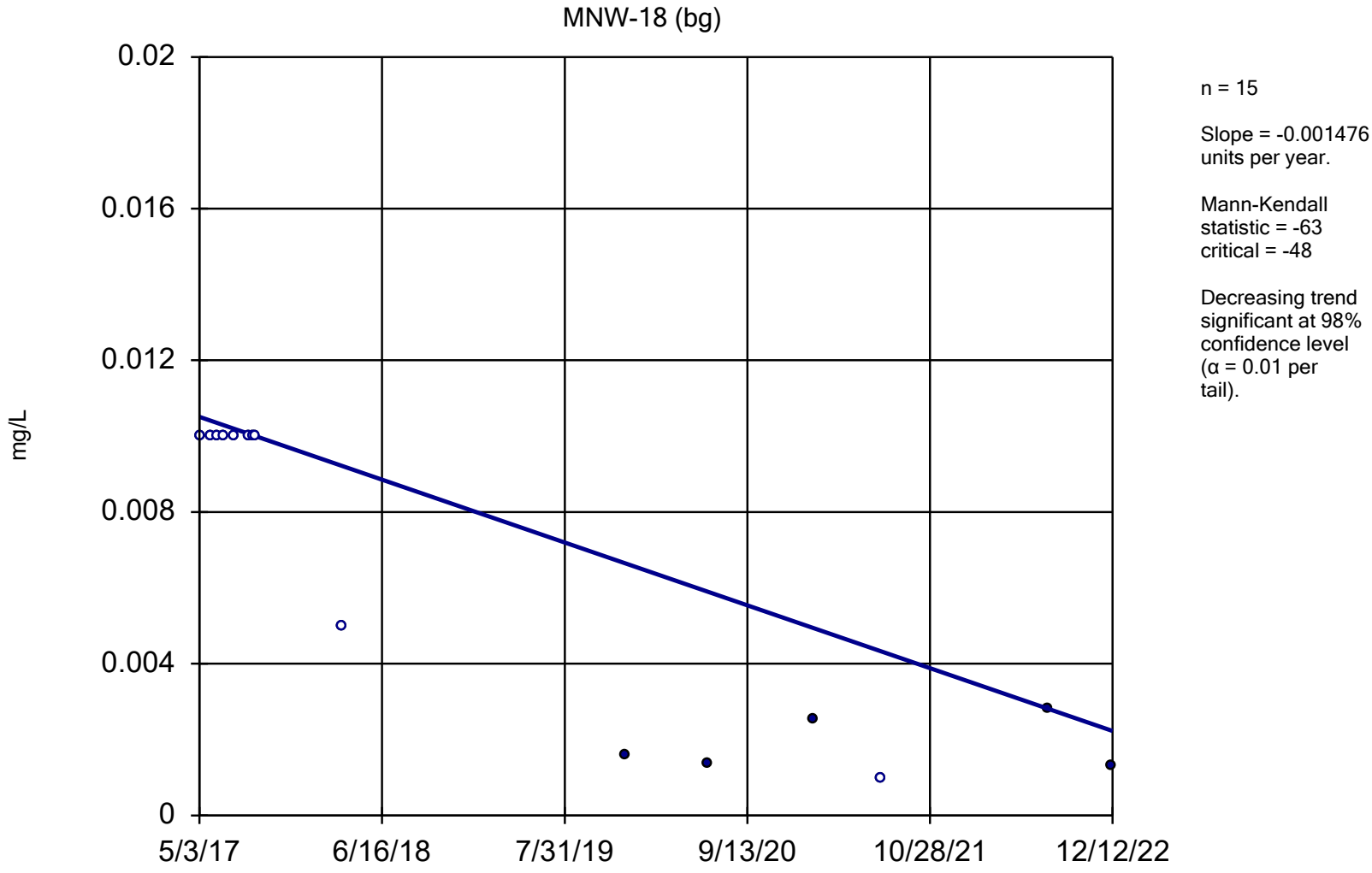


Constituent: Arsenic Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



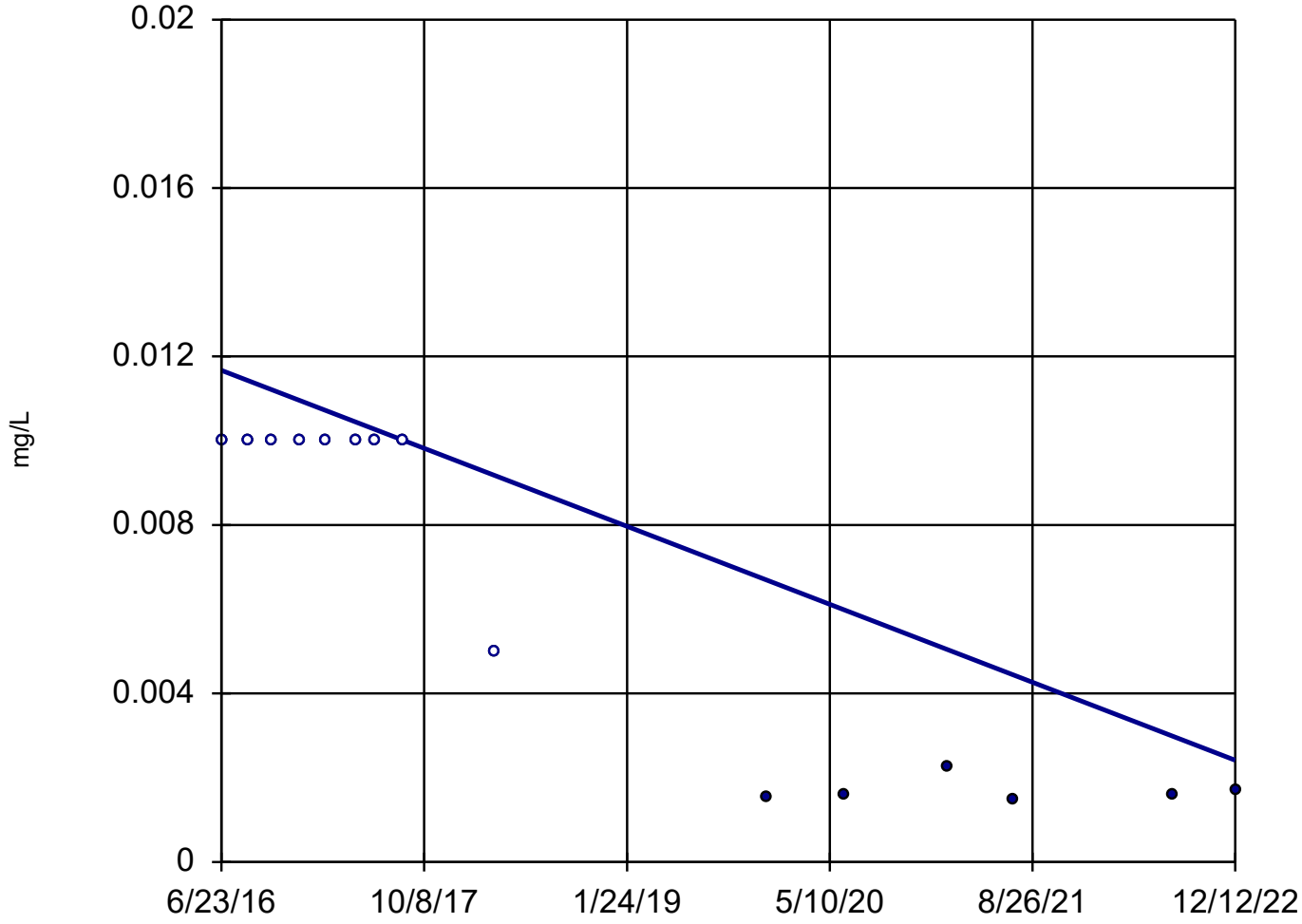
Constituent: Arsenic Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 15

Slope = -0.00143 units per year.

Mann-Kendall statistic = -57
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

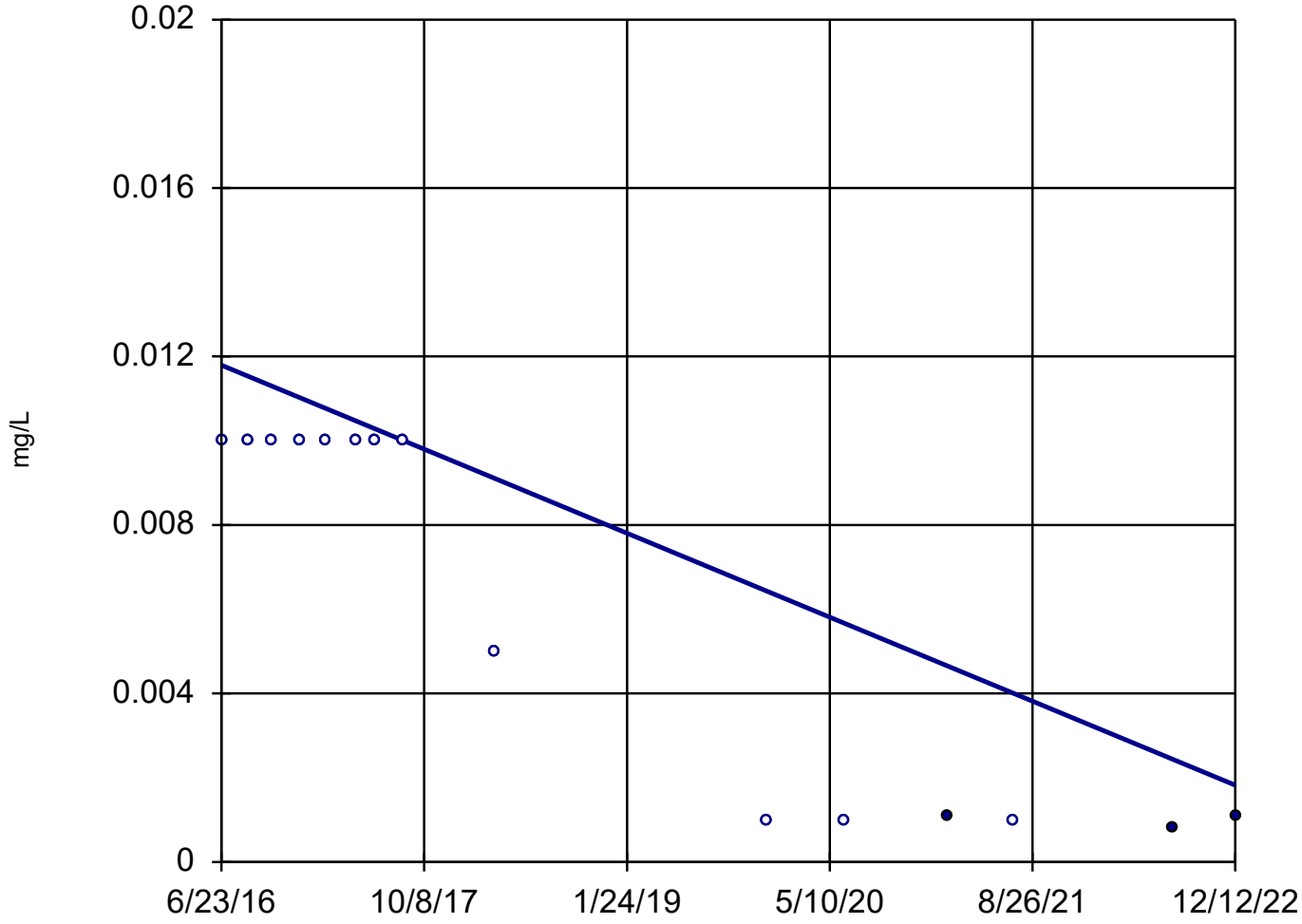
Constituent: Arsenic Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 15

Slope = -0.00154 units per year.

Mann-Kendall statistic = -61
critical = -48

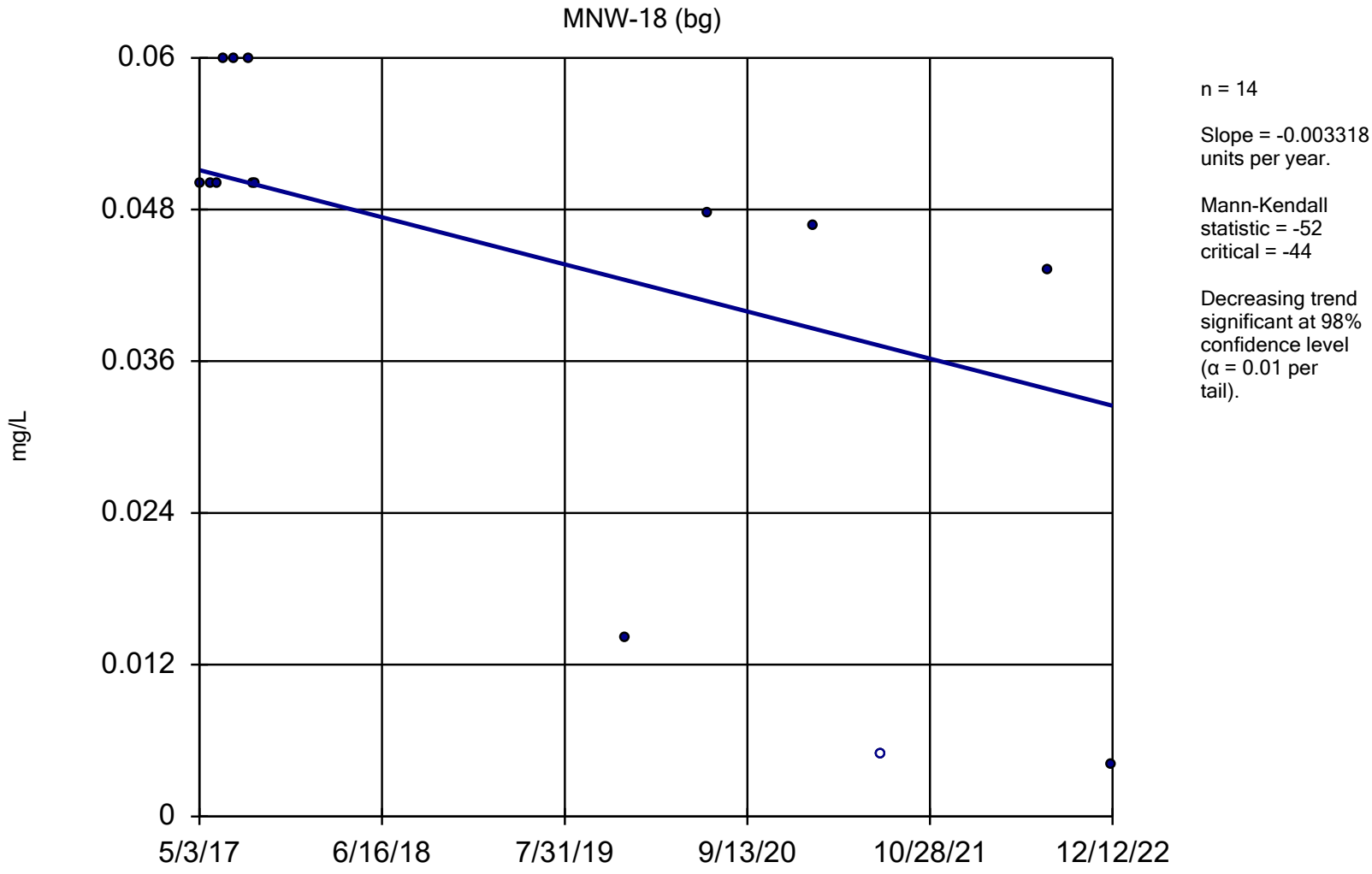
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Arsenic Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



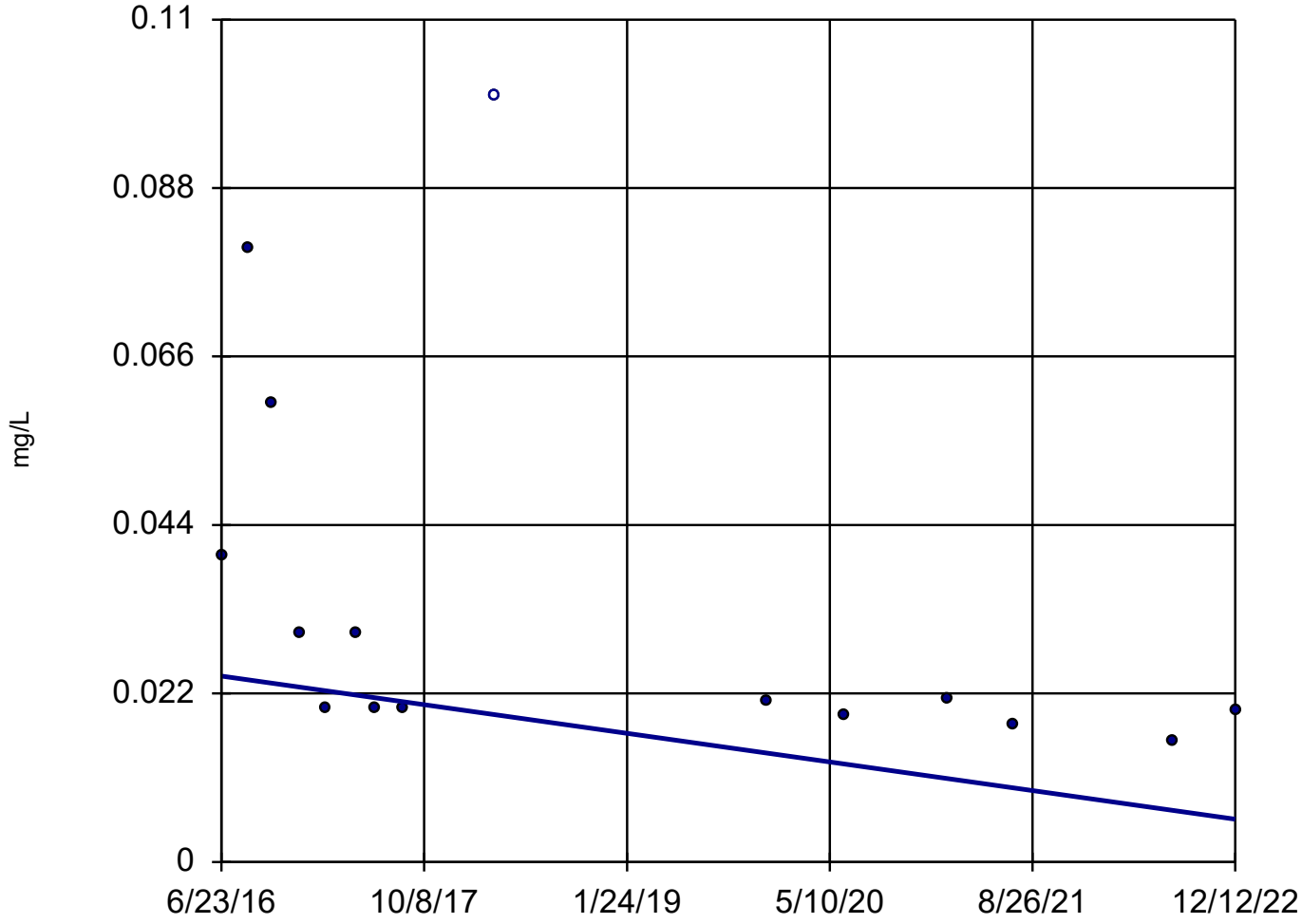
Constituent: Barium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 15

Slope = -0.002883 units per year.

Mann-Kendall statistic = -57
critical = -48

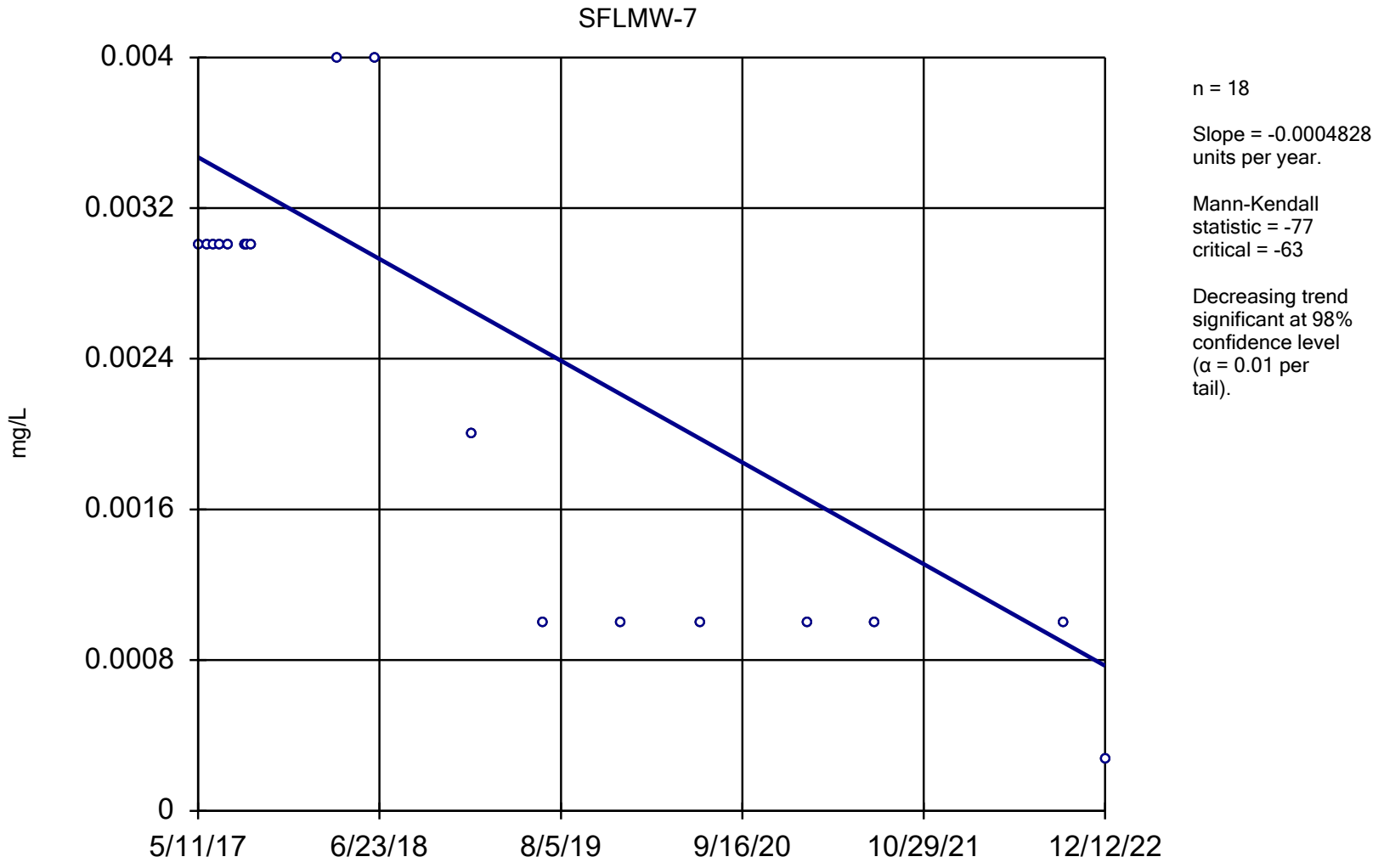
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

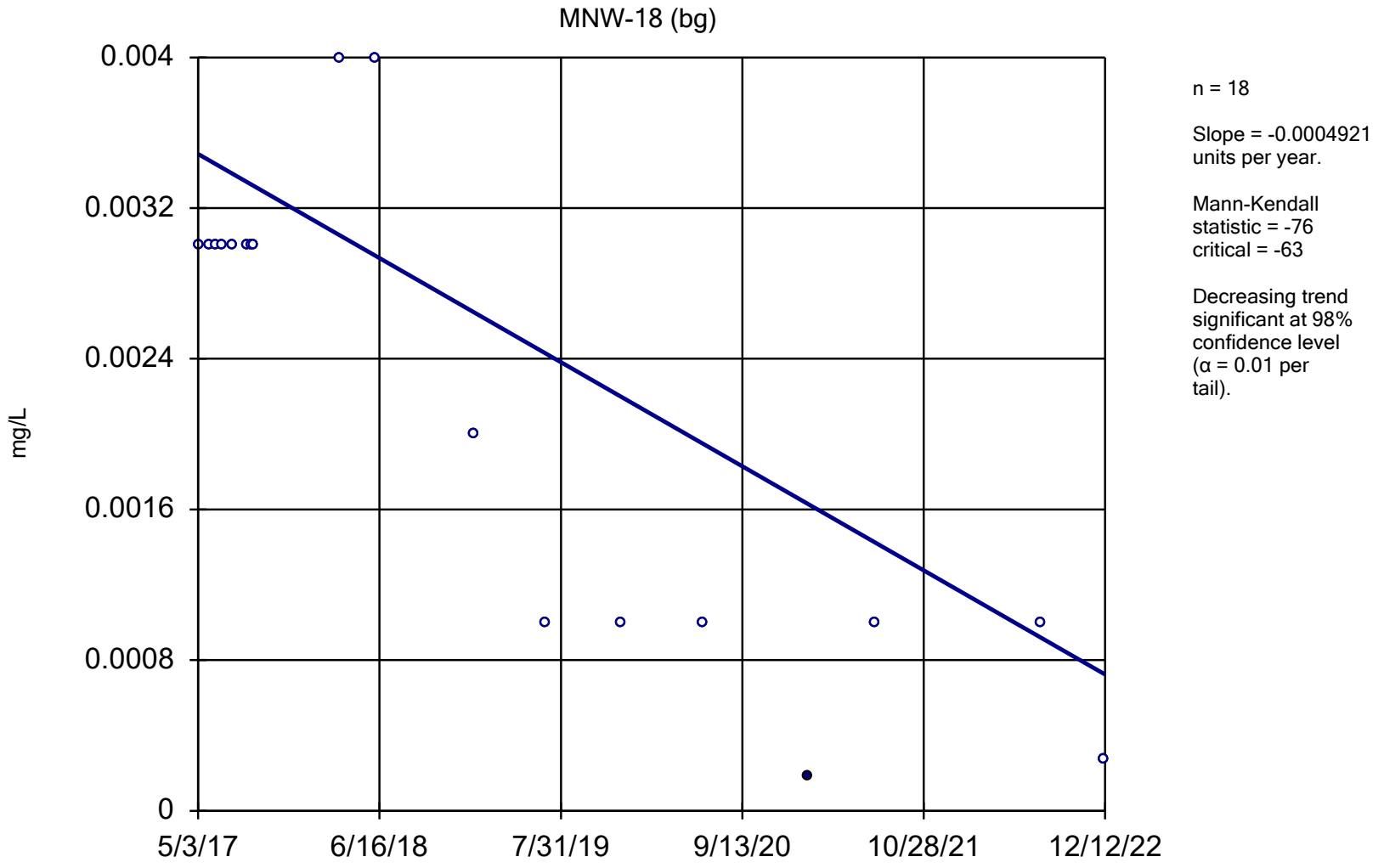


Constituent: Beryllium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

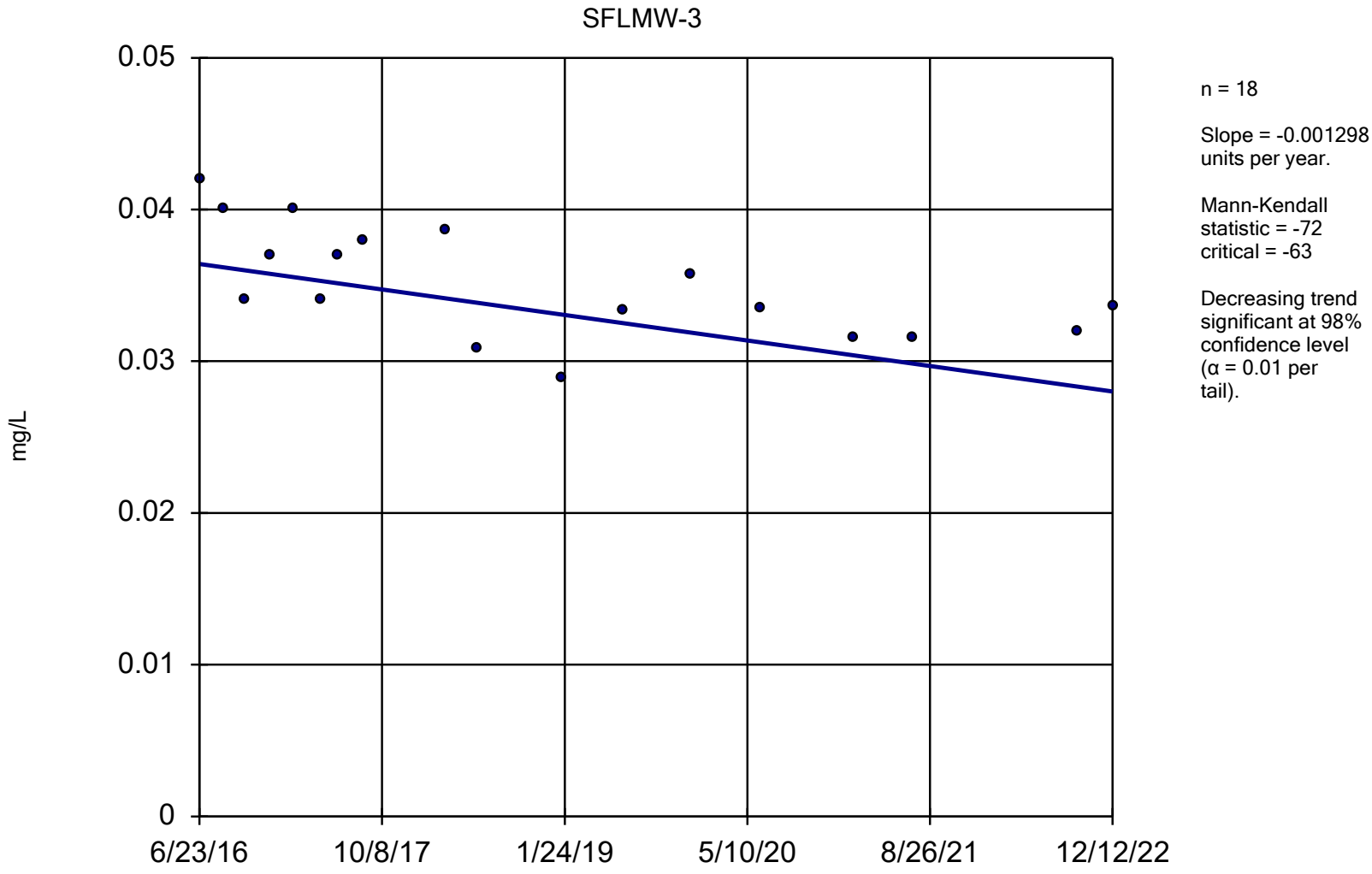
Sen's Slope Estimator



Constituent: Beryllium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

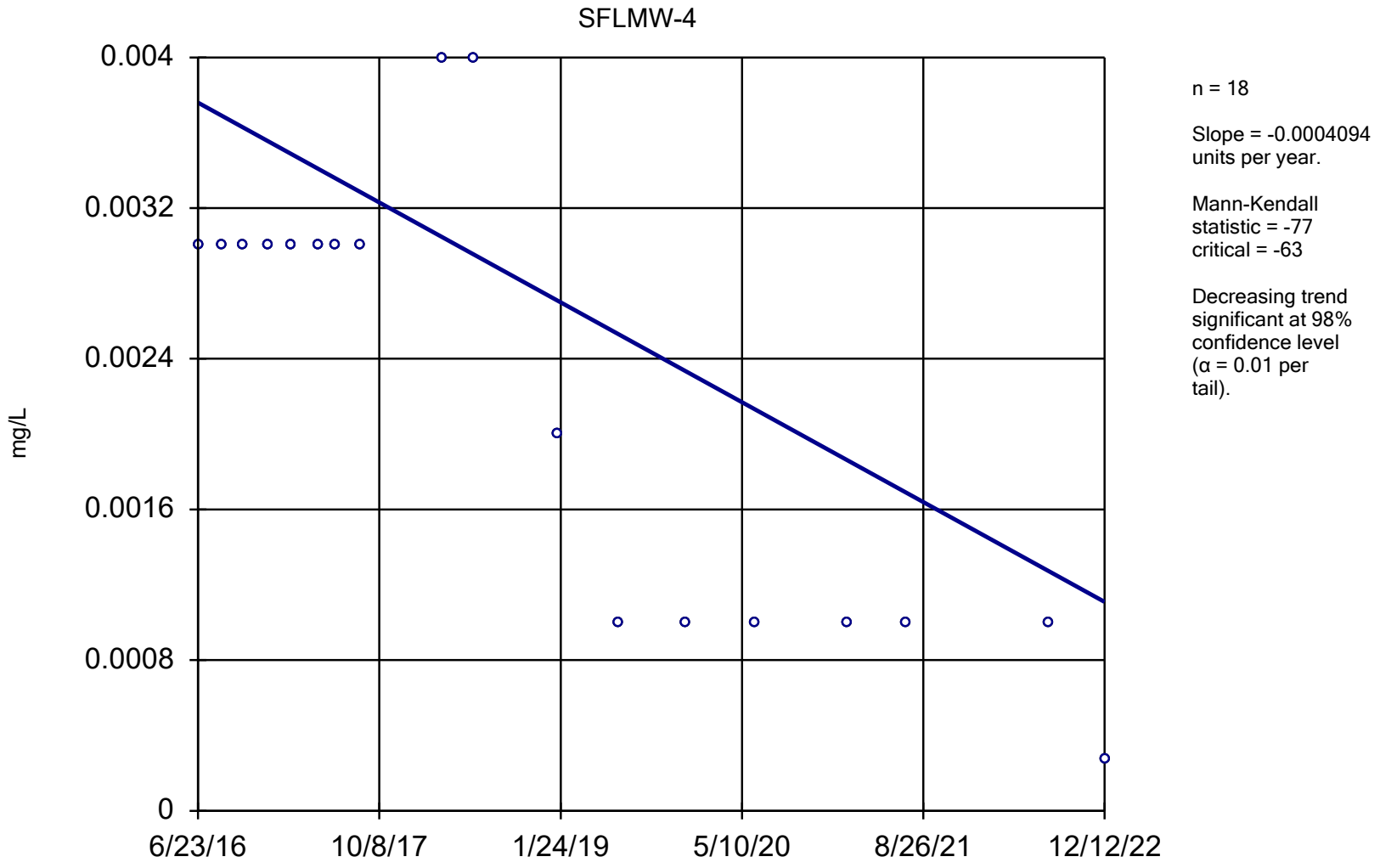


Constituent: Beryllium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

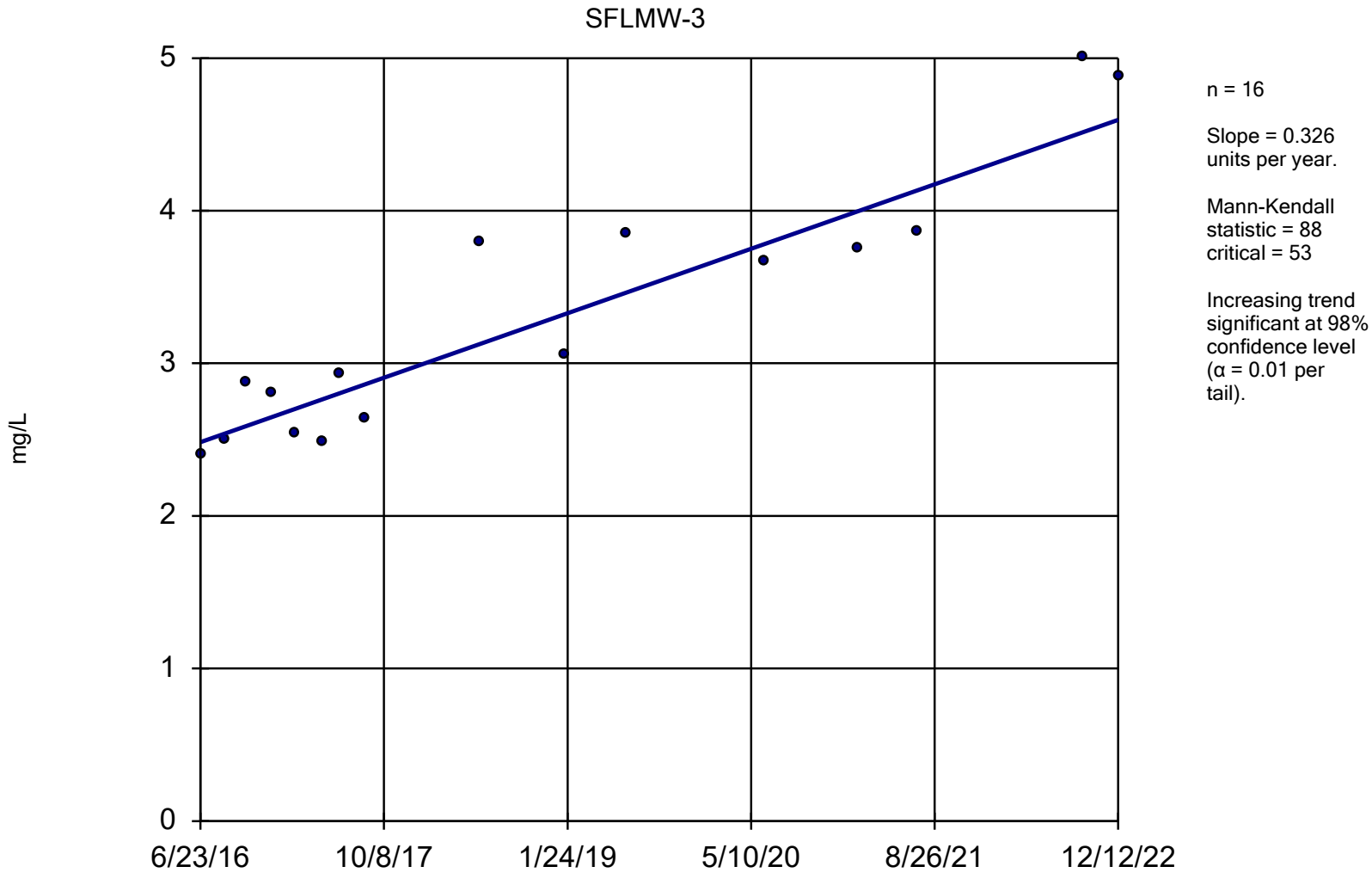
Sen's Slope Estimator



Constituent: Beryllium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

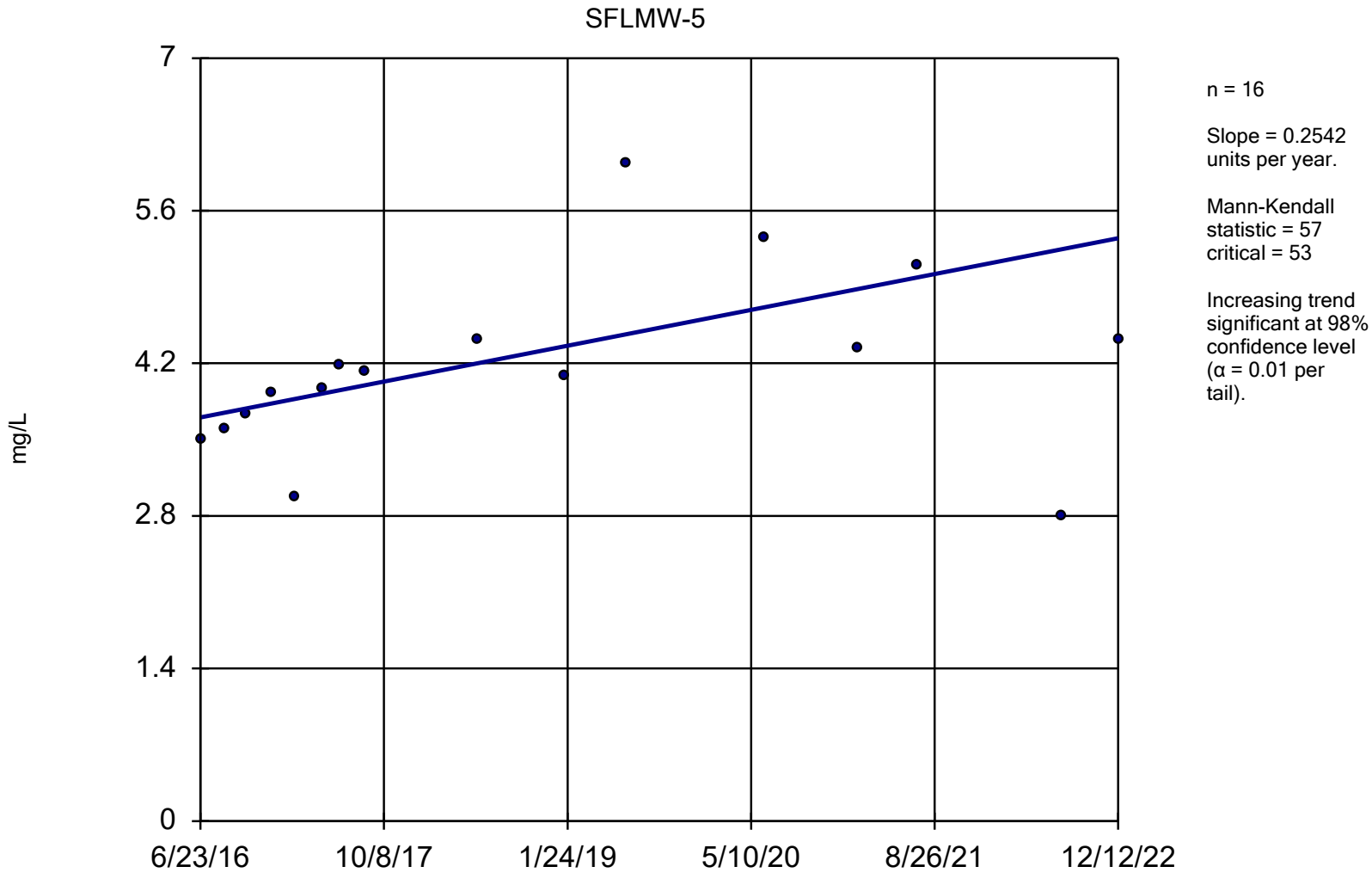
Sen's Slope Estimator



Constituent: Boron Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

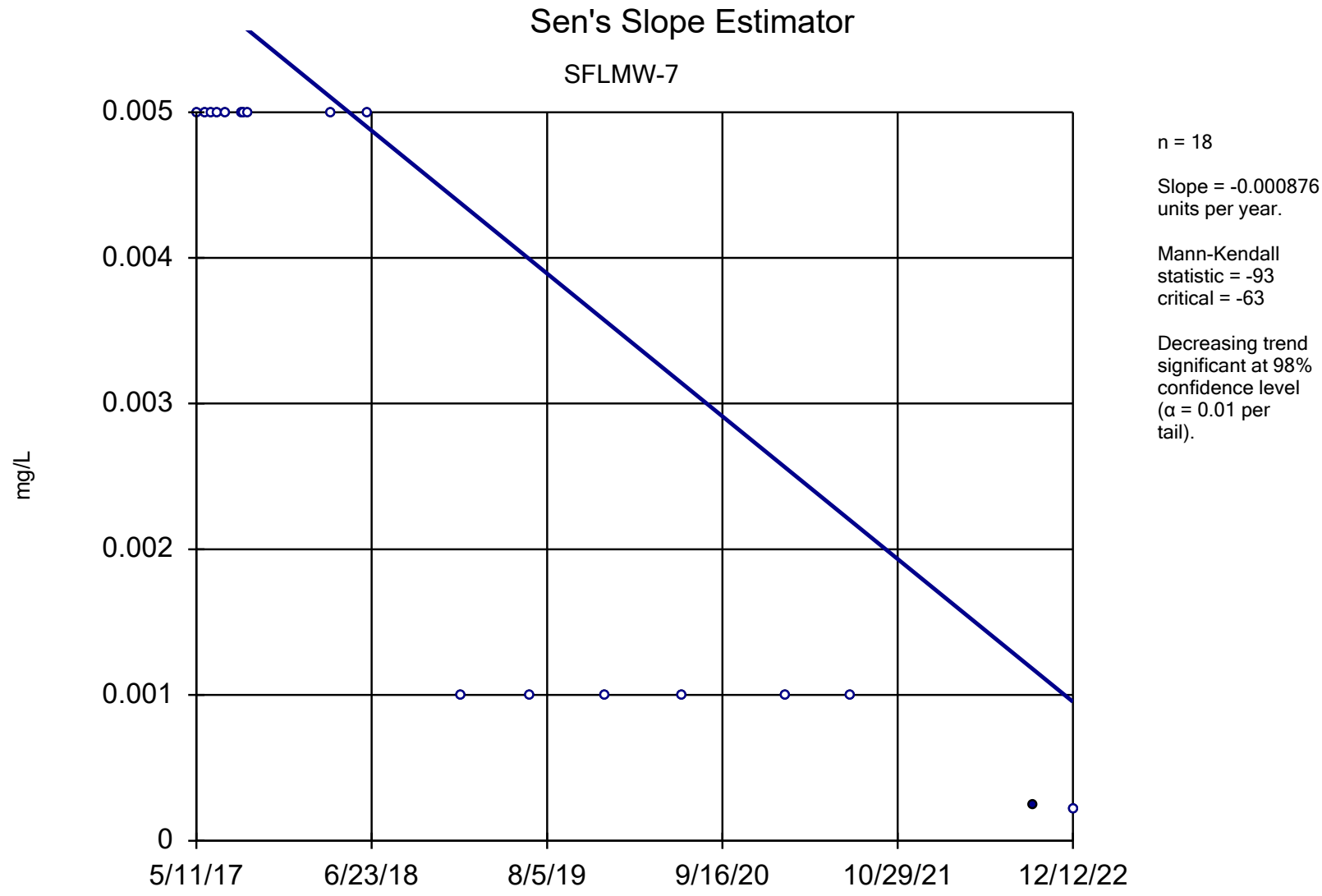
Sen's Slope Estimator



Constituent: Boron Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

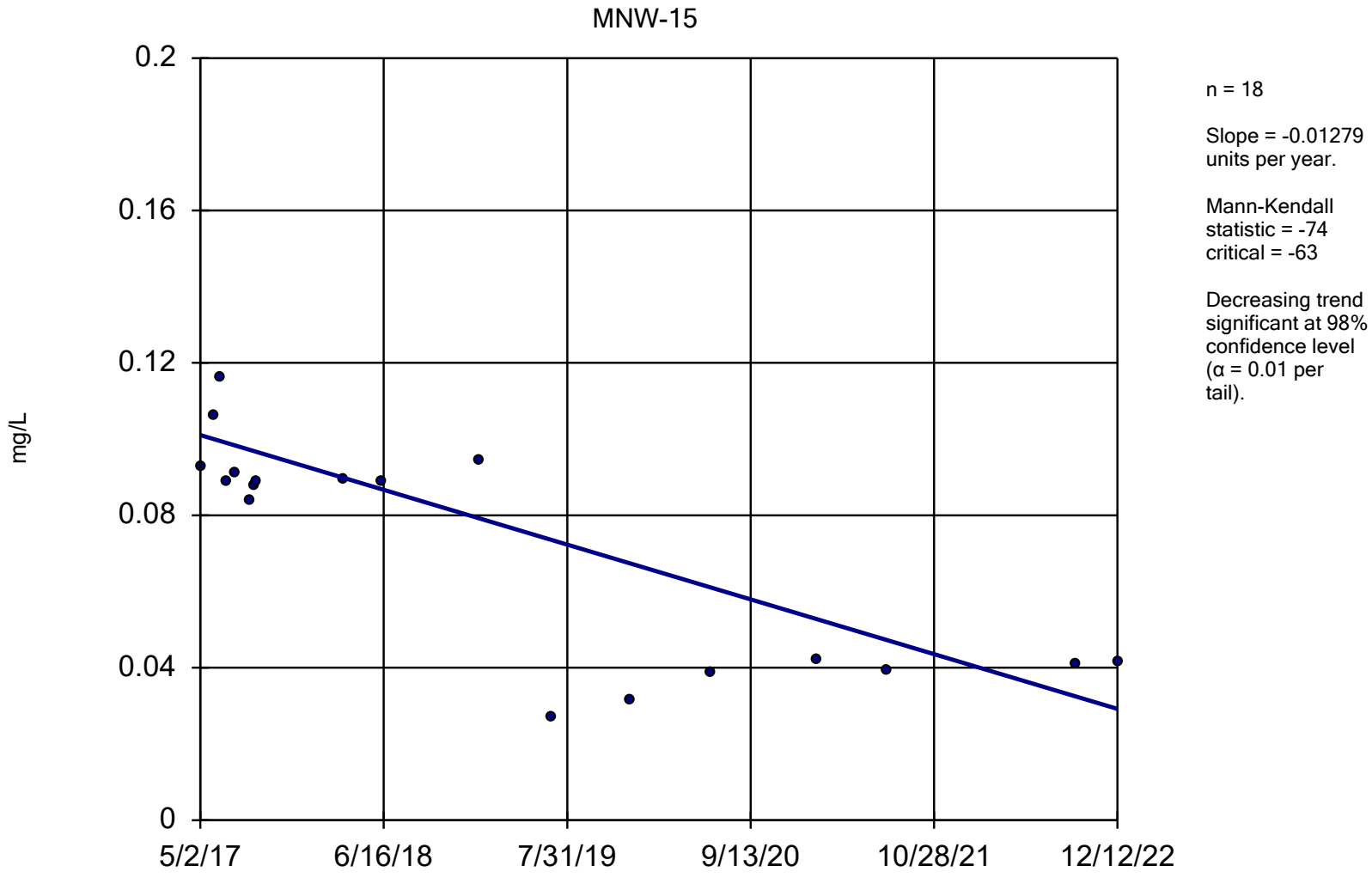
Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

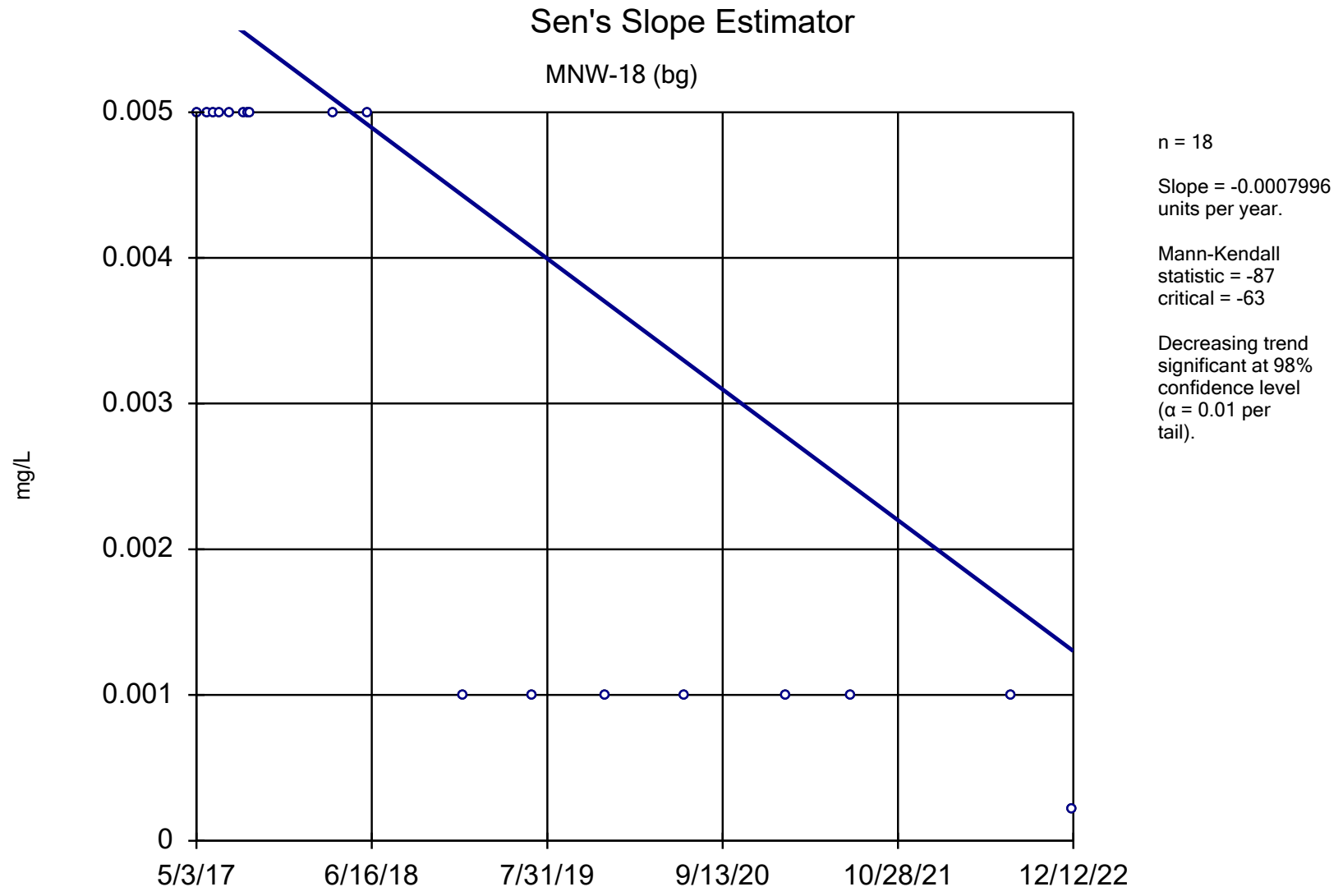
Sen's Slope Estimator



Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

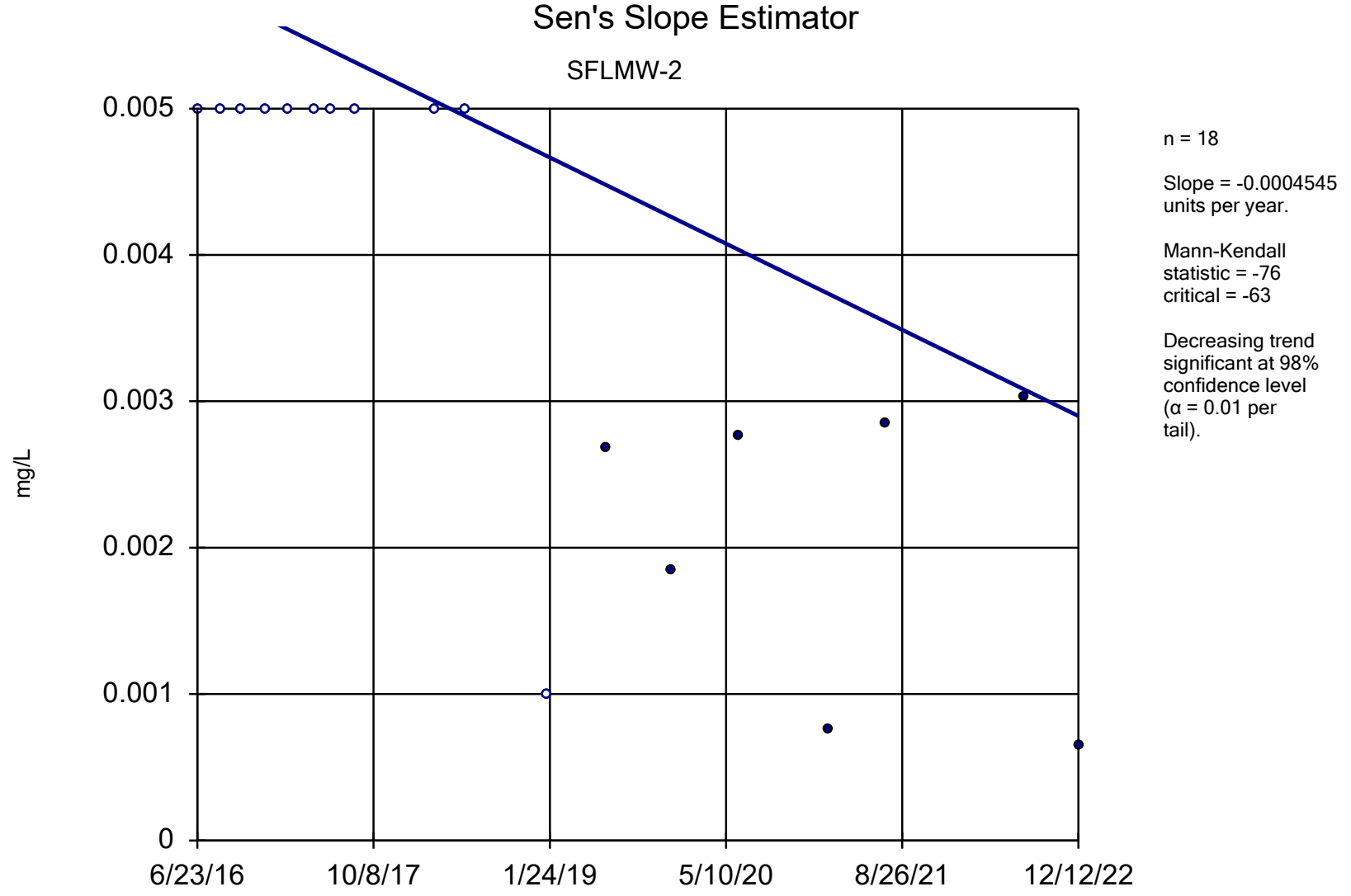
Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

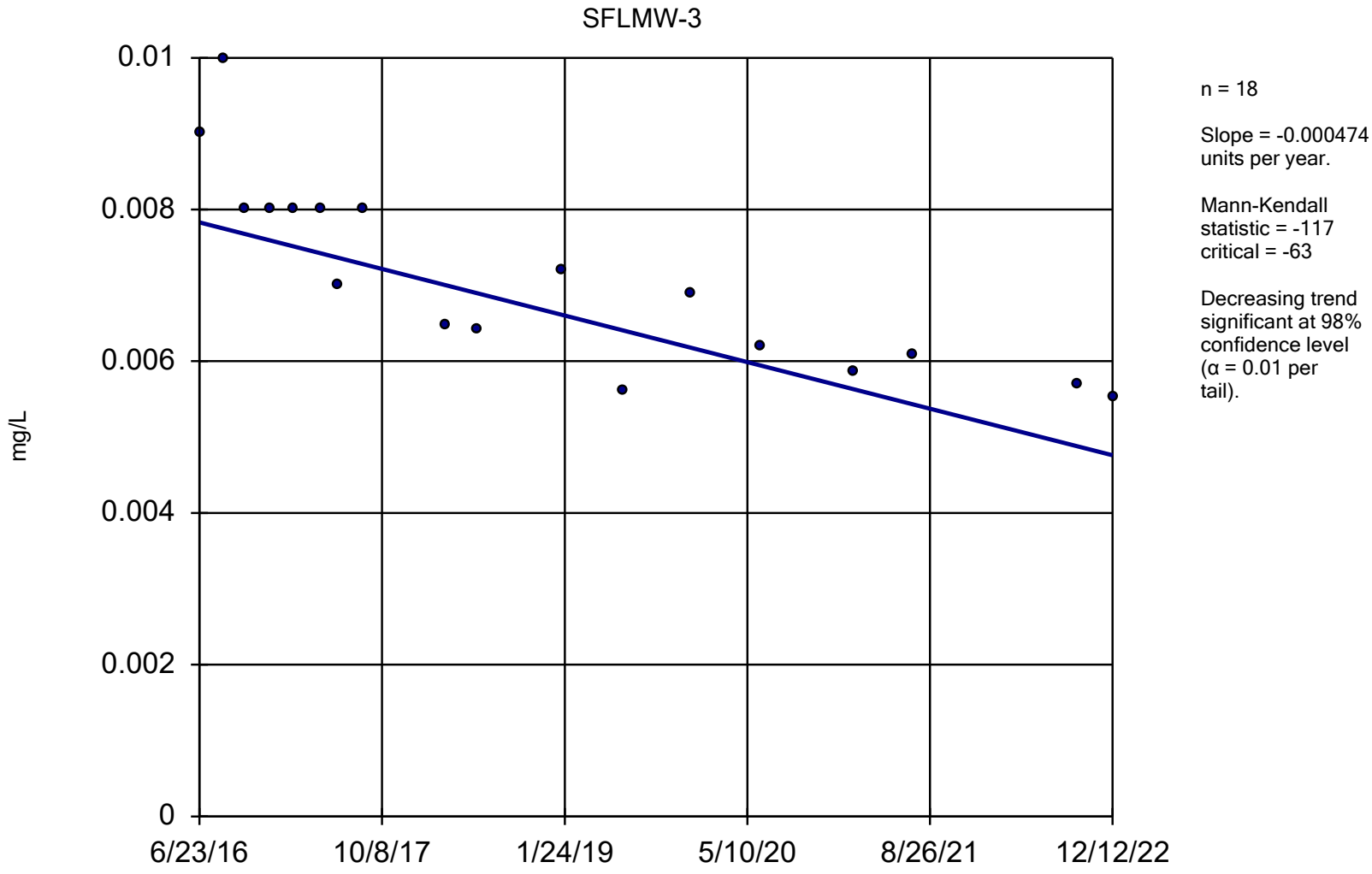
Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

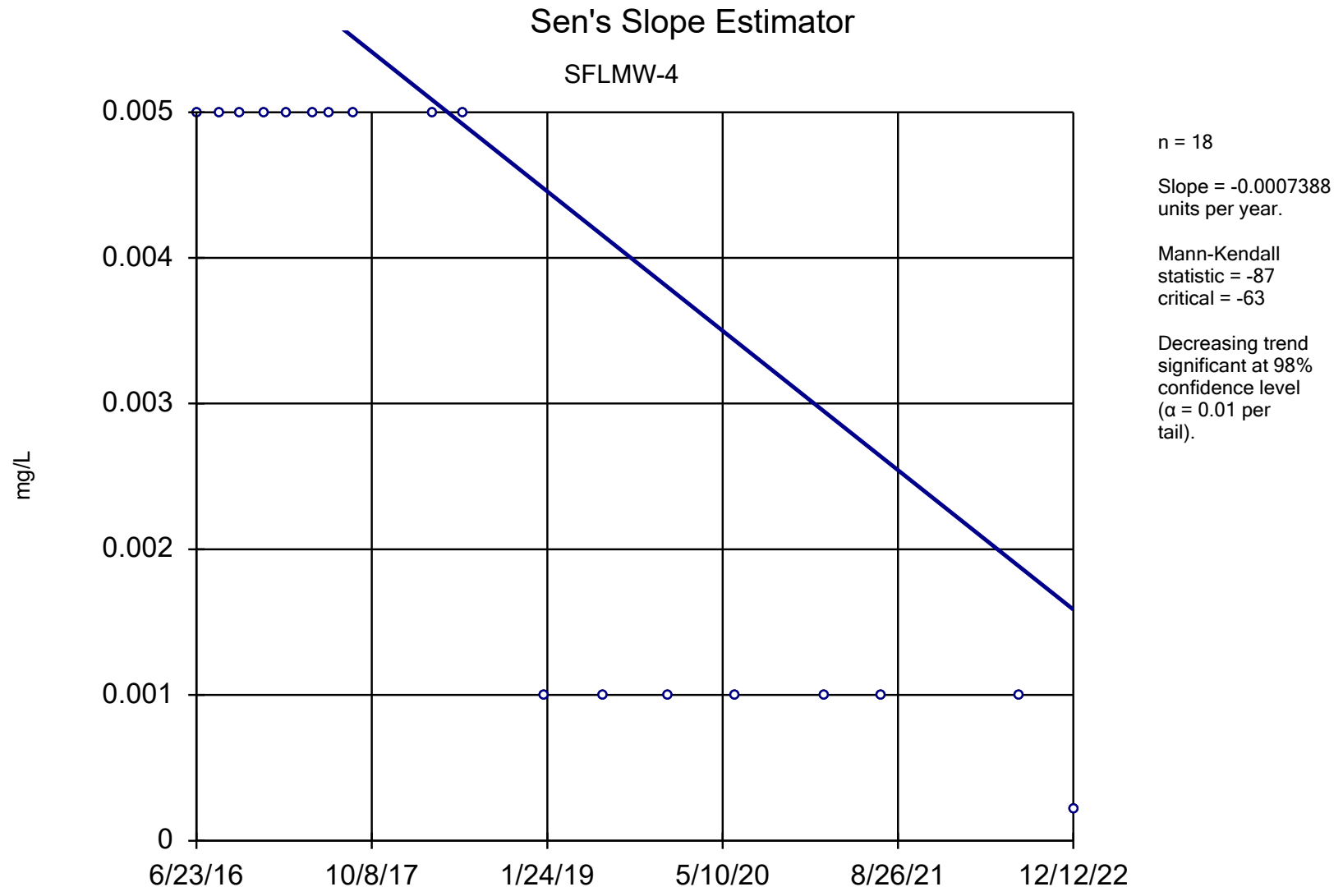
Sen's Slope Estimator



Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

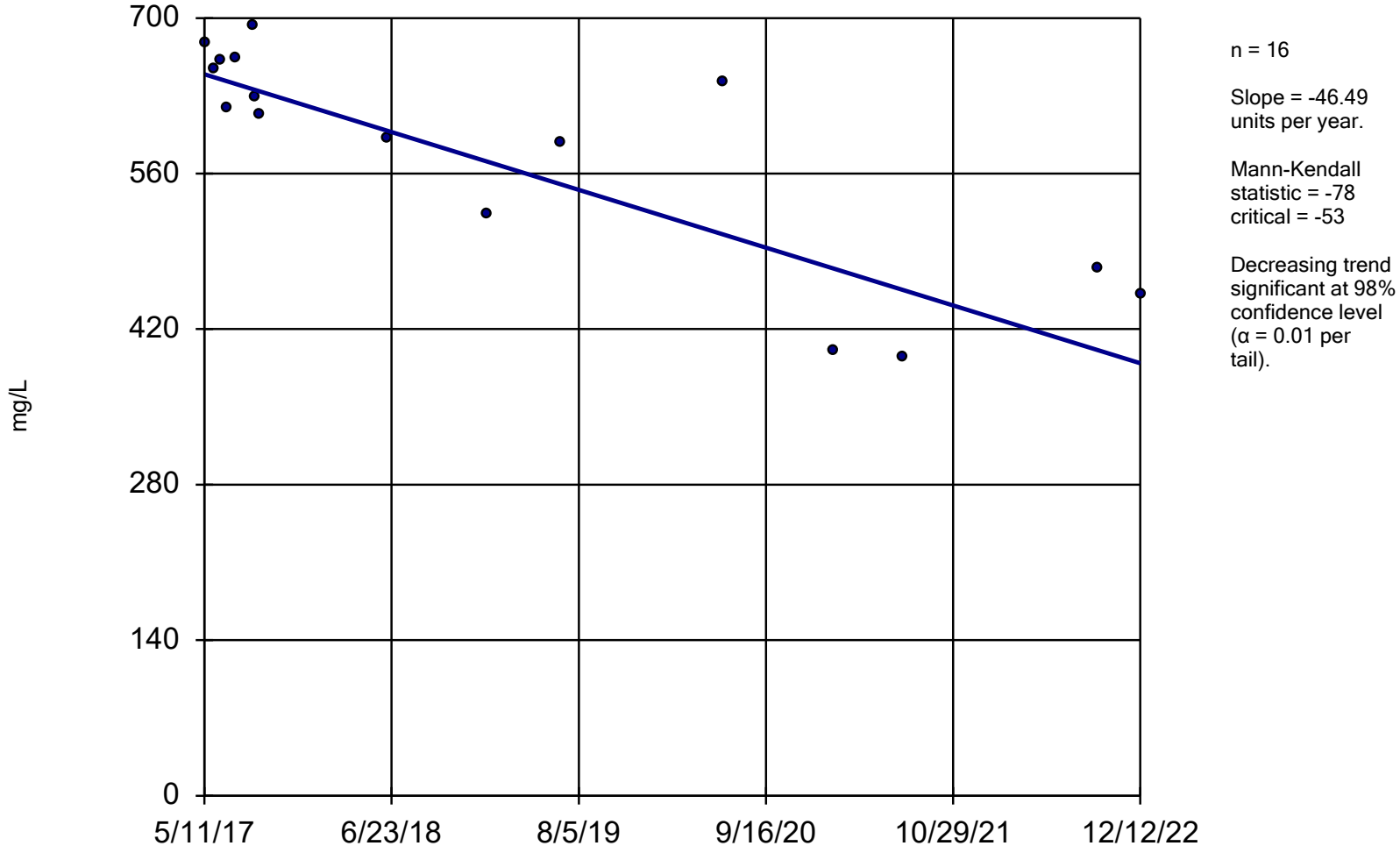


Constituent: Cadmium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

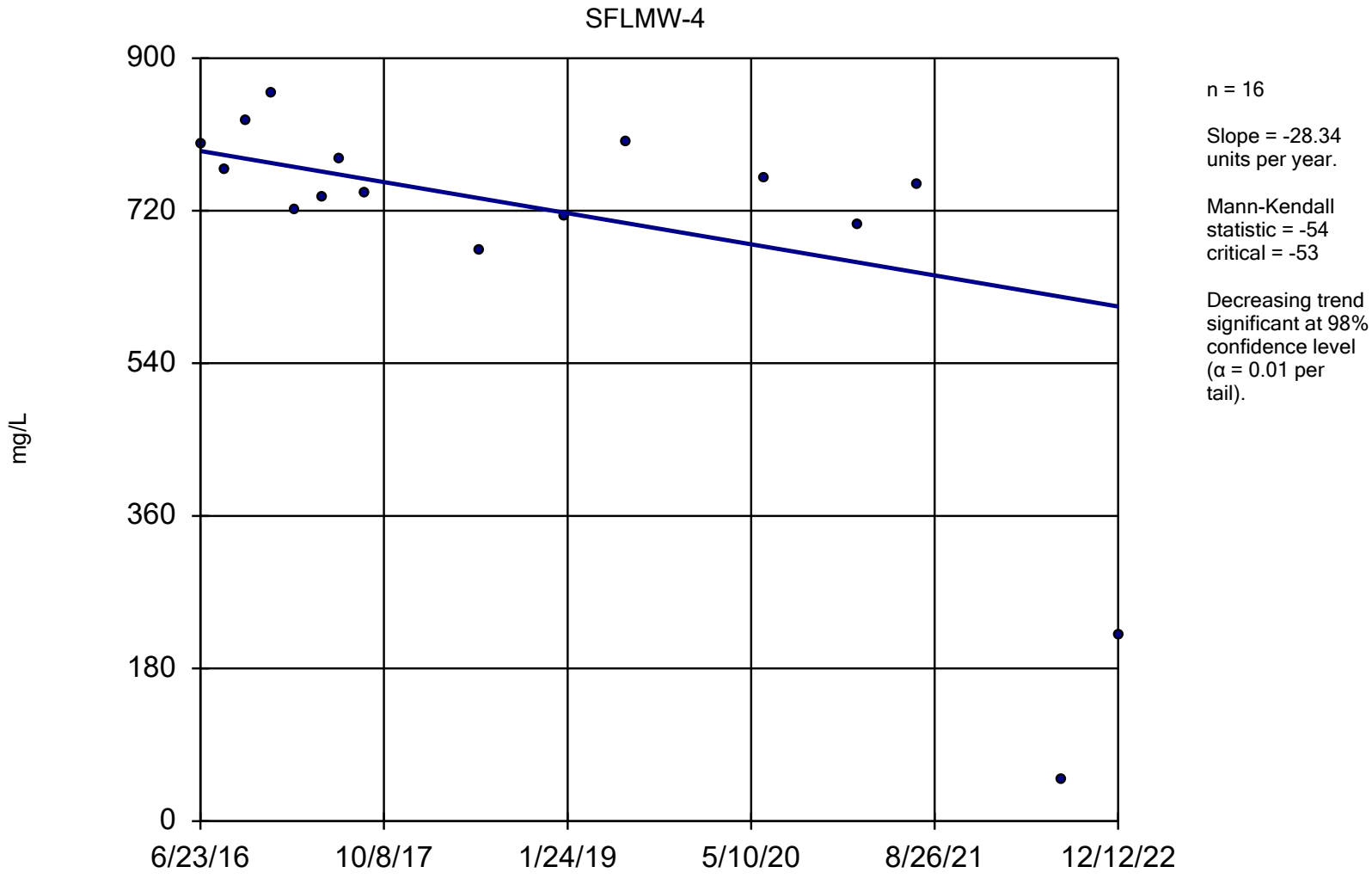
SFLMW-7



Constituent: Calcium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

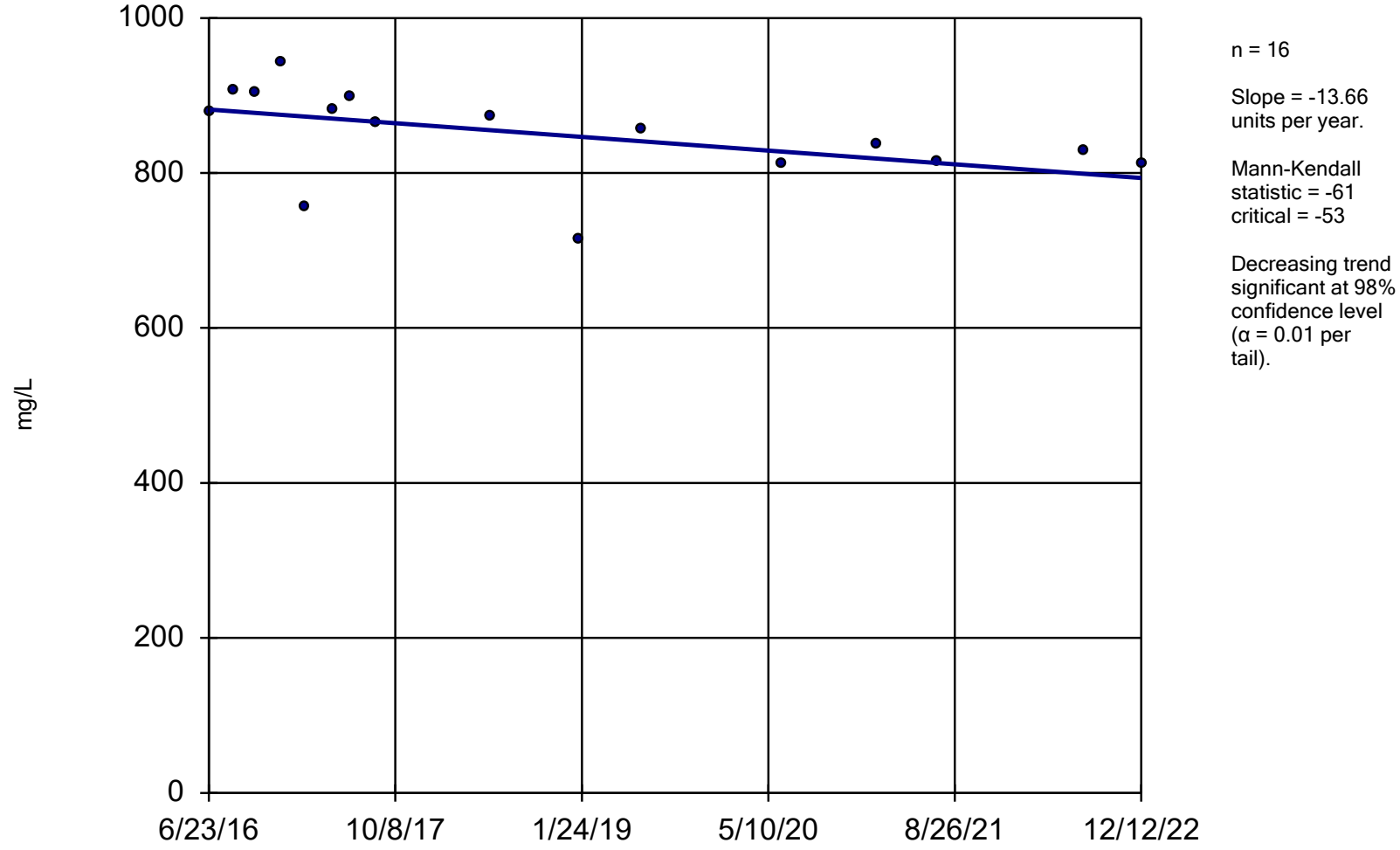


Constituent: Calcium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-5



n = 16

Slope = -13.66 units per year.

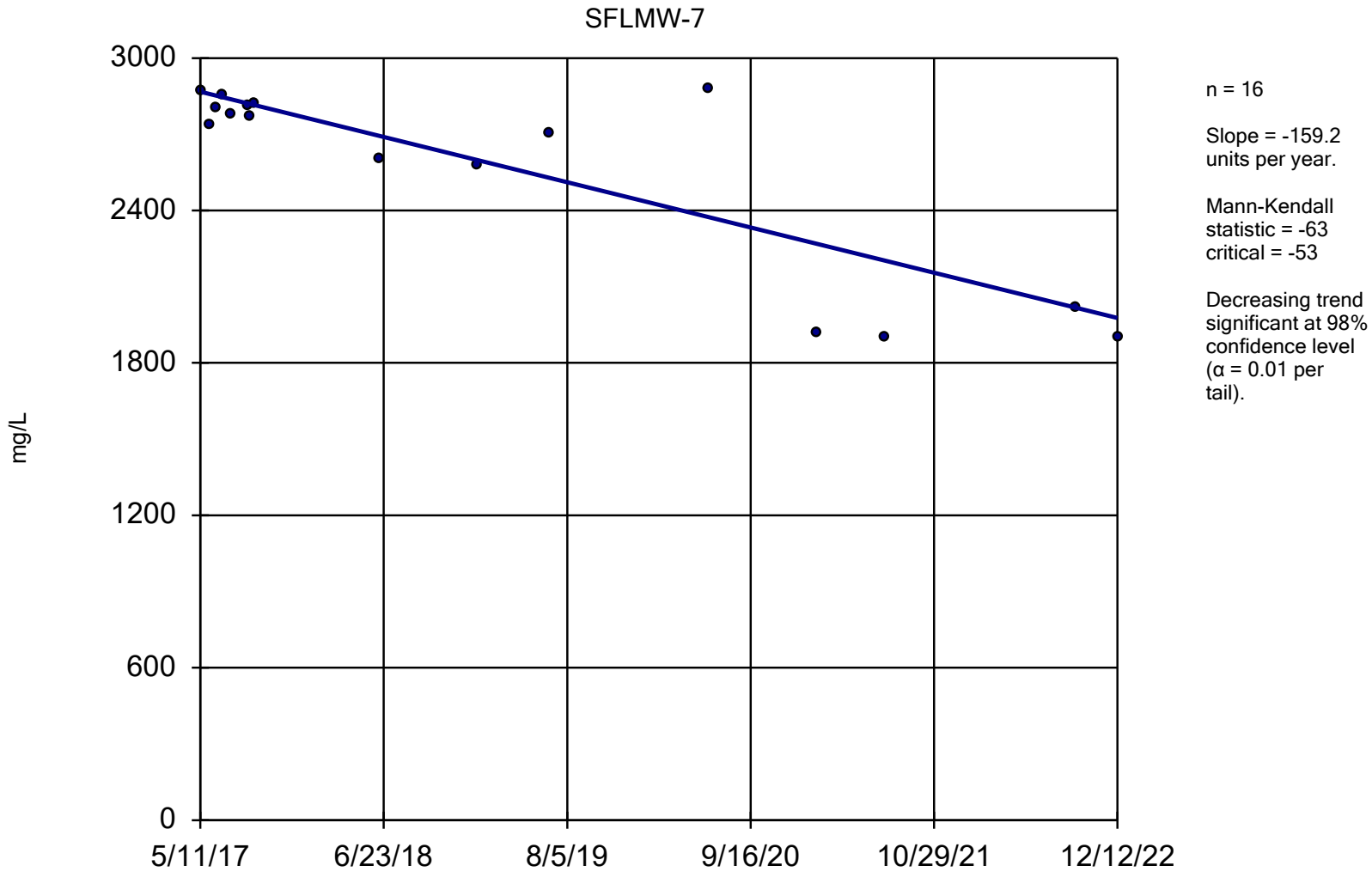
Mann-Kendall statistic = -61
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

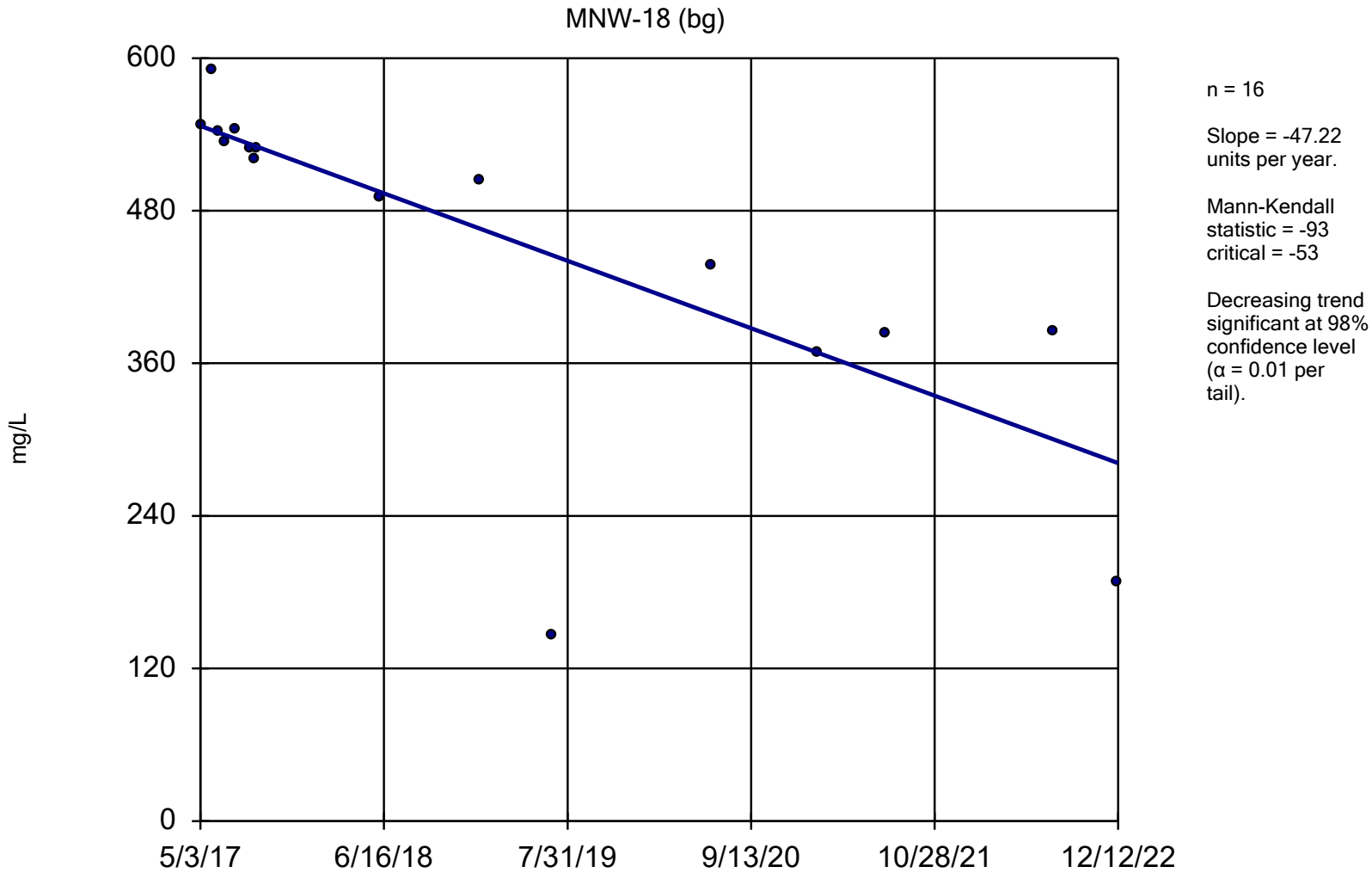
Sen's Slope Estimator



Constituent: Chloride Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

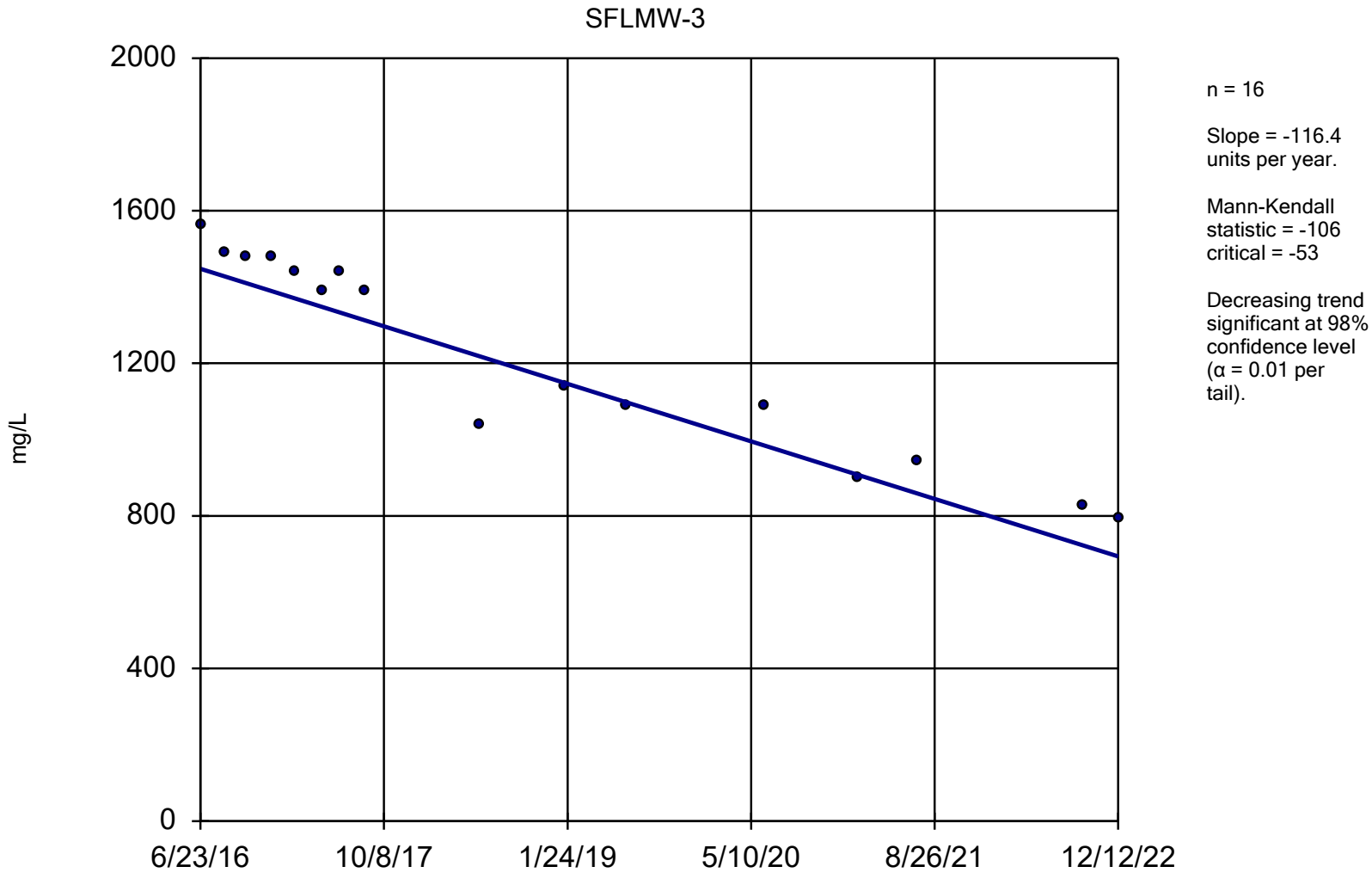
Sen's Slope Estimator



Constituent: Chloride Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator



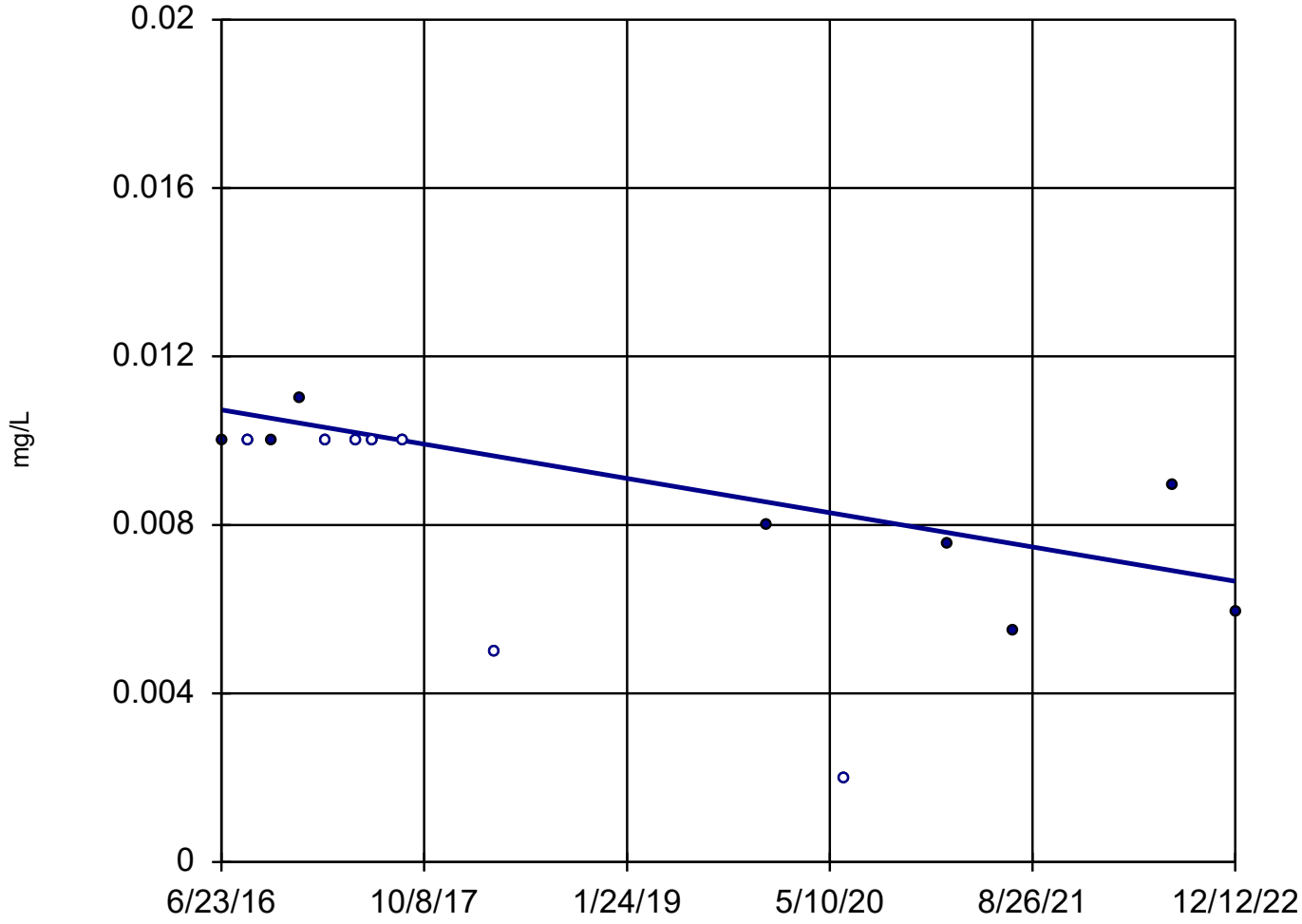
Constituent: Chloride Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 15

Slope = -0.0006287 units per year.

Mann-Kendall statistic = -52
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

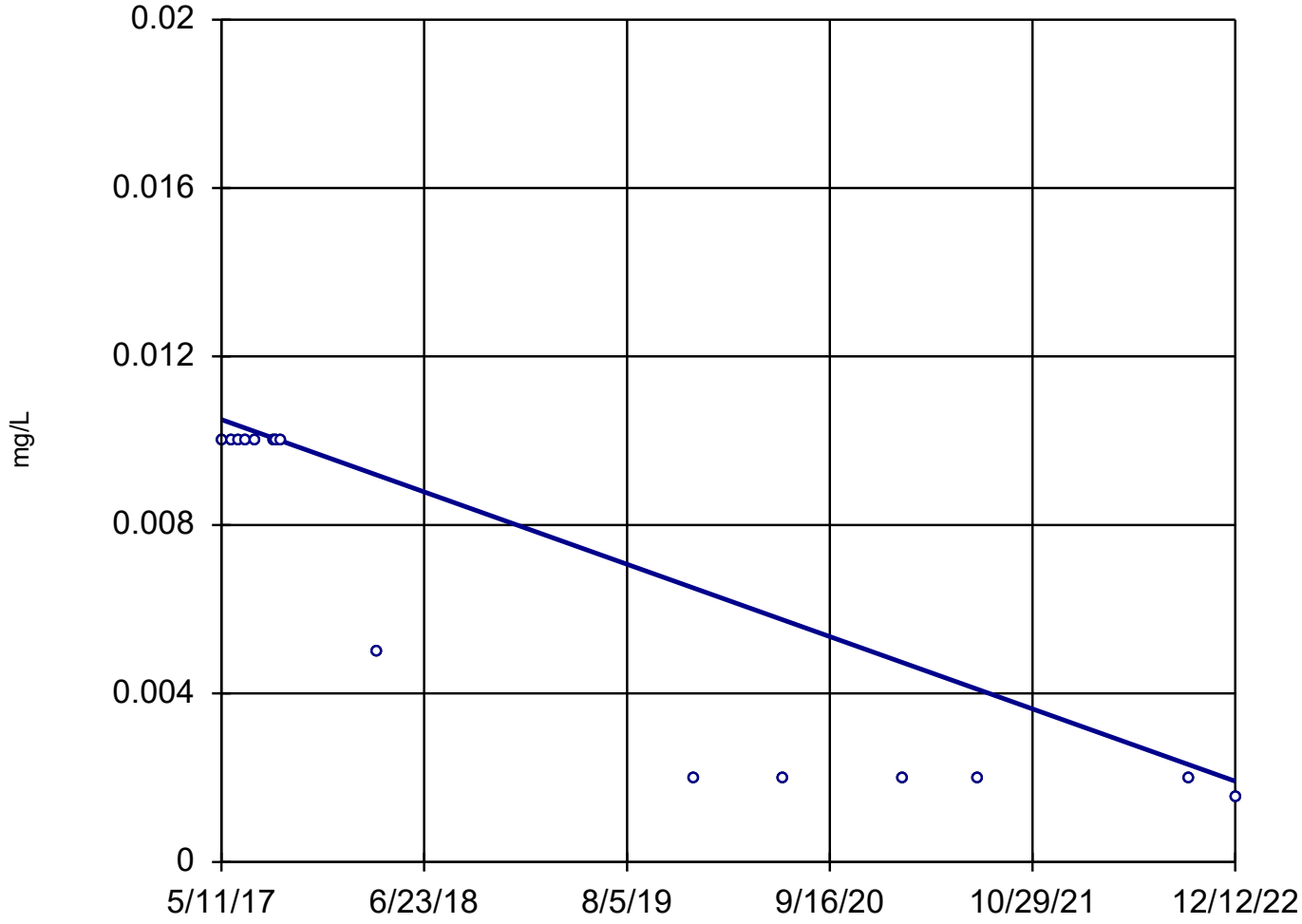
Constituent: Chromium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -0.001535 units per year.

Mann-Kendall statistic = -67
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

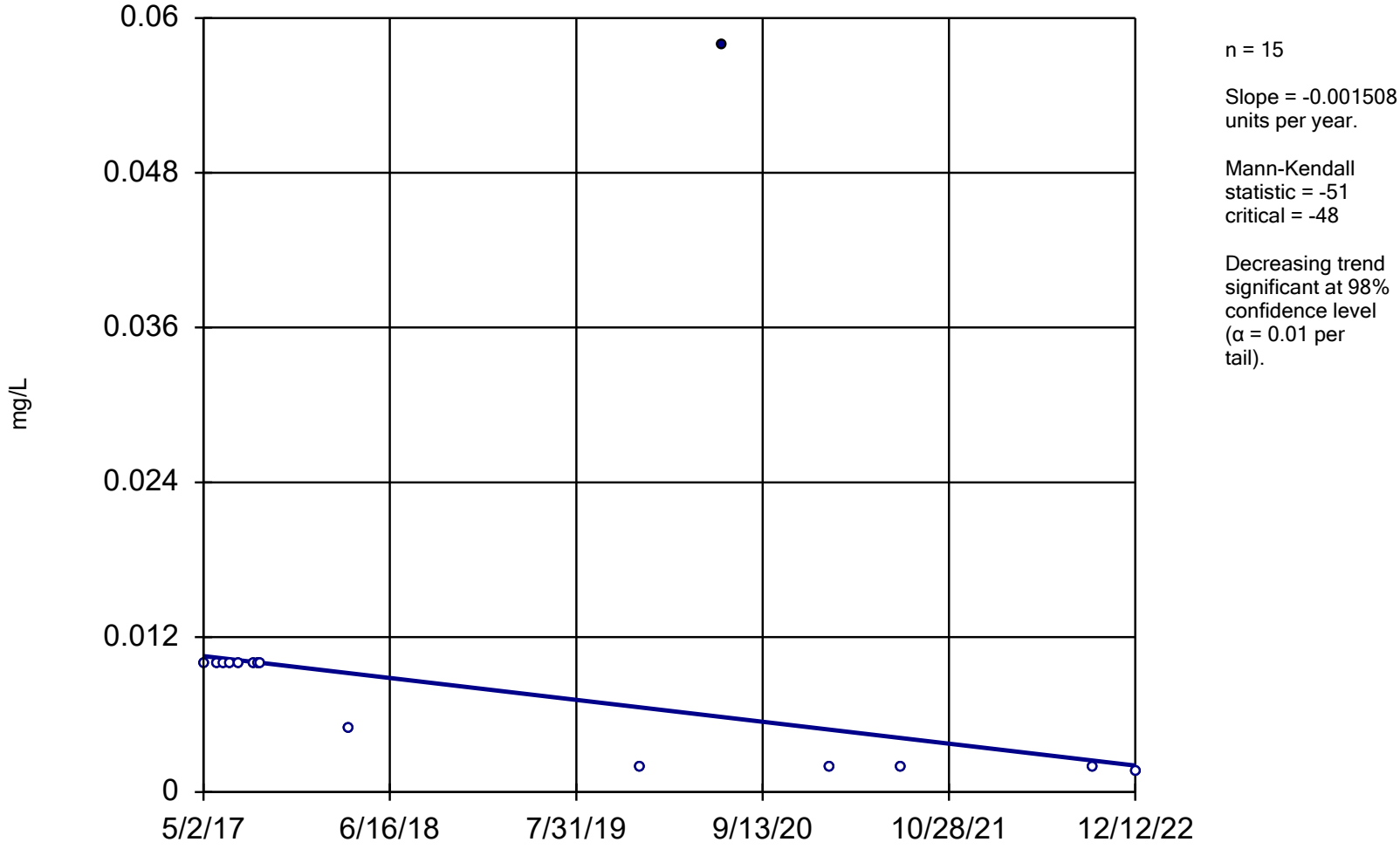
Constituent: Chromium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 15

Slope = -0.001508 units per year.

Mann-Kendall statistic = -51
critical = -48

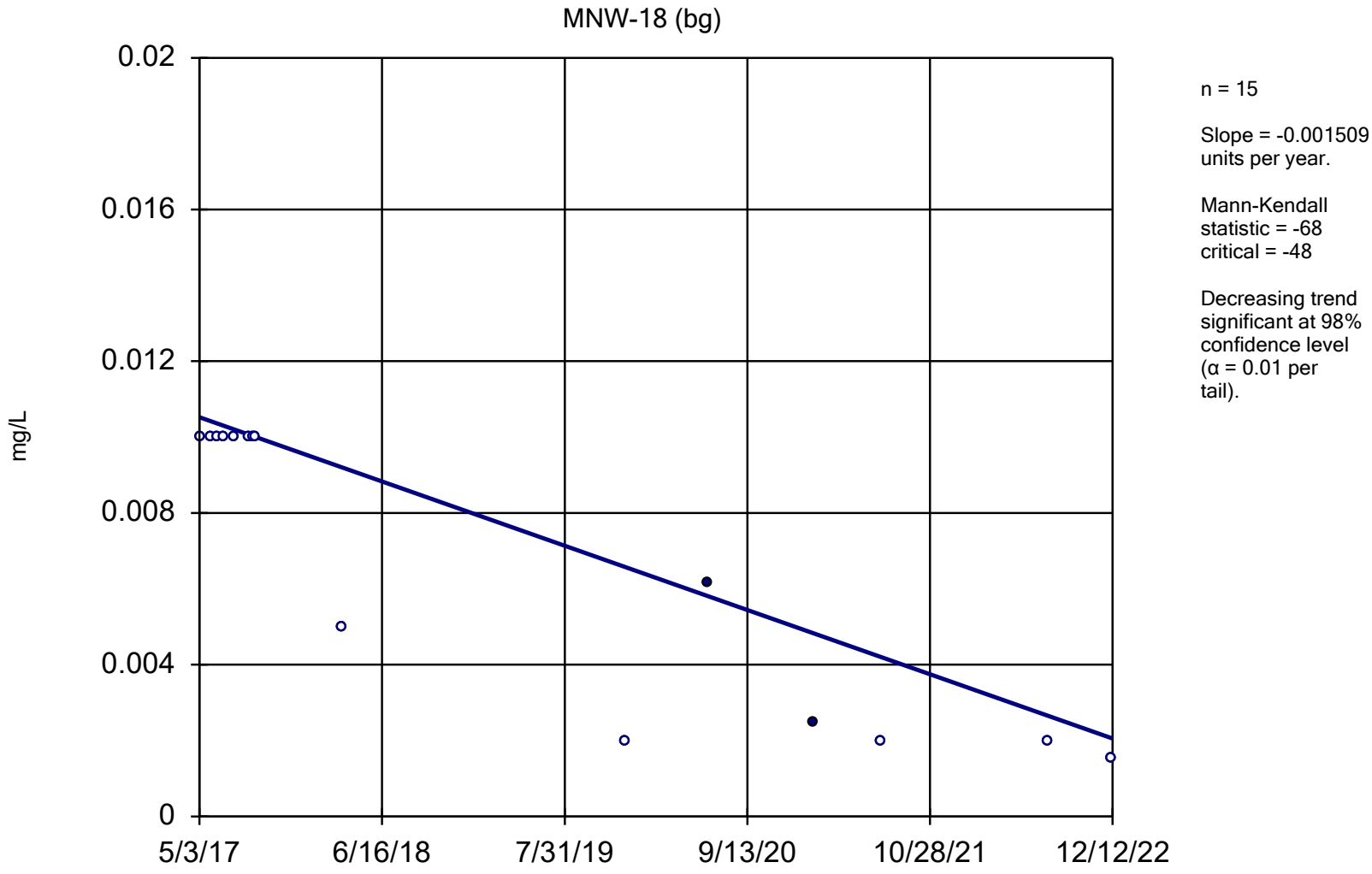
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chromium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



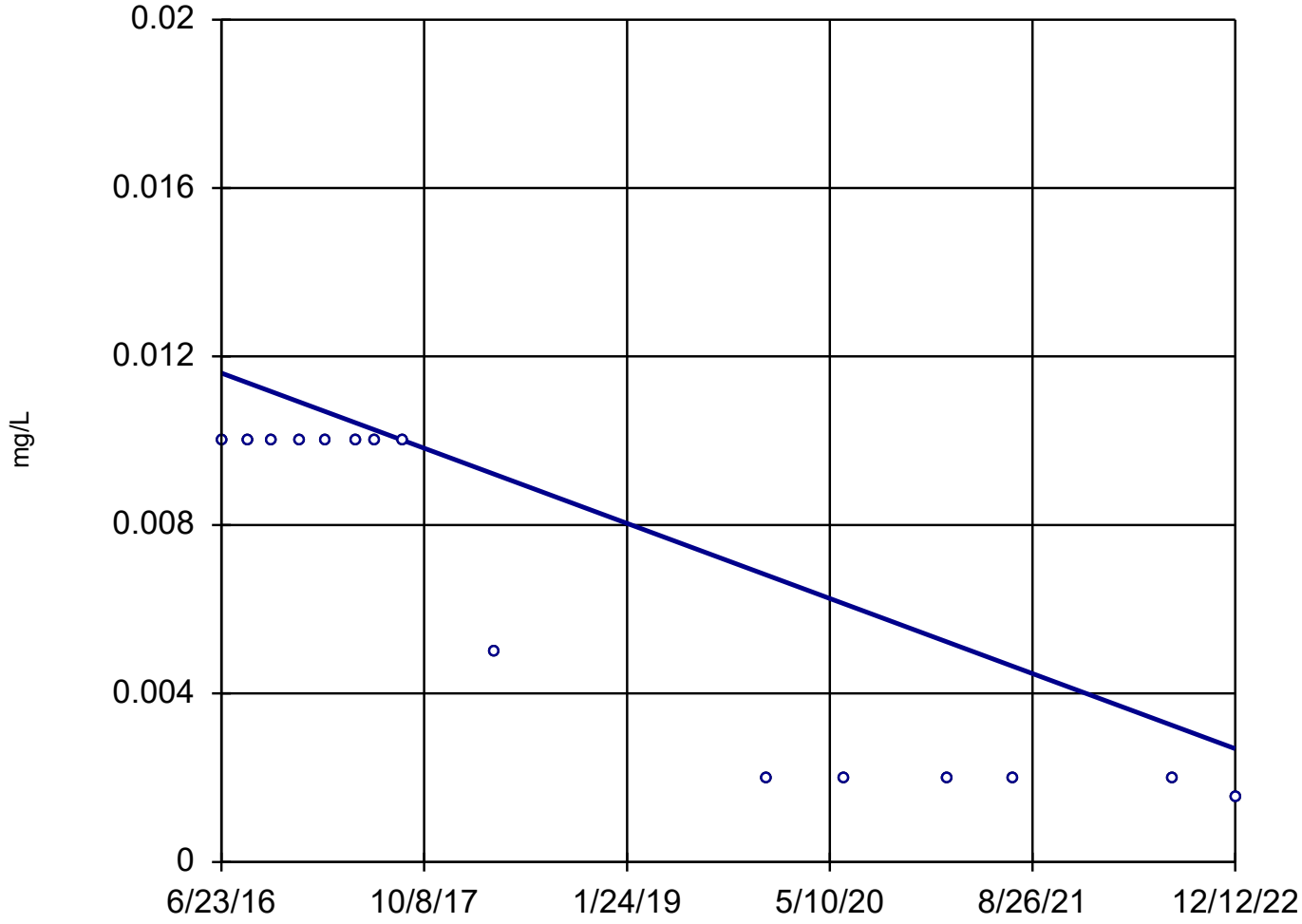
Constituent: Chromium Analysis Run 1/23/2023 9:15 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 15

Slope = -0.001377 units per year.

Mann-Kendall statistic = -67
critical = -48

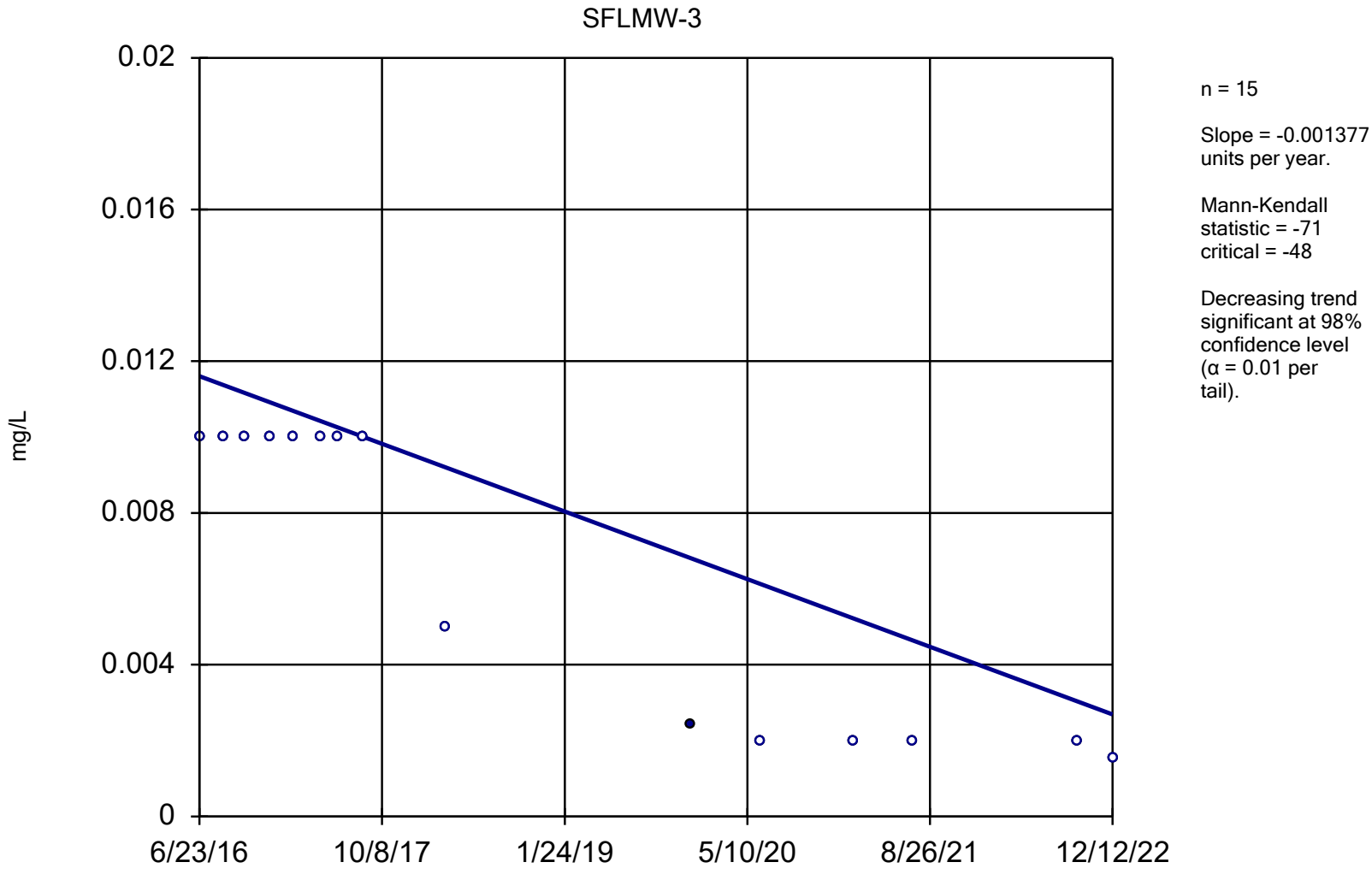
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chromium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

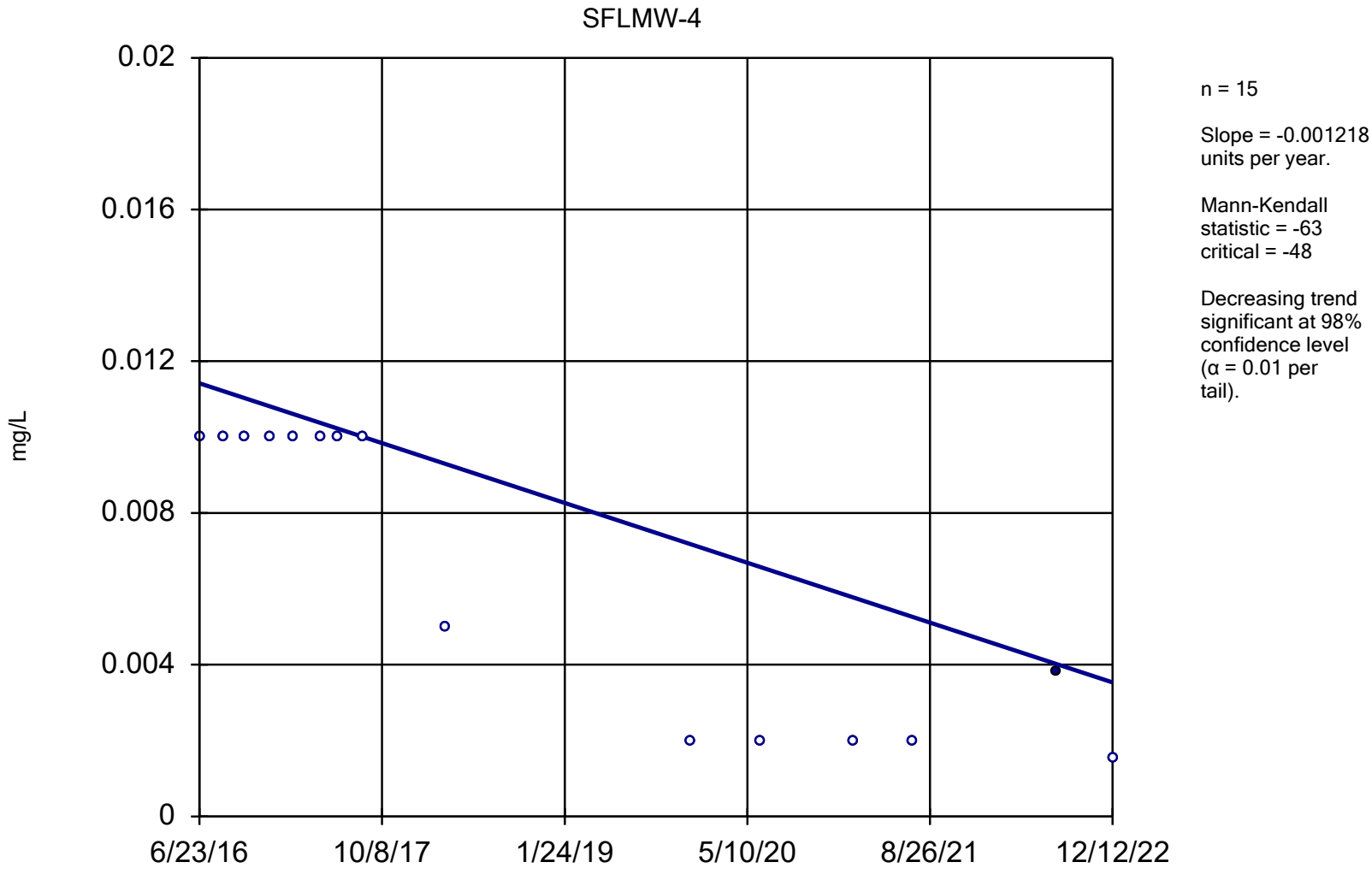


Constituent: Chromium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

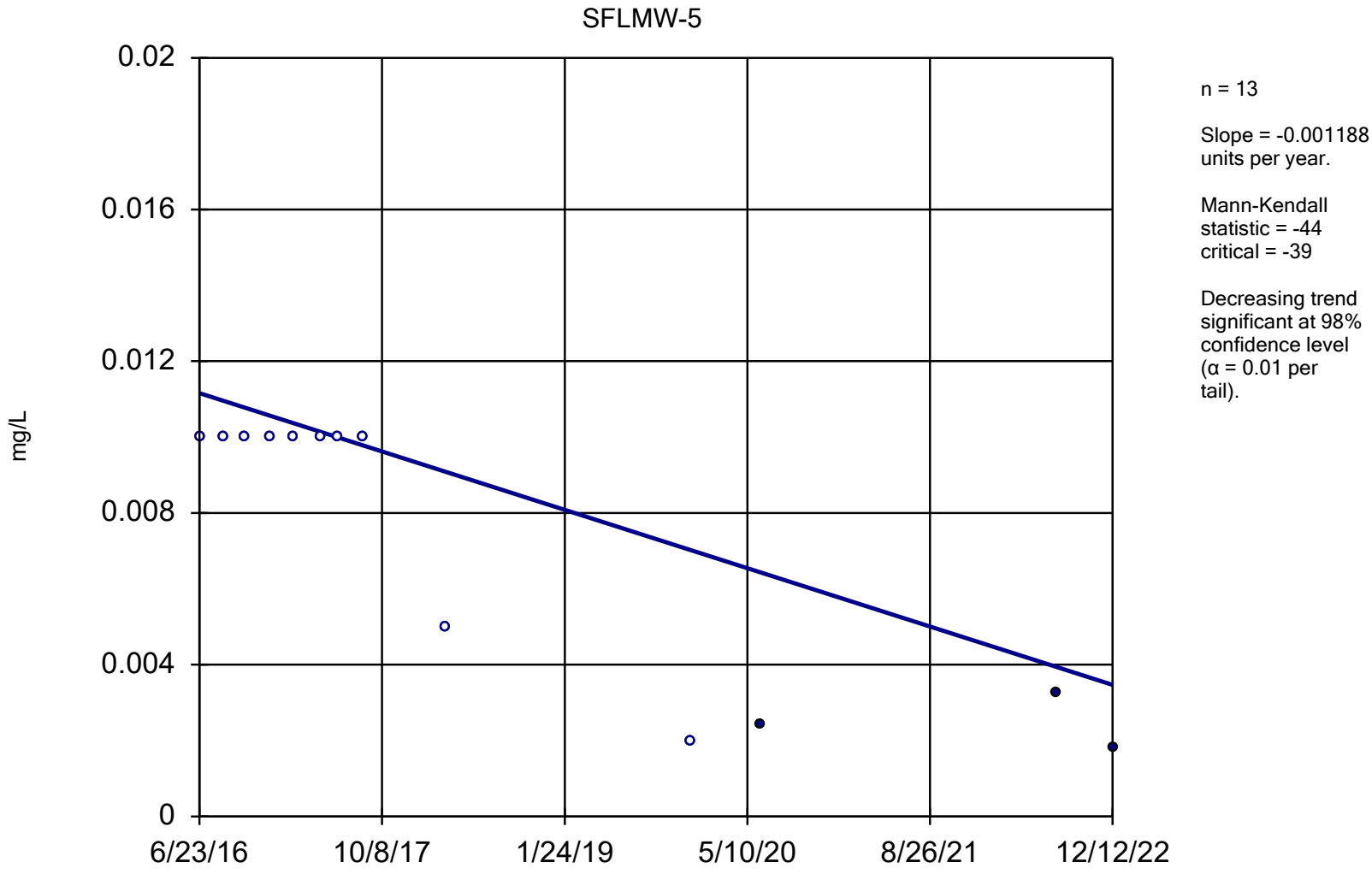


Constituent: Chromium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

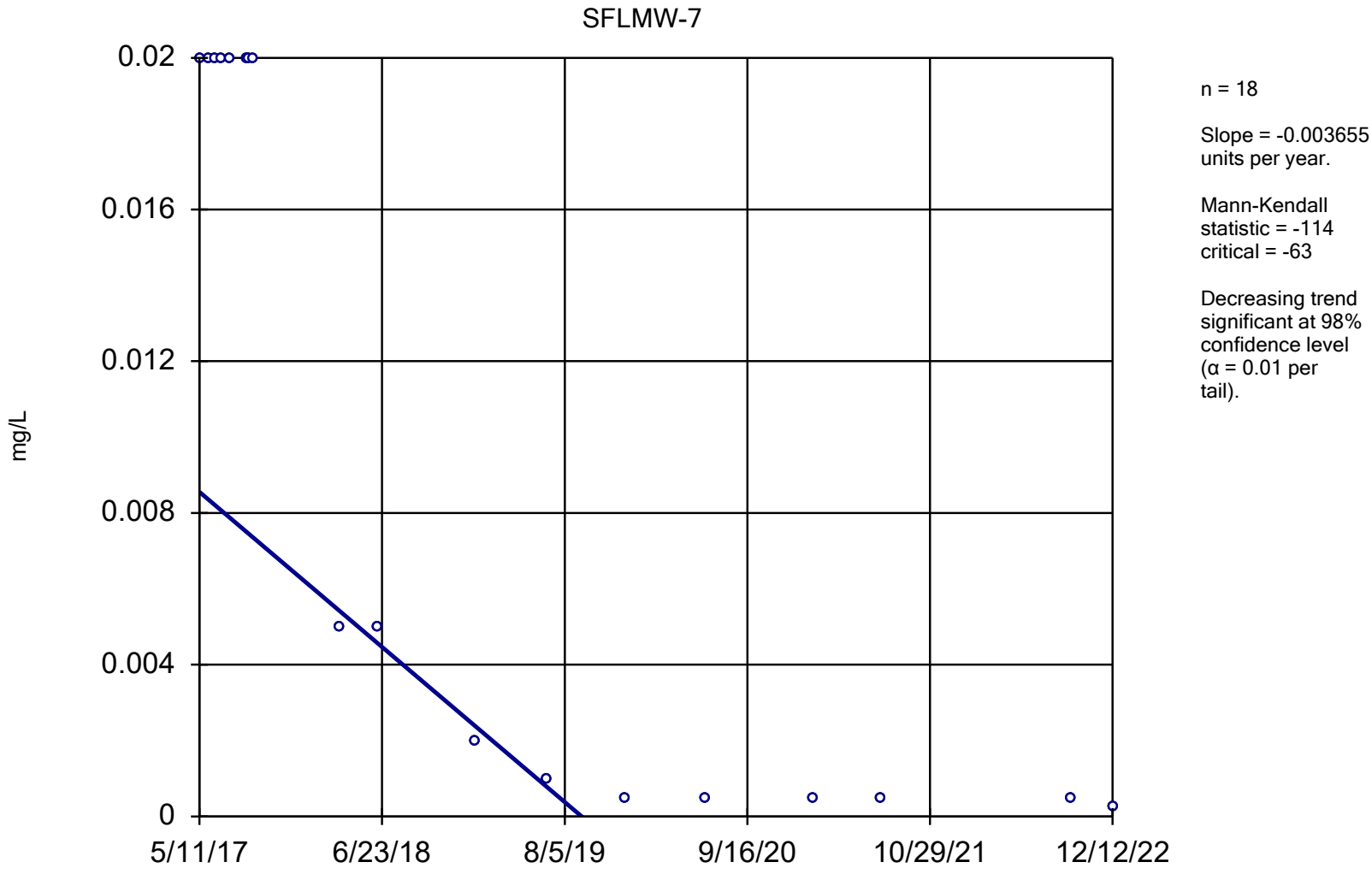


Constituent: Chromium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

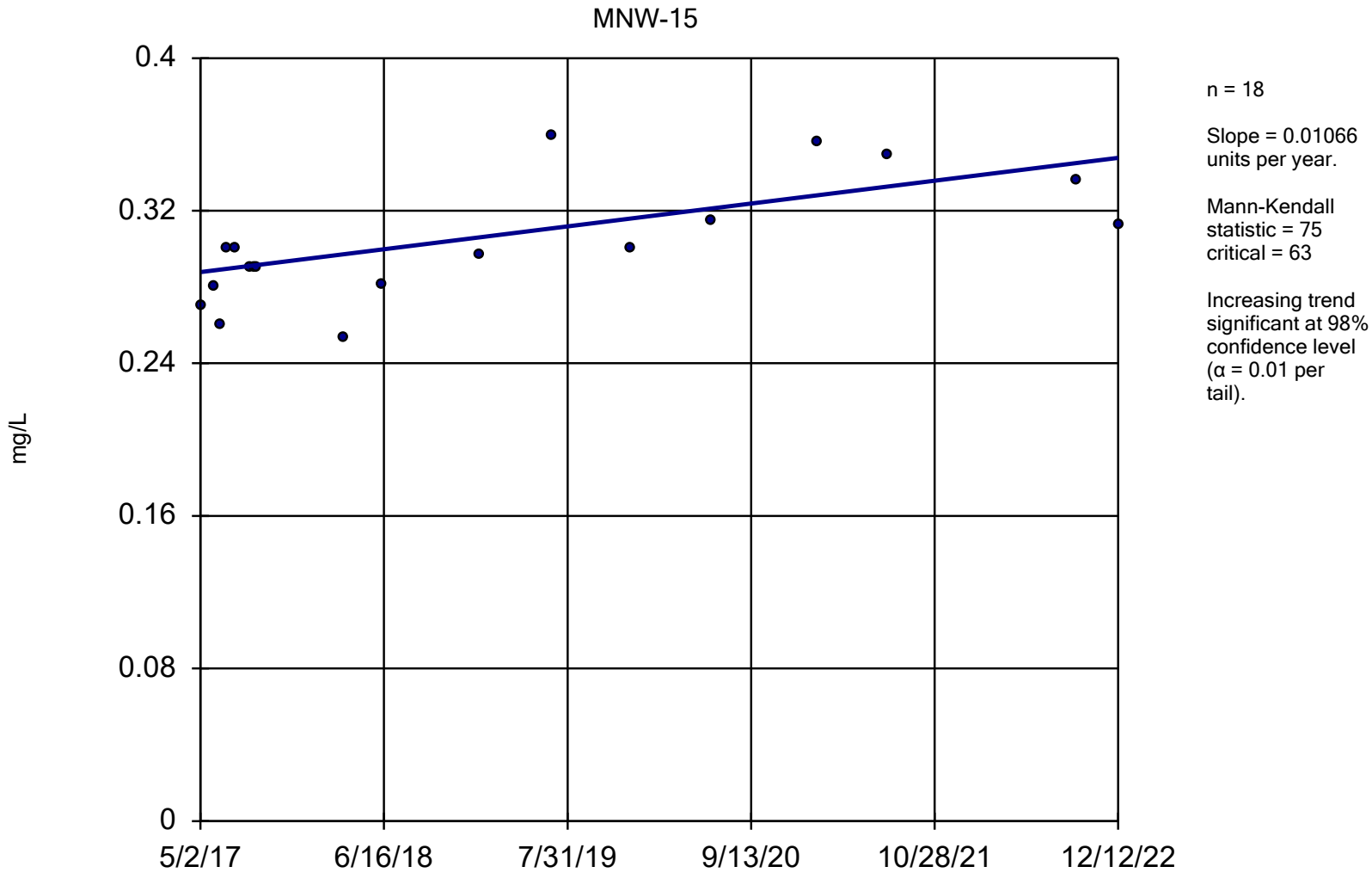
Sen's Slope Estimator



Constituent: Cobalt Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator



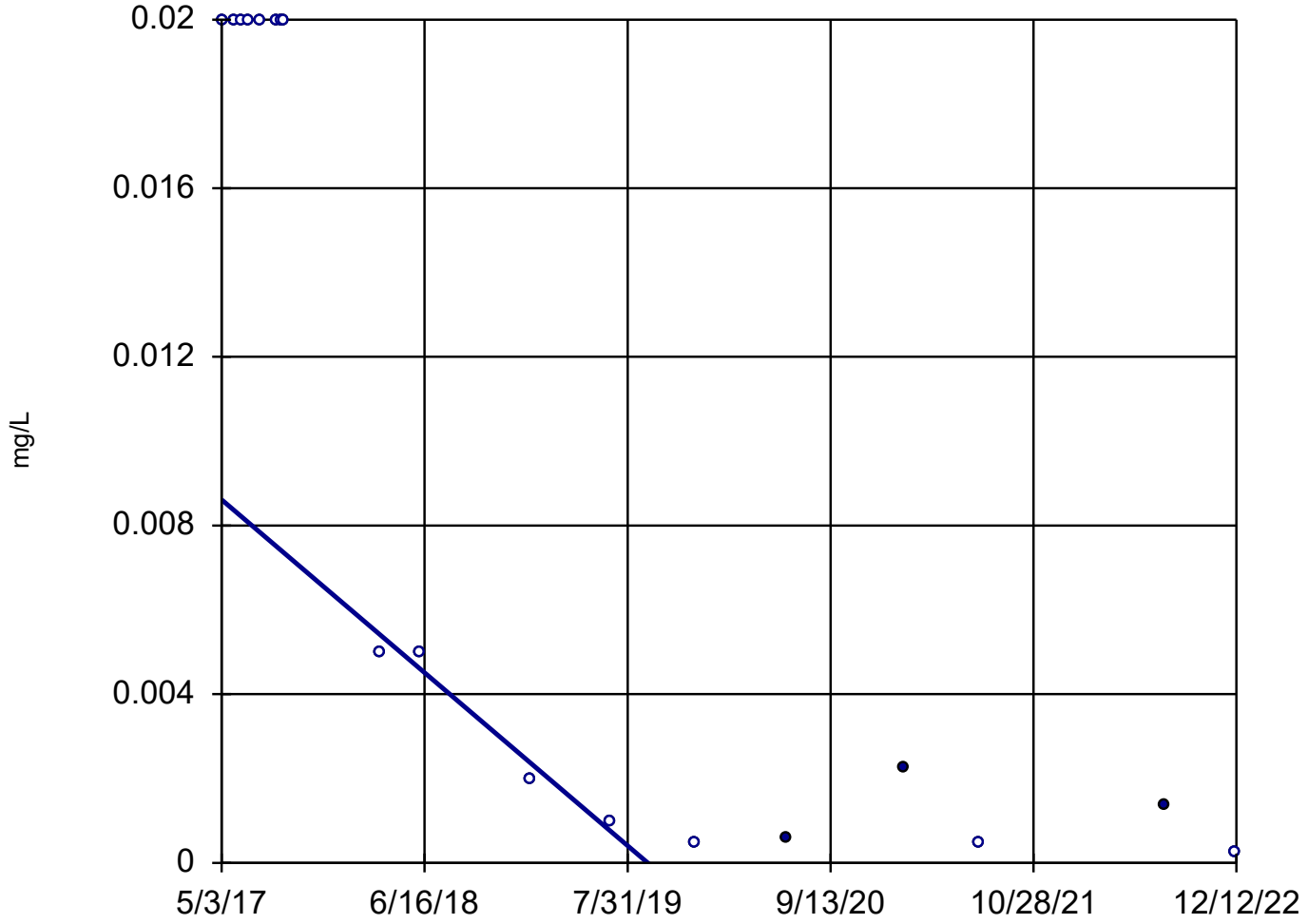
Constituent: Cobalt Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 18

Slope = -0.003654 units per year.

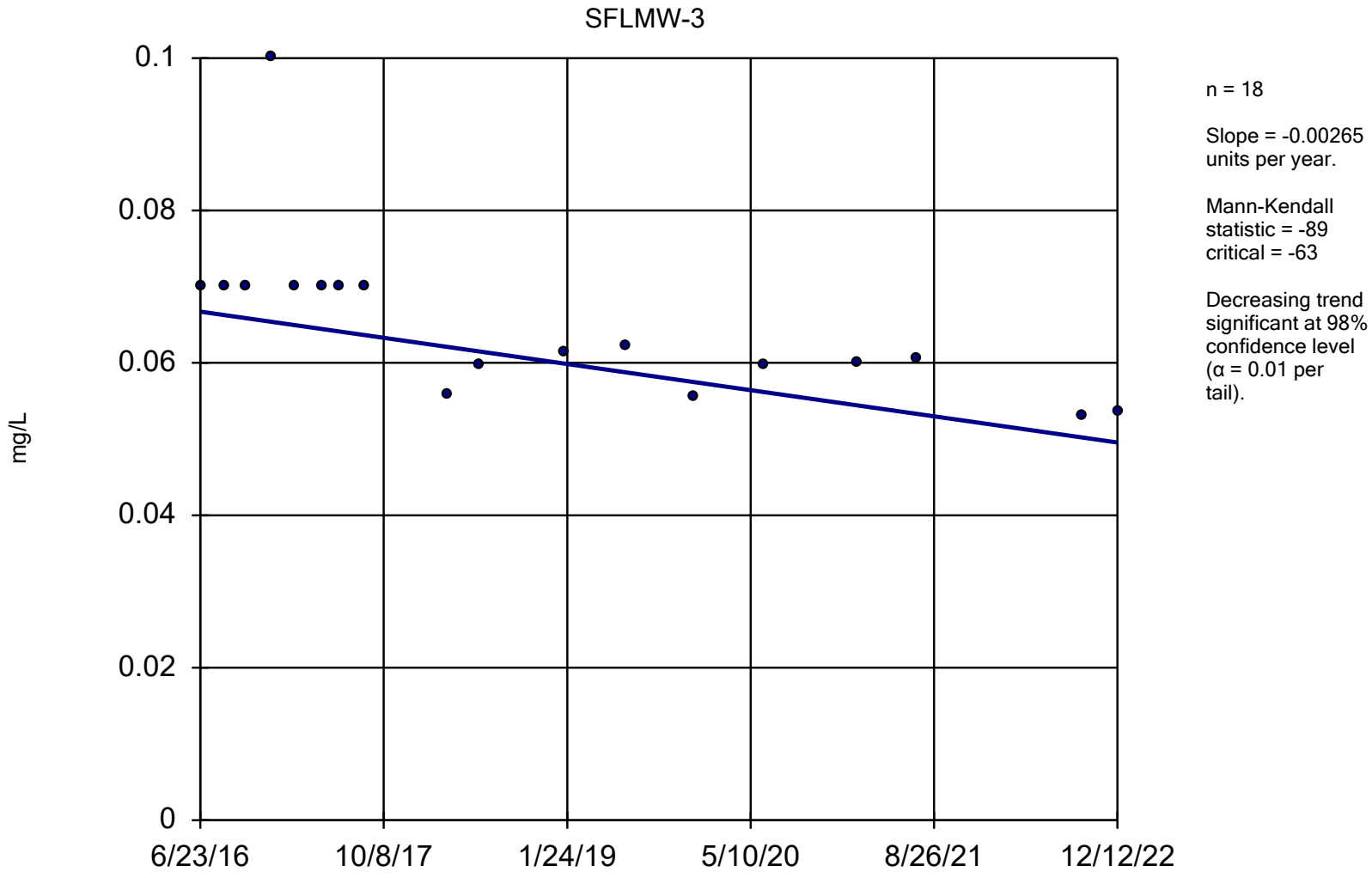
Mann-Kendall statistic = -105
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator



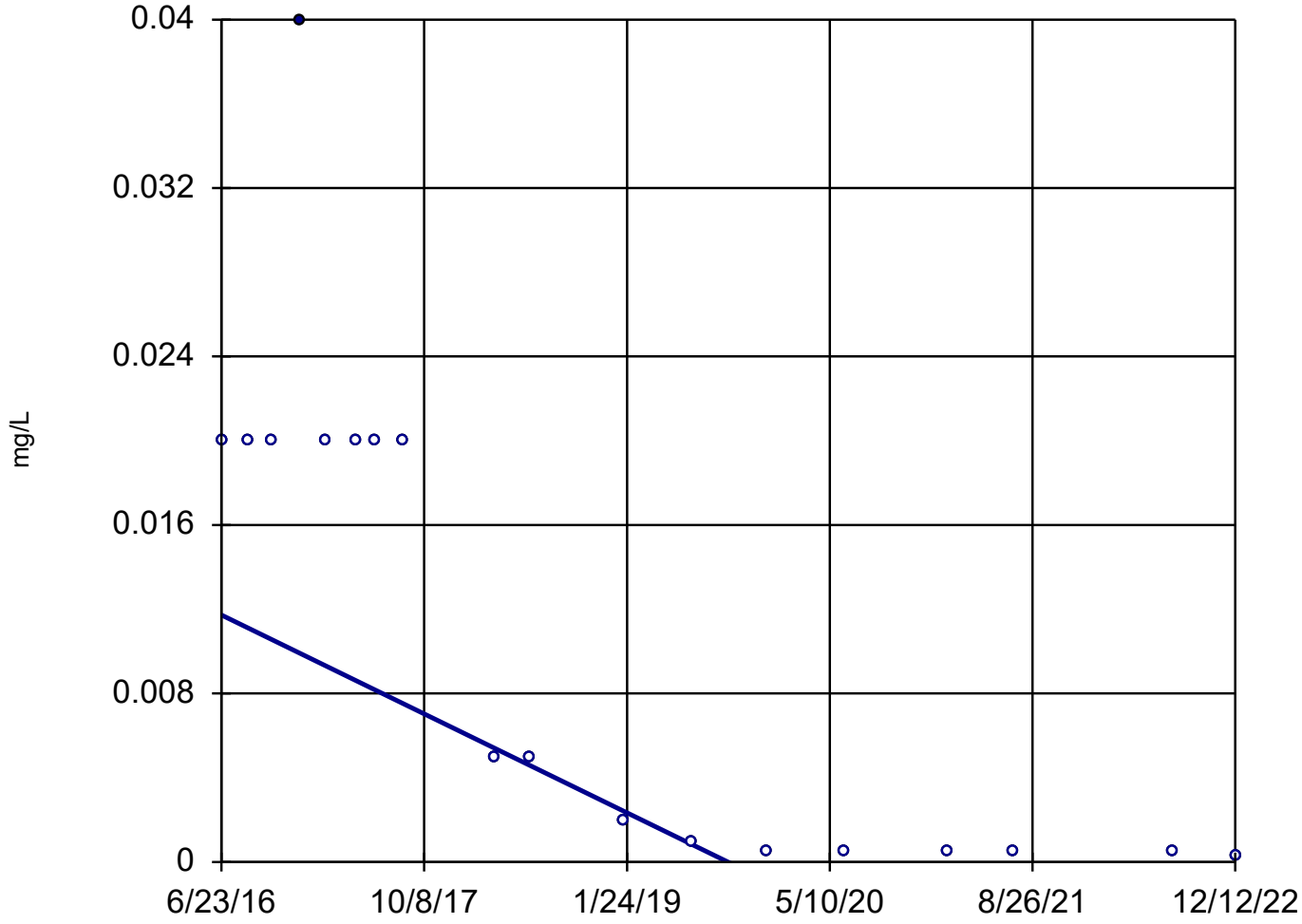
Constituent: Cobalt Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 18

Slope = -0.003626 units per year.

Mann-Kendall statistic = -115
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

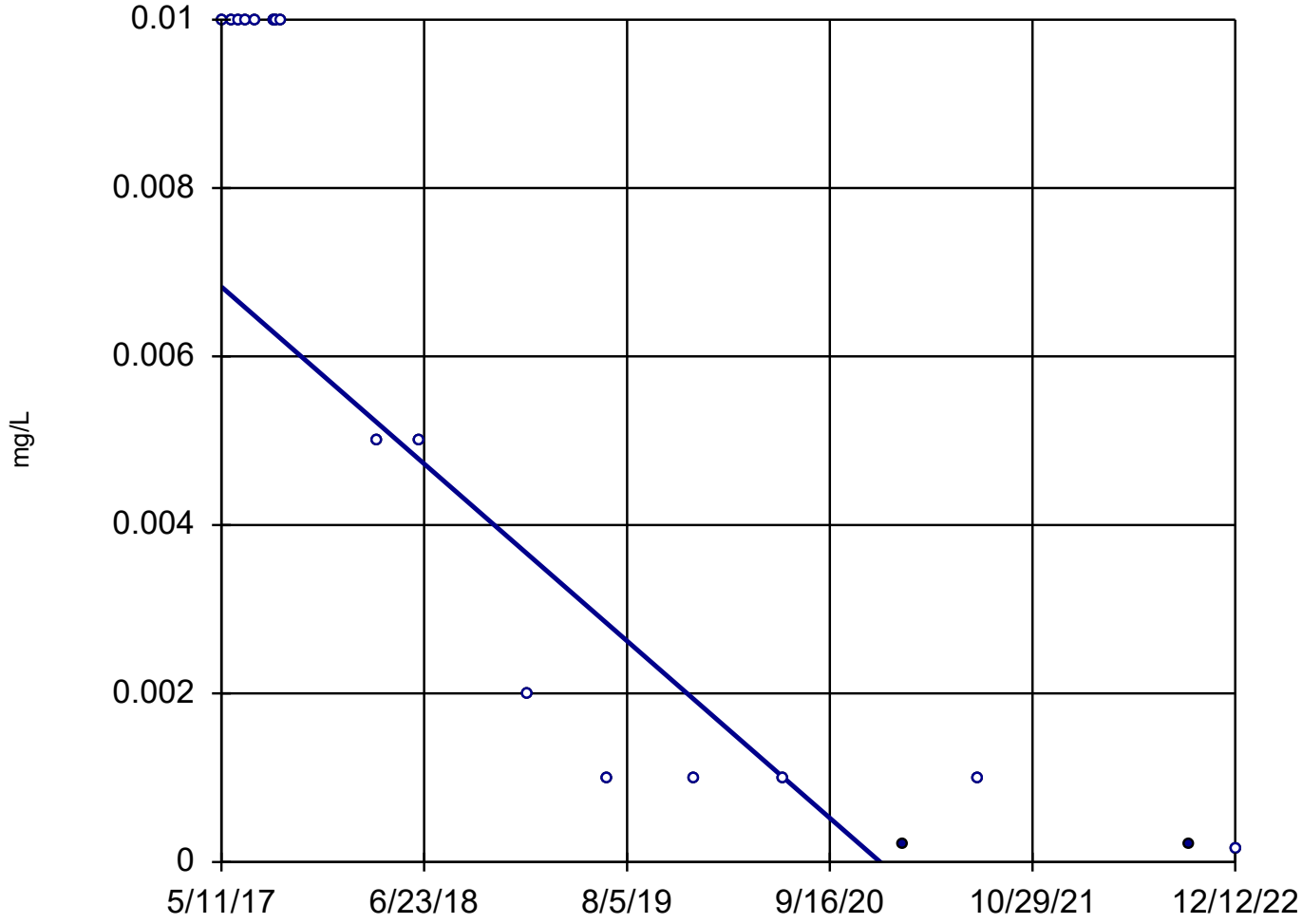
Constituent: Cobalt Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 18

Slope = -0.001879 units per year.

Mann-Kendall statistic = -116
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

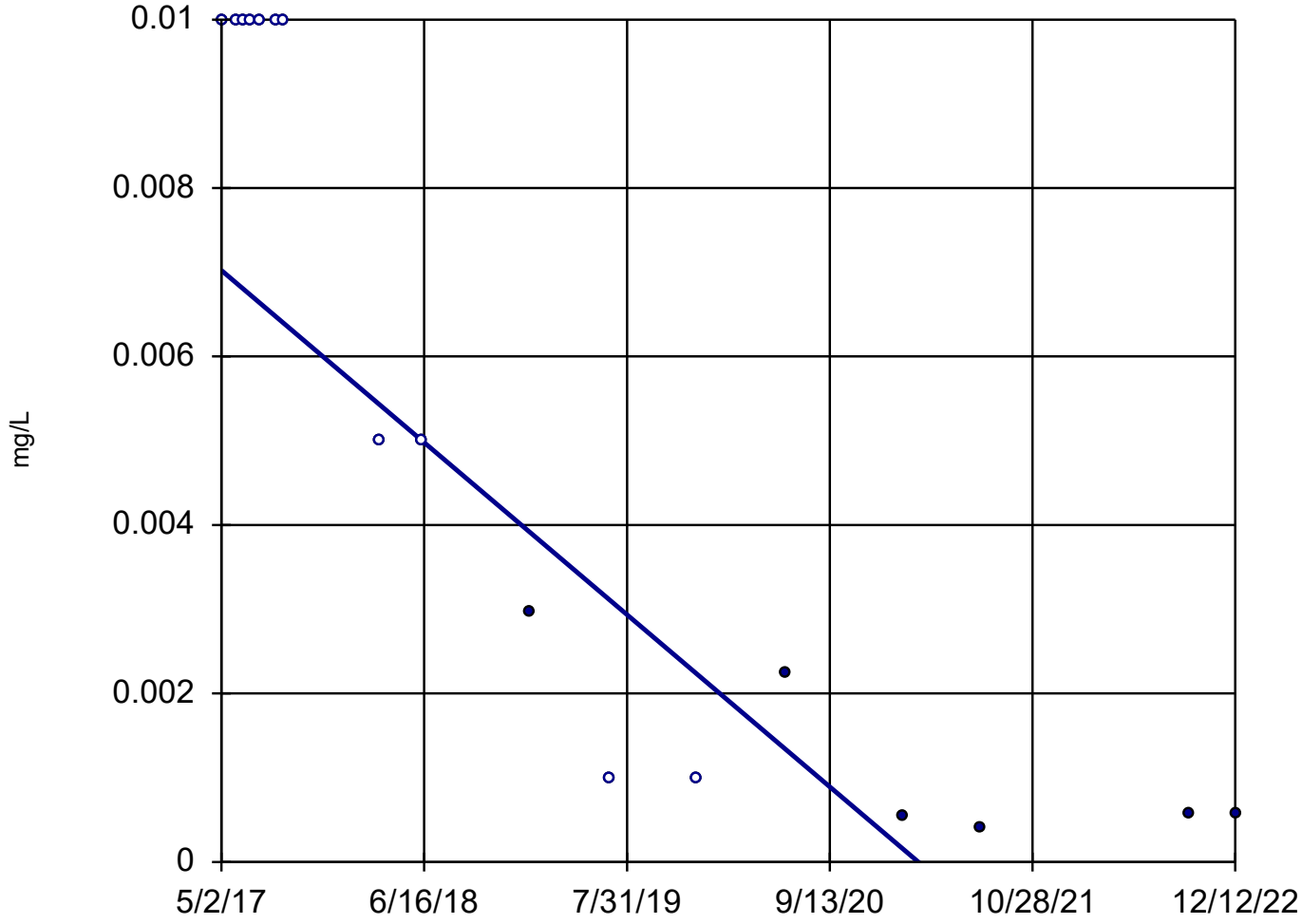
Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 17

Slope = -0.001819 units per year.

Mann-Kendall statistic = -101
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

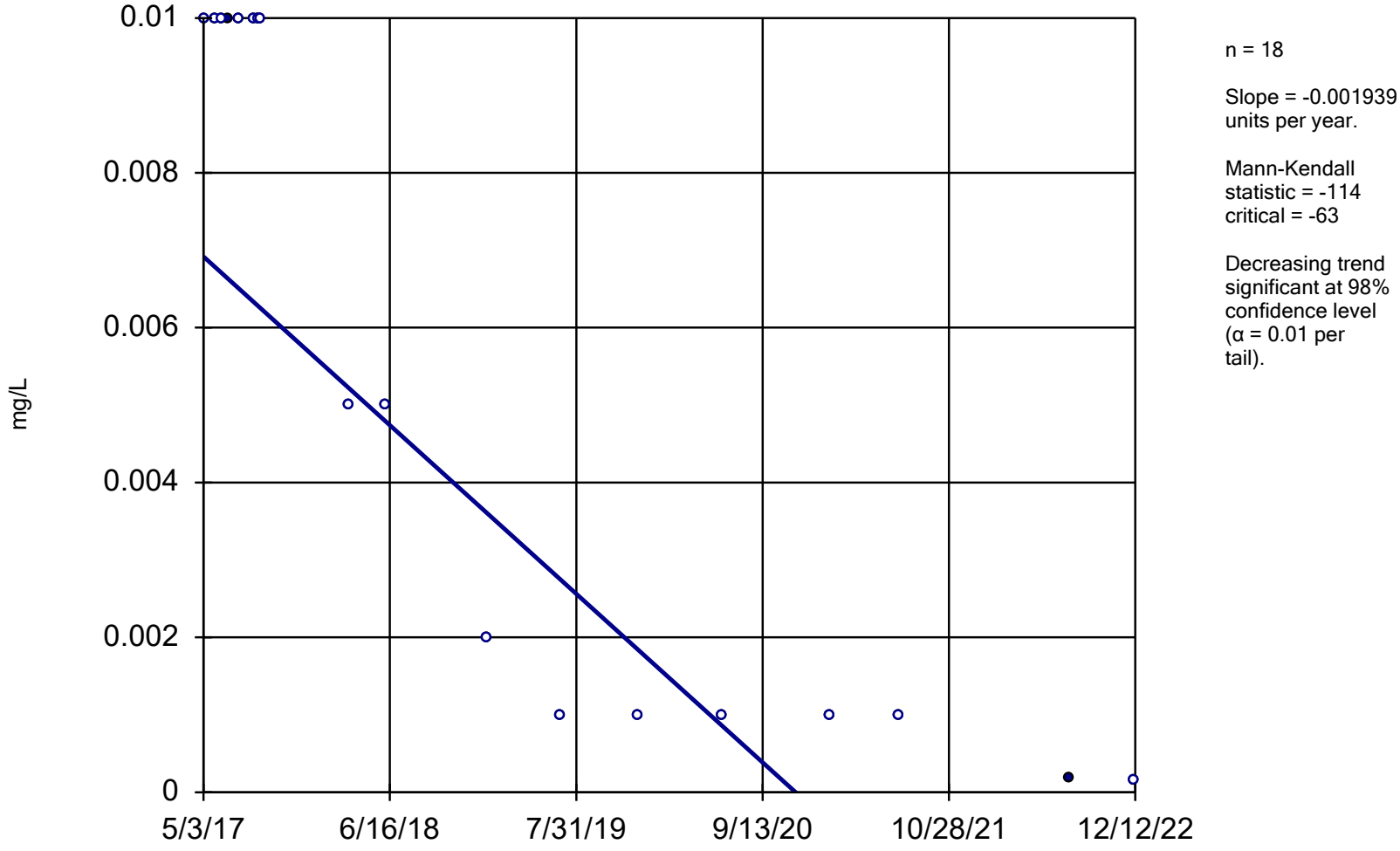
Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 18

Slope = -0.001939 units per year.

Mann-Kendall statistic = -114
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

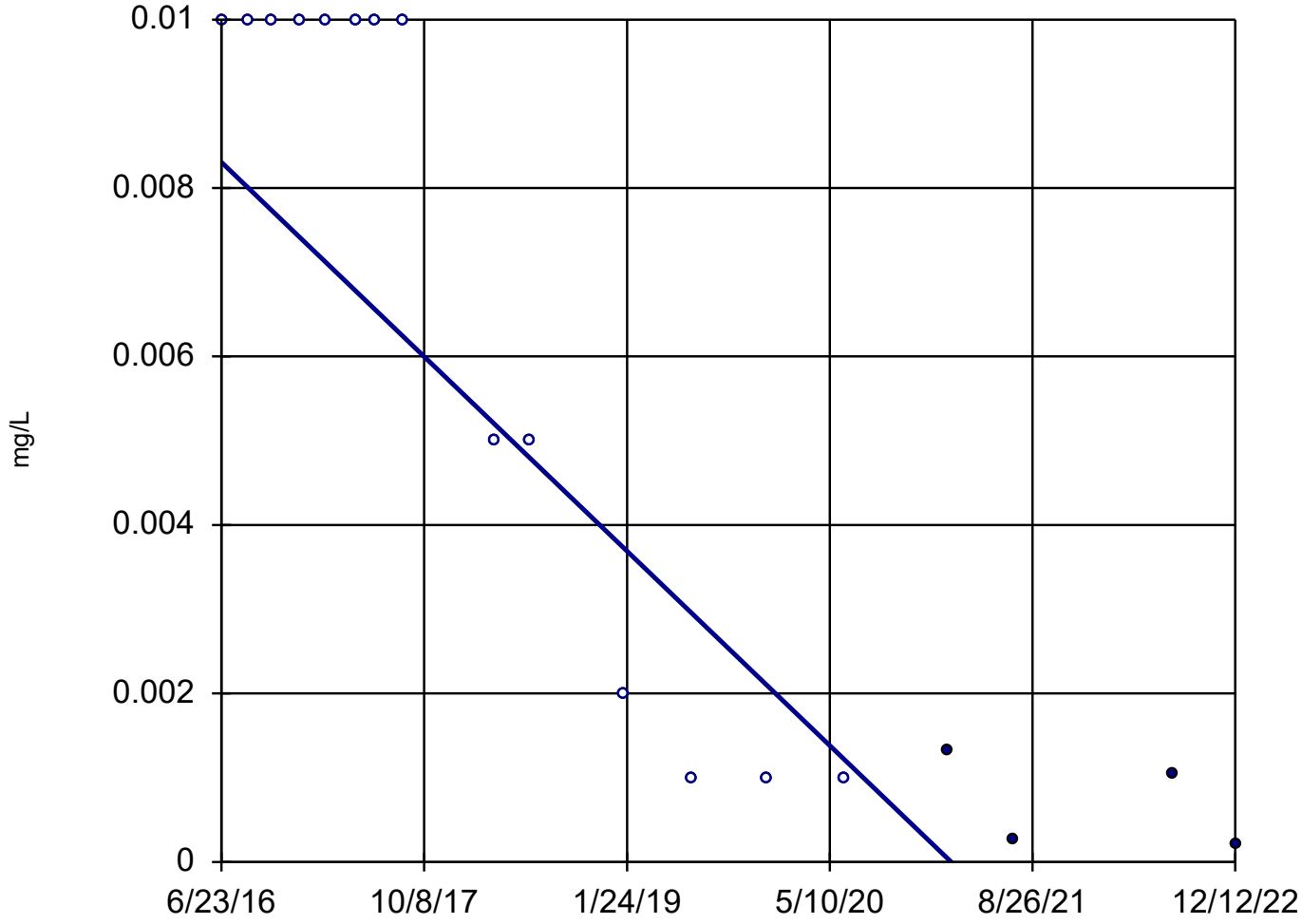
Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 18

Slope = -0.001783 units per year.

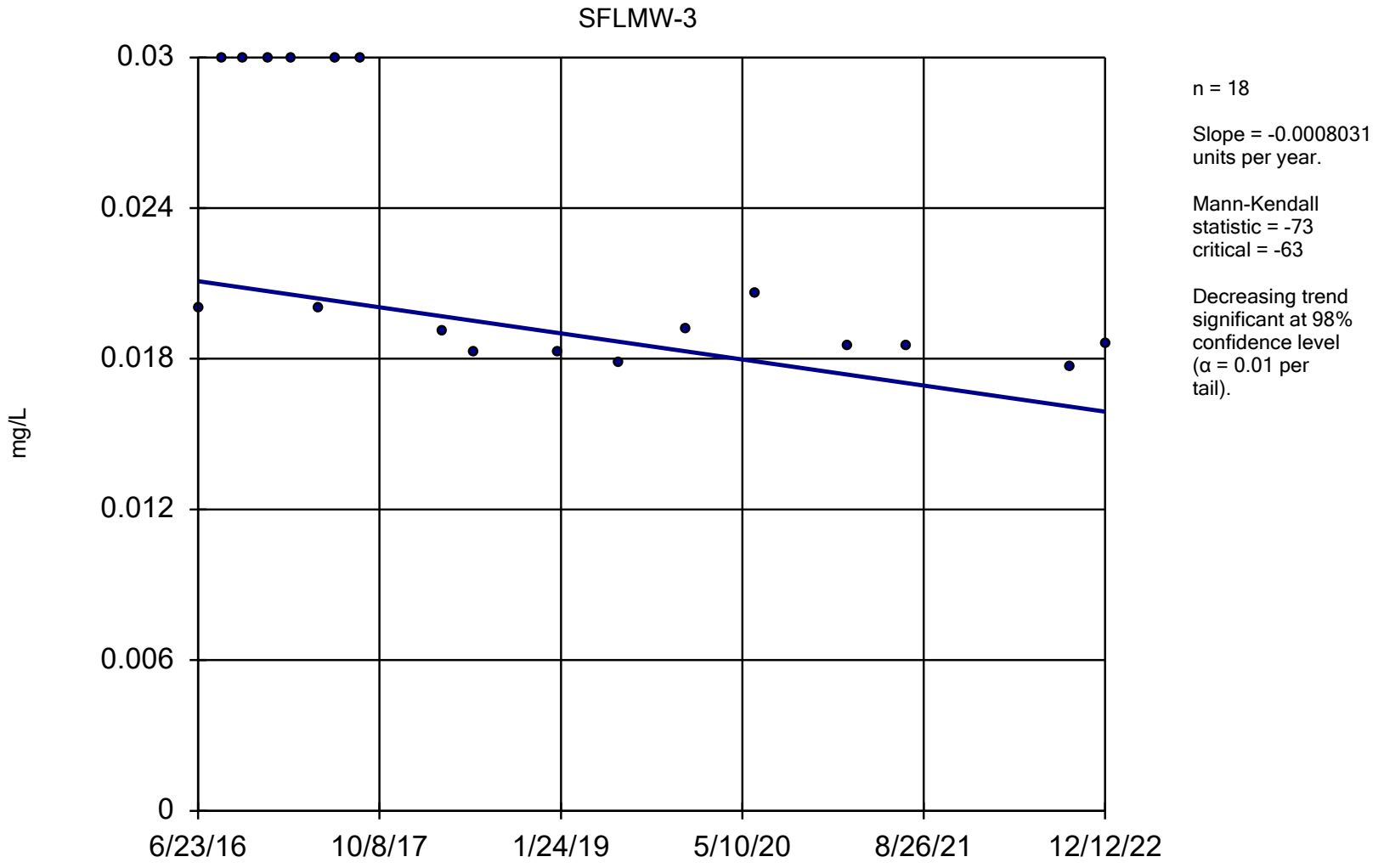
Mann-Kendall statistic = -107
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator



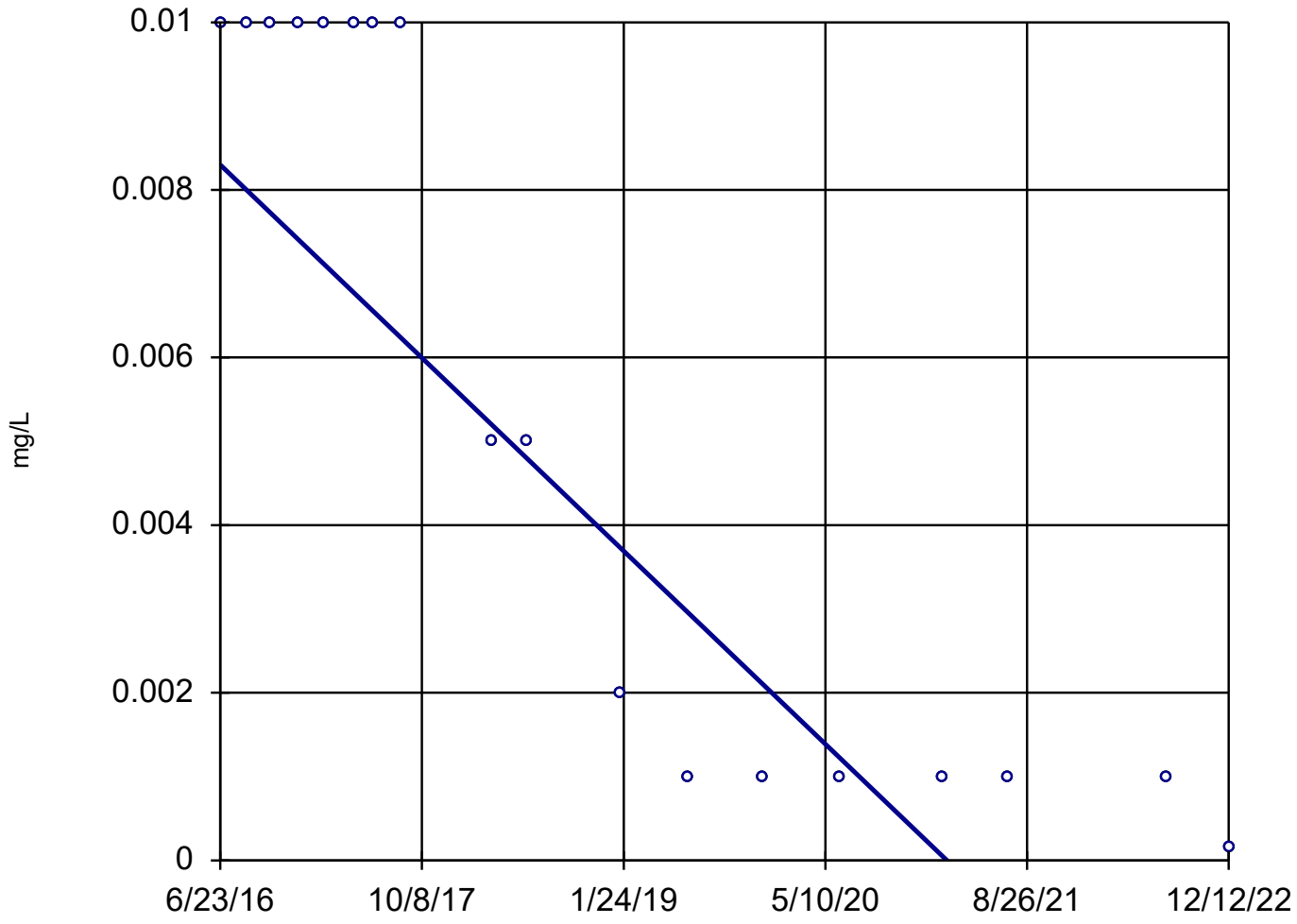
Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 18

Slope = -0.00178 units per year.

Mann-Kendall statistic = -109
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

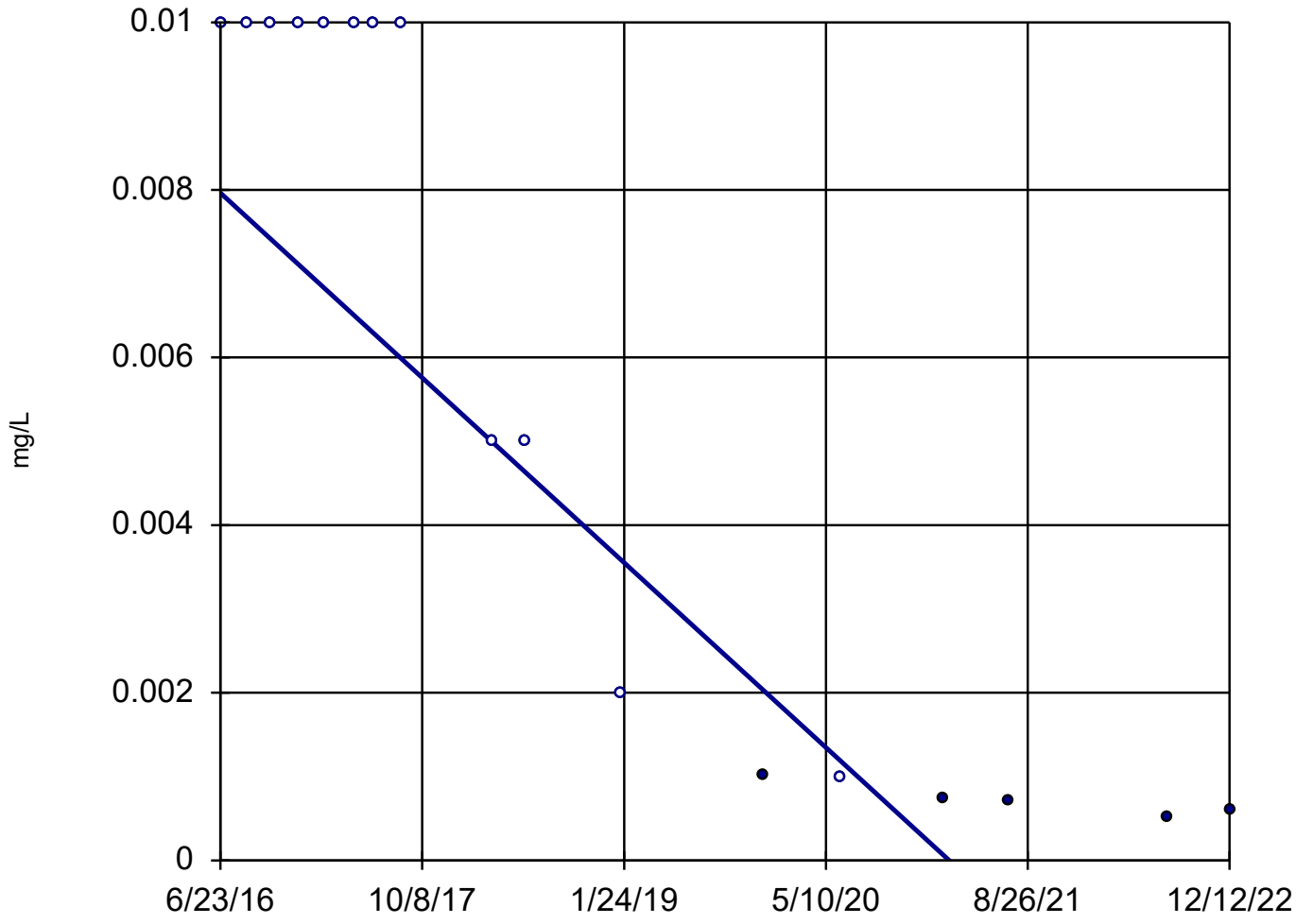
Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-5



n = 17

Slope = -0.001703 units per year.

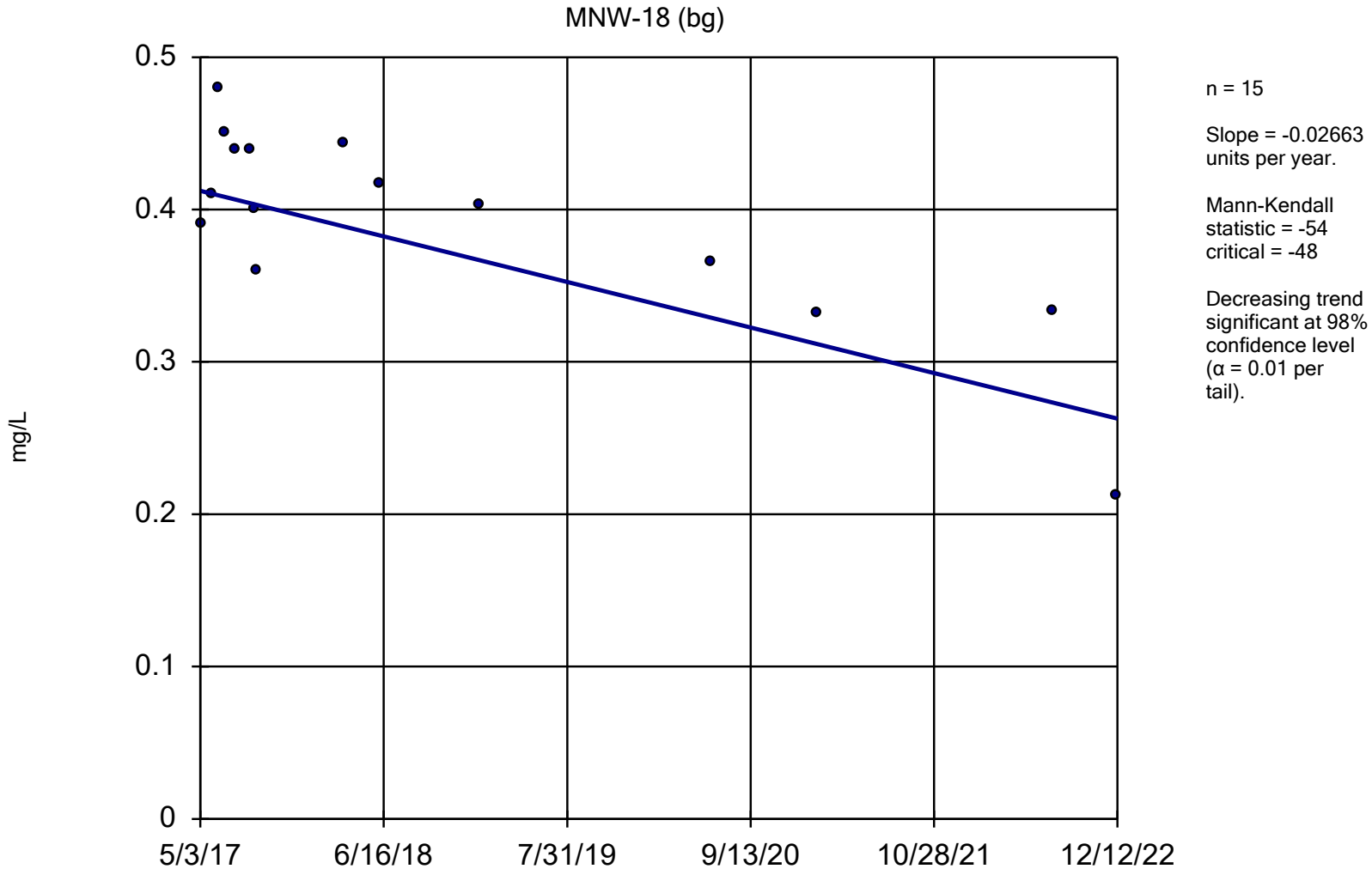
Mann-Kendall statistic = -105
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

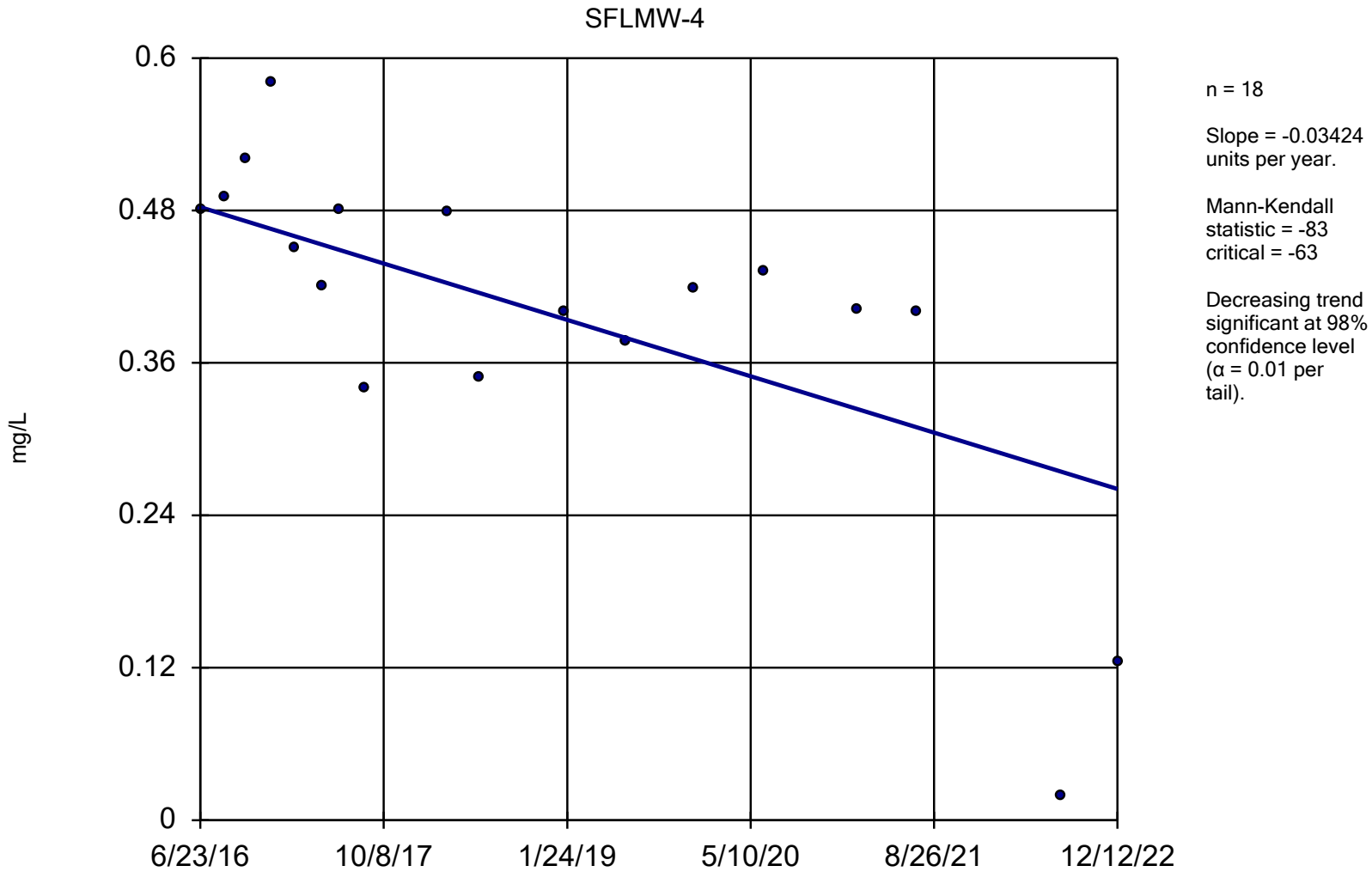
Sen's Slope Estimator



Constituent: Lithium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator



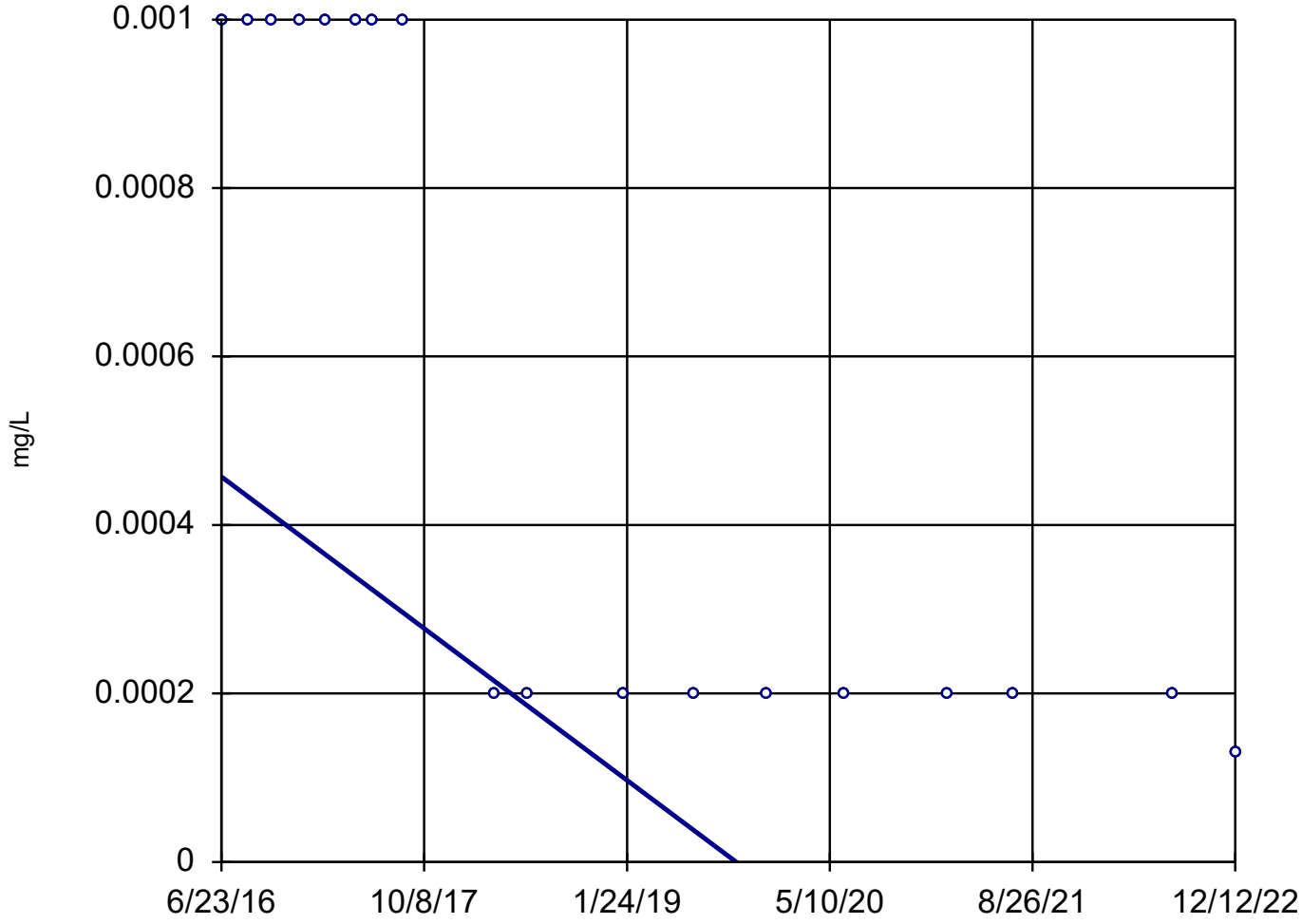
Constituent: Lithium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 18

Slope = -0.0001391 units per year.

Mann-Kendall statistic = -89
critical = -63

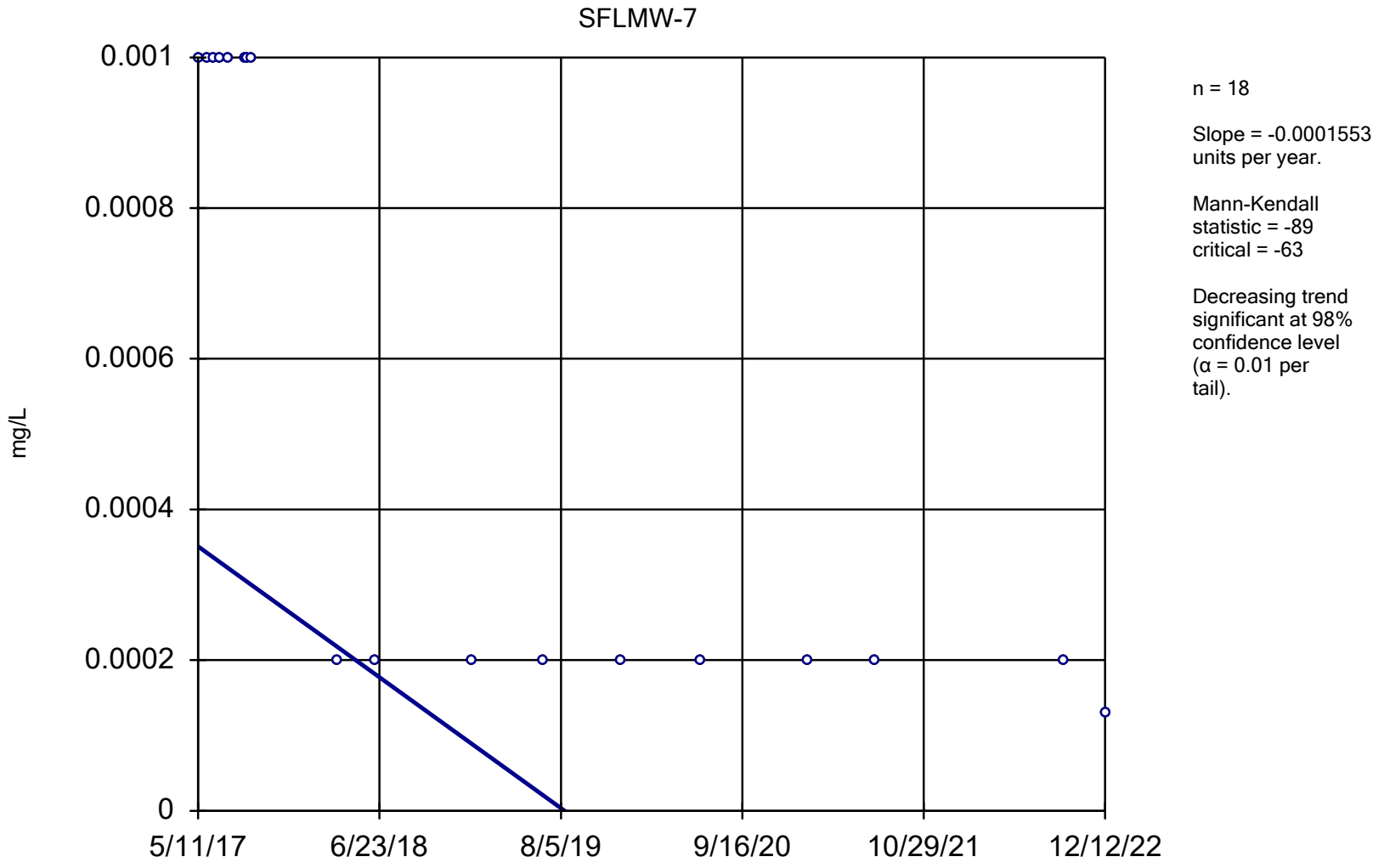
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

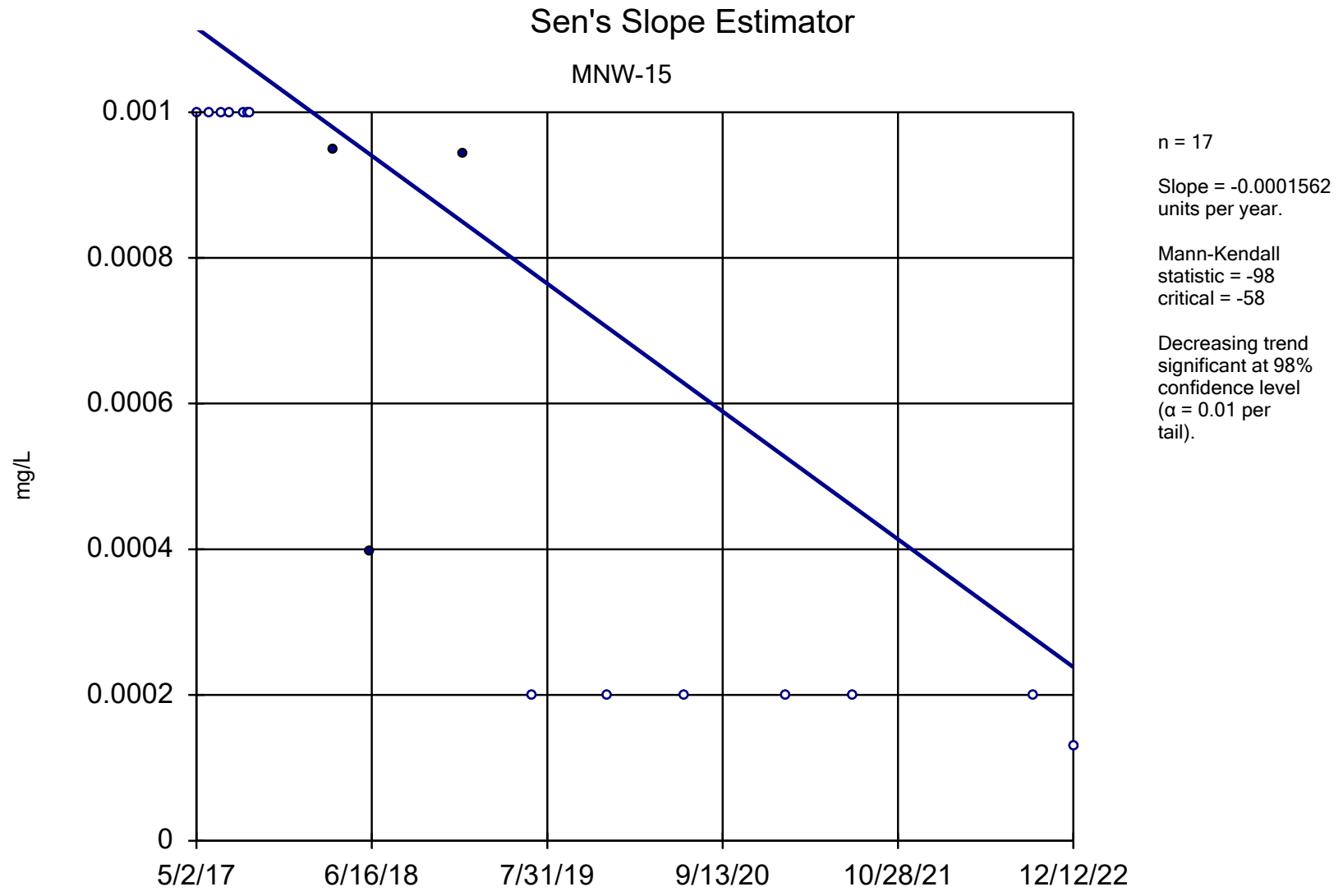
Sen's Slope Estimator



Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



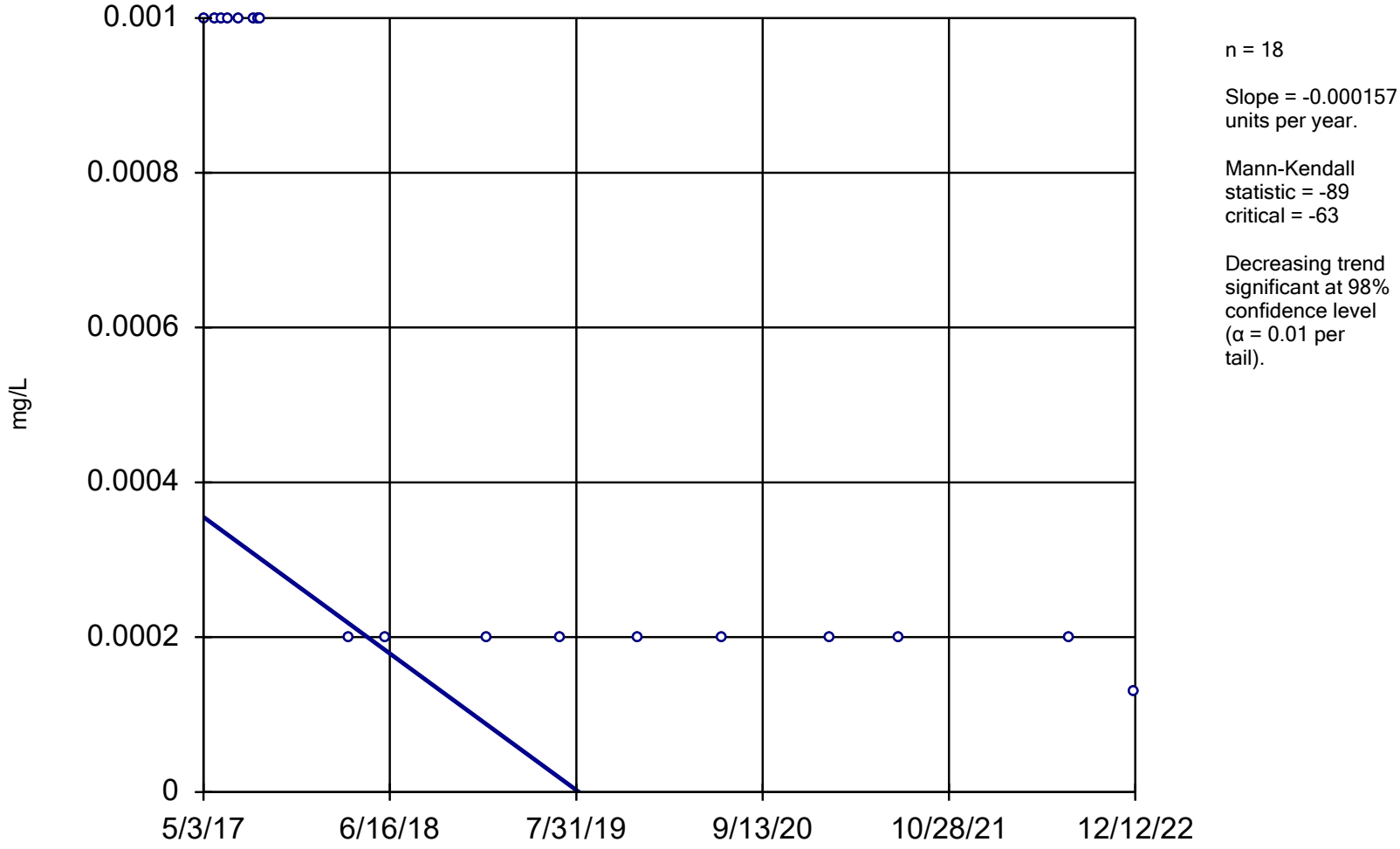
Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 18

Slope = -0.000157 units per year.

Mann-Kendall statistic = -89
critical = -63

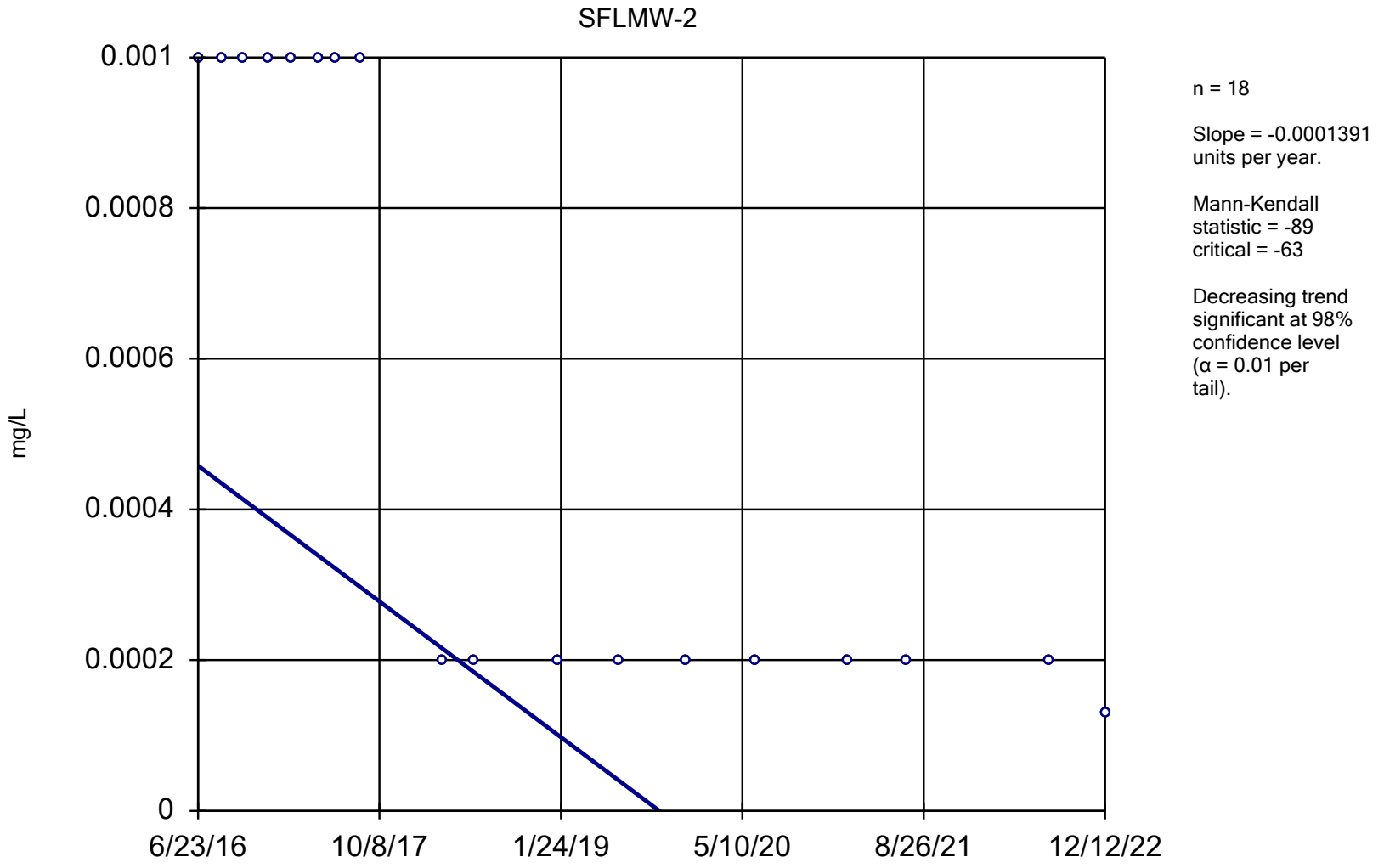
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

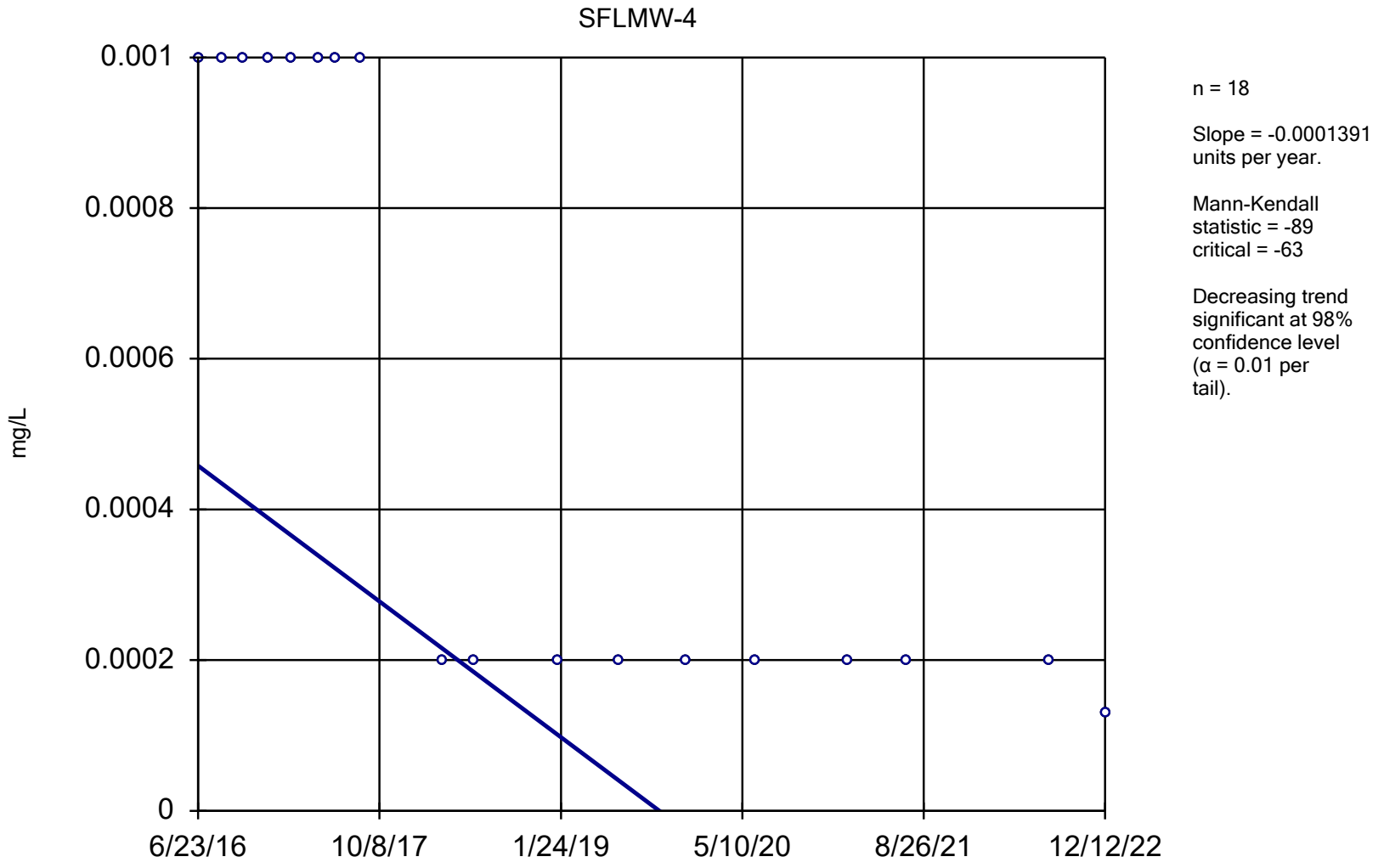


Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

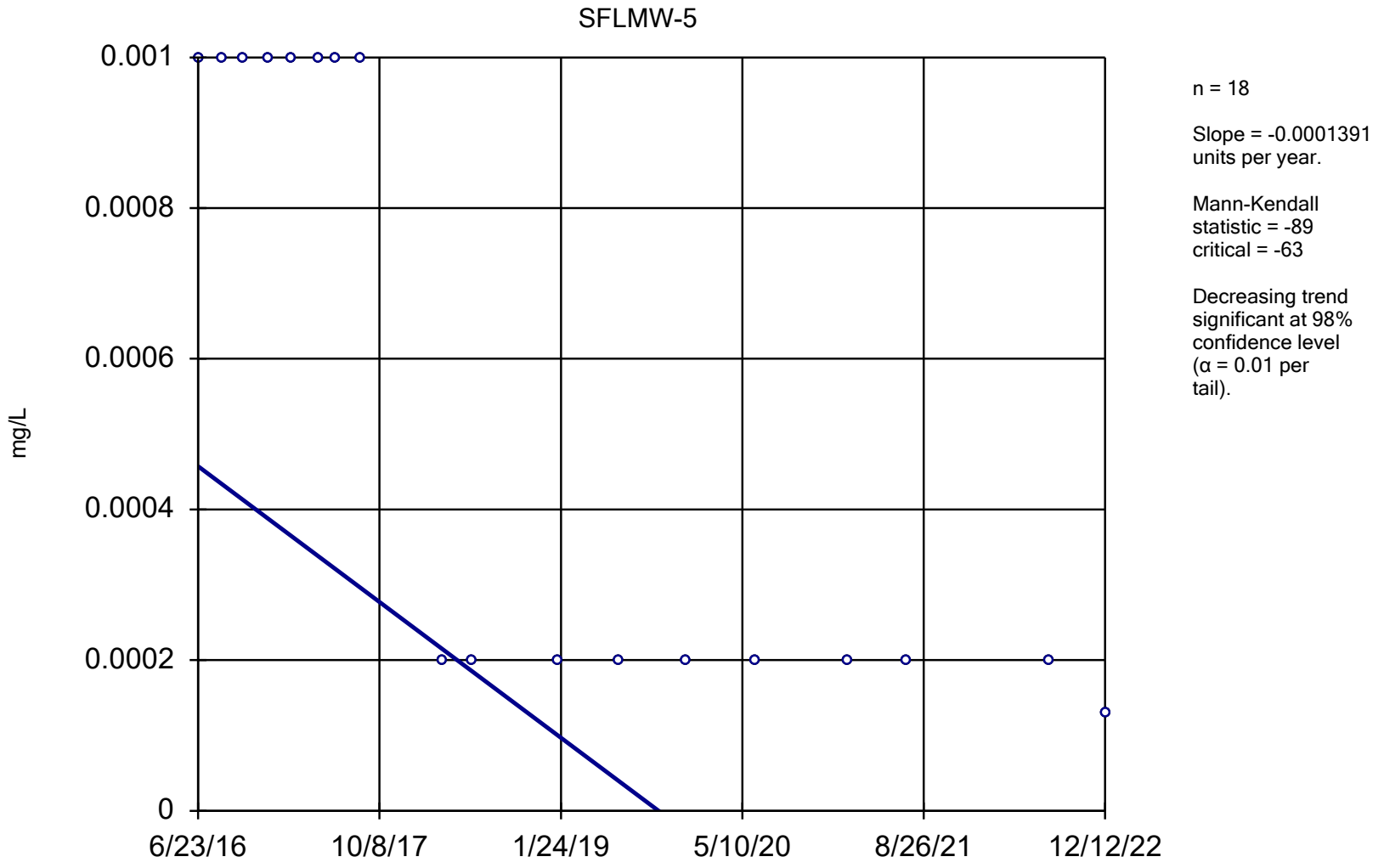


Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



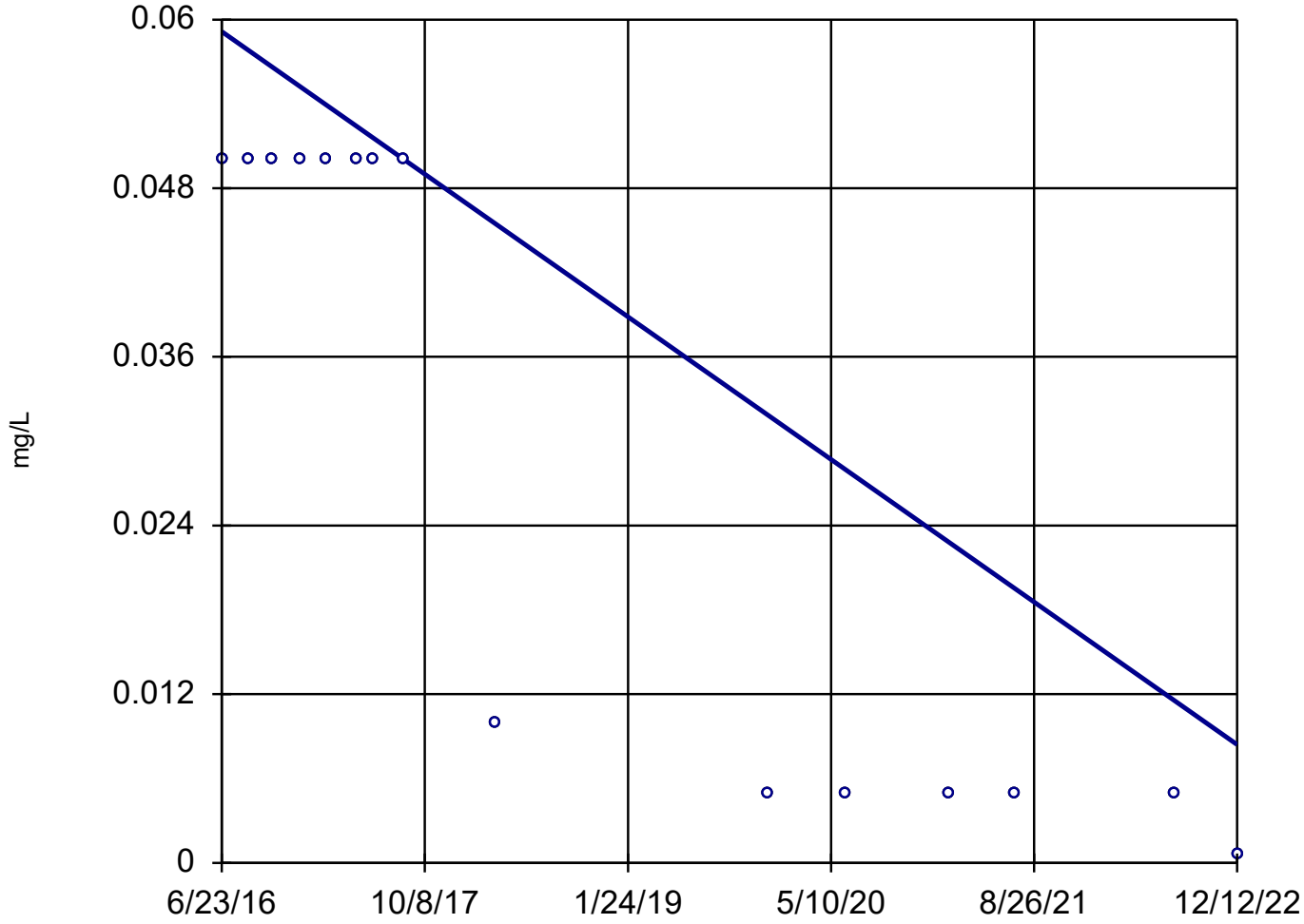
Constituent: Mercury Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-6



n = 15

Slope = -0.007838 units per year.

Mann-Kendall statistic = -67
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

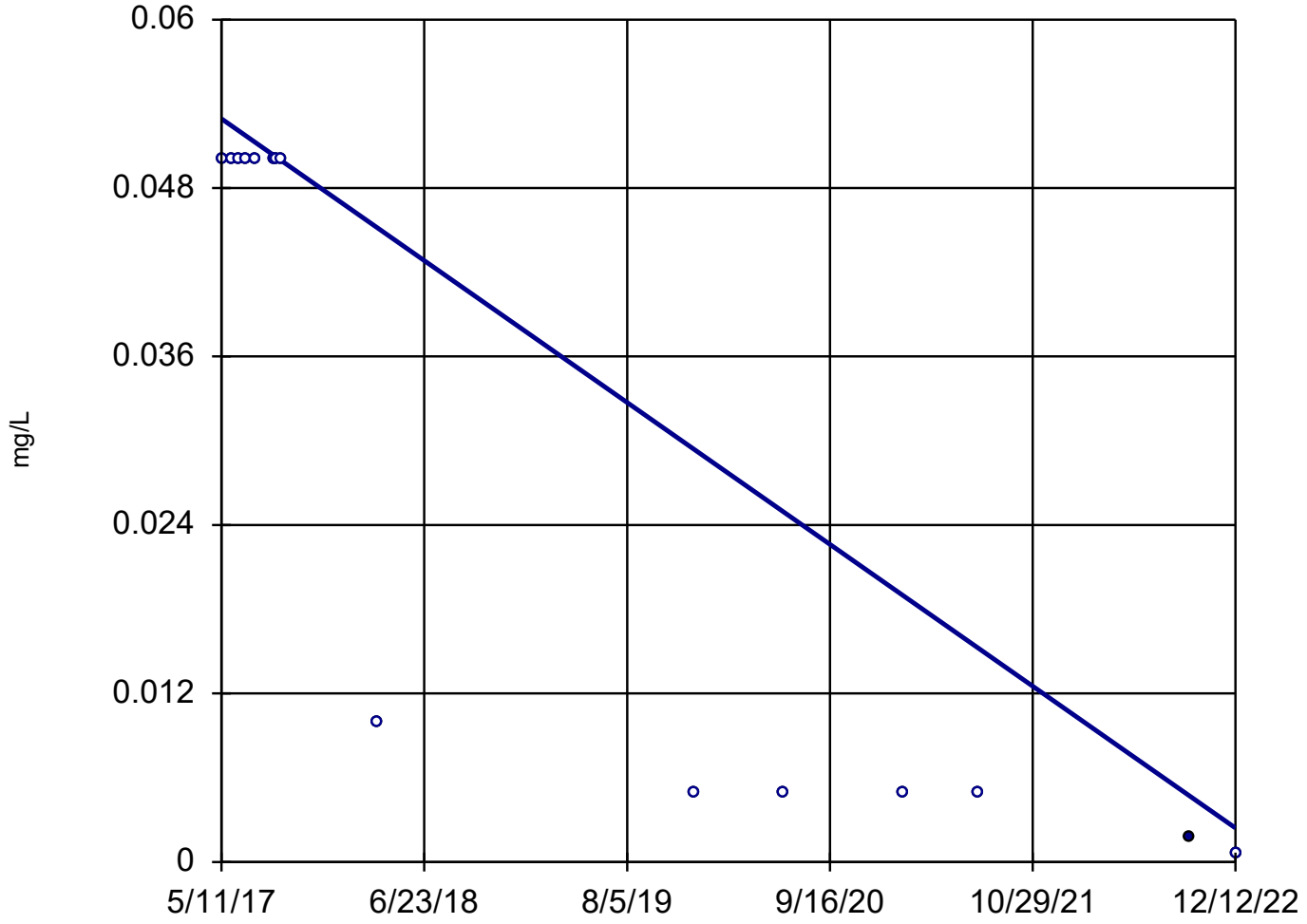
Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-7



n = 15

Slope = -0.009035 units per year.

Mann-Kendall statistic = -71
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

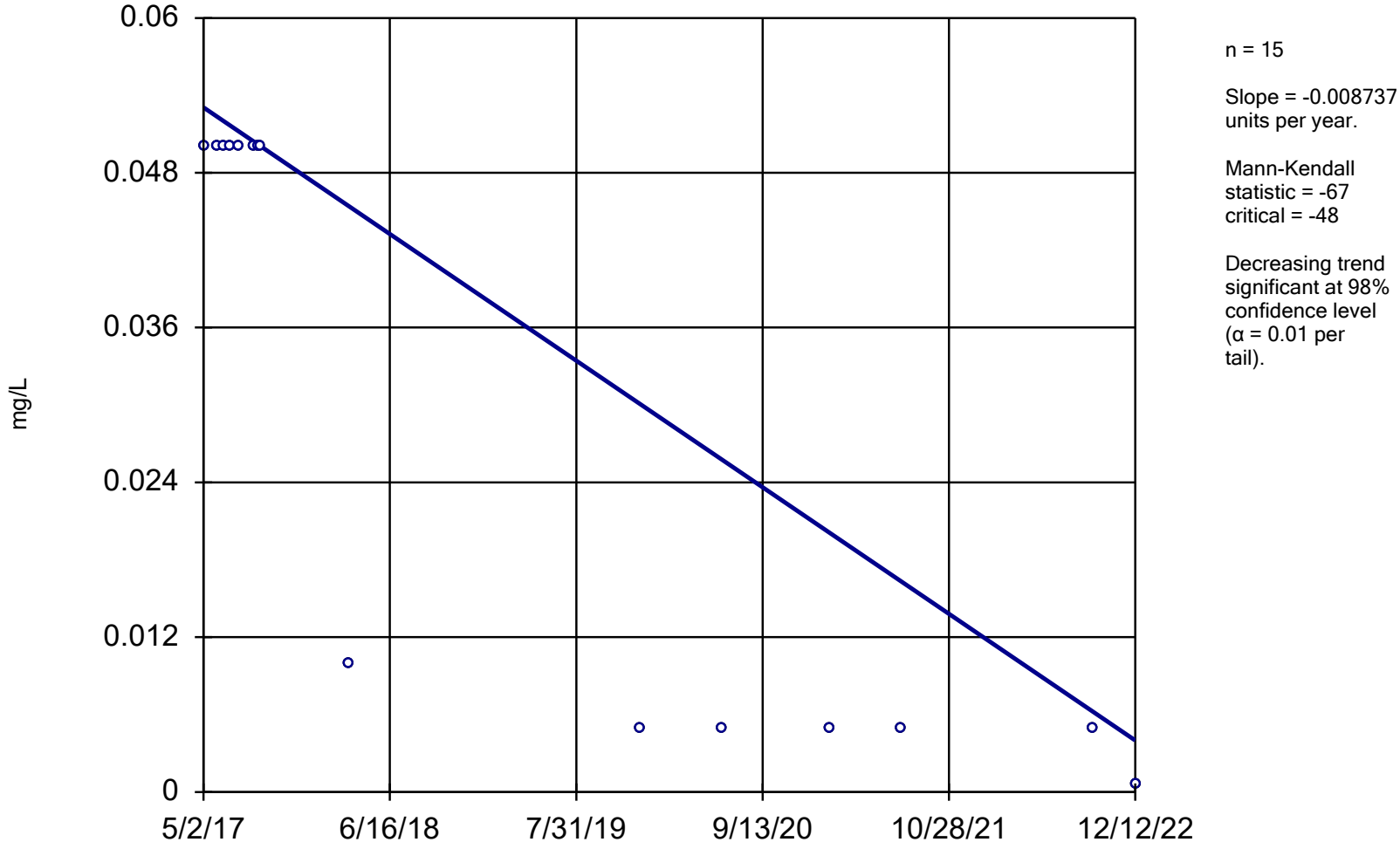
Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-15



n = 15

Slope = -0.008737 units per year.

Mann-Kendall statistic = -67
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

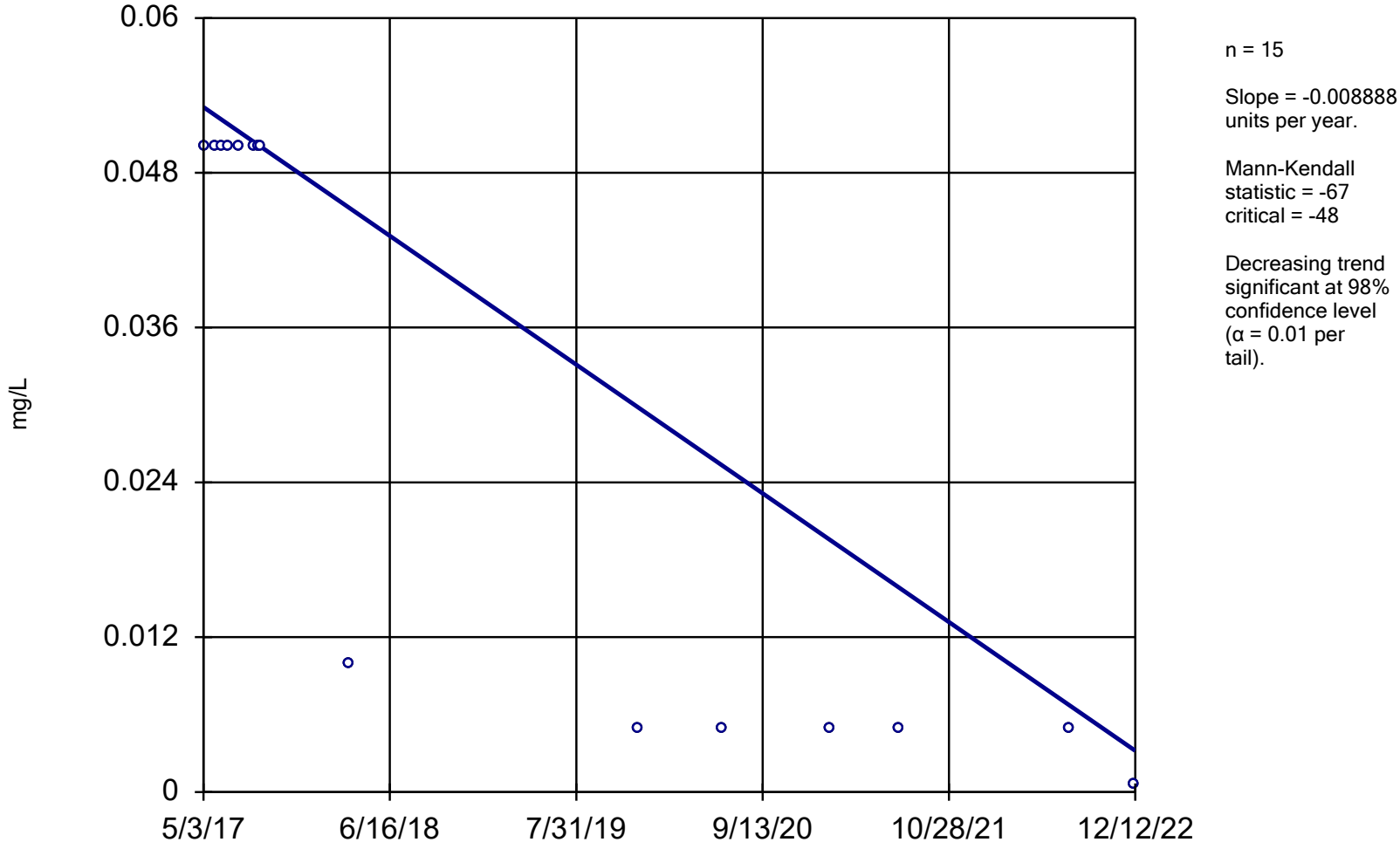
Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 15

Slope = -0.008888 units per year.

Mann-Kendall statistic = -67
critical = -48

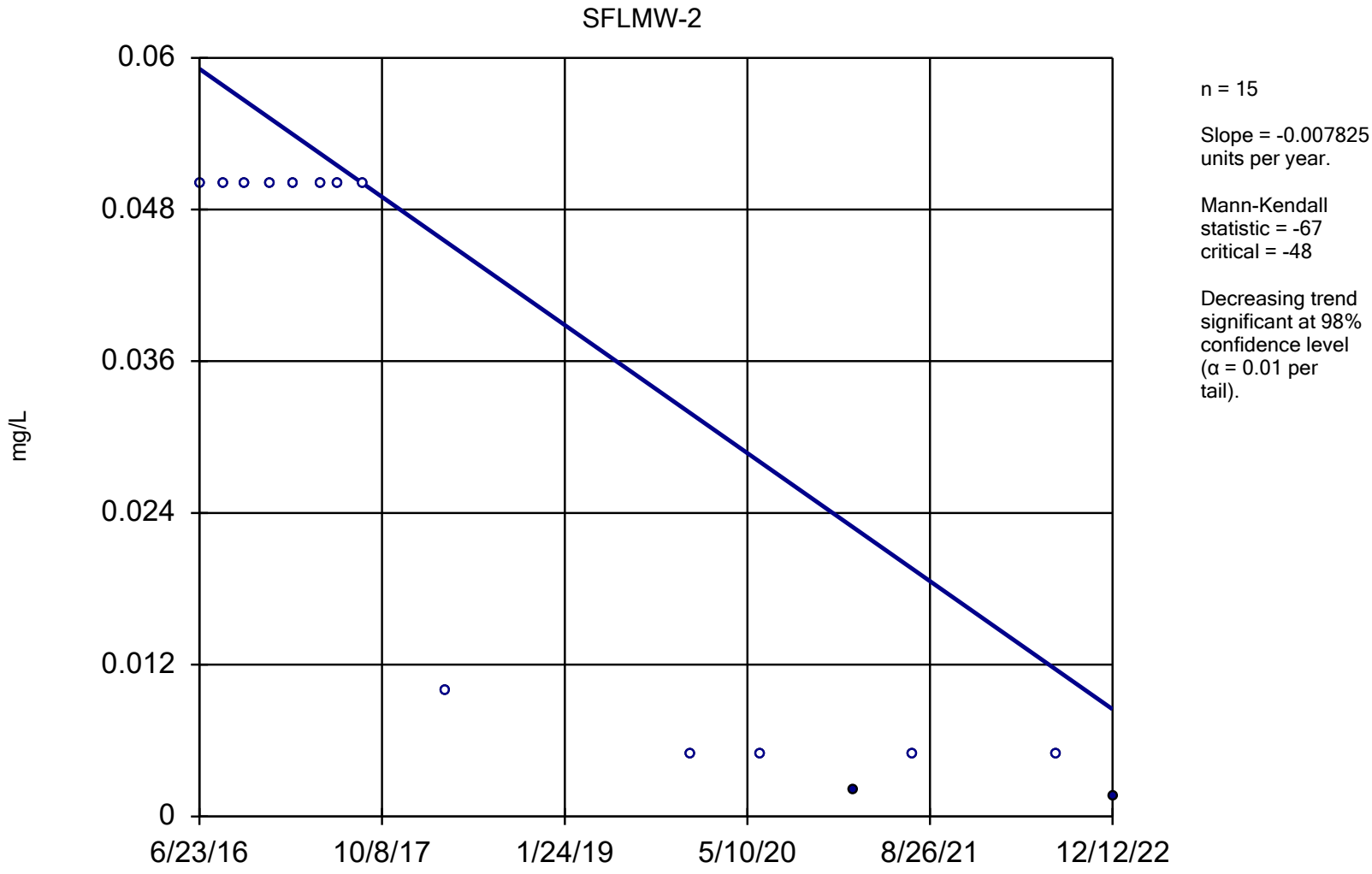
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



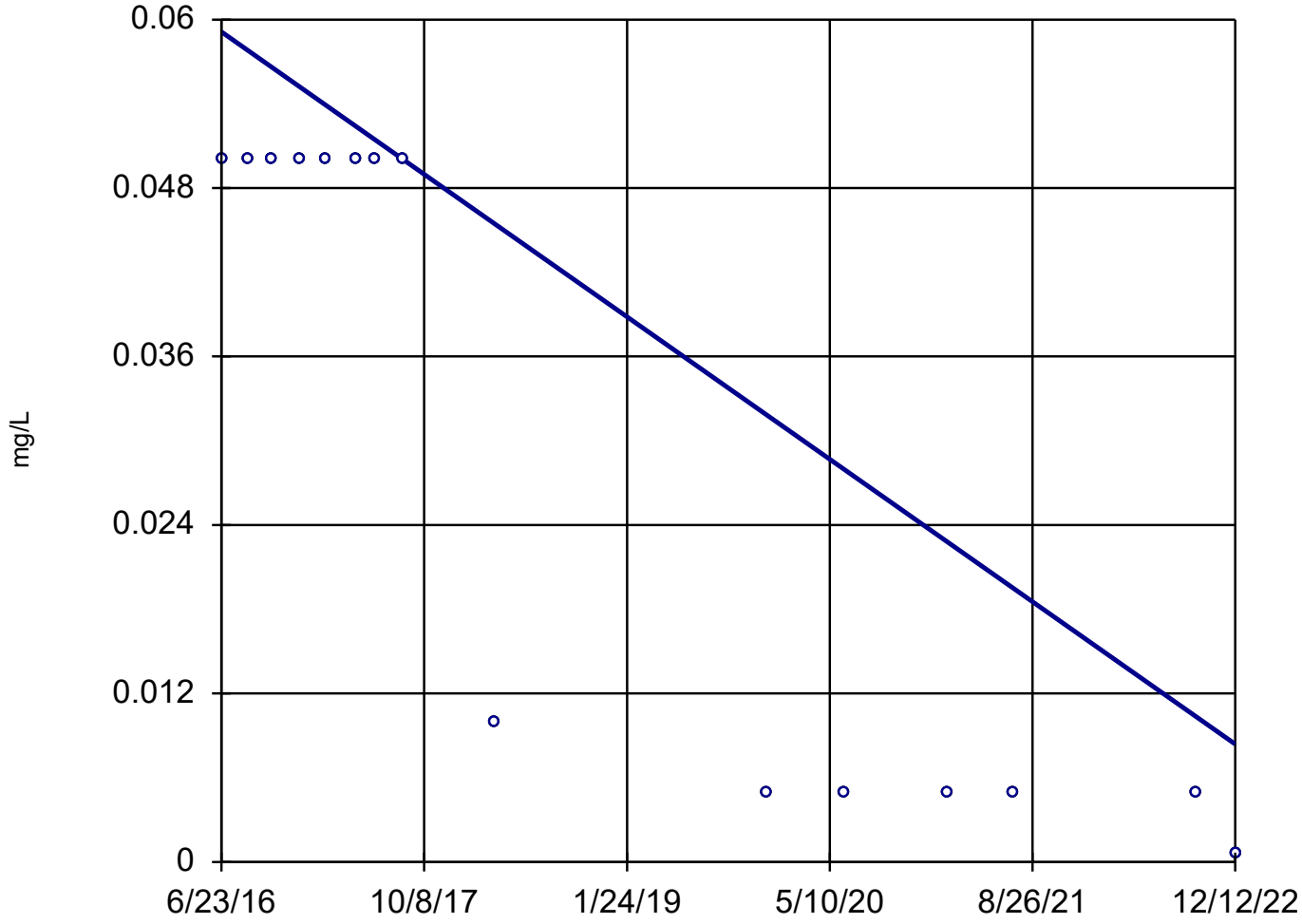
Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-3



n = 15

Slope = -0.007838 units per year.

Mann-Kendall statistic = -67
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

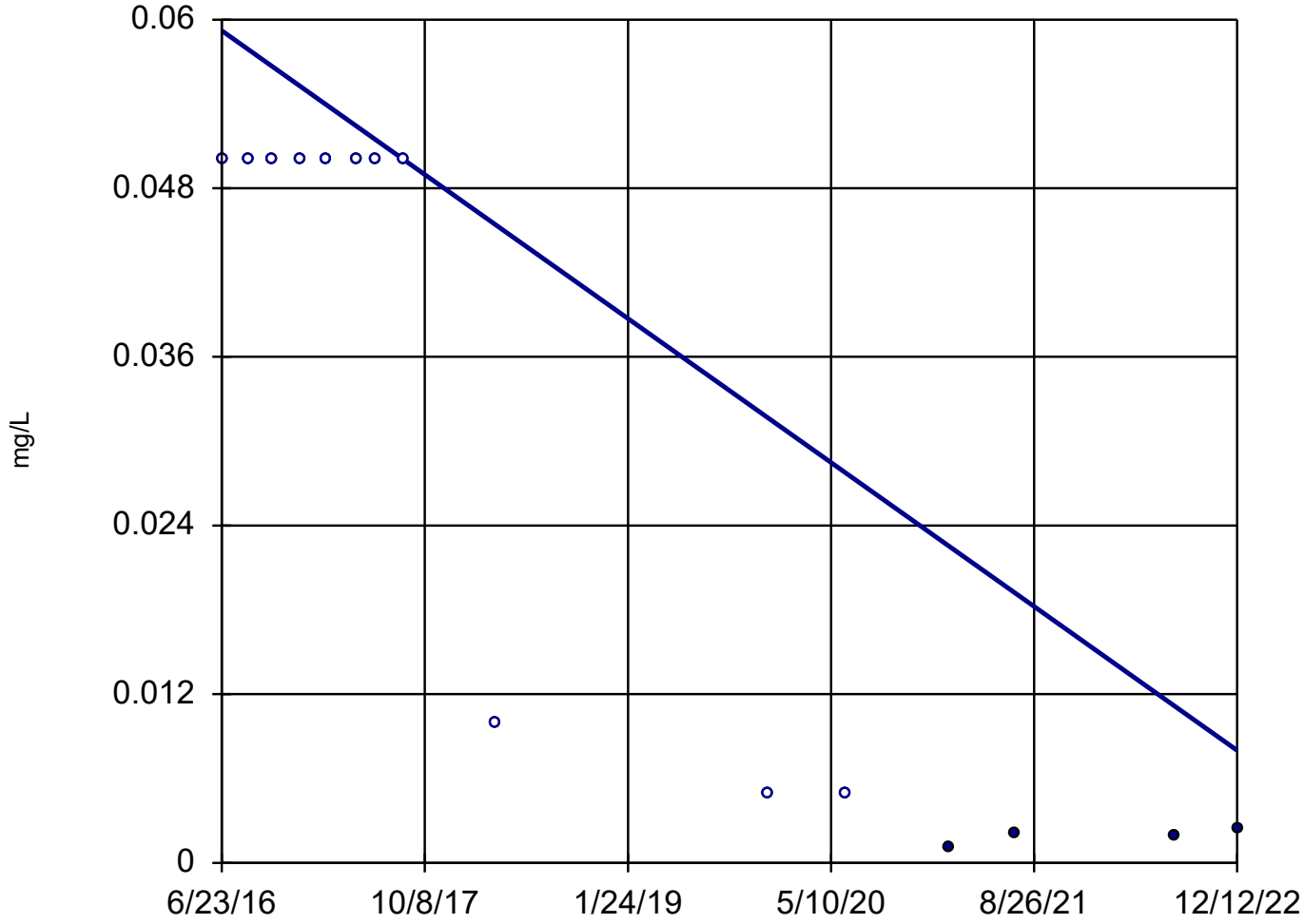
Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-4



n = 15

Slope = -0.007909 units per year.

Mann-Kendall statistic = -66
critical = -48

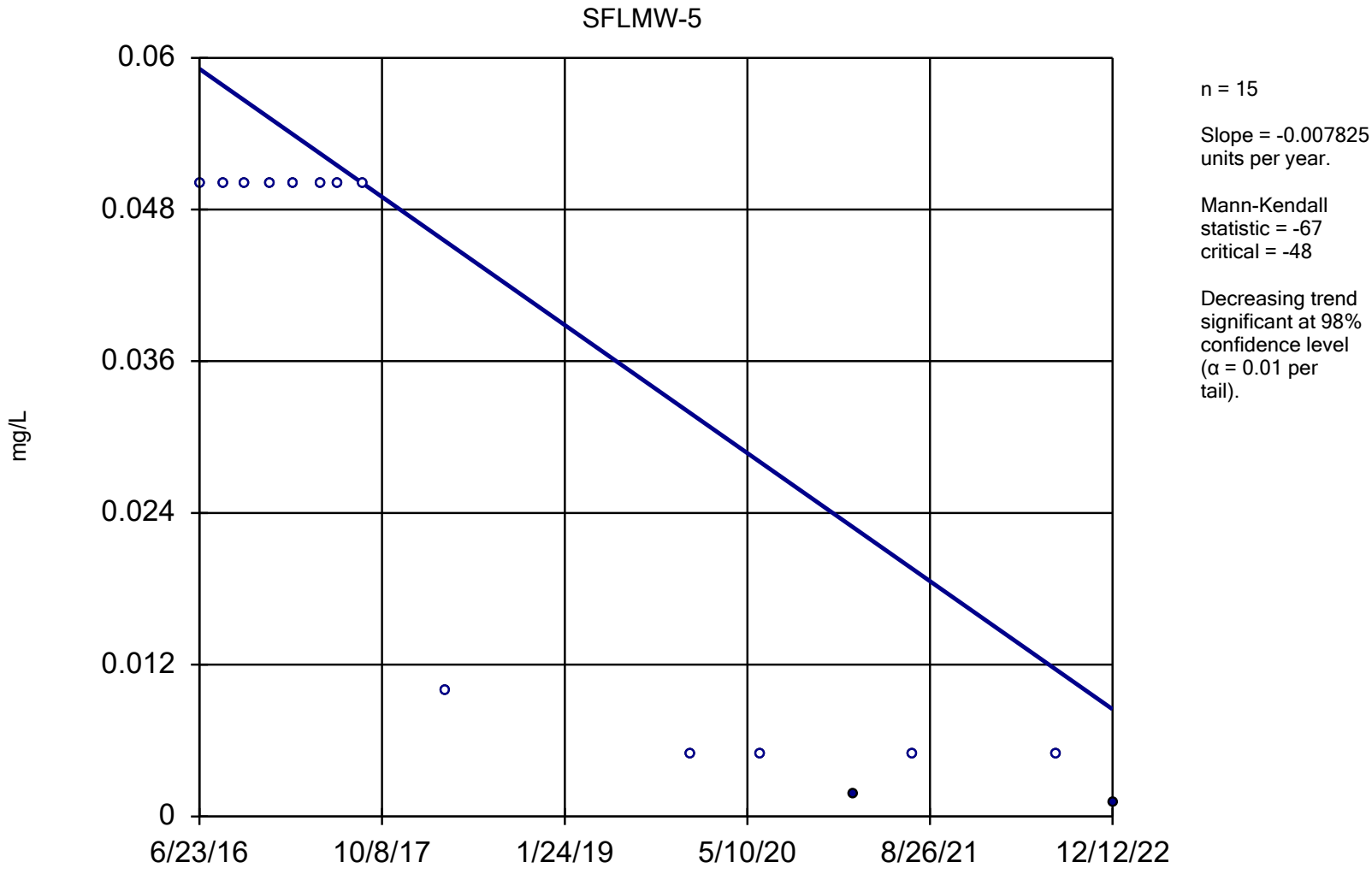
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

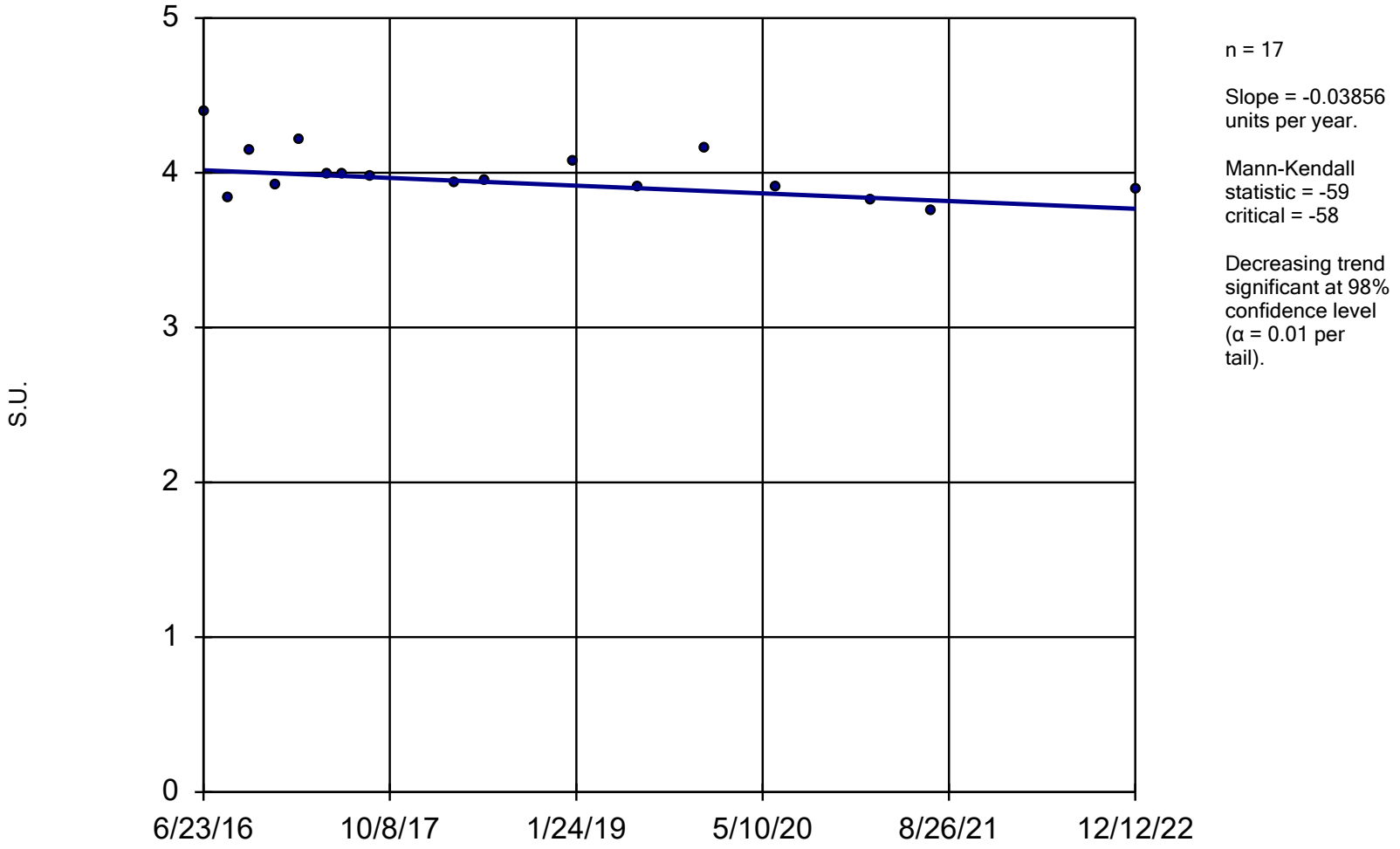


Constituent: Molybdenum Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-6



n = 17

Slope = -0.03856 units per year.

Mann-Kendall statistic = -59
critical = -58

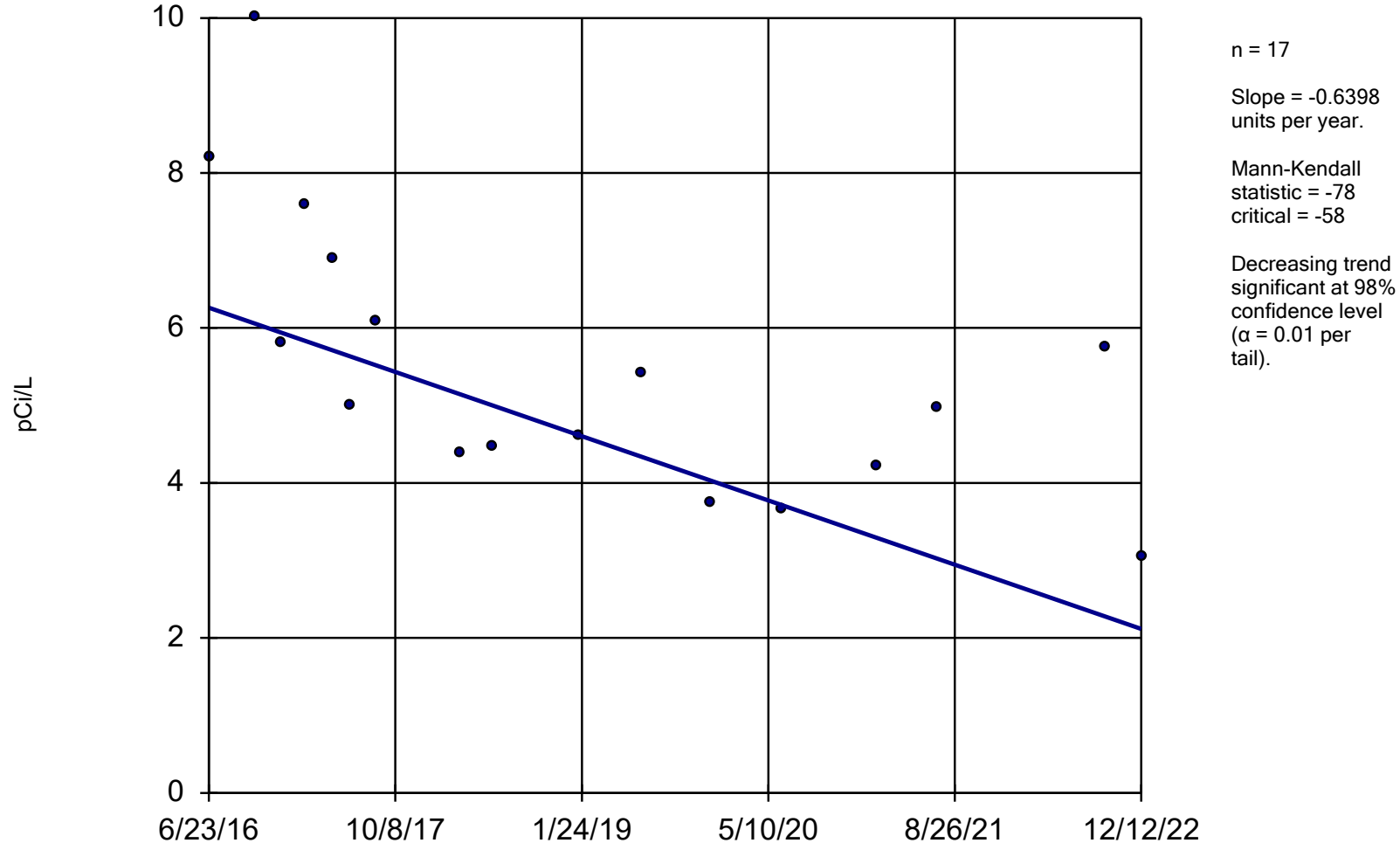
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 17

Slope = -0.6398 units per year.

Mann-Kendall statistic = -78
critical = -58

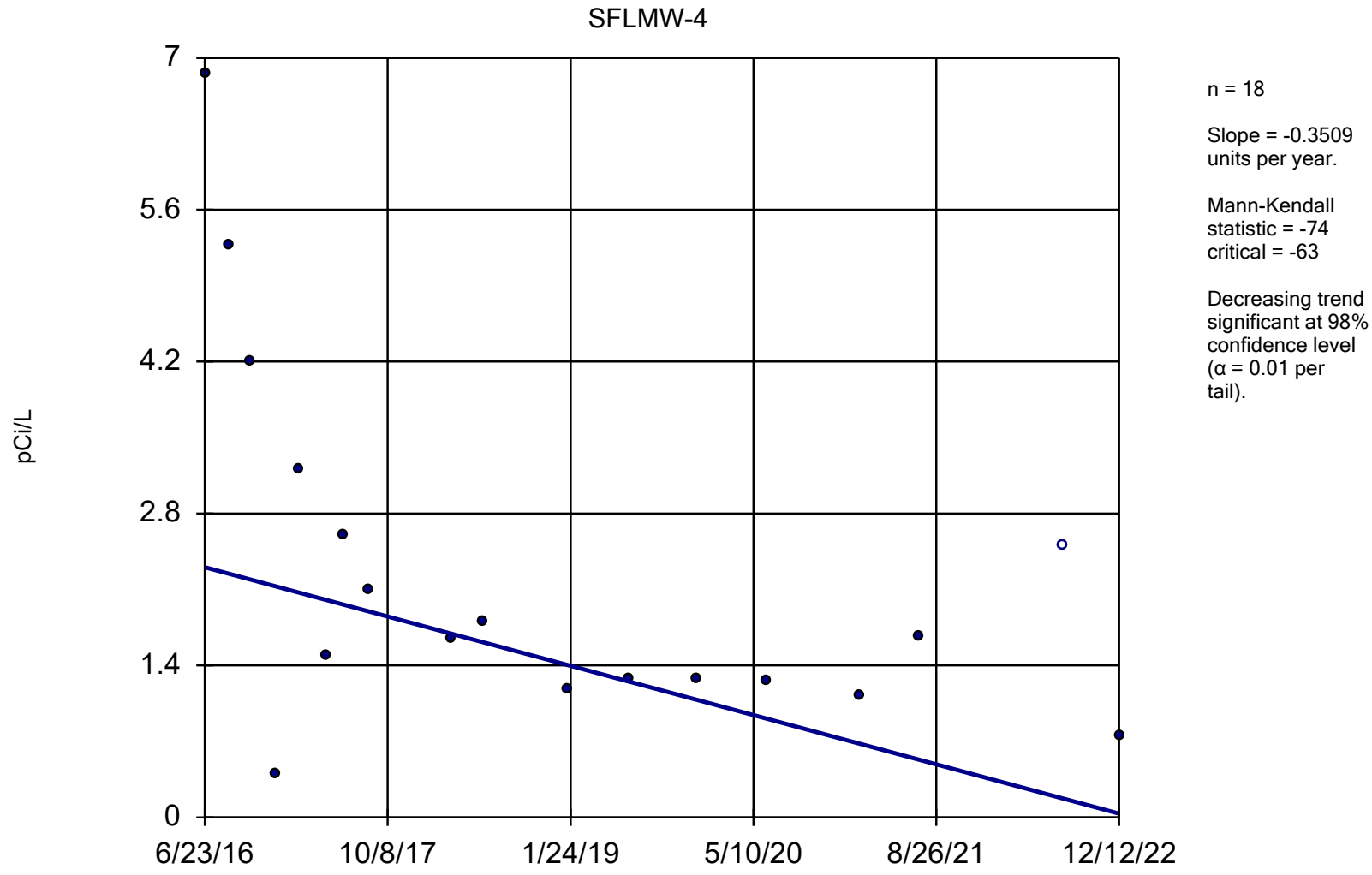
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

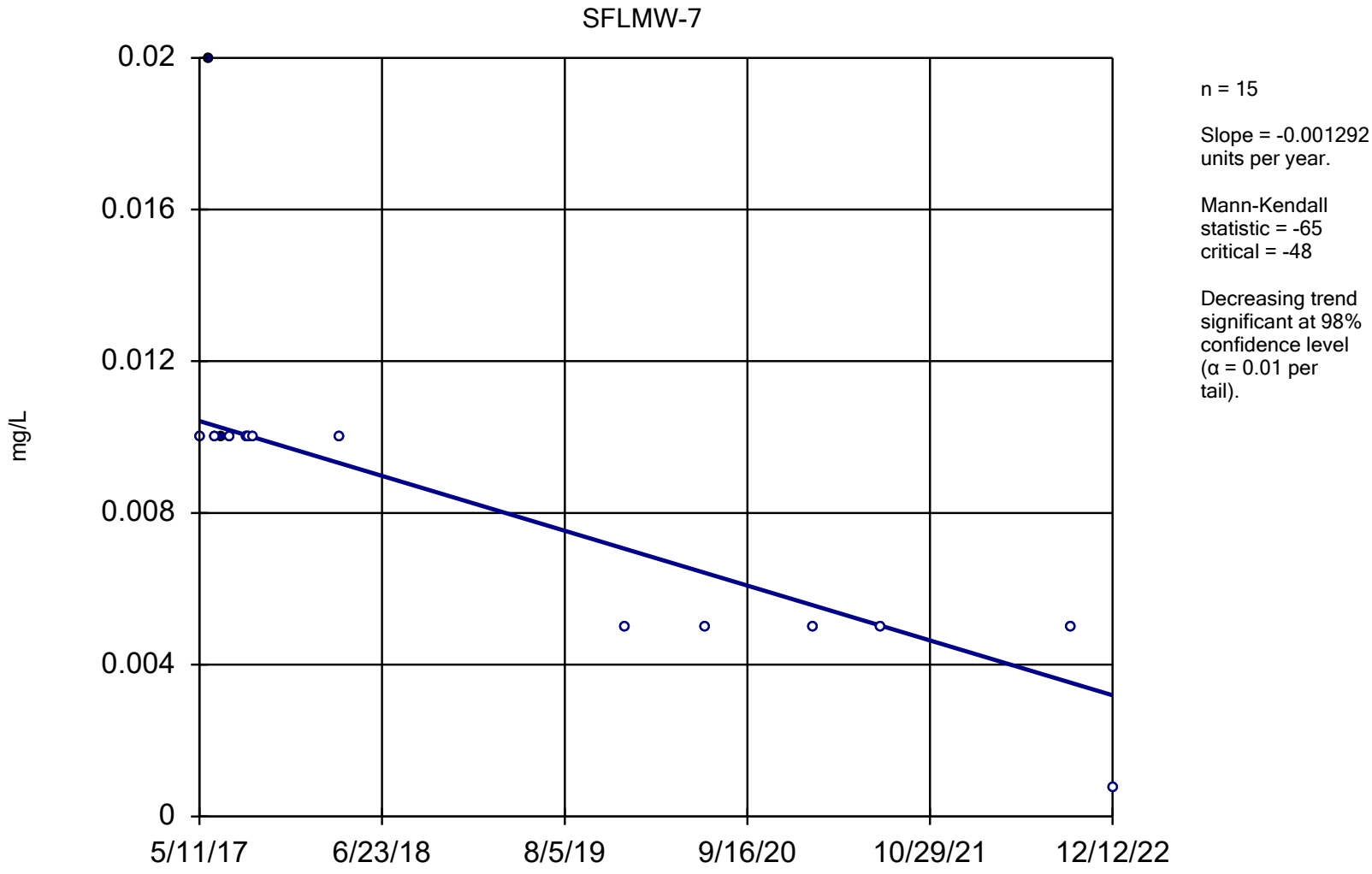


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



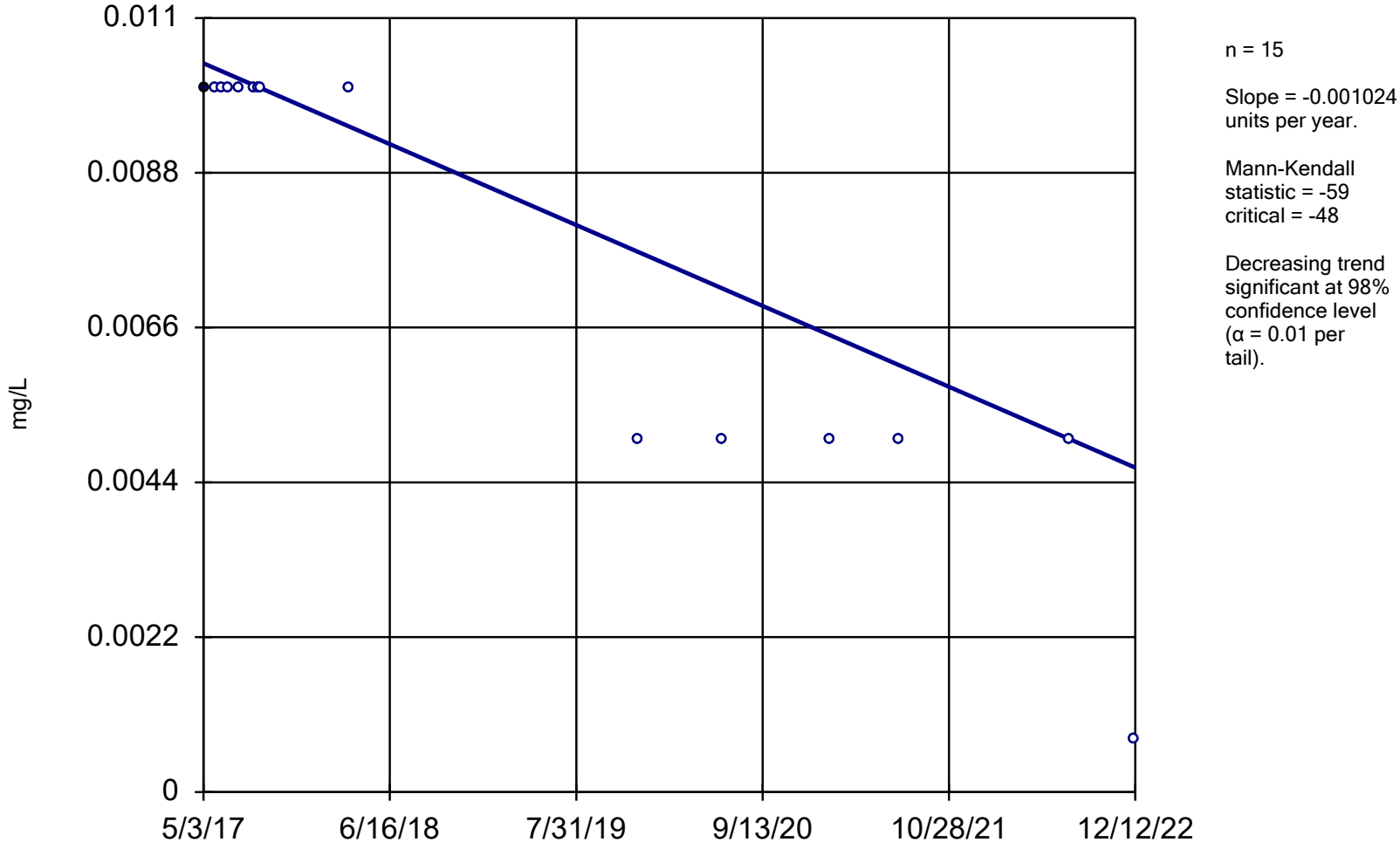
Constituent: Selenium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MNW-18 (bg)



n = 15

Slope = -0.001024 units per year.

Mann-Kendall statistic = -59
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

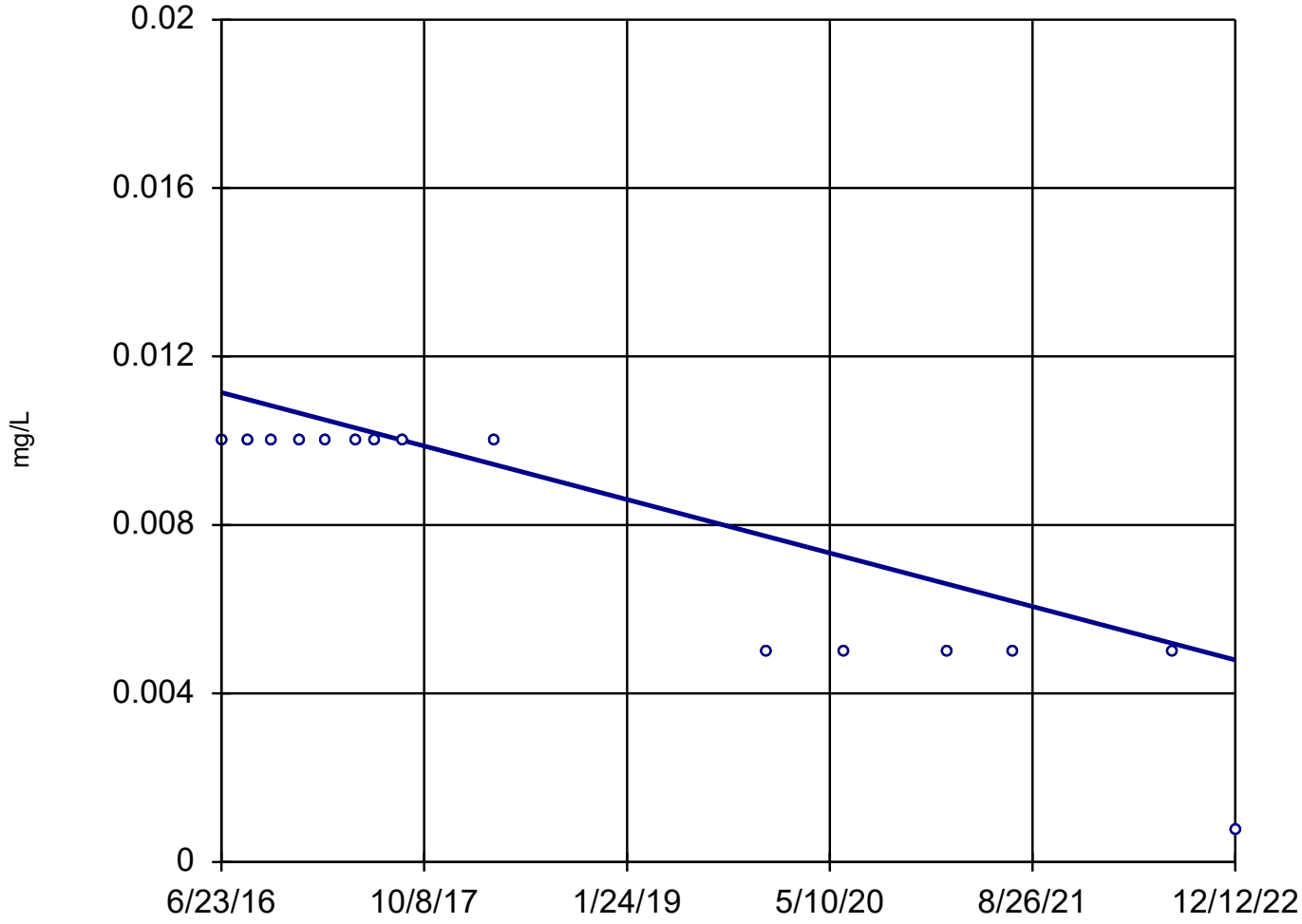
Constituent: Selenium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SFLMW-2



n = 15

Slope = -0.0009807 units per year.

Mann-Kendall statistic = -59
critical = -48

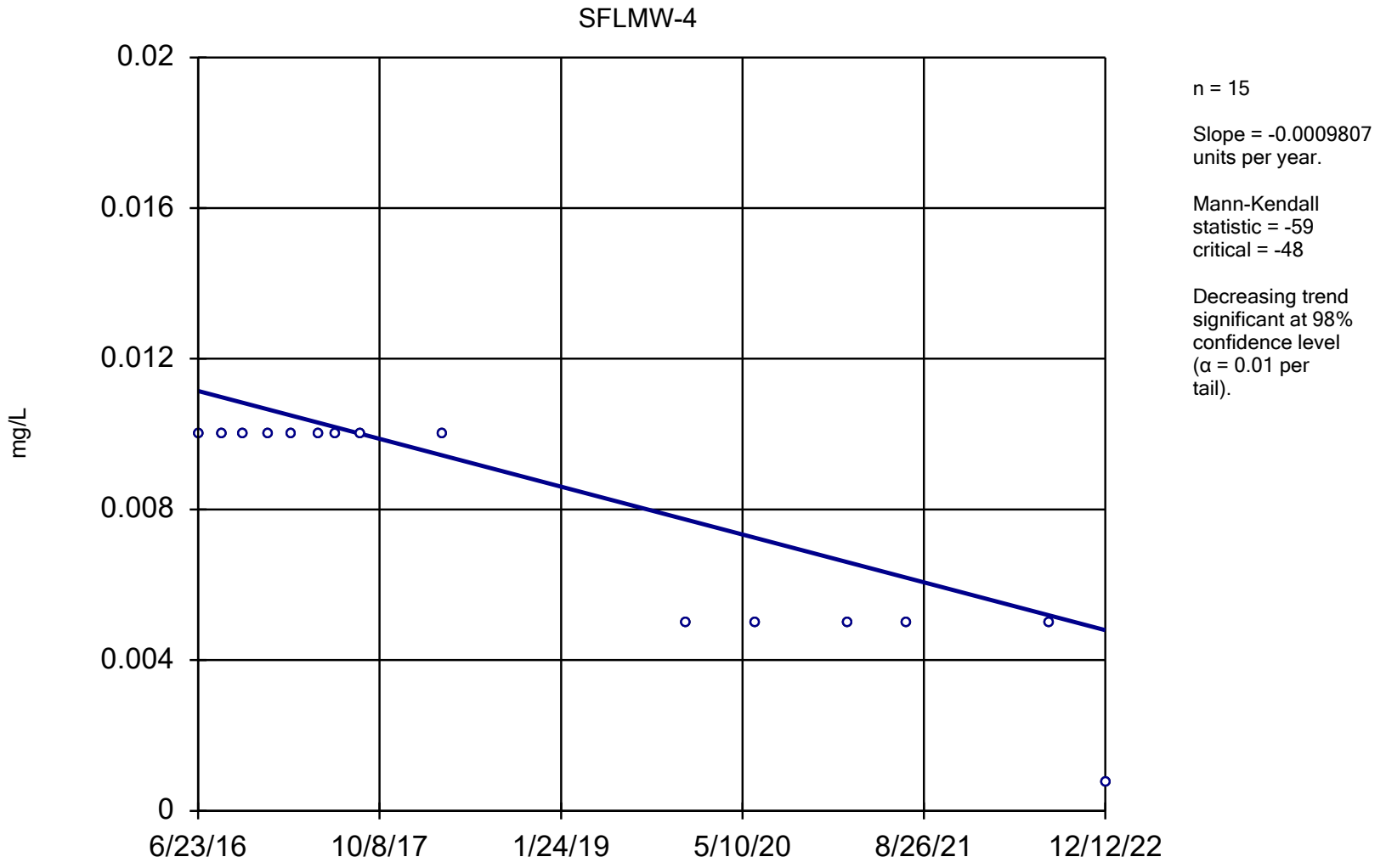
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Selenium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

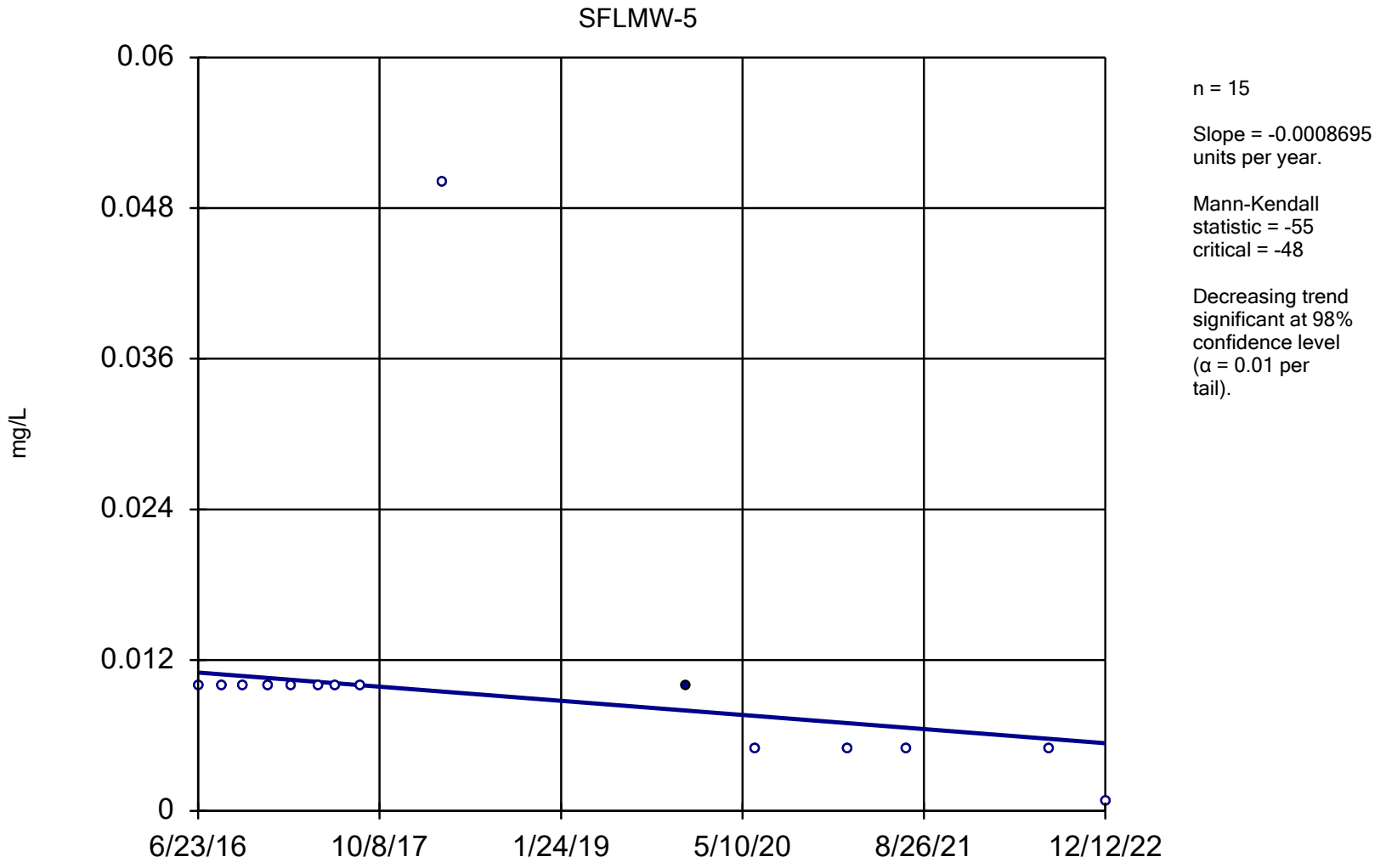


Constituent: Selenium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

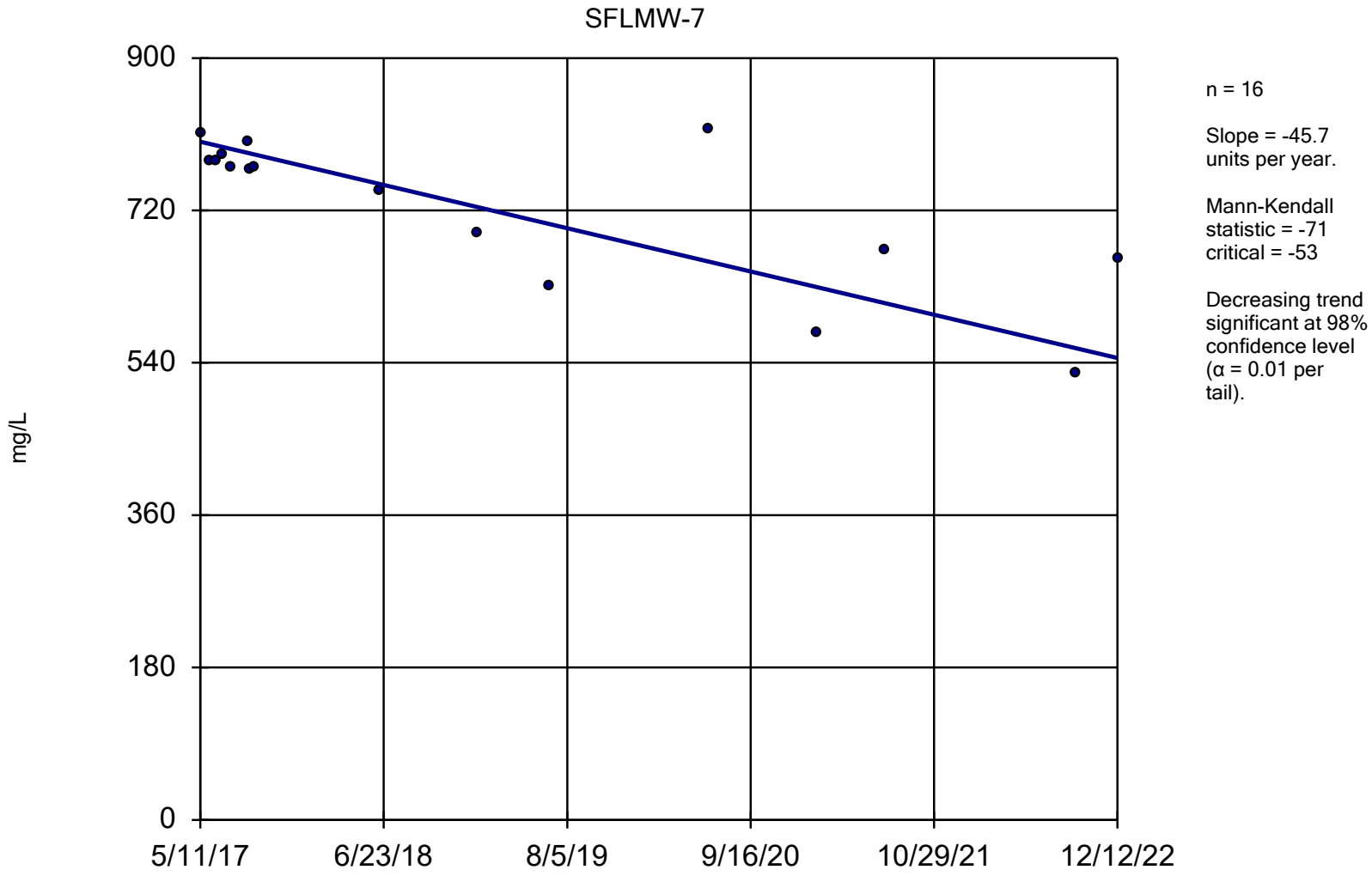
Sen's Slope Estimator



Constituent: Selenium Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

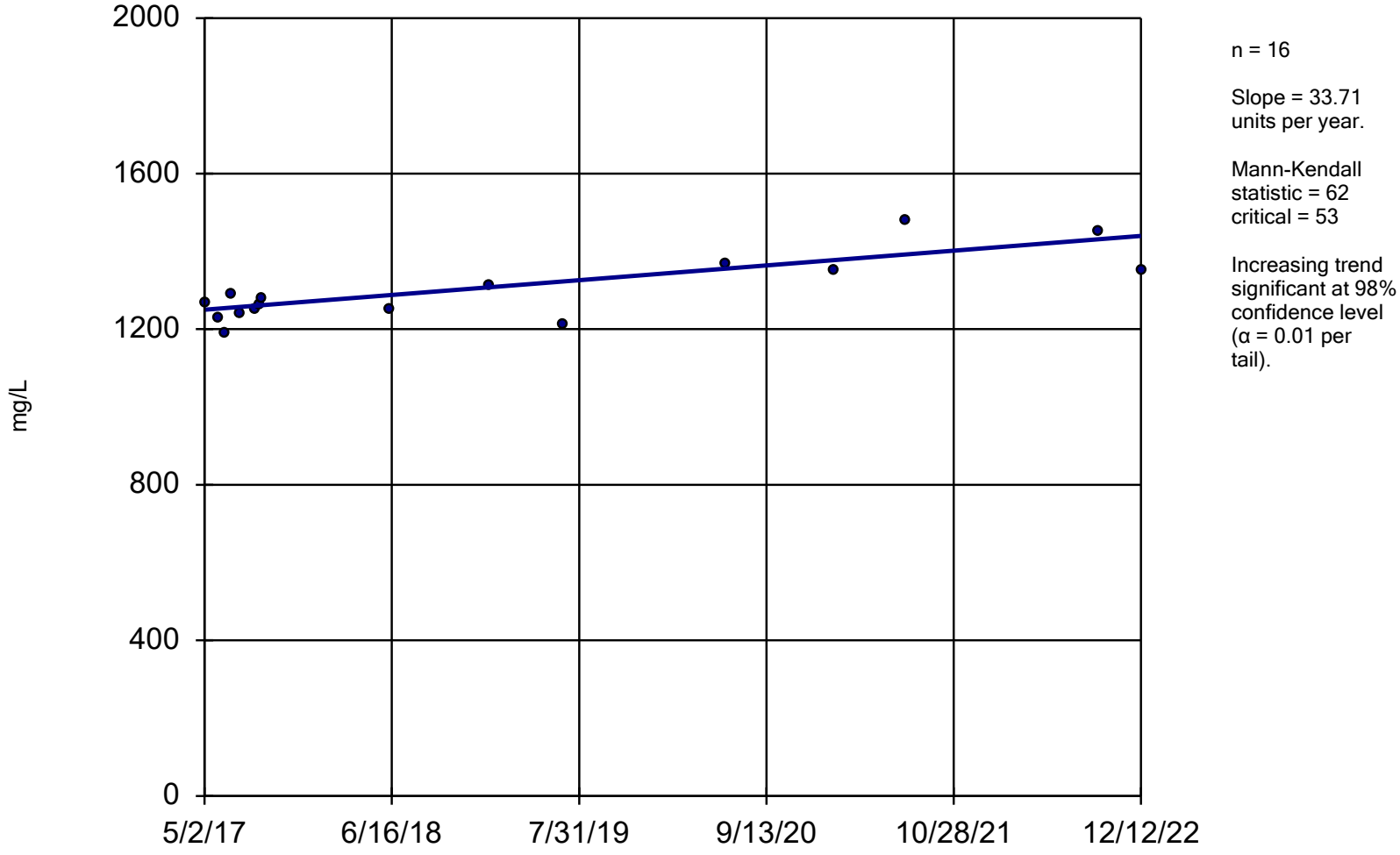


Constituent: Sulfate Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 16

Slope = 33.71 units per year.

Mann-Kendall statistic = 62
critical = 53

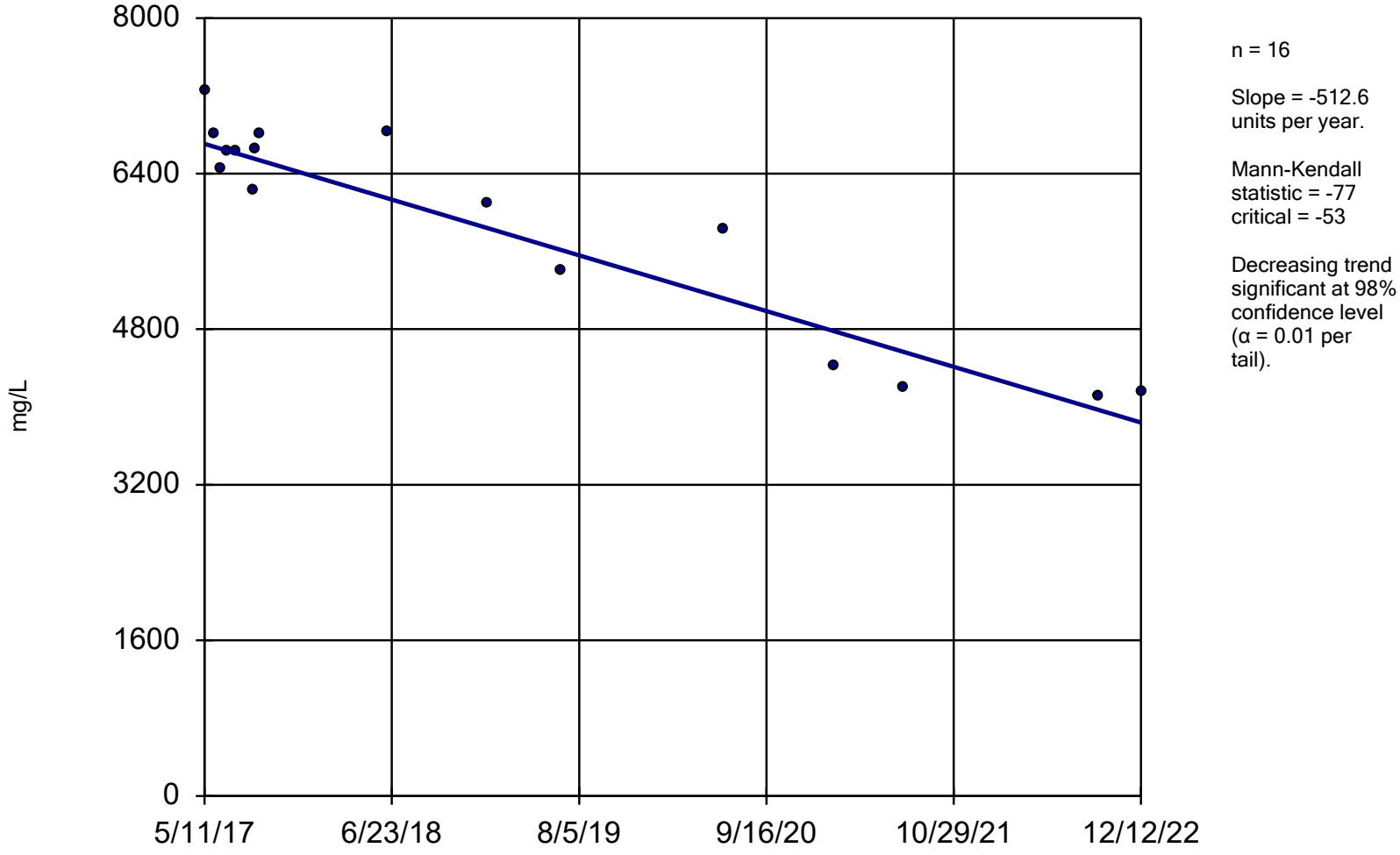
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 1/23/2023 9:16 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-7



n = 16

Slope = -512.6 units per year.

Mann-Kendall statistic = -77
critical = -53

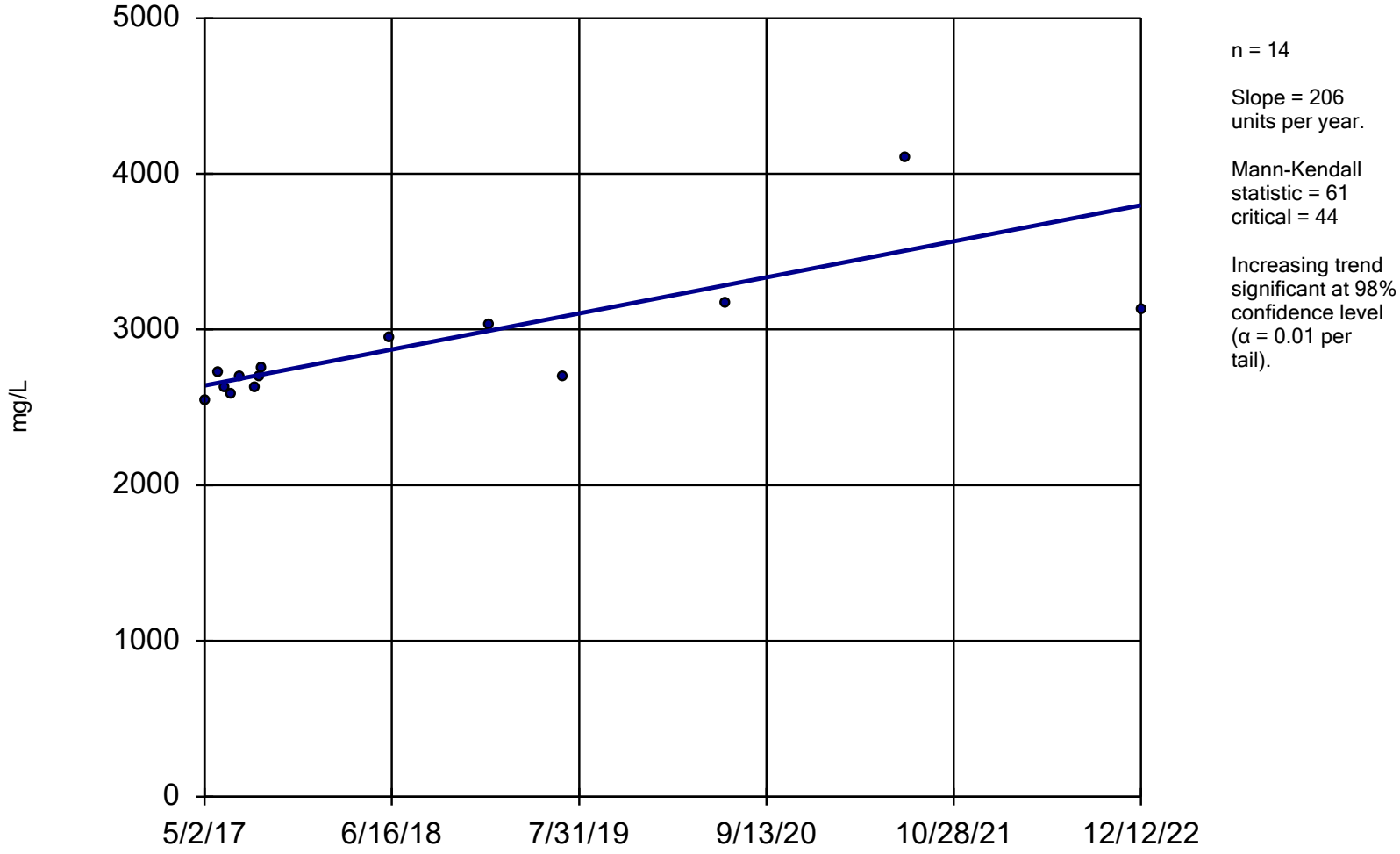
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

MNW-15



n = 14

Slope = 206 units per year.

Mann-Kendall statistic = 61
critical = 44

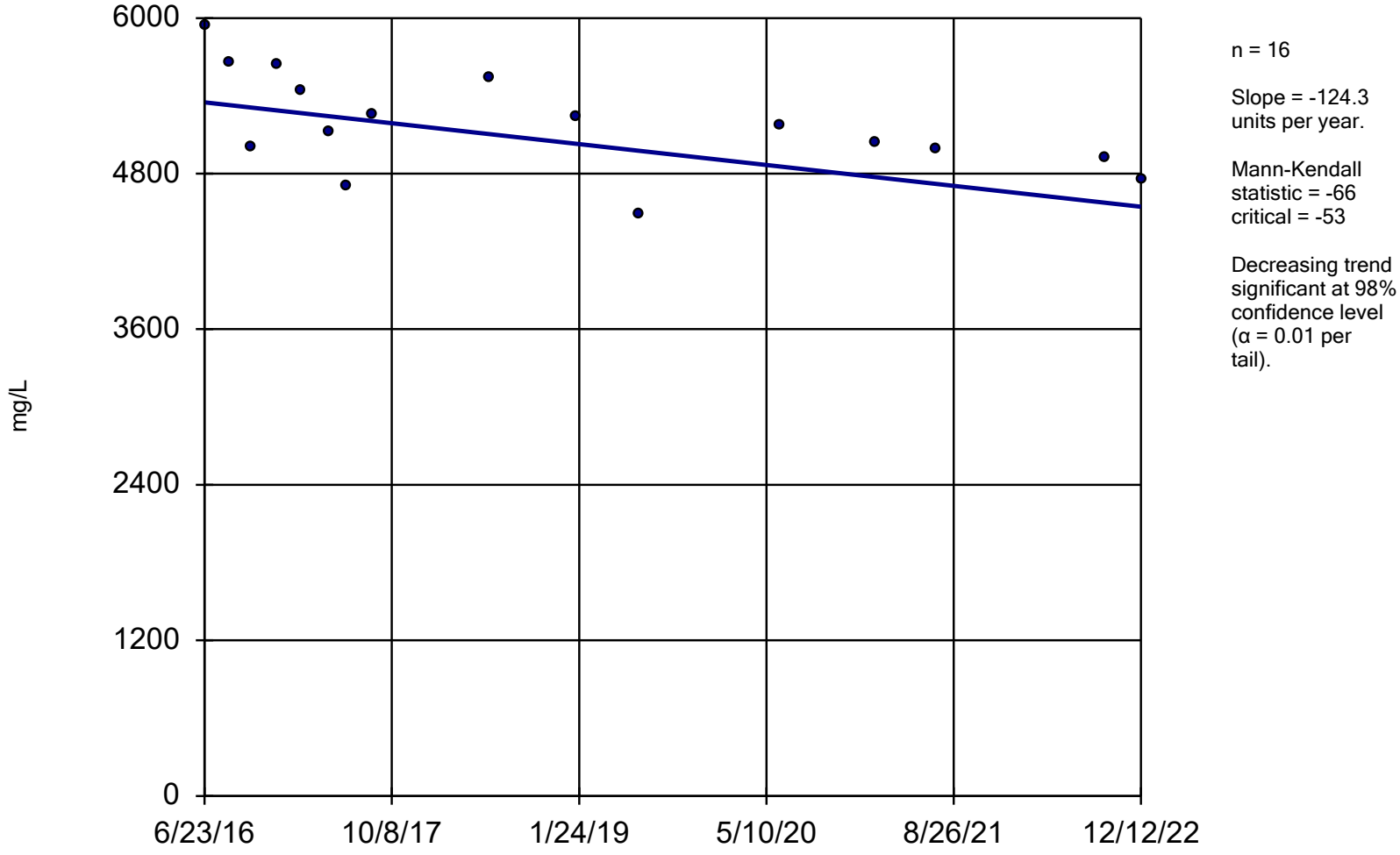
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SFLMW-3



n = 16

Slope = -124.3 units per year.

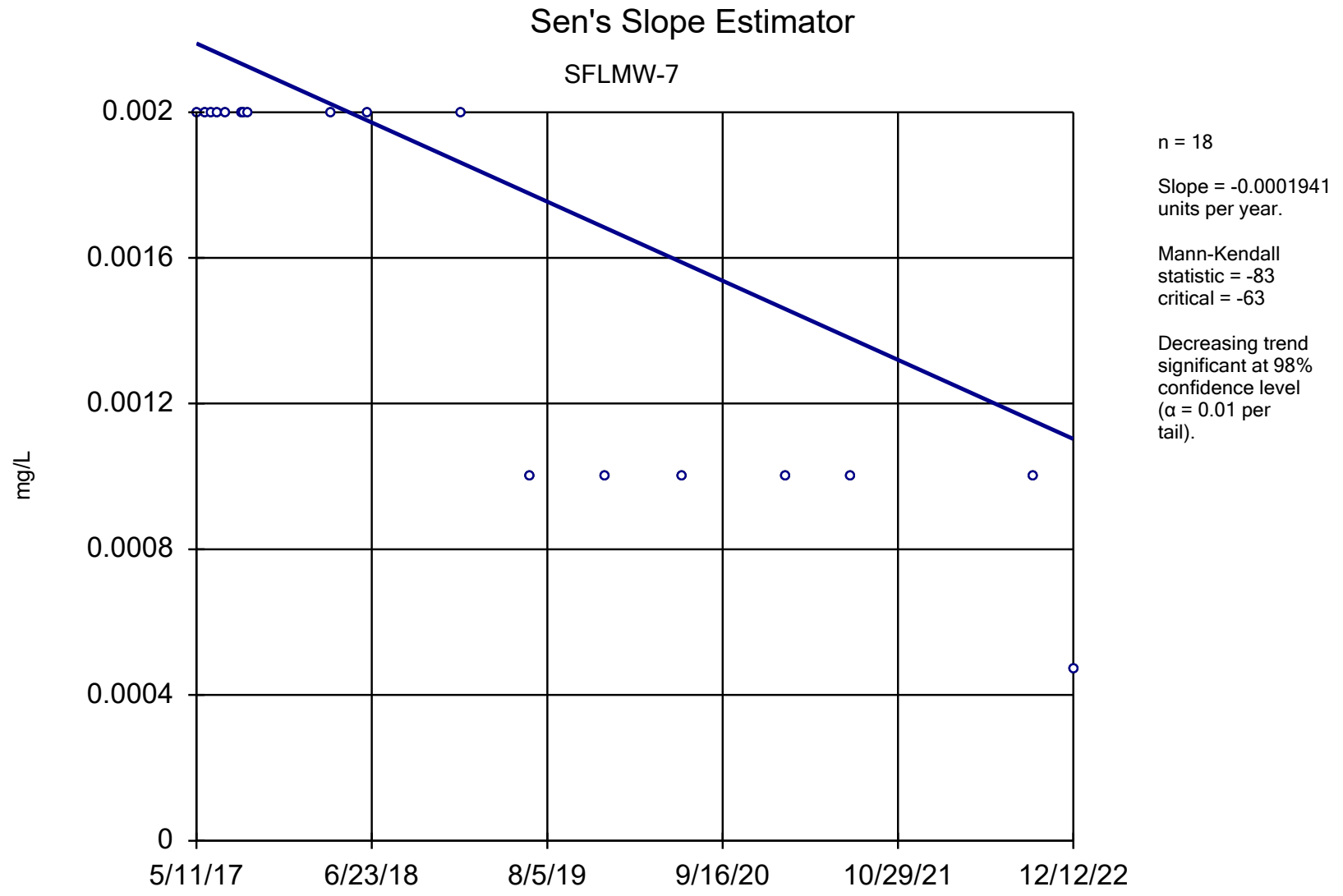
Mann-Kendall statistic = -66
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

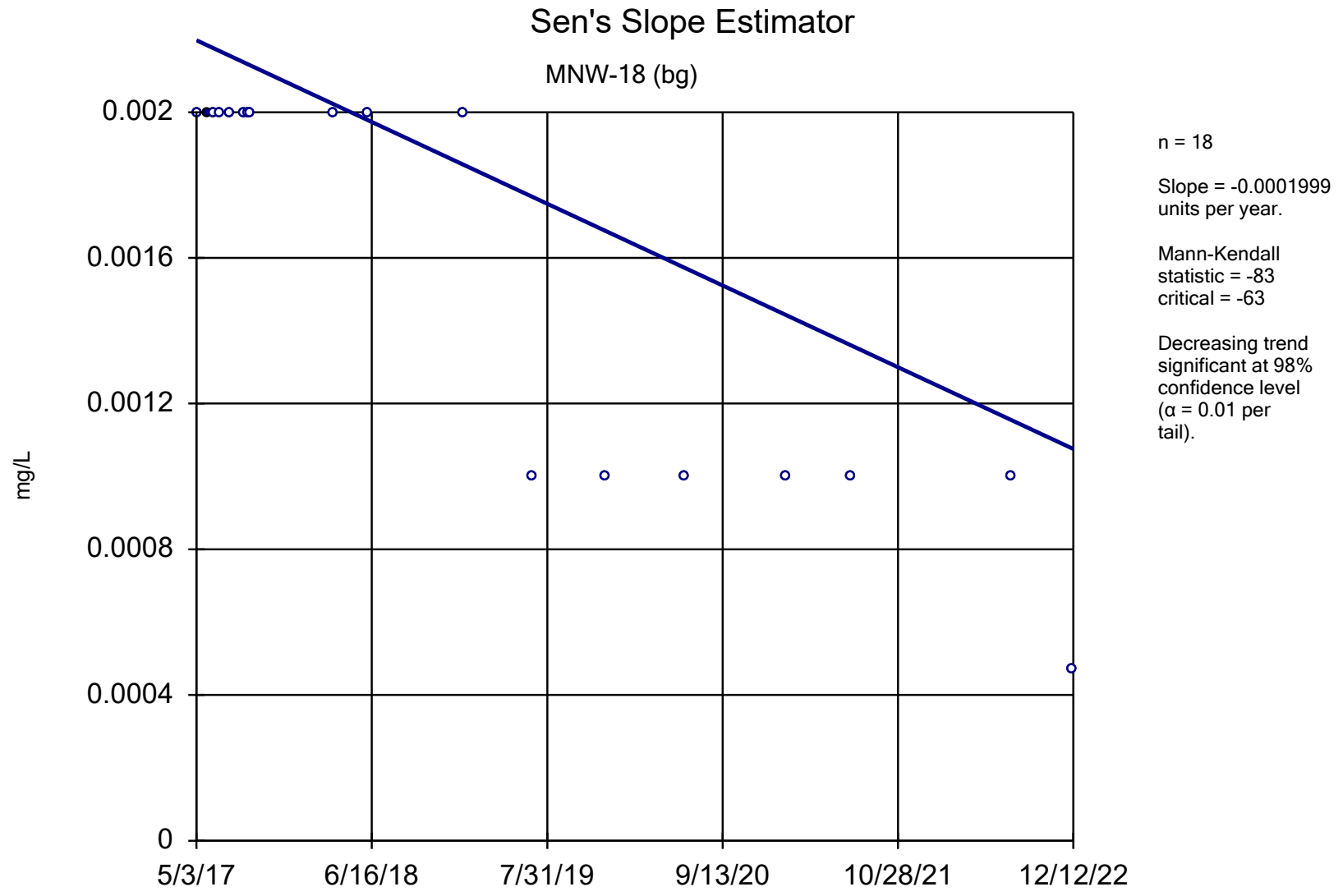
Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

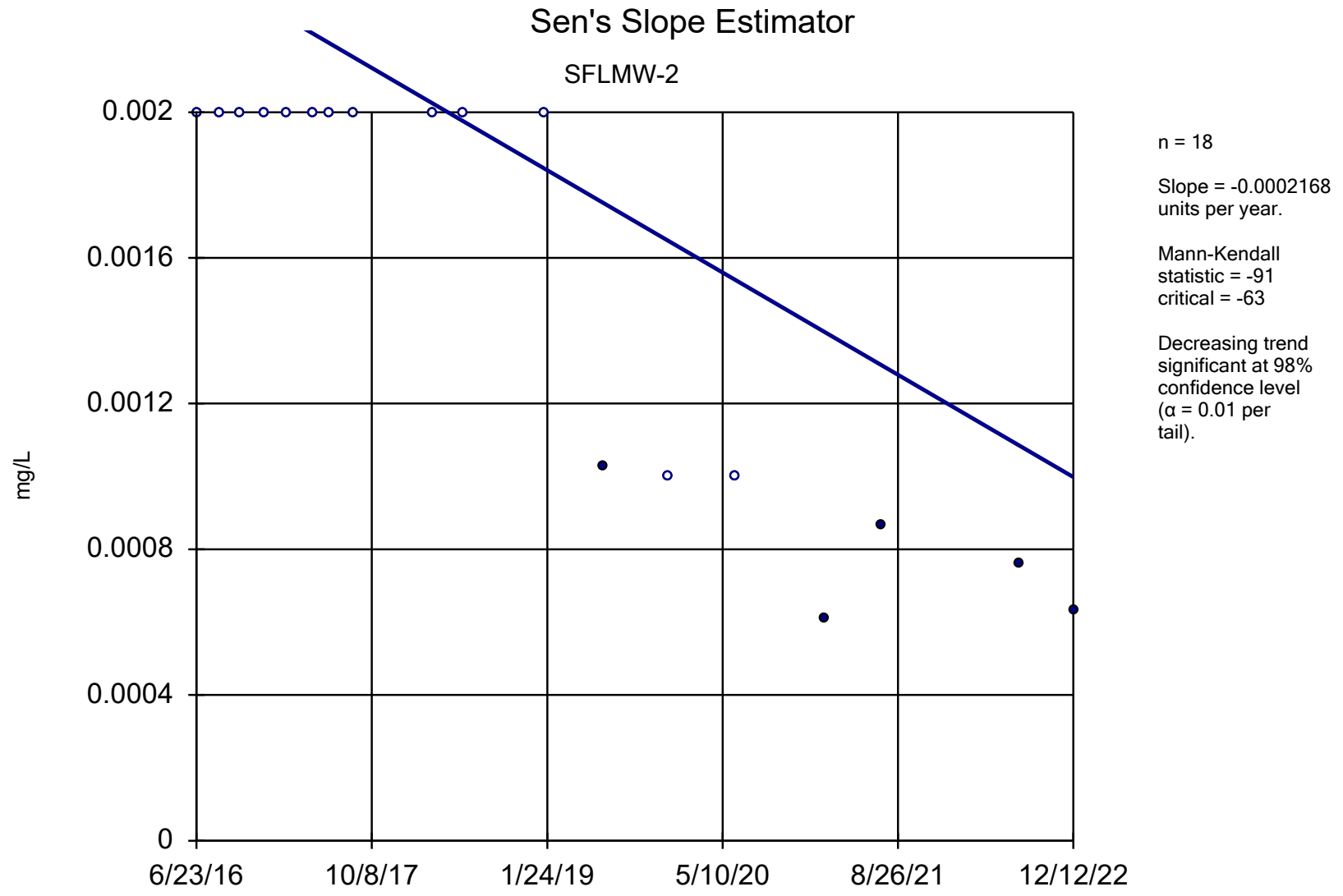
Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

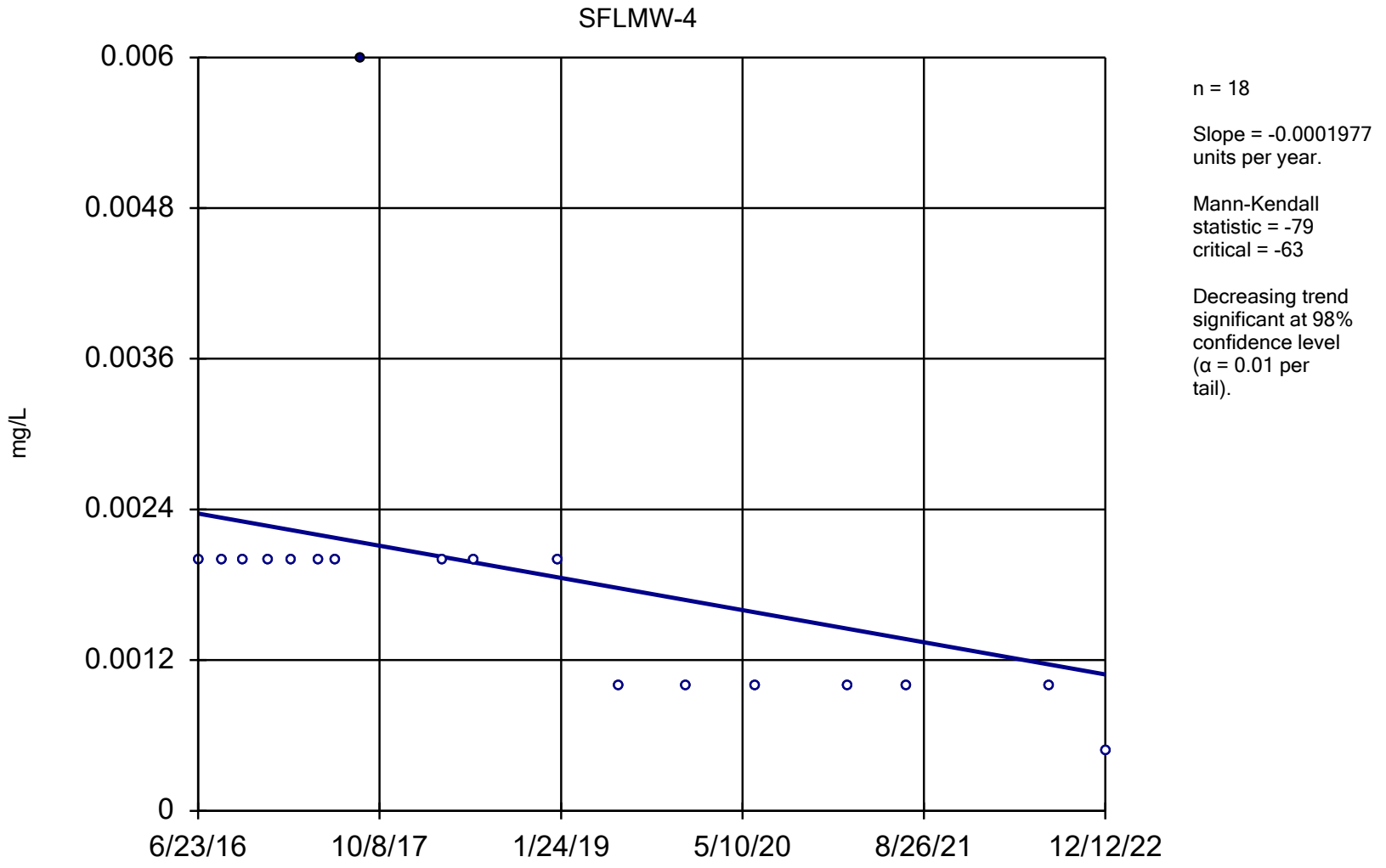


Constituent: Thallium Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

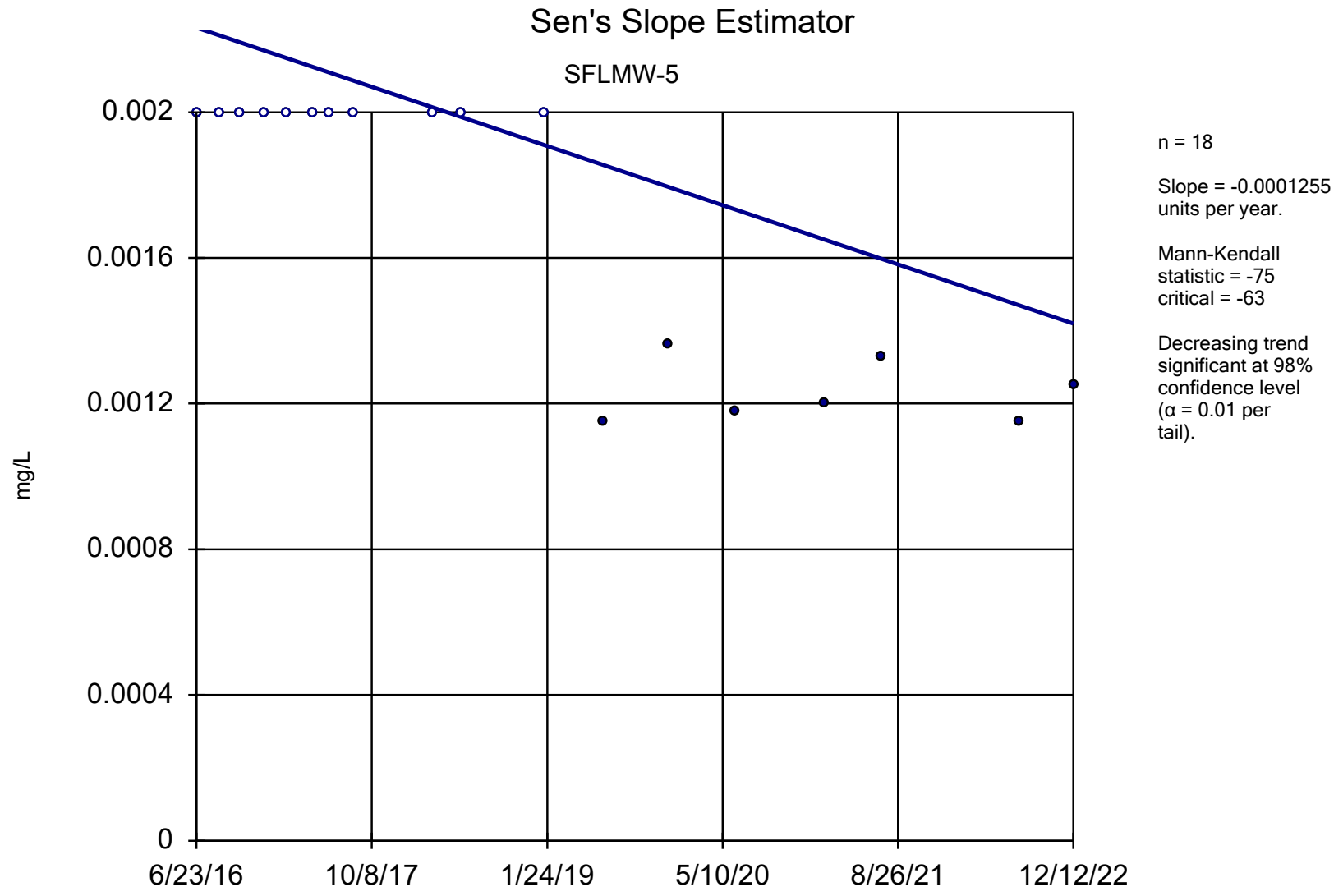
Sen's Slope Estimator



Constituent: Thallium Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 1/23/2023 9:17 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	**SFLMW-6**	**-0.00074**	**-67**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-7**	**-0.00...**	**-70**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-15**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-2**	**-0.00074**	**-67**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-3**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-4**	**-0.00...**	**-69**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SFLMW-5**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-6	0.000...	27	48	No	15	26.67	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-7**	**-0.00...**	**-71**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	MNW-15	0	-13	-44	No	14	57.14	n/a	n/a	0.02	NP
Arsenic (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-63**	**-48**	**Yes**	**15**	**66.67**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**SFLMW-2**	**-0.00143**	**-57**	**-48**	**Yes**	**15**	**60**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-3	-0.00...	-46	-48	No	15	60	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SFLMW-4**	**-0.00154**	**-61**	**-48**	**Yes**	**15**	**80**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SFLMW-5	-0.00...	-45	-48	No	15	60	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-6	-0.00...	-23	-39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-7	0.002469	37	44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	MNW-15	-0.00...	-39	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-52**	**-44**	**Yes**	**14**	**7.143**	**n/a**	**n/a**	**0.02**	**NP**
Barium (mg/L)	SFLMW-2	-0.00...	-16	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-3	-0.00...	-42	-48	No	15	6.667	n/a	n/a	0.02	NP
Barium (mg/L)	SFLMW-4	-0.00...	-22	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	**SFLMW-5**	**-0.00...**	**-57**	**-48**	**Yes**	**15**	**6.667**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-6	0.000...	14	58	No	17	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SFLMW-7**	**-0.00...**	**-77**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	MNW-15	0.003465	59	63	No	18	0	n/a	n/a	0.02	NP
Beryllium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-76**	**-63**	**Yes**	**18**	**94.44**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-2	0.000...	47	63	No	18	16.67	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SFLMW-3**	**-0.00...**	**-72**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SFLMW-4**	**-0.00...**	**-77**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SFLMW-5	0	5	58	No	17	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-6	-0.00...	-11	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-7	0.01535	26	48	No	15	6.667	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-15	0.03957	4	53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	MNW-18 (bg)	-0.01981	-39	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	SFLMW-2	0	1	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-3**	**0.326**	**88**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	SFLMW-4	0.02005	35	44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SFLMW-5**	**0.2542**	**57**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-6	0	2	63	No	18	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	**SFLMW-7**	**-0.00...**	**-93**	**-63**	**Yes**	**18**	**94.44**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-15**	**-0.01279**	**-74**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-87**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-2**	**-0.00...**	**-76**	**-63**	**Yes**	**18**	**61.11**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-3**	**-0.00...**	**-117**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SFLMW-4**	**-0.00...**	**-87**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SFLMW-5	0	-17	-63	No	18	33.33	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-6	9.659	16	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-7**	**-46.49**	**-78**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	MNW-15	10.48	36	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	MNW-18 (bg)	-28.18	-38	-48	No	15	6.667	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-2	8.248	21	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SFLMW-3	-14.52	-40	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	**SFLMW-4**	**-28.34**	**-54**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Calcium (mg/L)	**SFLMW-5**	**-13.66**	**-61**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-6	101.5	34	53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**SFLMW-7**	**-159.2**	**-63**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	MNW-15	-15.9	-51	-53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**MNW-18 (bg)**	**-47.22**	**-93**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-2	31.67	7	53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**SFLMW-3**	**-116.4**	**-106**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	SFLMW-4	-32.12	-38	-48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SFLMW-5	-26.21	-28	-48	No	15	0	n/a	n/a	0.02	NP
Chromium (mg/L)	**SFLMW-6**	**-0.00...**	**-52**	**-48**	**Yes**	**15**	**46.67**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-7**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**MNW-15**	**-0.00...**	**-51**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-68**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-2**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-3**	**-0.00...**	**-71**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-4**	**-0.00...**	**-63**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SFLMW-5**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**76.92**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-6	-0.00...	-16	-58	No	17	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-7**	**-0.00...**	**-114**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-15**	**0.01066**	**75**	**63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-105**	**-63**	**Yes**	**18**	**83.33**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-2	-0.00...	-50	-63	No	18	16.67	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SFLMW-3**	**-0.00265**	**-89**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**SFLMW-4**	**-0.00...**	**-115**	**-63**	**Yes**	**18**	**94.44**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SFLMW-5	-0.00...	-58	-63	No	18	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-6	0.03053	39	58	No	17	29.41	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-7	0	15	63	No	18	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-15	0.02839	59	63	No	18	11.11	n/a	n/a	0.02	NP
Fluoride (mg/L)	MNW-18 (bg)	0	-8	-58	No	17	23.53	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-2	0.009247	25	63	No	18	27.78	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-3	-0.00...	-30	-63	No	18	16.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-4	0.02671	42	63	No	18	61.11	n/a	n/a	0.02	NP
Fluoride (mg/L)	SFLMW-5	0	24	63	No	18	33.33	n/a	n/a	0.02	NP
Lead (mg/L)	SFLMW-6	0.000...	26	63	No	18	44.44	n/a	n/a	0.02	NP
Lead (mg/L)	**SFLMW-7**	**-0.00...**	**-116**	**-63**	**Yes**	**18**	**88.89**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-15**	**-0.00...**	**-101**	**-58**	**Yes**	**17**	**64.71**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-114**	**-63**	**Yes**	**18**	**88.89**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-2**	**-0.00...**	**-107**	**-63**	**Yes**	**18**	**77.78**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-3**	**-0.00...**	**-73**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-4**	**-0.00178**	**-109**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SFLMW-5**	**-0.00...**	**-105**	**-58**	**Yes**	**17**	**70.59**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SFLMW-6	-0.00...	-6	-63	No	18	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-7	-0.00...	-42	-63	No	18	0	n/a	n/a	0.02	NP
Lithium (mg/L)	MNW-15	0.005998	51	58	No	17	5.882	n/a	n/a	0.02	NP
Lithium (mg/L)	**MNW-18 (bg)**	**-0.02663**	**-54**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	SFLMW-2	-0.0131	-46	-63	No	18	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SFLMW-3	-0.02114	-58	-63	No	18	5.556	n/a	n/a	0.02	NP
Lithium (mg/L)	**SFLMW-4**	**-0.03424**	**-83**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SFLMW-5	-0.021	-45	-63	No	18	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-6**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-7**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-15**	**-0.00...**	**-98**	**-58**	**Yes**	**17**	**82.35**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-2**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	SFLMW-3	-0.00...	-56	-63	No	18	0	n/a	n/a	0.02	NP
Mercury (mg/L)	**SFLMW-4**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SFLMW-5**	**-0.00...**	**-89**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-6**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-7**	**-0.00...**	**-71**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-15**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-2**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-3**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-4**	**-0.00...**	**-66**	**-48**	**Yes**	**15**	**73.33**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SFLMW-5**	**-0.00...**	**-67**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	**SFLMW-6**	**-0.03856**	**-59**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SFLMW-7	0.04343	23	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-15	-0.01929	-16	-58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	MNW-18 (bg)	-0.0628	-25	-58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-2	-0.00...	-2	-58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-3	0.000...	5	58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-4	0.02672	8	58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	SFLMW-5	-0.04041	-35	-58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-6	0.9042	41	63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-7	-0.00...	-3	-63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	MNW-15	-0.03256	-12	-63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	MNW-18 (bg)	-0.1955	-37	-63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SFLMW-2	-0.1583	-30	-63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	**SFLMW-3**	**-0.6398**	**-78**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 (pCi/L)	**SFLMW-4**	**-0.3509**	**-74**	**-63**	**Yes**	**18**	**5.556**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 (pCi/L)	SFLMW-5	0.3956	45	58	No	17	0	n/a	n/a	0.02	NP
Selenium (mg/L)	SFLMW-6	-0.00...	-40	-48	No	15	66.67	n/a	n/a	0.02	NP
Selenium (mg/L)	**SFLMW-7**	**-0.00...**	**-65**	**-48**	**Yes**	**15**	**86.67**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	MNW-15	-0.00...	-23	-48	No	15	73.33	n/a	n/a	0.02	NP
Selenium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-59**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	**SFLMW-2**	**-0.00...**	**-59**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SFLMW-3	0	-18	-48	No	15	80	n/a	n/a	0.02	NP
Selenium (mg/L)	**SFLMW-4**	**-0.00...**	**-59**	**-48**	**Yes**	**15**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	**SFLMW-5**	**-0.00...**	**-55**	**-48**	**Yes**	**15**	**93.33**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	SFLMW-6	28.97	21	53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**SFLMW-7**	**-45.7**	**-71**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**MNW-15**	**33.71**	**62**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	MNW-18 (bg)	-151.3	-47	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-2	-62.34	-44	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-3	25.03	37	53	No	16	0	n/a	n/a	0.02	NP

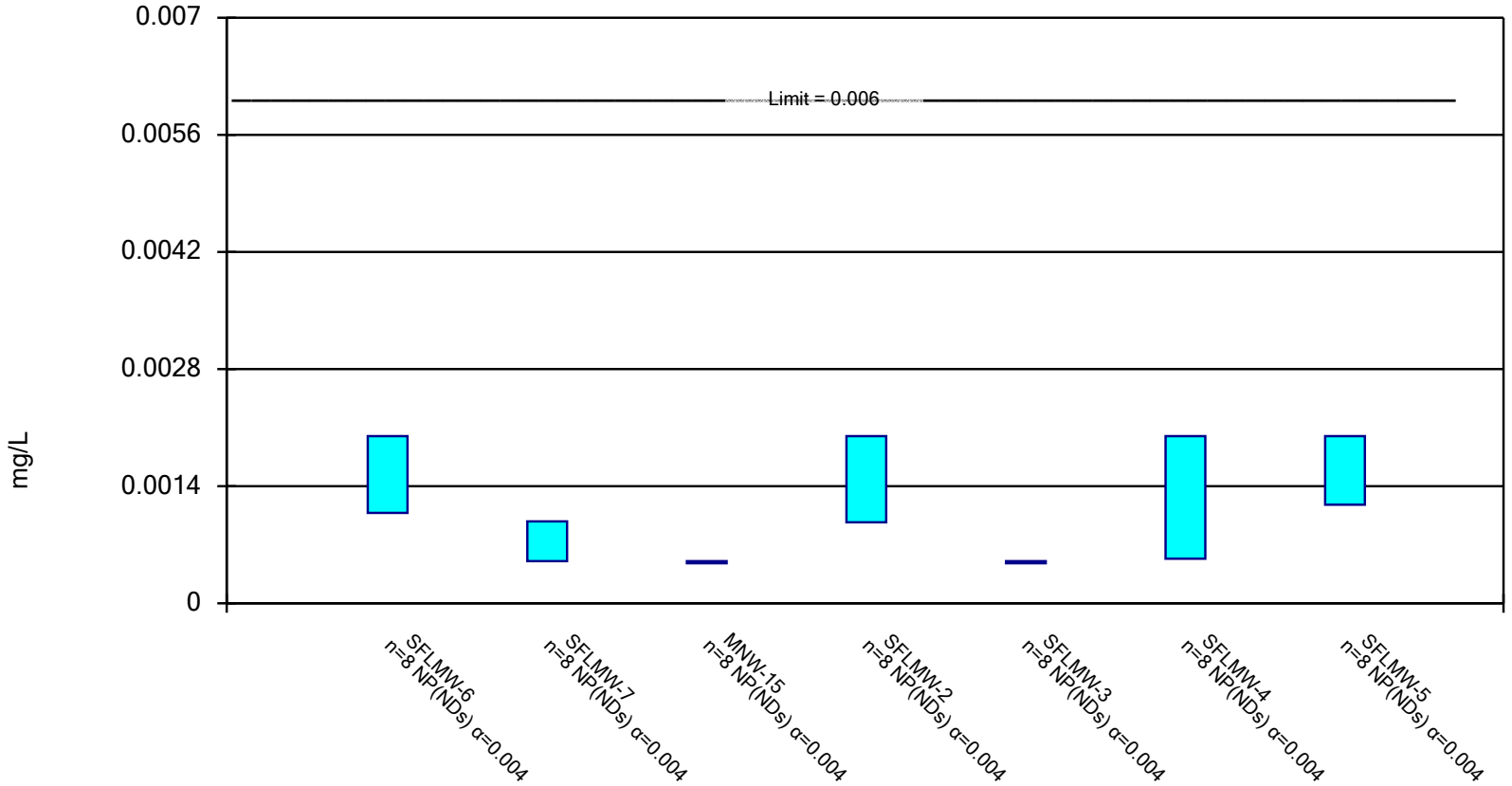
Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 9:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	SFLMW-4	-36.39	-14	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SFLMW-5	21.13	23	48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-6	197.7	17	53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-7**	**-512.6**	**-77**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	**MNW-15**	**206**	**61**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	MNW-18 (bg)	-236.8	-34	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-2	-99.46	-14	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SFLMW-3**	**-124.3**	**-66**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SFLMW-4	-220.4	-48	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	SFLMW-5	-54.67	-25	-53	No	16	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SFLMW-6	0.000...	25	58	No	17	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SFLMW-7**	**-0.00...**	**-83**	**-63**	**Yes**	**18**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	MNW-15	-0.00...	-52	-63	No	18	38.89	n/a	n/a	0.02	NP
Thallium (mg/L)	**MNW-18 (bg)**	**-0.00...**	**-83**	**-63**	**Yes**	**18**	**94.44**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SFLMW-2**	**-0.00...**	**-91**	**-63**	**Yes**	**18**	**72.22**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	SFLMW-3	-0.00...	-49	-63	No	18	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SFLMW-4**	**-0.00...**	**-79**	**-63**	**Yes**	**18**	**94.44**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SFLMW-5**	**-0.00...**	**-75**	**-63**	**Yes**	**18**	**61.11**	**n/a**	**n/a**	**0.02**	**NP**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

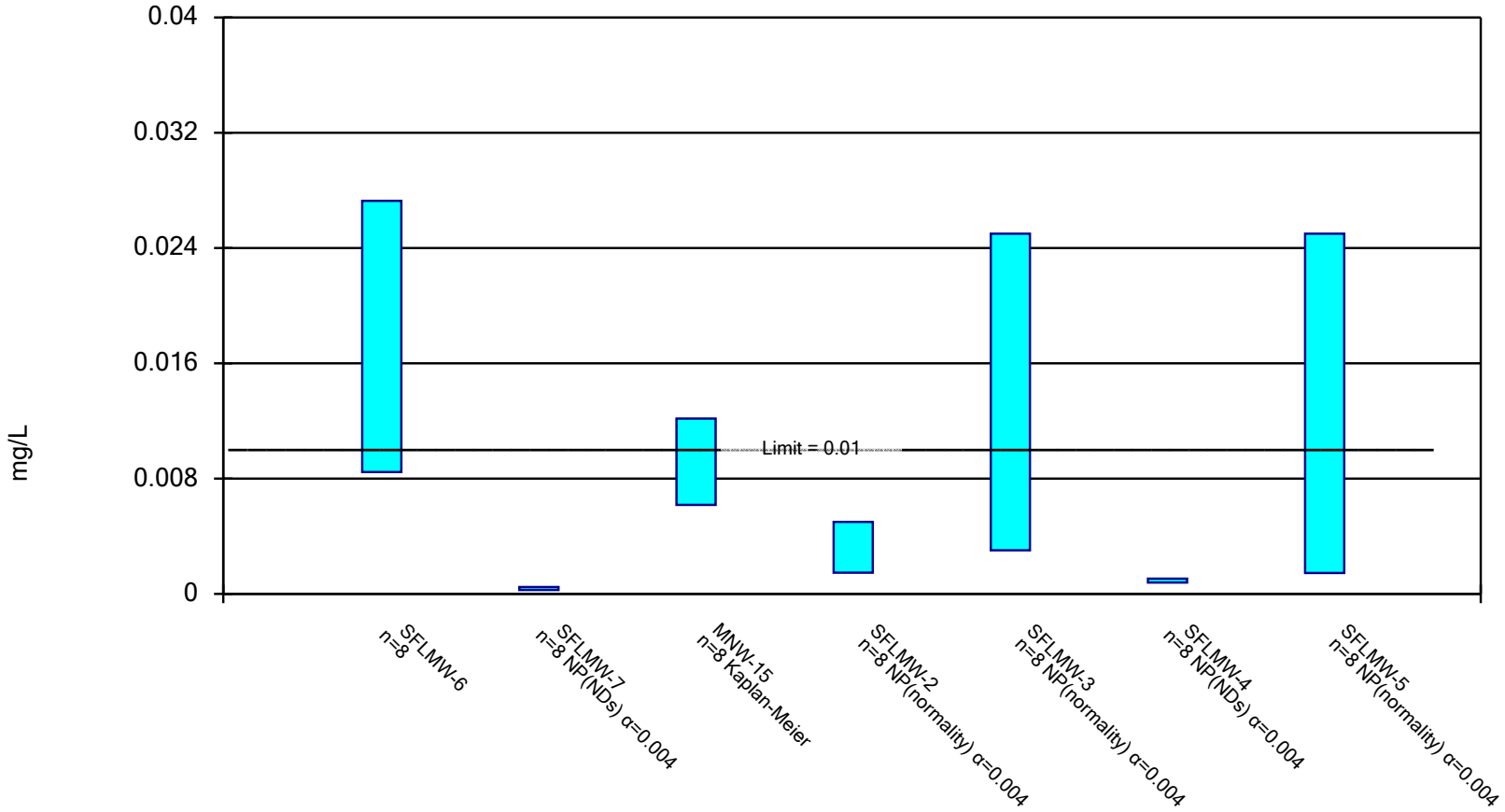


Constituent: Antimony Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

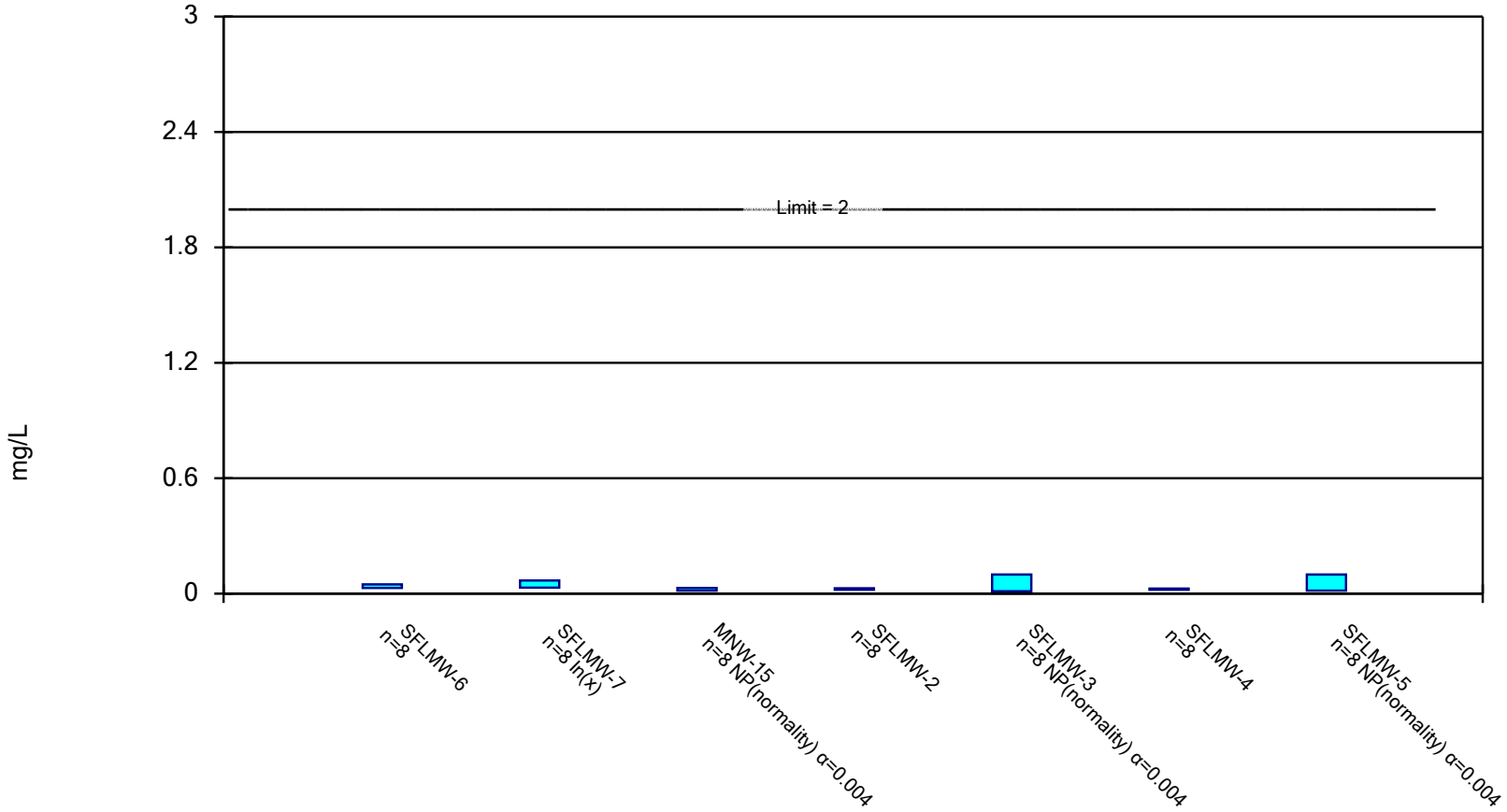


Constituent: Arsenic Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

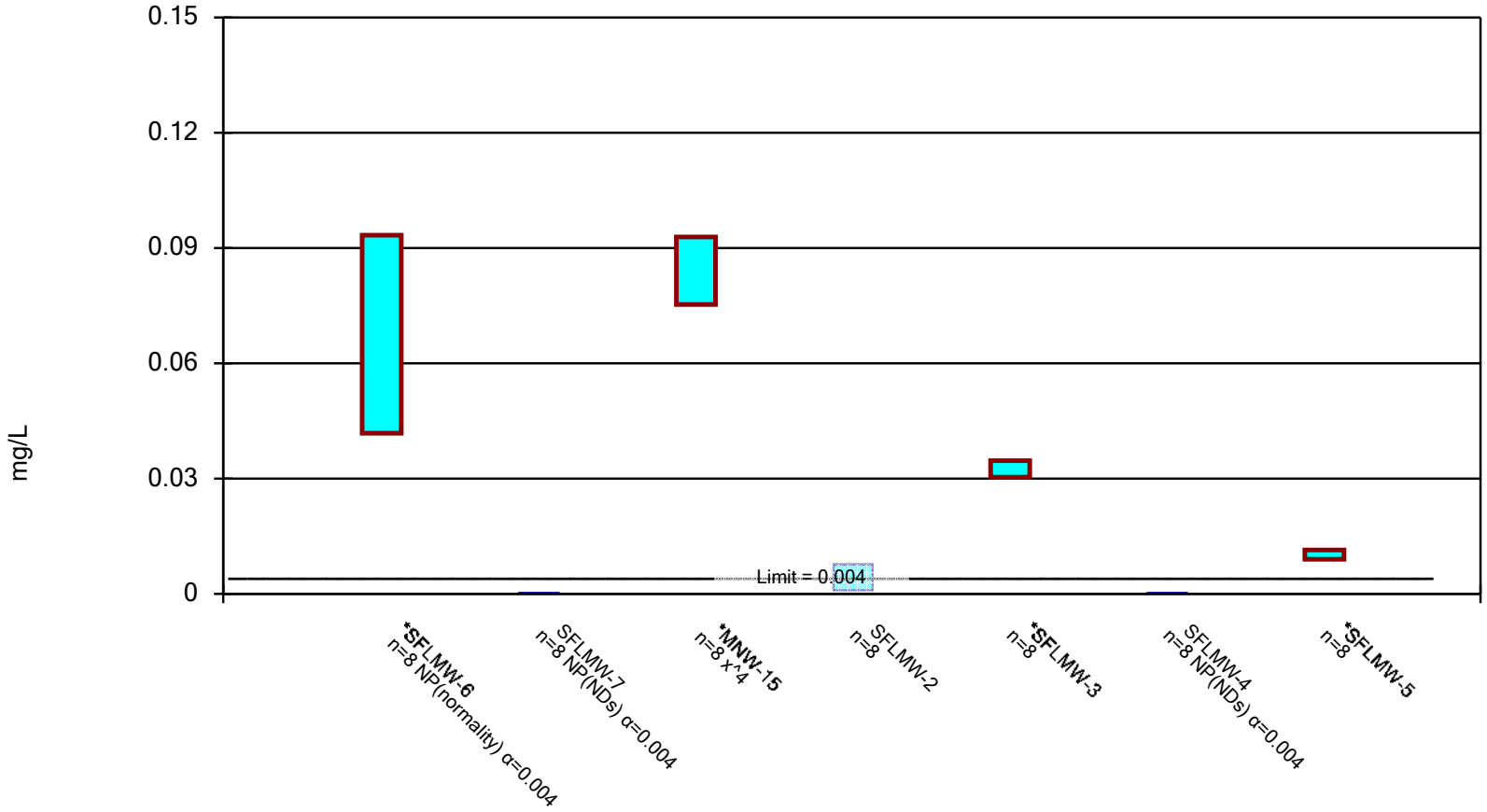


Constituent: Barium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

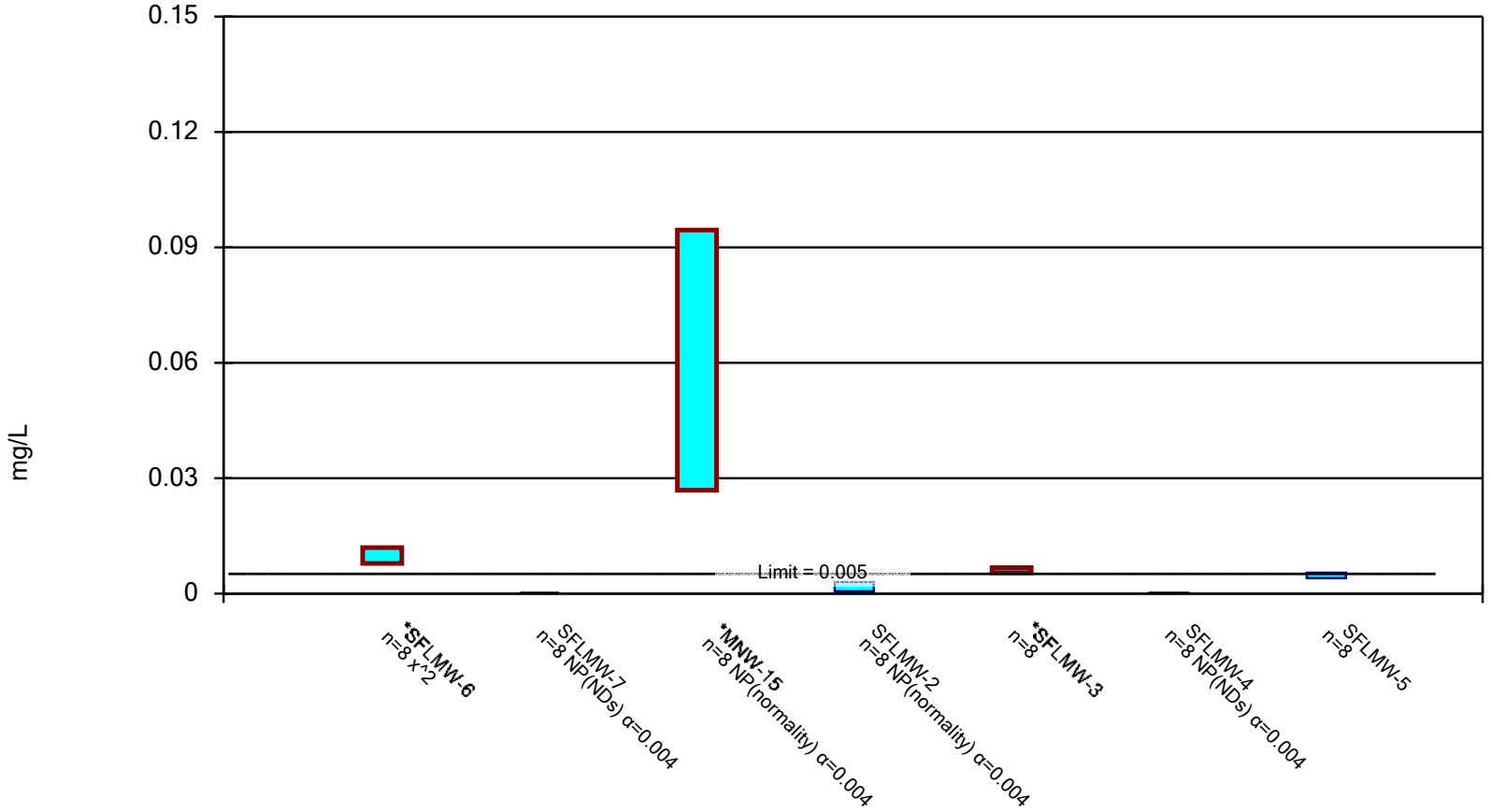


Constituent: Beryllium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

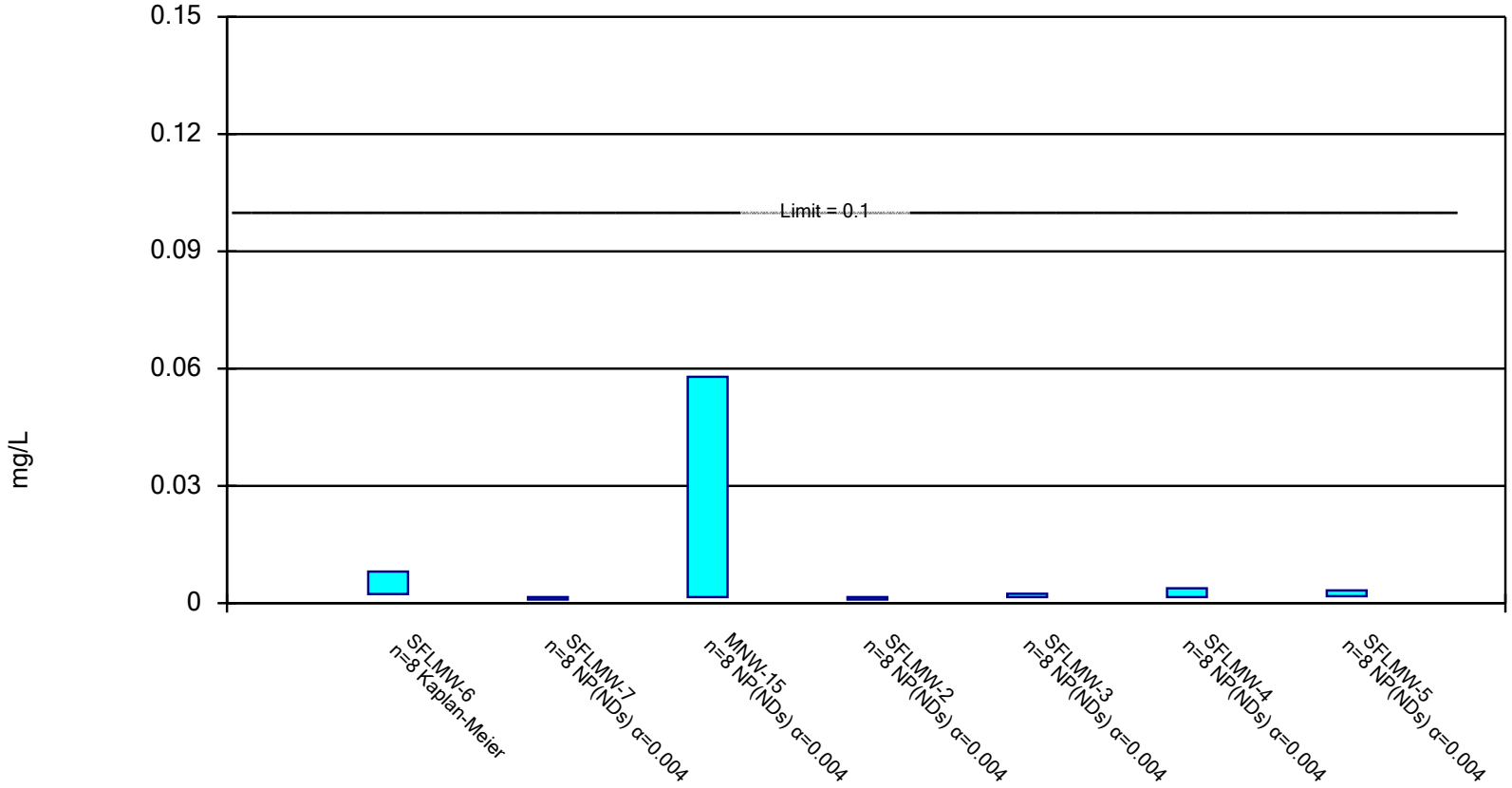


Constituent: Cadmium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

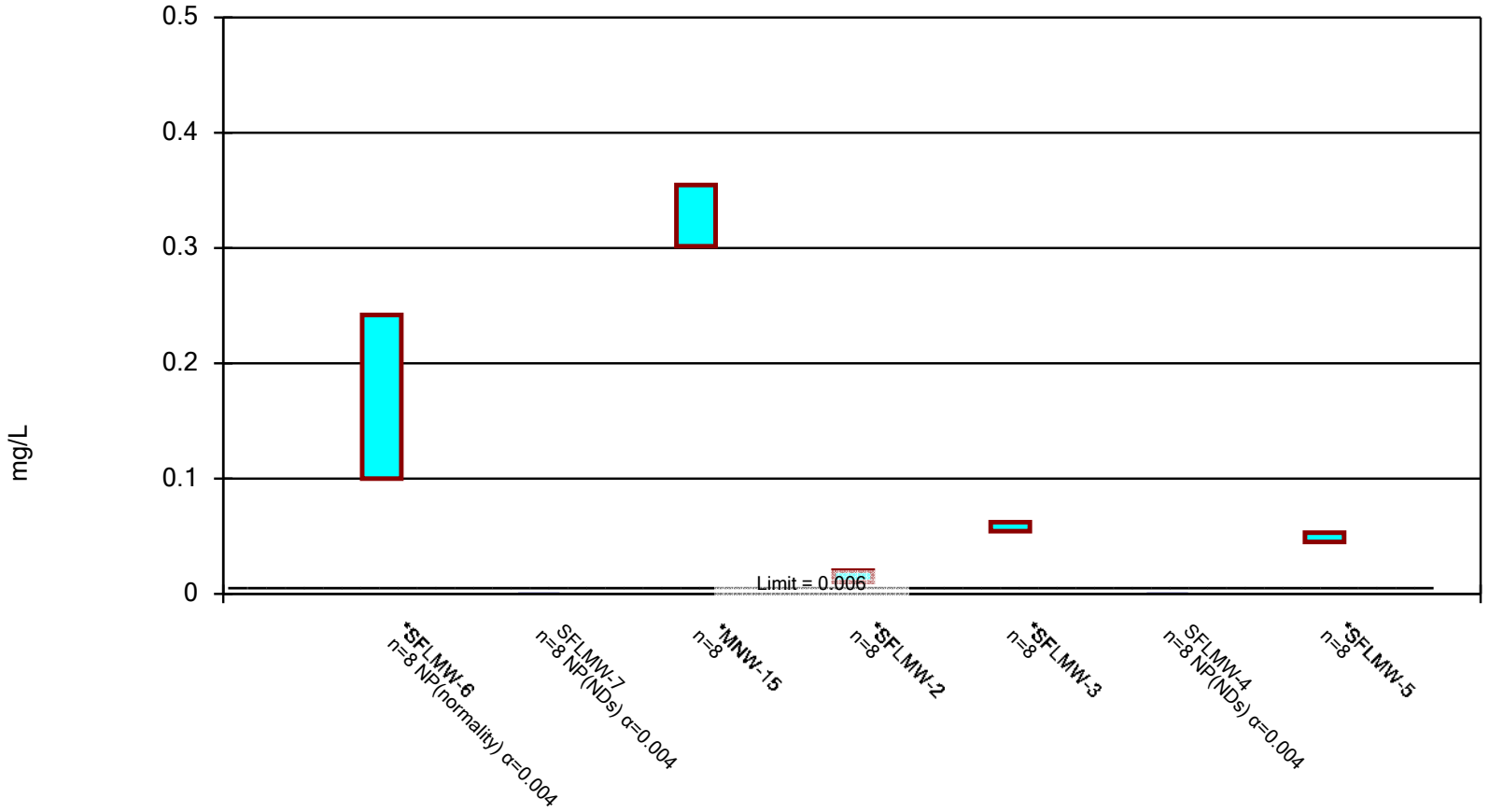


Constituent: Chromium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

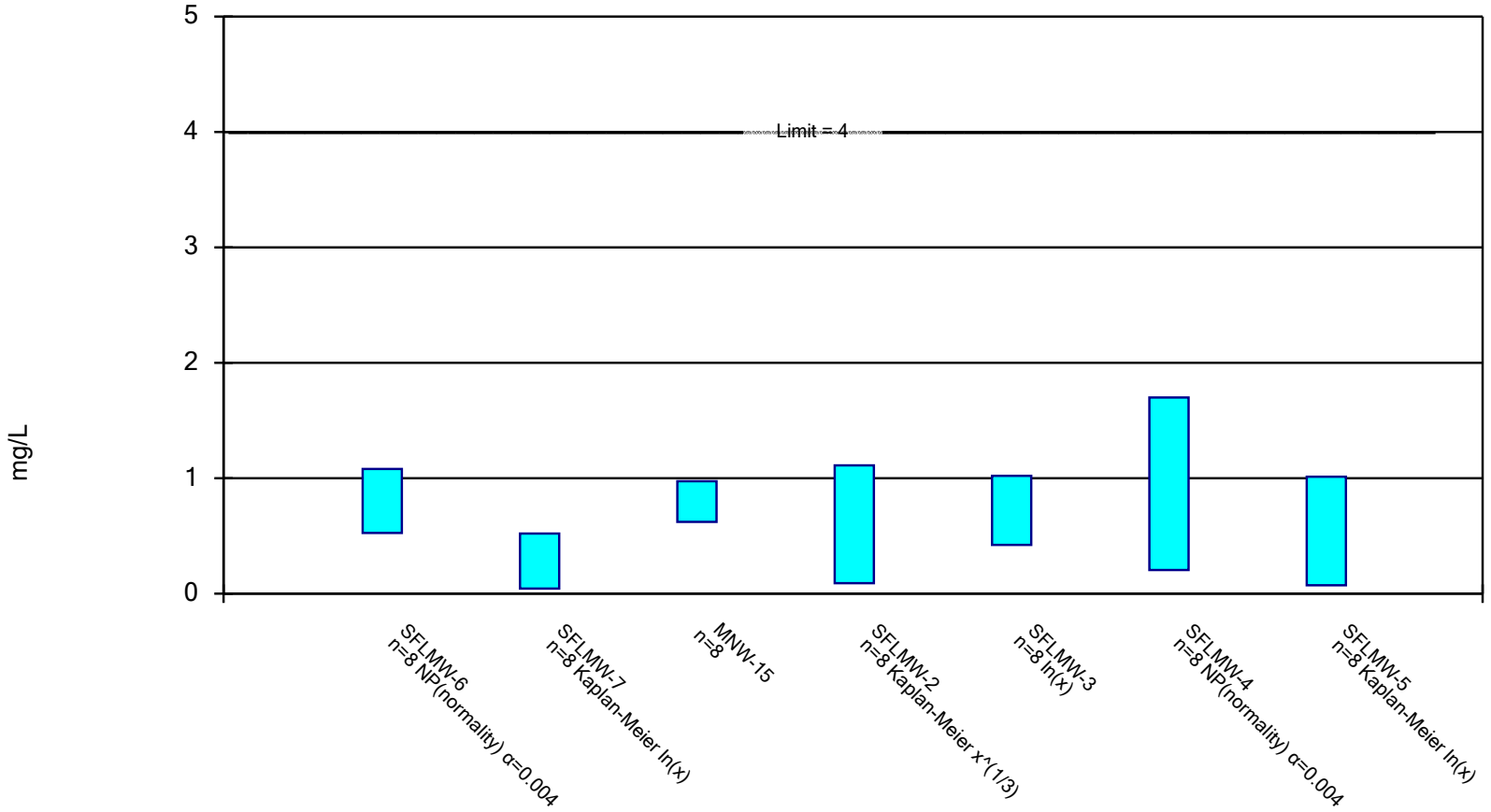


Constituent: Cobalt Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

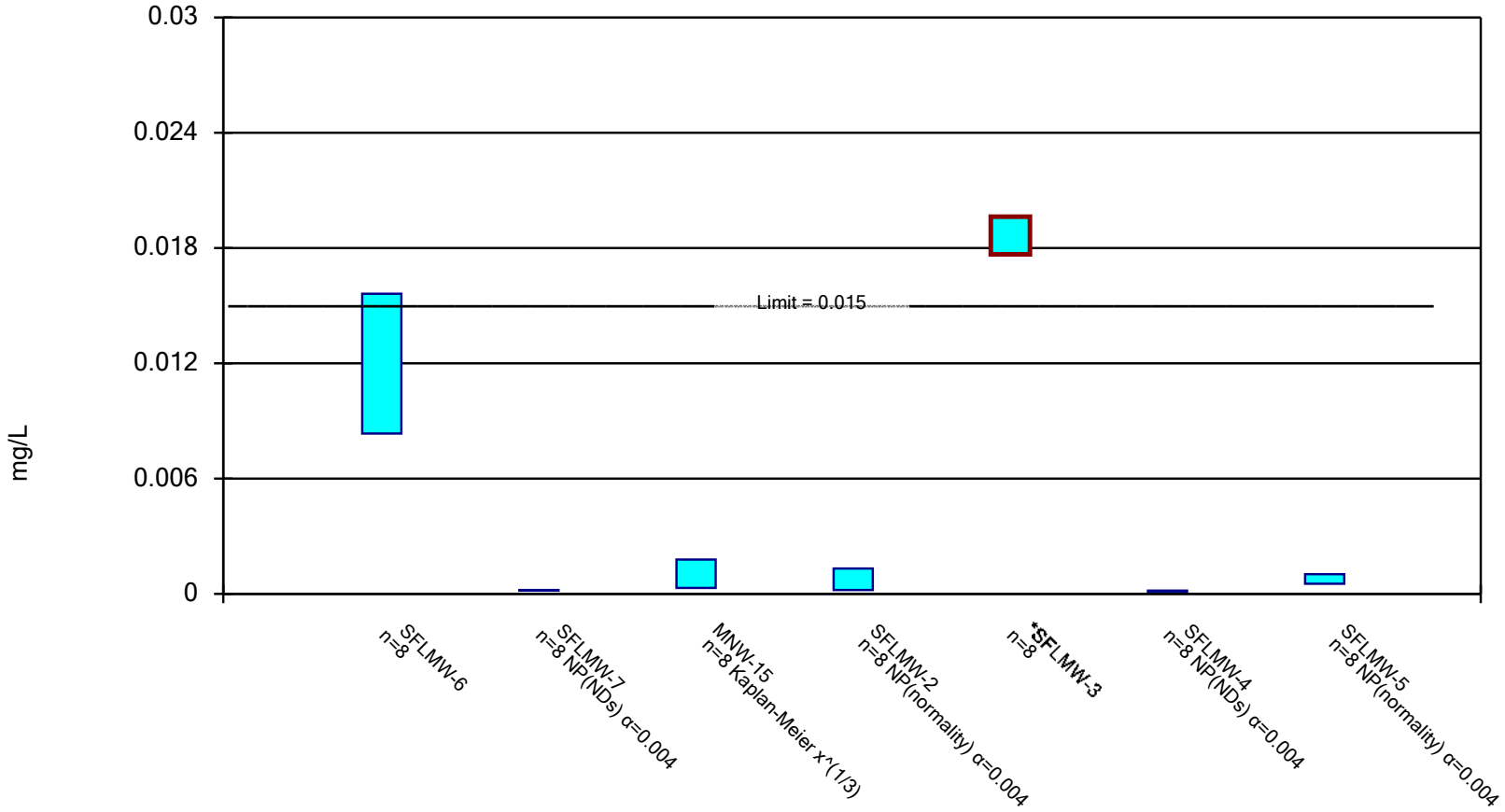


Constituent: Fluoride Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

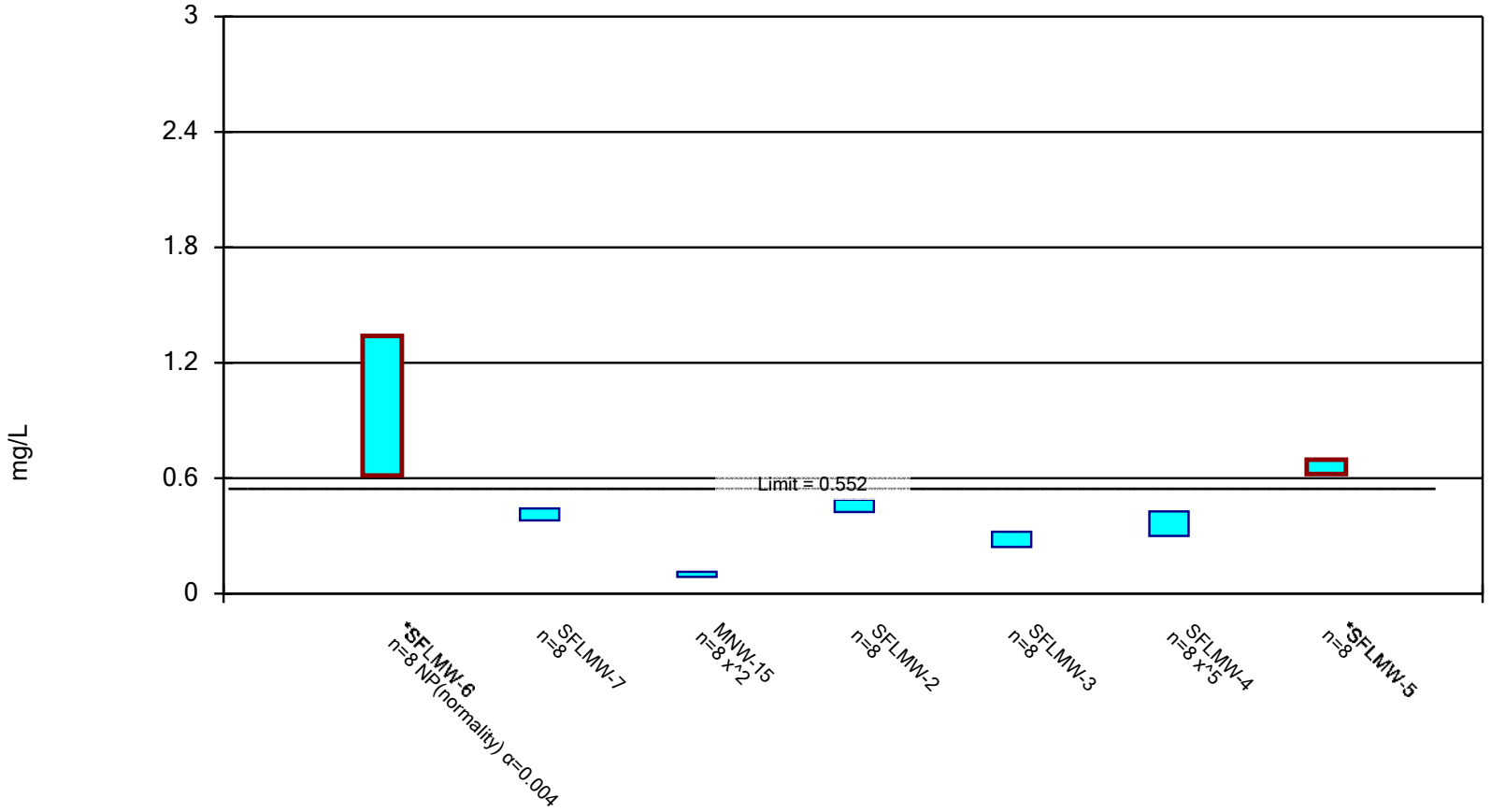


Constituent: Lead Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

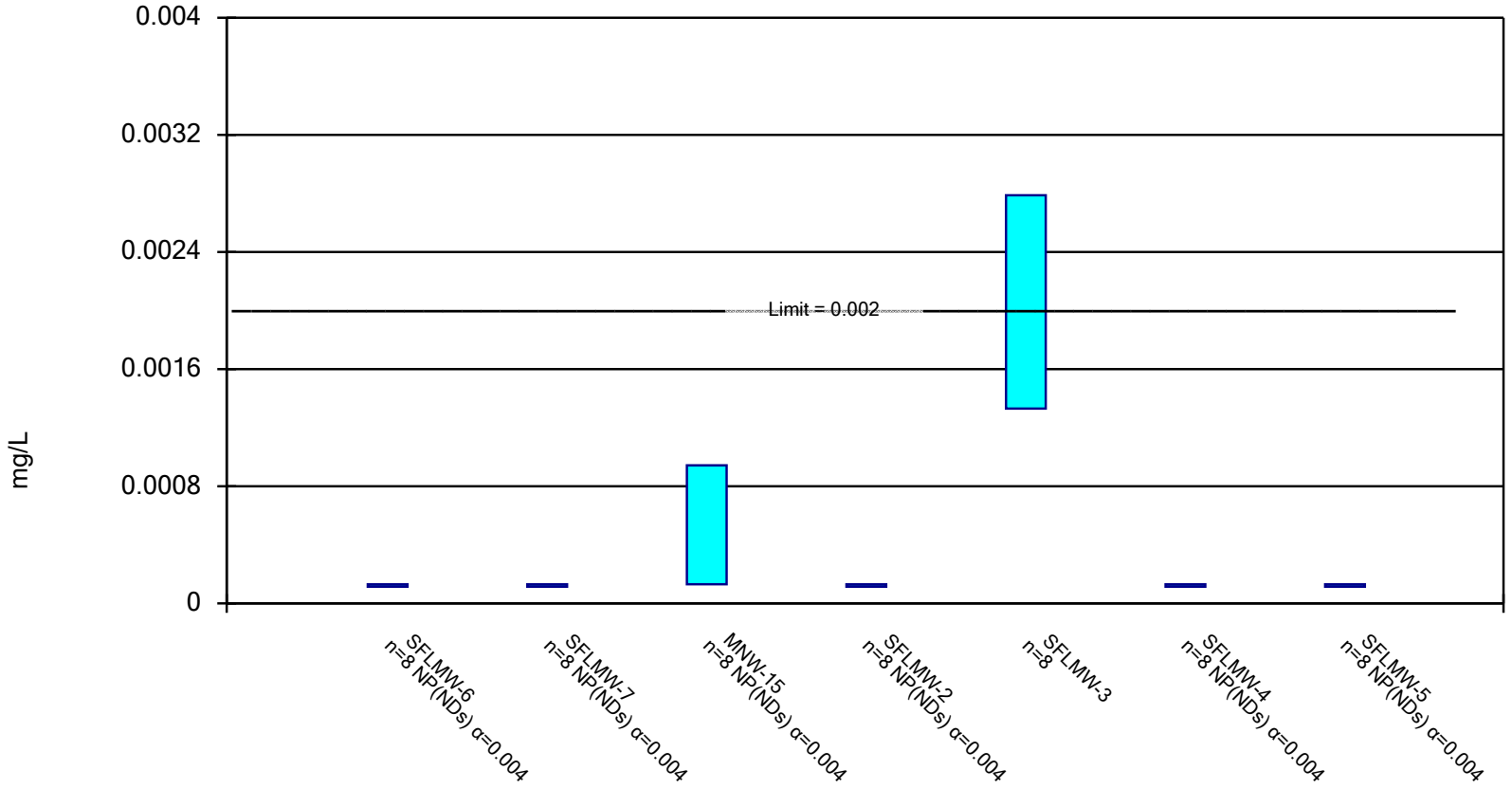


Constituent: Lithium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

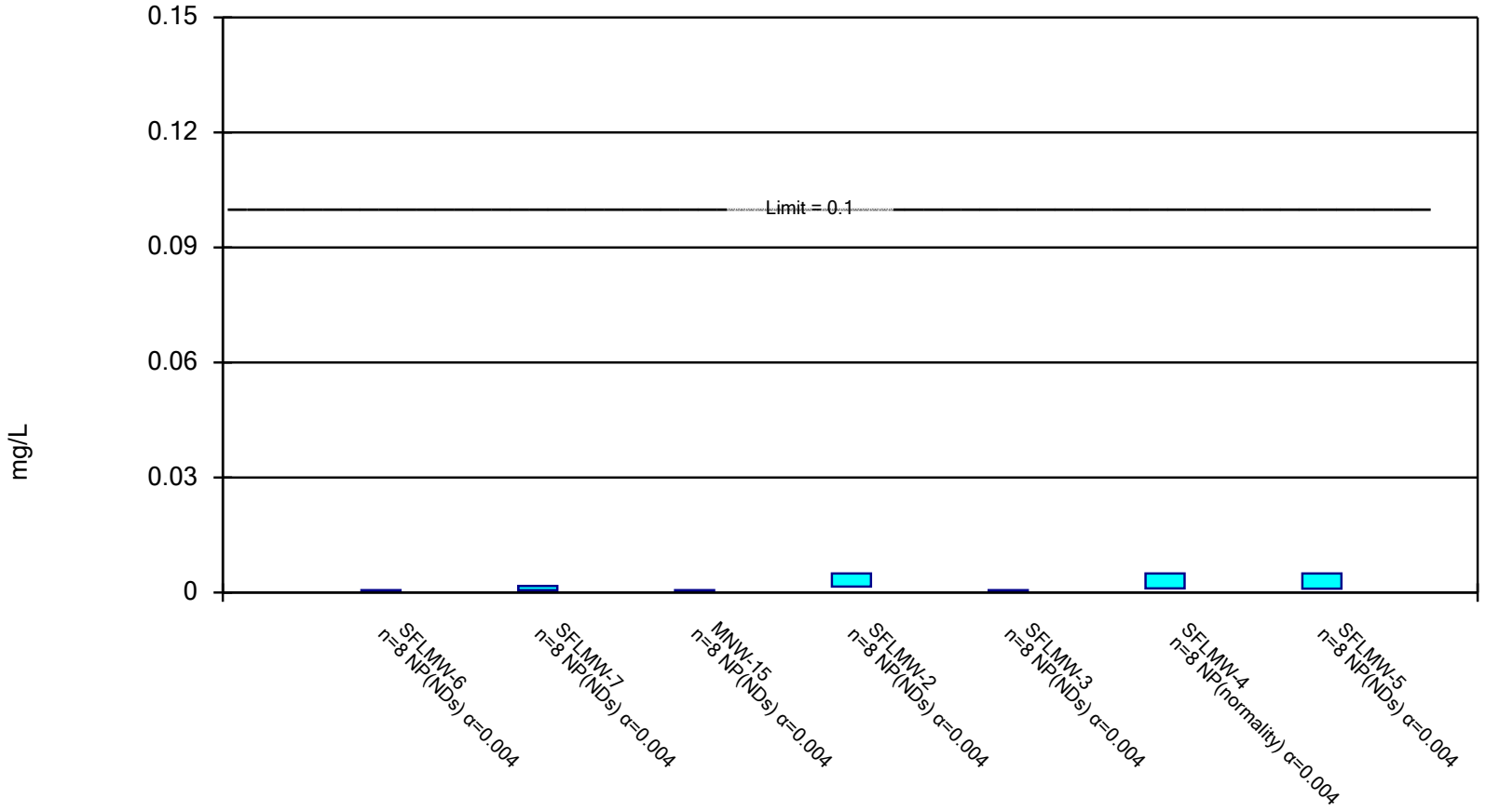


Constituent: Mercury Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

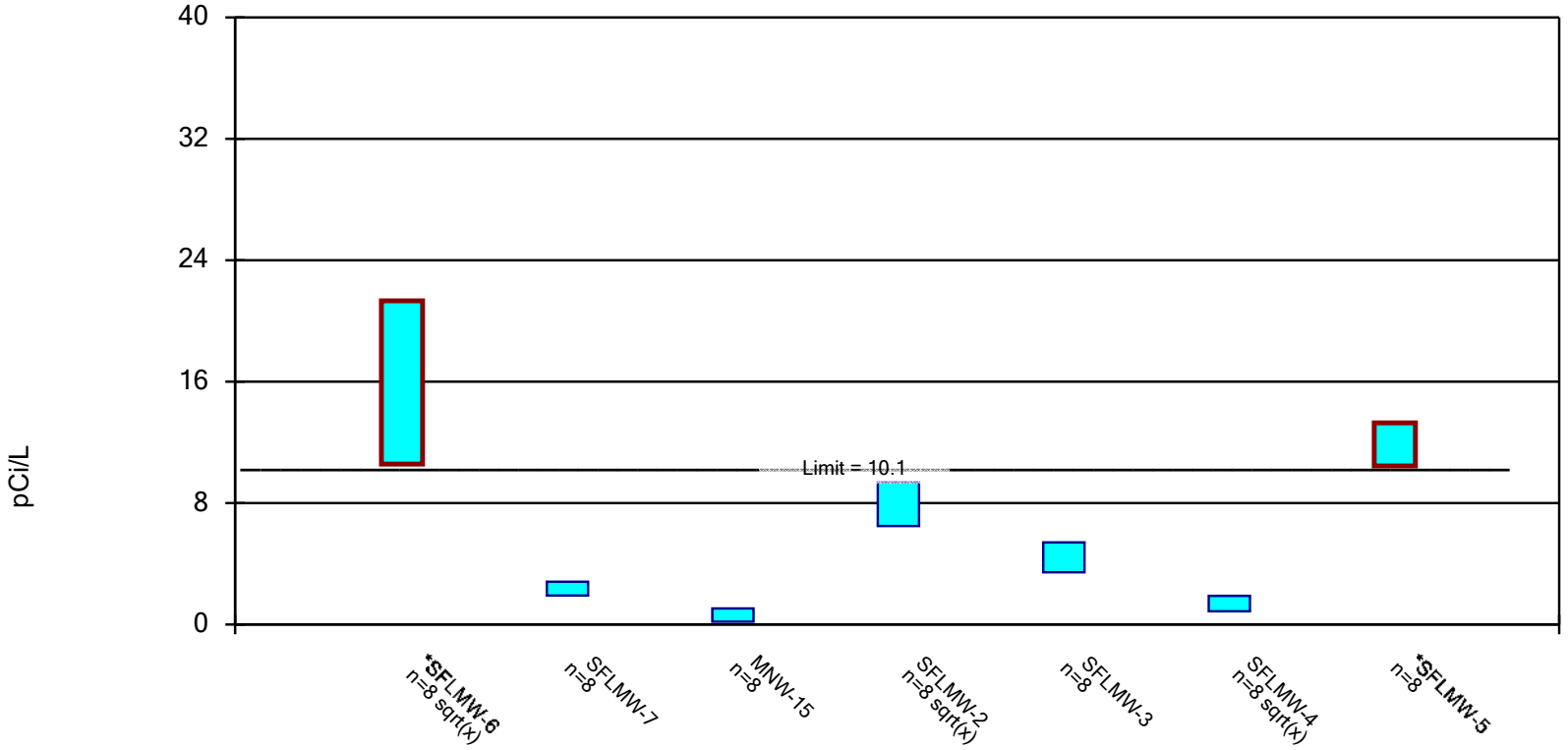


Constituent: Molybdenum Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

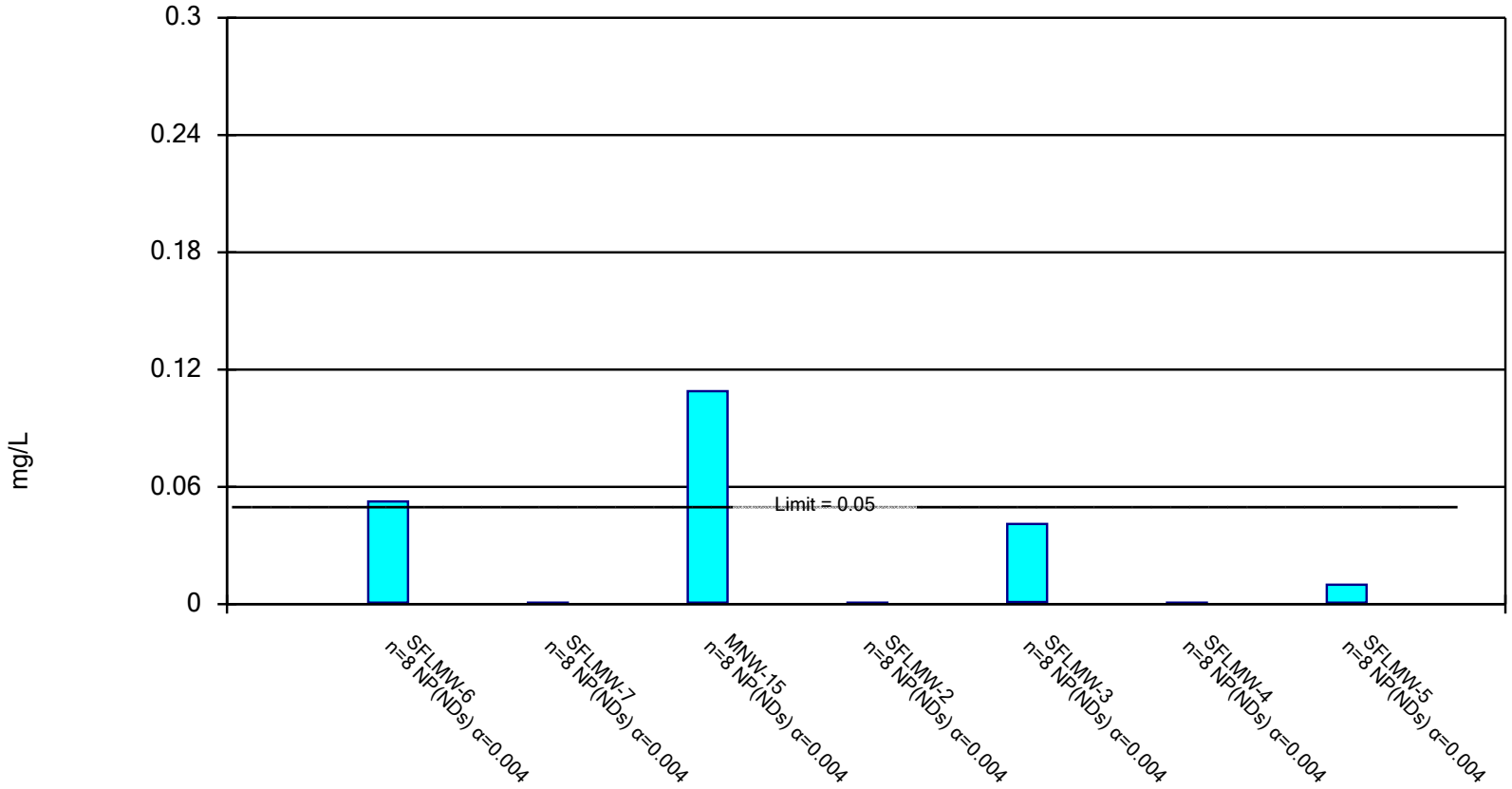


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

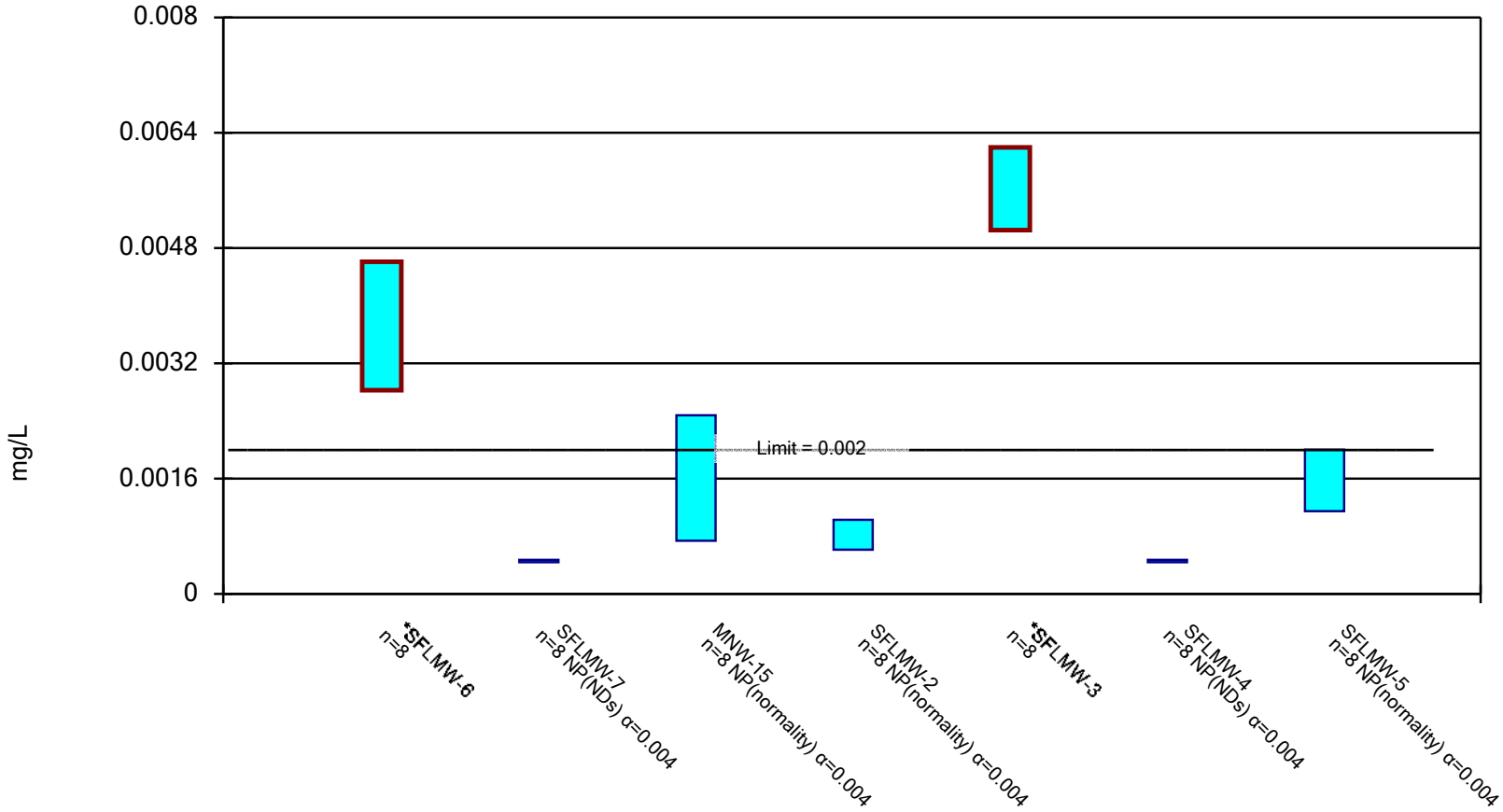


Constituent: Selenium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Thallium Analysis Run 1/23/2023 10:14 AM View: Site F Landfill

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:15 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SFLMW-6	0.002	0.00108	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-7	0.000978	0.000506	0.006	No	8	75	No	0.004	NP (NDs)
Antimony (mg/L)	MNW-15	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-2	0.002	0.000968	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-3	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-4	0.002	0.000534	0.006	No	8	75	No	0.004	NP (NDs)
Antimony (mg/L)	SFLMW-5	0.002	0.00118	0.006	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	SFLMW-6	0.02728	0.008452	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	SFLMW-7	0.000479	0.000282	0.01	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MNW-15	0.01217	0.006168	0.01	No	8	25	No	0.01	Param.
Arsenic (mg/L)	SFLMW-2	0.005	0.00147	0.01	No	8	25	No	0.004	NP (normality)
Arsenic (mg/L)	SFLMW-3	0.025	0.00303	0.01	No	8	25	No	0.004	NP (normality)
Arsenic (mg/L)	SFLMW-4	0.00106	0.000786	0.01	No	8	62.5	No	0.004	NP (NDs)
Arsenic (mg/L)	SFLMW-5	0.025	0.00145	0.01	No	8	25	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-6	0.049	0.02965	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-7	0.06866	0.03077	2	No	8	0	ln(x)	0.01	Param.
Barium (mg/L)	MNW-15	0.03	0.0159	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-2	0.0276	0.02057	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-3	0.1	0.013	2	No	8	12.5	No	0.004	NP (normality)
Barium (mg/L)	SFLMW-4	0.0263	0.02007	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SFLMW-5	0.1	0.0157	2	No	8	12.5	No	0.004	NP (normality)
Beryllium (mg/L)	**SFLMW-6**	**0.0933**	**0.0418**	**0.004**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Beryllium (mg/L)	SFLMW-7	0.000274	0.000274	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	**MNW-15**	**0.09283**	**0.07532**	**0.004**	**Yes**	**8**	**0**	**x^4**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-2	0.007616	0.0009765	0.004	No	8	12.5	No	0.01	Param.
Beryllium (mg/L)	**SFLMW-3**	**0.03465**	**0.03038**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SFLMW-4	0.000274	0.000274	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	**SFLMW-5**	**0.01144**	**0.00902**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	**SFLMW-6**	**0.012**	**0.007883**	**0.005**	**Yes**	**8**	**0**	**x^2**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-7	0.00025	0.000217	0.005	No	8	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	**MNW-15**	**0.0945**	**0.0269**	**0.005**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Cadmium (mg/L)	SFLMW-2	0.00303	0.000649	0.005	No	8	12.5	No	0.004	NP (normality)
Cadmium (mg/L)	**SFLMW-3**	**0.006786**	**0.005479**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SFLMW-4	0.000217	0.000217	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	SFLMW-5	0.005442	0.004018	0.005	No	8	0	No	0.01	Param.
Chromium (mg/L)	SFLMW-6	0.008112	0.00237	0.1	No	8	37.5	No	0.01	Param.
Chromium (mg/L)	SFLMW-7	0.00153	0.00153	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	MNW-15	0.0579	0.00153	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-2	0.00153	0.00153	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-3	0.0024	0.00153	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-4	0.00379	0.00153	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	SFLMW-5	0.00327	0.00181	0.1	No	8	62.5	No	0.004	NP (NDs)
Cobalt (mg/L)	**SFLMW-6**	**0.242**	**0.1**	**0.006**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Cobalt (mg/L)	SFLMW-7	0.000261	0.000261	0.006	No	8	100	No	0.004	NP (NDs)
Cobalt (mg/L)	**MNW-15**	**0.3547**	**0.3016**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-2**	**0.02026**	**0.01034**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**SFLMW-3**	**0.06215**	**0.05445**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SFLMW-4	0.000261	0.000261	0.006	No	8	100	No	0.004	NP (NDs)
Cobalt (mg/L)	**SFLMW-5**	**0.05313**	**0.04517**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SFLMW-6	1.08	0.527	4	No	8	50	No	0.004	NP (normality)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:15 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SFLMW-7	0.5199	0.04359	4	No	8	50	ln(x)	0.01	Param.
Fluoride (mg/L)	MNW-15	0.9741	0.6221	4	No	8	0	No	0.01	Param.
Fluoride (mg/L)	SFLMW-2	1.111	0.09153	4	No	8	37.5	x^(1/3)	0.01	Param.
Fluoride (mg/L)	SFLMW-3	1.02	0.4214	4	No	8	12.5	ln(x)	0.01	Param.
Fluoride (mg/L)	SFLMW-4	1.7	0.204	4	No	8	50	No	0.004	NP (normality)
Fluoride (mg/L)	SFLMW-5	1.014	0.07194	4	No	8	50	ln(x)	0.01	Param.
Lead (mg/L)	SFLMW-6	0.01563	0.008346	0.015	No	8	0	No	0.01	Param.
Lead (mg/L)	SFLMW-7	0.000211	0.000167	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	MNW-15	0.001783	0.000316	0.015	No	8	25	x^(1/3)	0.01	Param.
Lead (mg/L)	SFLMW-2	0.00132	0.000199	0.015	No	8	50	No	0.004	NP (normality)
Lead (mg/L)	**SFLMW-3**	**0.01962**	**0.01768**	**0.015**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Lead (mg/L)	SFLMW-4	0.000167	0.000167	0.015	No	8	100	No	0.004	NP (NDs)
Lead (mg/L)	SFLMW-5	0.00102	0.000527	0.015	No	8	37.5	No	0.004	NP (normality)
Lithium (mg/L)	**SFLMW-6**	**1.34**	**0.614**	**0.552**	**Yes**	**8**	**0**	**No**	**0.004**	**NP (normality)**
Lithium (mg/L)	SFLMW-7	0.4427	0.3811	0.552	No	8	0	No	0.01	Param.
Lithium (mg/L)	MNW-15	0.1141	0.08673	0.552	No	8	0	x^2	0.01	Param.
Lithium (mg/L)	SFLMW-2	0.4882	0.4243	0.552	No	8	0	No	0.01	Param.
Lithium (mg/L)	SFLMW-3	0.3224	0.2421	0.552	No	8	12.5	No	0.01	Param.
Lithium (mg/L)	SFLMW-4	0.4272	0.3003	0.552	No	8	0	x^5	0.01	Param.
Lithium (mg/L)	**SFLMW-5**	**0.6965**	**0.6215**	**0.552**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Mercury (mg/L)	SFLMW-6	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-7	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	MNW-15	0.000942	0.00013	0.002	No	8	87.5	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-2	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-3	0.002787	0.001331	0.002	No	8	0	No	0.01	Param.
Mercury (mg/L)	SFLMW-4	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SFLMW-5	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-6	0.00061	0.00061	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-7	0.00173	0.00061	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	MNW-15	0.00061	0.00061	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-2	0.005	0.00155	0.1	No	8	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-3	0.00061	0.00061	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SFLMW-4	0.005	0.00106	0.1	No	8	50	No	0.004	NP (normality)
Molybdenum (mg/L)	SFLMW-5	0.005	0.00103	0.1	No	8	75	No	0.004	NP (NDs)
Radium 226 + 228 (pCi/L)	**SFLMW-6**	**21.33**	**10.58**	**10.1**	**Yes**	**8**	**0**	**sqrt(x)**	**0.01**	**Param.**
Radium 226 + 228 (pCi/L)	SFLMW-7	2.824	1.916	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	MNW-15	1.059	0.1934	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-2	9.375	6.494	10.1	No	8	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-3	5.416	3.436	10.1	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SFLMW-4	1.897	0.8826	10.1	No	8	12.5	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	**SFLMW-5**	**13.29**	**10.45**	**10.1**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Selenium (mg/L)	SFLMW-6	0.0525	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-7	0.000739	0.000739	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	MNW-15	0.109	0.000739	0.05	No	8	75	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-2	0.000739	0.000739	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-3	0.041	0.00117	0.05	No	8	62.5	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-4	0.000739	0.000739	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	SFLMW-5	0.00989	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	**SFLMW-6**	**0.00461**	**0.002825**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-7	0.000472	0.000472	0.002	No	8	100	No	0.004	NP (NDs)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:15 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	MNW-15	0.00248	0.000739	0.002	No	8	37.5	No	0.004	NP (normality)
Thallium (mg/L)	SFLMW-2	0.00103	0.000612	0.002	No	8	37.5	No	0.004	NP (normality)
Thallium (mg/L)	**SFLMW-3**	**0.006198**	**0.005047**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Thallium (mg/L)	SFLMW-4	0.000472	0.000472	0.002	No	8	100	No	0.004	NP (NDs)
Thallium (mg/L)	SFLMW-5	0.002	0.00115	0.002	No	8	12.5	No	0.004	NP (normality)

Attachment A-4

Statistical Analysis

-July 2021

-SSP/AP

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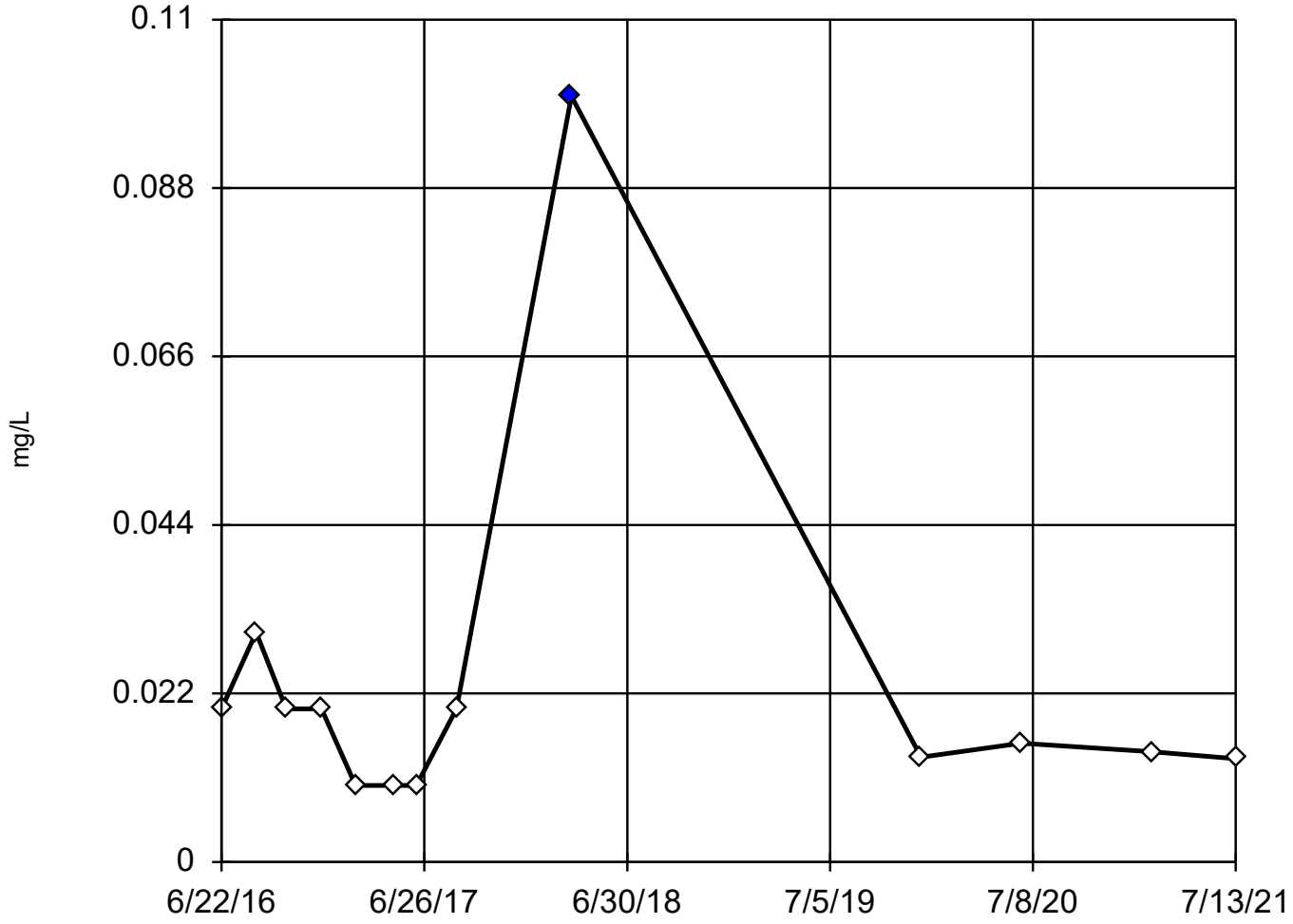
Dixon's Outlier Test

APMW-4



n = 13

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.02285.
Std. Dev. = 0.02385.
<0.2 (o): c = 0.8889
tabl = 0.521.
Alpha = 0.05.

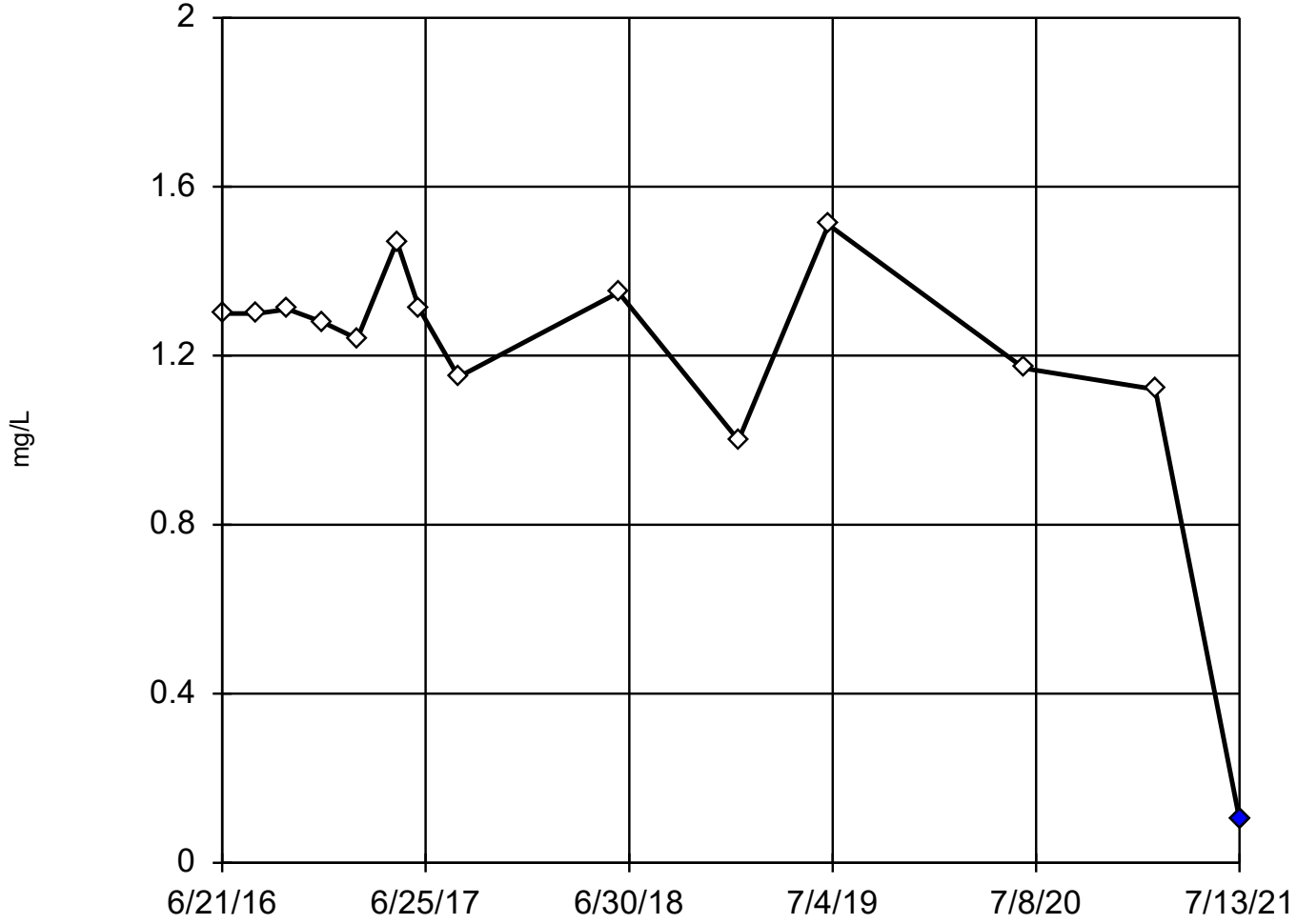
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8777
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1.187.
Std. Dev. = 0.3393.
0.102: c = 0.8157
tabl = 0.546.
Alpha = 0.05.

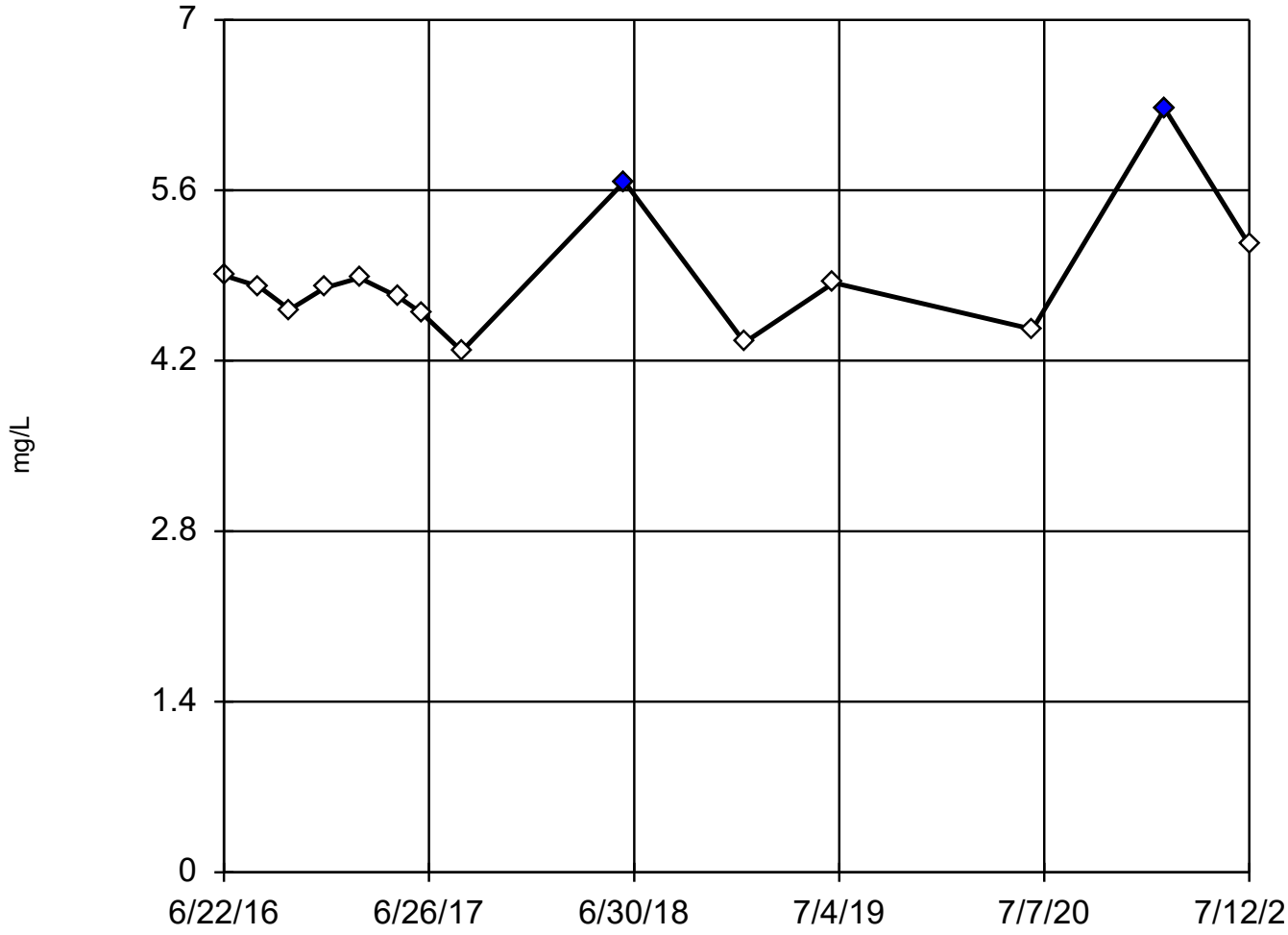
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9637
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-1D



n = 14

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 4.881.
Std. Dev. = 0.5289.
5.67 (o): c = 0.6364
tabl = 0.546.
Alpha = 0.05.

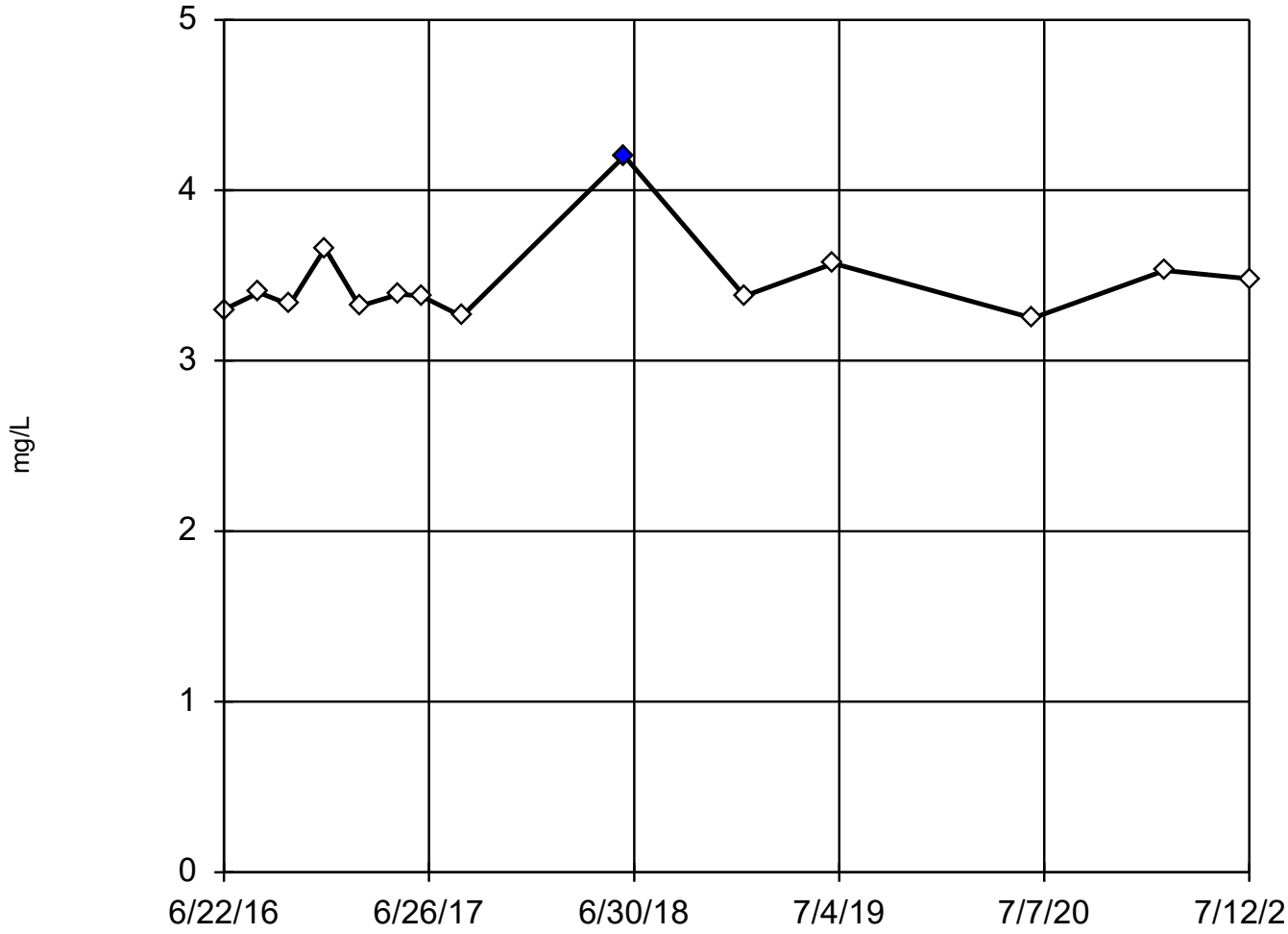
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9654
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 3.461.
Std. Dev. = 0.2438.
4.2 (o): c = 0.7
tabl = 0.546.
Alpha = 0.05.

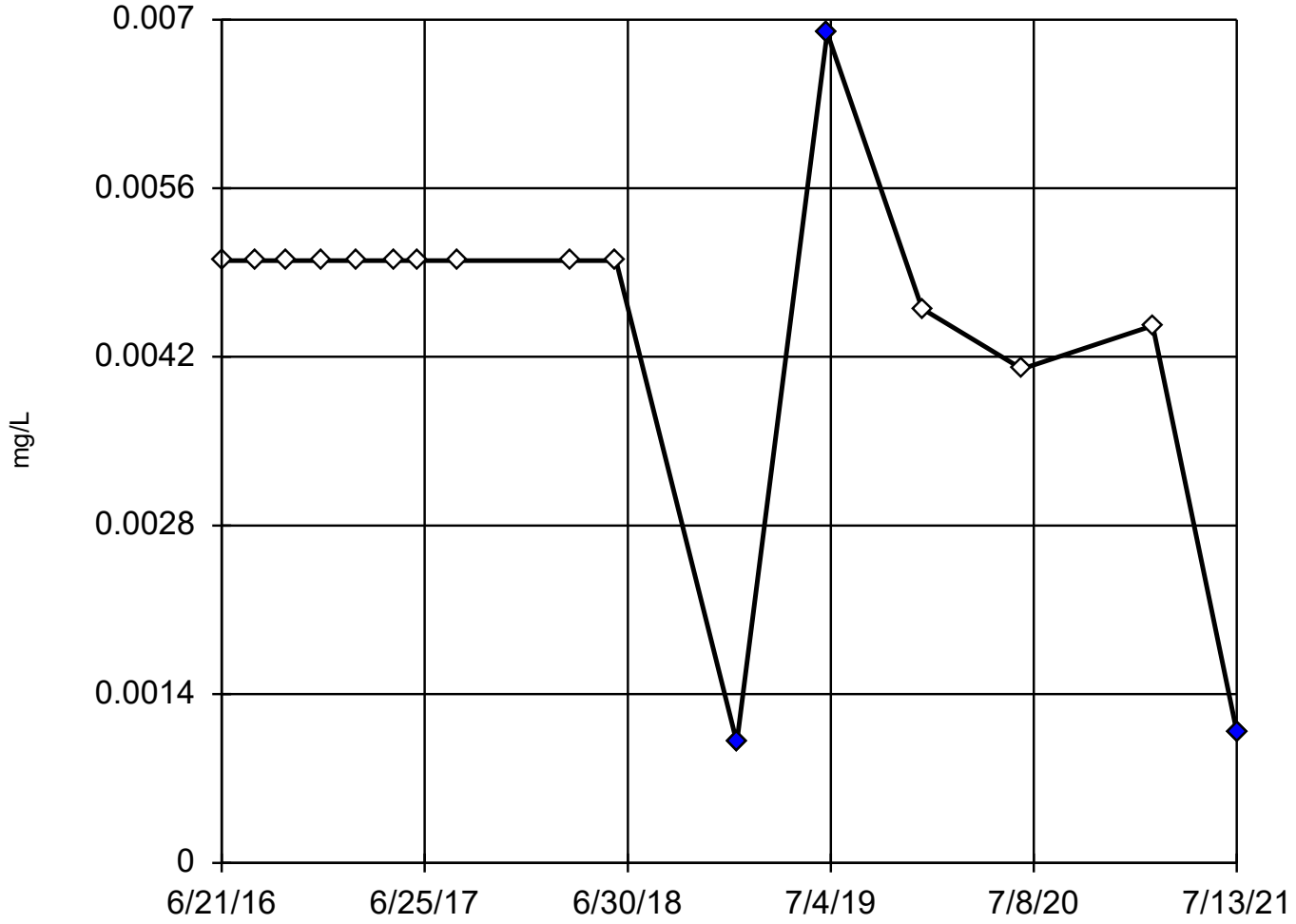
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9311
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SSPMW-2



n = 16

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

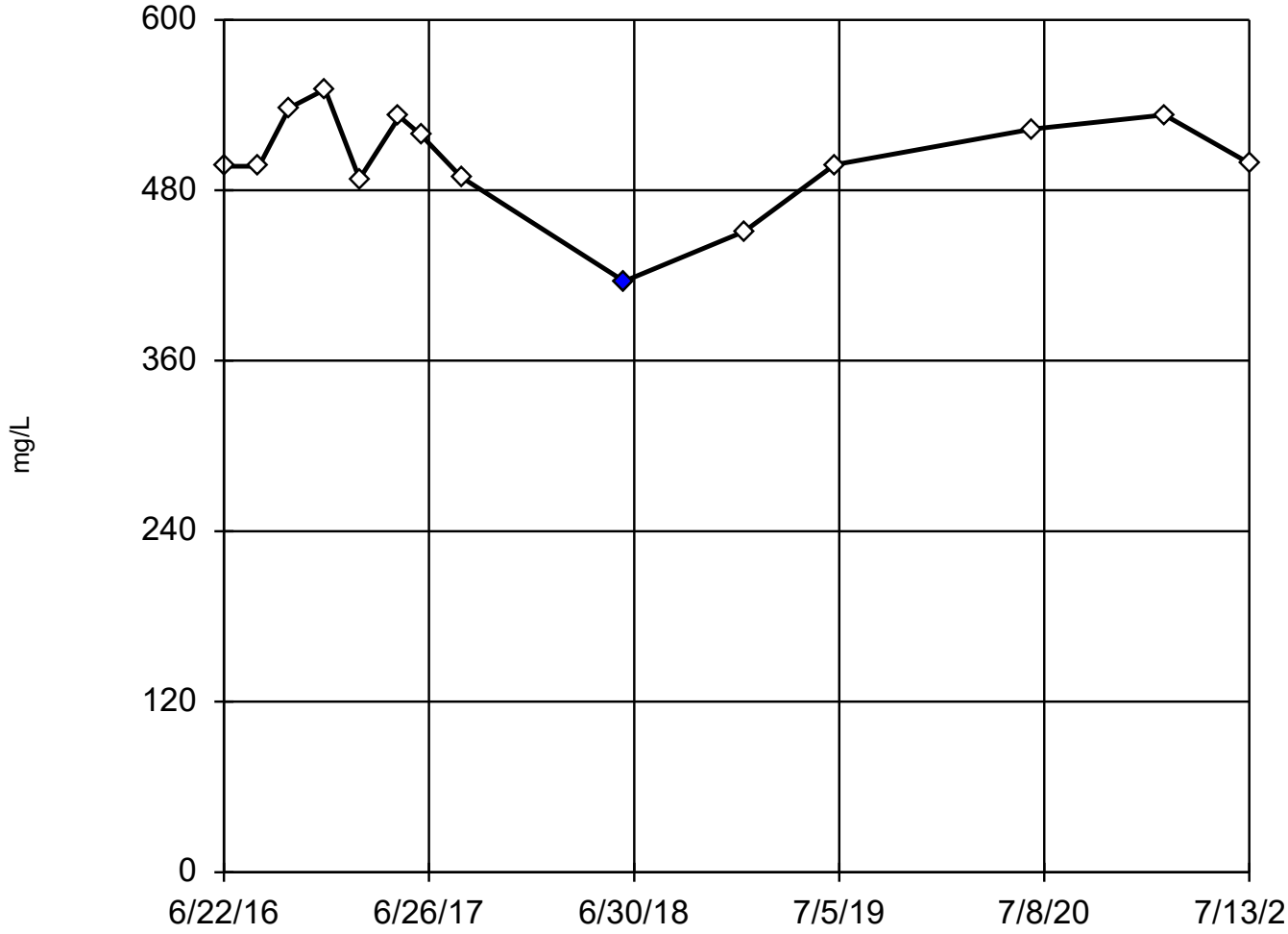
High cutoff = 0.006199, low cutoff = 0.002665, based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 502.2.
Std. Dev. = 35.87.
416 (o): c = 0.6154
tabl = 0.546.
Alpha = 0.05.

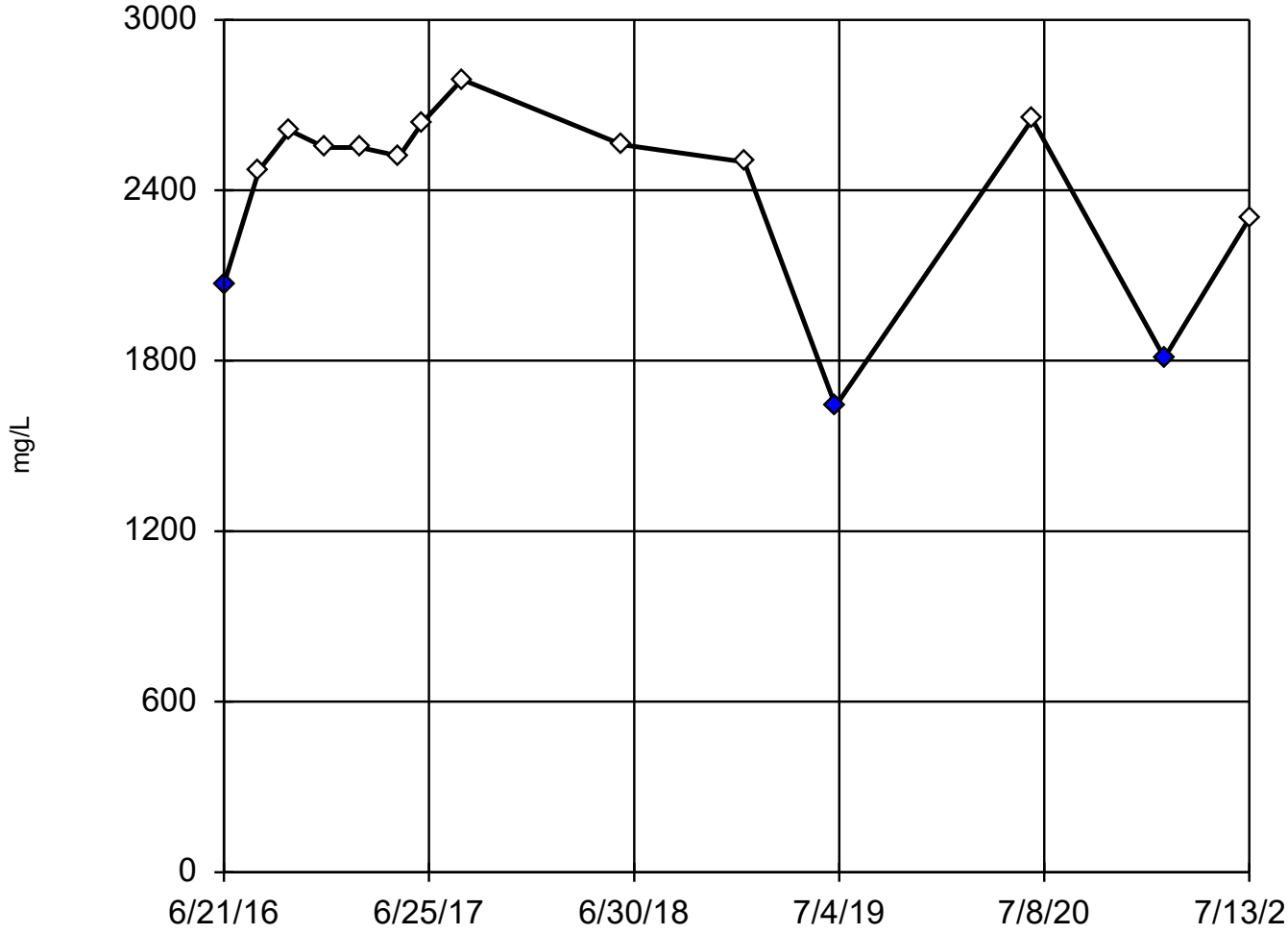
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9453
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 14

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 2404.
Std. Dev. = 335.2.
2070 (o): c = 0.7018
tabl = 0.546.
Alpha = 0.05.

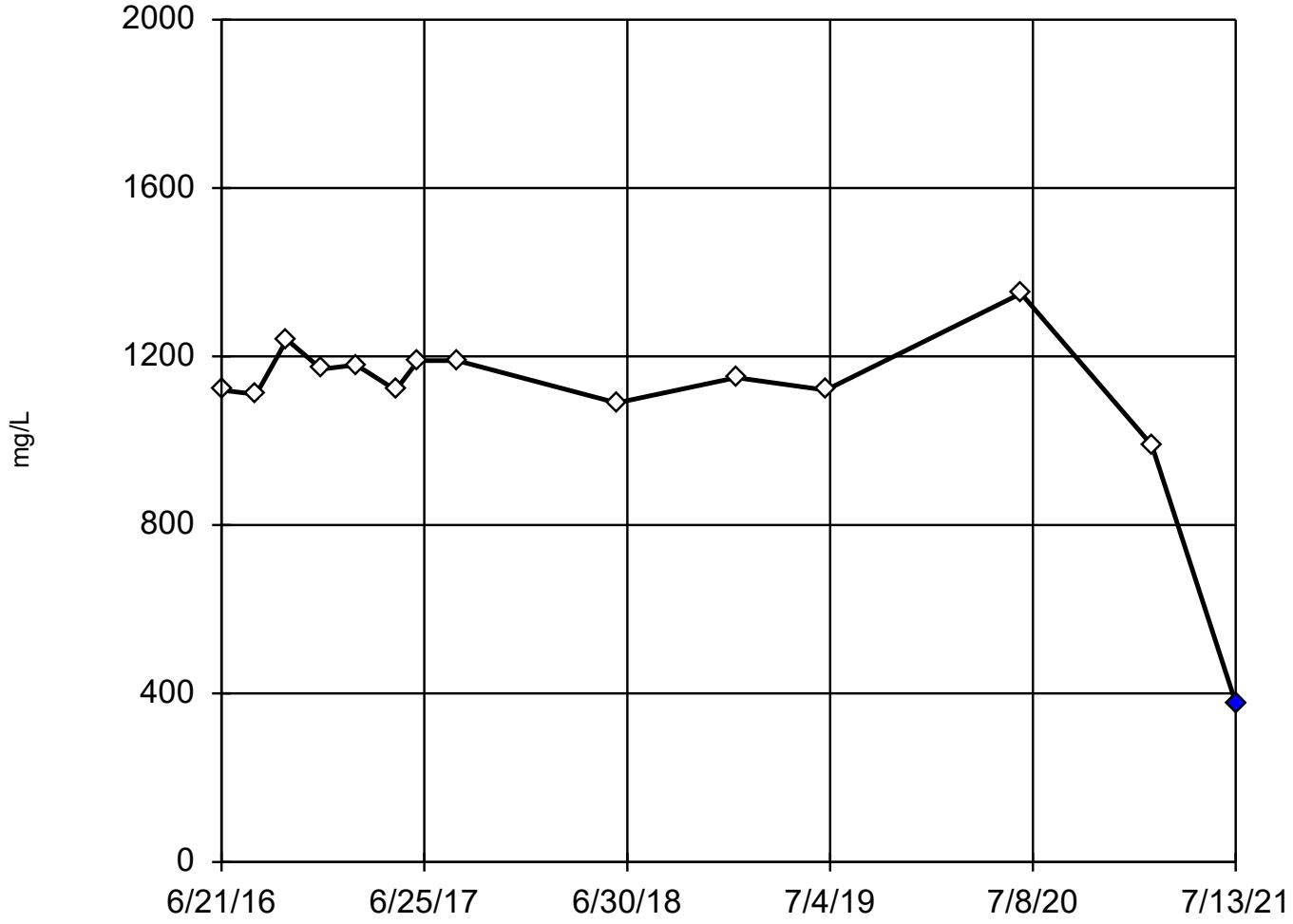
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9531
Critical = 0.85
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Chloride Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1100.
Std. Dev. = 223.1.
378: c = 0.8768
tabl = 0.546.
Alpha = 0.05.

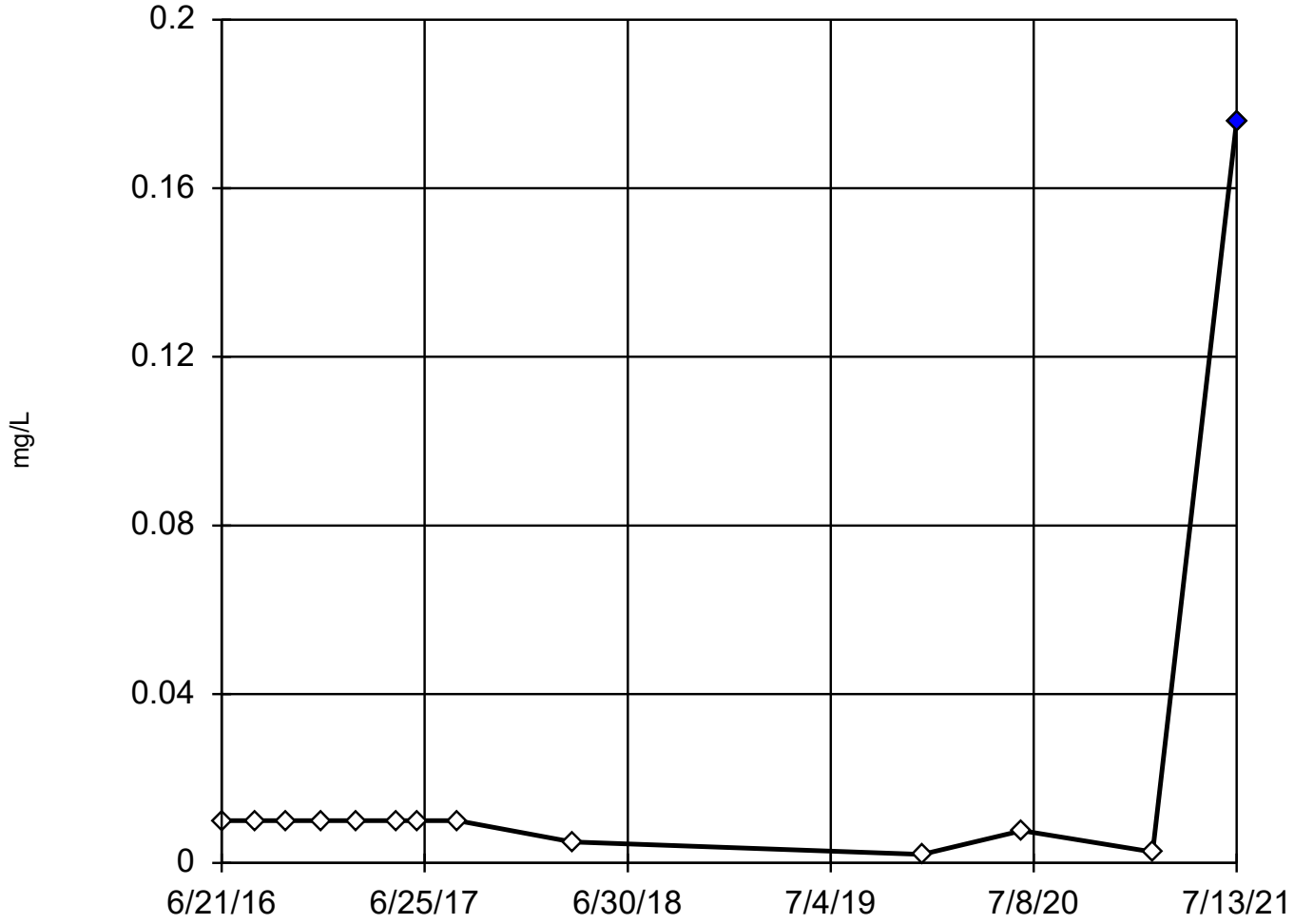
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9365
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 8/19/2021 7:37 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SSPMW-4



n = 13

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

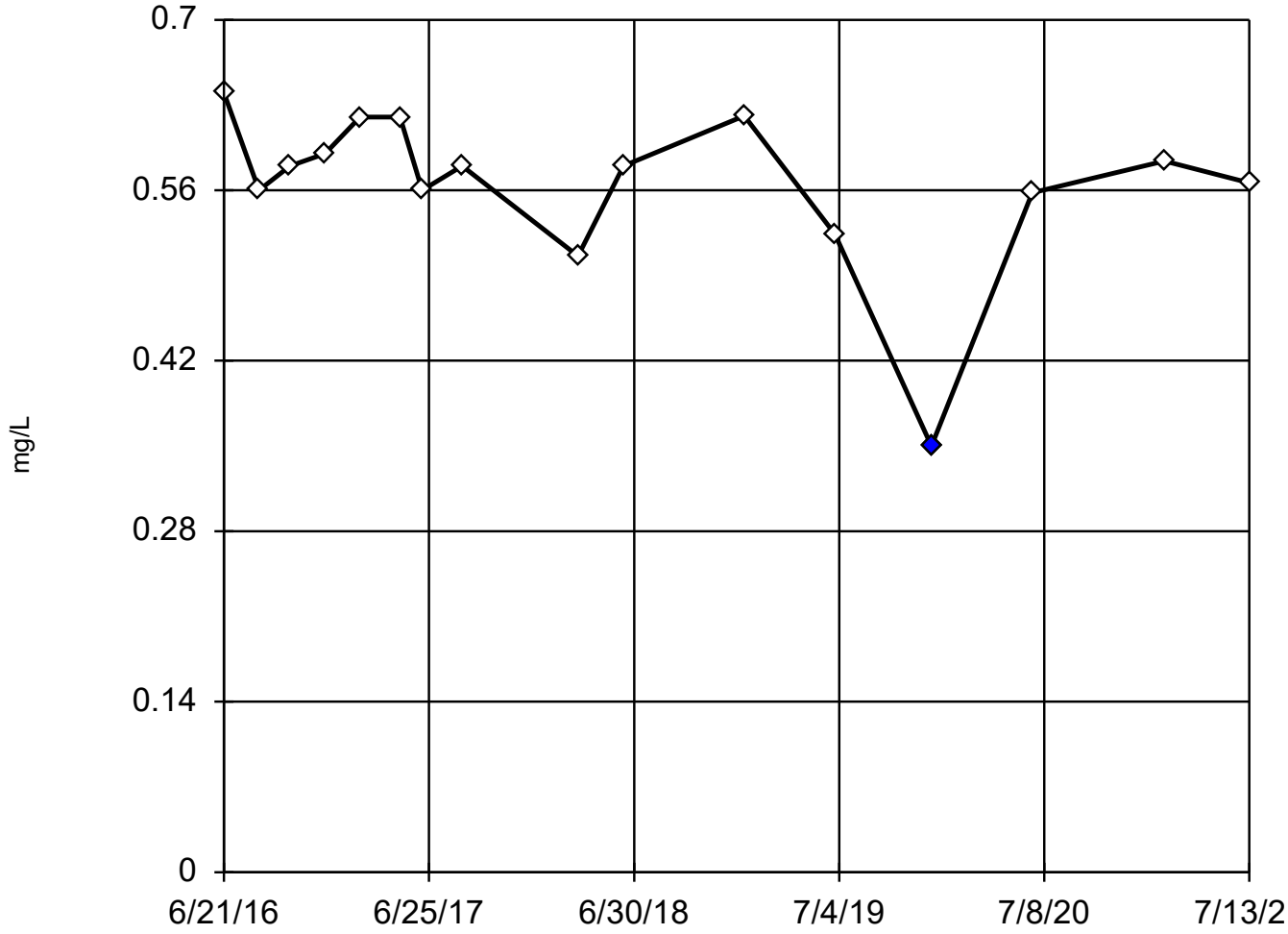
High cutoff = 0.04252, low cutoff = 0.001452, based on IQR multiplier of 3.

Constituent: Chromium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.5649.
Std. Dev. = 0.06731.
0.35 (o): c = 0.6444
tabl = 0.507.
Alpha = 0.05.

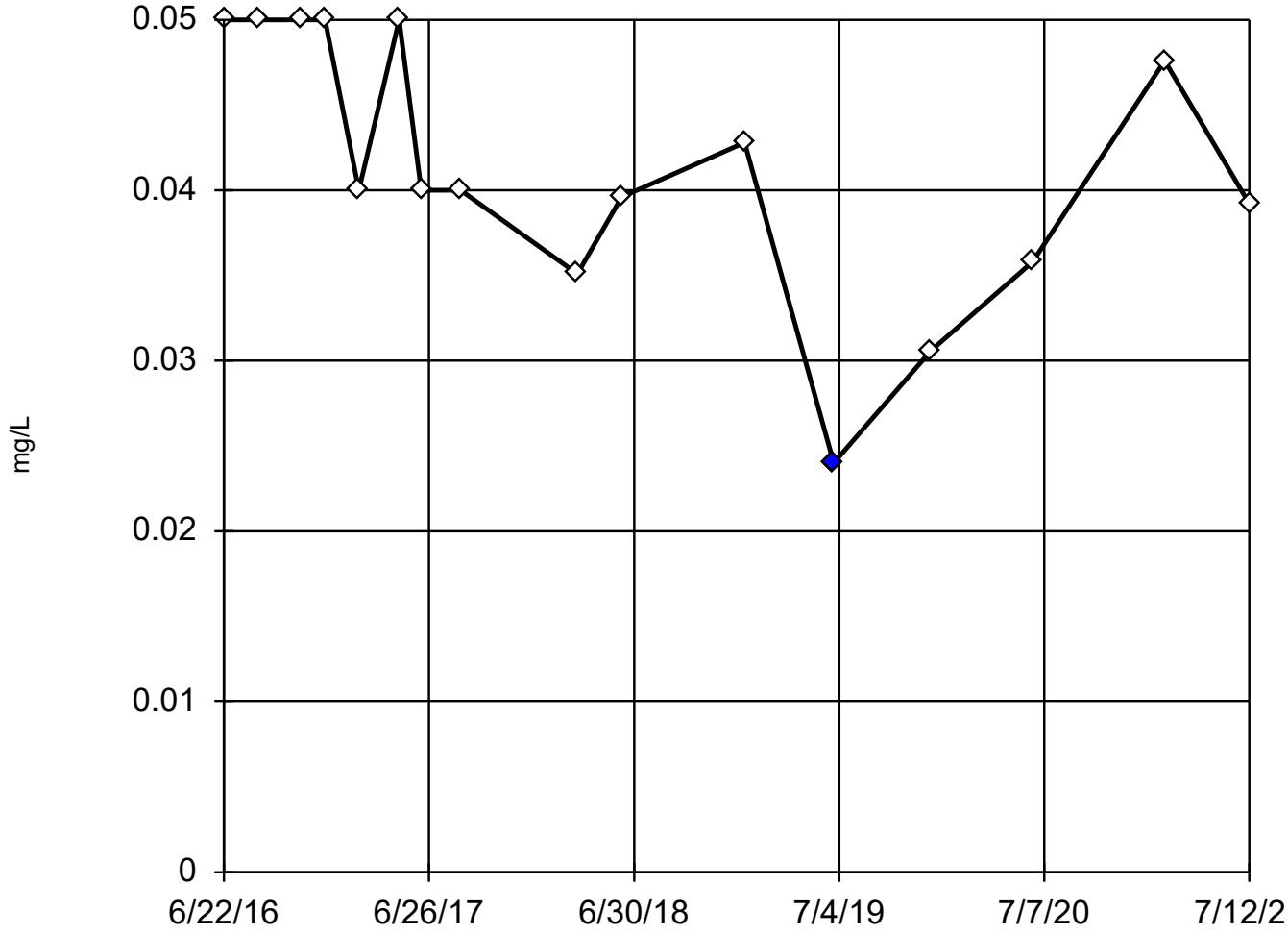
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9534
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Cobalt Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.04154.
Std. Dev. = 0.007807.
-3.73 (o): c = 0.5179
tabl = 0.507.
Alpha = 0.05.

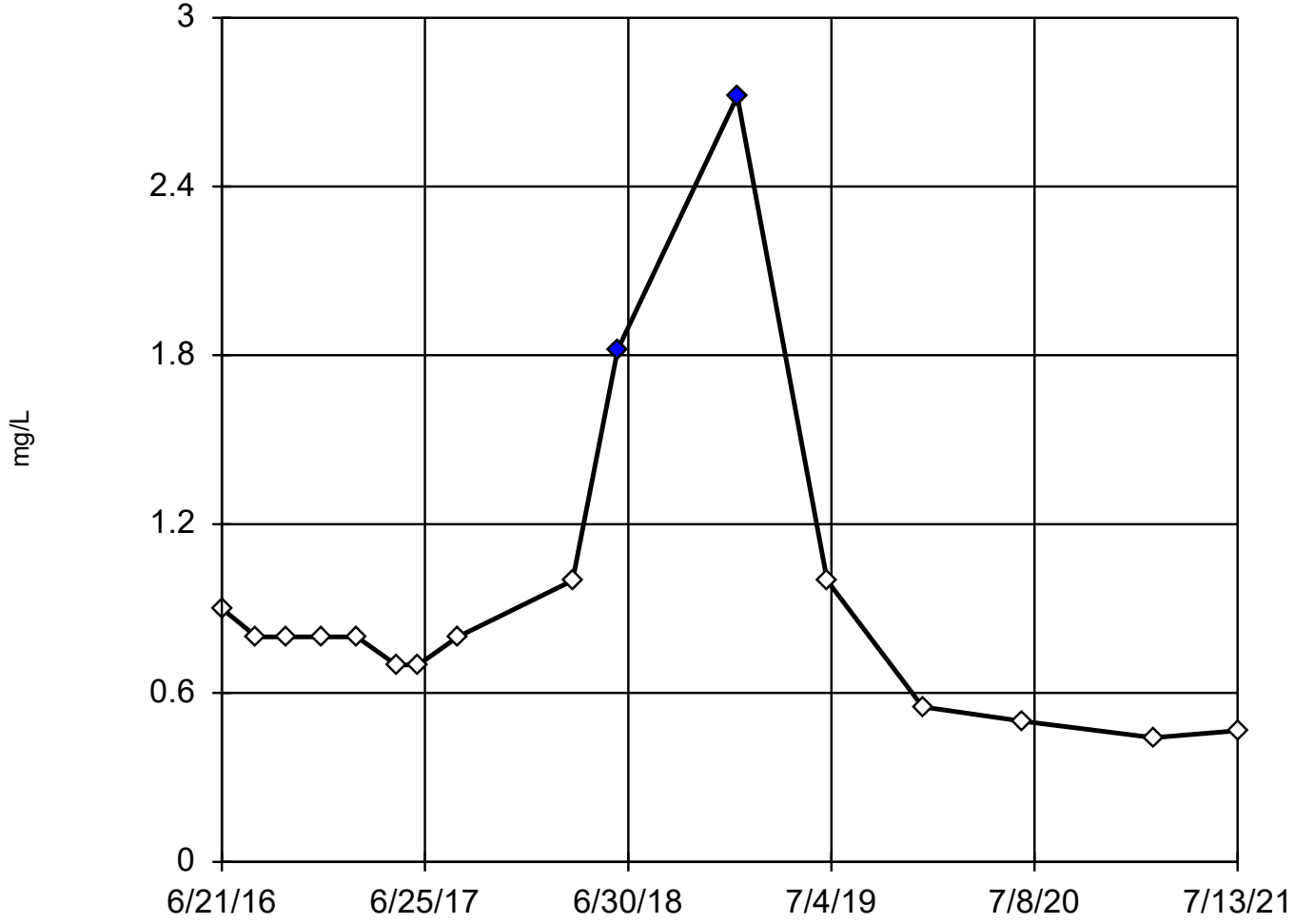
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8832
Critical = 0.881 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Cobalt Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 16

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 0.9249.
Std. Dev. = 0.5762.
1.82 (o): c = 0.6212
tabl = 0.507.
Alpha = 0.05.

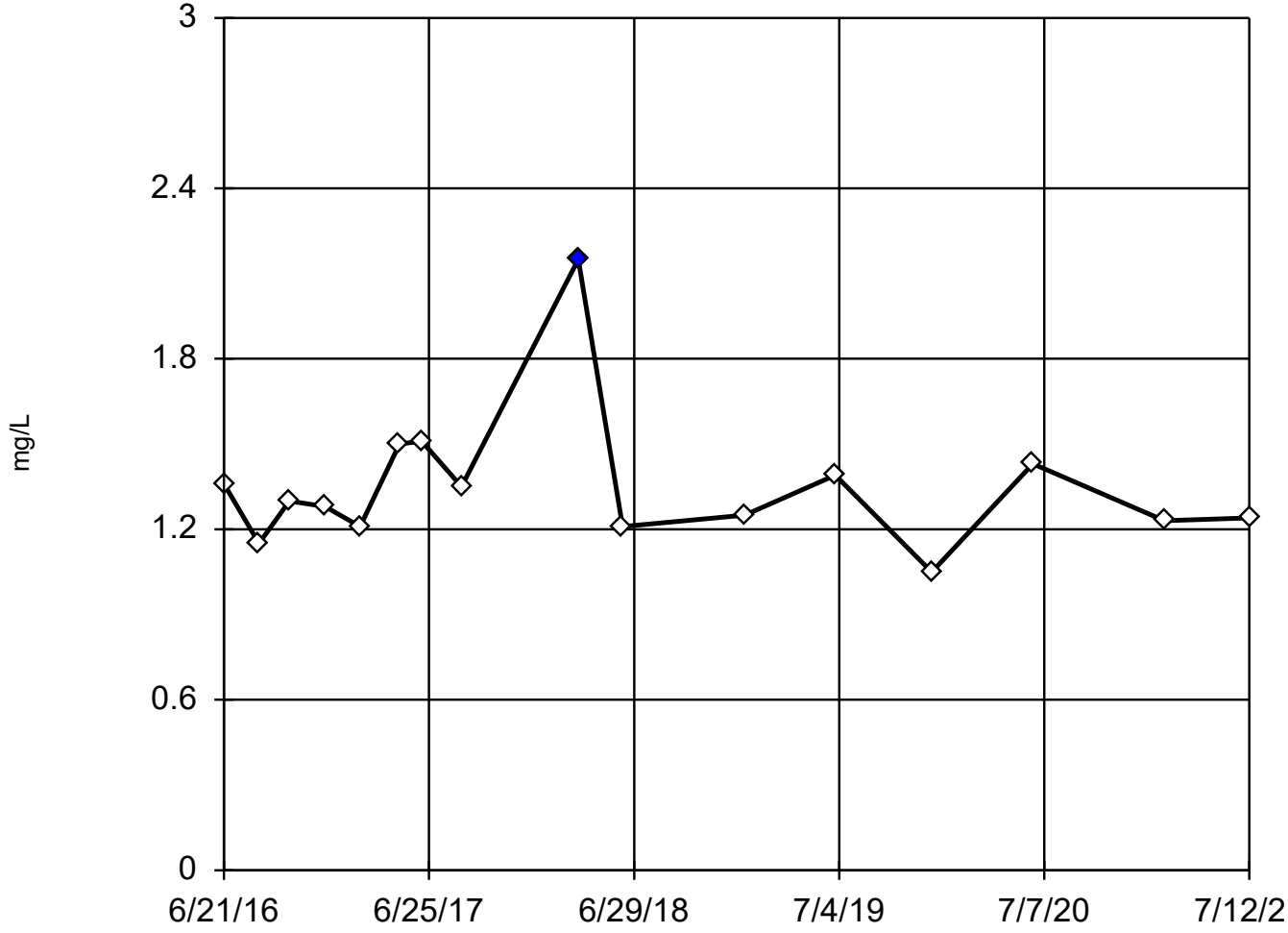
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9145
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Fluoride Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSP/APMW-1 (bg)



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.351.
Std. Dev. = 0.2462.
2.15 (o): c = 0.6915
tabl = 0.507.
Alpha = 0.05.

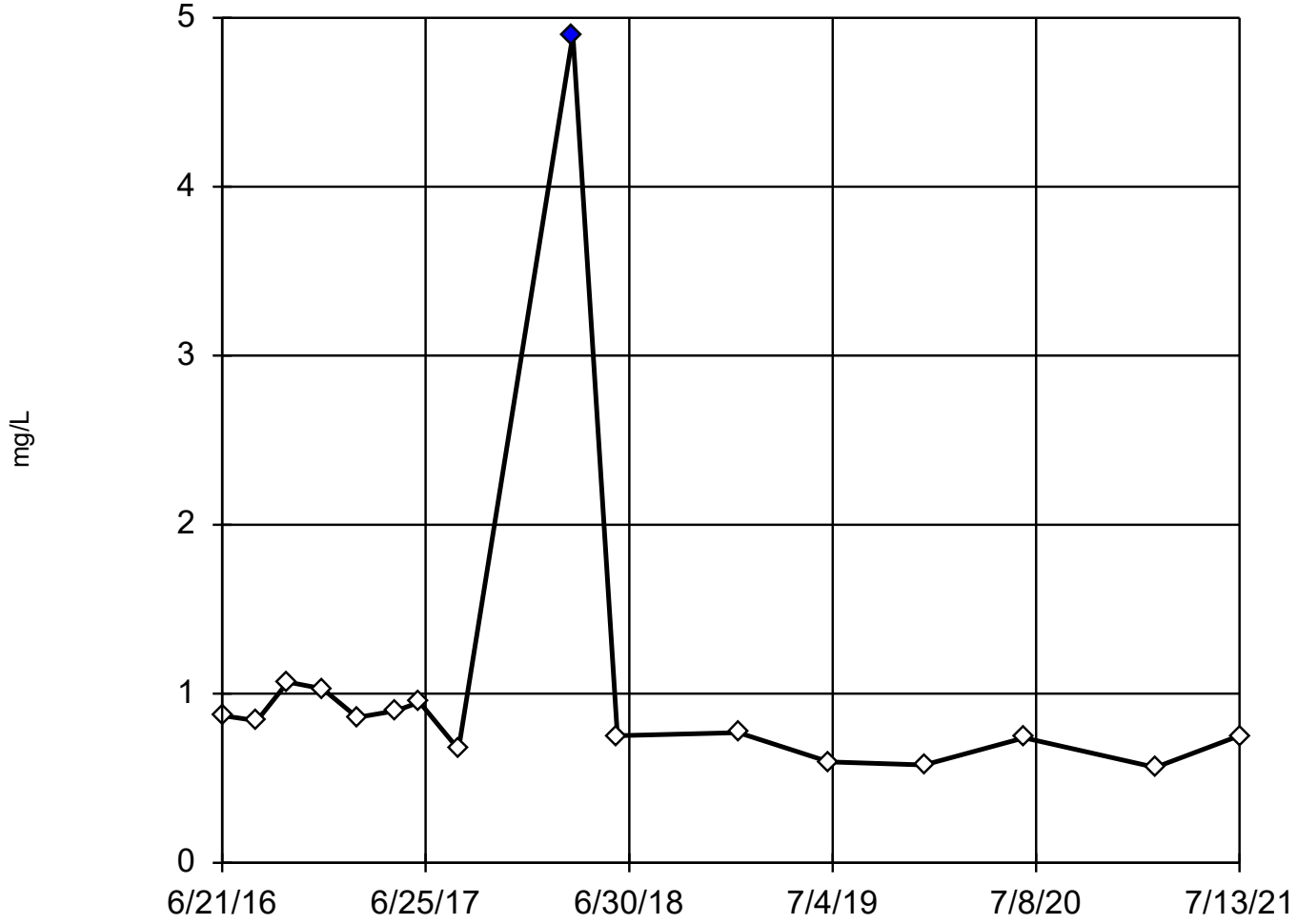
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9732
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.053.
Std. Dev. = 1.037.
4.9 (o): c = 0.8994
tabl = 0.507.
Alpha = 0.05.

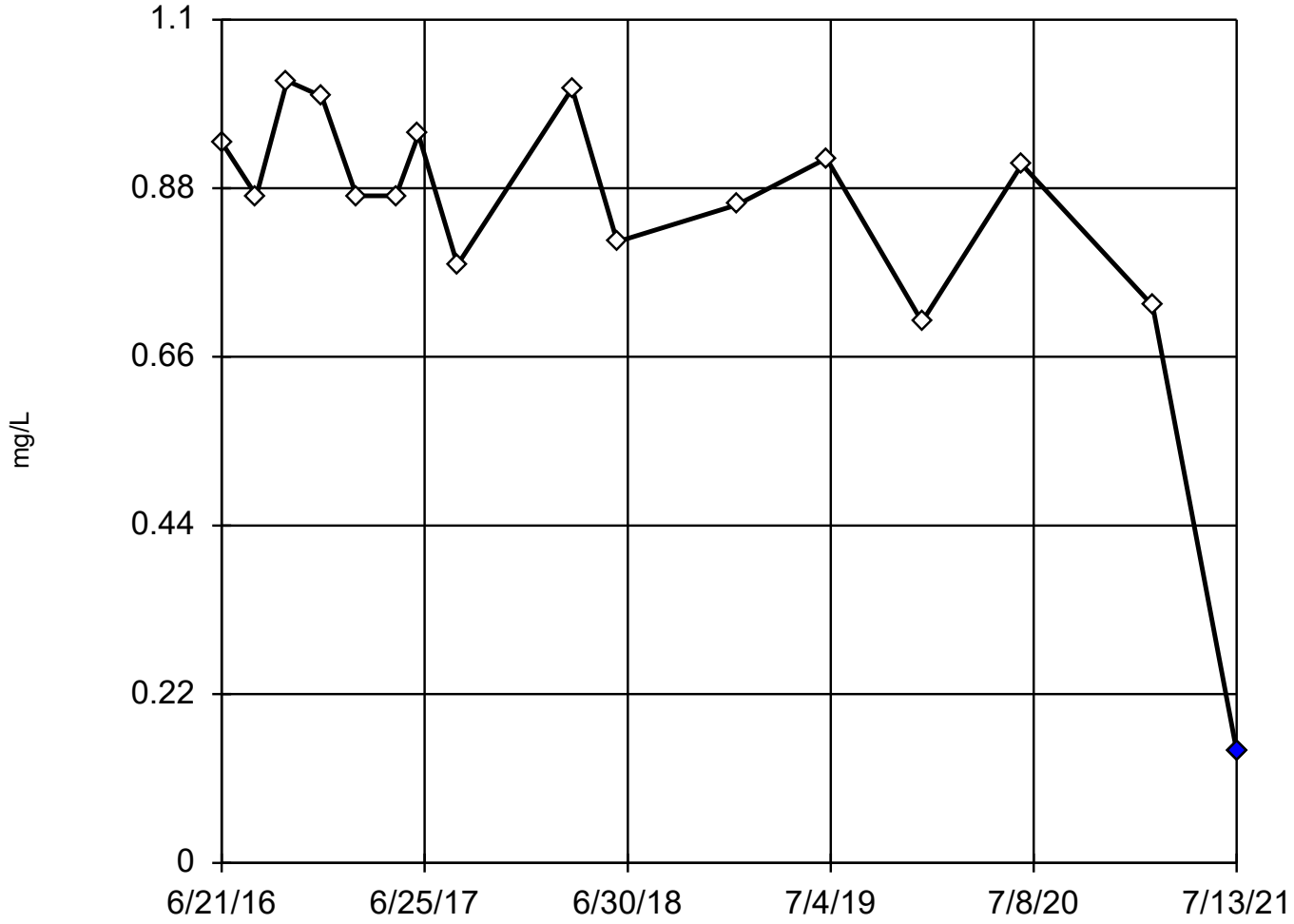
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9622
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.8367.
Std. Dev. = 0.2066.
0.146: c = 0.6803
tabl = 0.507.
Alpha = 0.05.

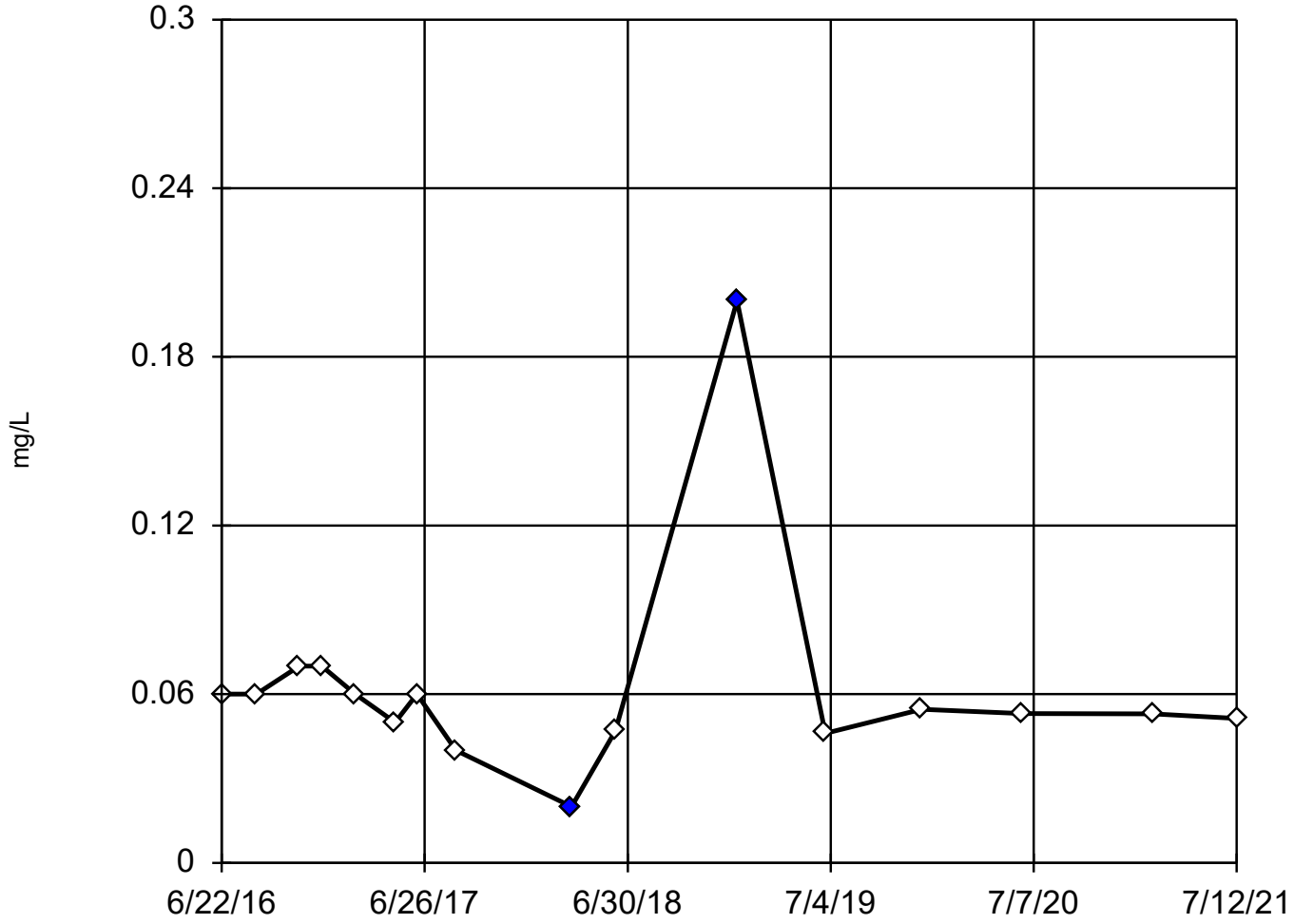
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9536
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outliers are drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 0.0622.
Std. Dev. = 0.03863.
<0.4 (o): c = 0.8447
tabl = 0.507.
<0.04: c = 0.522
tabl = 0.507.
Alpha = 0.05.

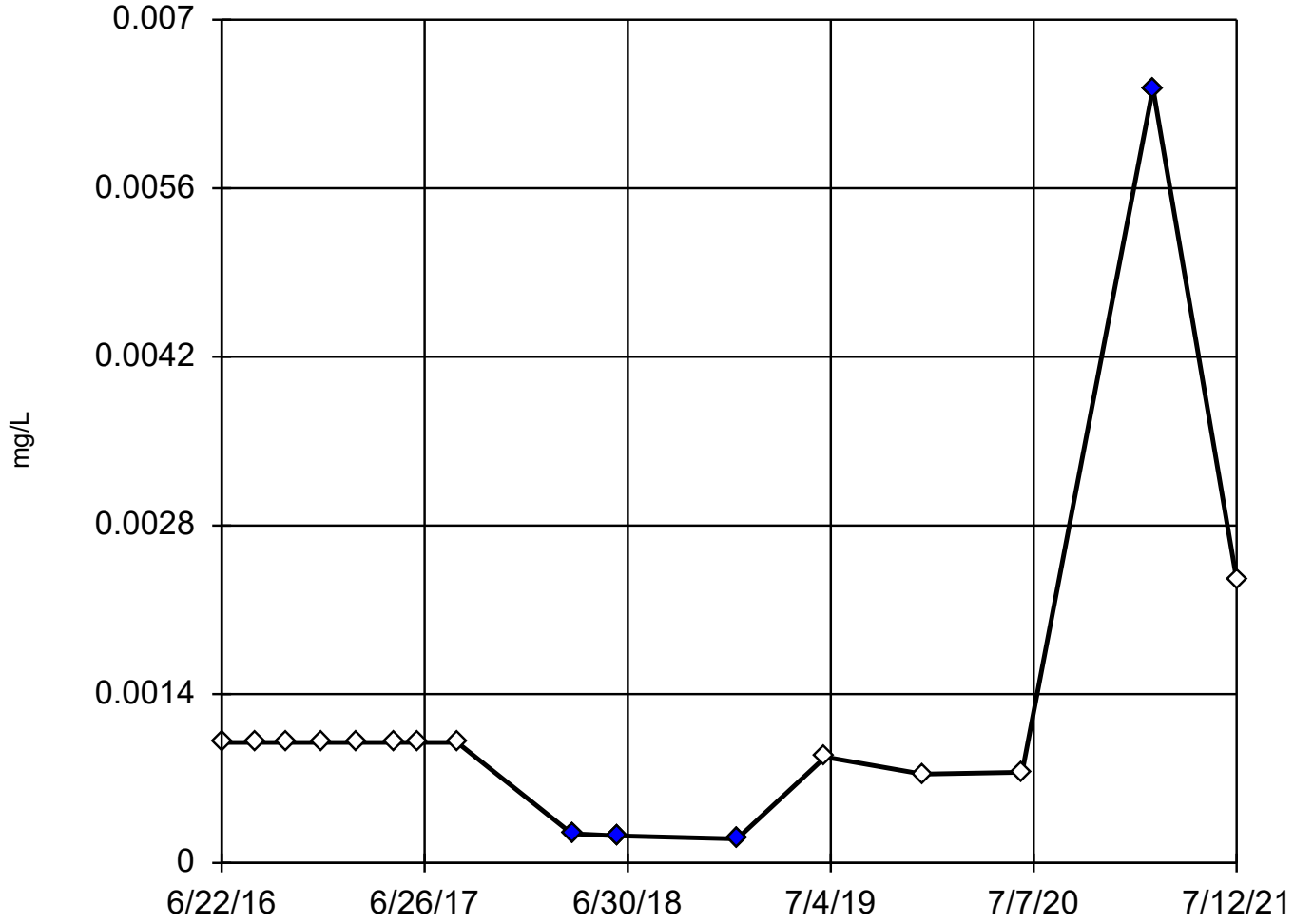
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.954
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Lithium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-5



n = 16

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

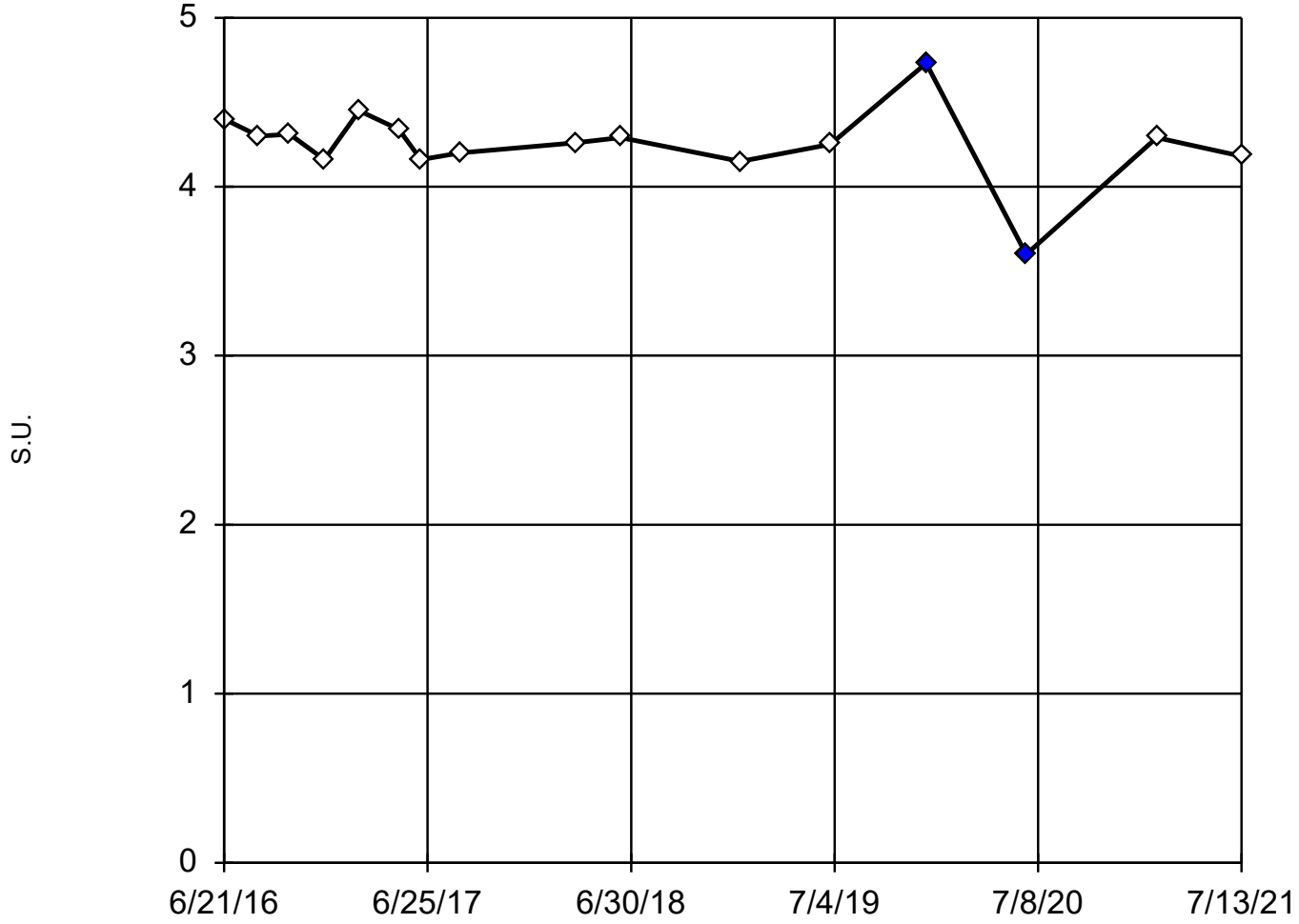
High cutoff = 0.002424, low cutoff = 0.0003071, based on IQR multiplier of 3.

Constituent: Mercury Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 16

Statistical outliers are drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 4.254.
Std. Dev. = 0.226.
4.73: c = 0.5789
tabl = 0.507.
3.6 (o): c = 0.7
tabl = 0.507.
Alpha = 0.05.

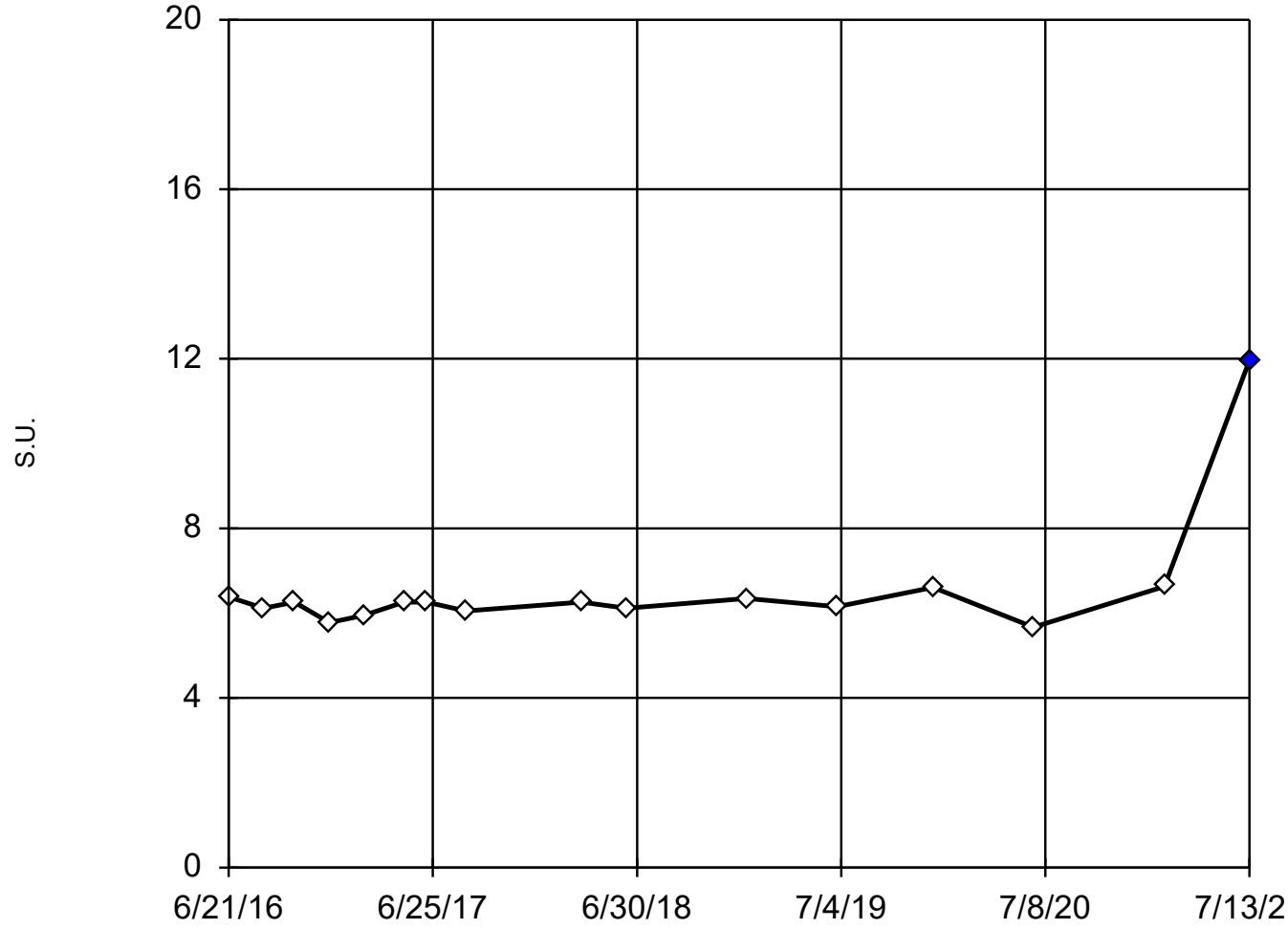
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9405
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 6.551.
Std. Dev. = 1.465.
11.96: c = 0.8902
tabl = 0.507.
Alpha = 0.05.

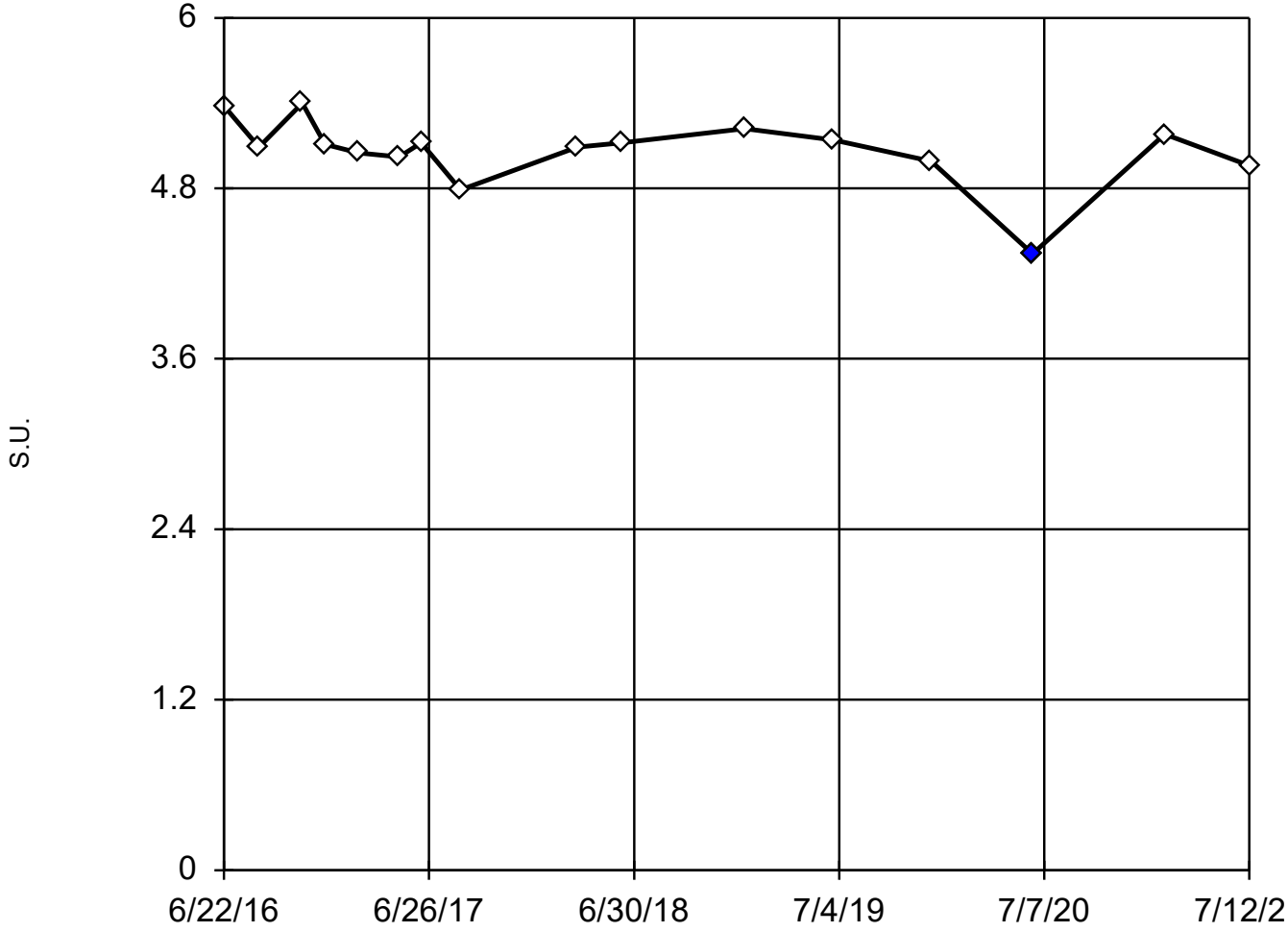
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9586
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 5.063.
Std. Dev. = 0.2427.
4.34 (o): c = 0.7045
tabl = 0.507.
Alpha = 0.05.

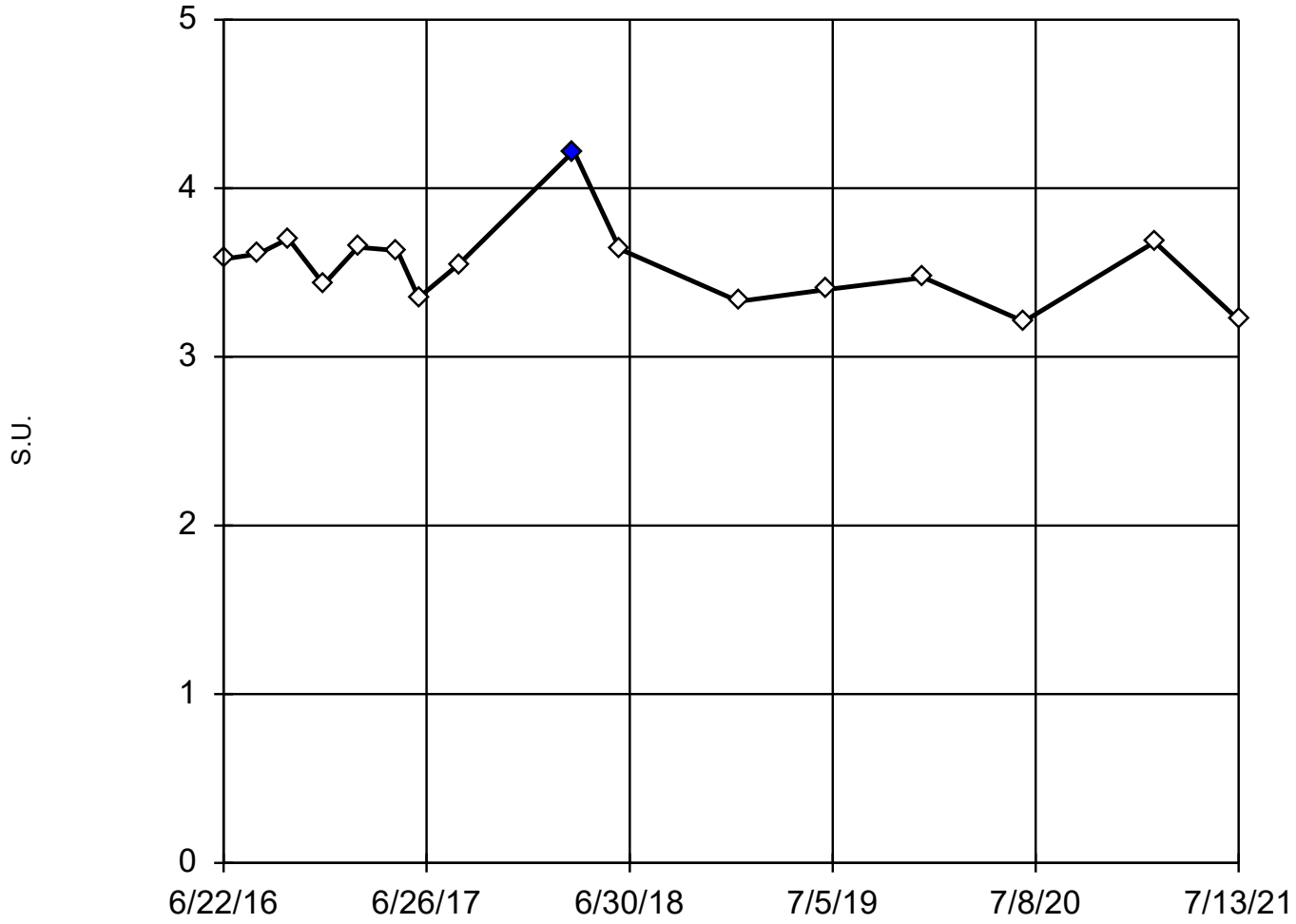
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9476
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 3.542.
Std. Dev. = 0.2412.
4.22 (o): c = 0.6067
tabl = 0.507.
Alpha = 0.05.

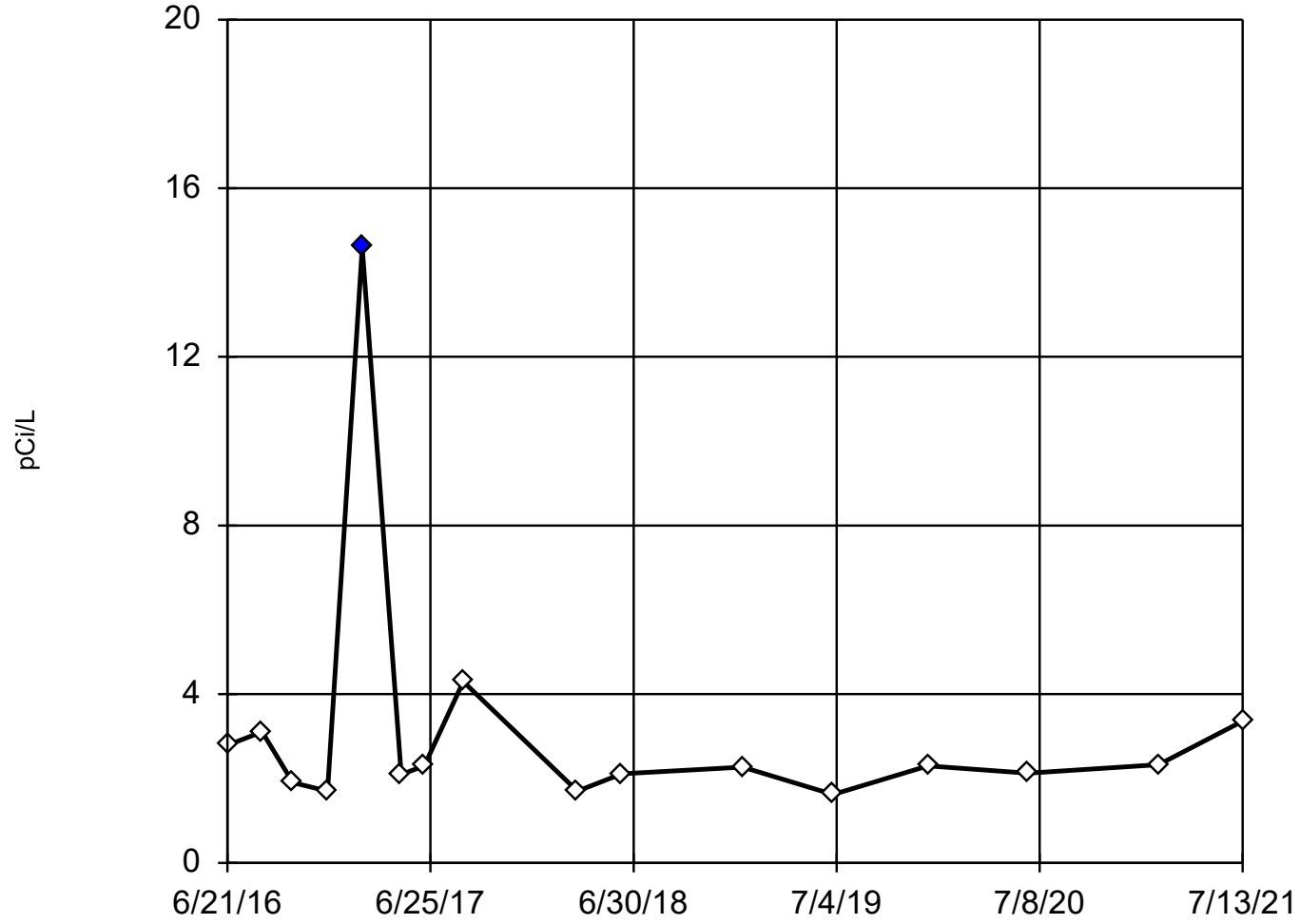
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9128
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 3.164.
Std. Dev. = 3.129.
14.6 (o): c = 0.6832
tabl = 0.507.
Alpha = 0.05.

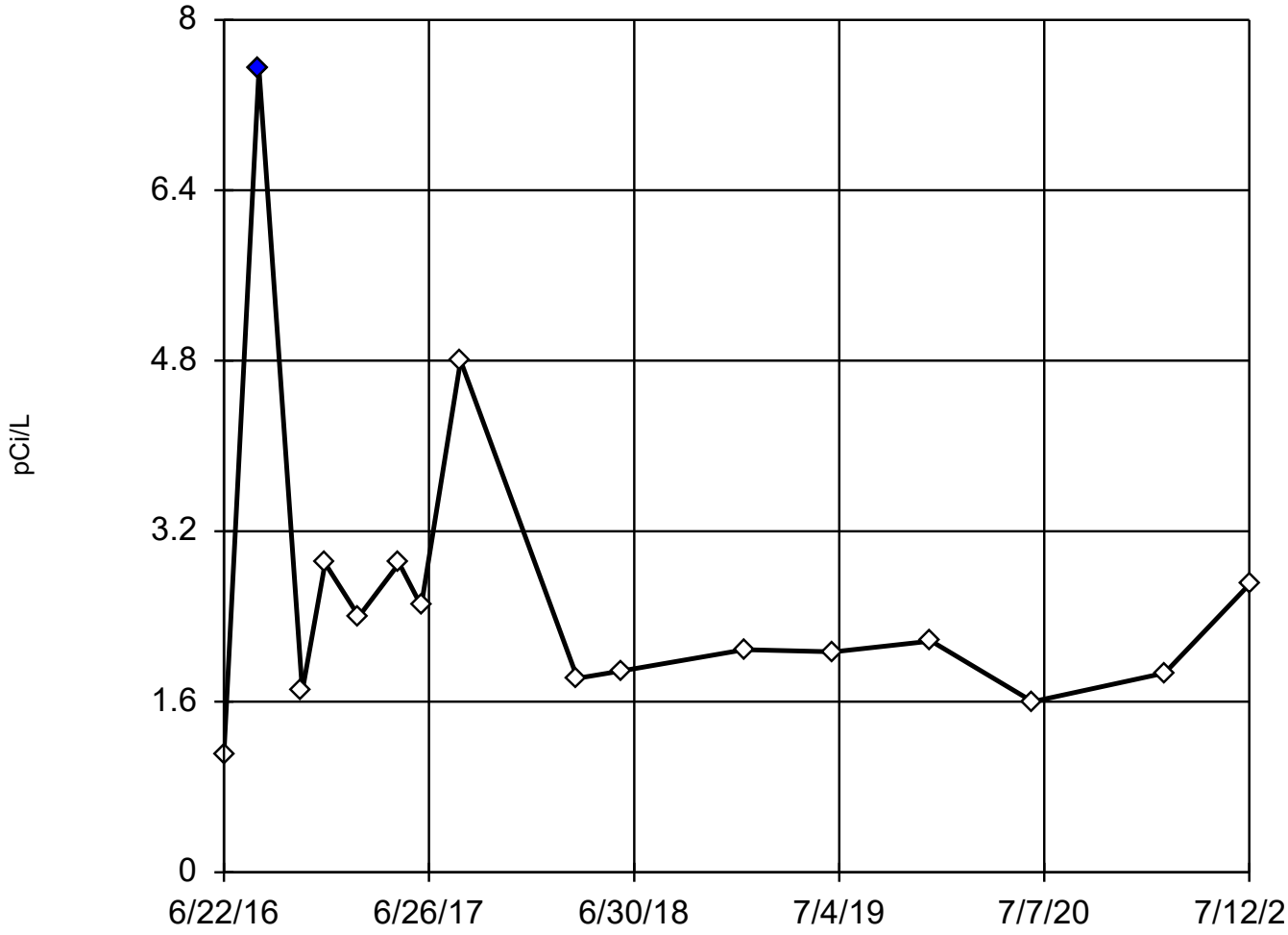
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9273
Critical = 0.881 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2.629.
Std. Dev. = 1.546.
7.54 (o): c = 0.6415
tabl = 0.507.
Alpha = 0.05.

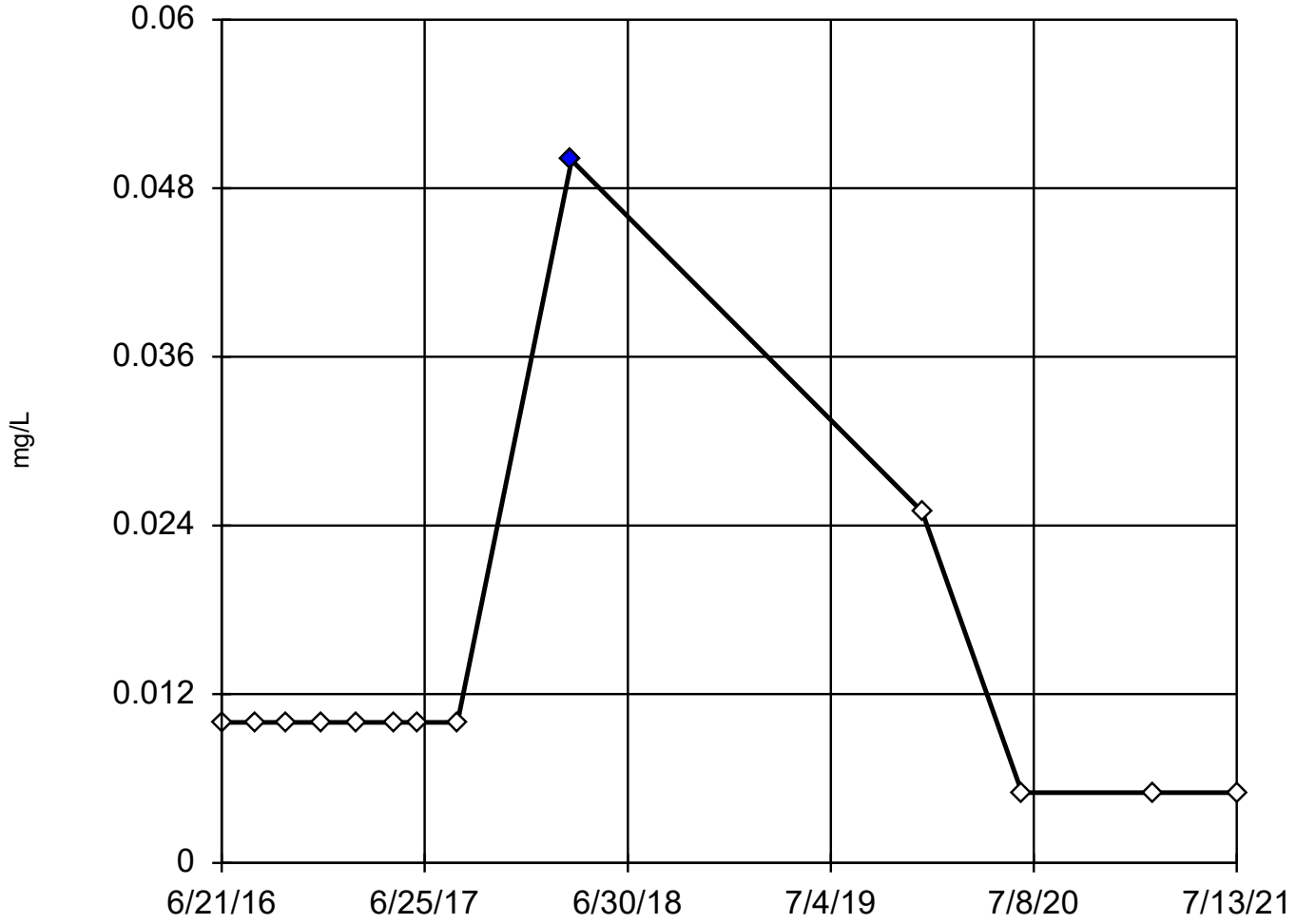
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9586
Critical = 0.881 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SSPMW-2



n = 13

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

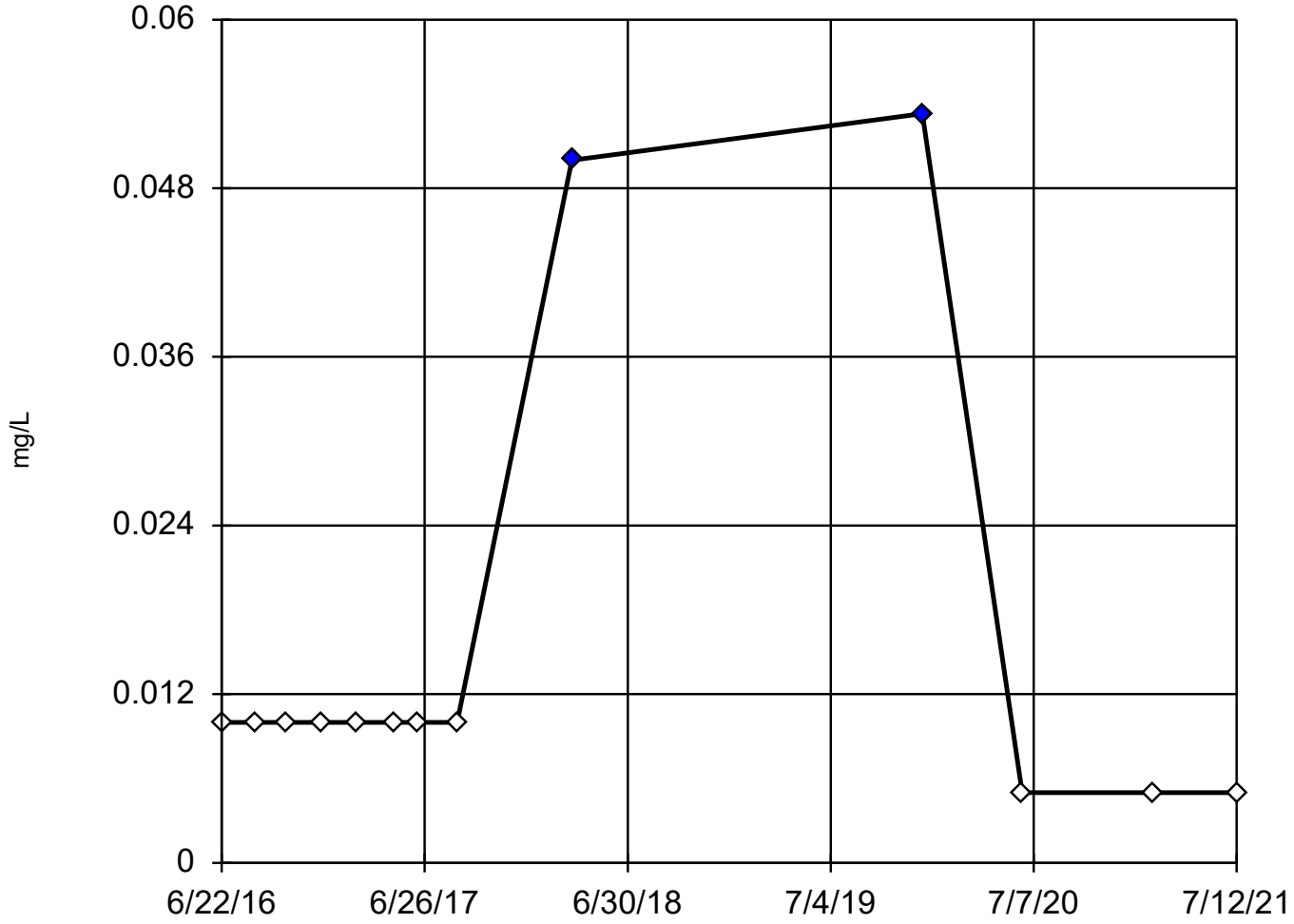
High cutoff = 0.02828, low cutoff = 0.0025, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-5



n = 13

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

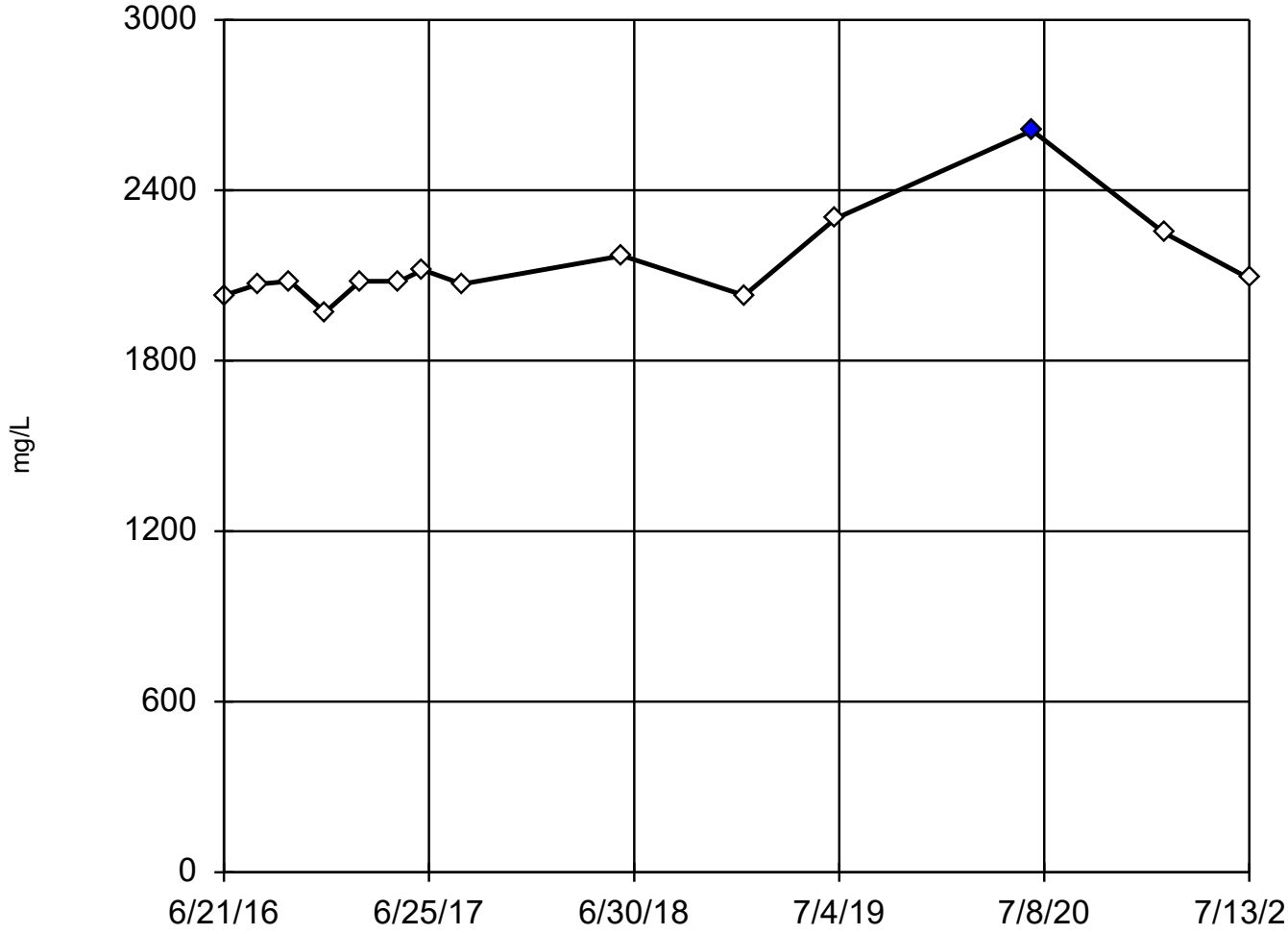
High cutoff = 0.02828, low cutoff = 0.0025, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2139.
Std. Dev. = 160.8.
2610: c = 0.6207
tabl = 0.546.
Alpha = 0.05.

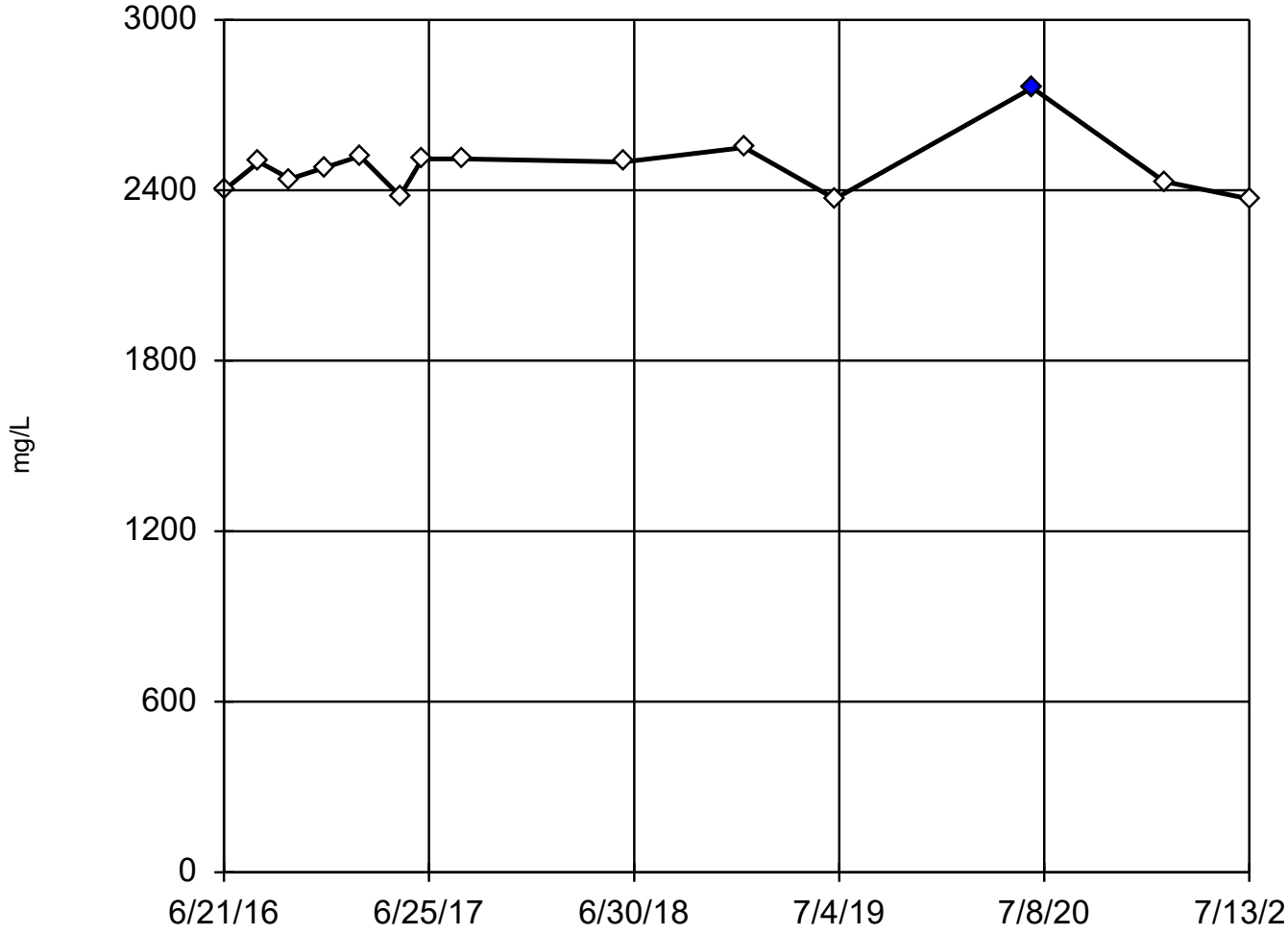
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8897
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 14

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2480.
Std. Dev. = 100.8.
2760: c = 0.6316
tabl = 0.546.
Alpha = 0.05.

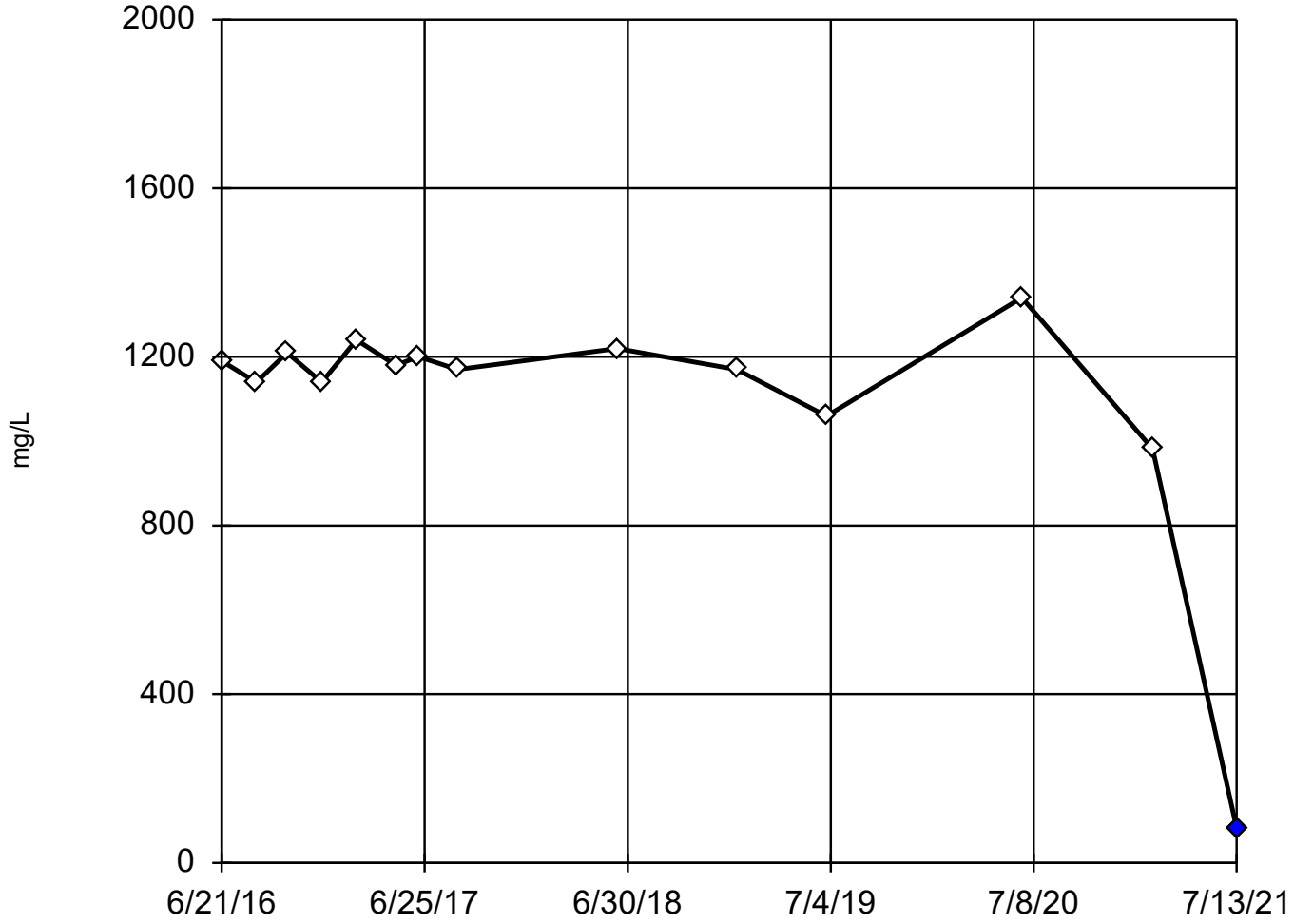
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9004
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1095.
Std. Dev. = 302.8.
82.2: c = 0.8594
tabl = 0.546.
Alpha = 0.05.

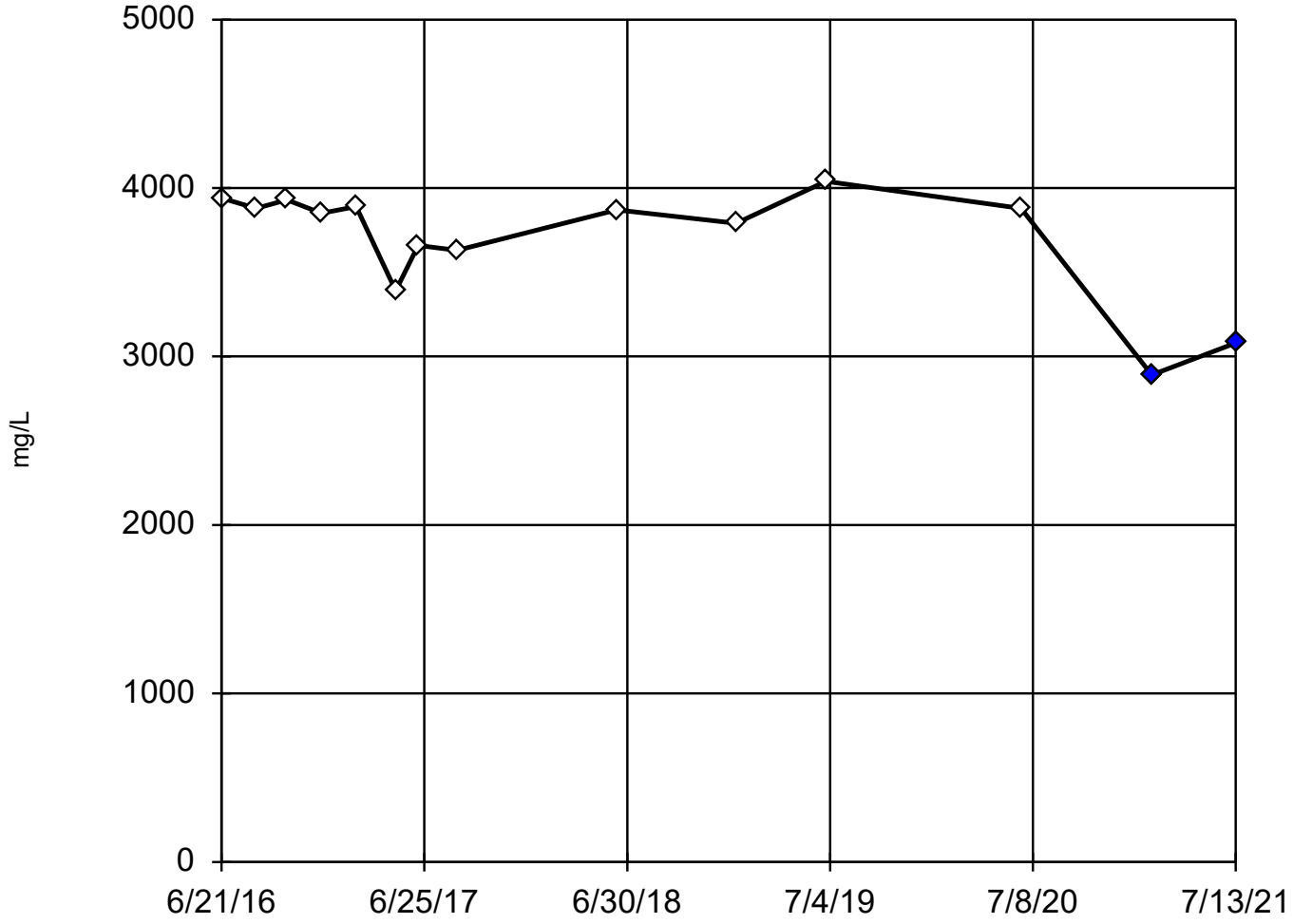
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9332
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 8/19/2021 7:38 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 14

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 3694.
Std. Dev. = 343.
3390: c = 0.5
tabl = 0.546.
Alpha = 0.05.
3080 (H): c = 0.6471
tabl = 0.546.
Alpha = 0.05.

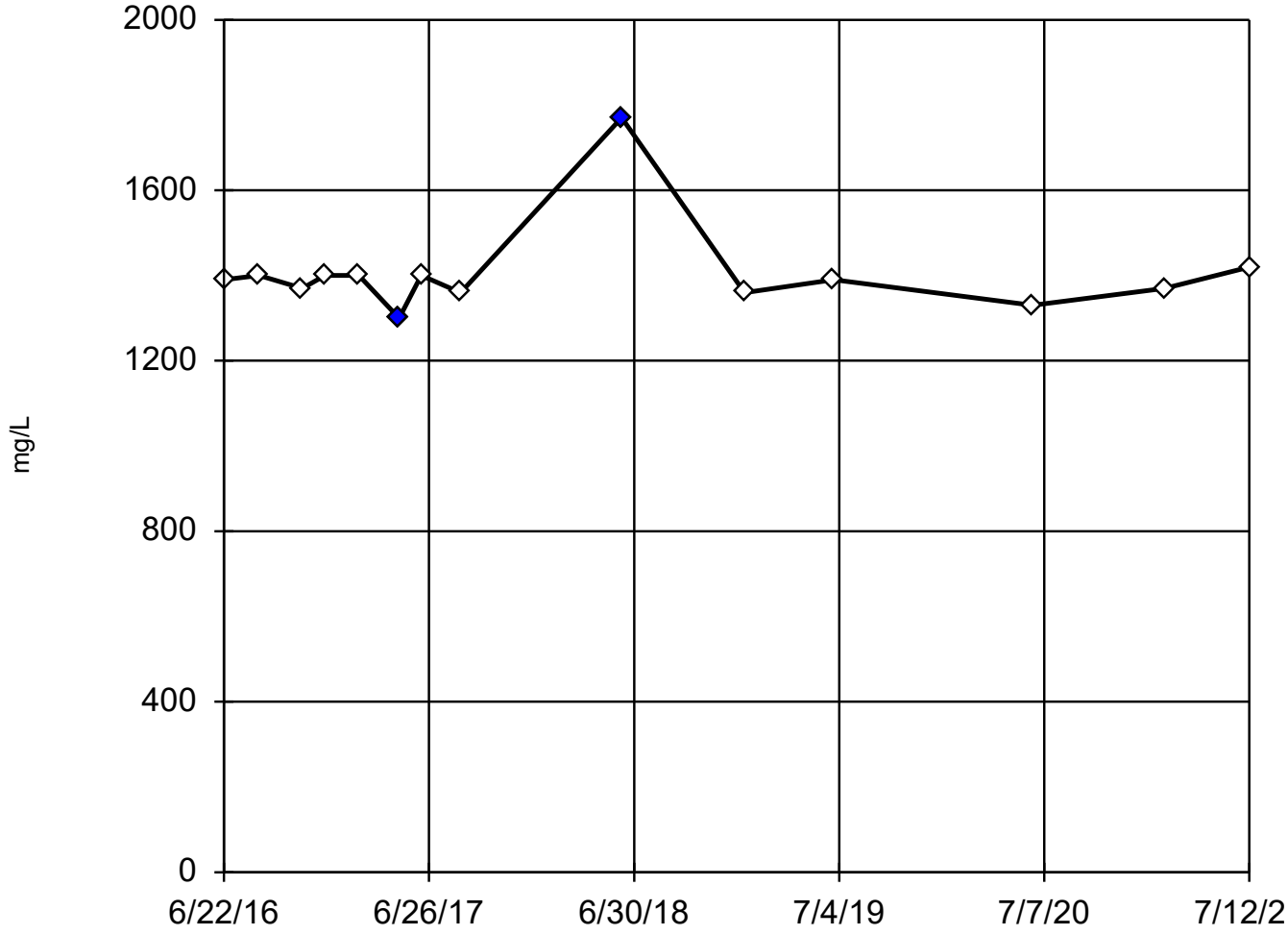
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8687
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 8/19/2021 7:39 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 14

Statistical outliers are drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 1404.
Std. Dev. = 109.9.
1770 (o): c = 0.9024
tabl = 0.546.
1300: c = 0.6
tabl = 0.546.
Alpha = 0.05.

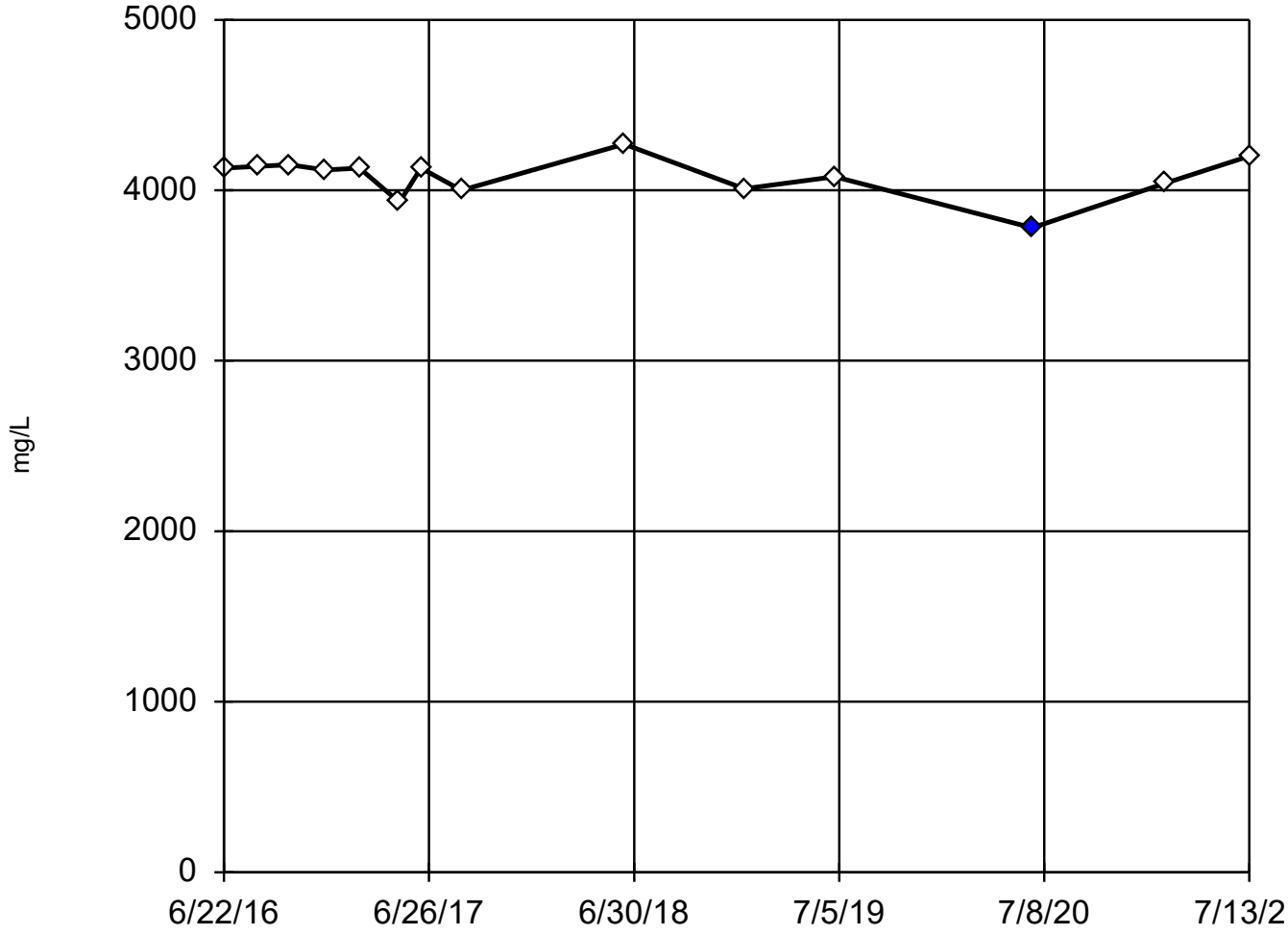
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9257
Critical = 0.859
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 8/19/2021 7:39 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 14

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 4079.
Std. Dev. = 122.
3780: c = 0.5946
tabl = 0.546.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9624
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 8/19/2021 7:39 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 7:45 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004343	0.002253	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004417	0.002152	unknown	ShapiroWilk
Antimony (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004538	0.001941	unknown	ShapiroWilk
Antimony (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	13	0.004323	0.002288	unknown	ShapiroWilk
Arsenic (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	16	0.006993	0.003249	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.009852	0.005829	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.009466	0.004682	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.006272	0.004106	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	16	0.009386	0.000773	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.006695	0.004029	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.006289	0.004079	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	0.01267	0.005212	ln(x)	ShapiroWilk
Barium (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	13	0.06011	0.0434	ln(x)	ShapiroWilk
Barium (mg/L)	SSPMW-2	No	n/a	n/a	Dixon`s	0.05	13	0.0795	0.09919	ln(x)	ShapiroWilk
Barium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.03897	0.02637	unknown	ShapiroWilk
Barium (mg/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	13	0.04289	0.02855	ln(x)	ShapiroWilk
Barium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	13	0.02136	0.02411	unknown	ShapiroWilk
Barium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.03085	0.02161	unknown	ShapiroWilk
Barium (mg/L)	**APMW-4**	**Yes**	**0.1**	**3/21/2018**	**Dixon`s**	**0.05**	**13**	**0.02285**	**0.02385**	**normal**	**ShapiroWilk**
Barium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	13	0.02836	0.02552	ln(x)	ShapiroWilk
Beryllium (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	16	0.002286	0.001091	unknown	ShapiroWilk
Beryllium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.05083	0.05207	ln(x)	ShapiroWilk
Beryllium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.1148	0.01013	normal	ShapiroWilk
Beryllium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002438	0.001094	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002438	0.001094	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.002936	0.0005123	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002353	0.00123	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	0.07691	0.01318	normal	ShapiroWilk
Boron (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	14	0.852	0.2181	ln(x)	ShapiroWilk
Boron (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	14	0.6579	0.2149	ln(x)	ShapiroWilk
Boron (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	14	2.724	0.2408	normal	ShapiroWilk
Boron (mg/L)	**SSPMW-4**	**Yes**	**0.102**	**7/13/2021**	**Dixon`s**	**0.05**	**14**	**1.187**	**0.3393**	**normal**	**ShapiroWilk**
Boron (mg/L)	**APMW-1D**	**Yes**	**5.67,6.27**	**6/13/2018...**	**Dixon`s**	**0.05**	**14**	**4.881**	**0.5289**	**normal**	**ShapiroWilk**
Boron (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	14	3.696	0.2483	normal	ShapiroWilk
Boron (mg/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	14	2.169	0.2105	normal	ShapiroWilk
Boron (mg/L)	**APMW-5**	**Yes**	**4.2**	**6/13/2018**	**Dixon`s**	**0.05**	**14**	**3.461**	**0.2438**	**normal**	**ShapiroWilk**
Cadmium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	**SSPMW-2**	**Yes**	**0.001,0.0...**	**1/15/2019...**	**NP (nrm)**	**NaN**	**16**	**0.004509**	**0.001467**	**unknown**	**ShapiroWilk**
Cadmium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.07089	0.009961	normal	ShapiroWilk
Cadmium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	16	0.003422	0.002112	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.004752	0.0003929	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0035	0.002	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	16	0.008524	0.001802	unknown	ShapiroWilk
Calcium (mg/L)	SSP/APMW-...	No	n/a	n/a	Dixon`s	0.05	14	651.1	33.03	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	14	824.9	80	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 7:45 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Calcium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	14	685.1	29.37	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	14	401.9	21.61	normal	ShapiroWilk
Calcium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	14	81.74	10.84	unknown	ShapiroWilk
Calcium (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	14	133.4	6.699	normal	ShapiroWilk
Calcium (mg/L)	**APMW-4**	**Yes**	**416**	**6/13/2018**	**Dixon`s**	**0.05**	**14**	**502.2**	**35.87**	**normal**	**ShapiroWilk**
Calcium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	14	472.3	77.32	normal	ShapiroWilk
Chloride (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	14	1536	85.82	normal	ShapiroWilk
Chloride (mg/L)	**SSPMW-2**	**Yes**	**2070,1640...**	**6/21/2016...**	**Dixon`s**	**0.05**	**14**	**2404**	**335.2**	**normal**	**ShapiroWilk**
Chloride (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	14	1788	117.2	normal	ShapiroWilk
Chloride (mg/L)	**SSPMW-4**	**Yes**	**378**	**7/13/2021**	**Dixon`s**	**0.05**	**14**	**1100**	**223.1**	**normal**	**ShapiroWilk**
Chloride (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	14	205.7	30.61	unknown	ShapiroWilk
Chloride (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	14	145.4	8.847	normal	ShapiroWilk
Chloride (mg/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	14	481	37.35	normal	ShapiroWilk
Chloride (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	14	428.7	54.38	unknown	ShapiroWilk
Chromium (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	13	0.007191	0.003774	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.009462	0.009905	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.008822	0.002659	unknown	ShapiroWilk
Chromium (mg/L)	**SSPMW-4**	**Yes**	**0.176**	**7/13/2021**	**NP (nrm)**	**NaN**	**13**	**0.02102**	**0.04666**	**unknown**	**ShapiroWilk**
Chromium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007154	0.003826	unknown	ShapiroWilk
Chromium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007133	0.003857	unknown	ShapiroWilk
Chromium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007154	0.003826	unknown	ShapiroWilk
Chromium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.007175	0.003796	unknown	ShapiroWilk
Cobalt (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	16	0.01102	0.009361	unknown	ShapiroWilk
Cobalt (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.07568	0.03526	unknown	ShapiroWilk
Cobalt (mg/L)	**SSPMW-3**	**Yes**	**0.35**	**12/18/2019**	**Dixon`s**	**0.05**	**16**	**0.5649**	**0.06731**	**normal**	**ShapiroWilk**
Cobalt (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.01218	0.01179	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	16	0.01729	0.003187	unknown	ShapiroWilk
Cobalt (mg/L)	**APMW-3**	**Yes**	**0.024**	**6/25/2019**	**Dixon`s**	**0.05**	**16**	**0.04154**	**0.007807**	**ln(x)**	**ShapiroWilk**
Cobalt (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.01094	0.009452	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	0.1646	0.02685	normal	ShapiroWilk
Fluoride (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	16	0.3889	0.3385	unknown	ShapiroWilk
Fluoride (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.5678	0.6174	ln(x)	ShapiroWilk
Fluoride (mg/L)	**SSPMW-3**	**Yes**	**1.82,2.72**	**6/11/2018...**	**Dixon`s**	**0.05**	**16**	**0.9249**	**0.5762**	**normal**	**ShapiroWilk**
Fluoride (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.5229	0.7105	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	0.7038	0.1522	ln(x)	ShapiroWilk
Fluoride (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.2367	0.3036	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	16	0.2812	0.3119	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	1.738	0.6646	ln(x)	ShapiroWilk
Lead (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	16	0.006814	0.003985	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.007496	0.004733	ln(x)	ShapiroWilk
Lead (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.008811	0.00617	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005965	0.004381	unknown	ShapiroWilk
Lead (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	13	0.006789	0.004368	unknown	ShapiroWilk
Lead (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.00678	0.004381	unknown	ShapiroWilk
Lead (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.00679	0.004365	unknown	ShapiroWilk
Lead (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.007684	0.00326	unknown	ShapiroWilk
Lithium (mg/L)	**SSP/APMW-...**	**Yes**	**2.15**	**3/21/2018**	**Dixon`s**	**0.05**	**16**	**1.351**	**0.2462**	**normal**	**ShapiroWilk**
Lithium (mg/L)	**SSPMW-2**	**Yes**	**4.9**	**3/20/2018**	**Dixon`s**	**0.05**	**16**	**1.053**	**1.037**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	0.6234	0.07382	normal	ShapiroWilk
Lithium (mg/L)	**SSPMW-4**	**Yes**	**0.146**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**0.8367**	**0.2066**	**normal**	**ShapiroWilk**

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 7:45 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lithium (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	0.03571	0.01836	normal	ShapiroWilk
Lithium (mg/L)	**APMW-3**	**Yes**	**0.2,0.02**	**1/15/2019...**	**Dixon`s**	**0.05**	**16**	**0.0622**	**0.03863**	**normal**	**ShapiroWilk**
Lithium (mg/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	16	0.8731	0.1144	normal	ShapiroWilk
Lithium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	0.4783	0.09065	normal	ShapiroWilk
Mercury (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	13	0.000...	0.0004051	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.000...	0.0004051	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.000...	0.0004091	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.000...	0.0004051	unknown	ShapiroWilk
Mercury (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.000...	0.0004279	unknown	ShapiroWilk
Mercury (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0006	0.0004131	unknown	ShapiroWilk
Mercury (mg/L)	**APMW-5**	**Yes**	**0.000241,...**	**3/21/2018...**	**NP (nrm)**	**NaN**	**16**	**0.001238**	**0.001469**	**unknown**	**ShapiroWilk**
Molybdenum (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03253	0.02308	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03308	0.02232	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.03274	0.0228	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	13	0.03739	0.02225	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	16	0.035	0.01603	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.02768	0.02316	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.02794	0.02286	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	16	0.02794	0.02286	unknown	ShapiroWilk
pH (S.U.)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	16	5.804	0.1804	normal	ShapiroWilk
pH (S.U.)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	4.688	0.5278	normal	ShapiroWilk
pH (S.U.)	**SSPMW-3**	**Yes**	**4.73,3.6**	**12/18/201...**	**Dixon`s**	**0.05**	**16**	**4.254**	**0.226**	**normal**	**ShapiroWilk**
pH (S.U.)	**SSPMW-4**	**Yes**	**11.96**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**6.551**	**1.465**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	5.818	0.2156	normal	ShapiroWilk
pH (S.U.)	**APMW-3**	**Yes**	**4.34**	**6/17/2020**	**Dixon`s**	**0.05**	**16**	**5.063**	**0.2427**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-4	No	n/a	n/a	EPA 1989	0.05	16	5.598	0.1427	normal	ShapiroWilk
pH (S.U.)	**APMW-5**	**Yes**	**4.22**	**3/21/2018**	**Dixon`s**	**0.05**	**16**	**3.542**	**0.2412**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	16	1.69	0.8459	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SSPMW-2**	**Yes**	**14.6**	**2/21/2017**	**Dixon`s**	**0.05**	**16**	**3.164**	**3.129**	**ln(x)**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	32.32	6.623	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	16	3.178	1.369	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	1.938	0.8569	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**APMW-3**	**Yes**	**7.54**	**8/24/2016**	**Dixon`s**	**0.05**	**16**	**2.629**	**1.546**	**ln(x)**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	16	1.772	0.8605	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	2.645	1.586	ln(x)	ShapiroWilk
Selenium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	**SSPMW-2**	**Yes**	**0.05**	**3/20/2018**	**NP (nrm)**	**NaN**	**13**	**0.01308**	**0.01217**	**unknown**	**ShapiroWilk**
Selenium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	13	0.01167	0.01172	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008416	0.002477	unknown	ShapiroWilk
Selenium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	13	0.007937	0.003368	unknown	ShapiroWilk
Selenium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.008462	0.002402	unknown	ShapiroWilk
Selenium (mg/L)	**APMW-5**	**Yes**	**0.05,0.0533**	**3/21/2018...**	**NP (nrm)**	**NaN**	**13**	**0.01525**	**0.01631**	**unknown**	**ShapiroWilk**
Sulfate (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	14	3002	117.2	normal	ShapiroWilk
Sulfate (mg/L)	**SSPMW-2**	**Yes**	**2610**	**6/17/2020**	**Dixon`s**	**0.05**	**14**	**2139**	**160.8**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**SSPMW-3**	**Yes**	**2760**	**6/17/2020**	**Dixon`s**	**0.05**	**14**	**2480**	**100.8**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**SSPMW-4**	**Yes**	**82.2**	**7/13/2021**	**Dixon`s**	**0.05**	**14**	**1095**	**302.8**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	14	538.4	59.4	normal	ShapiroWilk
Sulfate (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	14	712.9	46.87	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 7:45 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Sulfate (mg/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	14	2263	119	normal	ShapiroWilk
Sulfate (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	14	2621	398.2	unknown	ShapiroWilk
TDS (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	14	6689	542.1	normal	ShapiroWilk
TDS (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	14	6630	468.3	normal	ShapiroWilk
TDS (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	14	6021	1141	unknown	ShapiroWilk
TDS (mg/L)	**SSPMW-4**	**Yes**	**3080,2890**	**7/13/2021...**	**Dixon`s**	**0.05**	**14**	**3694**	**343**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	14	1339	92.64	normal	ShapiroWilk
TDS (mg/L)	**APMW-3**	**Yes**	**1770,1300**	**6/8/2018,...**	**Dixon`s**	**0.05**	**14**	**1404**	**109.9**	**normal**	**ShapiroWilk**
TDS (mg/L)	**APMW-4**	**Yes**	**3780**	**6/17/2020**	**Dixon`s**	**0.05**	**14**	**4079**	**122**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	14	4468	520.8	unknown	ShapiroWilk
Thallium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0016	0.0006456	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	16	0.001684	0.0005075	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.009559	0.0009485	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001688	0.0004787	unknown	ShapiroWilk
Thallium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	13	0.001611	0.0006293	unknown	ShapiroWilk
Thallium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	13	0.00158	0.0006891	unknown	ShapiroWilk
Thallium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	13	0.001629	0.0006157	unknown	ShapiroWilk
Thallium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	13	0.002083	0.0001251	unknown	ShapiroWilk

Data

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:14 AM

	APMW-4 Barium (mg/L)	SSP/APMW-1 Beryllium (mg/L)	APMW-1D Boron (mg/L)	APMW-5 Boron (mg/L)	SSPMW-2 Cadmium (mg/L)	APMW-4 Calcium (mg/L)	SSPMW-2 Chloride (mg/L)	SSPMW-3 Cobalt (mg/L)	APMW-1D Cobalt (mg/L)	APMW-3 Cobalt (mg/L)
6/21/2016							2070 (o)			
6/22/2016									<0.02 (o)	
8/23/2016										
8/24/2016									<0.02 (o)	
10/18/2016									<0.02 (o)	
12/20/2016		0.002 (o)								
12/21/2016									<0.02 (o)	
2/21/2017									<0.02 (o)	
5/4/2017									<0.02 (o)	
6/13/2017									<0.02 (o)	
8/24/2017									<0.02 (o)	
3/20/2018										
3/21/2018	<0.2 (o)									
6/8/2018										
6/11/2018										
6/13/2018			5.67 (o)	4.2 (o)		416 (o)				
1/15/2019					<0.001 (o)					
6/25/2019										0.024 (o)
6/28/2019					0.00689 (o)		1640 (o)			
12/18/2019								0.35 (o)		
6/17/2020										
2/10/2021			6.27 (o)				1810 (o)			

Data

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:14 AM

	SSPMW-3 Fluoride (mg/L)	SSP/APMW-1 Lithium (mg/L)	SSPMW-2 Lithium (mg/L)	APMW-3 Lithium (mg/L)	APMW-5 Mercury (mg/L)	APMW-1D Molybdenum (mg/L)	SSPMW-3 pH (S.U.)	APMW-3 pH (S.U.)	APMW-5 pH (S.U.)	SSPMW-2 Radium 226 + 228 (pCi/L)
6/21/2016										
6/22/2016						<0.05 (o)				
8/23/2016										
8/24/2016						<0.05 (o)				
10/18/2016						<0.05 (o)				
12/20/2016										
12/21/2016						<0.05 (o)				
2/21/2017						<0.05 (o)				14.6 (o)
5/4/2017						<0.05 (o)				
6/13/2017						<0.05 (o)				
8/24/2017						<0.05 (o)				
3/20/2018			4.9 (o)							
3/21/2018		2.15 (o)							4.22 (o)	
6/8/2018										
6/11/2018	1.82 (o)									
6/13/2018										
1/15/2019	2.72 (o)			<0.4 (o)						
6/25/2019										
6/28/2019										
12/18/2019							4.73 (o)			
6/17/2020							3.6 (o)	4.34 (o)		
2/10/2021					0.00643 (o)					

Data

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:14 AM

	SSPMW-3 Radium 226 + 228 (pCi/L)	APMW-3 Radium 226 + 228 (pCi/L)	SSPMW-2 Selenium (mg/L)	SSPMW-3 Selenium (mg/L)	APMW-5 Selenium (mg/L)	APMW-3 TDS (mg/L)
6/21/2016						
6/22/2016						
8/23/2016	49.8 (o)					
8/24/2016		7.54 (o)				
10/18/2016						
12/20/2016						
12/21/2016						
2/21/2017						
5/4/2017						
6/13/2017						
8/24/2017						
3/20/2018			<0.005 (o)			
3/21/2018				<0.005 (o)	<0.005 (o)	
6/8/2018						1770 (o)
6/11/2018						
6/13/2018						
1/15/2019						
6/25/2019						
6/28/2019						
12/18/2019					0.0533 (o)	
6/17/2020						
2/10/2021						

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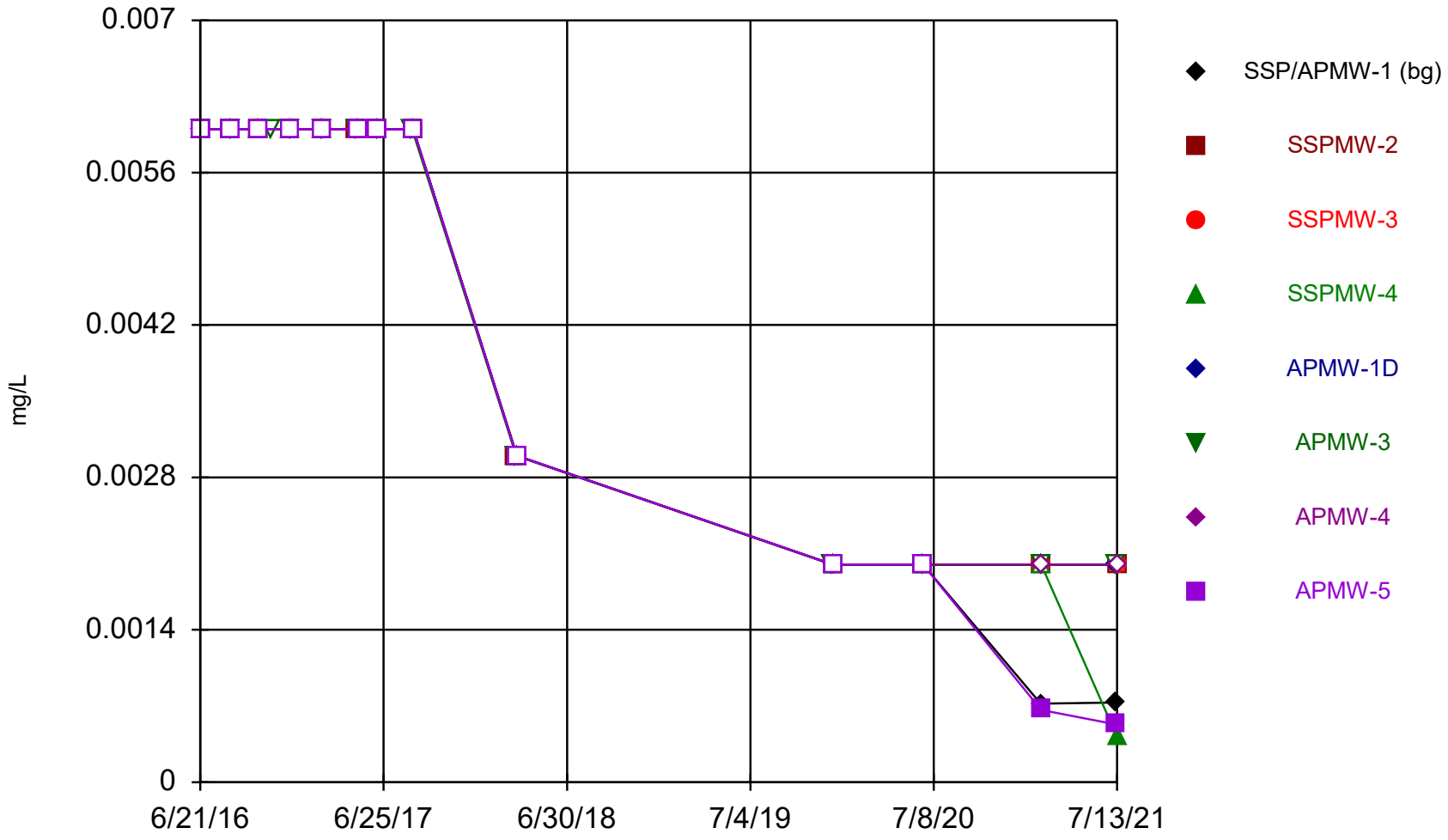
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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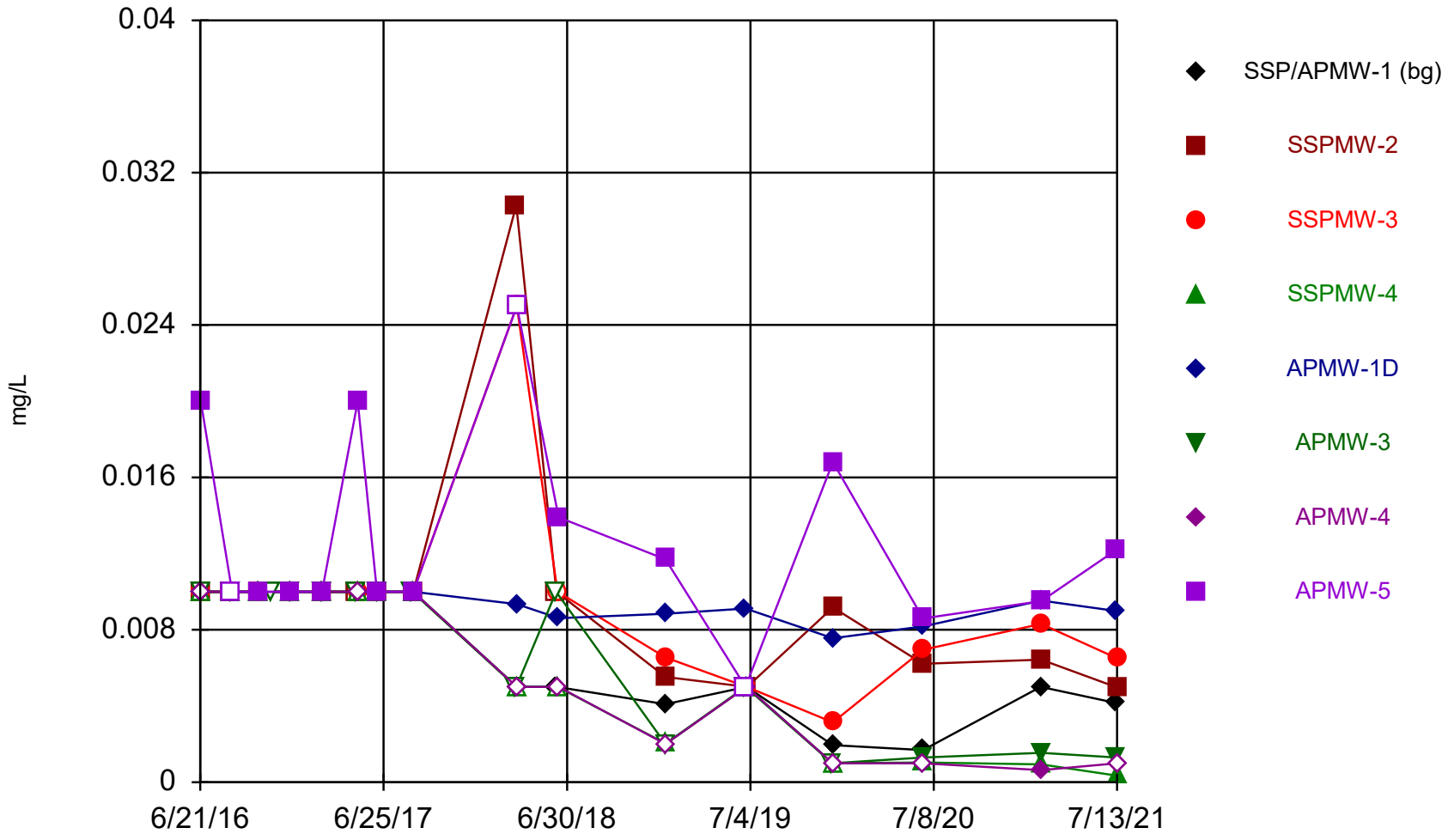
Time Series

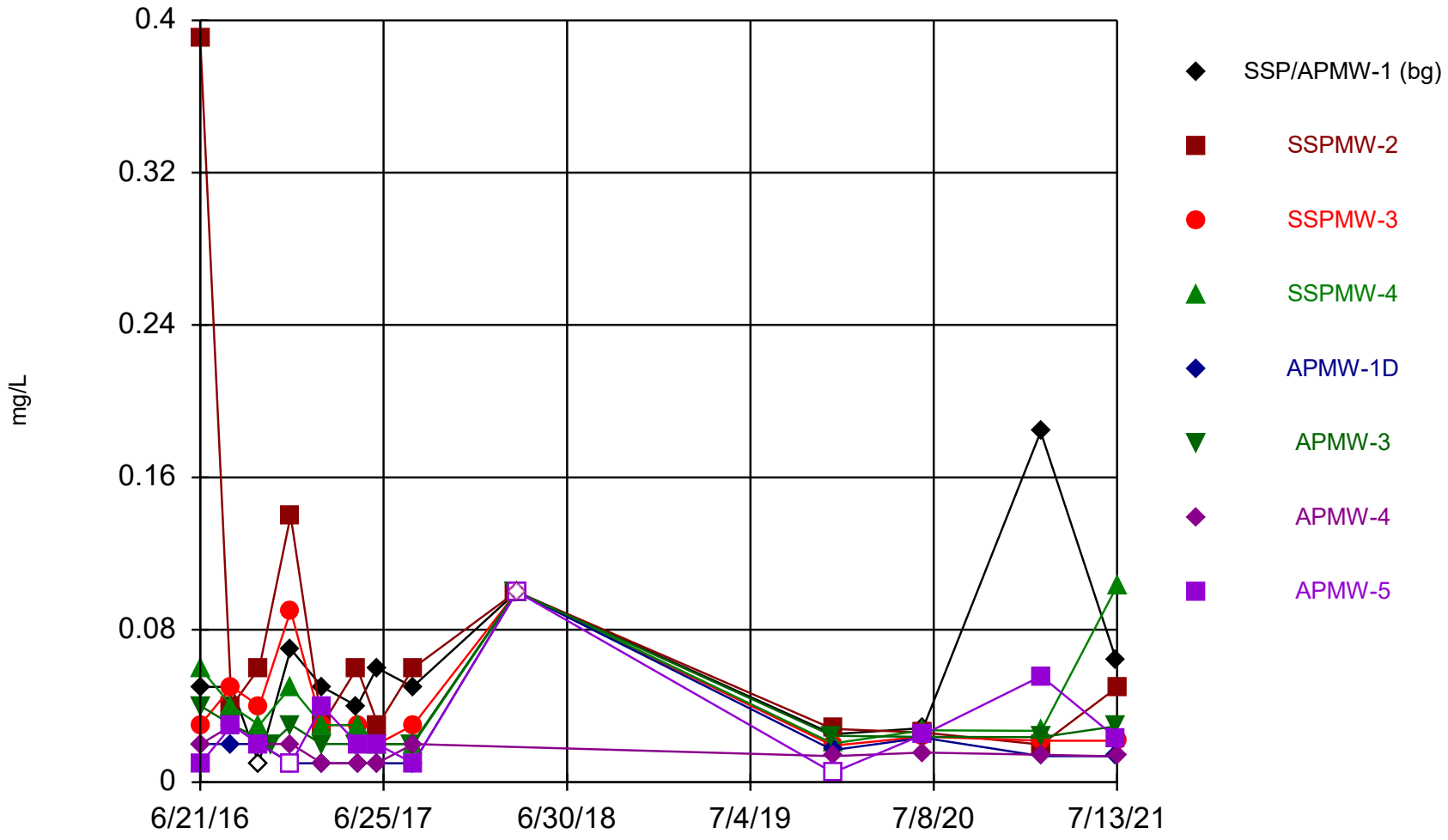


Constituent: Arsenic Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series



Constituent: Barium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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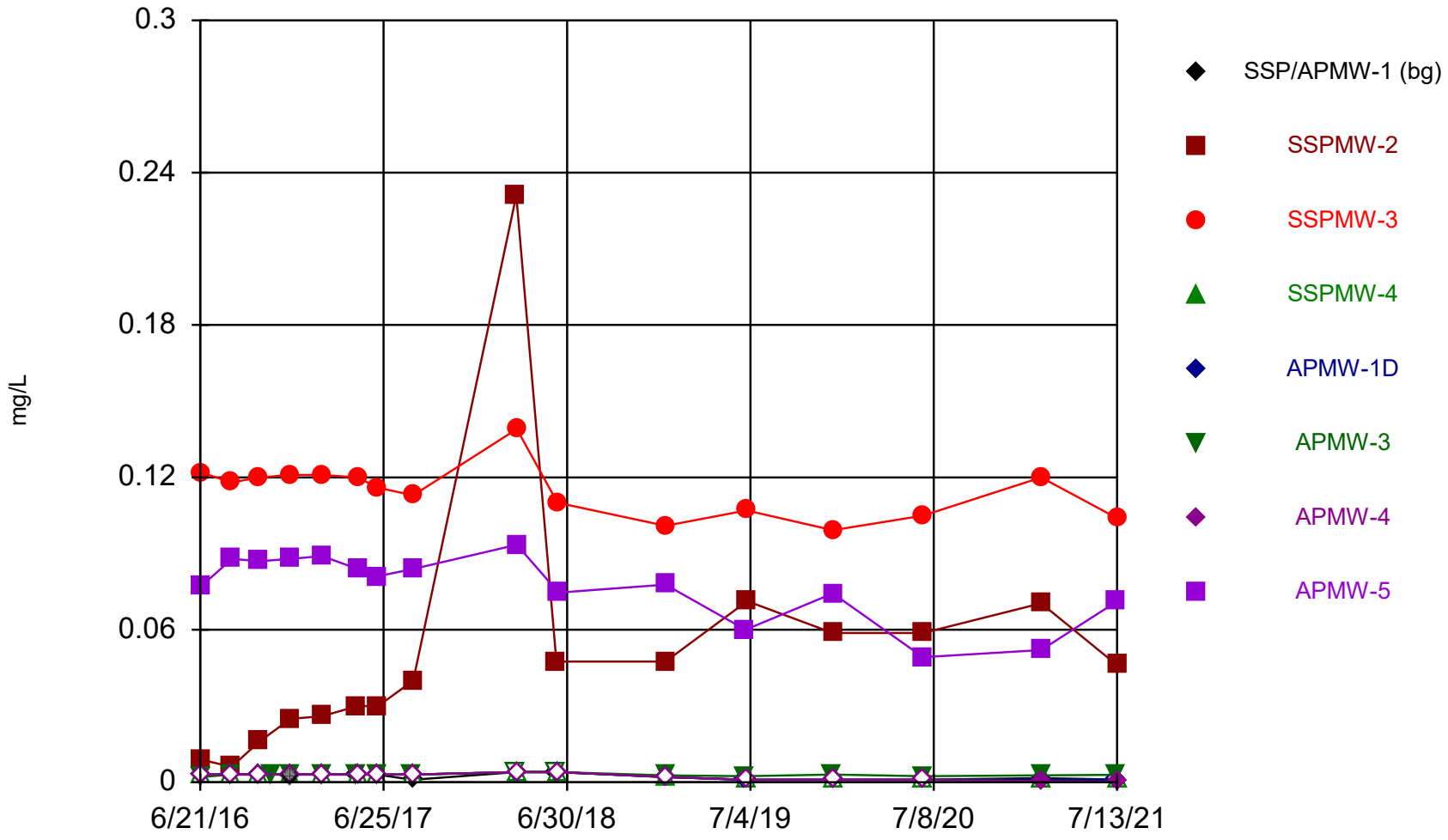
Hollow symbols indicate censored values.

Time Series

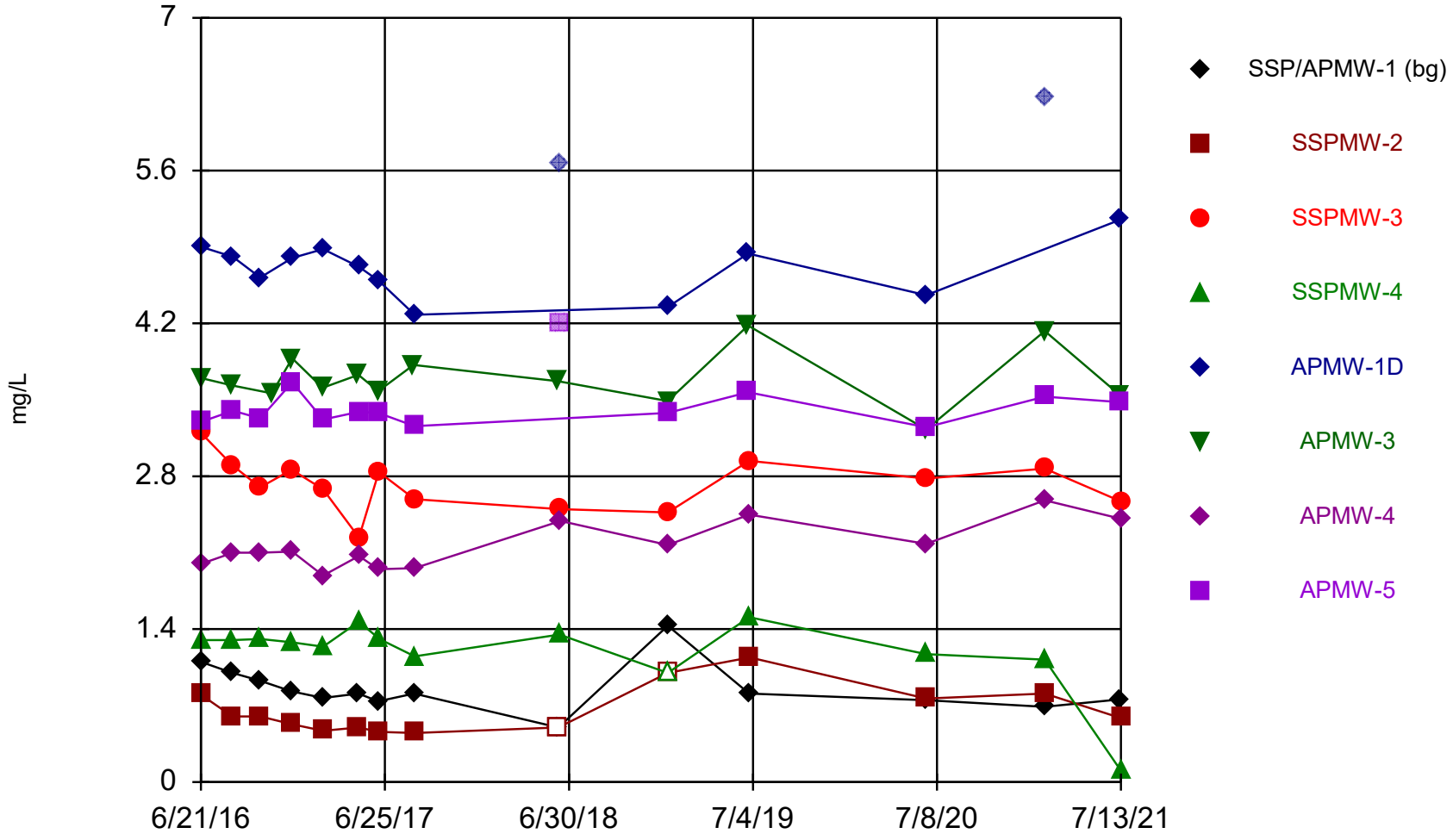


Constituent: Beryllium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

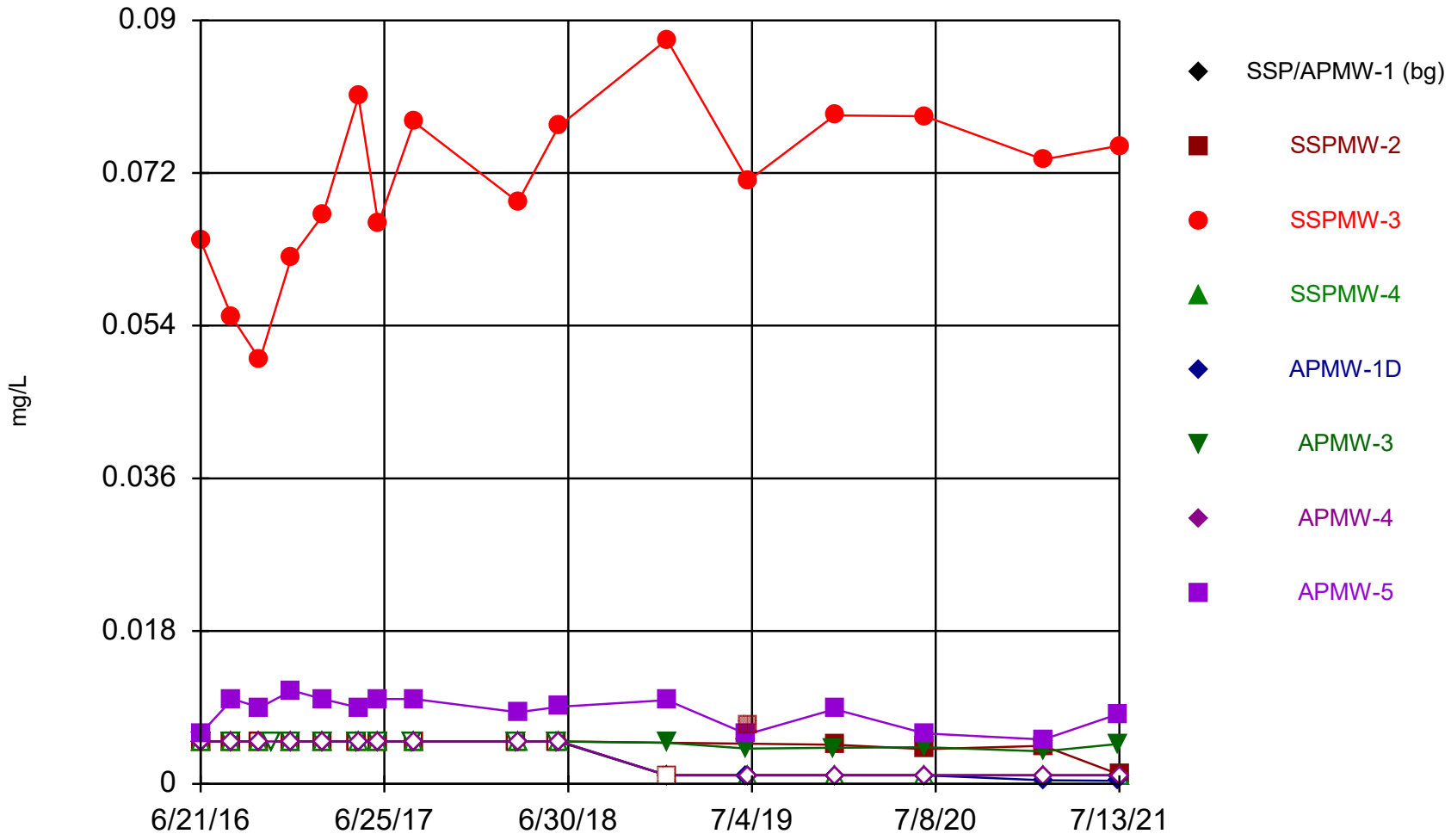


Constituent: Boron Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

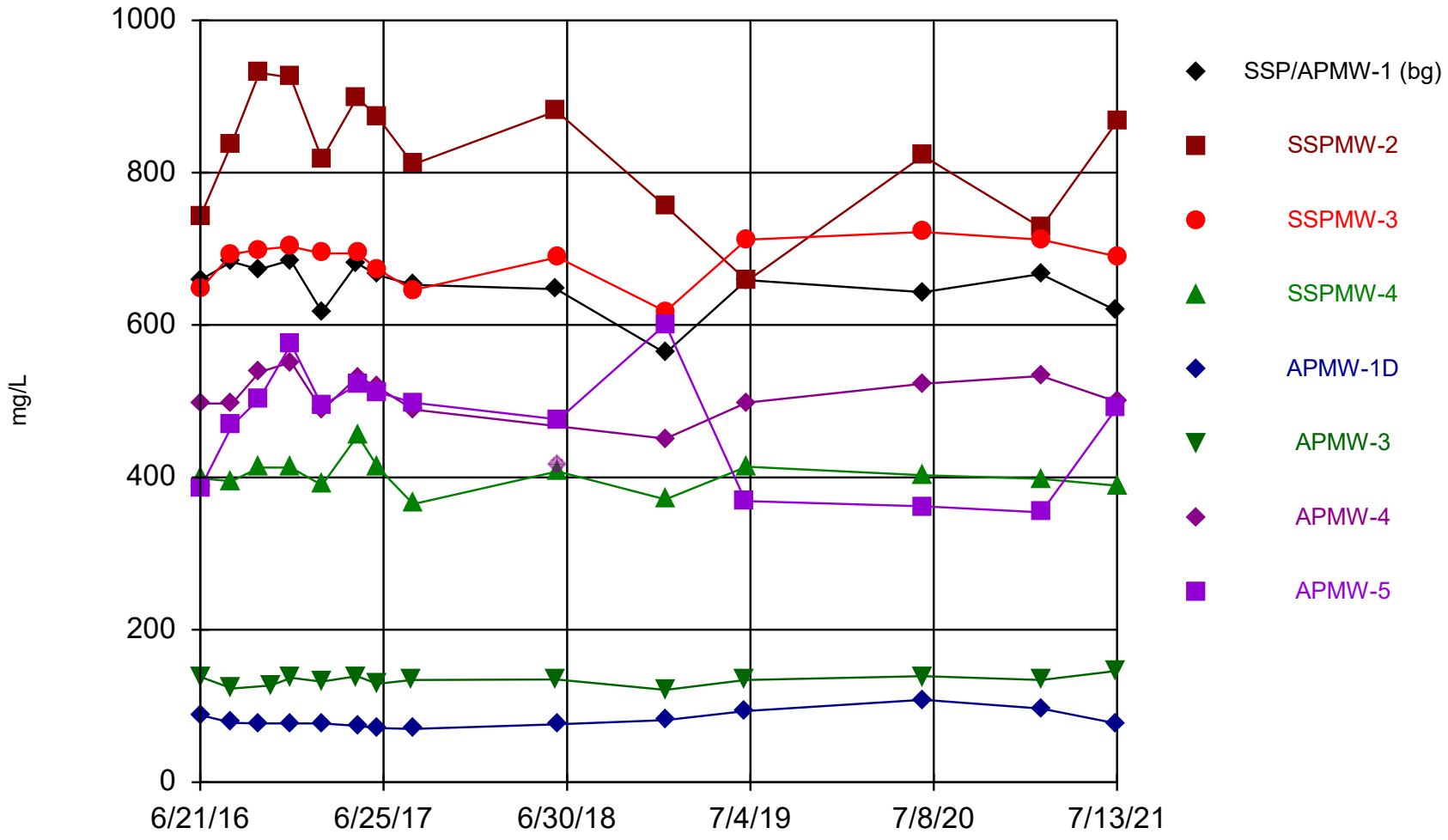
Time Series



Constituent: Cadmium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

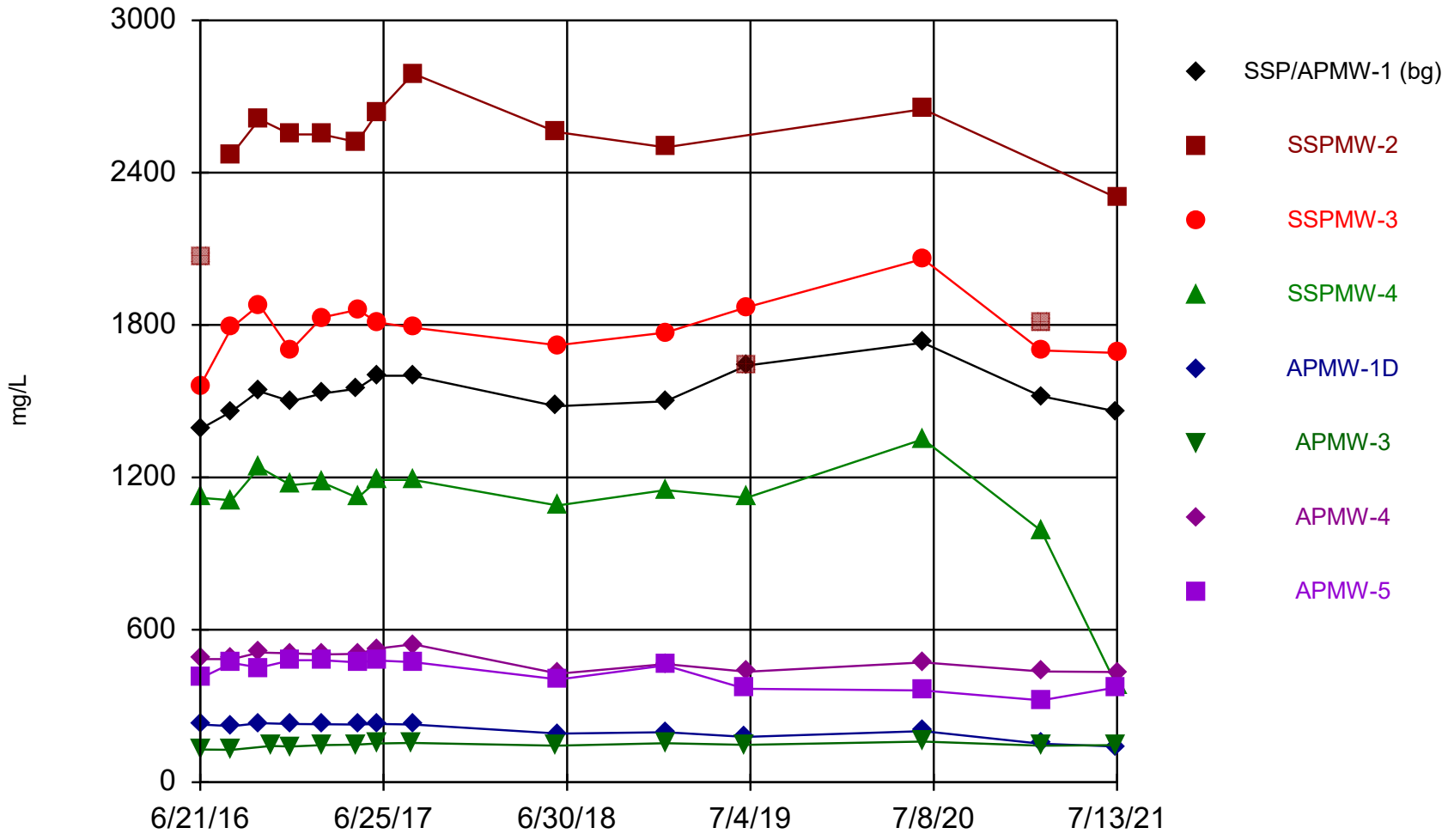
Time Series



Constituent: Calcium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

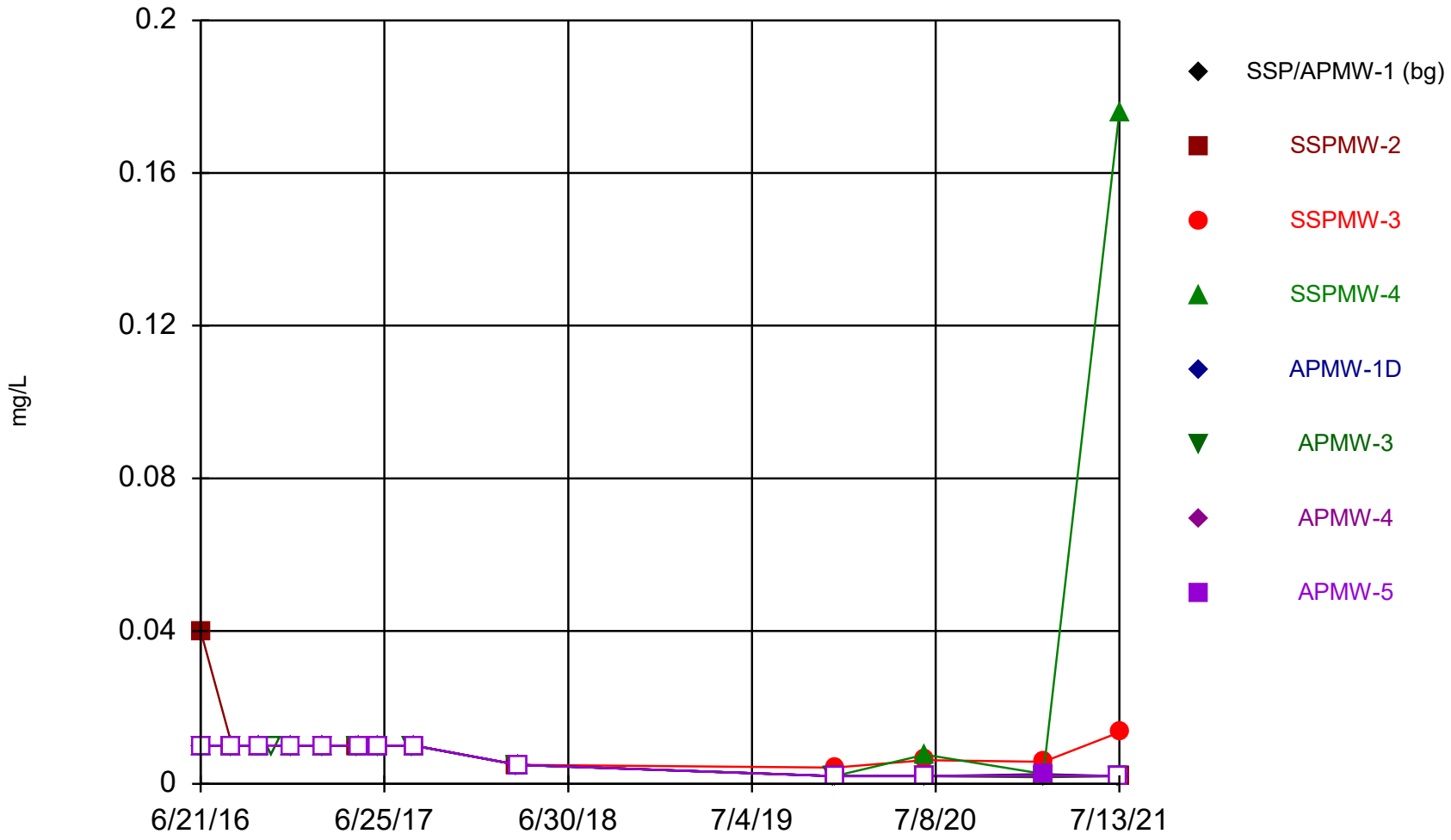


Constituent: Chloride Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Chromium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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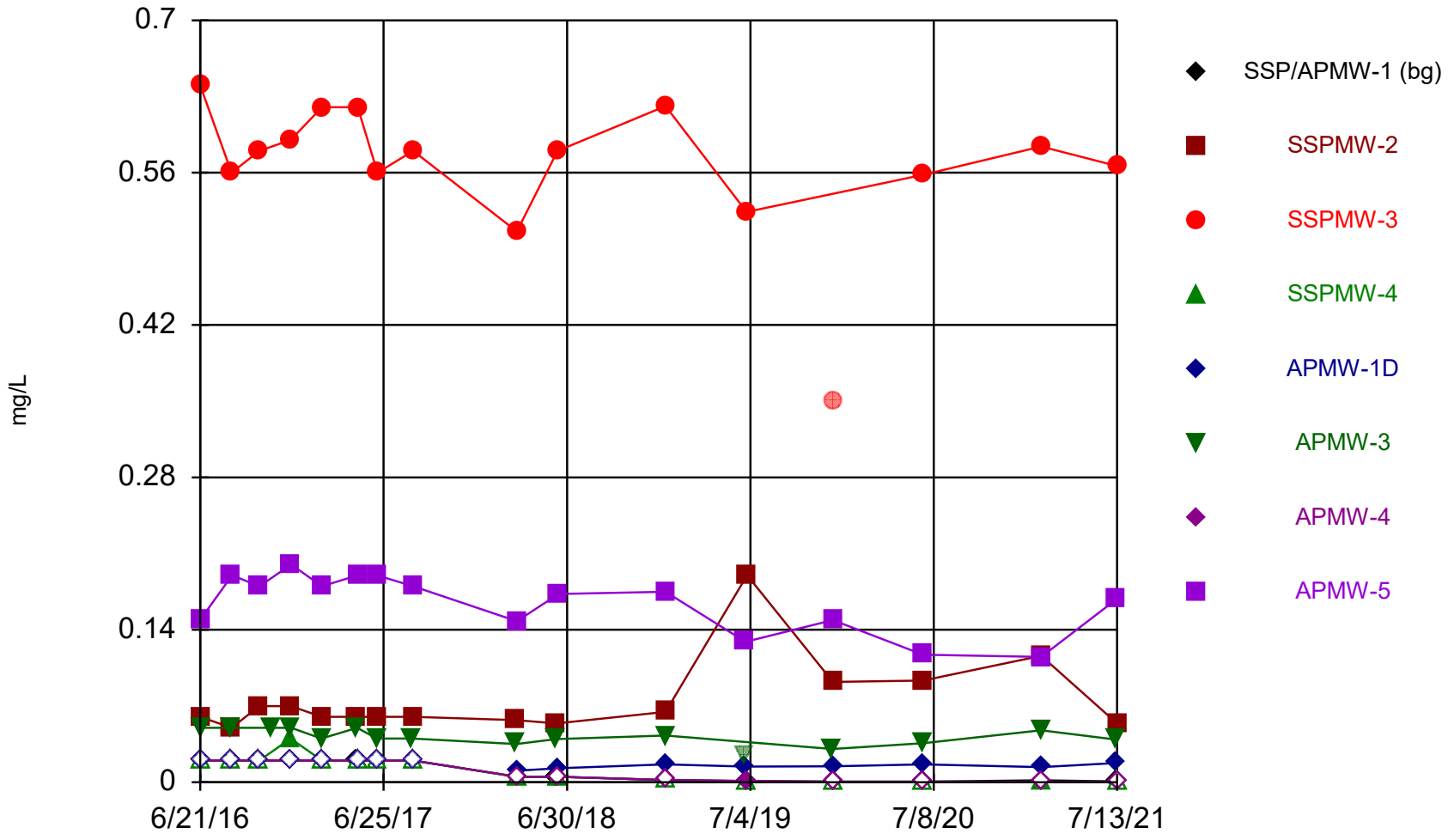
Time Series



Constituent: Cobalt Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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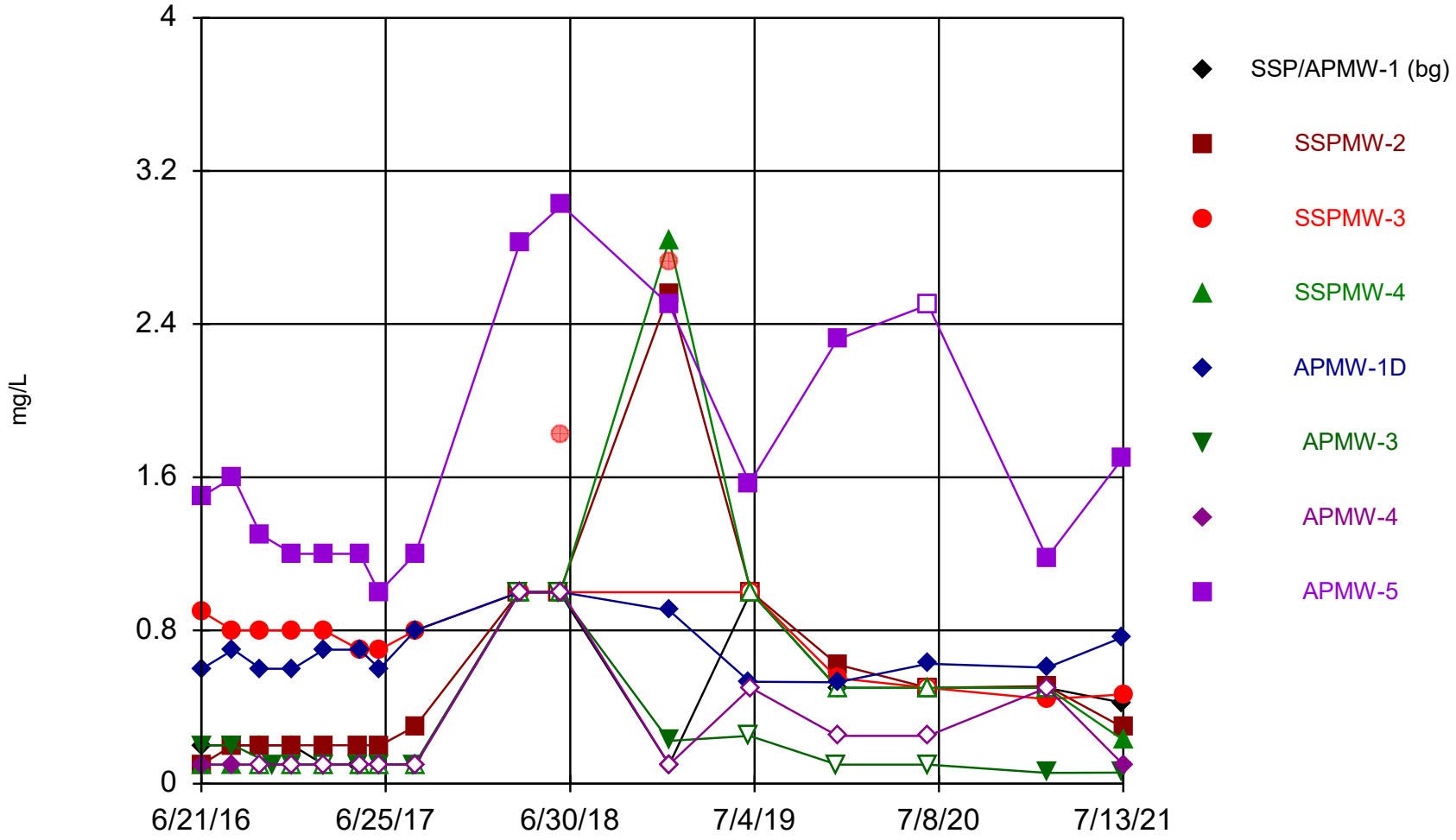
Hollow symbols indicate censored values.

Time Series



Constituent: Fluoride Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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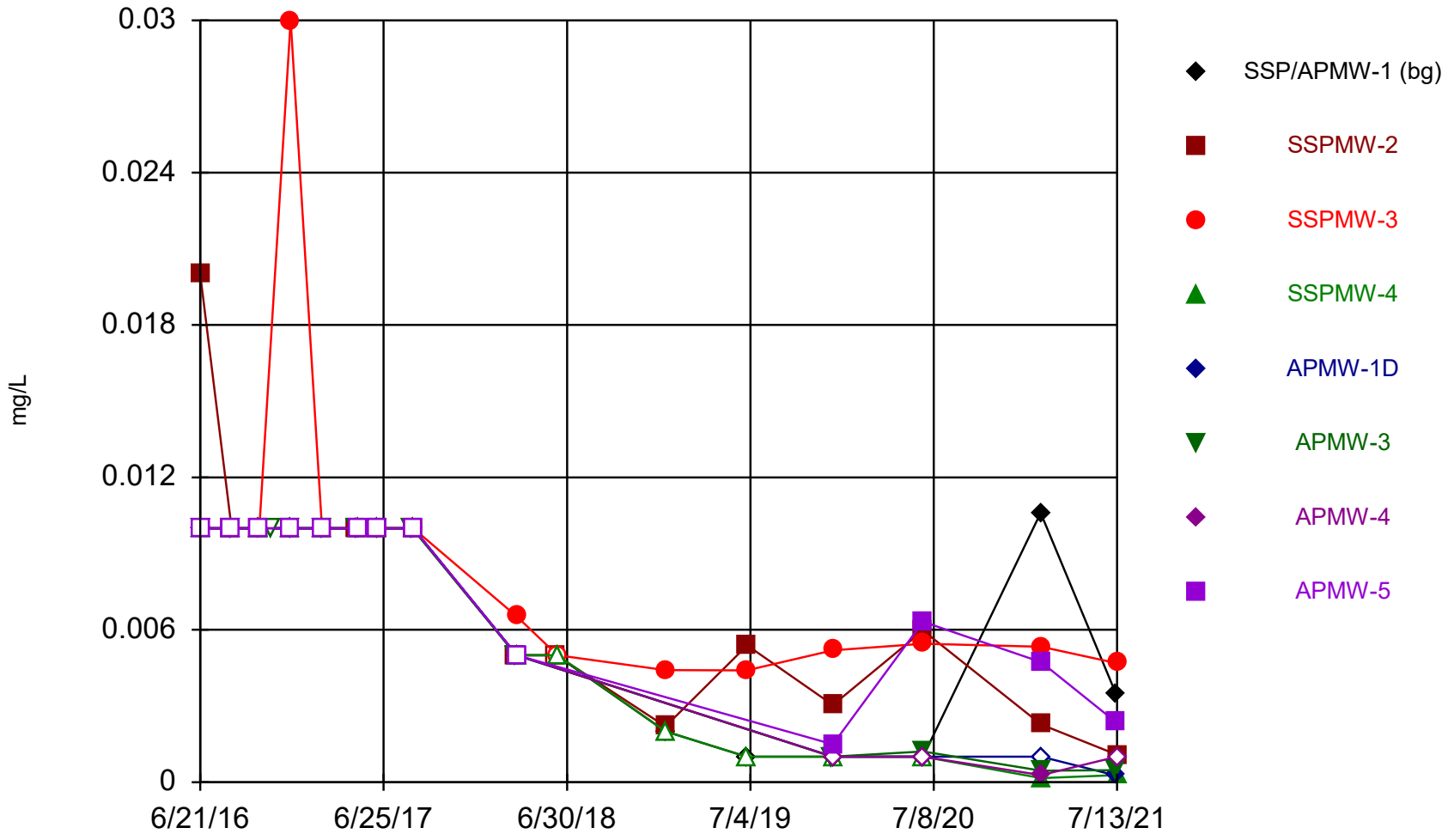
Hollow symbols indicate censored values.

Time Series



Constituent: Lead Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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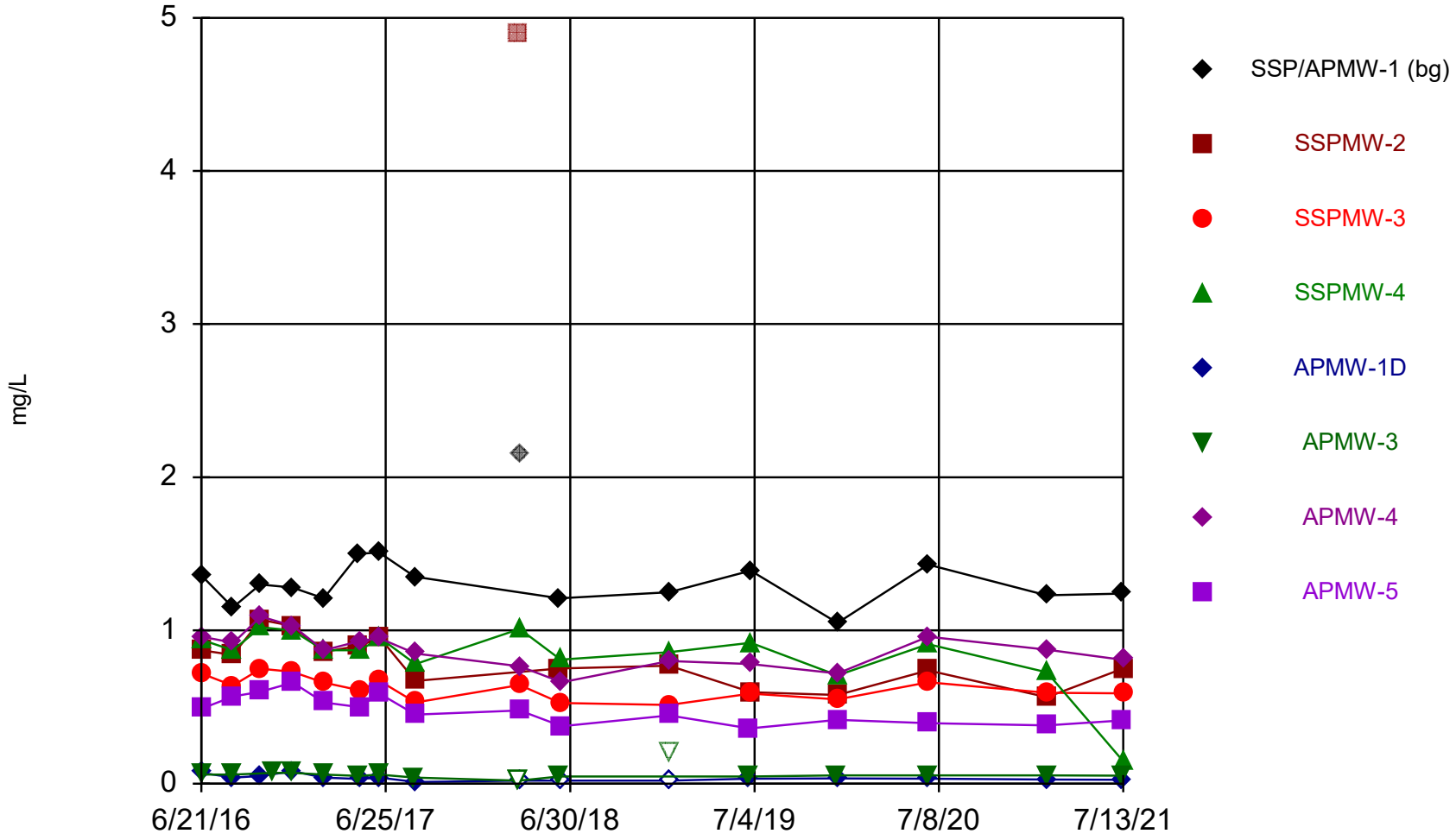
Hollow symbols indicate censored values.

Time Series



Constituent: Lithium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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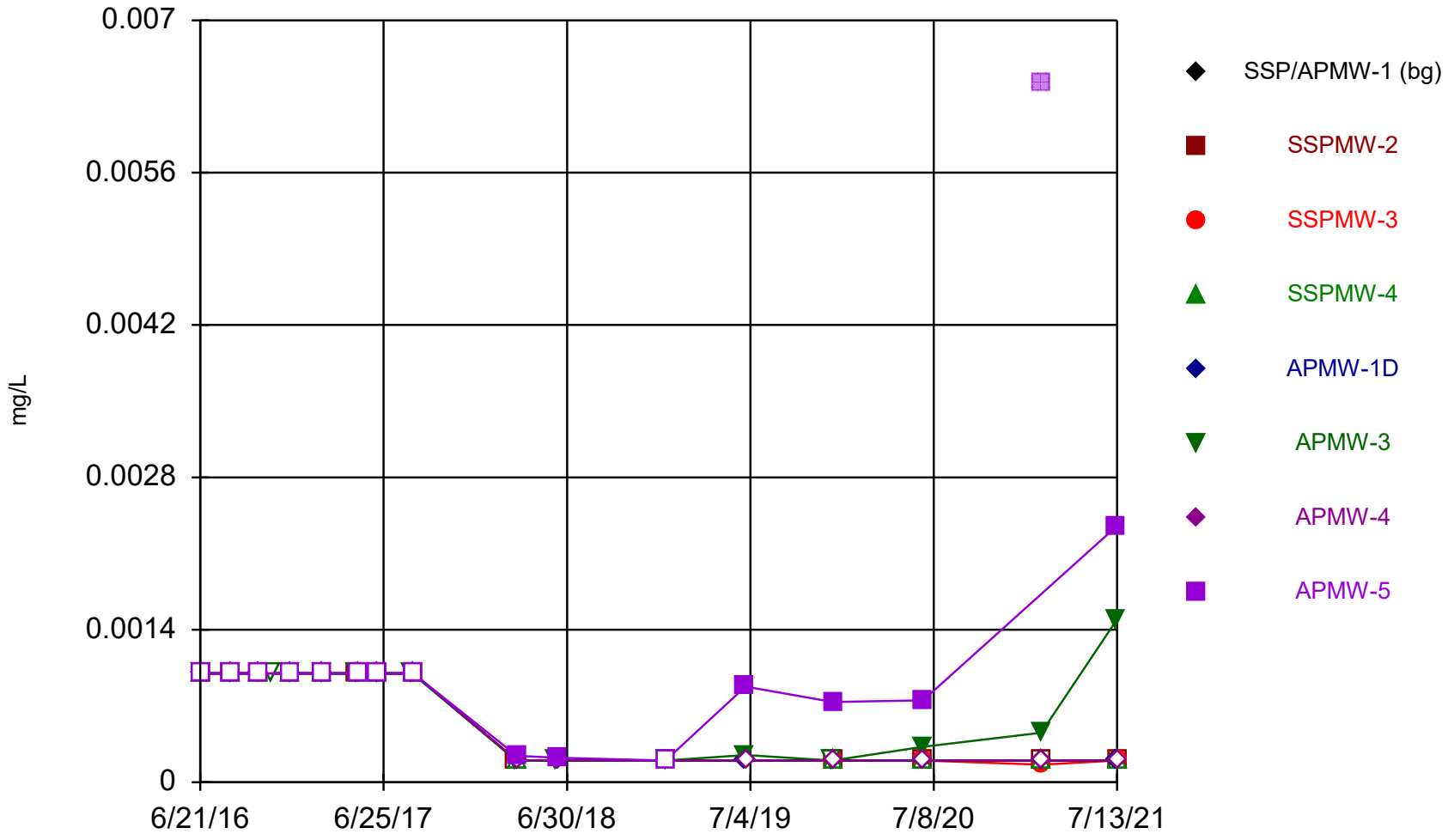
Hollow symbols indicate censored values.

Time Series



Constituent: Mercury Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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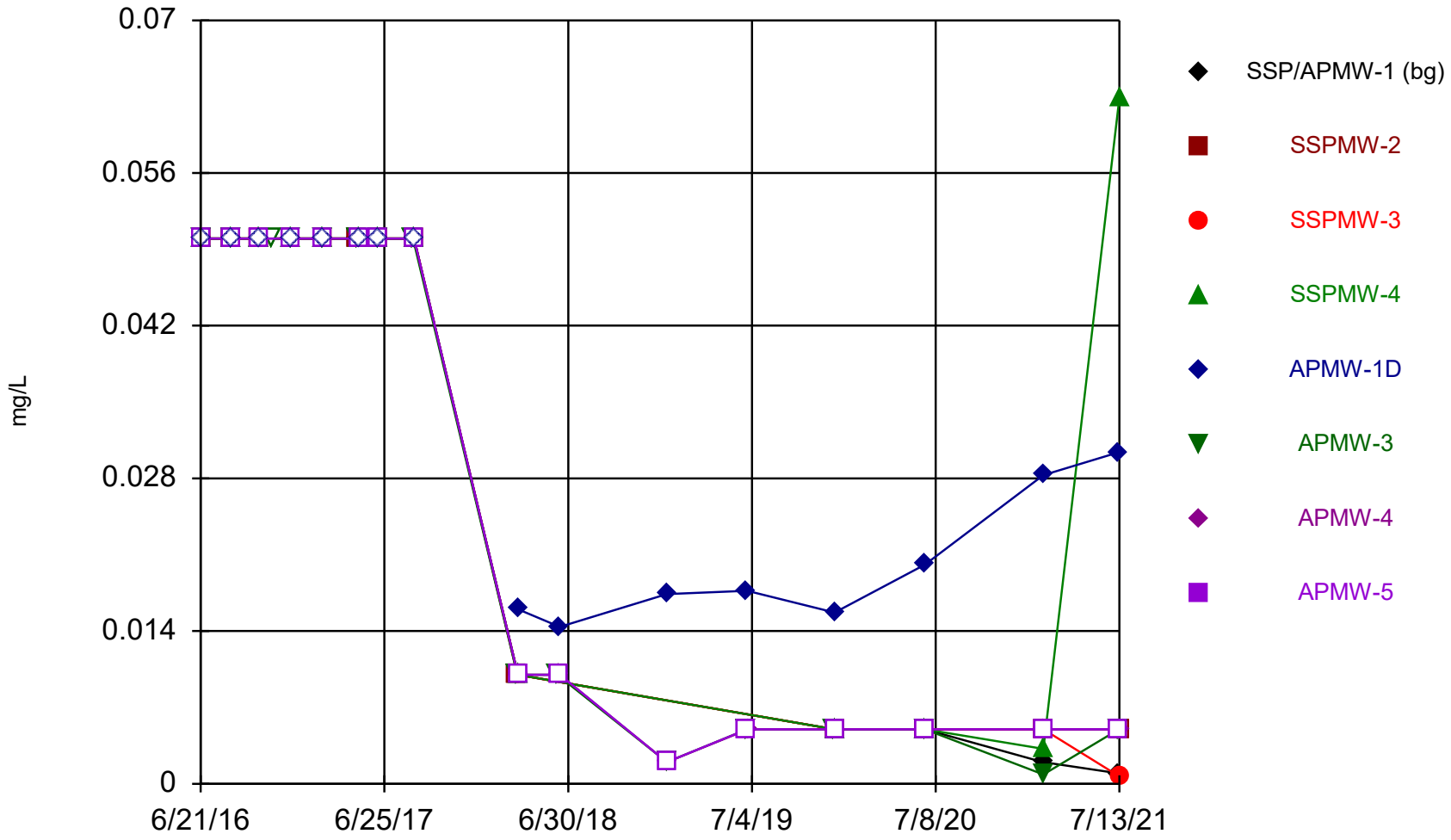
Hollow symbols indicate censored values.

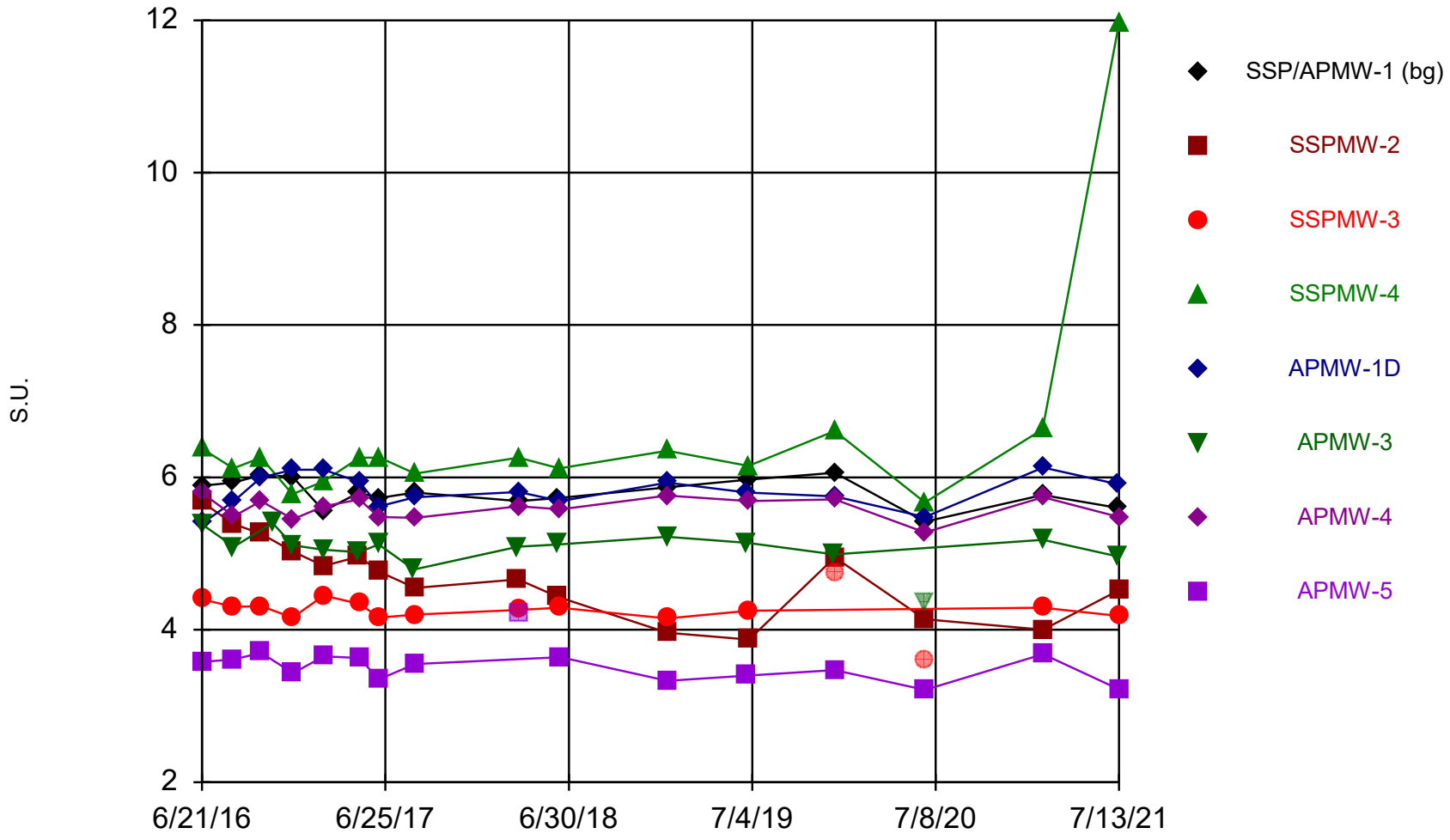
Time Series



Constituent: Molybdenum Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

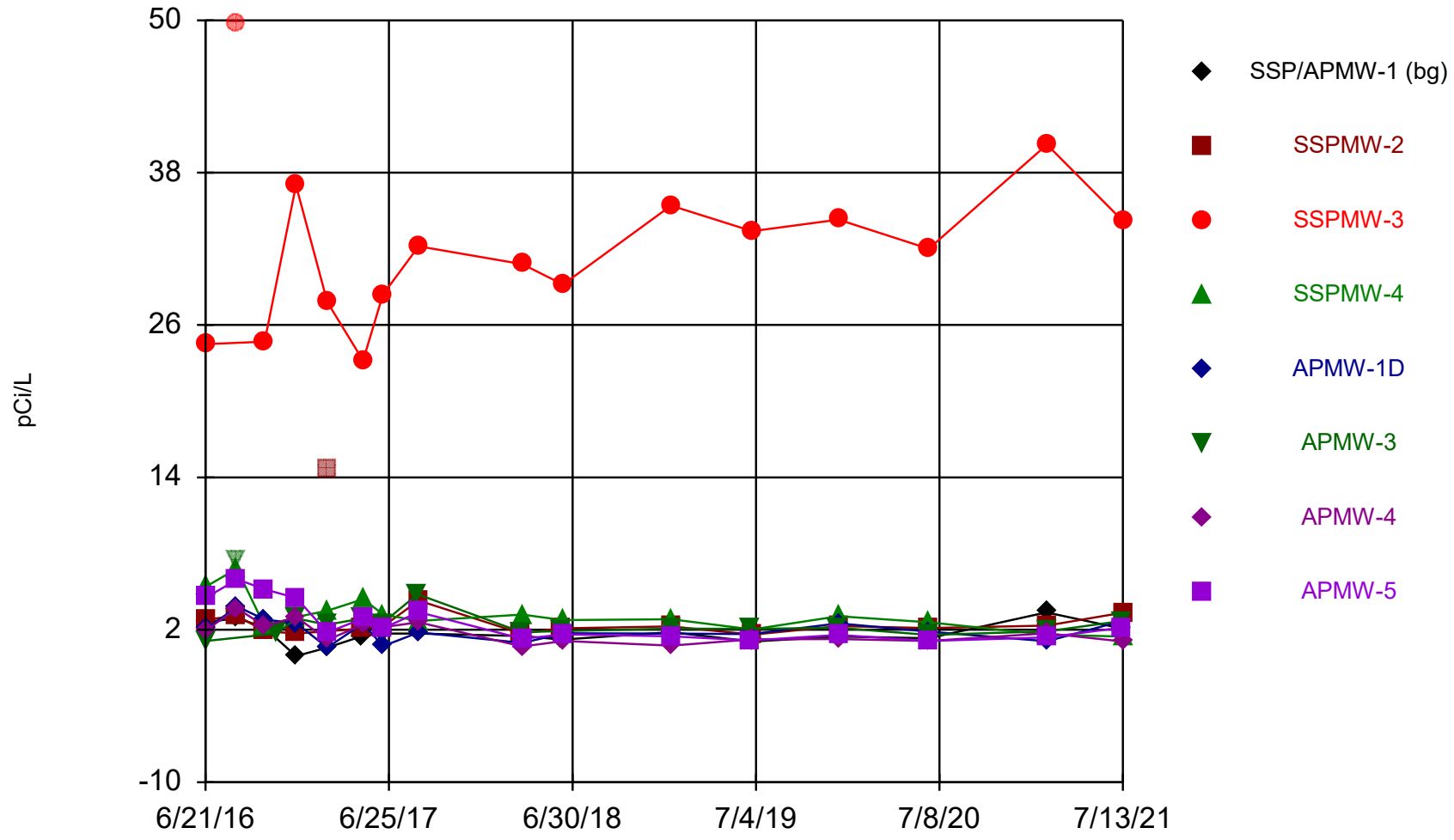
Time Series



Constituent: pH Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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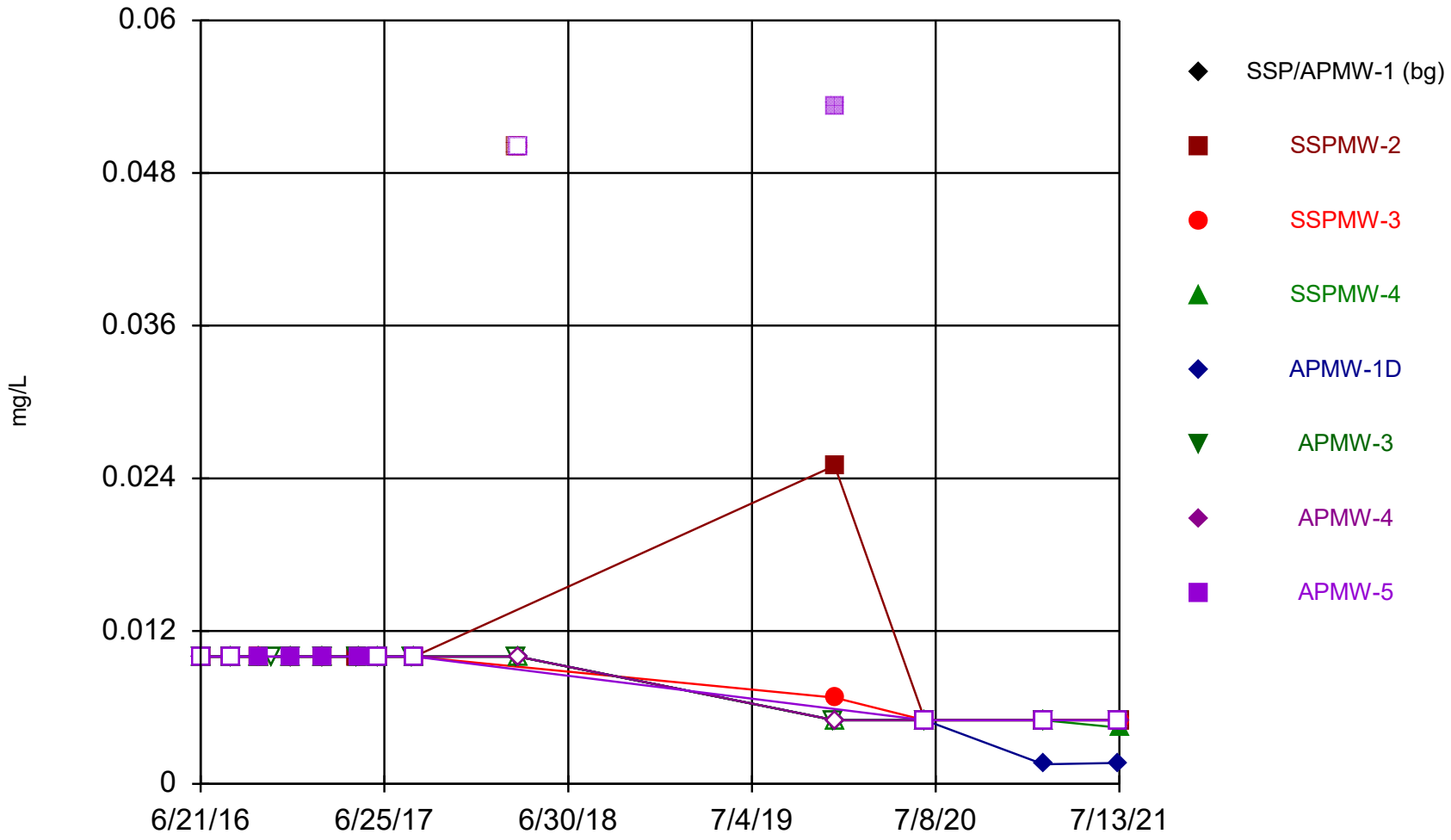
Hollow symbols indicate censored values.

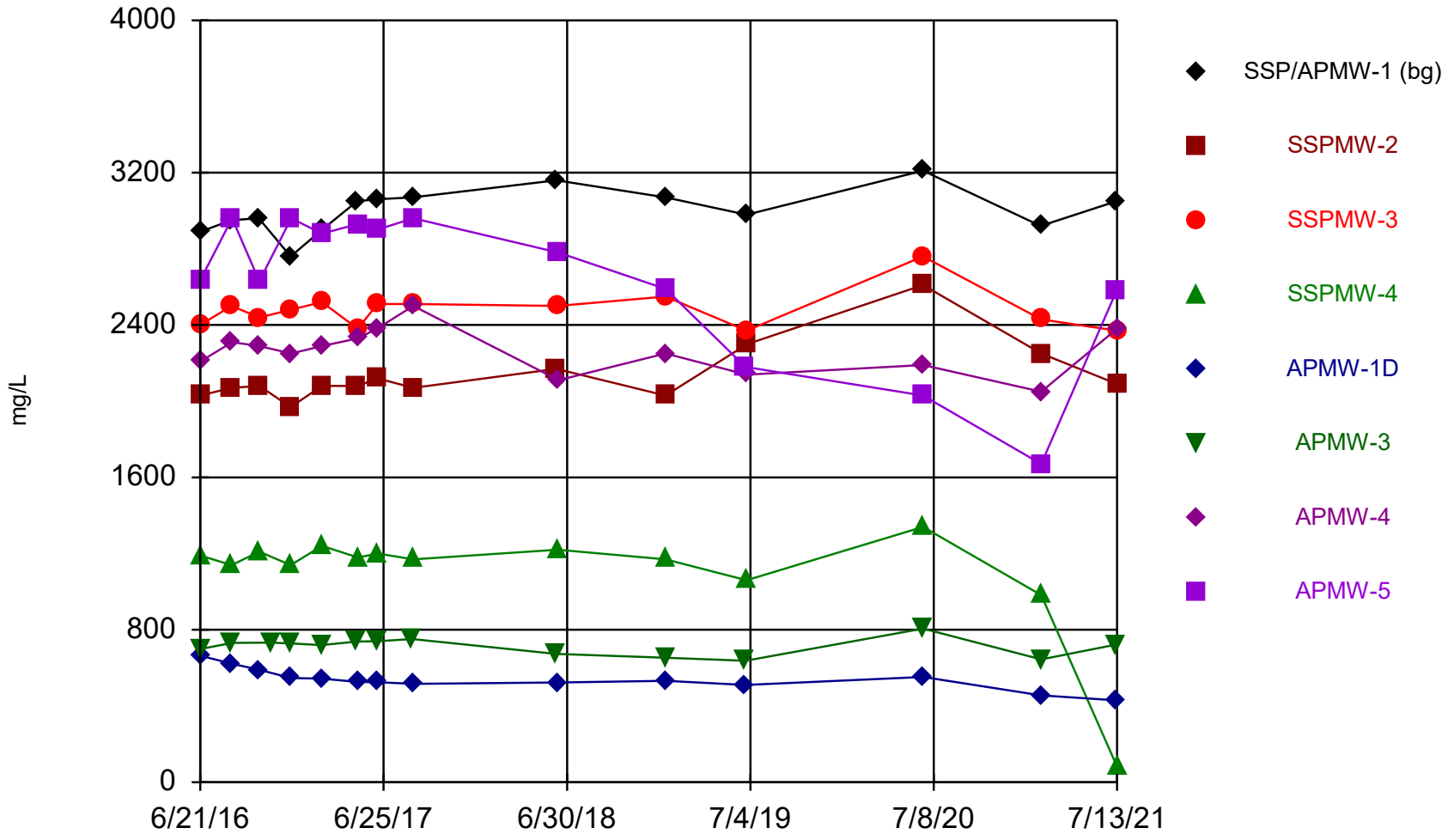
Time Series



Constituent: Selenium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

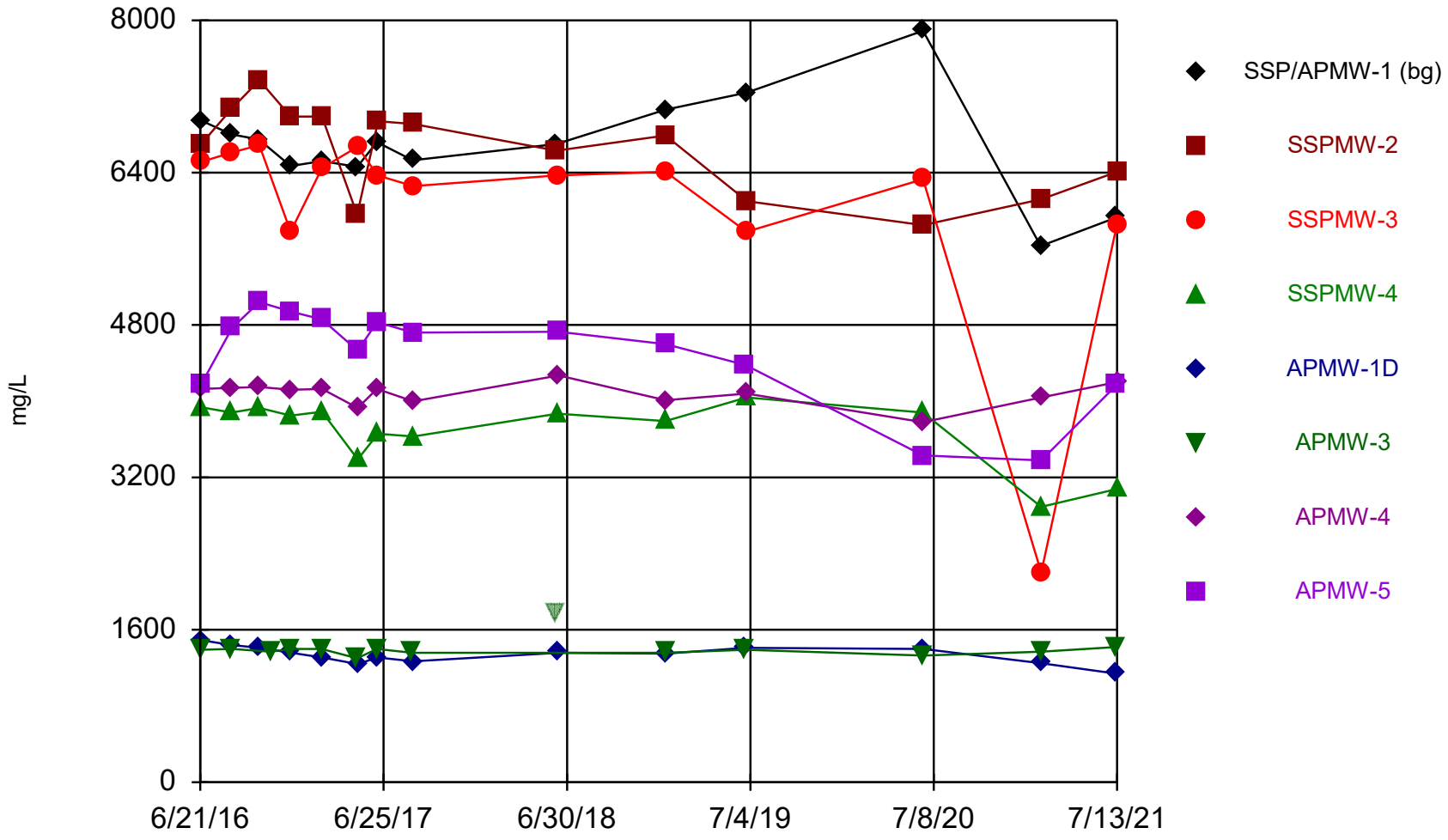
Time Series



Constituent: Sulfate Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: TDS Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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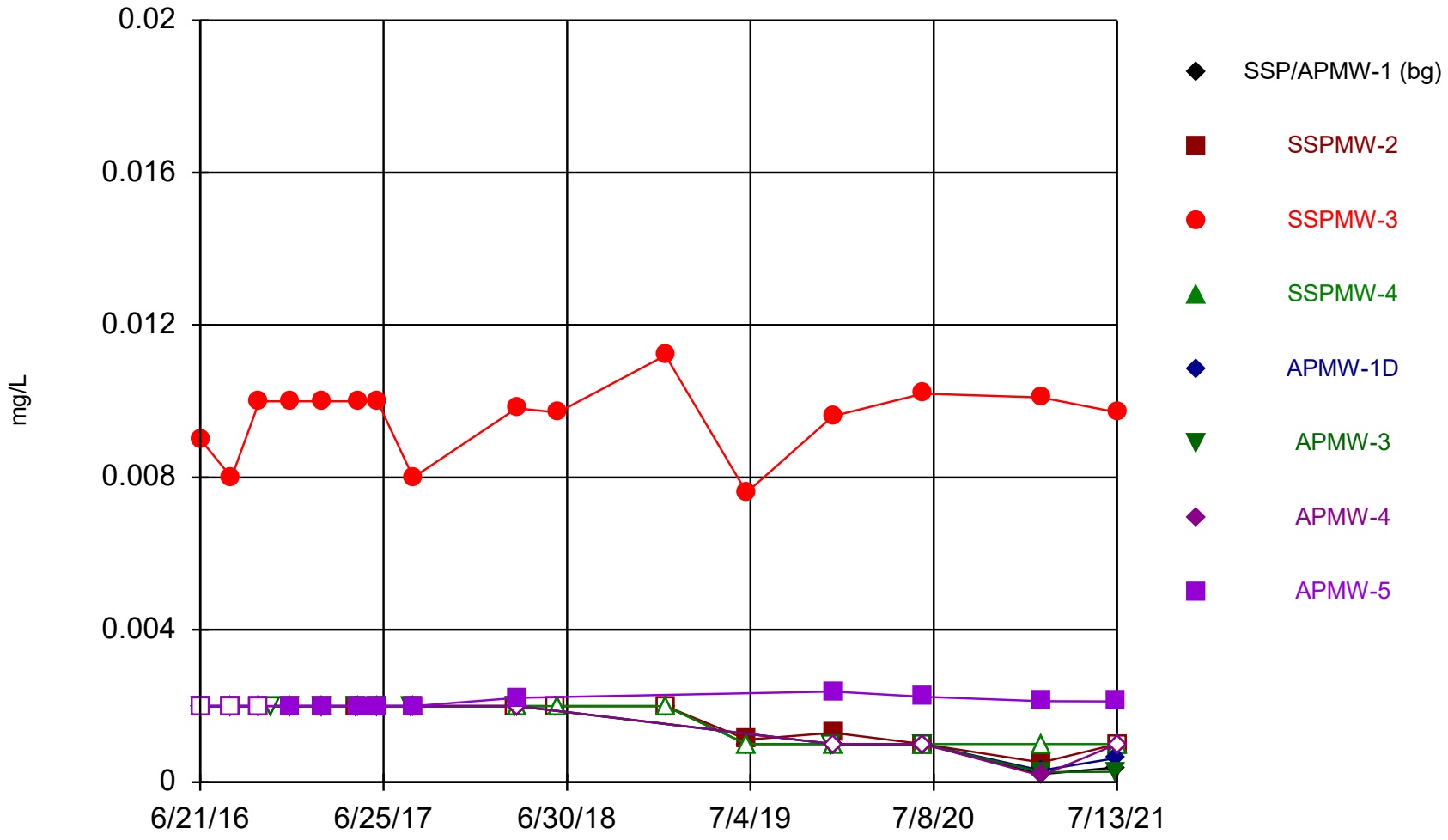
Hollow symbols indicate censored values.

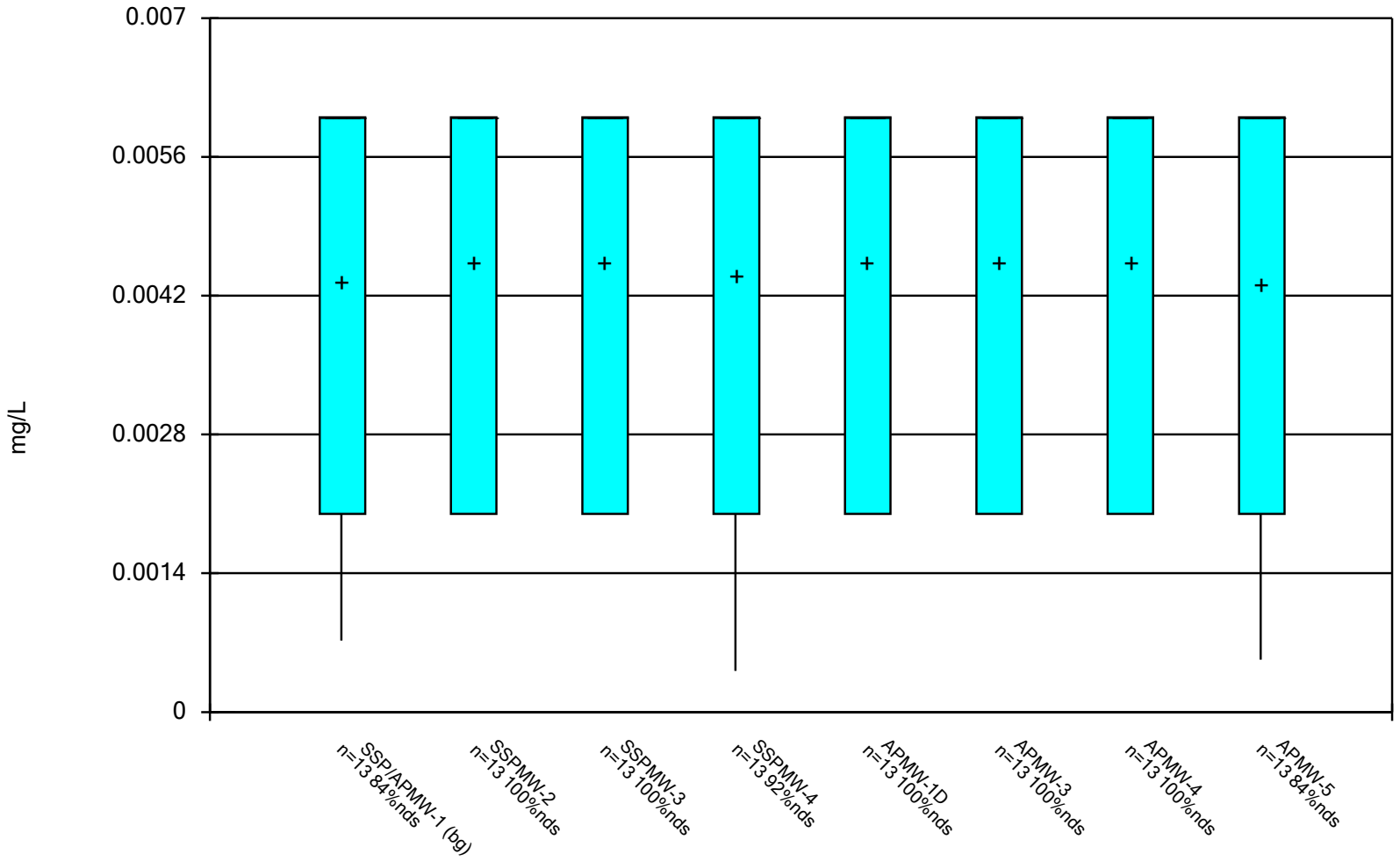
Time Series



Constituent: Thallium Analysis Run 8/19/2021 10:16 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

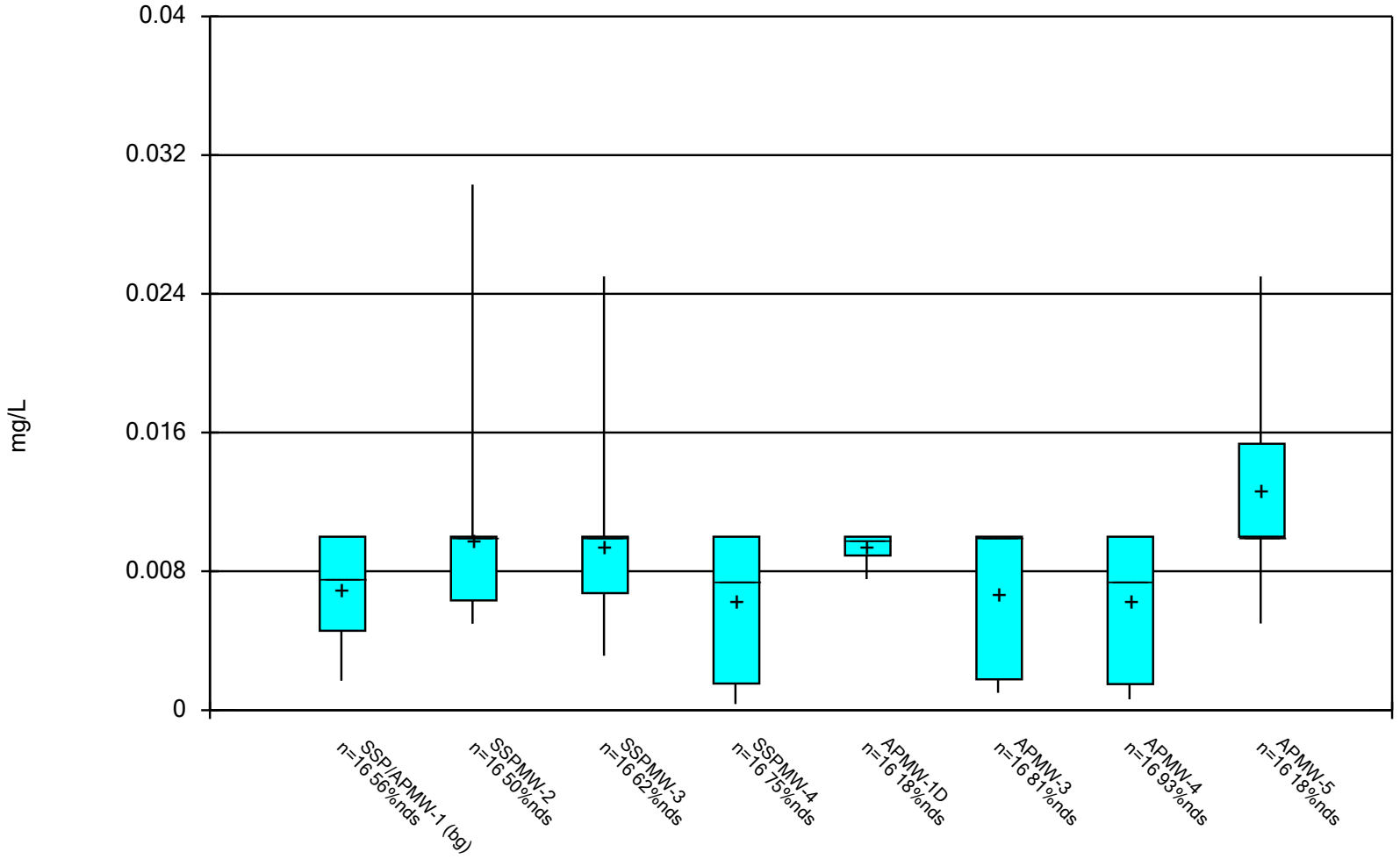
Box & Whiskers Plot



Constituent: Antimony Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

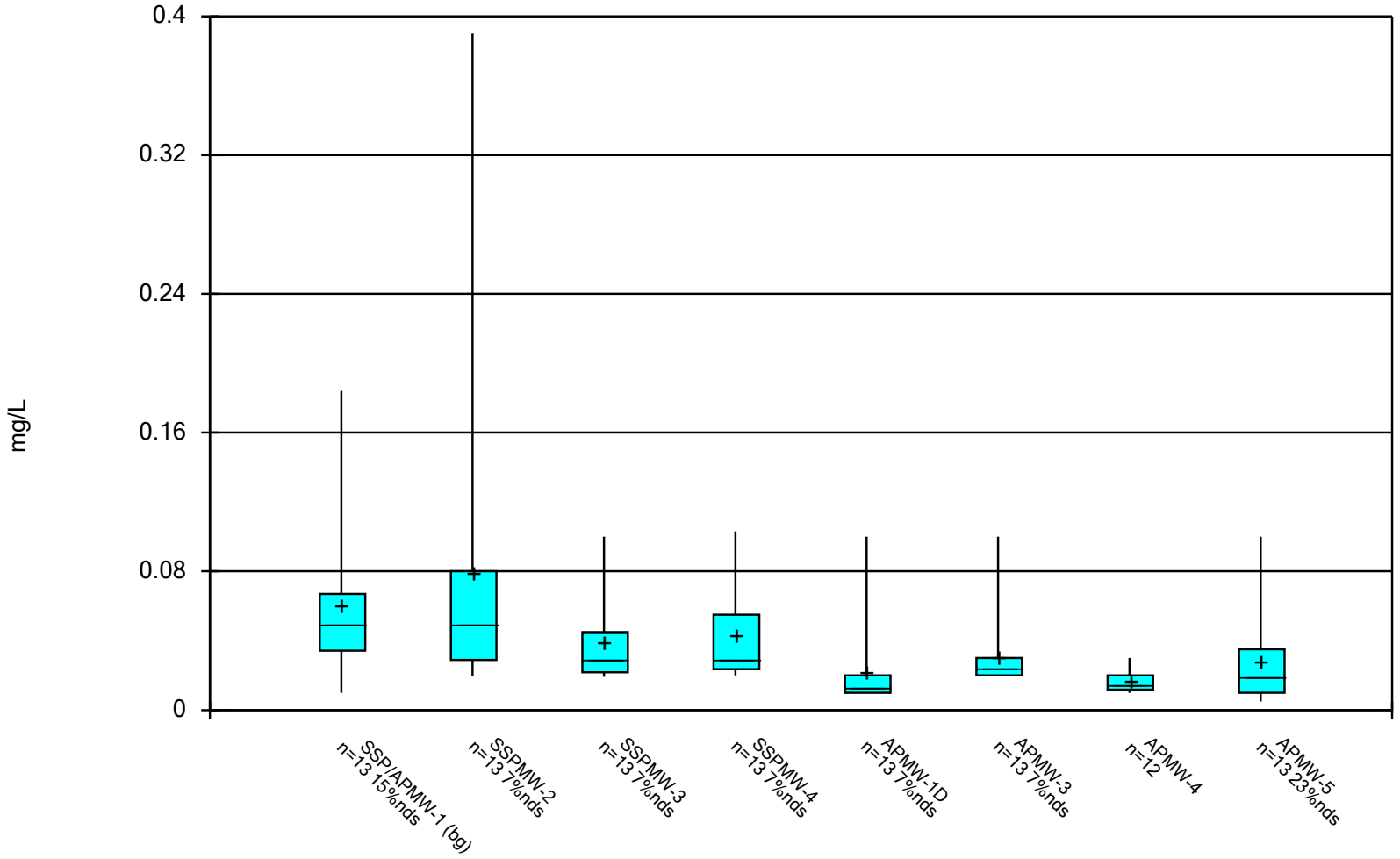
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

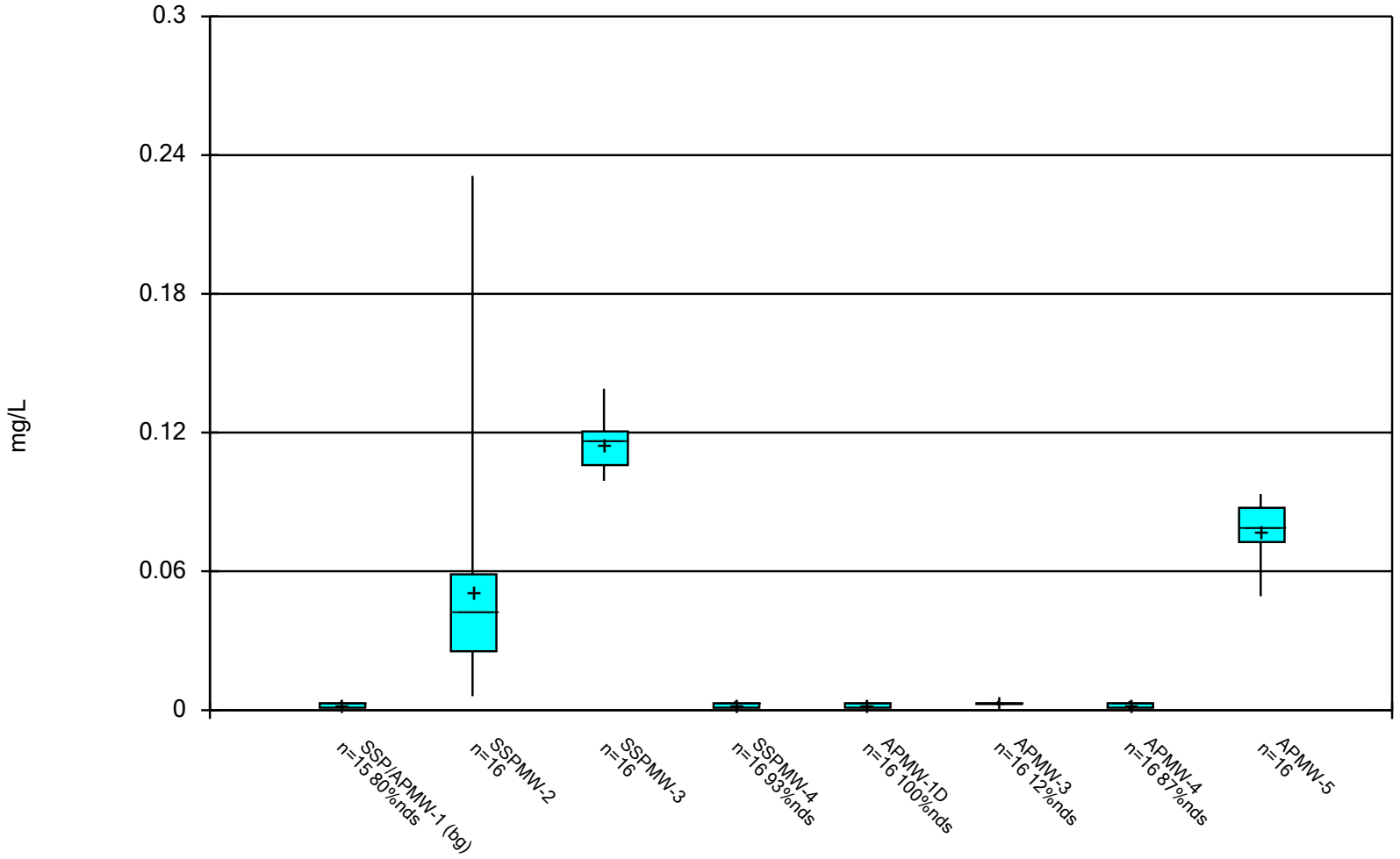
Box & Whiskers Plot



Constituent: Barium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

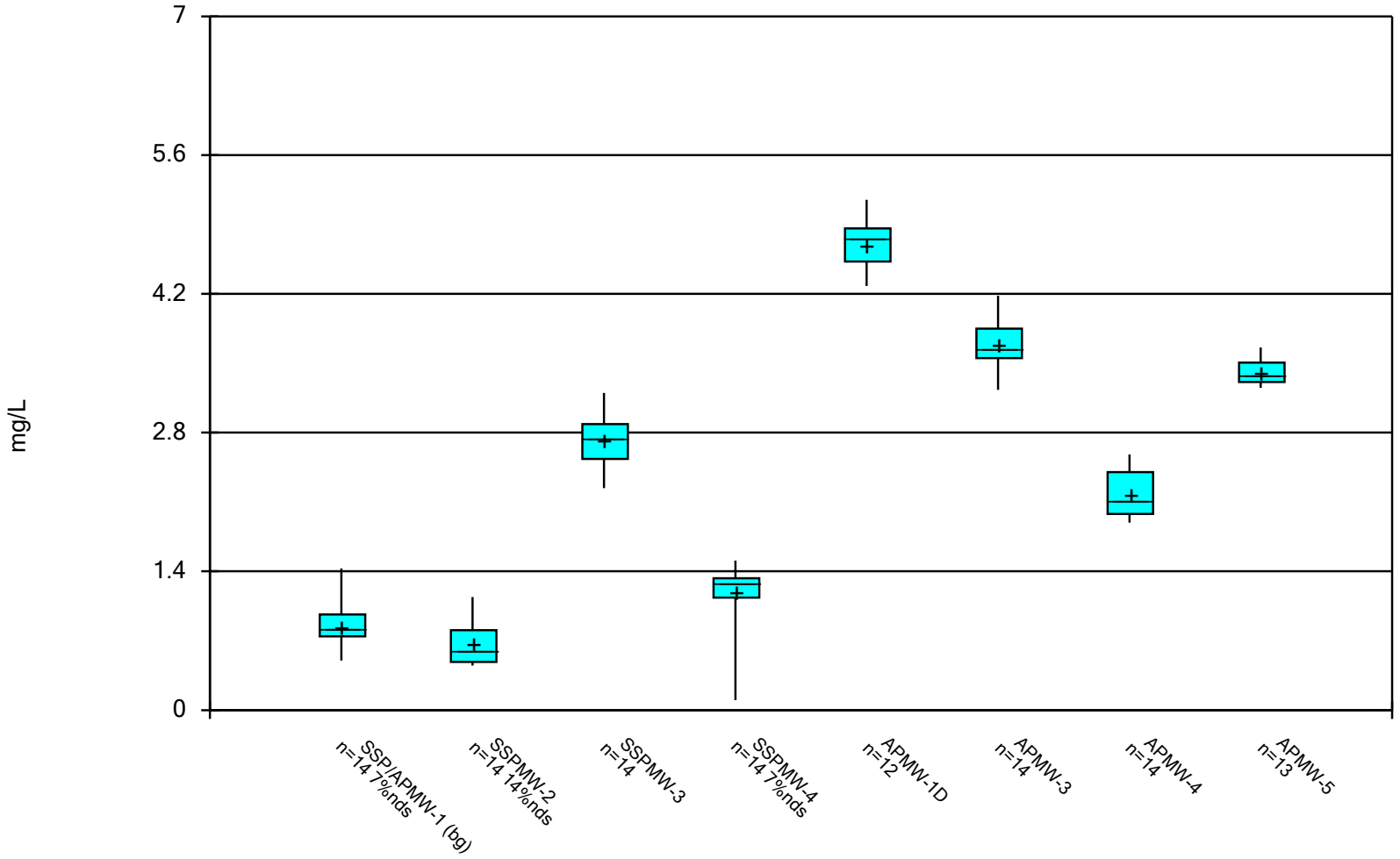
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

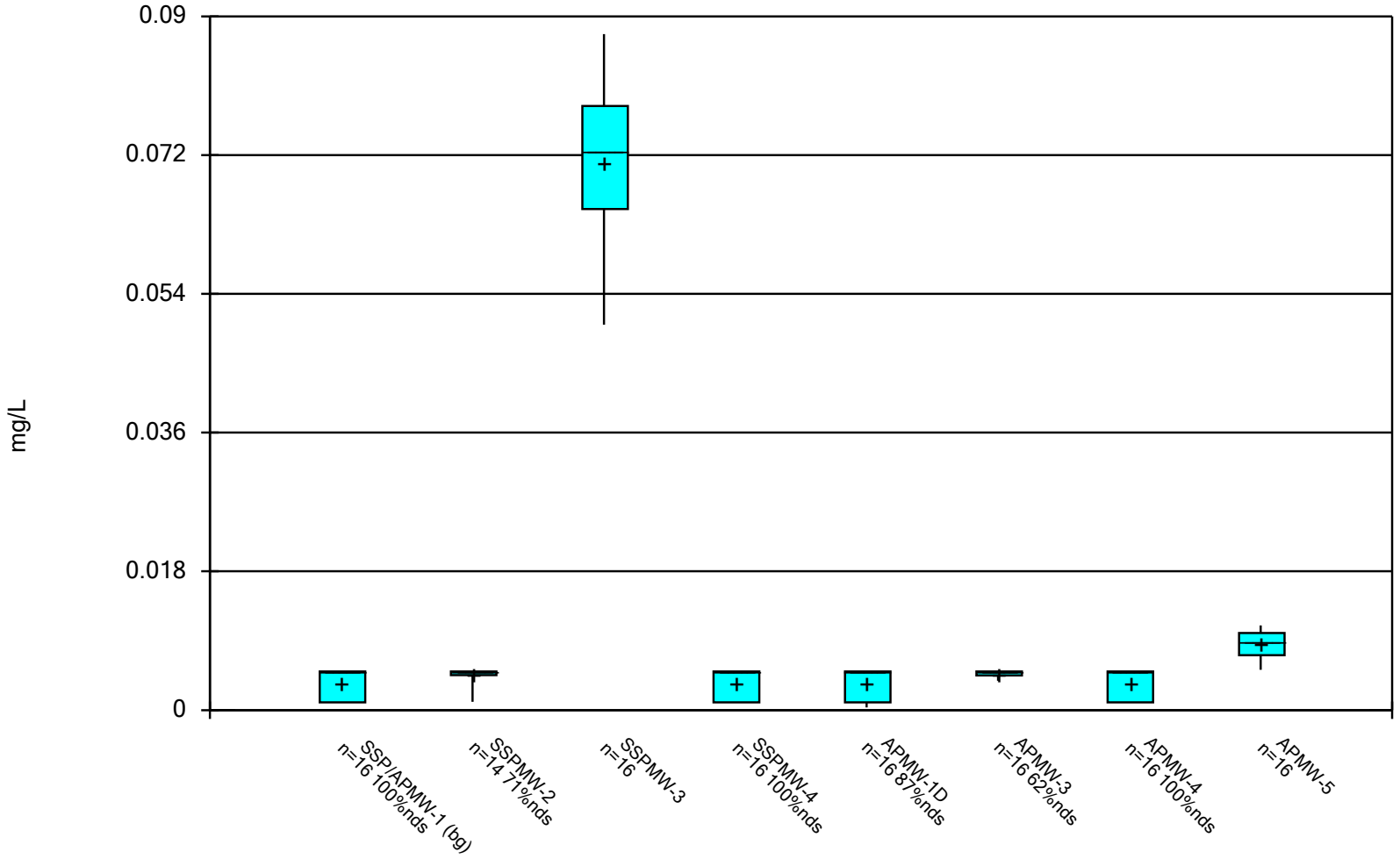
Box & Whiskers Plot



Constituent: Boron Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

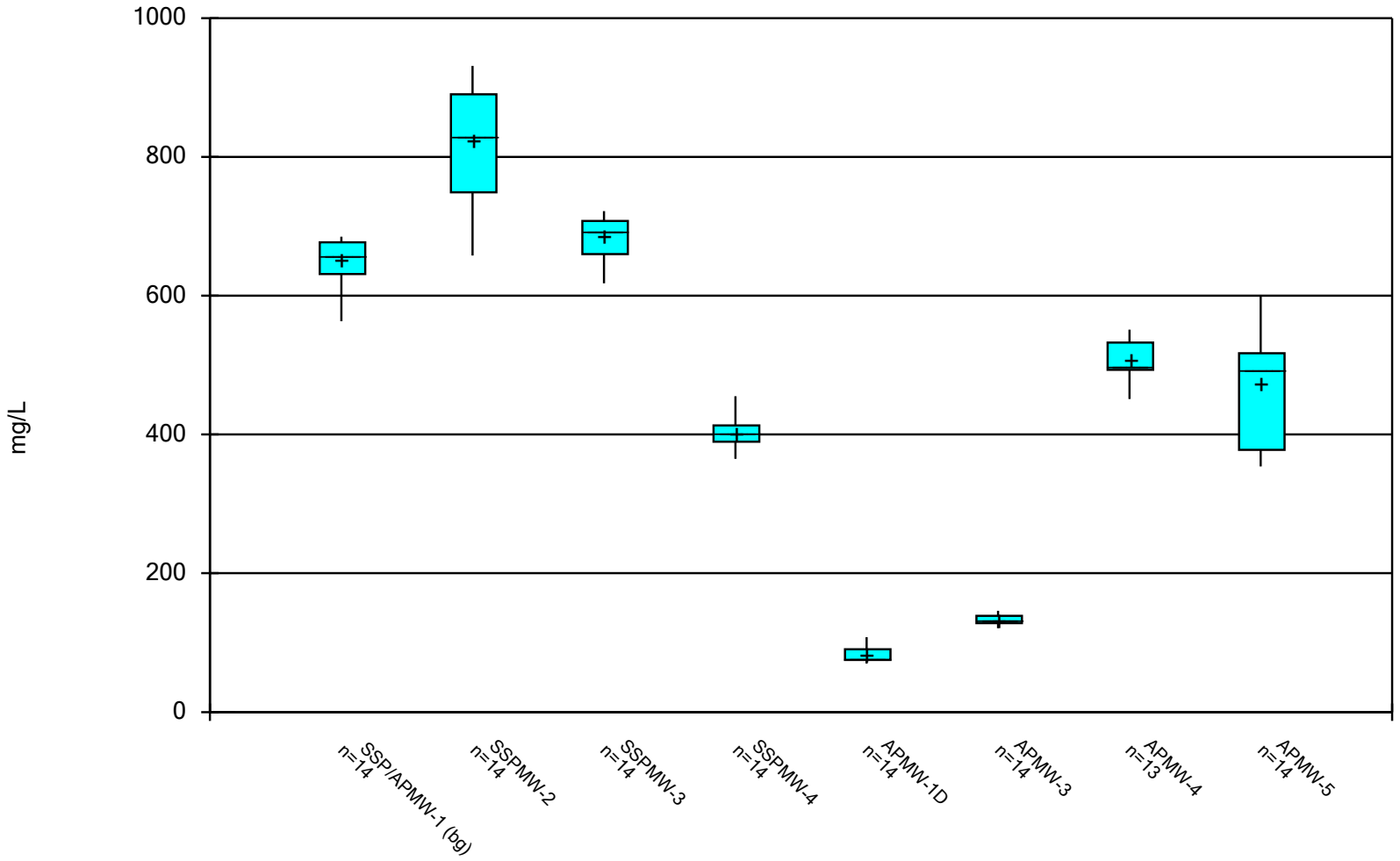
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

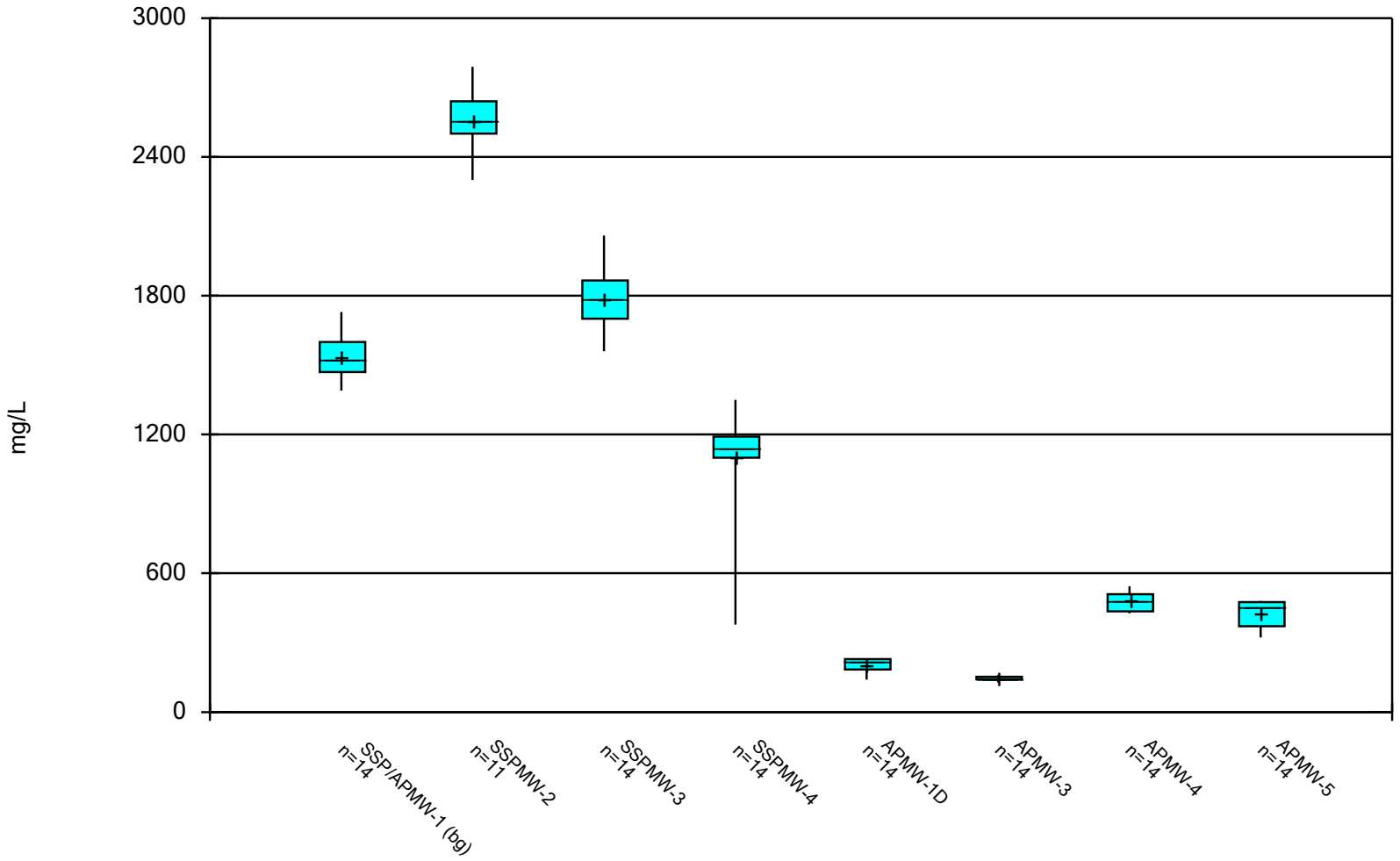
Box & Whiskers Plot



Constituent: Calcium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

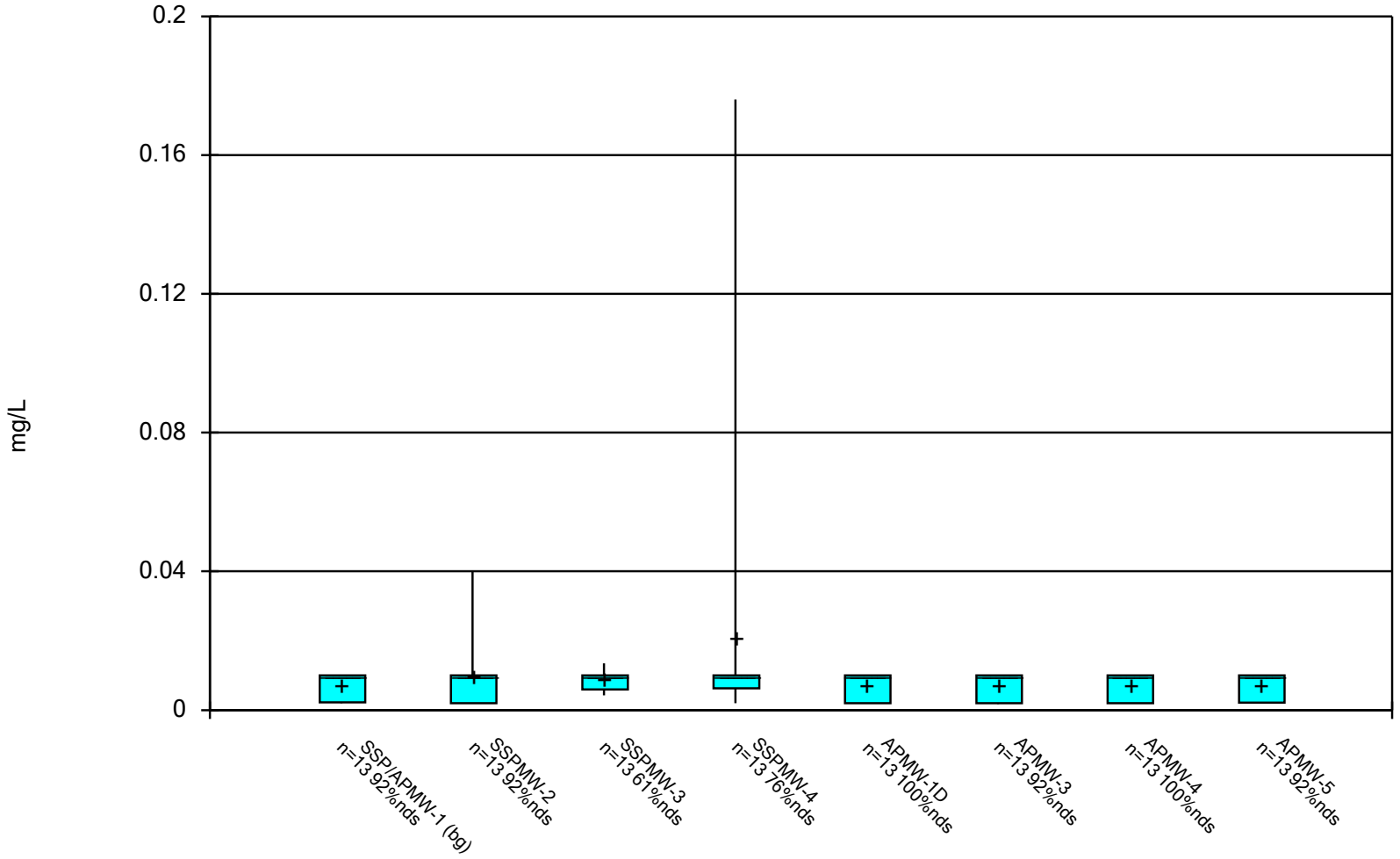
Box & Whiskers Plot



Constituent: Chloride Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

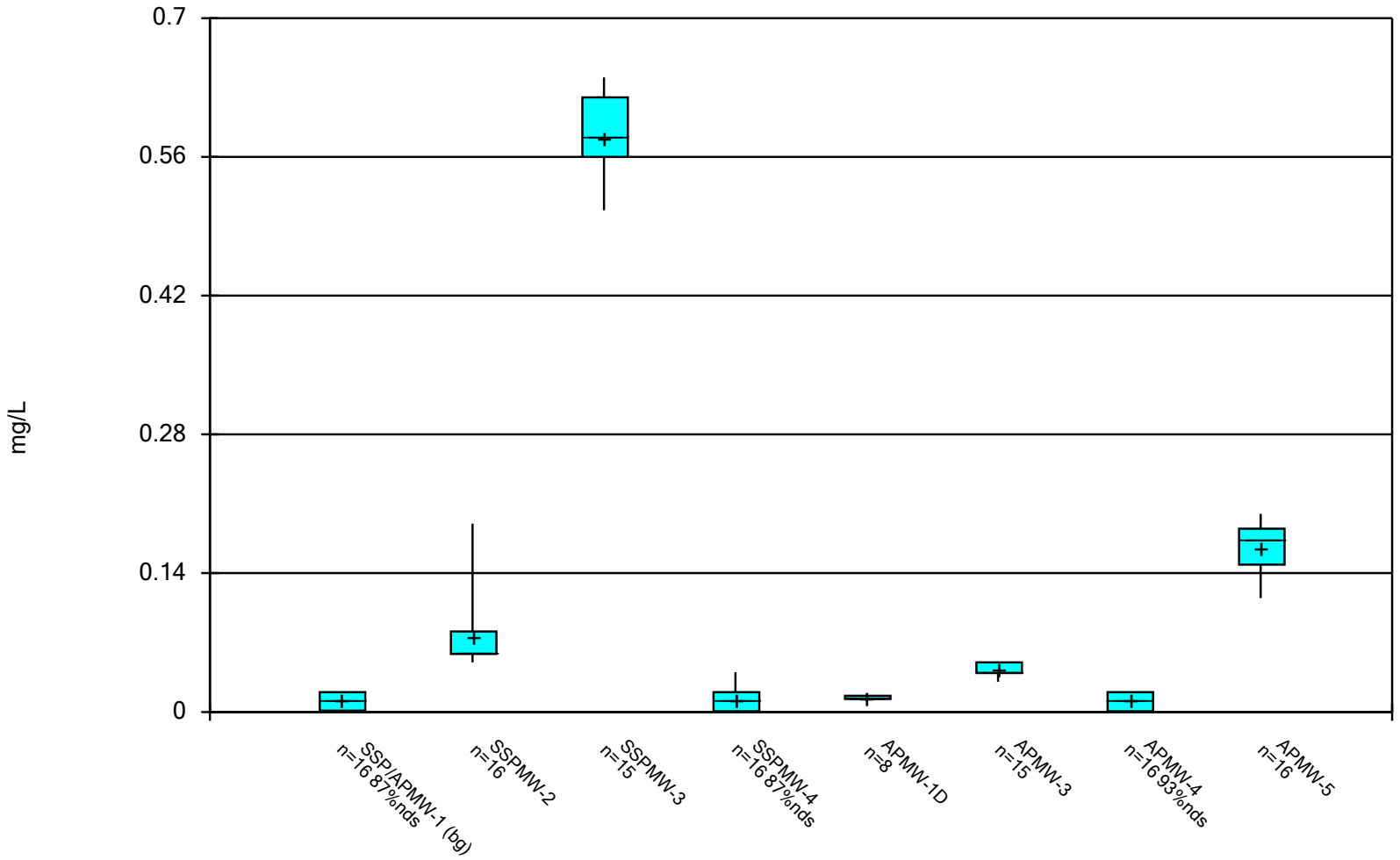
Box & Whiskers Plot



Constituent: Chromium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

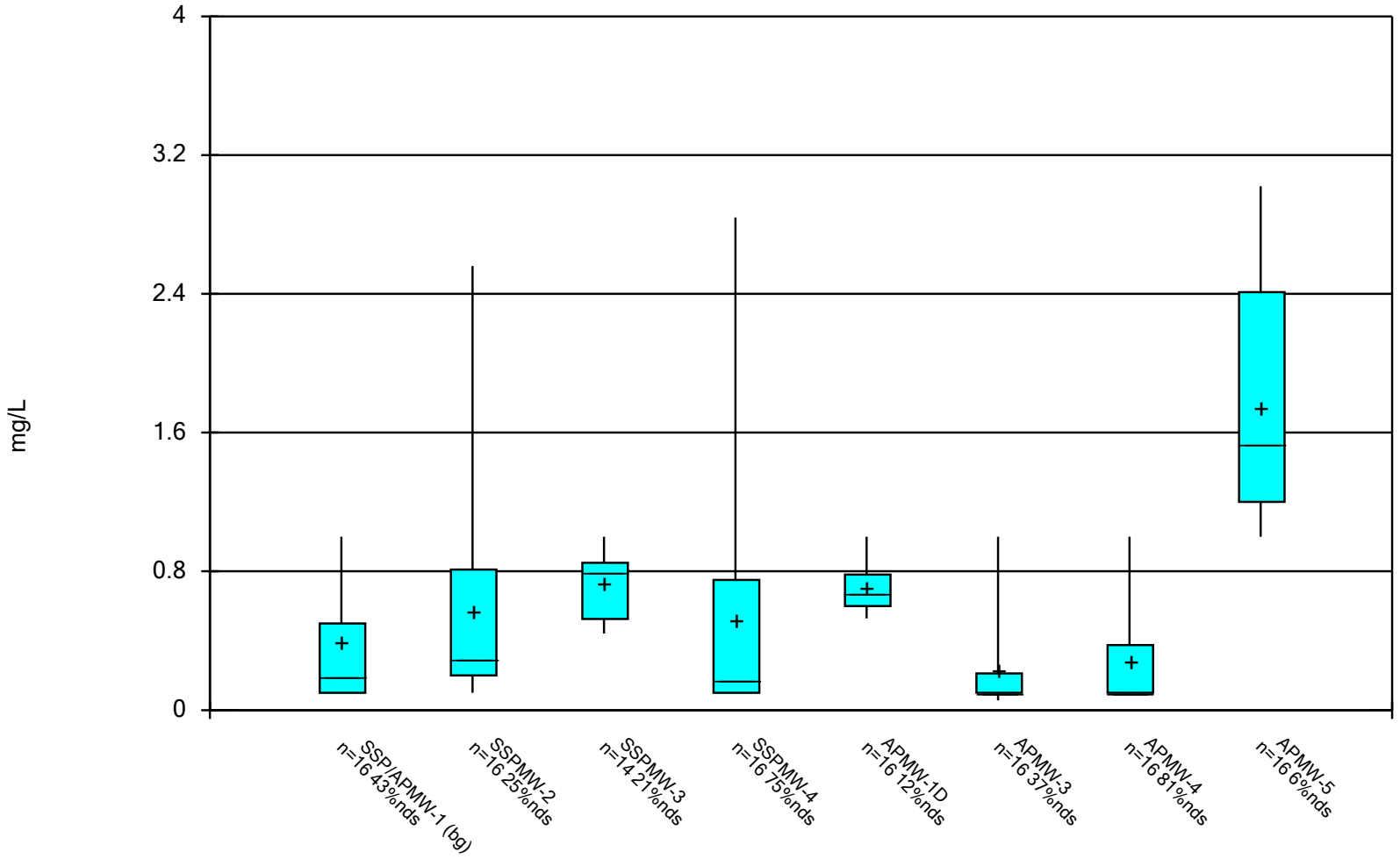
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

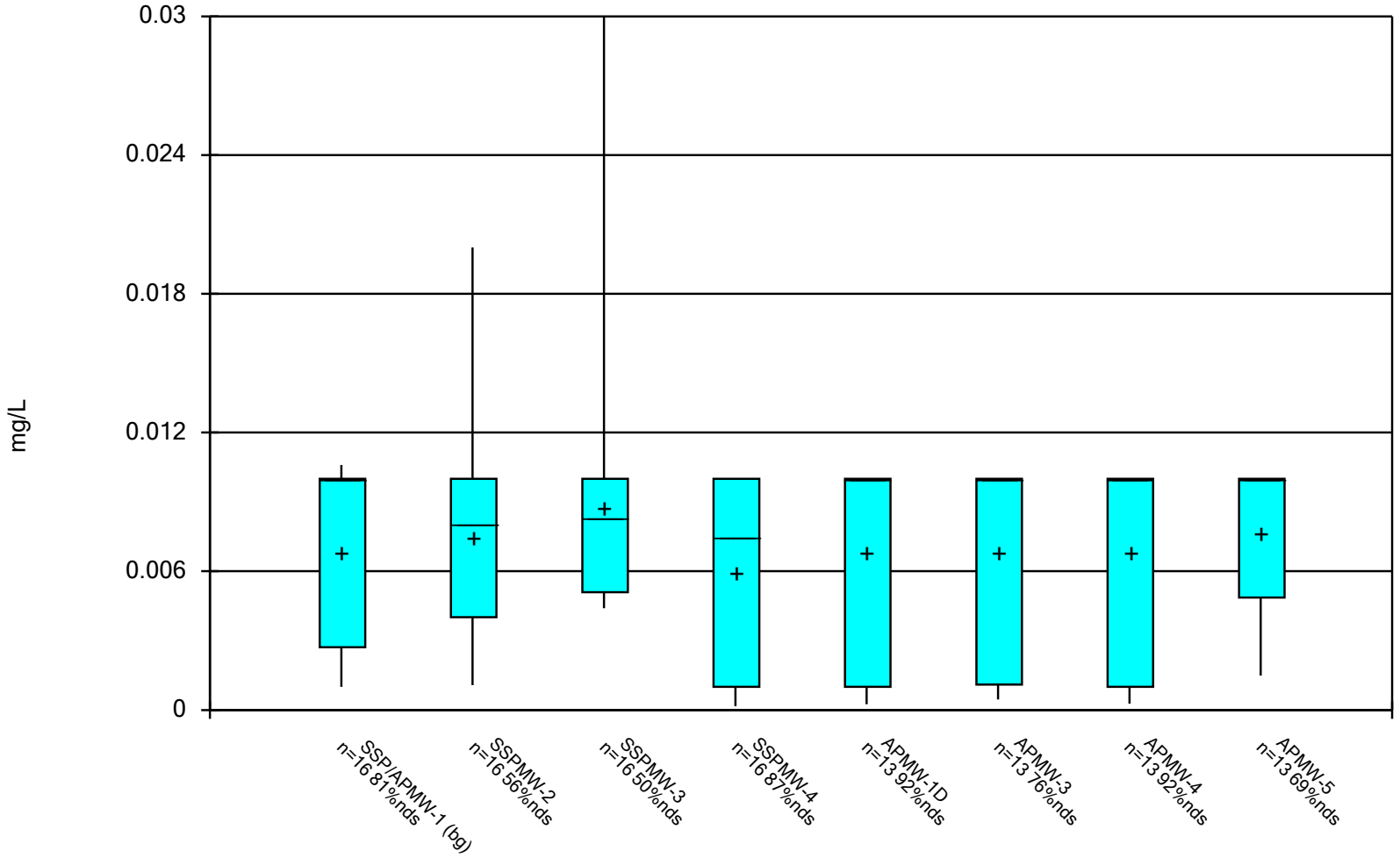
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

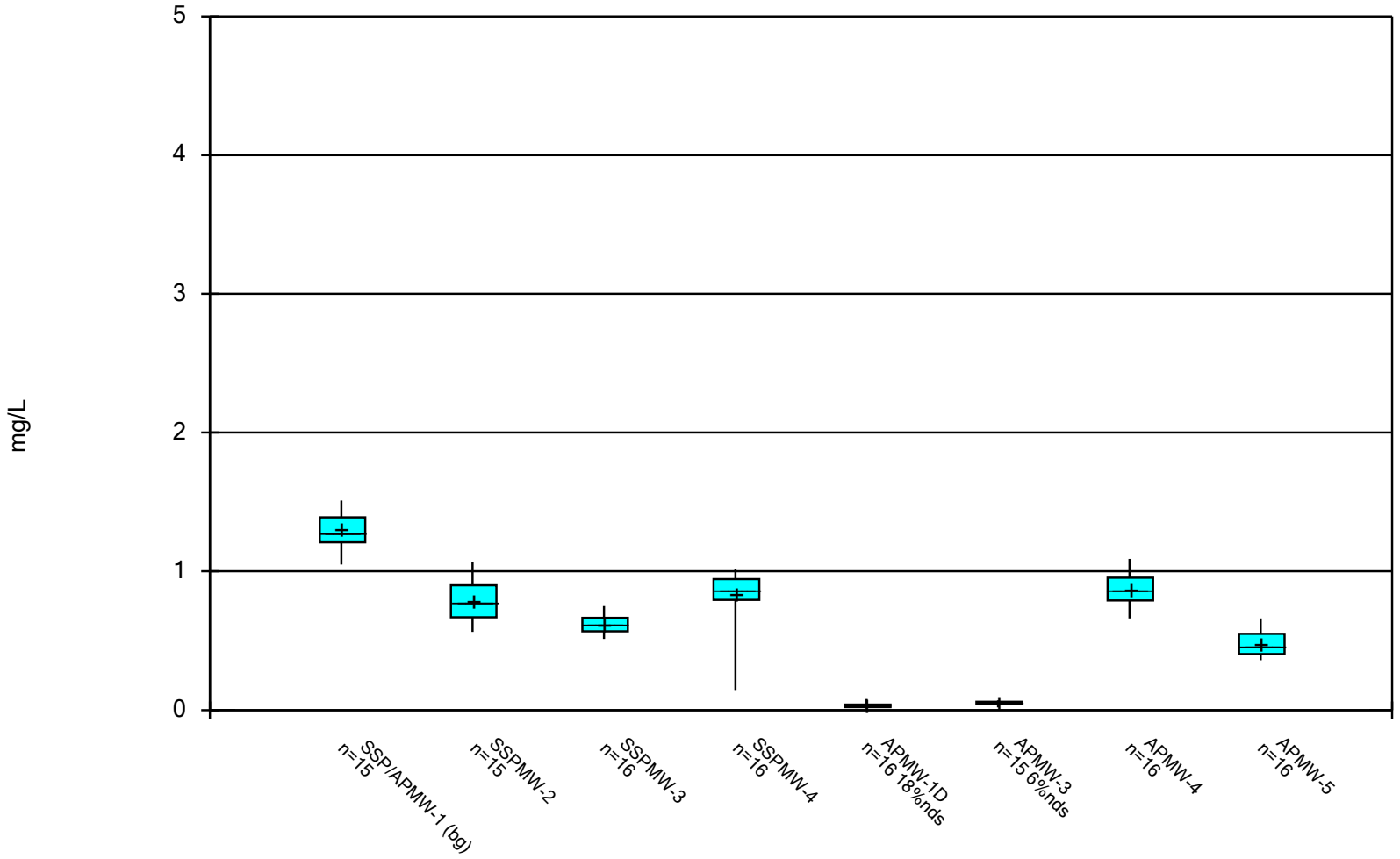
Box & Whiskers Plot



Constituent: Lead Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

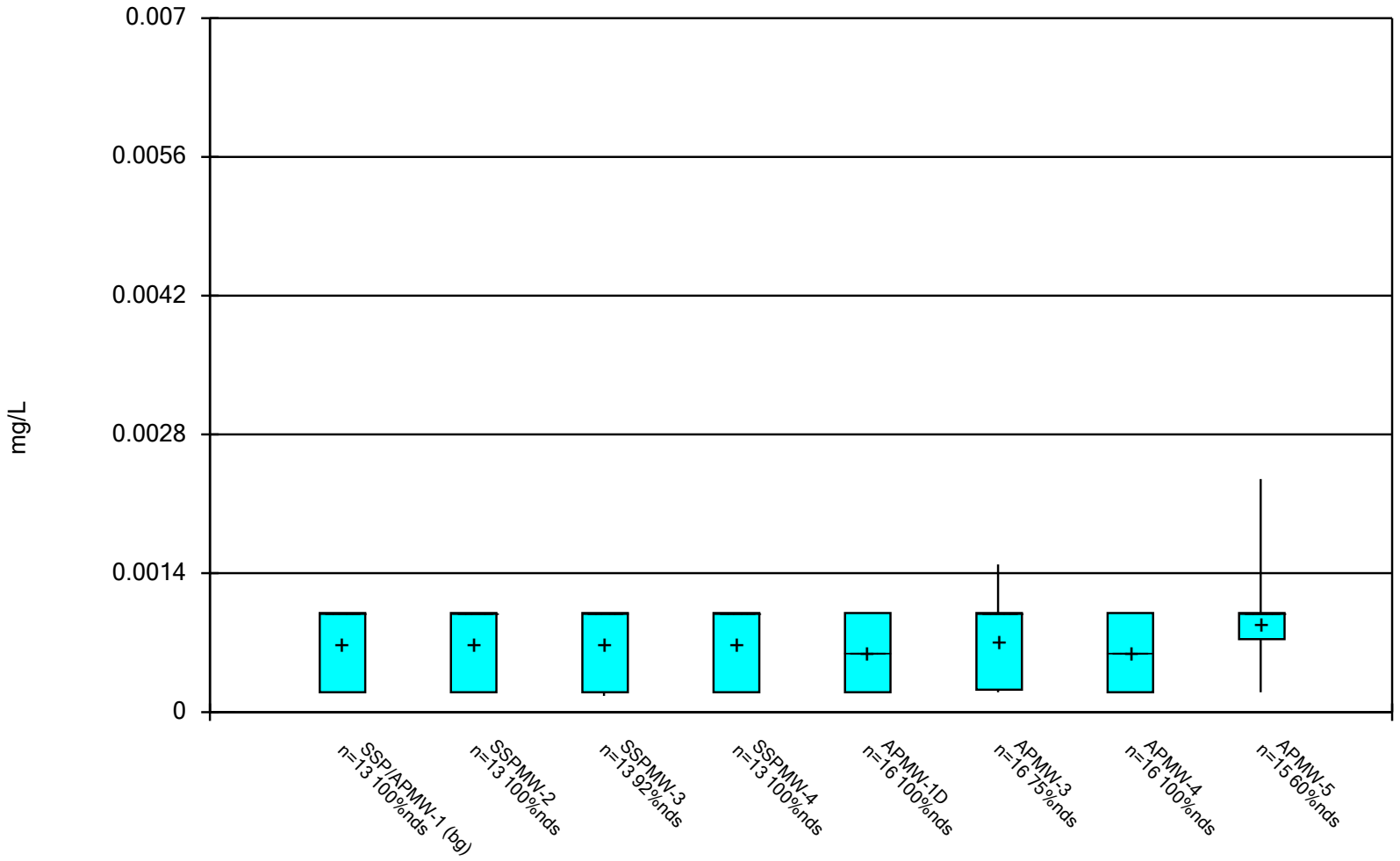
Box & Whiskers Plot



Constituent: Lithium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

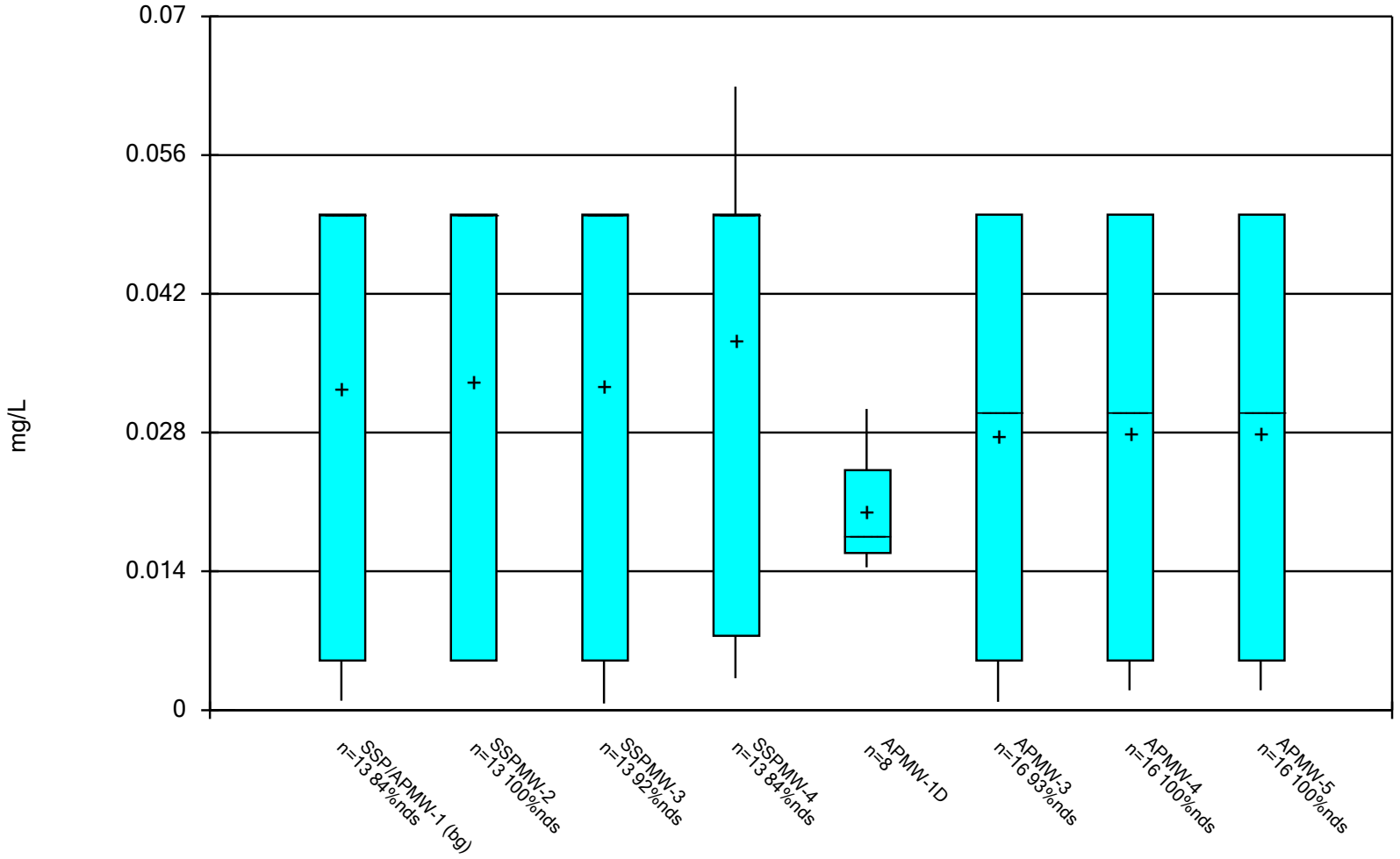
Box & Whiskers Plot



Constituent: Mercury Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

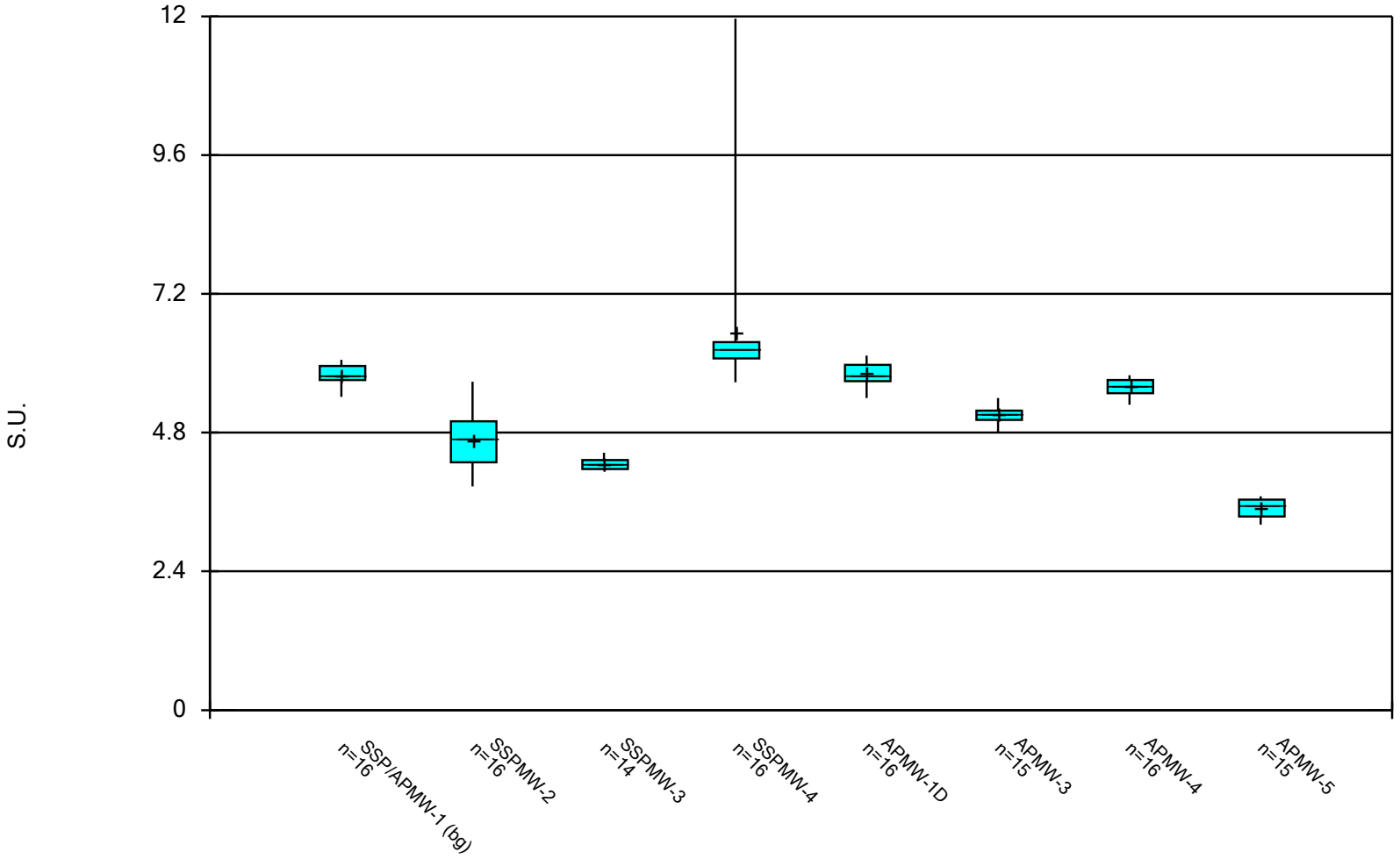
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

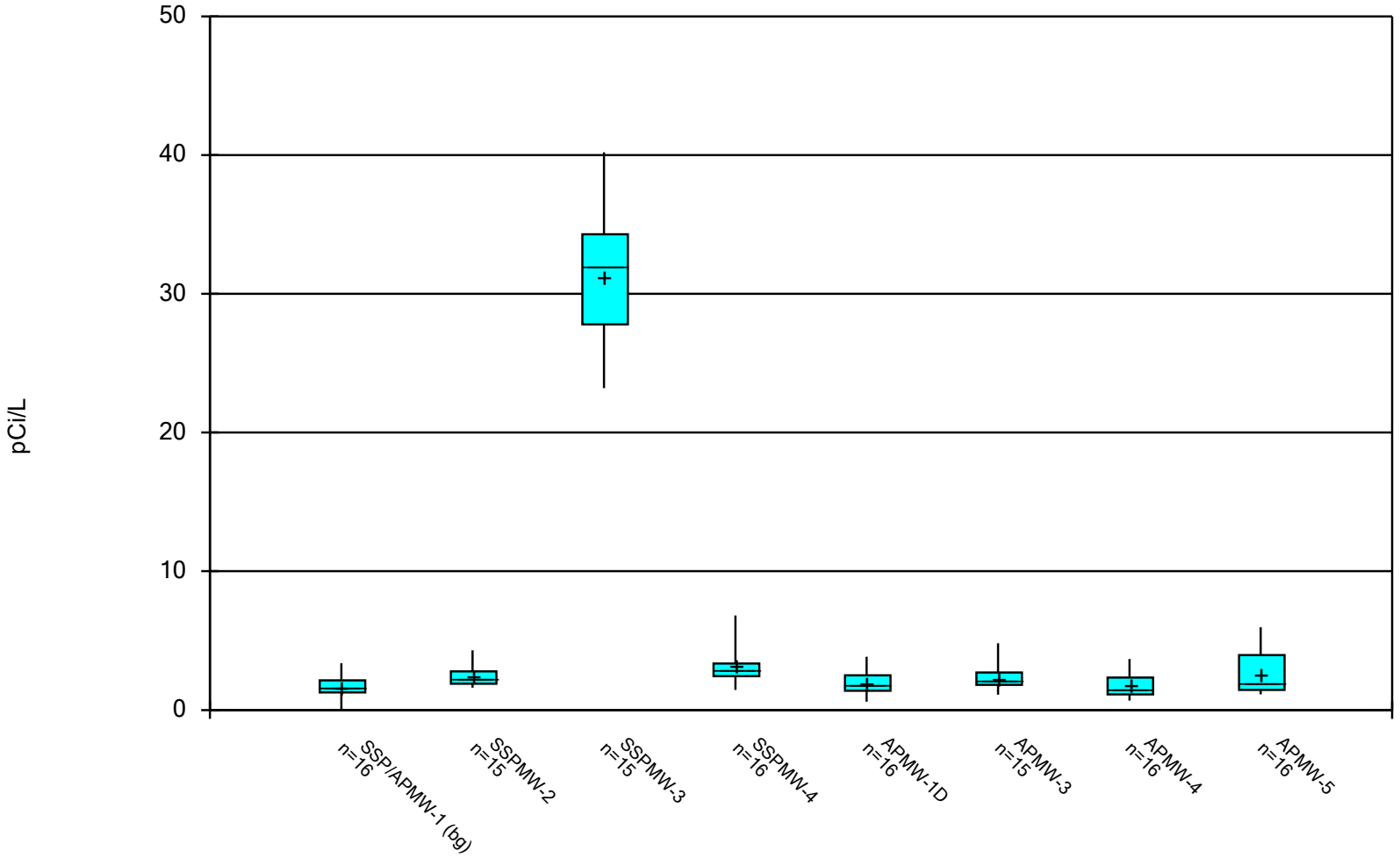
Box & Whiskers Plot



Constituent: pH Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

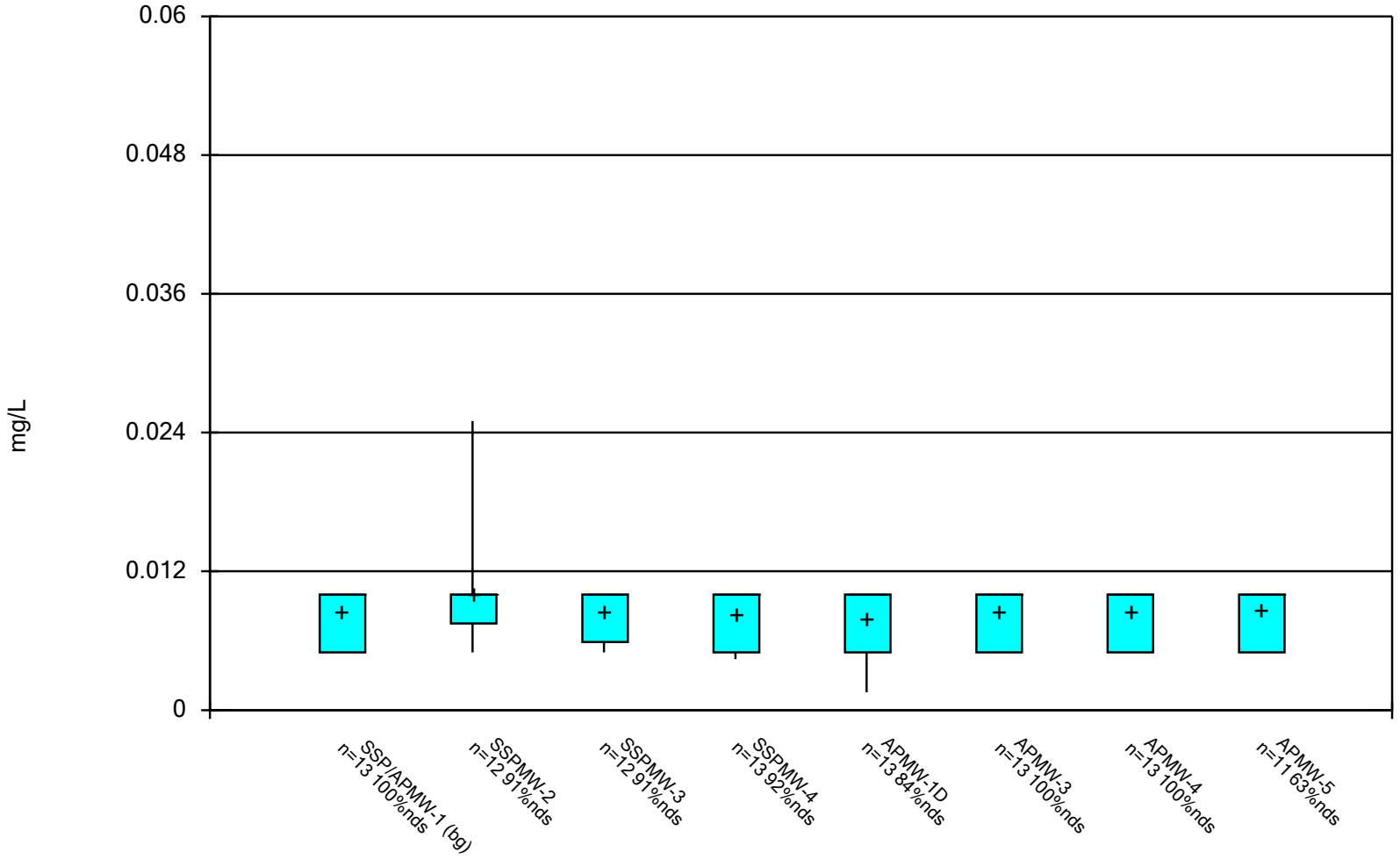
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

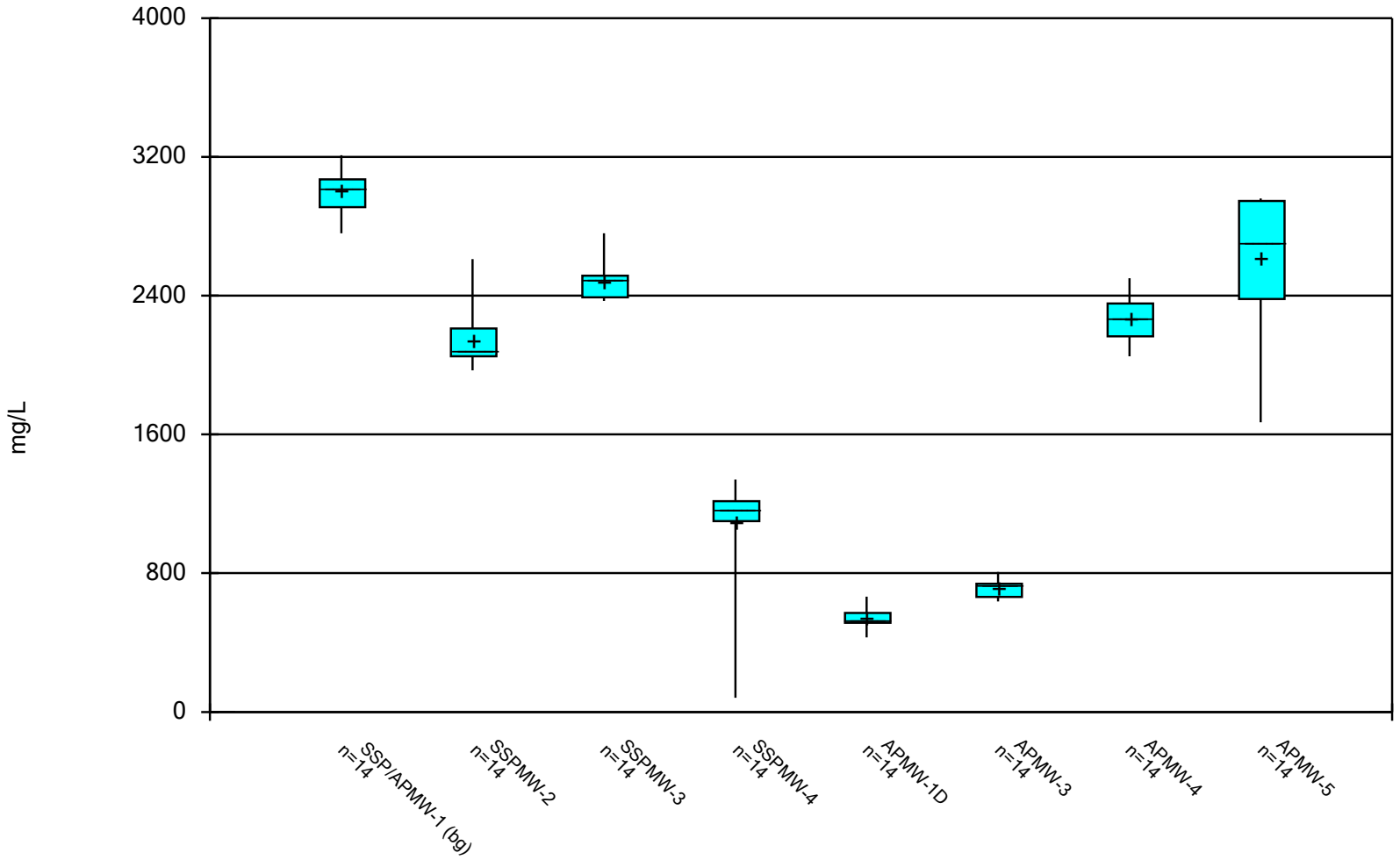
Box & Whiskers Plot



Constituent: Selenium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

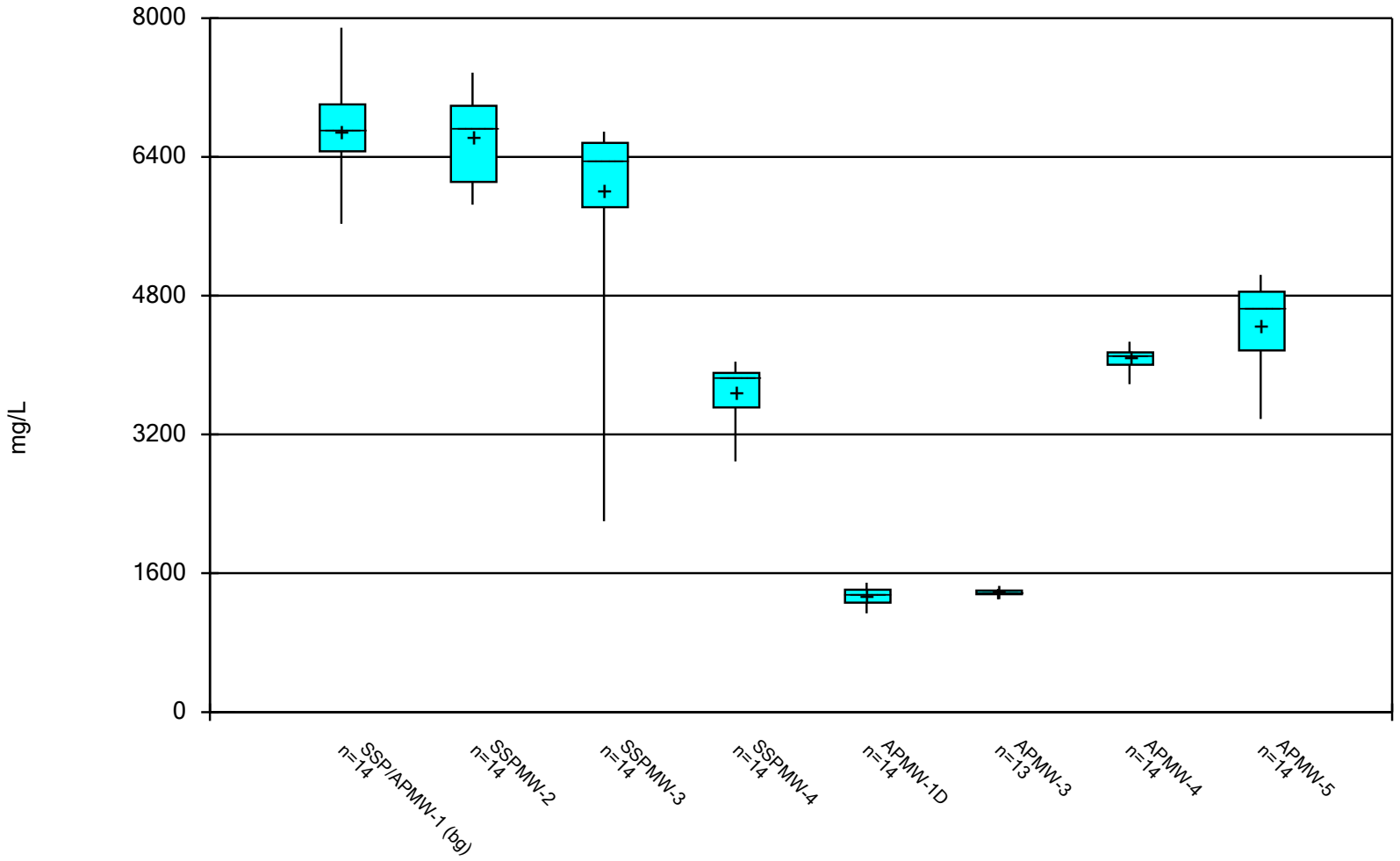
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

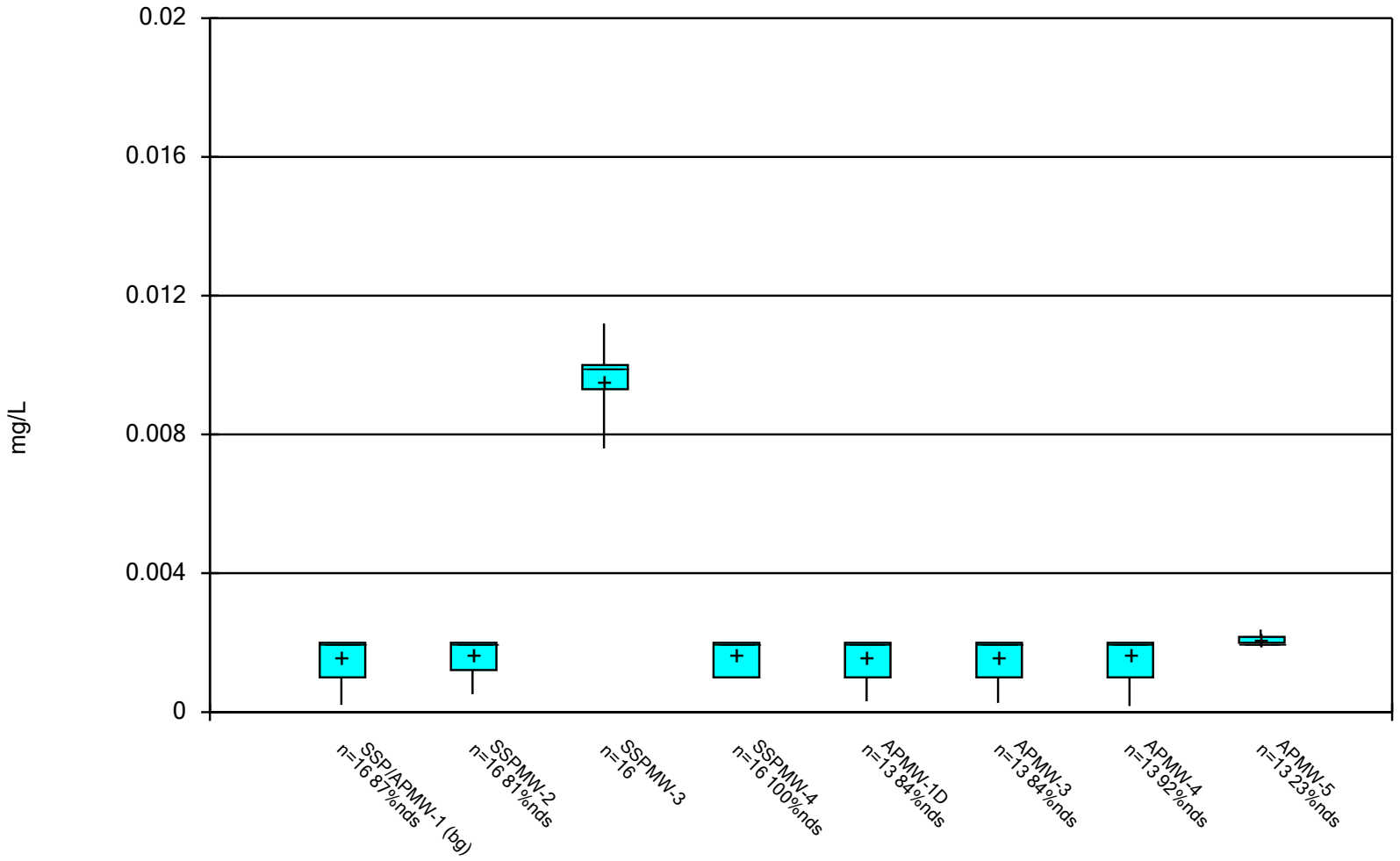
Box & Whiskers Plot



Constituent: TDS Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 8/19/2021 10:45 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:46 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Antimony (mg/L)	SSP/APMW-1 (bg)	13	0.004343	0.006	0.000721	0.006	84.62
Antimony (mg/L)	SSPMW-2	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SSPMW-3	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	SSPMW-4	13	0.004417	0.006	0.000415	0.006	92.31
Antimony (mg/L)	APMW-1D	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-3	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-4	13	0.004538	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-5	13	0.004323	0.006	0.000529	0.006	84.62
Arsenic (mg/L)	SSP/APMW-1 (bg)	16	0.006993	0.007505	0.00169	0.01	56.25
Arsenic (mg/L)	SSPMW-2	16	0.009852	0.01	0.00498	0.0303	50
Arsenic (mg/L)	SSPMW-3	16	0.009466	0.01	0.00314	0.025	62.5
Arsenic (mg/L)	SSPMW-4	16	0.006272	0.0075	0.000344	0.01	75
Arsenic (mg/L)	APMW-1D	16	0.009386	0.009765	0.00756	0.01	18.75
Arsenic (mg/L)	APMW-3	16	0.006695	0.01	0.001	0.01	81.25
Arsenic (mg/L)	APMW-4	16	0.006289	0.0075	0.000628	0.01	93.75
Arsenic (mg/L)	APMW-5	16	0.01267	0.01	0.005	0.025	18.75
Barium (mg/L)	SSP/APMW-1 (bg)	13	0.06011	0.05	0.01	0.184	15.38
Barium (mg/L)	SSPMW-2	13	0.0795	0.0497	0.0197	0.39	7.692
Barium (mg/L)	SSPMW-3	13	0.03897	0.03	0.0192	0.1	7.692
Barium (mg/L)	SSPMW-4	13	0.04289	0.03	0.02	0.103	7.692
Barium (mg/L)	APMW-1D	13	0.02136	0.0137	0.01	0.1	7.692
Barium (mg/L)	APMW-3	13	0.03085	0.0238	0.02	0.1	7.692
Barium (mg/L)	APMW-4	12	0.01643	0.01495	0.01	0.03	0
Barium (mg/L)	APMW-5	13	0.02836	0.02	0.005	0.1	23.08
Beryllium (m...	SSP/APMW-1 (bg)	15	0.002305	0.003	0.001	0.004	80
Beryllium (m...	SSPMW-2	16	0.05083	0.04305	0.006	0.231	0
Beryllium (m...	SSPMW-3	16	0.1148	0.117	0.0992	0.139	0
Beryllium (m...	SSPMW-4	16	0.002438	0.003	0.001	0.004	93.75
Beryllium (m...	APMW-1D	16	0.002438	0.003	0.001	0.004	100
Beryllium (m...	APMW-3	16	0.002936	0.003	0.002	0.004	12.5
Beryllium (m...	APMW-4	16	0.002353	0.003	0.000204	0.004	87.5
Beryllium (m...	APMW-5	16	0.07691	0.0794	0.0492	0.0935	0
Boron (mg/L)	SSP/APMW-1 (bg)	14	0.852	0.81	0.5	1.43	7.143
Boron (mg/L)	SSPMW-2	14	0.6579	0.5925	0.45	1.14	14.29
Boron (mg/L)	SSPMW-3	14	2.724	2.74	2.24	3.2	0
Boron (mg/L)	SSPMW-4	14	1.187	1.29	0.102	1.51	7.143
Boron (mg/L)	APMW-1D	12	4.7	4.76	4.28	5.15	0
Boron (mg/L)	APMW-3	14	3.696	3.65	3.23	4.18	0
Boron (mg/L)	APMW-4	14	2.169	2.105	1.89	2.58	0
Boron (mg/L)	APMW-5	13	3.404	3.38	3.25	3.66	0
Cadmium (mg/L)	SSP/APMW-1 (bg)	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	SSPMW-2	14	0.004589	0.005	0.00109	0.005	71.43
Cadmium (mg/L)	SSPMW-3	16	0.07089	0.07235	0.05	0.0877	0
Cadmium (mg/L)	SSPMW-4	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	APMW-1D	16	0.003422	0.005	0.000343	0.005	87.5
Cadmium (mg/L)	APMW-3	16	0.004752	0.005	0.00382	0.005	62.5
Cadmium (mg/L)	APMW-4	16	0.0035	0.005	0.001	0.005	100
Cadmium (mg/L)	APMW-5	16	0.008524	0.009	0.00523	0.011	0
Calcium (mg/L)	SSP/APMW-1 (bg)	14	651.1	659	563	685	0
Calcium (mg/L)	SSPMW-2	14	824.9	830	658	931	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:46 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Calcium (mg/L)	SSPMW-3	14	685.1	693.5	618	722	0
Calcium (mg/L)	SSPMW-4	14	401.9	401	365	455	0
Calcium (mg/L)	APMW-1D	14	81.74	77.05	70	108	0
Calcium (mg/L)	APMW-3	14	133.4	134	121	146	0
Calcium (mg/L)	APMW-4	13	508.8	499	451	551	0
Calcium (mg/L)	APMW-5	14	472.3	492.5	354	601	0
Chloride (mg/L)	SSP/APMW-1 (bg)	14	1536	1525	1390	1730	0
Chloride (mg/L)	SSPMW-2	11	2558	2550	2300	2790	0
Chloride (mg/L)	SSPMW-3	14	1788	1790	1560	2060	0
Chloride (mg/L)	SSPMW-4	14	1100	1135	378	1350	0
Chloride (mg/L)	APMW-1D	14	205.7	224	141	233	0
Chloride (mg/L)	APMW-3	14	145.4	146	128	160	0
Chloride (mg/L)	APMW-4	14	481	485	427	543	0
Chloride (mg/L)	APMW-5	14	428.7	455.5	322	480	0
Chromium (mg/L)	SSP/APMW-1 (bg)	13	0.007191	0.01	0.002	0.01	92.31
Chromium (mg/L)	SSPMW-2	13	0.009462	0.01	0.002	0.04	92.31
Chromium (mg/L)	SSPMW-3	13	0.008822	0.01	0.00427	0.0135	61.54
Chromium (mg/L)	SSPMW-4	13	0.02102	0.01	0.002	0.176	76.92
Chromium (mg/L)	APMW-1D	13	0.007154	0.01	0.002	0.01	100
Chromium (mg/L)	APMW-3	13	0.007133	0.01	0.00173	0.01	92.31
Chromium (mg/L)	APMW-4	13	0.007154	0.01	0.002	0.01	100
Chromium (mg/L)	APMW-5	13	0.007175	0.01	0.002	0.01	92.31
Cobalt (mg/L)	SSP/APMW-1 (bg)	16	0.01102	0.0125	0.0005	0.02	87.5
Cobalt (mg/L)	SSPMW-2	16	0.07568	0.06	0.05	0.19	0
Cobalt (mg/L)	SSPMW-3	15	0.5793	0.58	0.506	0.64	0
Cobalt (mg/L)	SSPMW-4	16	0.01218	0.0125	0.000336	0.04	87.5
Cobalt (mg/L)	APMW-1D	8	0.01459	0.01445	0.0106	0.0177	0
Cobalt (mg/L)	APMW-3	15	0.04271	0.04	0.0306	0.05	0
Cobalt (mg/L)	APMW-4	16	0.01094	0.0125	0.0005	0.02	93.75
Cobalt (mg/L)	APMW-5	16	0.1646	0.174	0.115	0.2	0
Fluoride (mg/L)	SSP/APMW-1 (bg)	16	0.3889	0.2	0.1	1	43.75
Fluoride (mg/L)	SSPMW-2	16	0.5678	0.2965	0.1	2.56	25
Fluoride (mg/L)	SSPMW-3	14	0.7327	0.8	0.441	1	21.43
Fluoride (mg/L)	SSPMW-4	16	0.5229	0.1635	0.1	2.84	75
Fluoride (mg/L)	APMW-1D	16	0.7038	0.663	0.529	1	12.5
Fluoride (mg/L)	APMW-3	16	0.2367	0.1	0.0558	1	37.5
Fluoride (mg/L)	APMW-4	16	0.2812	0.1	0.0996	1	81.25
Fluoride (mg/L)	APMW-5	16	1.738	1.535	1	3.02	6.25
Lead (mg/L)	SSP/APMW-1 (bg)	16	0.006814	0.01	0.001	0.0106	81.25
Lead (mg/L)	SSPMW-2	16	0.007496	0.007985	0.00108	0.02	56.25
Lead (mg/L)	SSPMW-3	16	0.008811	0.00826	0.0044	0.03	50
Lead (mg/L)	SSPMW-4	16	0.005965	0.0075	0.000161	0.01	87.5
Lead (mg/L)	APMW-1D	13	0.006789	0.01	0.000256	0.01	92.31
Lead (mg/L)	APMW-3	13	0.00678	0.01	0.000456	0.01	76.92
Lead (mg/L)	APMW-4	13	0.00679	0.01	0.000276	0.01	92.31
Lead (mg/L)	APMW-5	13	0.007684	0.01	0.00149	0.01	69.23
Lithium (mg/L)	SSP/APMW-1 (bg)	15	1.297	1.28	1.05	1.51	0
Lithium (mg/L)	SSPMW-2	15	0.7961	0.77	0.564	1.07	0
Lithium (mg/L)	SSPMW-3	16	0.6234	0.625	0.514	0.75	0
Lithium (mg/L)	SSPMW-4	16	0.8367	0.87	0.146	1.02	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:46 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Lithium (mg/L)	APMW-1D	16	0.03571	0.03275	0.01	0.08	18.75
Lithium (mg/L)	APMW-3	15	0.05301	0.0531	0.02	0.07	6.667
Lithium (mg/L)	APMW-4	16	0.8731	0.8725	0.661	1.09	0
Lithium (mg/L)	APMW-5	16	0.4783	0.464	0.36	0.66	0
Mercury (mg/L)	SSP/APMW-1 (bg)	13	0.000...	0.001	0.0002	0.001	100
Mercury (mg/L)	SSPMW-2	13	0.000...	0.001	0.0002	0.001	100
Mercury (mg/L)	SSPMW-3	13	0.000...	0.001	0.000162	0.001	92.31
Mercury (mg/L)	SSPMW-4	13	0.000...	0.001	0.0002	0.001	100
Mercury (mg/L)	APMW-1D	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	APMW-3	16	0.000...	0.001	0.0002	0.00149	75
Mercury (mg/L)	APMW-4	16	0.0006	0.0006	0.0002	0.001	100
Mercury (mg/L)	APMW-5	15	0.000...	0.001	0.0002	0.00235	60
Molybdenum (...	SSP/APMW-1 (bg)	13	0.03253	0.05	0.000961	0.05	84.62
Molybdenum (...	SSPMW-2	13	0.03308	0.05	0.005	0.05	100
Molybdenum (...	SSPMW-3	13	0.03274	0.05	0.000667	0.05	92.31
Molybdenum (...	SSPMW-4	13	0.03739	0.05	0.00321	0.0629	84.62
Molybdenum (...	APMW-1D	8	0.02	0.01755	0.0144	0.0304	0
Molybdenum (...	APMW-3	16	0.02768	0.03	0.000848	0.05	93.75
Molybdenum (...	APMW-4	16	0.02794	0.03	0.002	0.05	100
Molybdenum (...	APMW-5	16	0.02794	0.03	0.002	0.05	100
pH (S.U.)	SSP/APMW-1 (bg)	16	5.804	5.8	5.42	6.06	0
pH (S.U.)	SSPMW-2	16	4.688	4.71	3.87	5.68	0
pH (S.U.)	SSPMW-3	14	4.267	4.275	4.15	4.45	0
pH (S.U.)	SSPMW-4	16	6.551	6.26	5.67	11.96	0
pH (S.U.)	APMW-1D	16	5.818	5.805	5.4	6.13	0
pH (S.U.)	APMW-3	15	5.111	5.11	4.79	5.4	0
pH (S.U.)	APMW-4	16	5.598	5.62	5.28	5.79	0
pH (S.U.)	APMW-5	15	3.497	3.55	3.21	3.7	0
Radium 226 +...	SSP/APMW-1 (bg)	16	1.69	1.605	-0.06	3.38	0
Radium 226 +...	SSPMW-2	15	2.401	2.27	1.62	4.3	0
Radium 226 +...	SSPMW-3	15	31.15	32	23.2	40.2	0
Radium 226 +...	SSPMW-4	16	3.178	2.91	1.46	6.82	0
Radium 226 +...	APMW-1D	16	1.938	1.83	0.6	3.83	0
Radium 226 +...	APMW-3	15	2.301	2.09	1.11	4.8	0
Radium 226 +...	APMW-4	16	1.772	1.495	0.678	3.67	0
Radium 226 +...	APMW-5	16	2.645	1.95	1.12	5.96	0
Selenium (mg/L)	SSP/APMW-1 (bg)	13	0.008462	0.01	0.005	0.01	100
Selenium (mg/L)	SSPMW-2	12	0.01	0.01	0.005	0.025	91.67
Selenium (mg/L)	SSPMW-3	12	0.00848	0.01	0.005	0.01	91.67
Selenium (mg/L)	SSPMW-4	13	0.008416	0.01	0.00441	0.01	92.31
Selenium (mg/L)	APMW-1D	13	0.007937	0.01	0.00154	0.01	84.62
Selenium (mg/L)	APMW-3	13	0.008462	0.01	0.005	0.01	100
Selenium (mg/L)	APMW-4	13	0.008462	0.01	0.005	0.01	100
Selenium (mg/L)	APMW-5	11	0.008636	0.01	0.005	0.01	63.64
Sulfate (mg/L)	SSP/APMW-1 (bg)	14	3002	3015	2760	3210	0
Sulfate (mg/L)	SSPMW-2	14	2139	2080	1970	2610	0
Sulfate (mg/L)	SSPMW-3	14	2480	2490	2370	2760	0
Sulfate (mg/L)	SSPMW-4	14	1095	1175	82.2	1340	0
Sulfate (mg/L)	APMW-1D	14	538.4	529.5	430	664	0
Sulfate (mg/L)	APMW-3	14	712.9	725.5	637	807	0

Box & Whiskers Plot

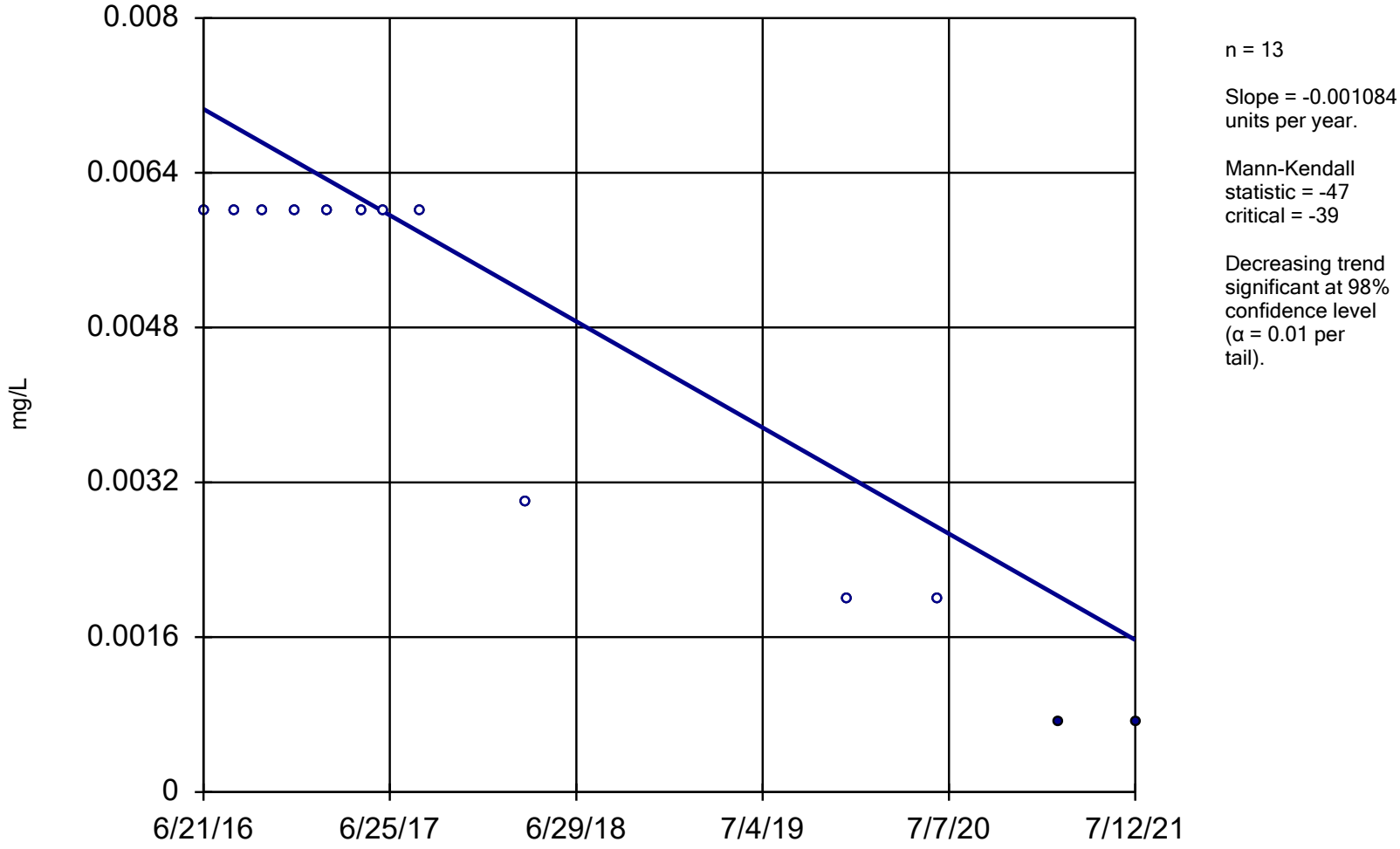
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:46 AM

Constituent	Well	N	Mean	Median	Min.	Max.	%NDs
Sulfate (mg/L)	APMW-4	14	2263	2270	2050	2500	0
Sulfate (mg/L)	APMW-5	14	2621	2710	1670	2960	0
TDS (mg/L)	SSP/APMW-1 (bg)	14	6689	6710	5630	7890	0
TDS (mg/L)	SSPMW-2	14	6630	6740	5850	7370	0
TDS (mg/L)	SSPMW-3	14	6021	6370	2200	6690	0
TDS (mg/L)	SSPMW-4	14	3694	3860	2890	4040	0
TDS (mg/L)	APMW-1D	14	1339	1355	1140	1490	0
TDS (mg/L)	APMW-3	13	1376	1390	1300	1420	0
TDS (mg/L)	APMW-4	14	4079	4125	3780	4270	0
TDS (mg/L)	APMW-5	14	4468	4660	3380	5040	0
Thallium (mg/L)	SSP/APMW-1 (bg)	16	0.0016	0.002	0.000206	0.002	87.5
Thallium (mg/L)	SSPMW-2	16	0.001684	0.002	0.000516	0.002	81.25
Thallium (mg/L)	SSPMW-3	16	0.009559	0.00991	0.0076	0.0112	0
Thallium (mg/L)	SSPMW-4	16	0.001688	0.002	0.001	0.002	100
Thallium (mg/L)	APMW-1D	13	0.001611	0.002	0.00031	0.002	84.62
Thallium (mg/L)	APMW-3	13	0.00158	0.002	0.000267	0.002	84.62
Thallium (mg/L)	APMW-4	13	0.001629	0.002	0.000172	0.002	92.31
Thallium (mg/L)	APMW-5	13	0.002083	0.002	0.002	0.00238	23.08

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 13

Slope = -0.001084 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

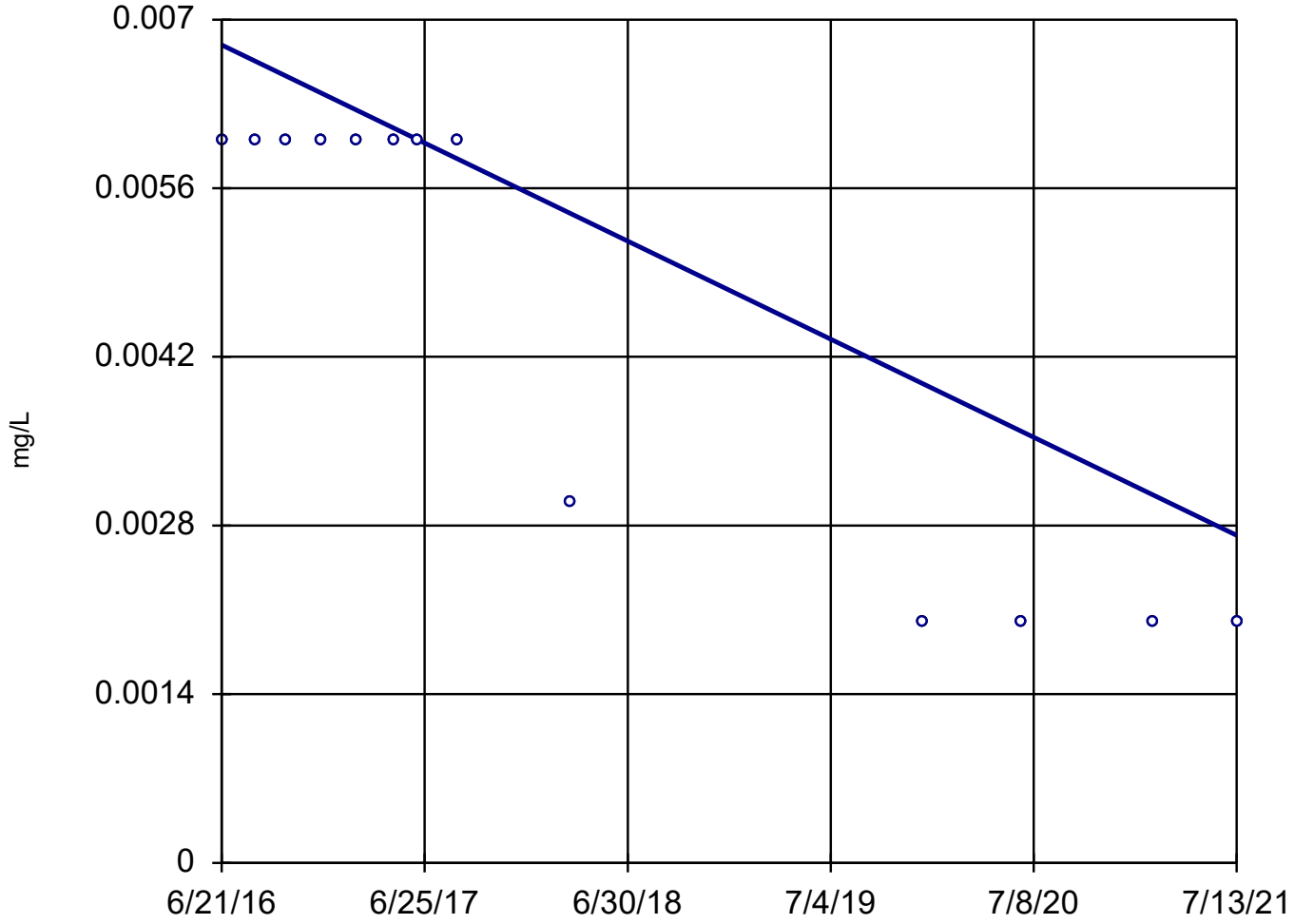
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 13

Slope = -0.000804 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

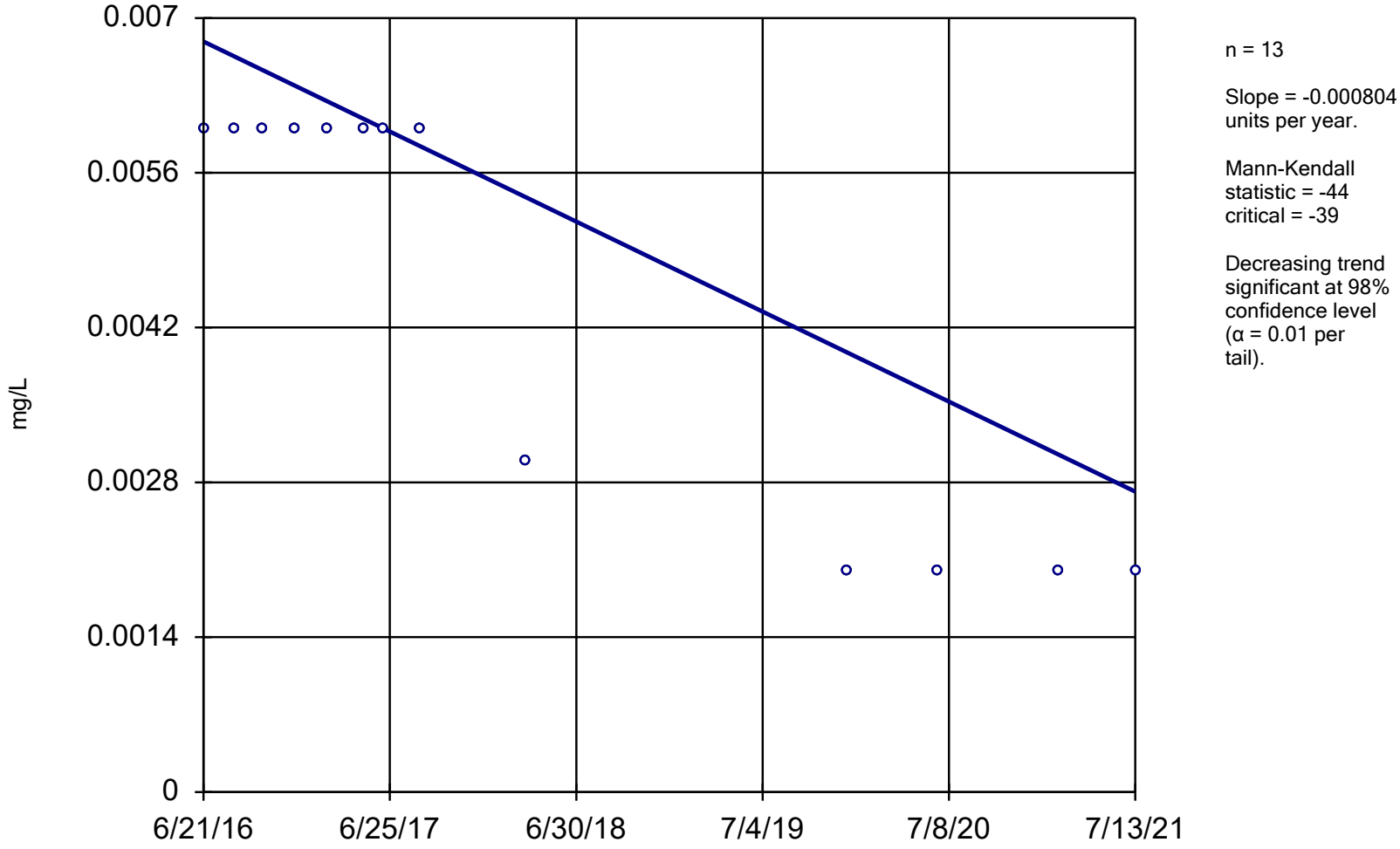
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 13

Slope = -0.000804 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

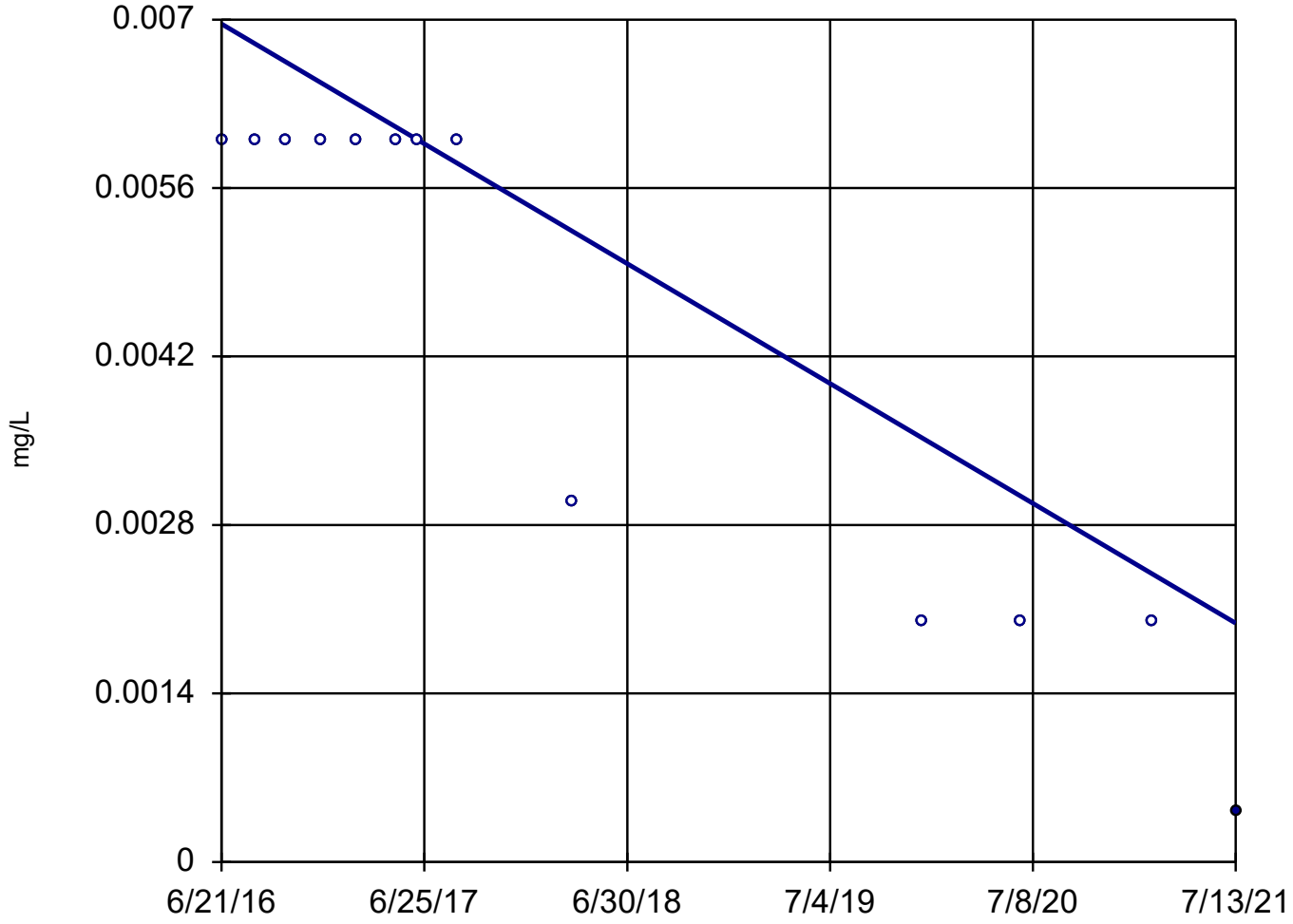
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 13

Slope = -0.0009835 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

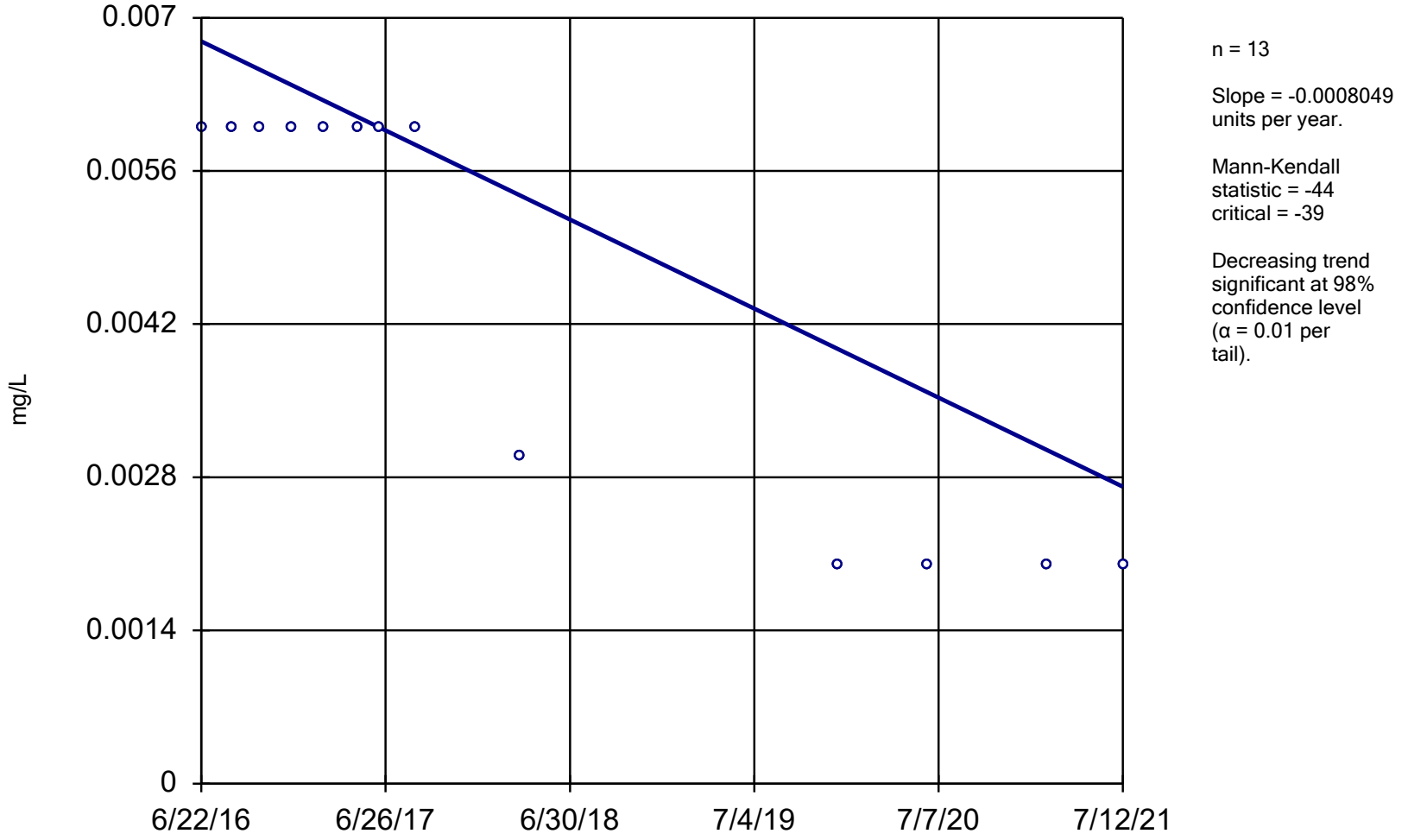
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

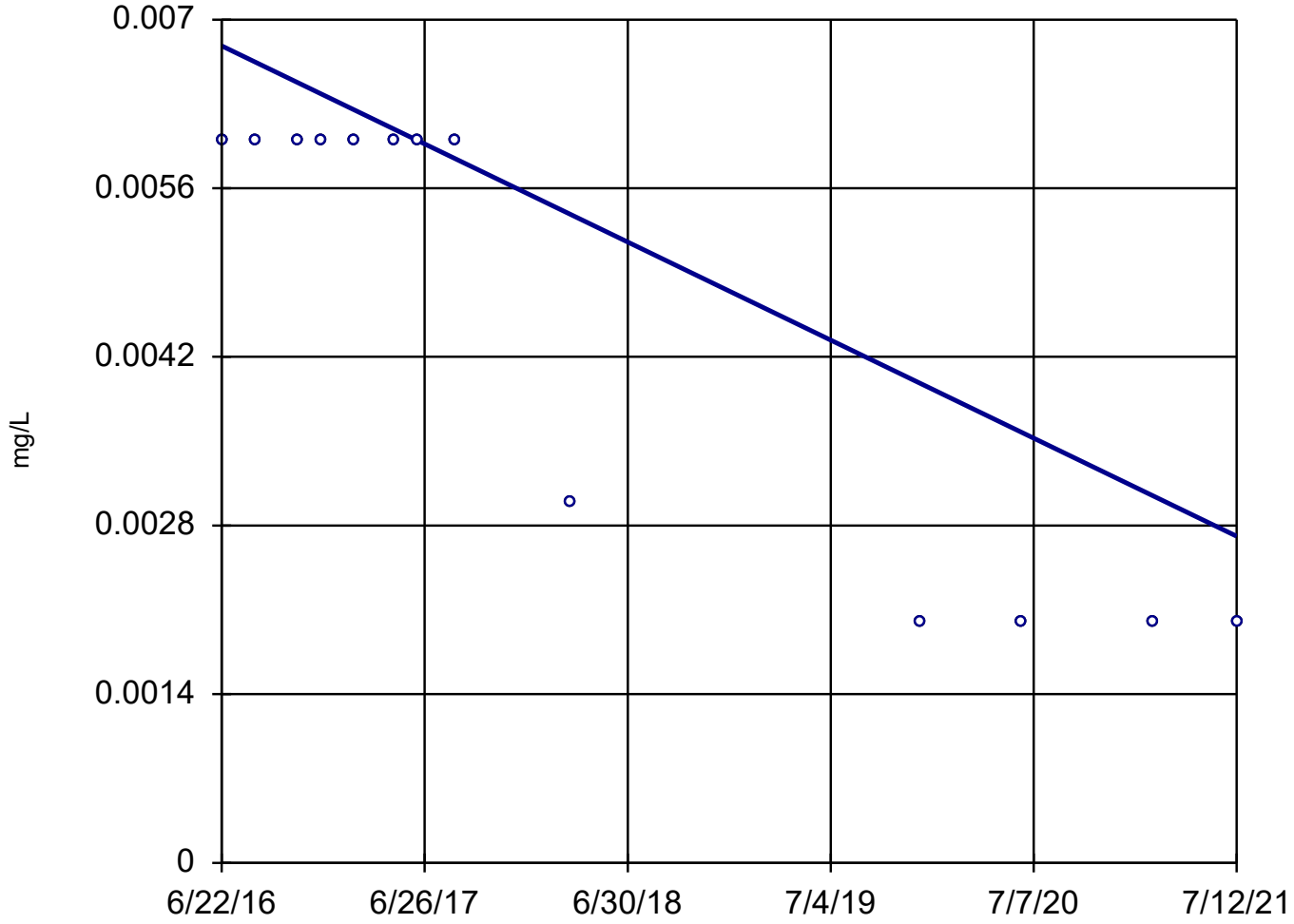
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 13

Slope = -0.0008049 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

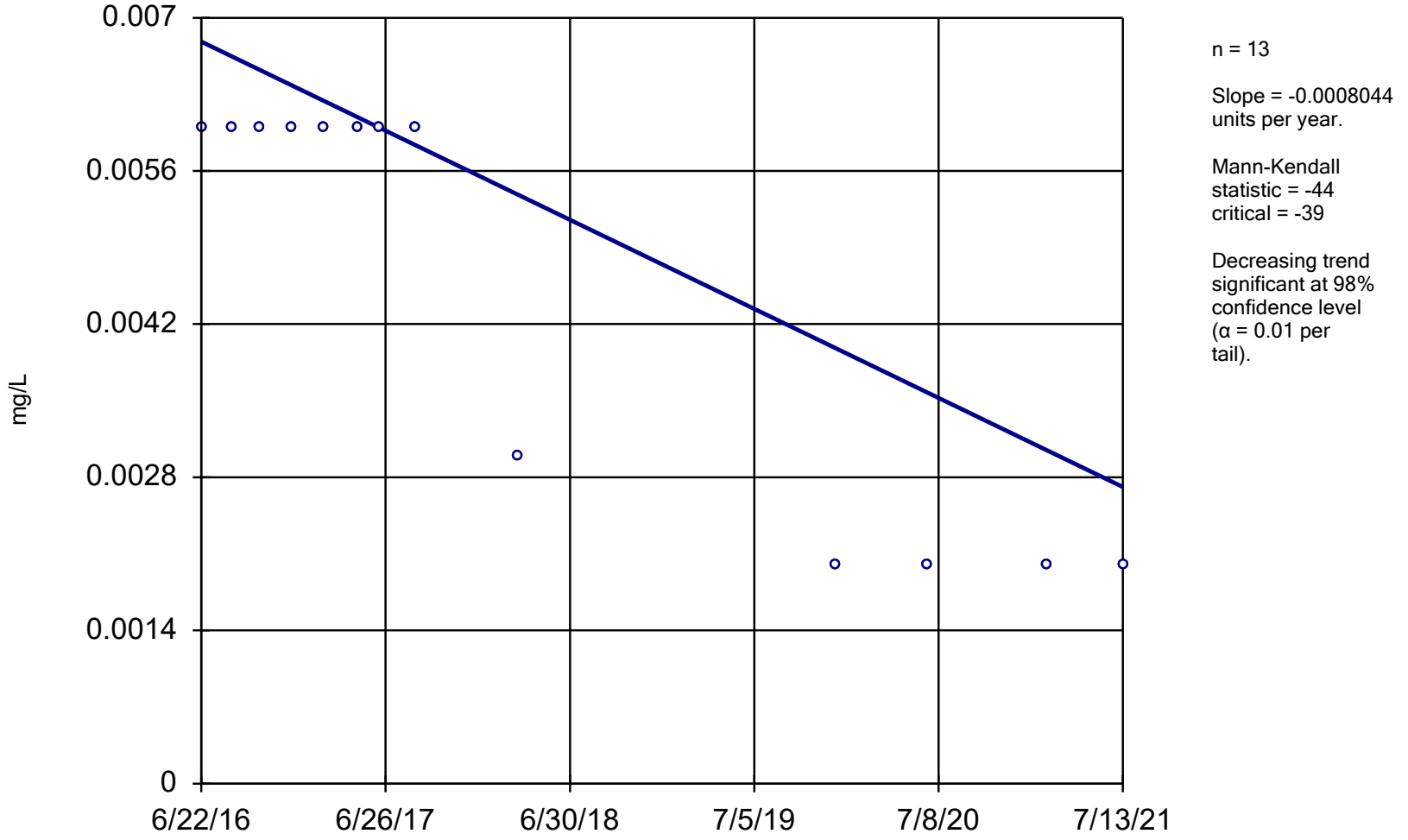
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 13

Slope = -0.0008044 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

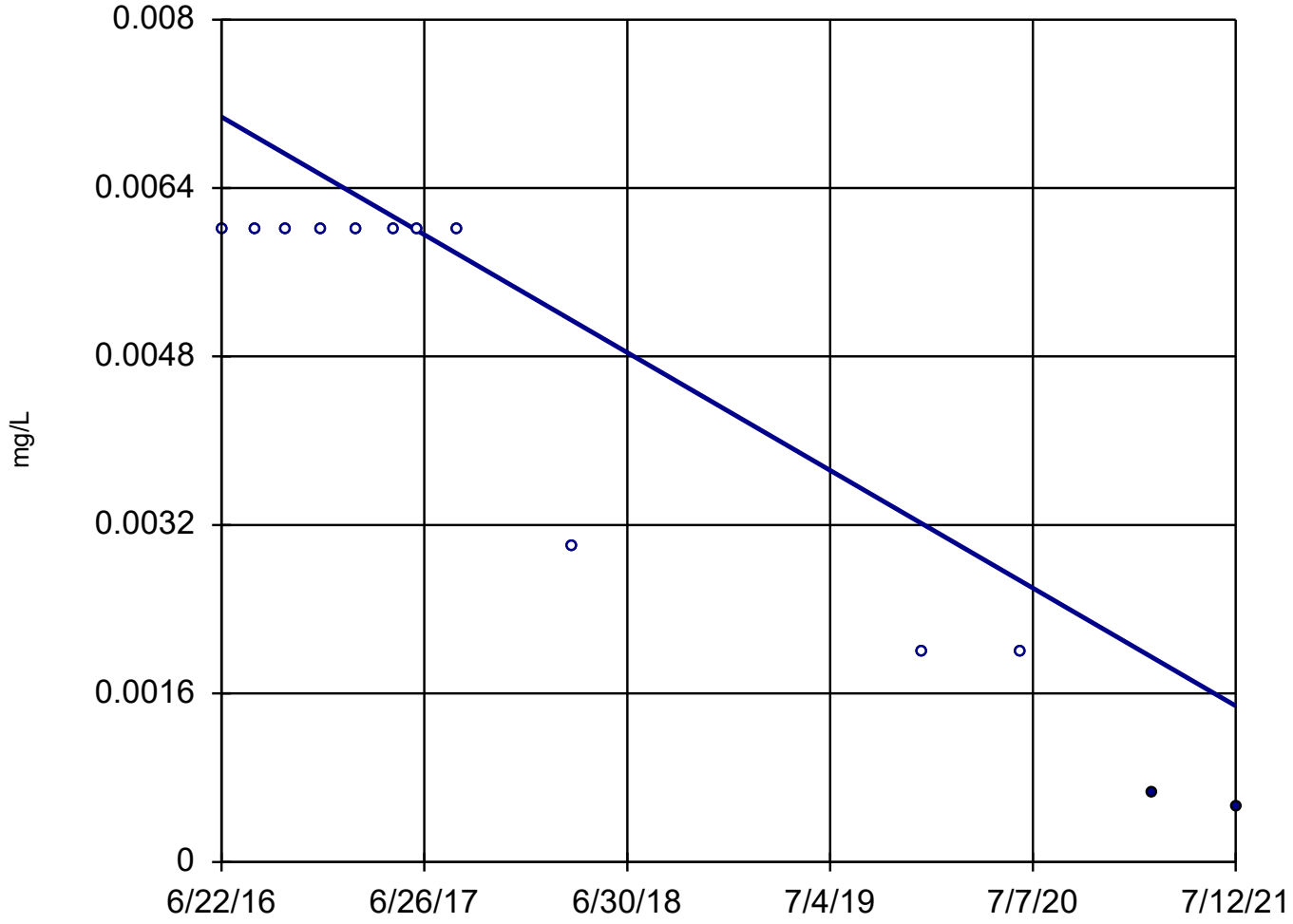
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 13

Slope = -0.001106 units per year.

Mann-Kendall statistic = -49
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

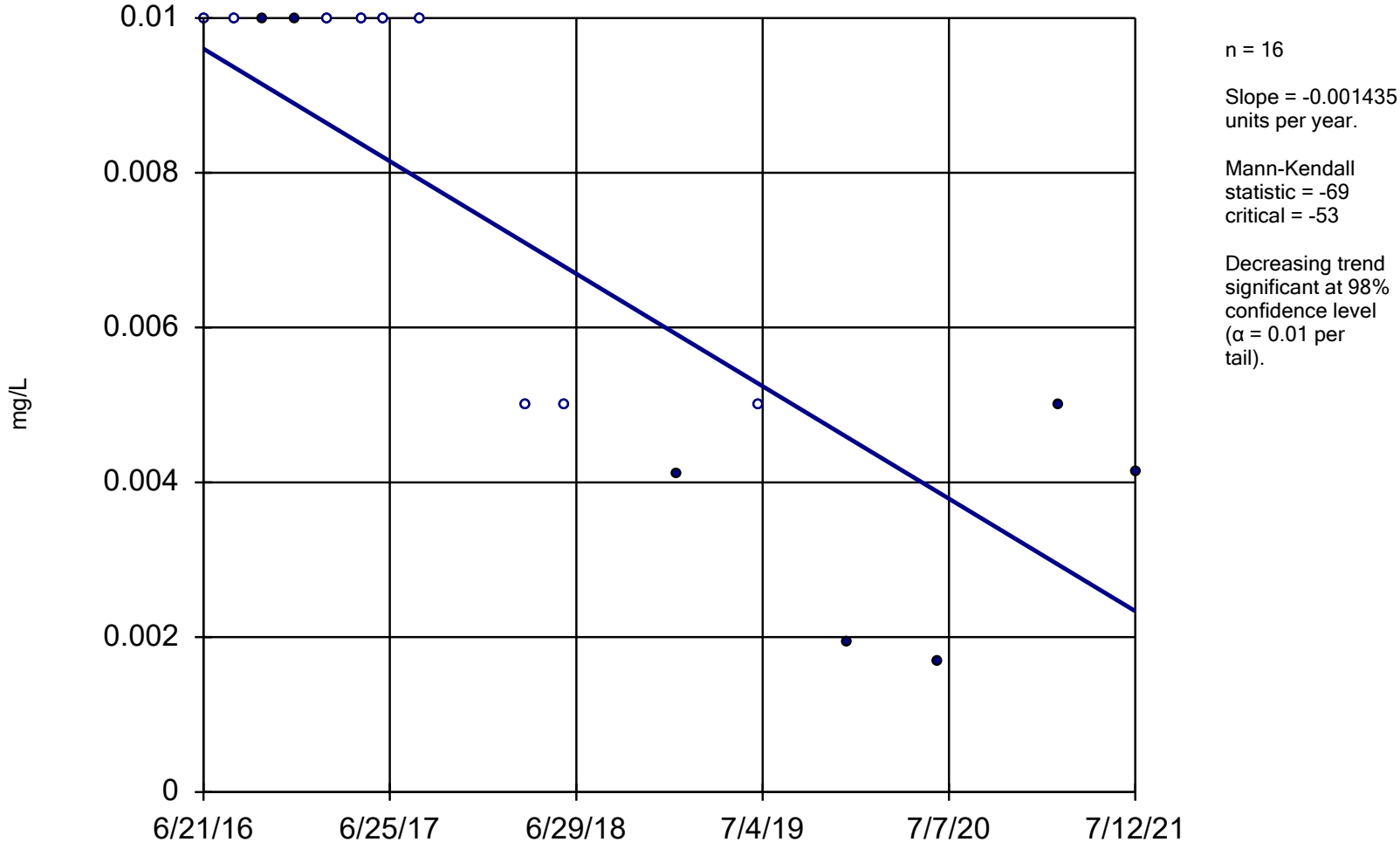
Constituent: Antimony Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 16

Slope = -0.001435 units per year.

Mann-Kendall statistic = -69
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

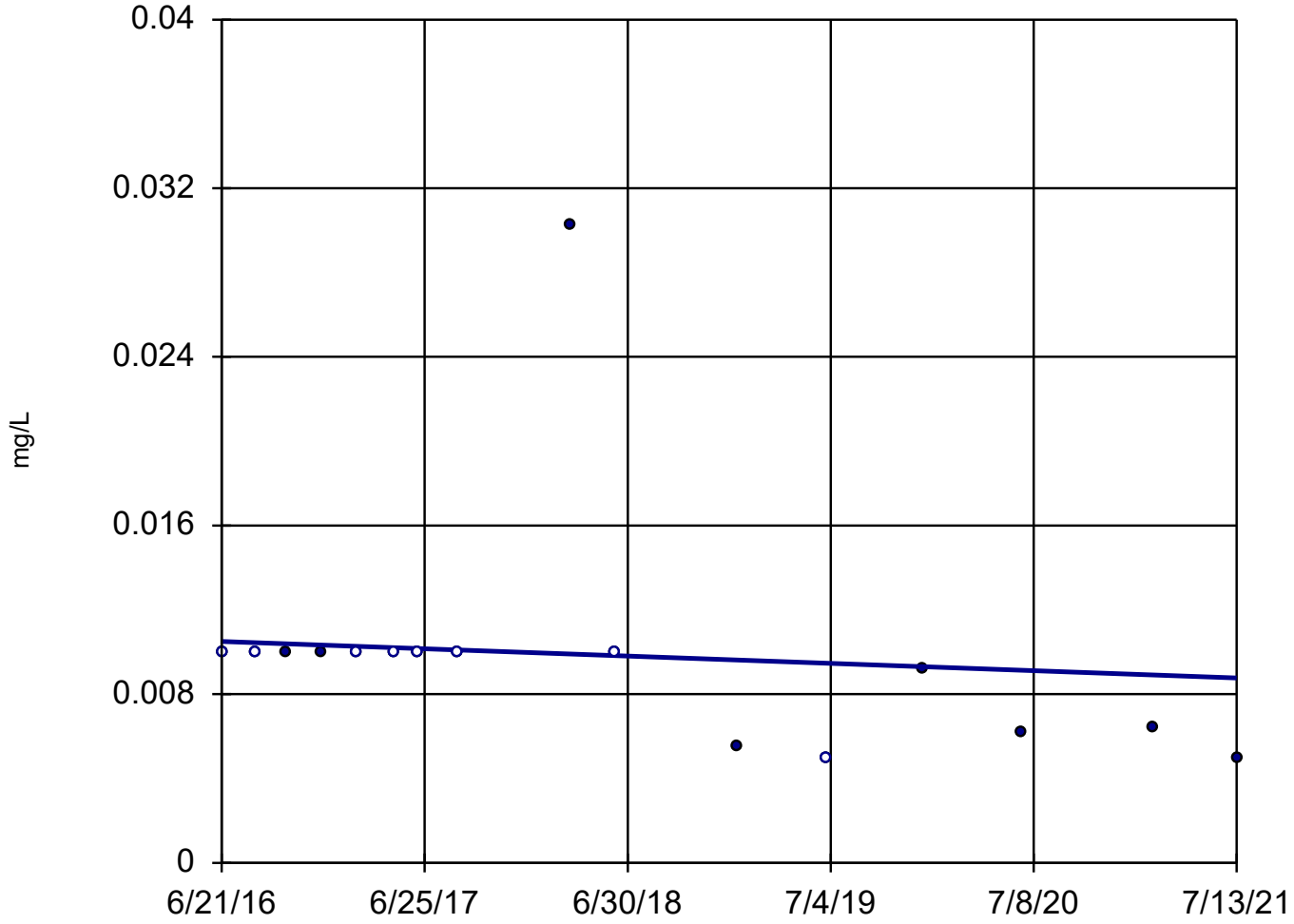
Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.0003401 units per year.

Mann-Kendall statistic = -54
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

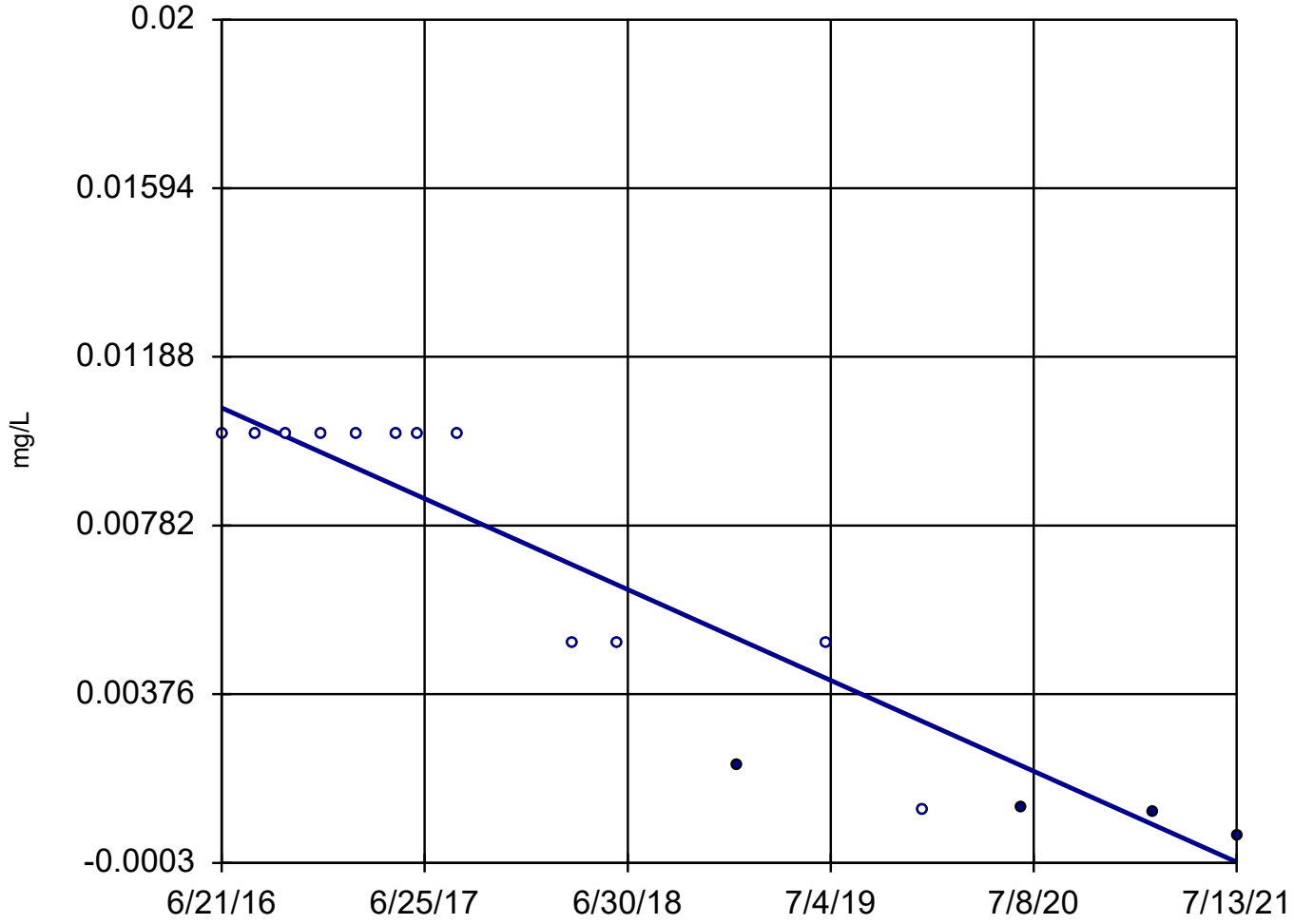
Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = -0.002159 units per year.

Mann-Kendall statistic = -85
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

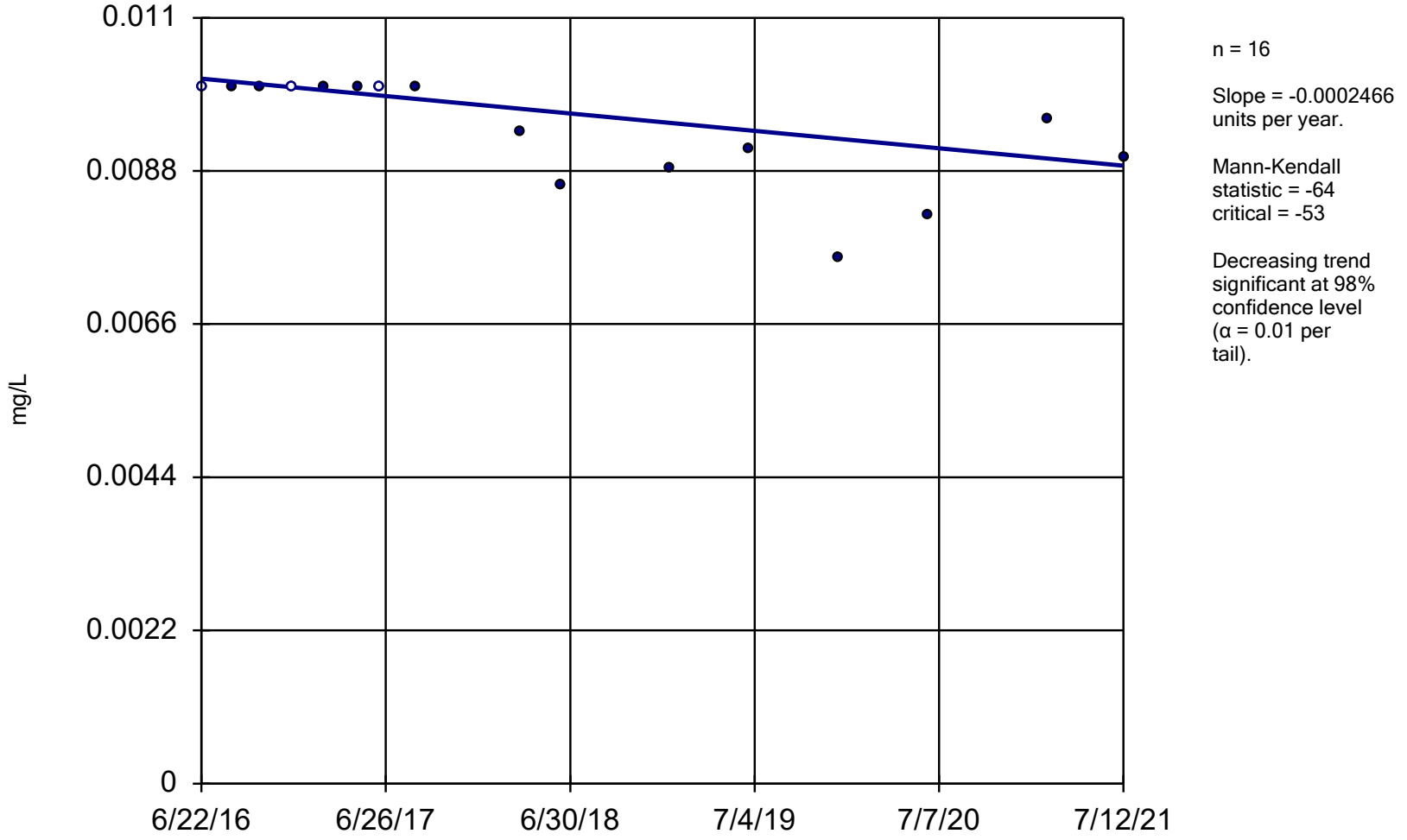
Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 16

Slope = -0.0002466 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

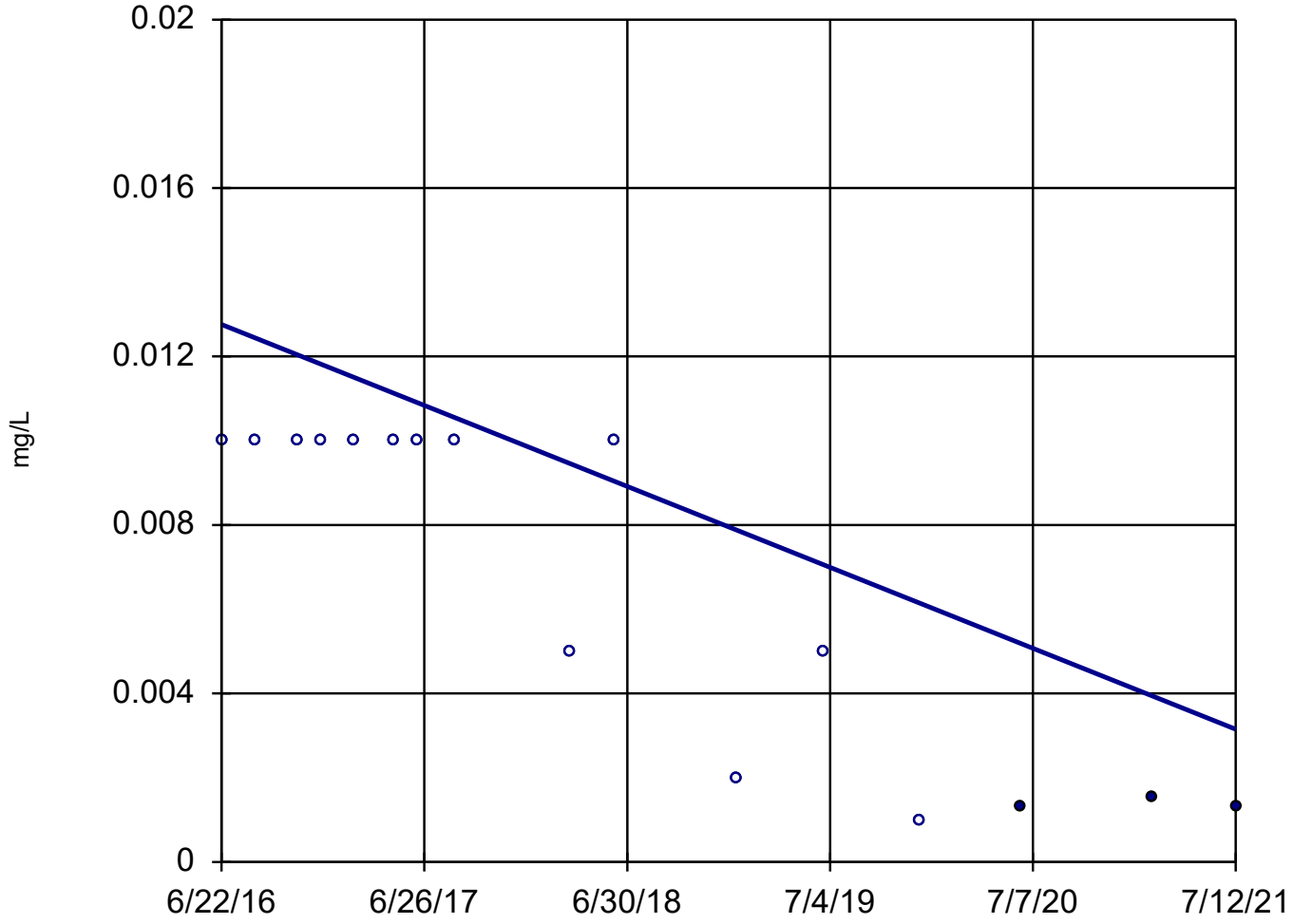
Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 16

Slope = -0.0019 units per year.

Mann-Kendall statistic = -70
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

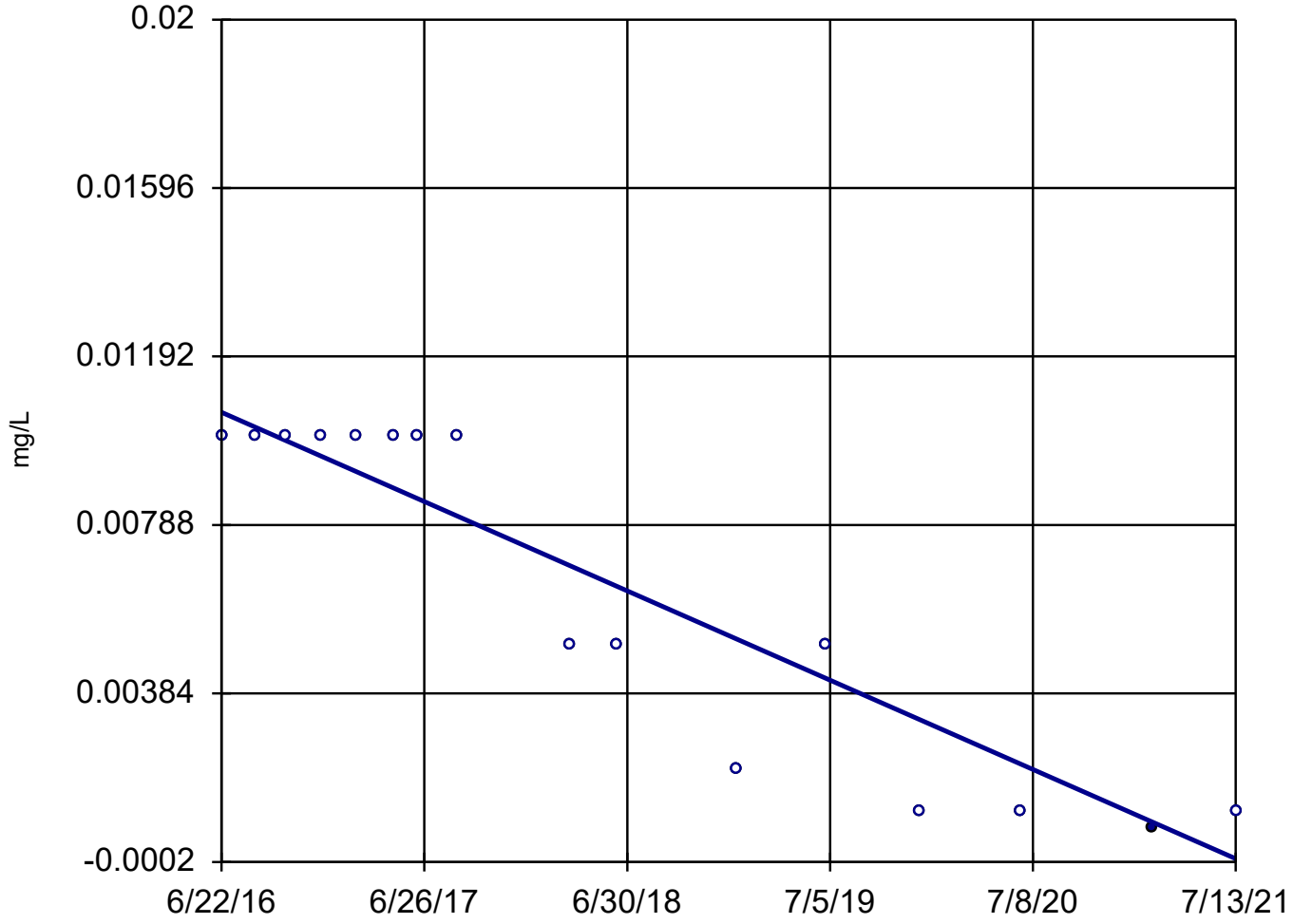
Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.002115 units per year.

Mann-Kendall statistic = -82
critical = -53

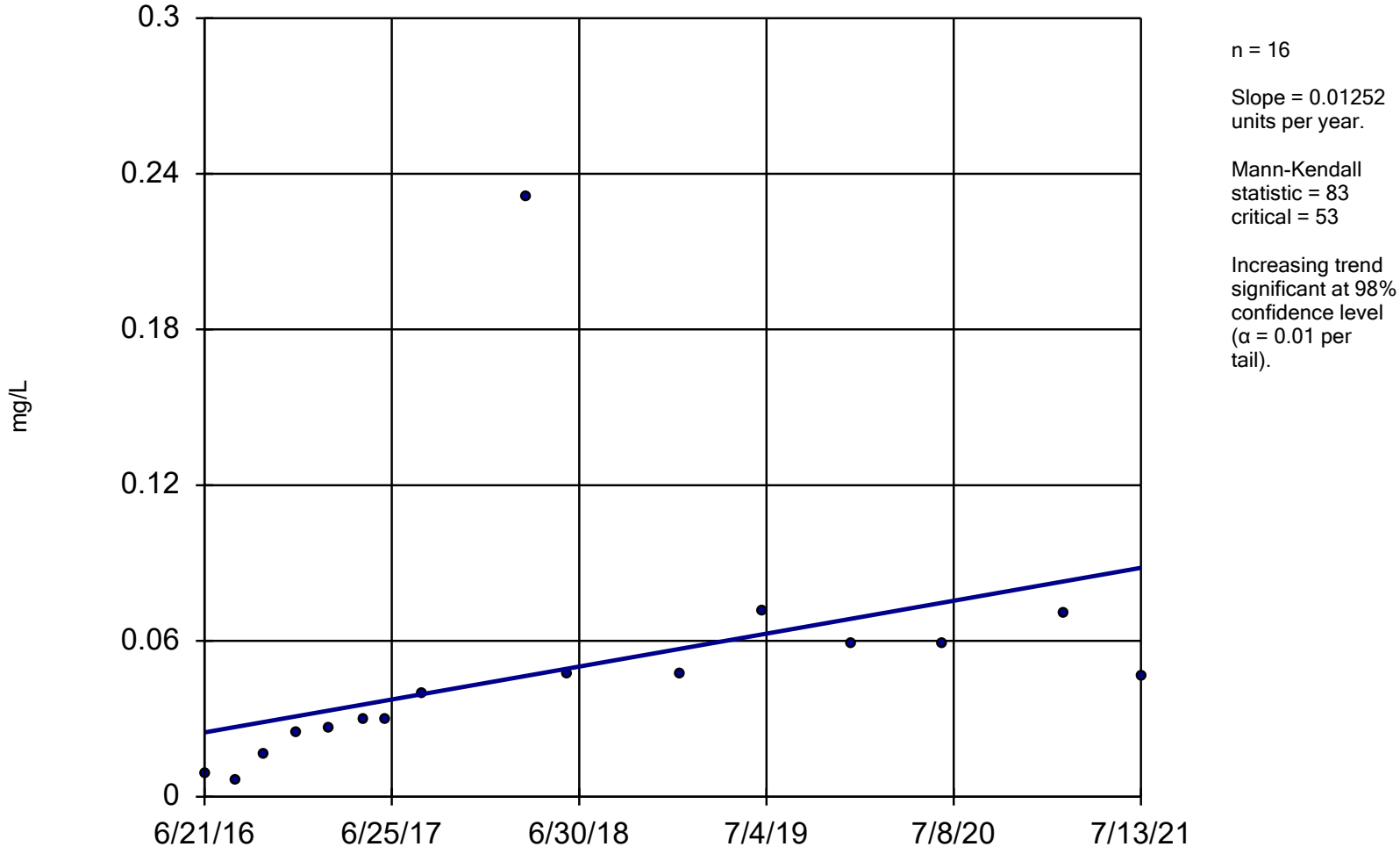
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Arsenic Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = 0.01252 units per year.

Mann-Kendall statistic = 83
critical = 53

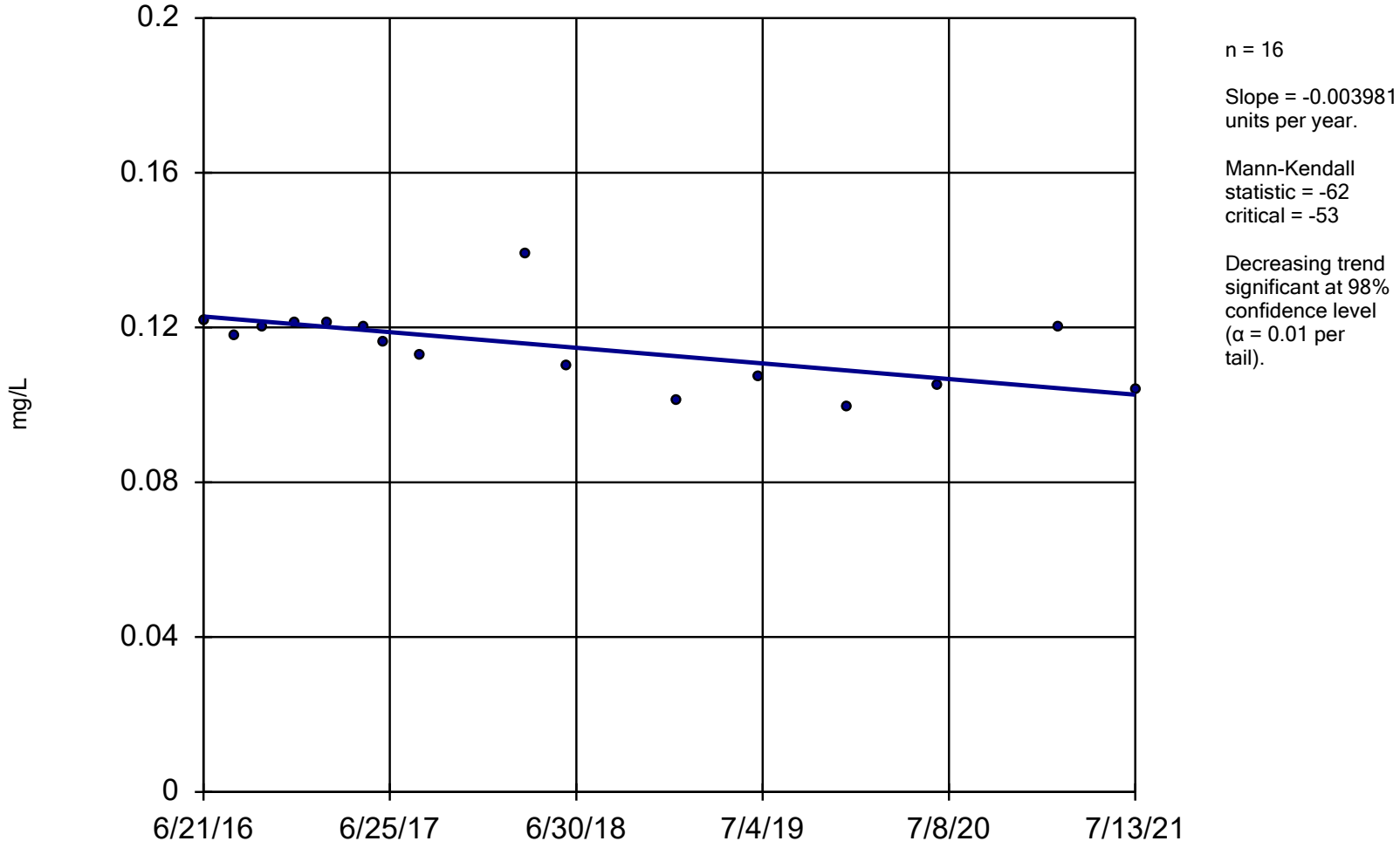
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 16

Slope = -0.003981 units per year.

Mann-Kendall statistic = -62
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

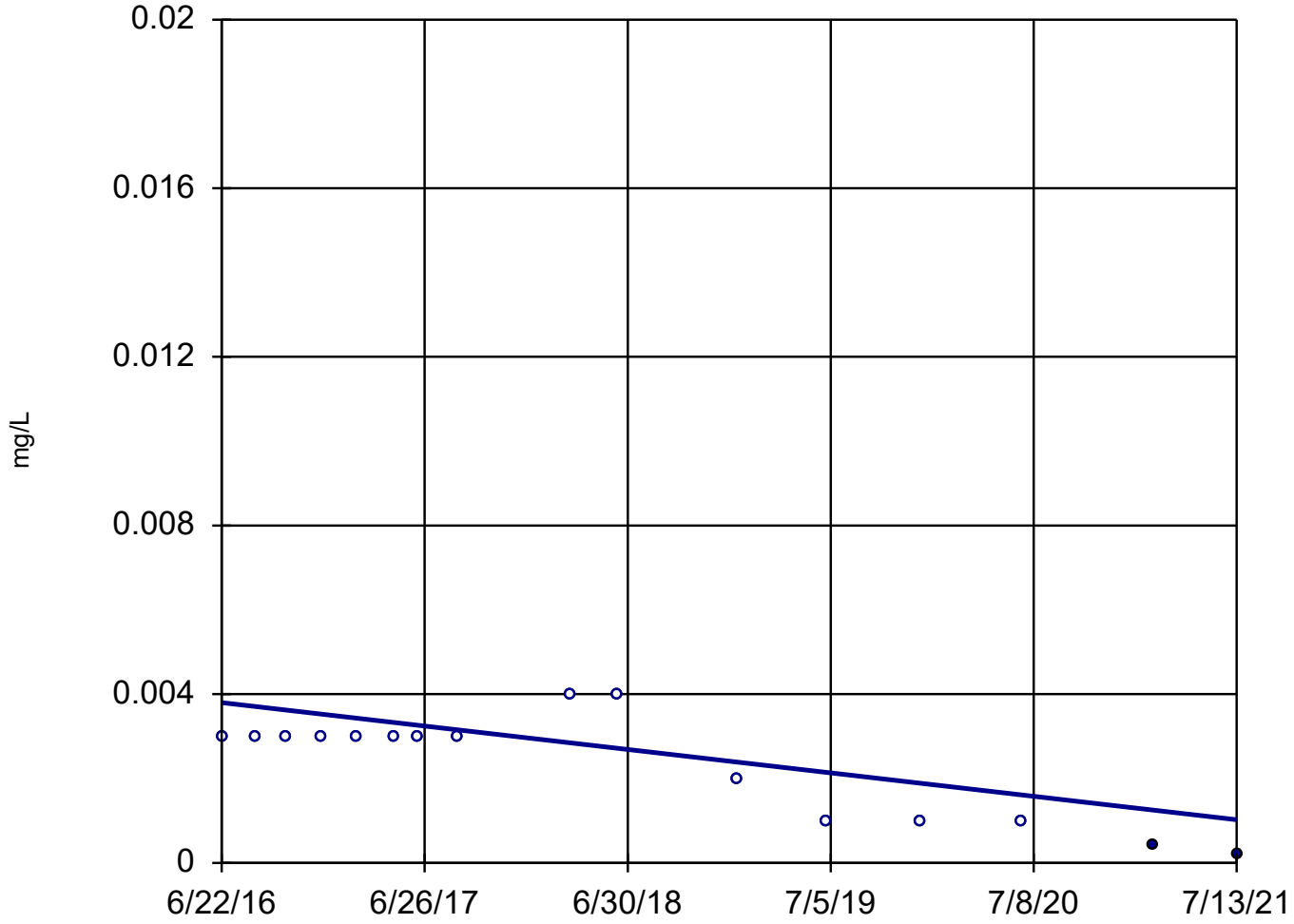
Constituent: Beryllium Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.000549 units per year.

Mann-Kendall statistic = -56
critical = -53

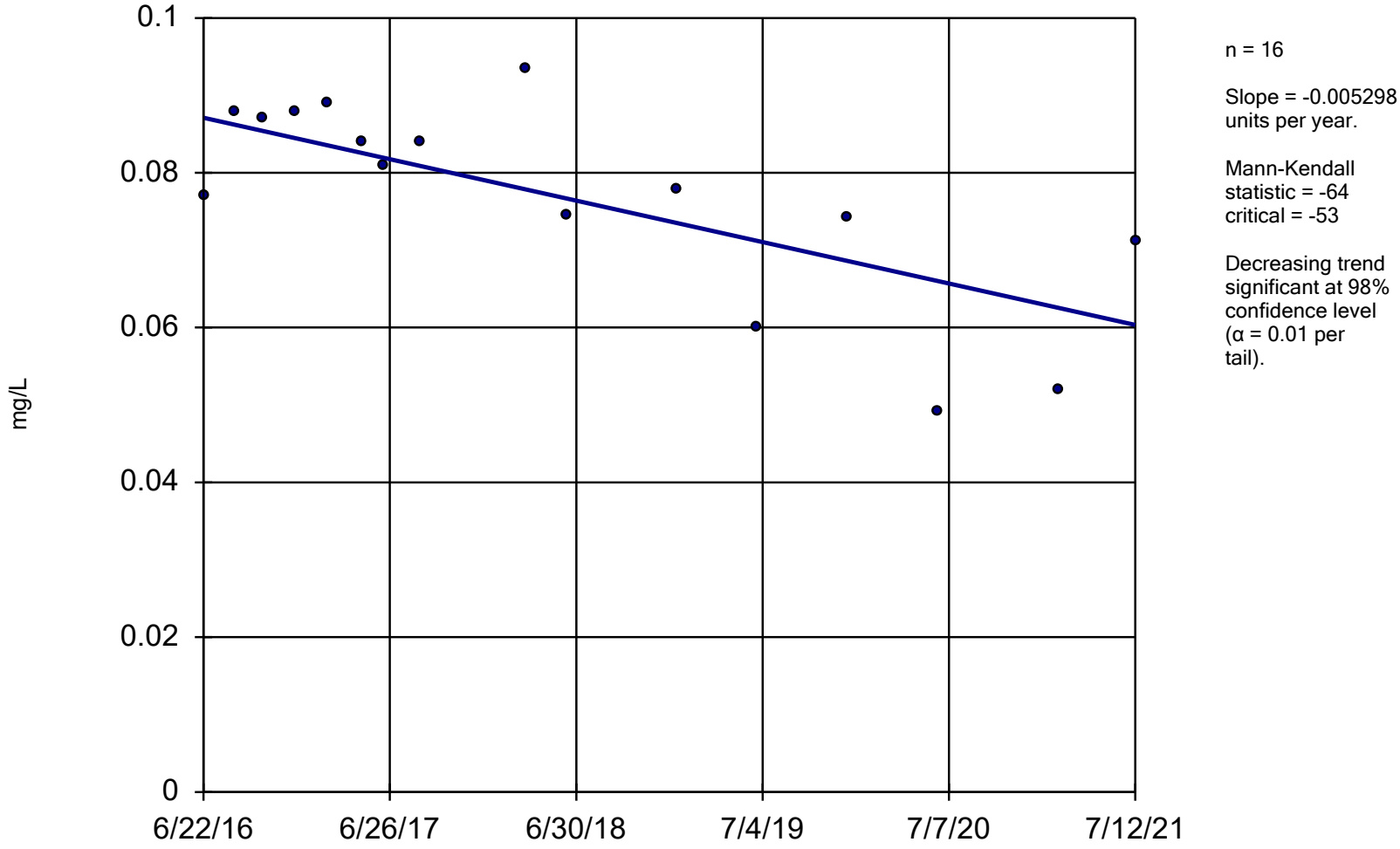
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 16

Slope = -0.005298 units per year.

Mann-Kendall statistic = -64
critical = -53

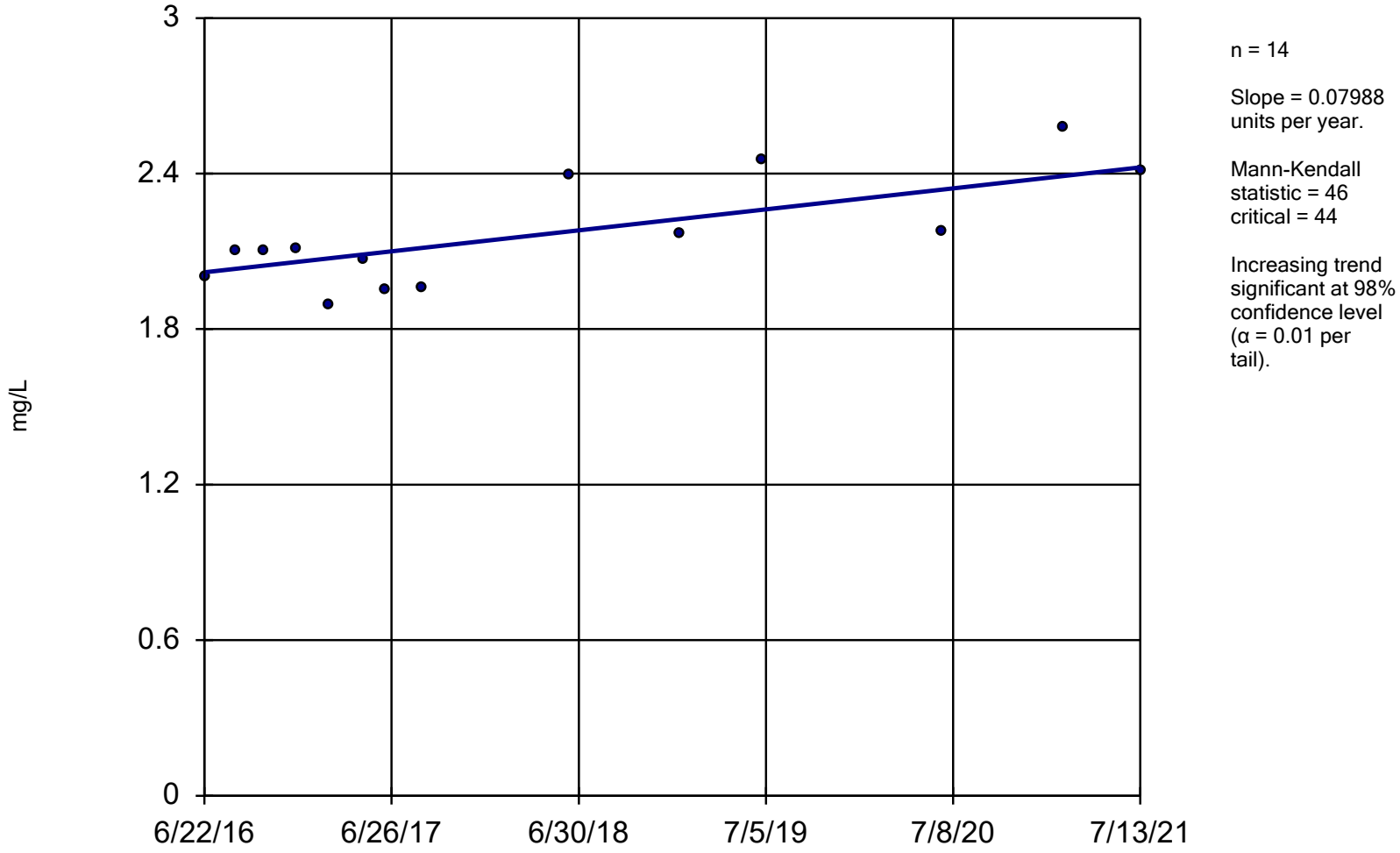
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-4



n = 14

Slope = 0.07988 units per year.

Mann-Kendall statistic = 46
critical = 44

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

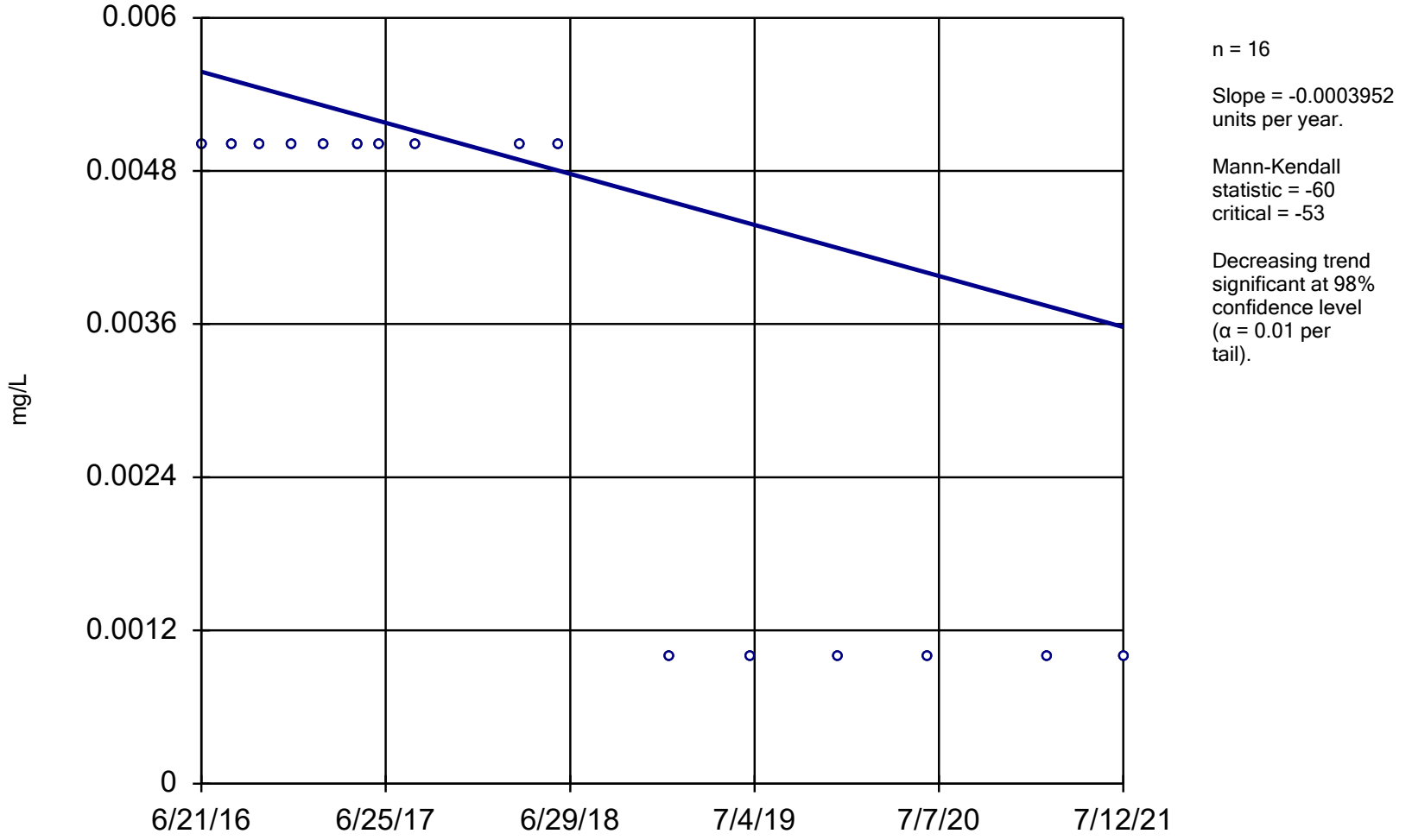
Constituent: Boron Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 16

Slope = -0.0003952 units per year.

Mann-Kendall statistic = -60
critical = -53

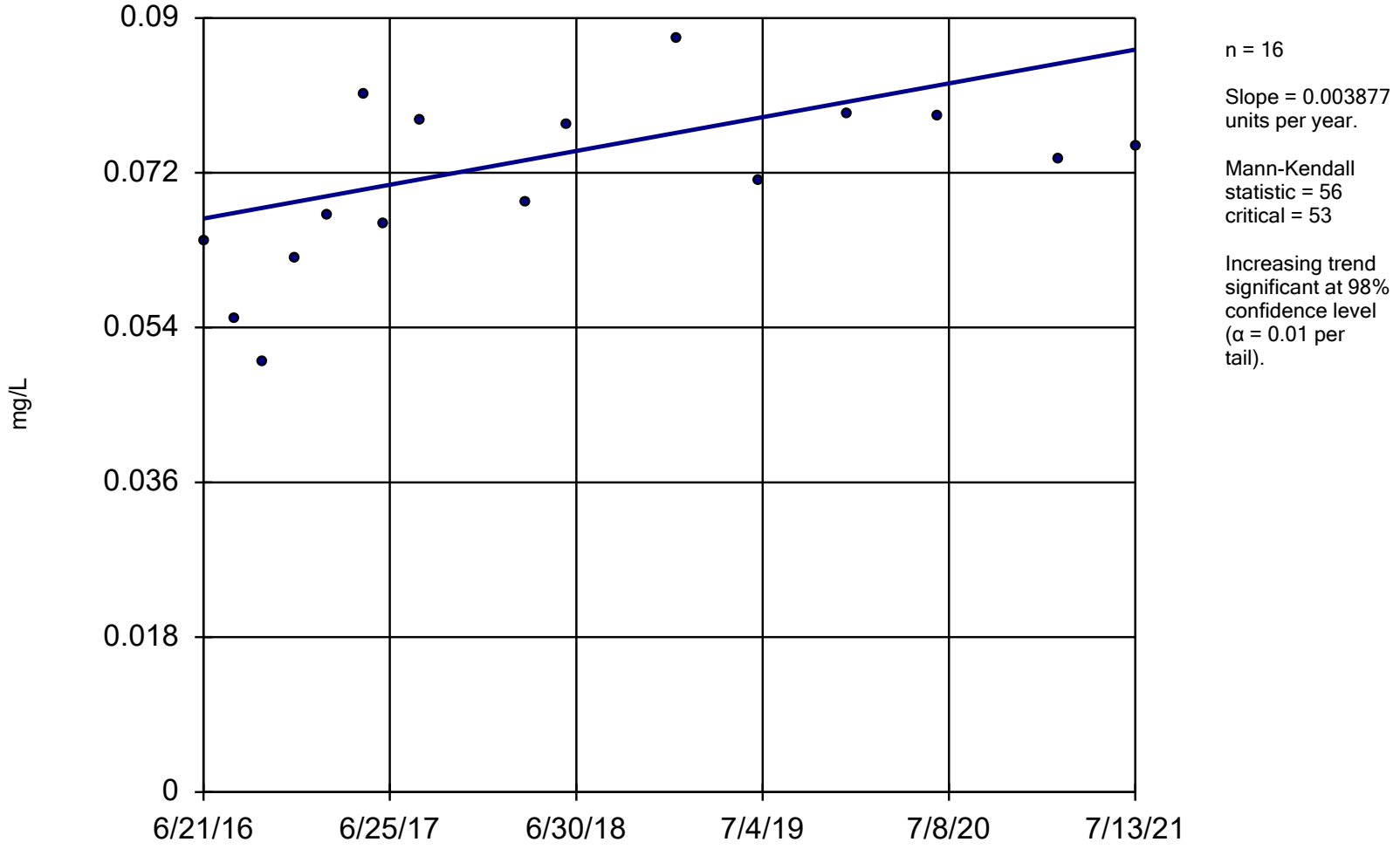
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 8/19/2021 10:24 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 16

Slope = 0.003877 units per year.

Mann-Kendall statistic = 56
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

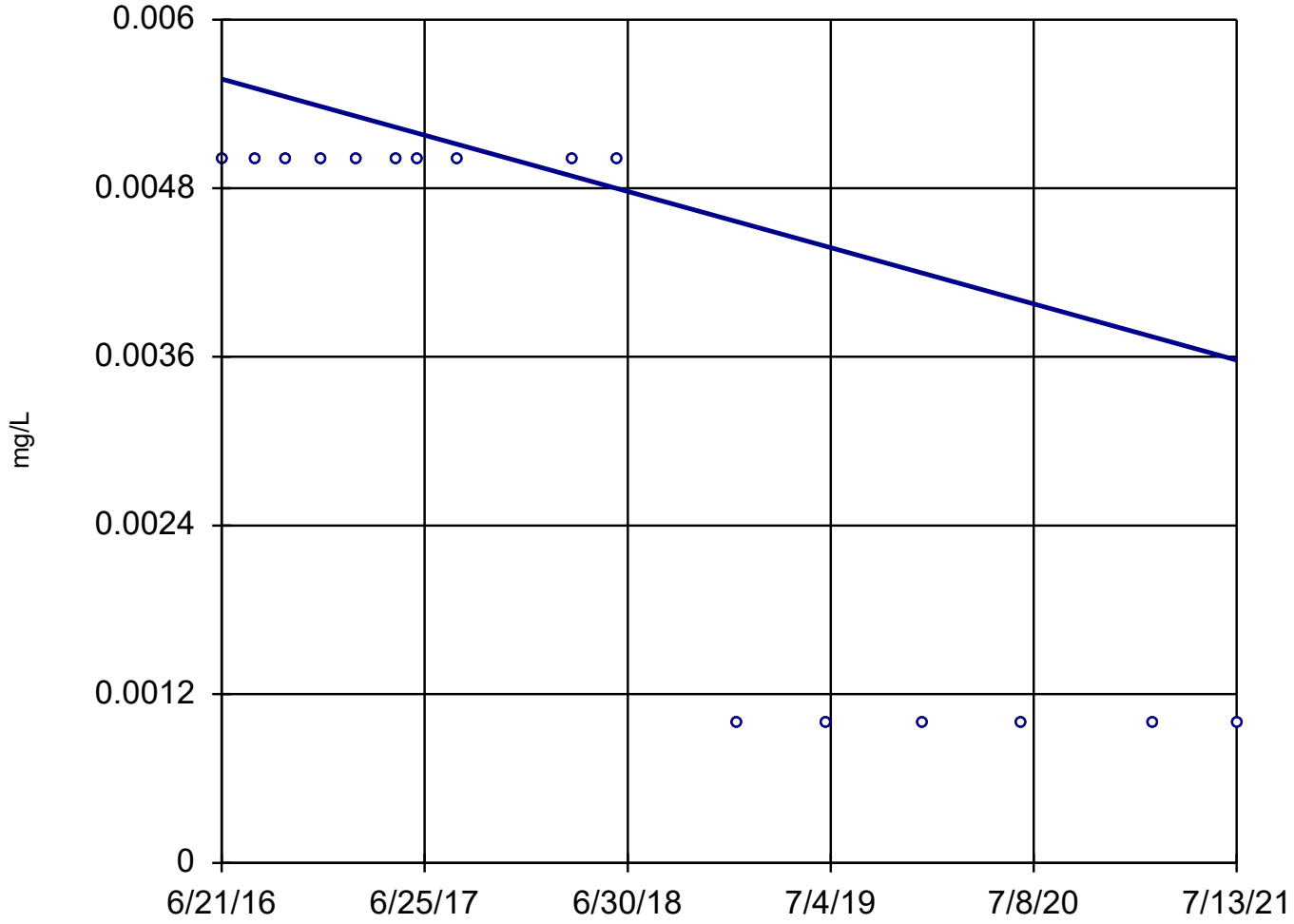
Constituent: Cadmium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = -0.000395 units per year.

Mann-Kendall statistic = -60
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

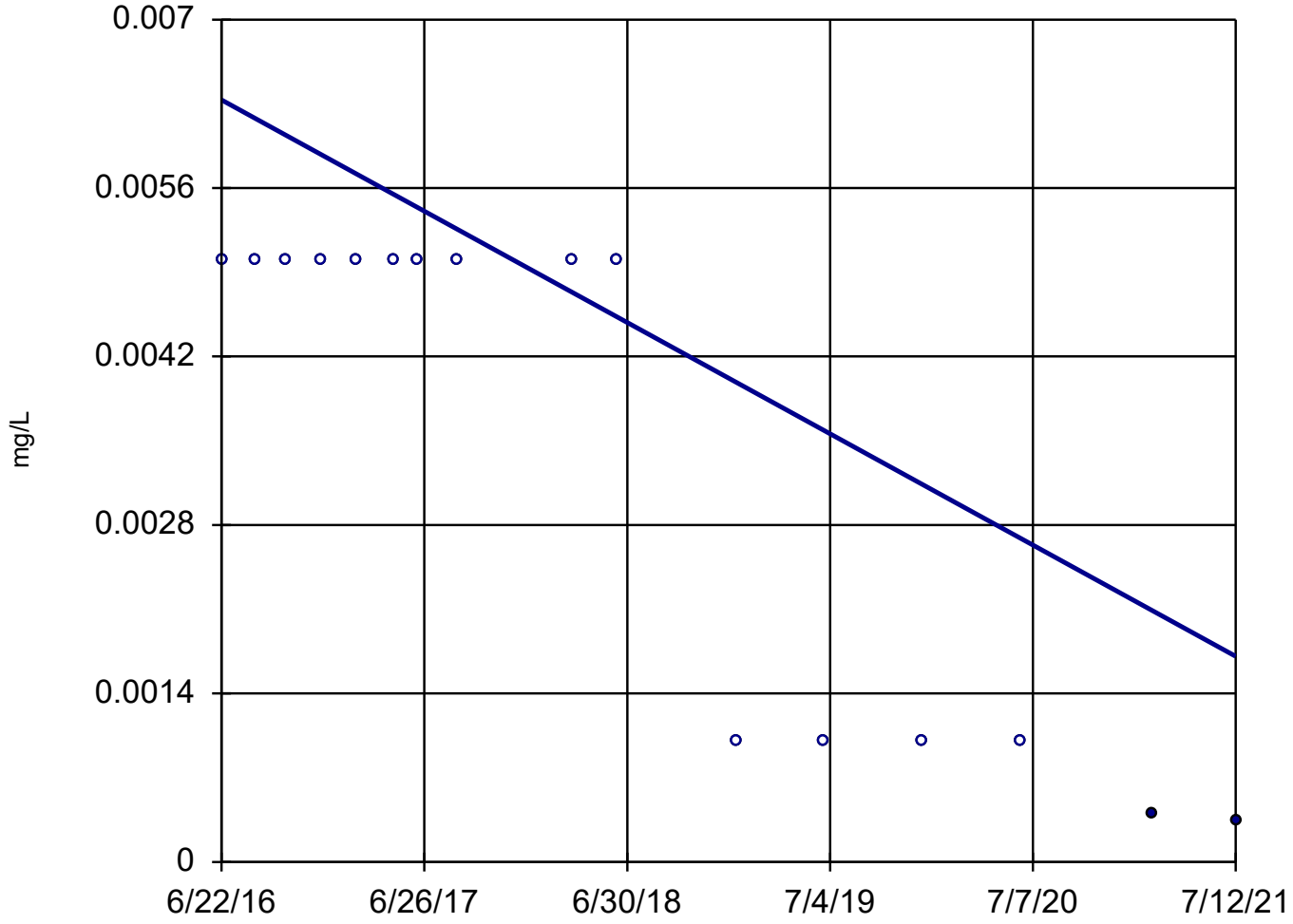
Constituent: Cadmium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 16

Slope = -0.0009144 units per year.

Mann-Kendall statistic = -69
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

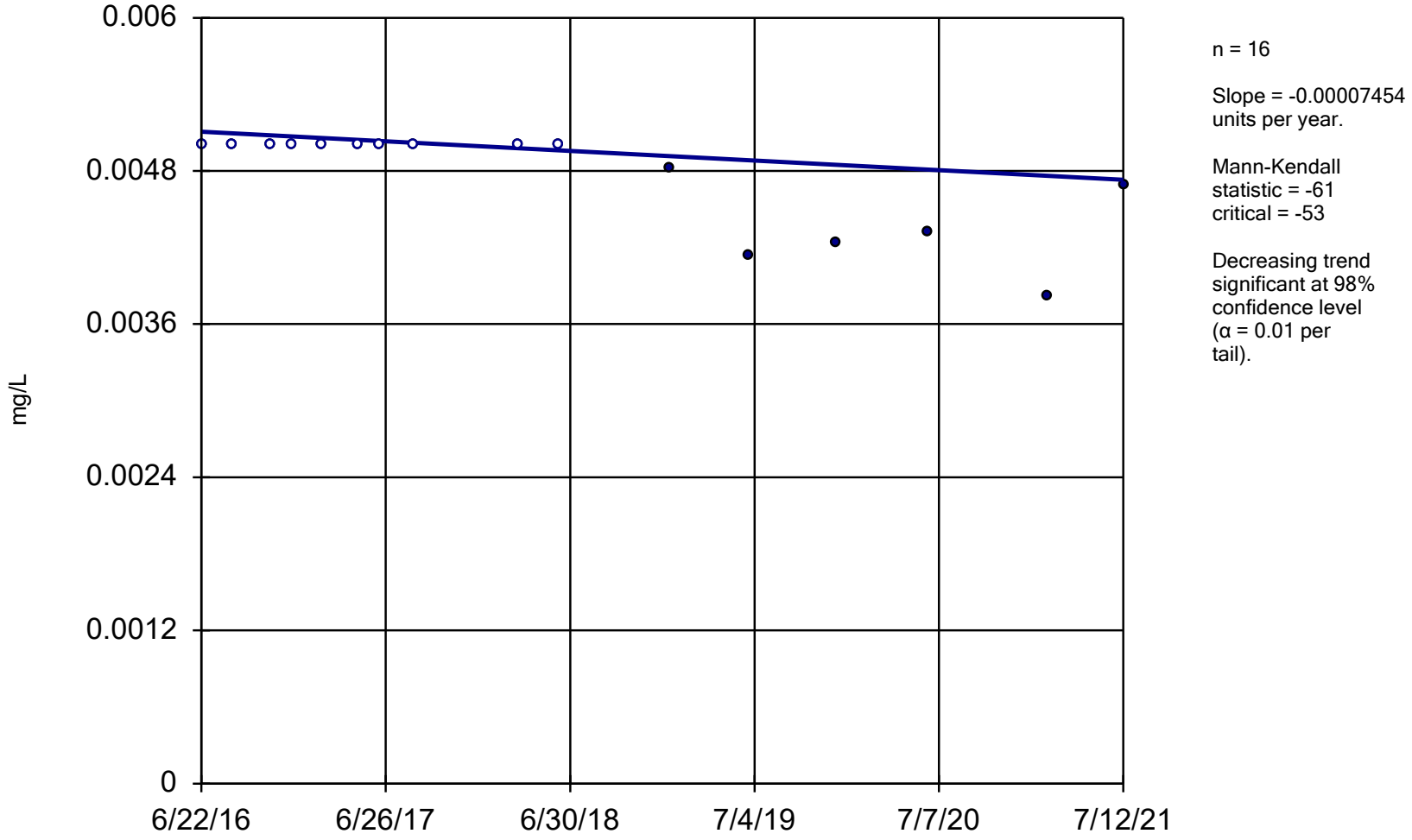
Constituent: Cadmium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 16

Slope = -0.00007454 units per year.

Mann-Kendall statistic = -61
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

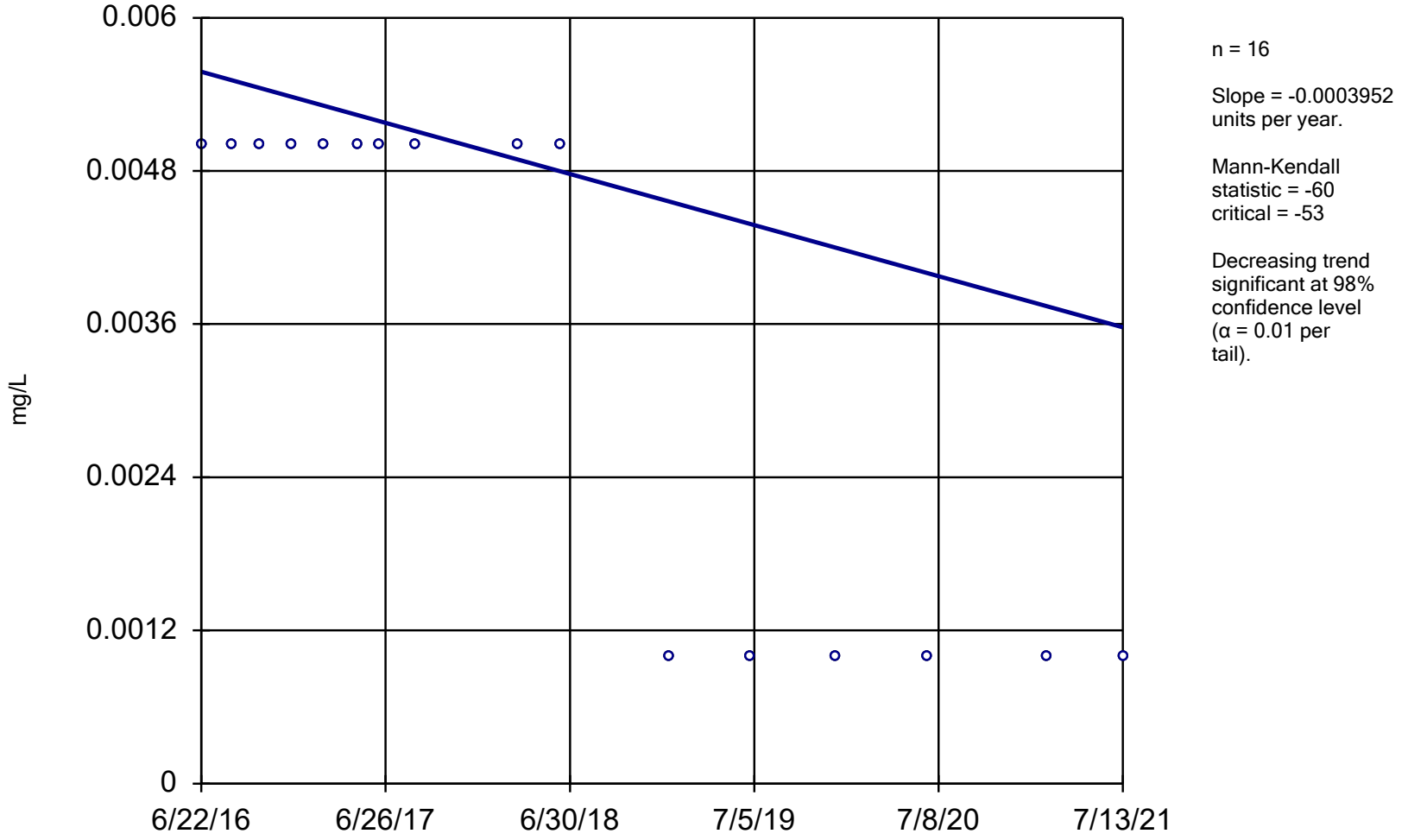
Constituent: Cadmium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.0003952 units per year.

Mann-Kendall statistic = -60
critical = -53

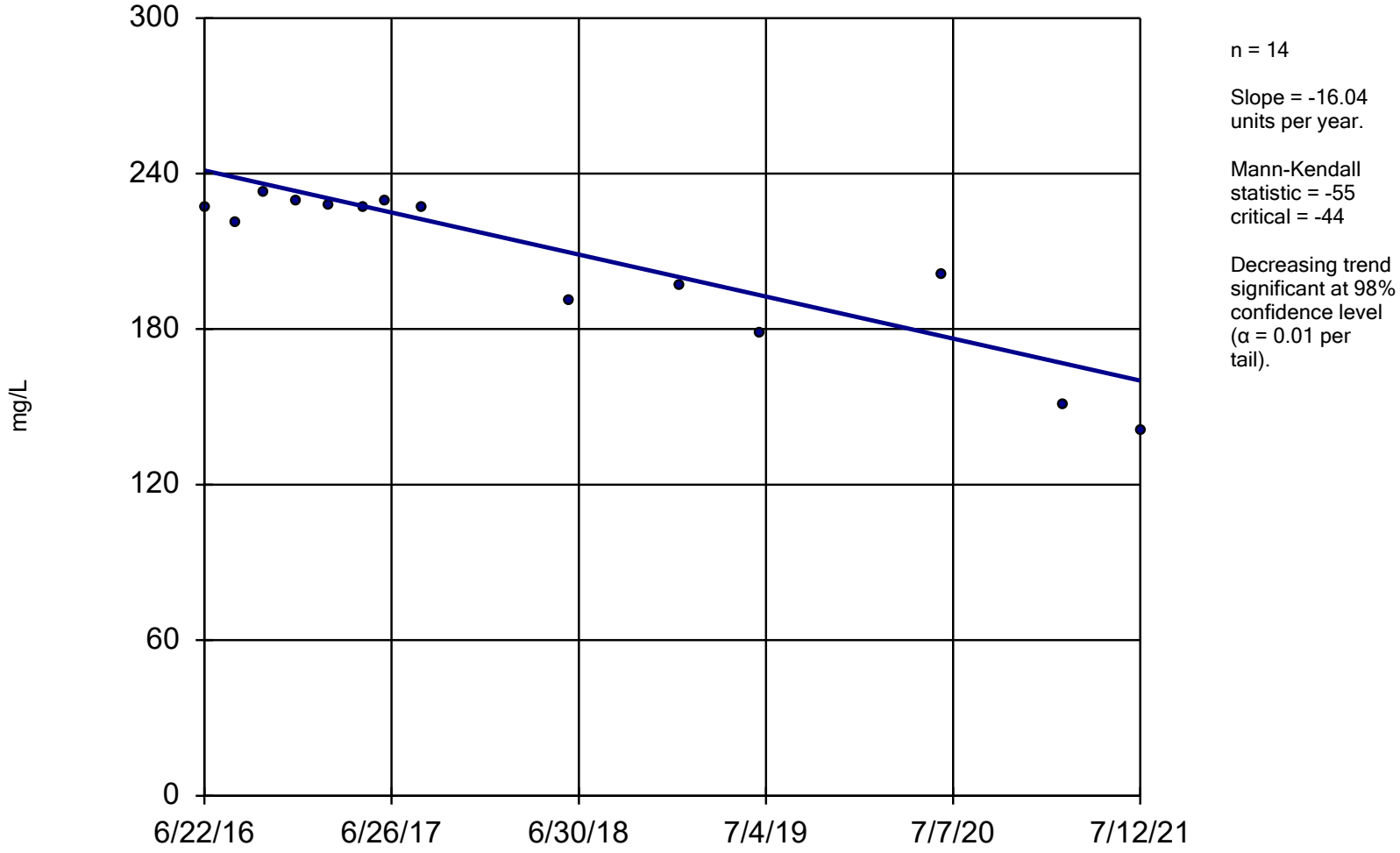
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 14

Slope = -16.04 units per year.

Mann-Kendall statistic = -55
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

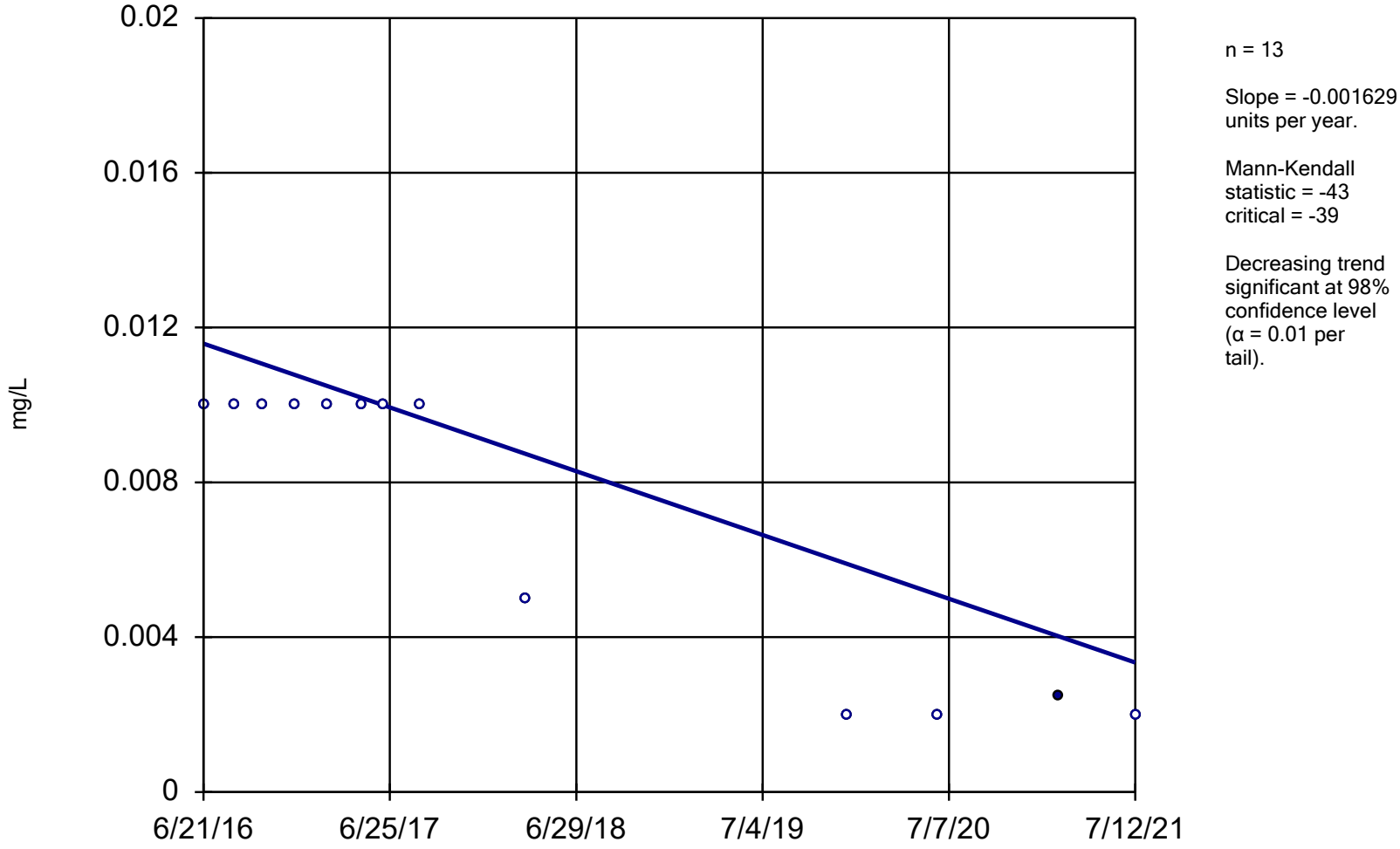
Constituent: Chloride Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 13

Slope = -0.001629 units per year.

Mann-Kendall statistic = -43
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

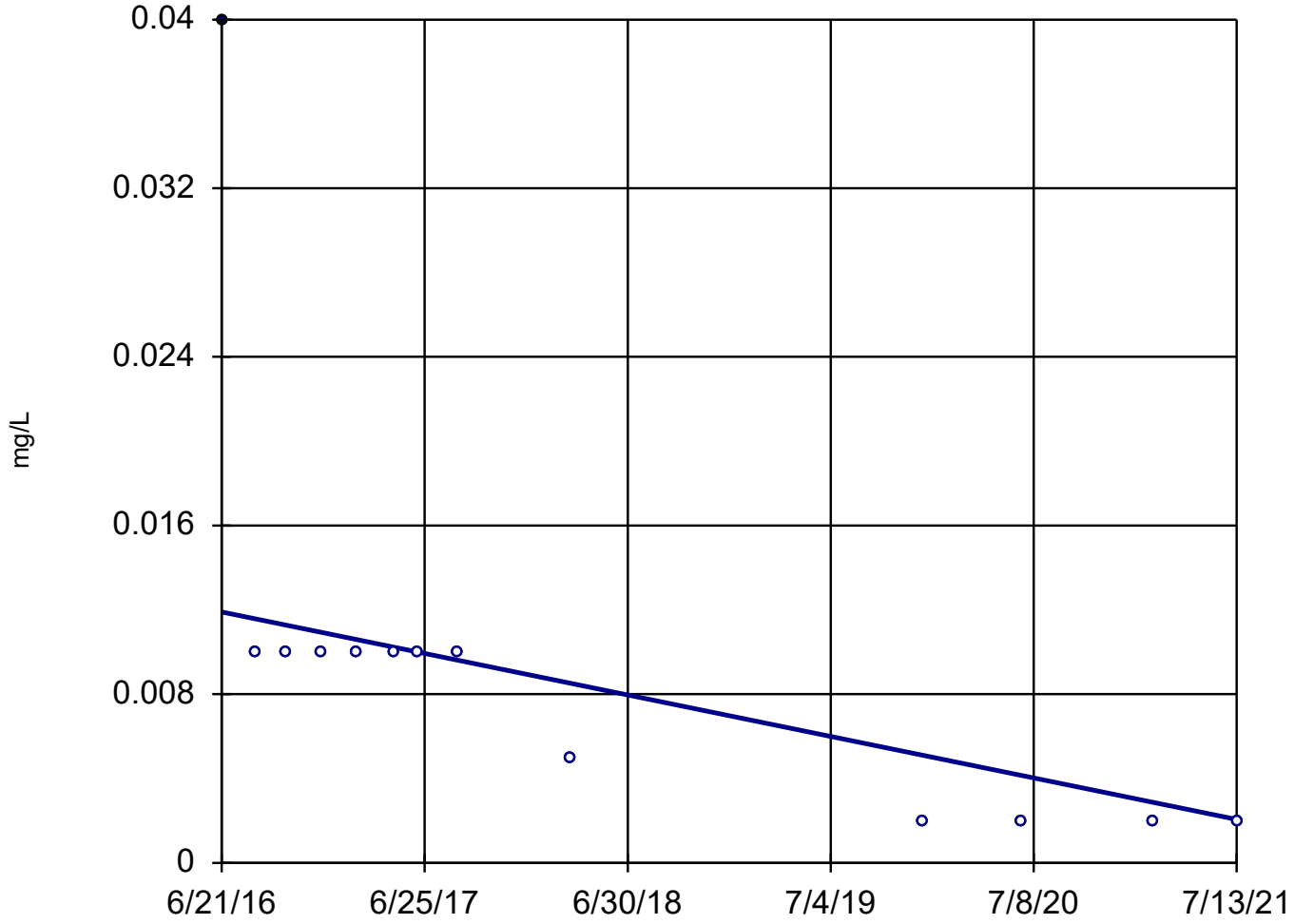
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 13

Slope = -0.001945 units per year.

Mann-Kendall statistic = -51
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

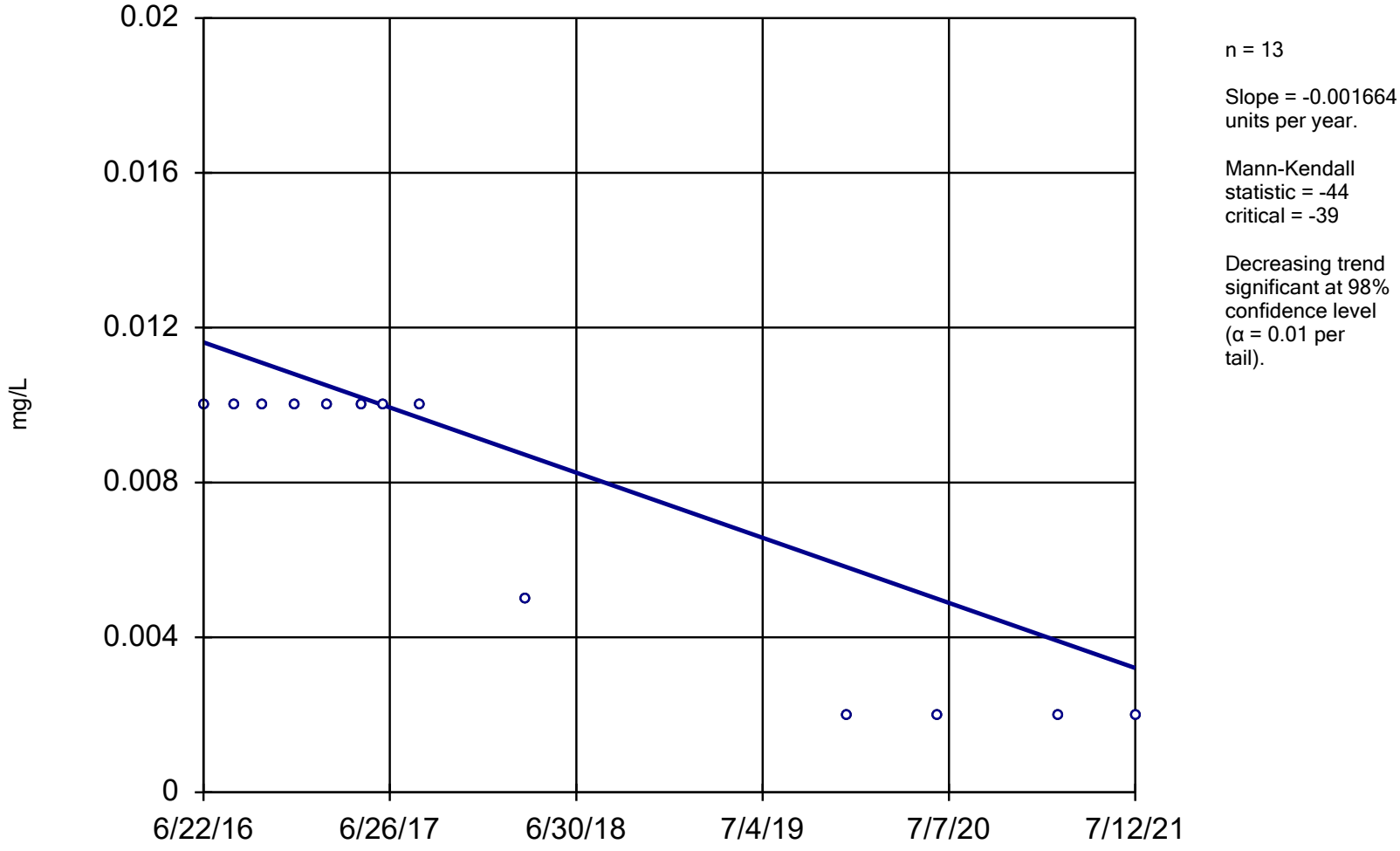
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 13

Slope = -0.001664 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

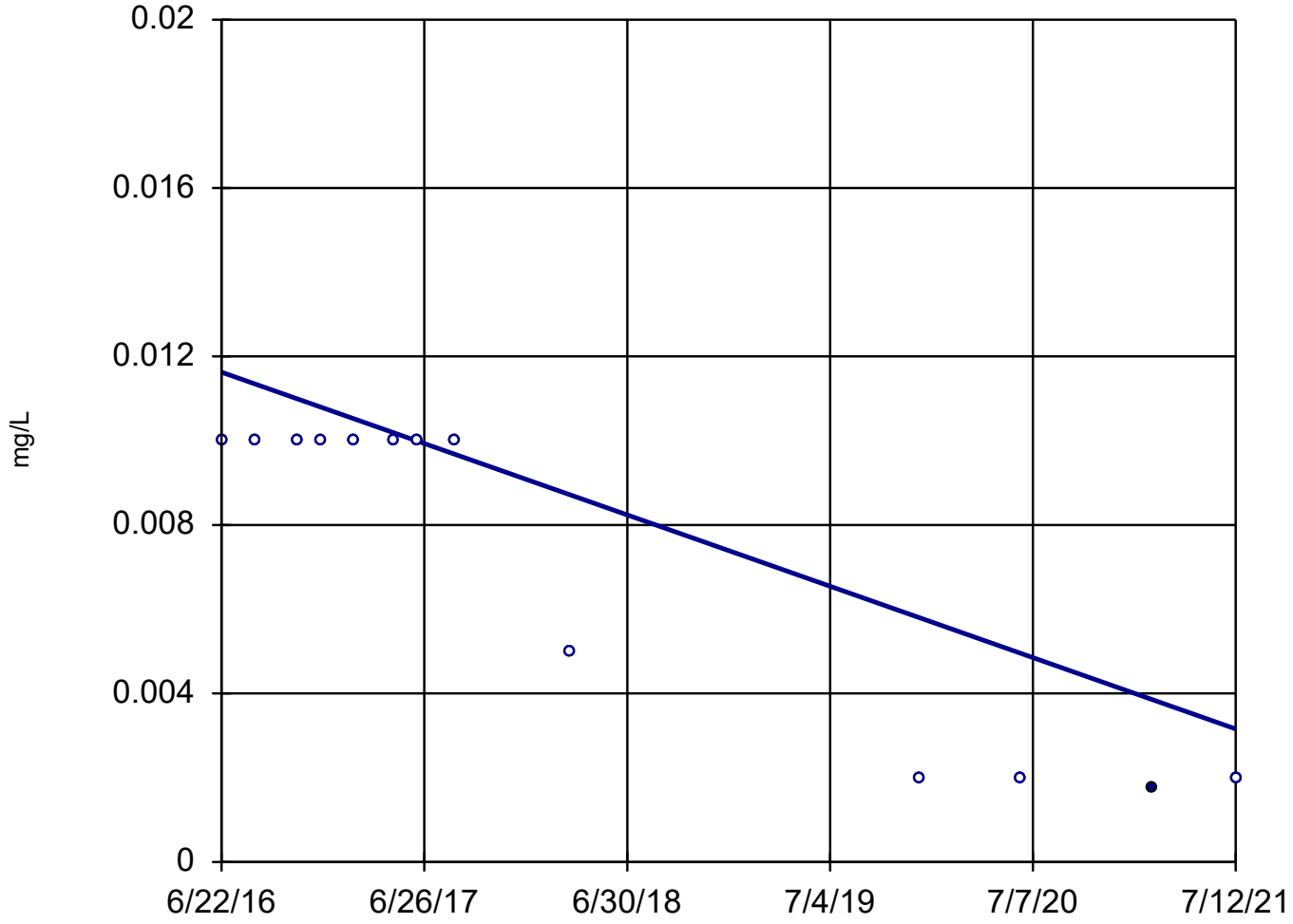
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 13

Slope = -0.001675 units per year.

Mann-Kendall statistic = -45
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

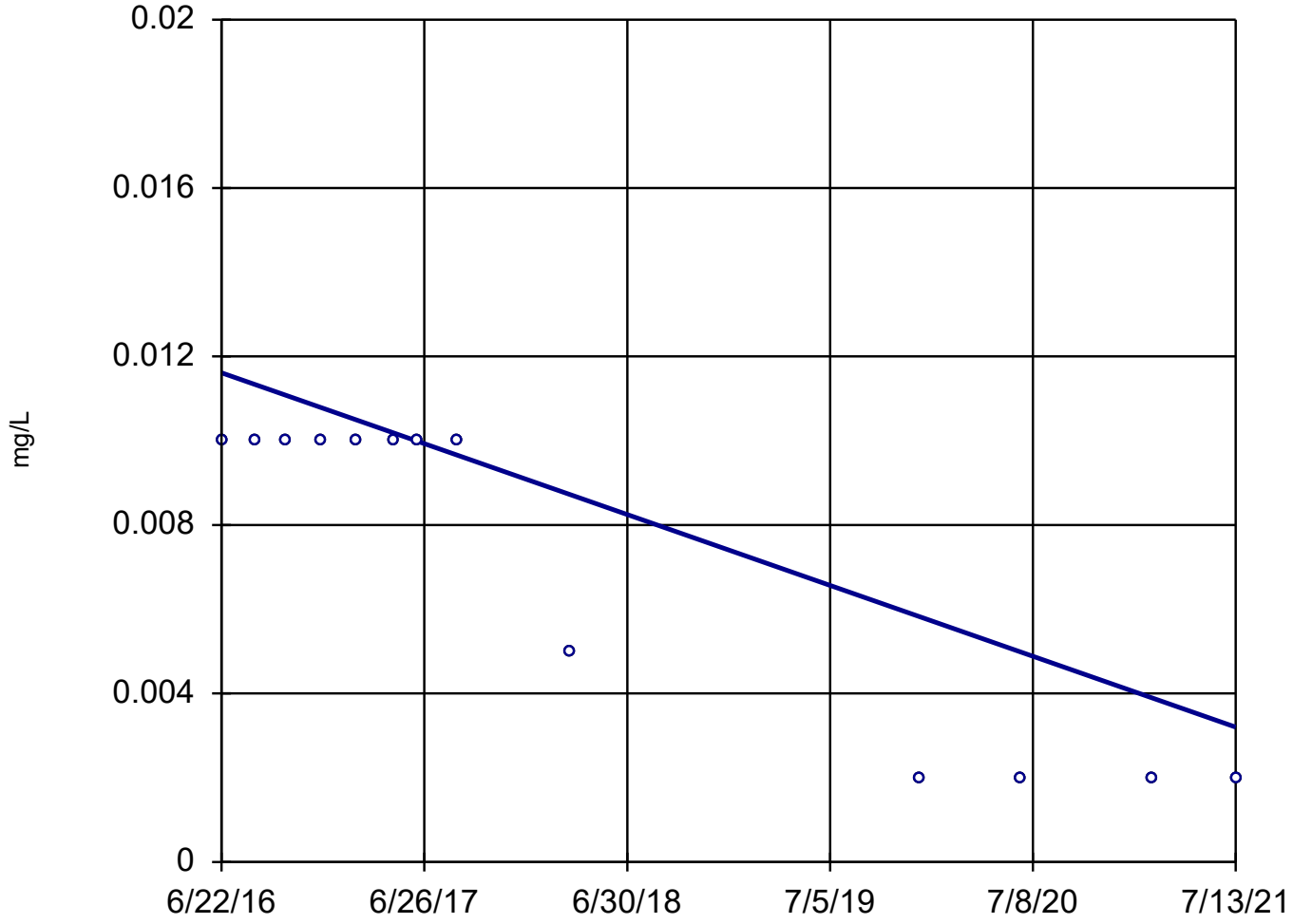
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 13

Slope = -0.001663 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

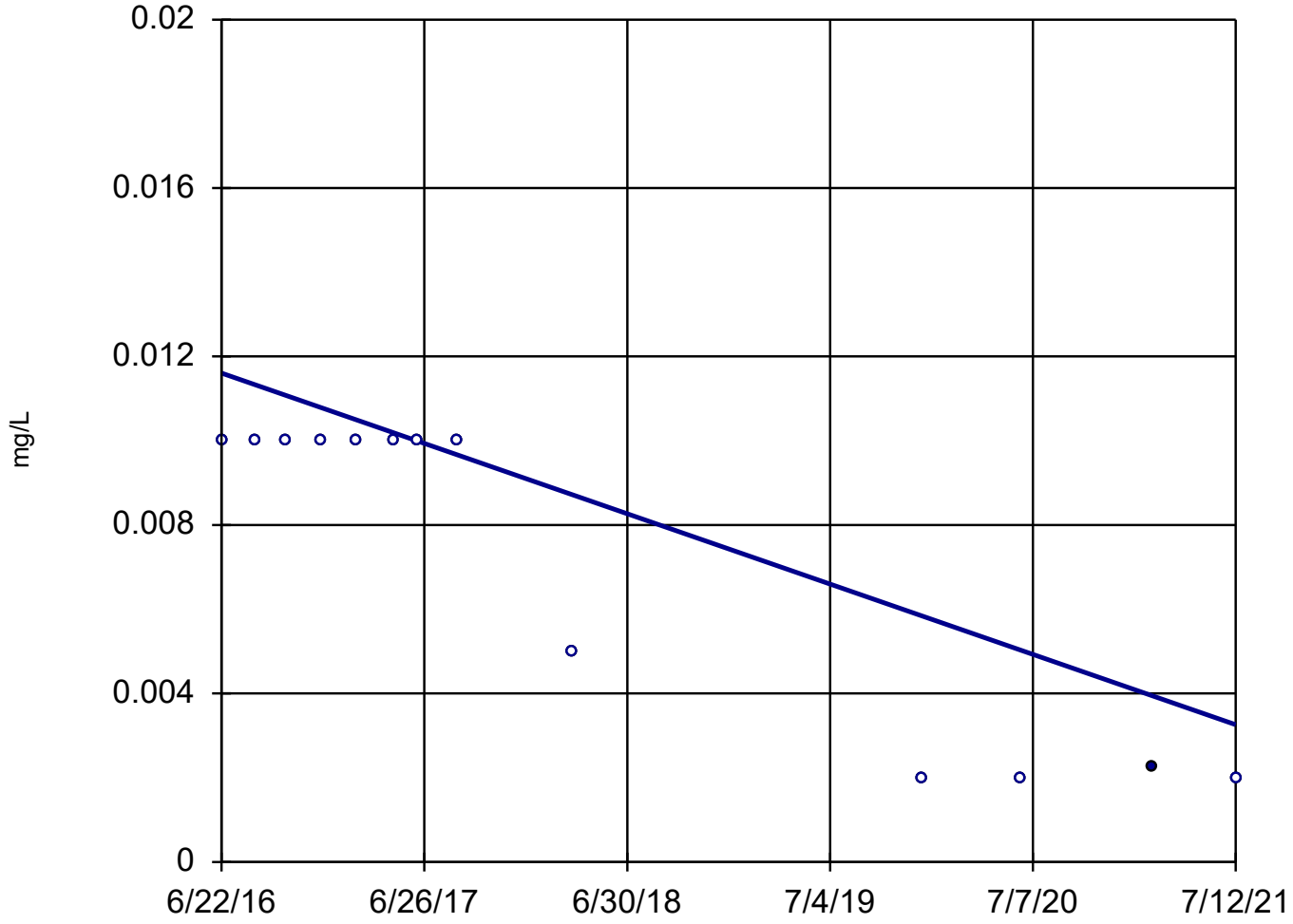
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 13

Slope = -0.001651 units per year.

Mann-Kendall statistic = -43
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

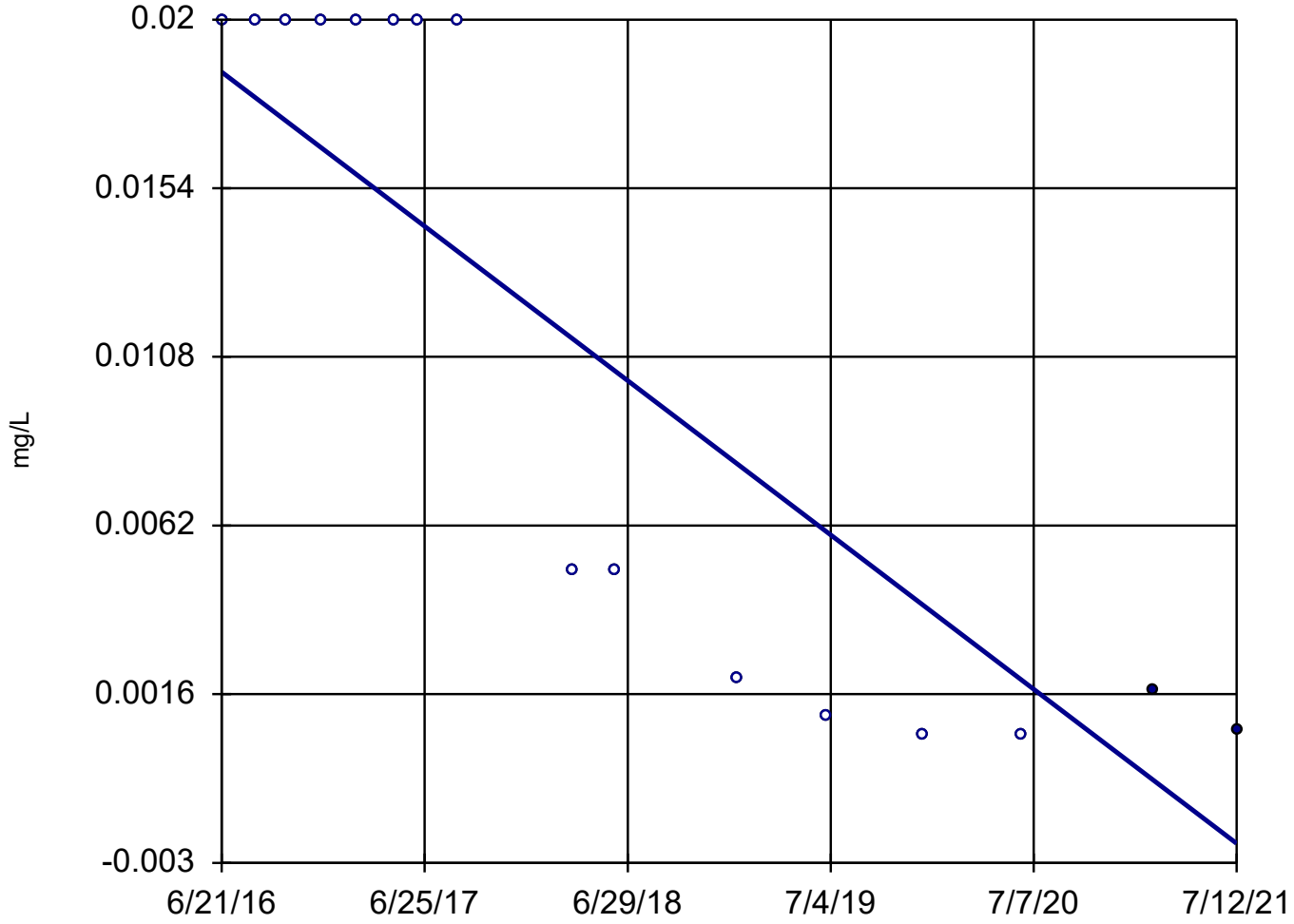
Constituent: Chromium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 16

Slope = -0.004158 units per year.

Mann-Kendall statistic = -80
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

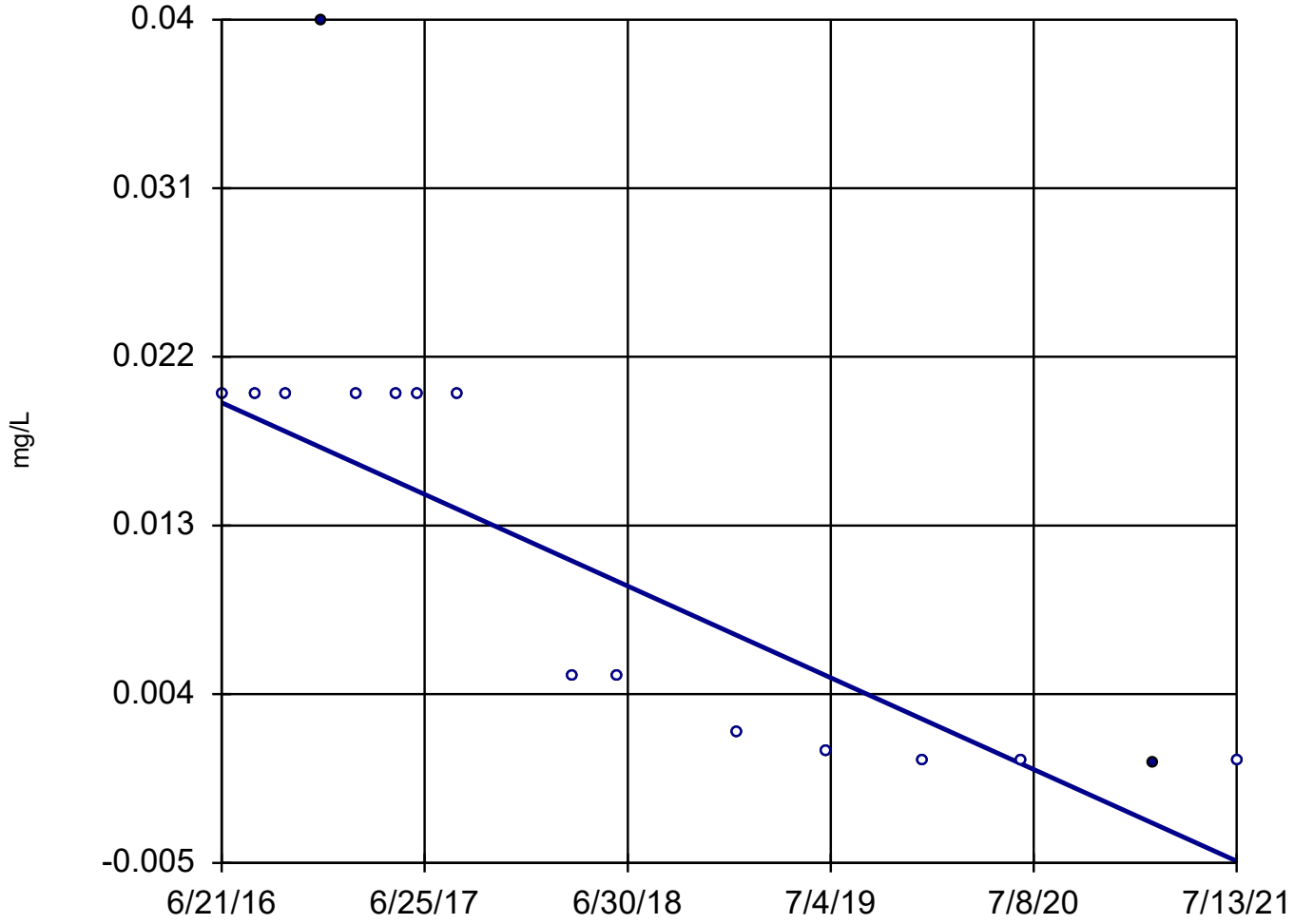
Constituent: Cobalt Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = -0.004831 units per year.

Mann-Kendall statistic = -87
critical = -53

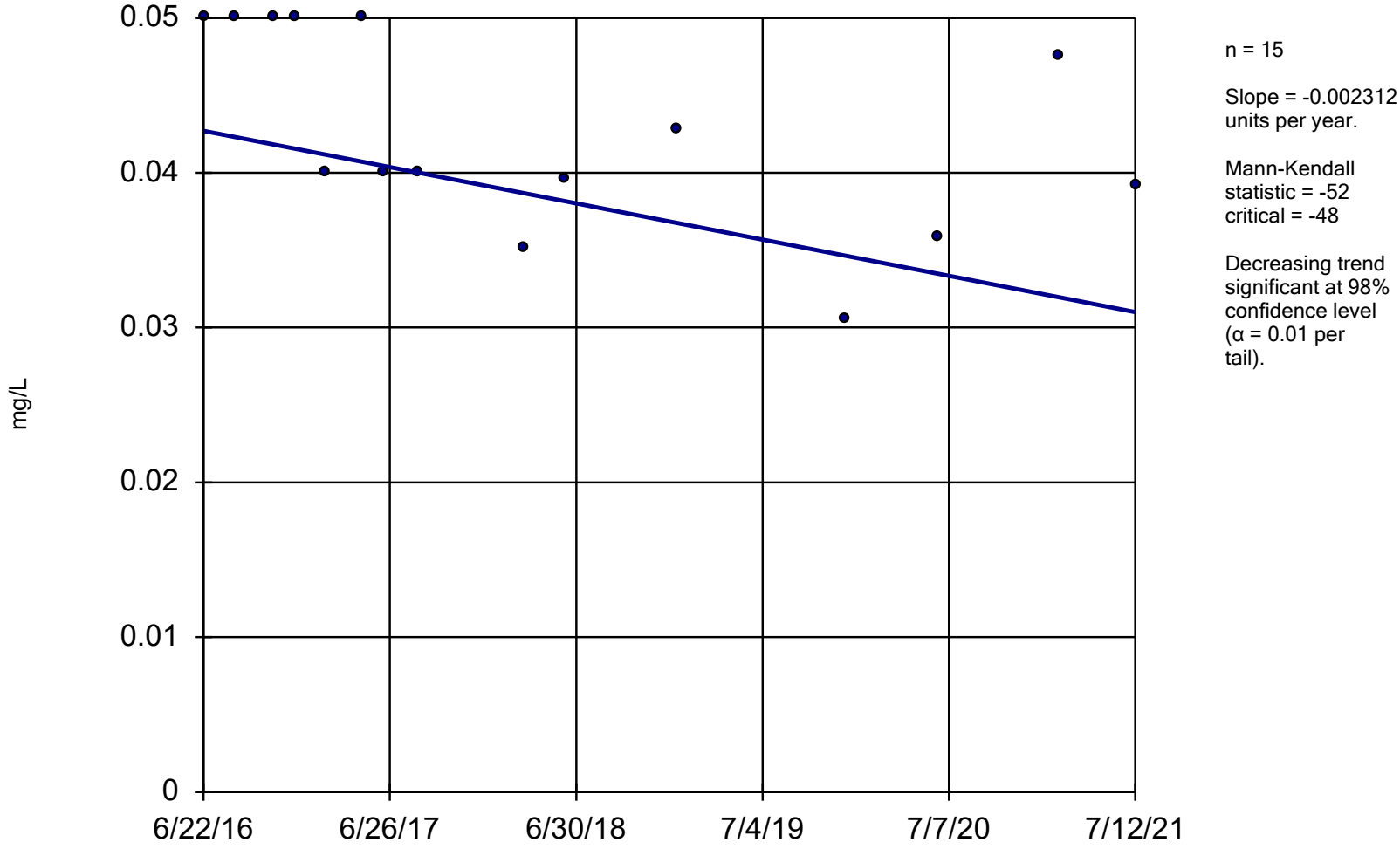
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-3



n = 15

Slope = -0.002312 units per year.

Mann-Kendall statistic = -52
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

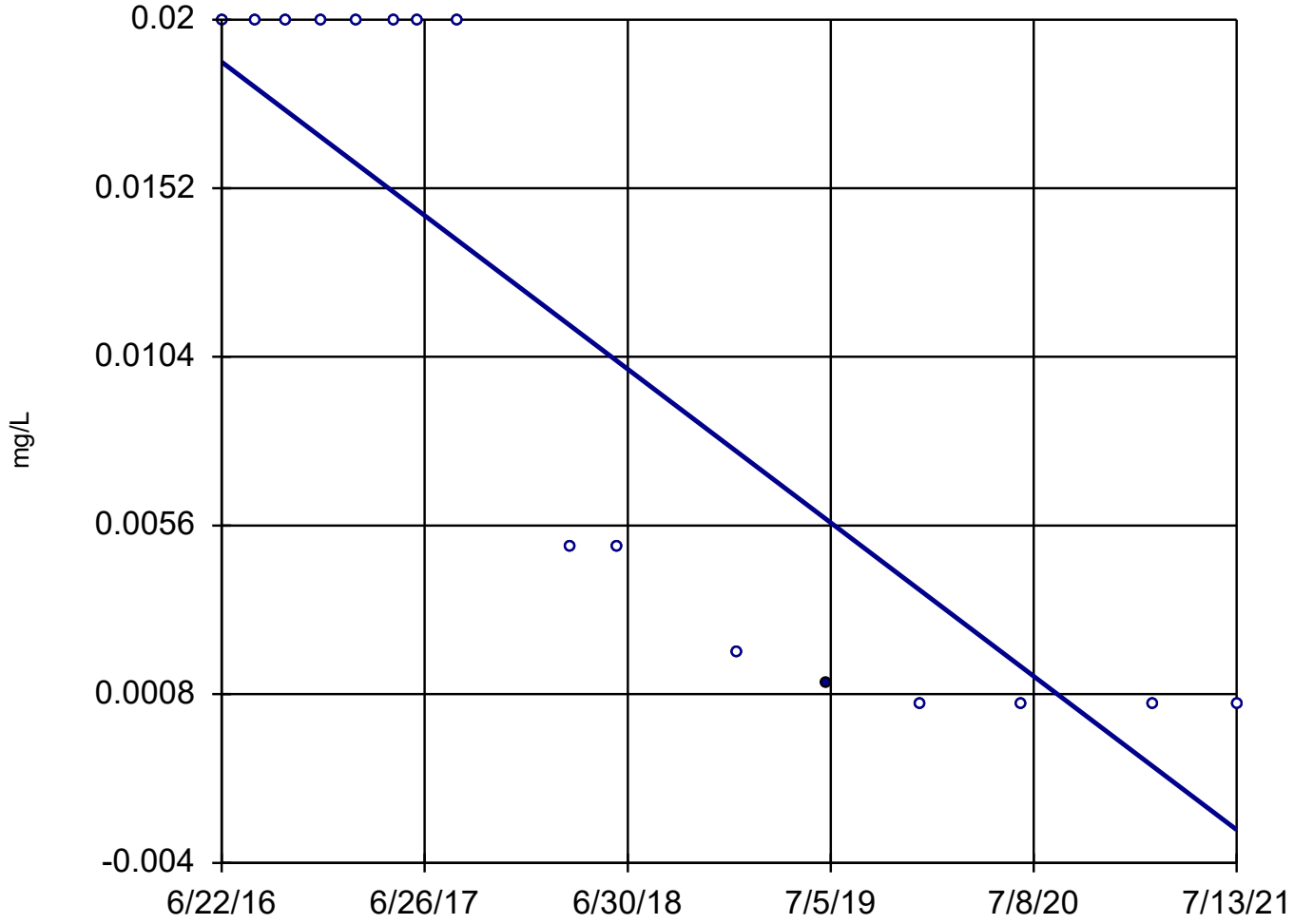
Constituent: Cobalt Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.004319 units per year.

Mann-Kendall statistic = -85
critical = -53

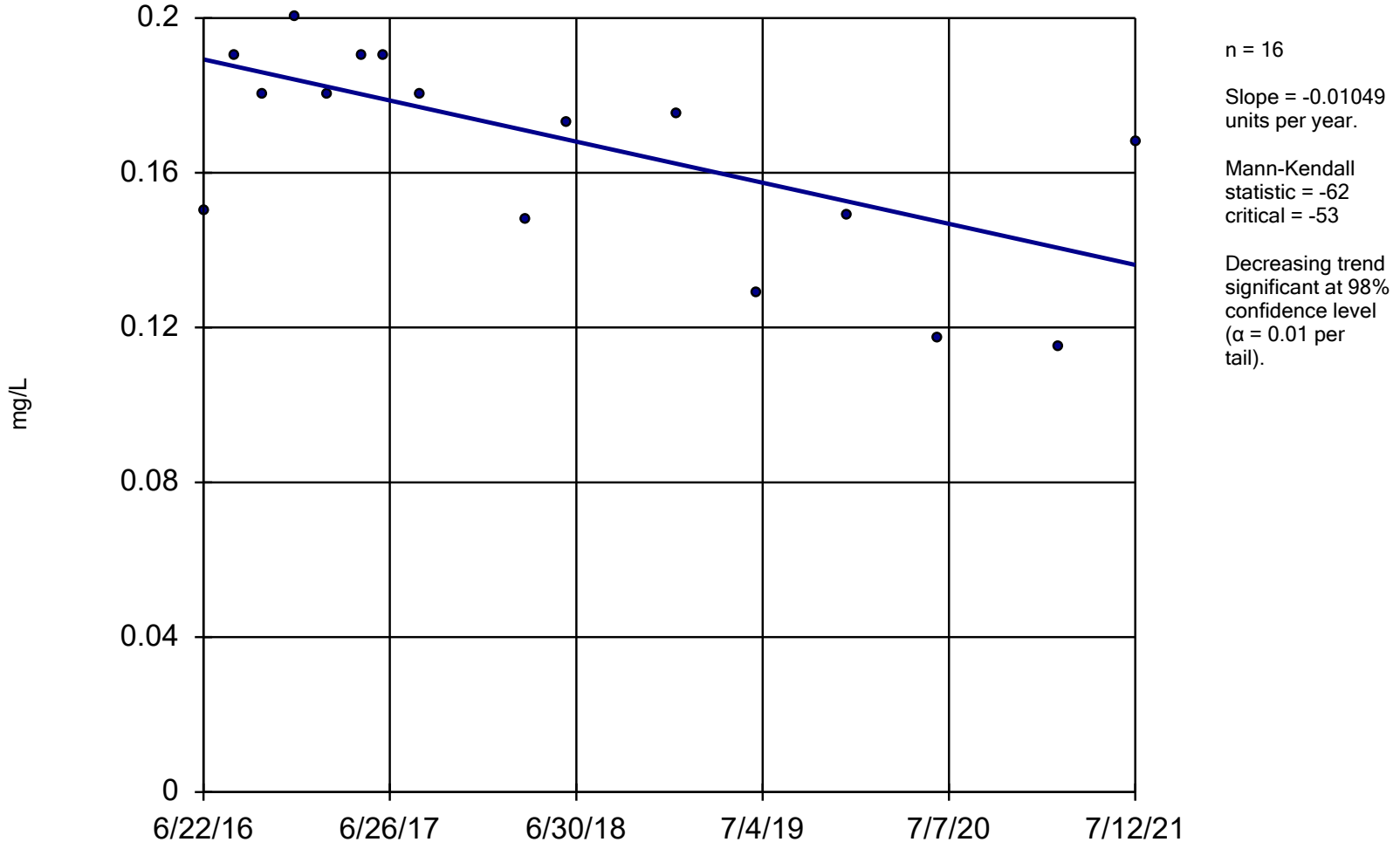
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 16

Slope = -0.01049 units per year.

Mann-Kendall statistic = -62
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

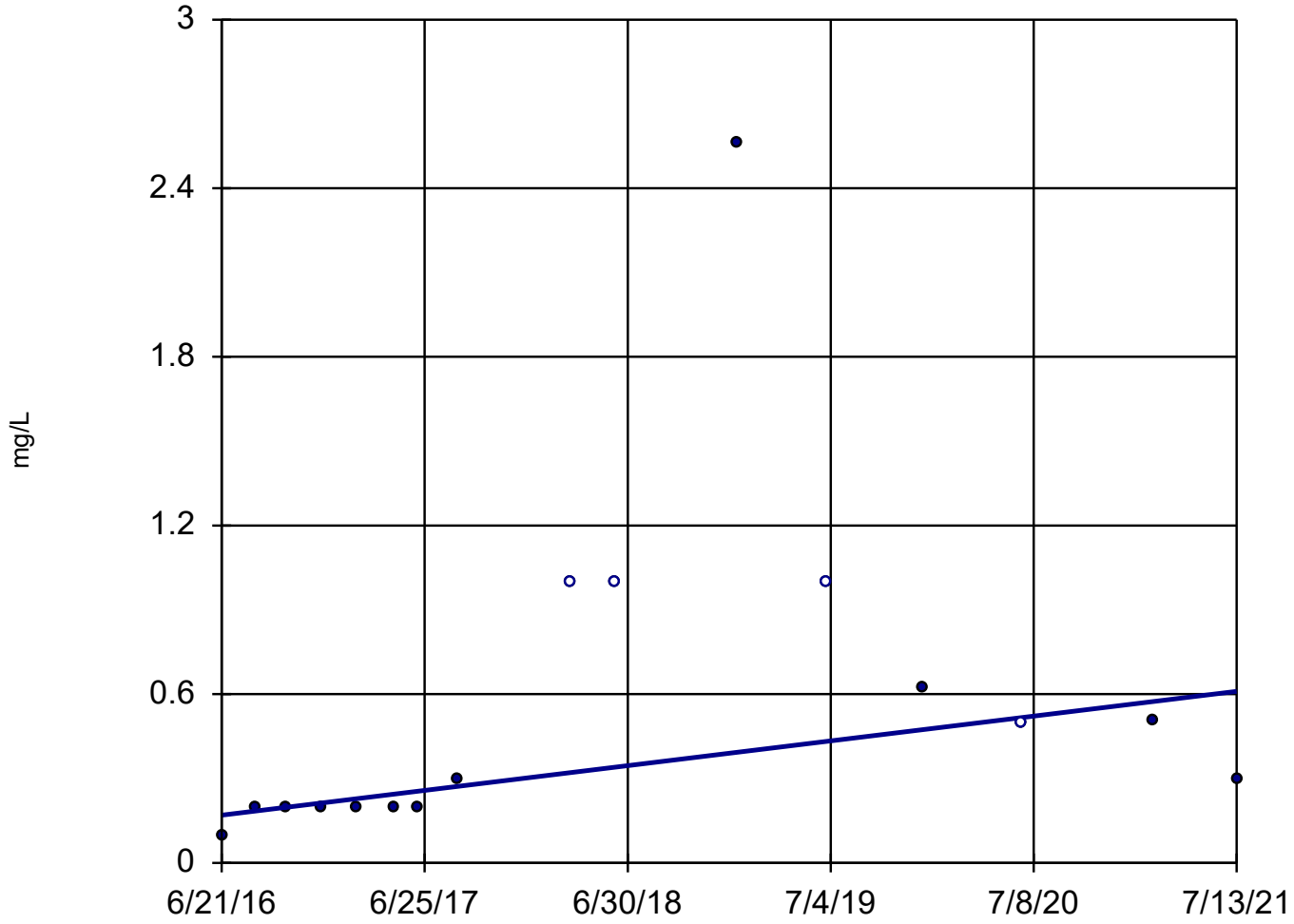
Constituent: Cobalt Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = 0.08698 units per year.

Mann-Kendall statistic = 56
critical = 53

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

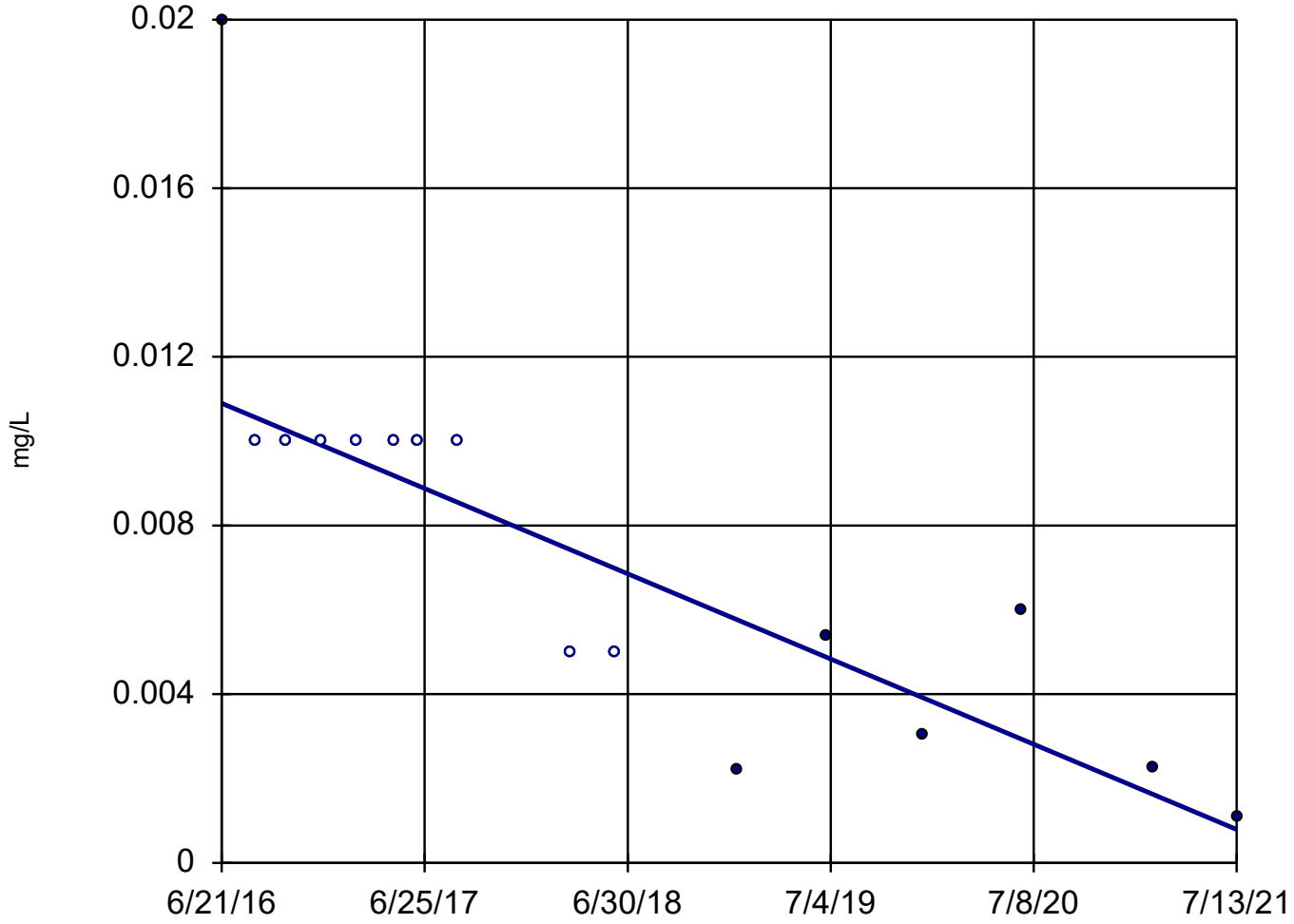
Constituent: Fluoride Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.001997 units per year.

Mann-Kendall statistic = -78
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

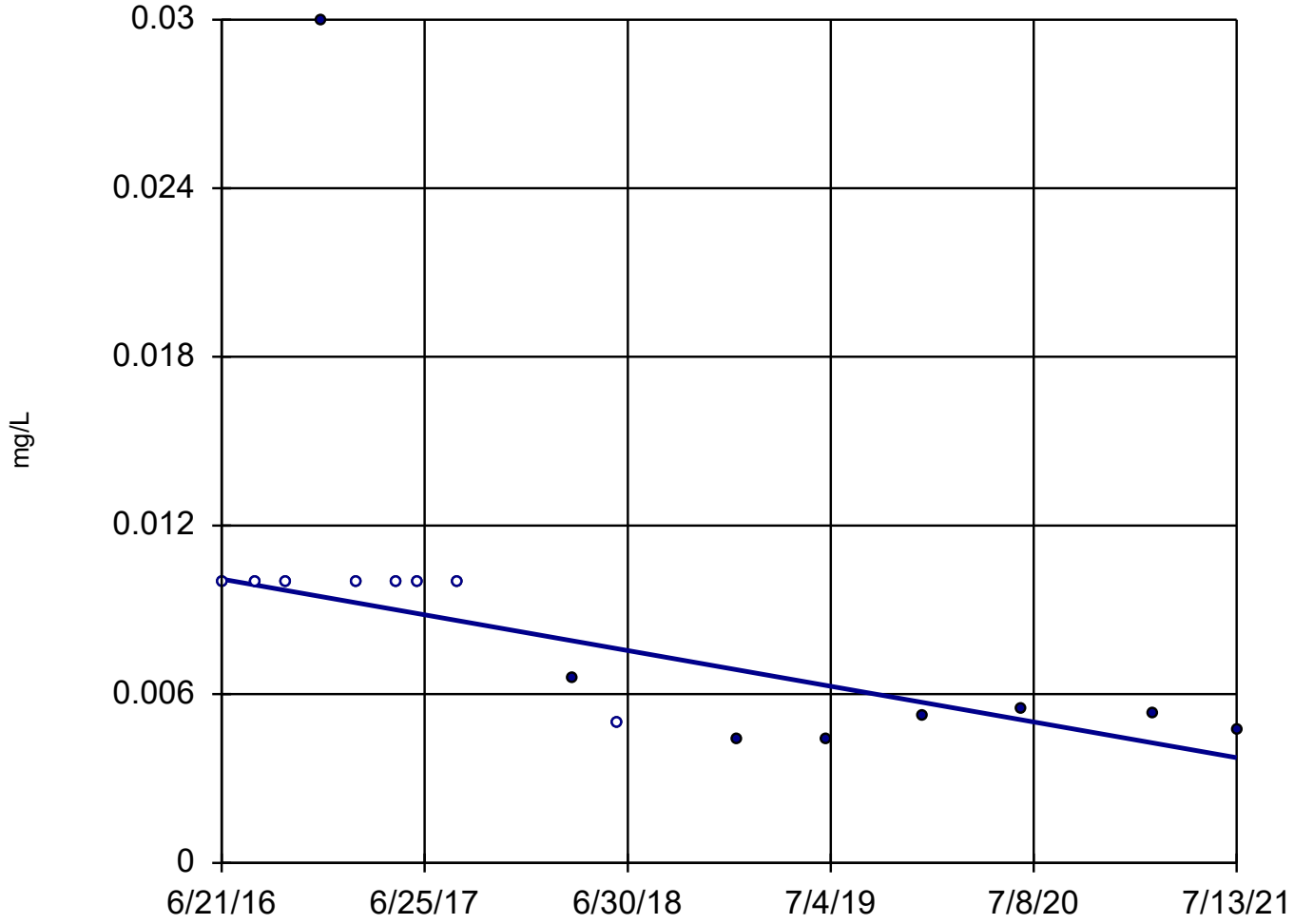
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 16

Slope = -0.001255 units per year.

Mann-Kendall statistic = -67
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

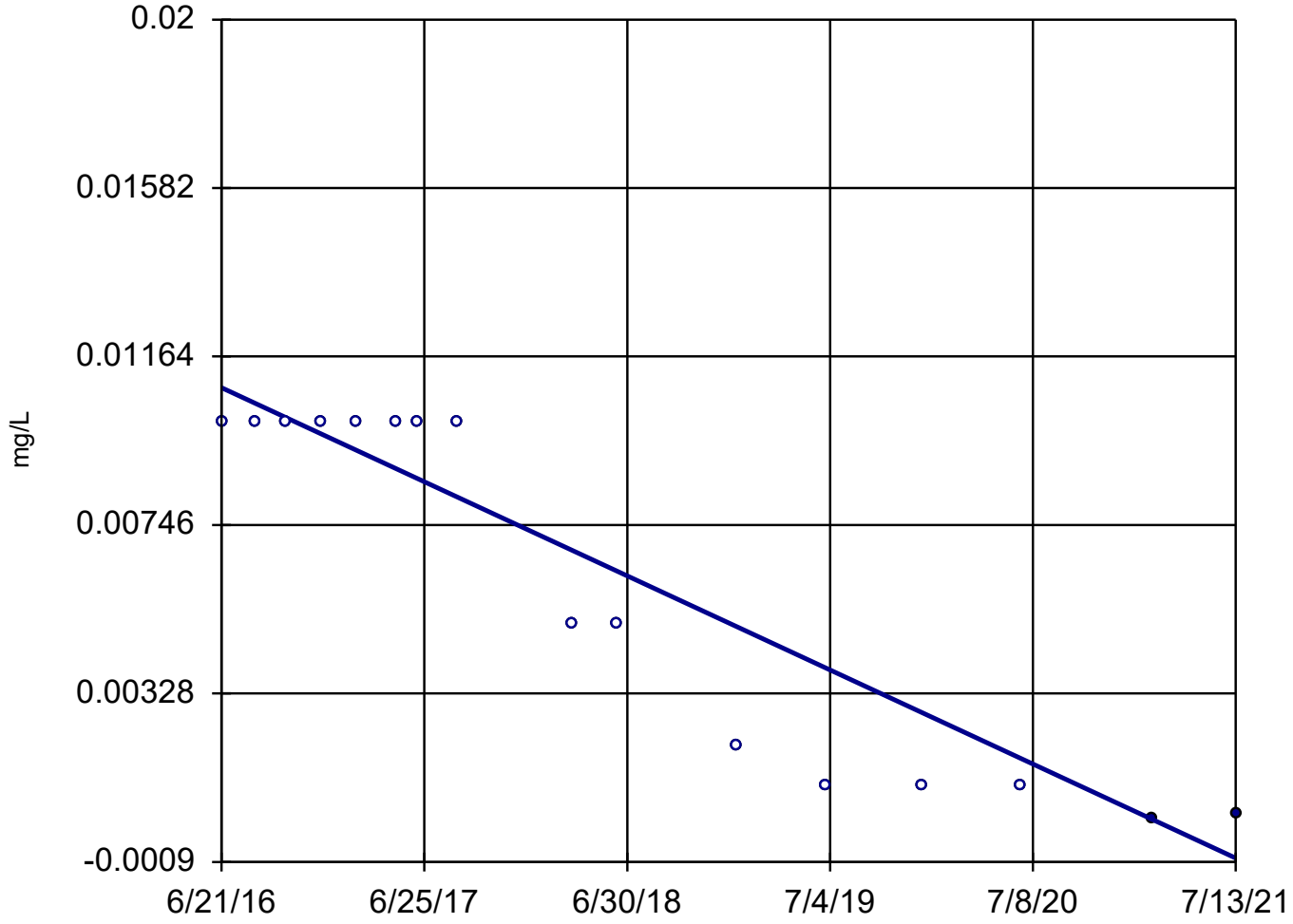
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = -0.002305 units per year.

Mann-Kendall statistic = -86
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

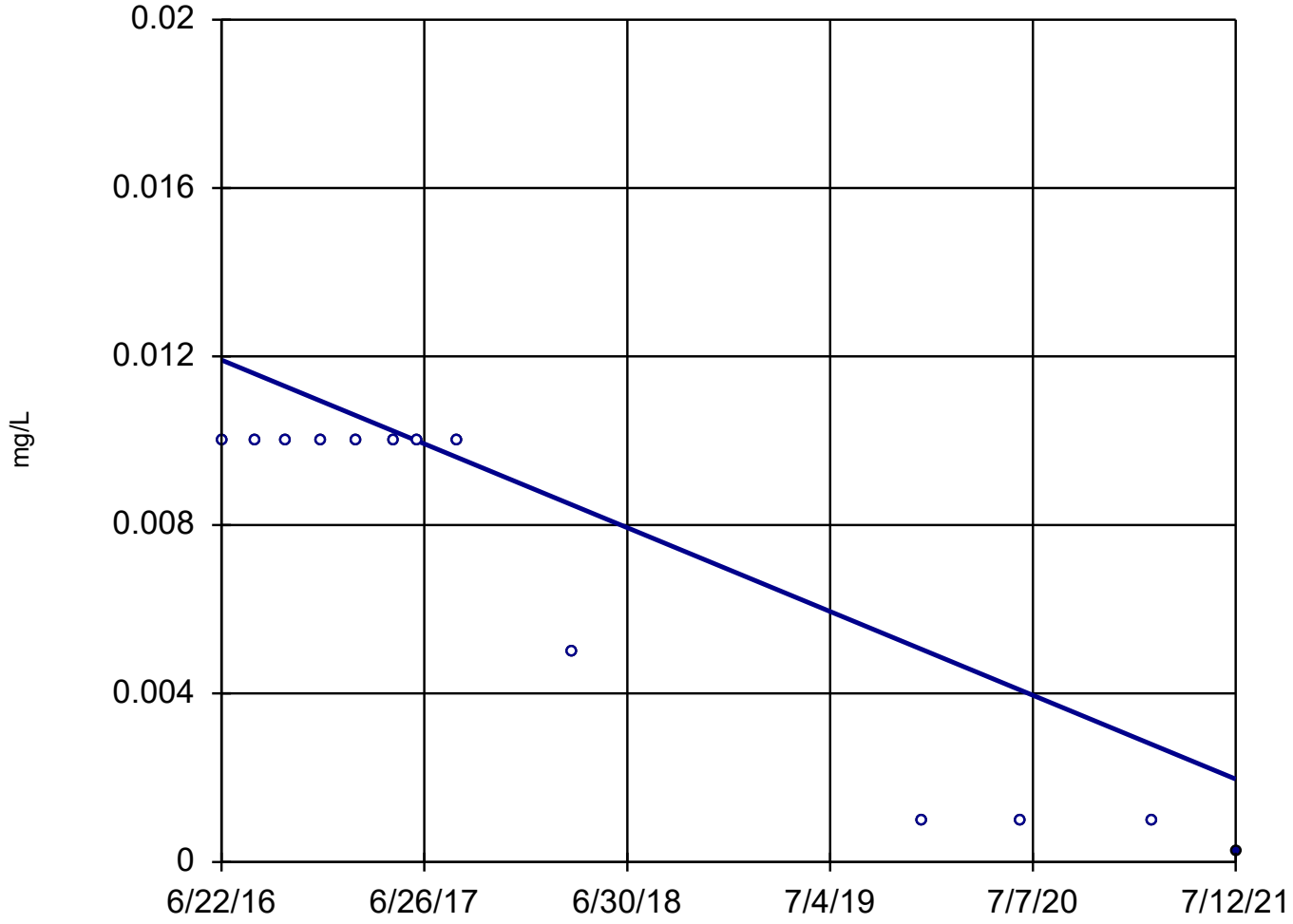
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 13

Slope = -0.001967 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

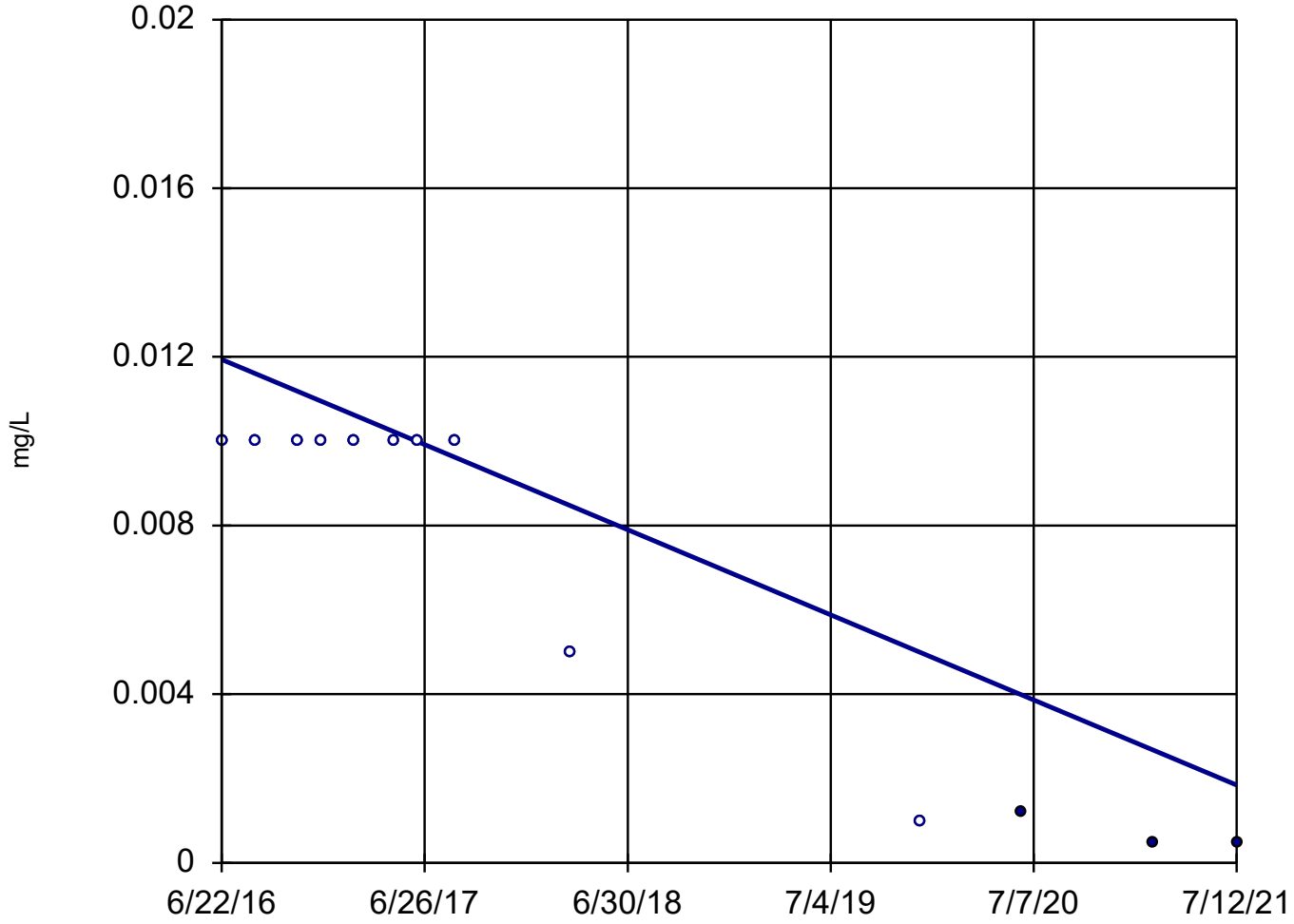
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 13

Slope = -0.001996 units per year.

Mann-Kendall statistic = -46
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

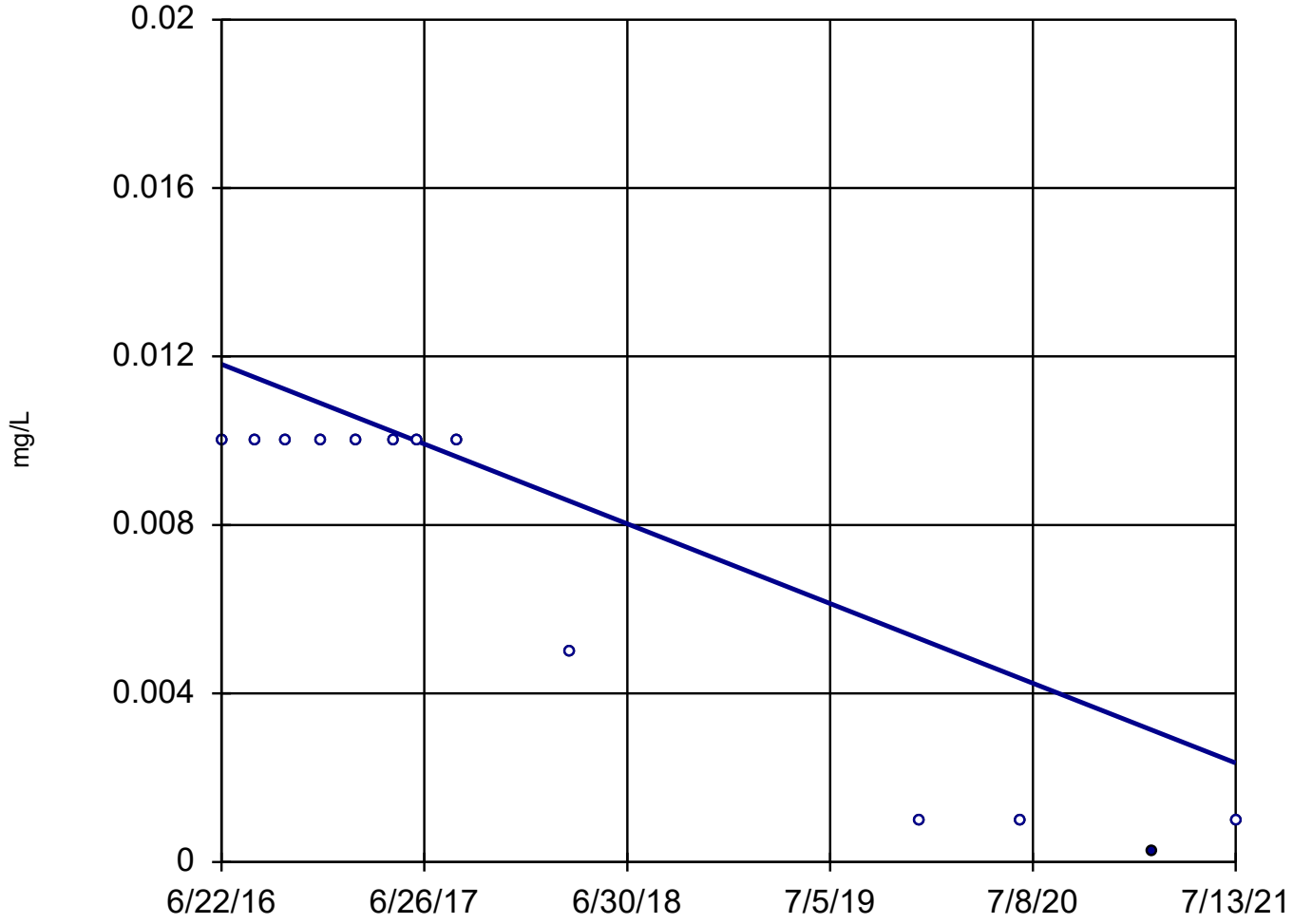
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 13

Slope = -0.001871 units per year.

Mann-Kendall statistic = -45
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

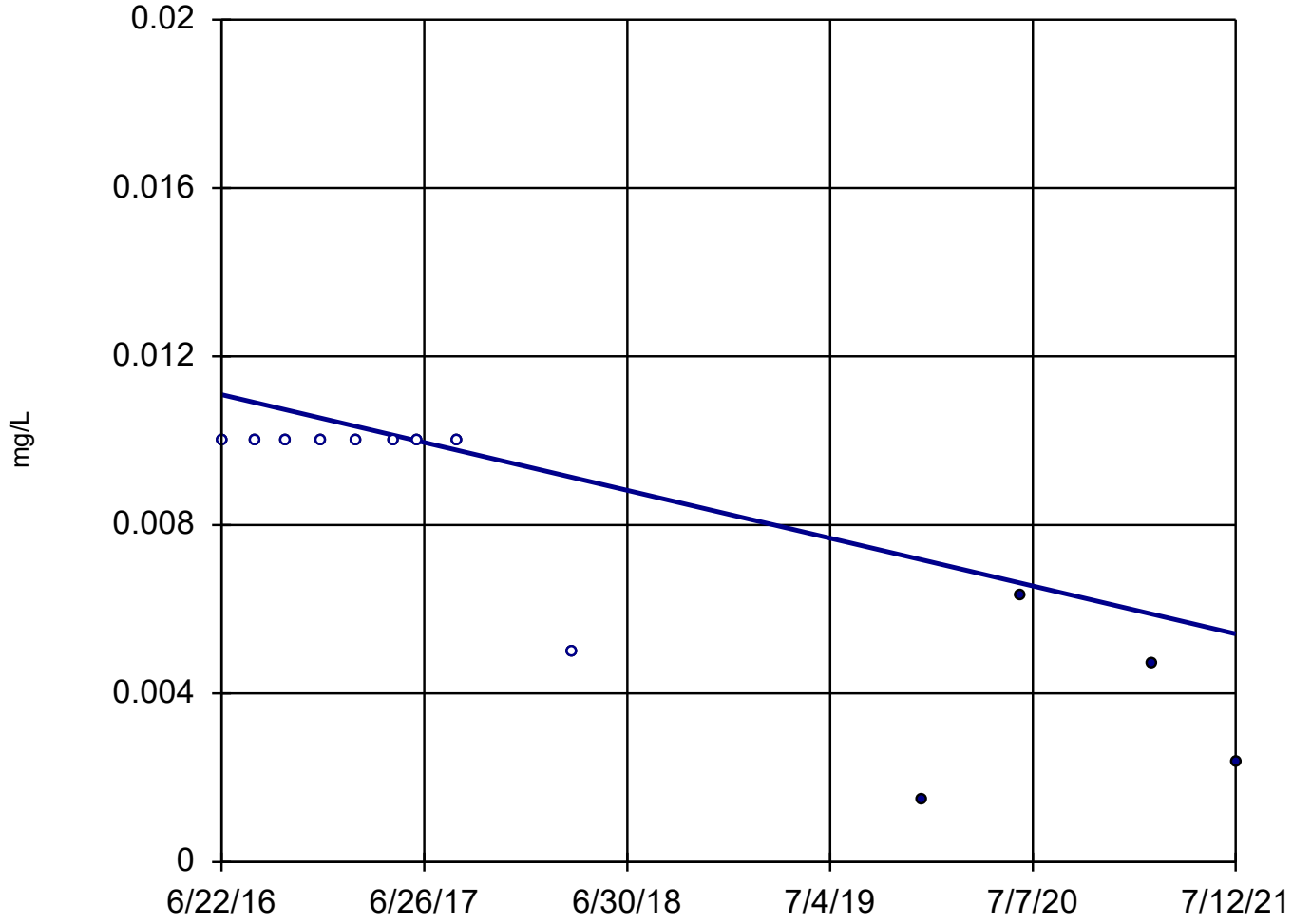
Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 13

Slope = -0.001122 units per year.

Mann-Kendall statistic = -42
critical = -39

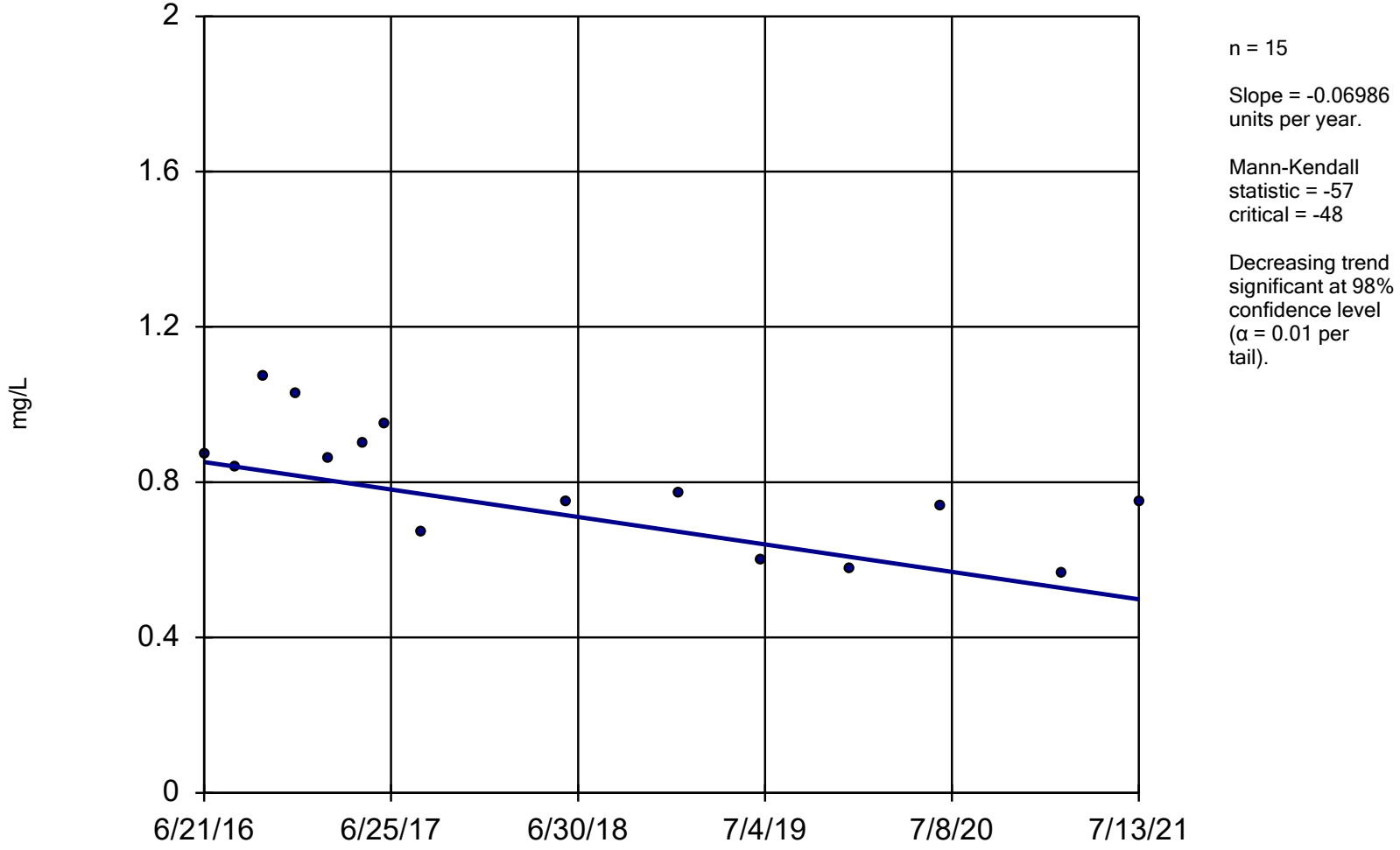
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 15

Slope = -0.06986 units per year.

Mann-Kendall statistic = -57
critical = -48

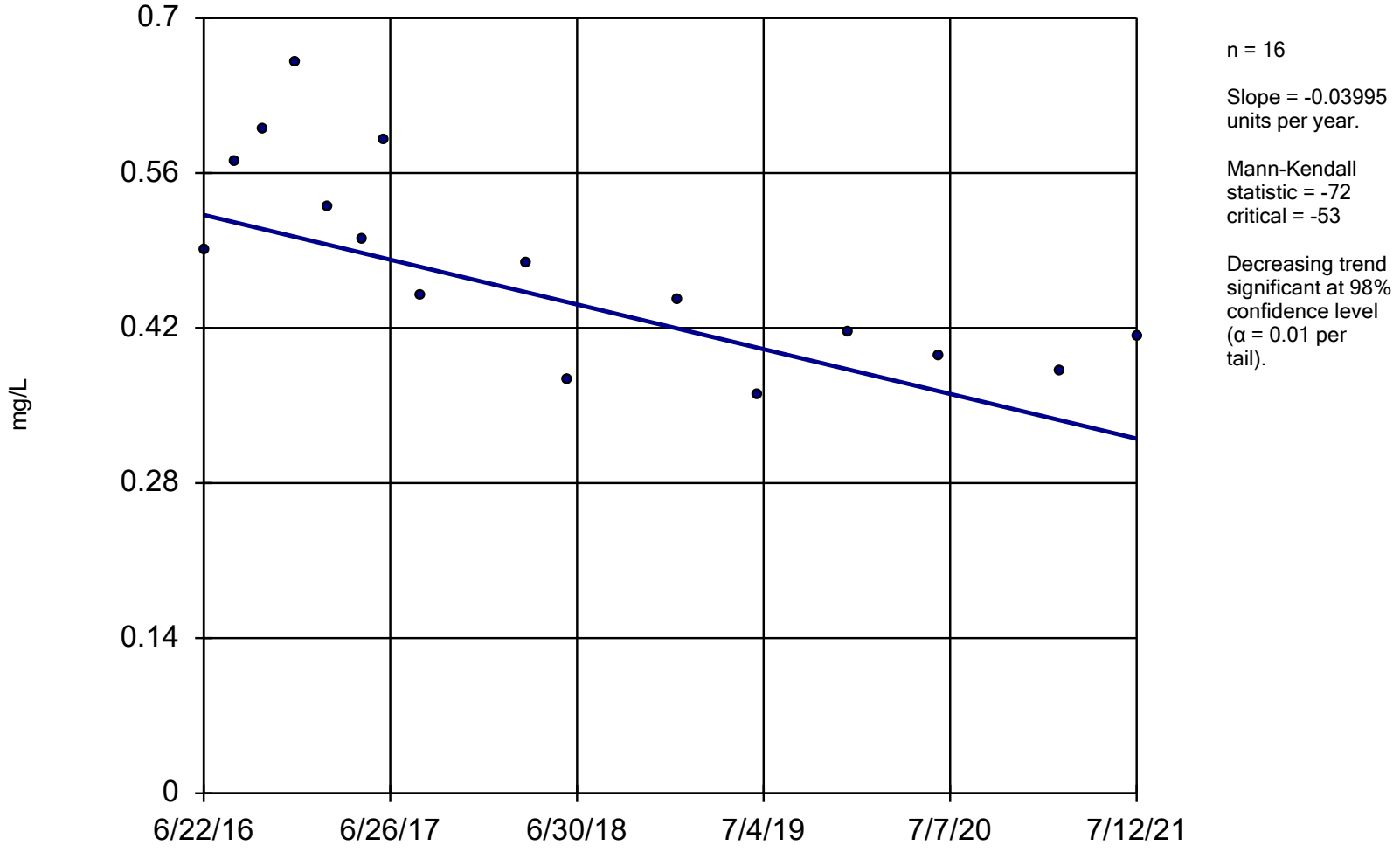
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 16

Slope = -0.03995 units per year.

Mann-Kendall statistic = -72
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

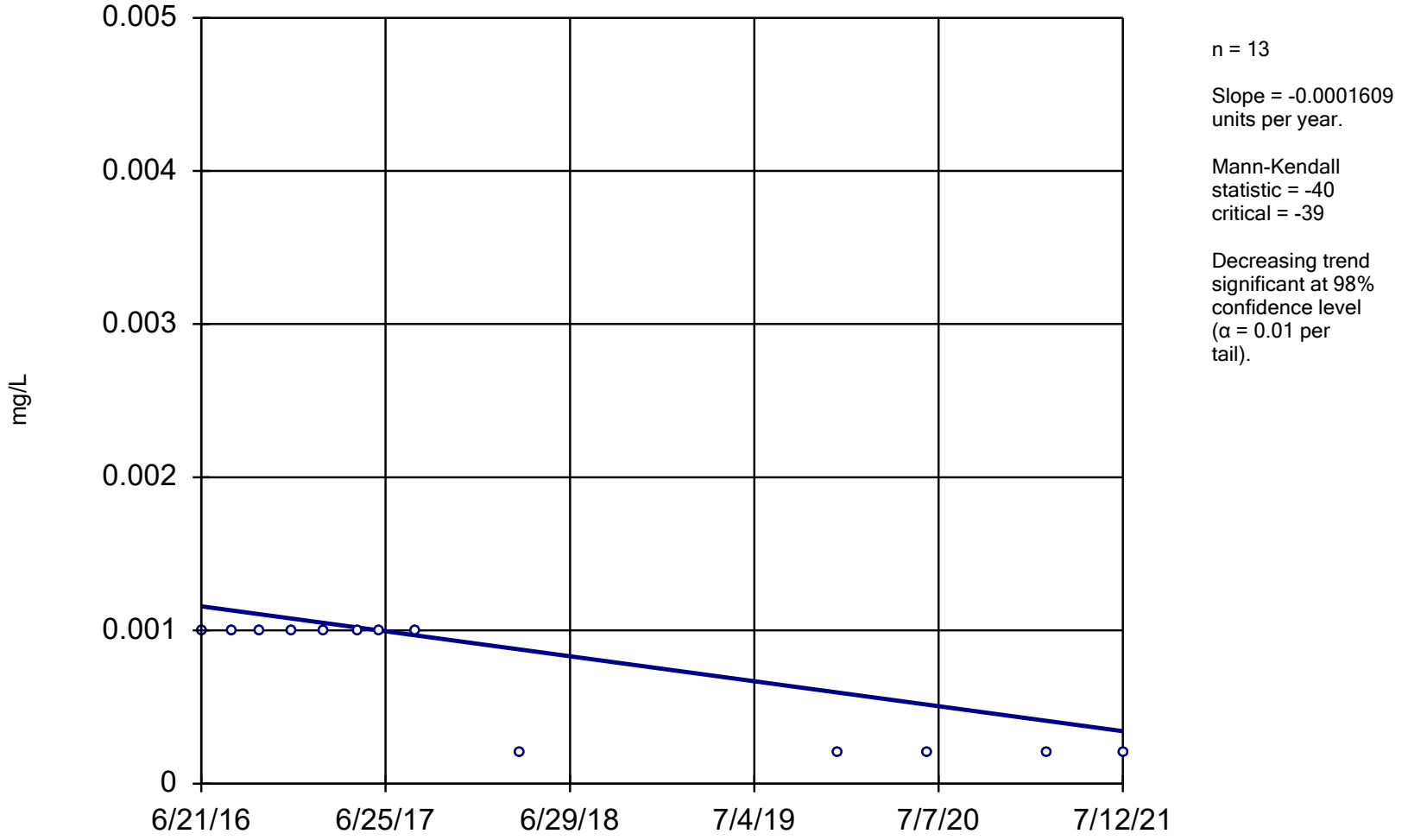
Constituent: Lithium Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 13

Slope = -0.0001609 units per year.

Mann-Kendall statistic = -40
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

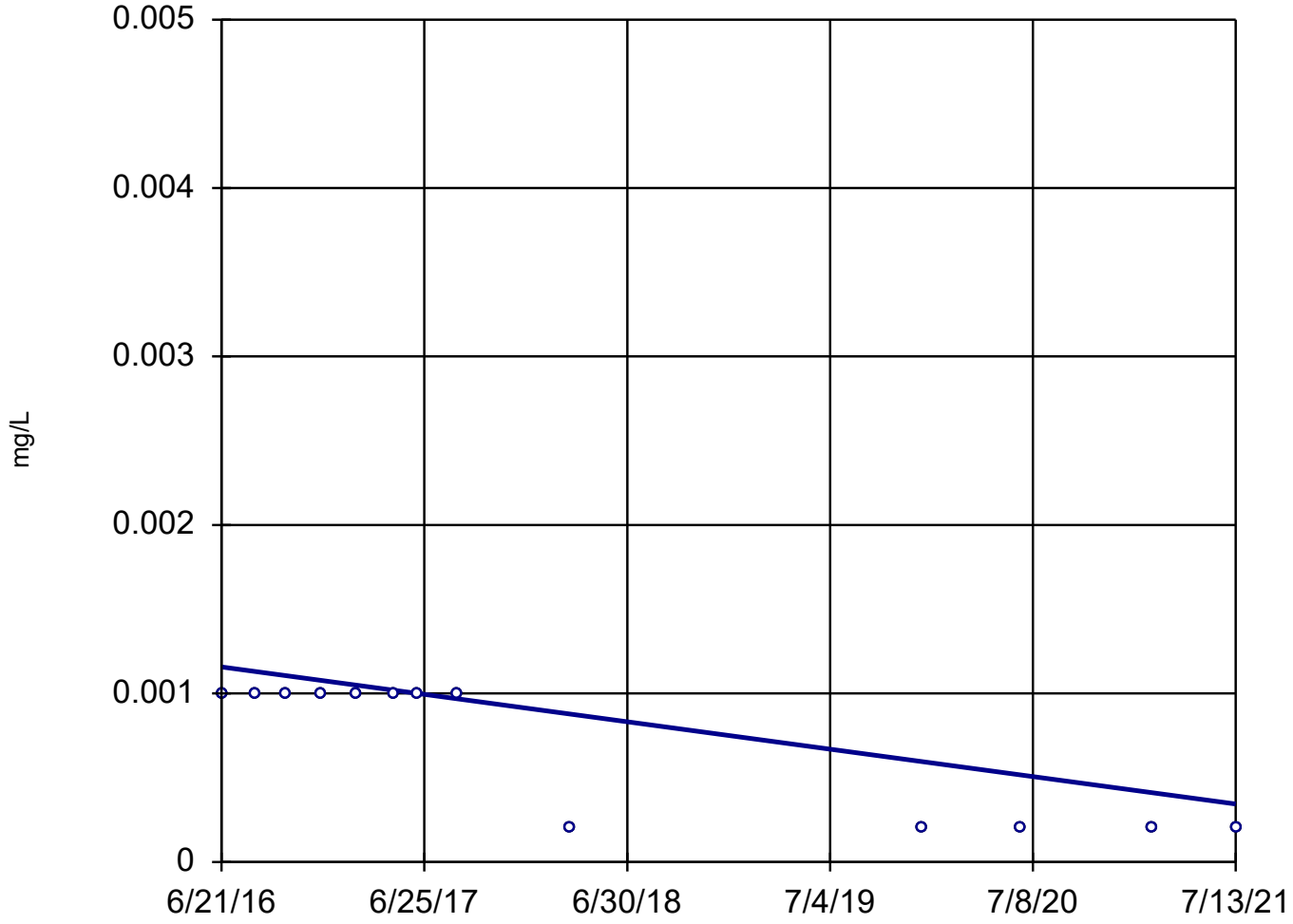
Constituent: Mercury Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 13

Slope = -0.0001608 units per year.

Mann-Kendall statistic = -40
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

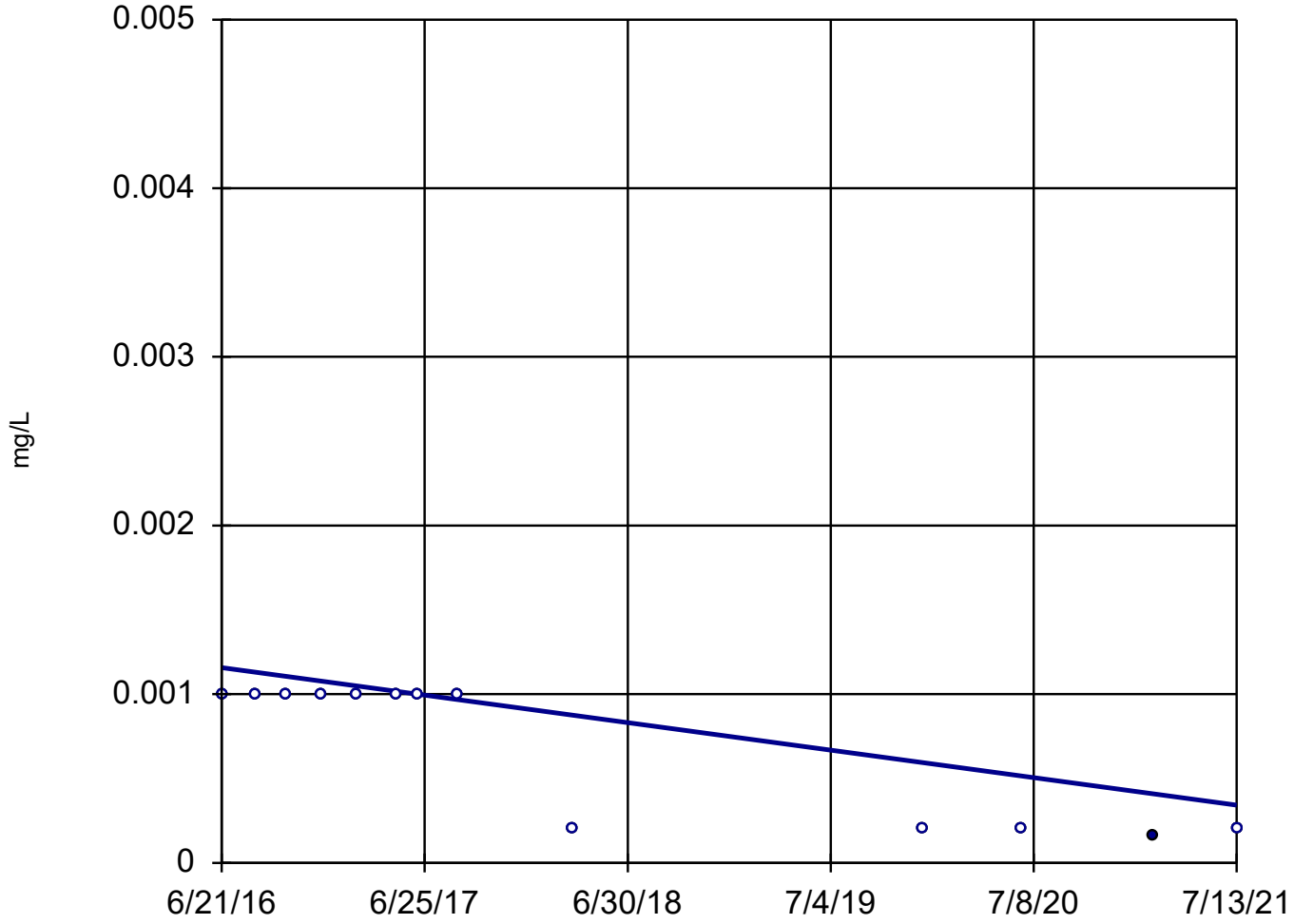
Constituent: Mercury Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 13

Slope = -0.0001608 units per year.

Mann-Kendall statistic = -42
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

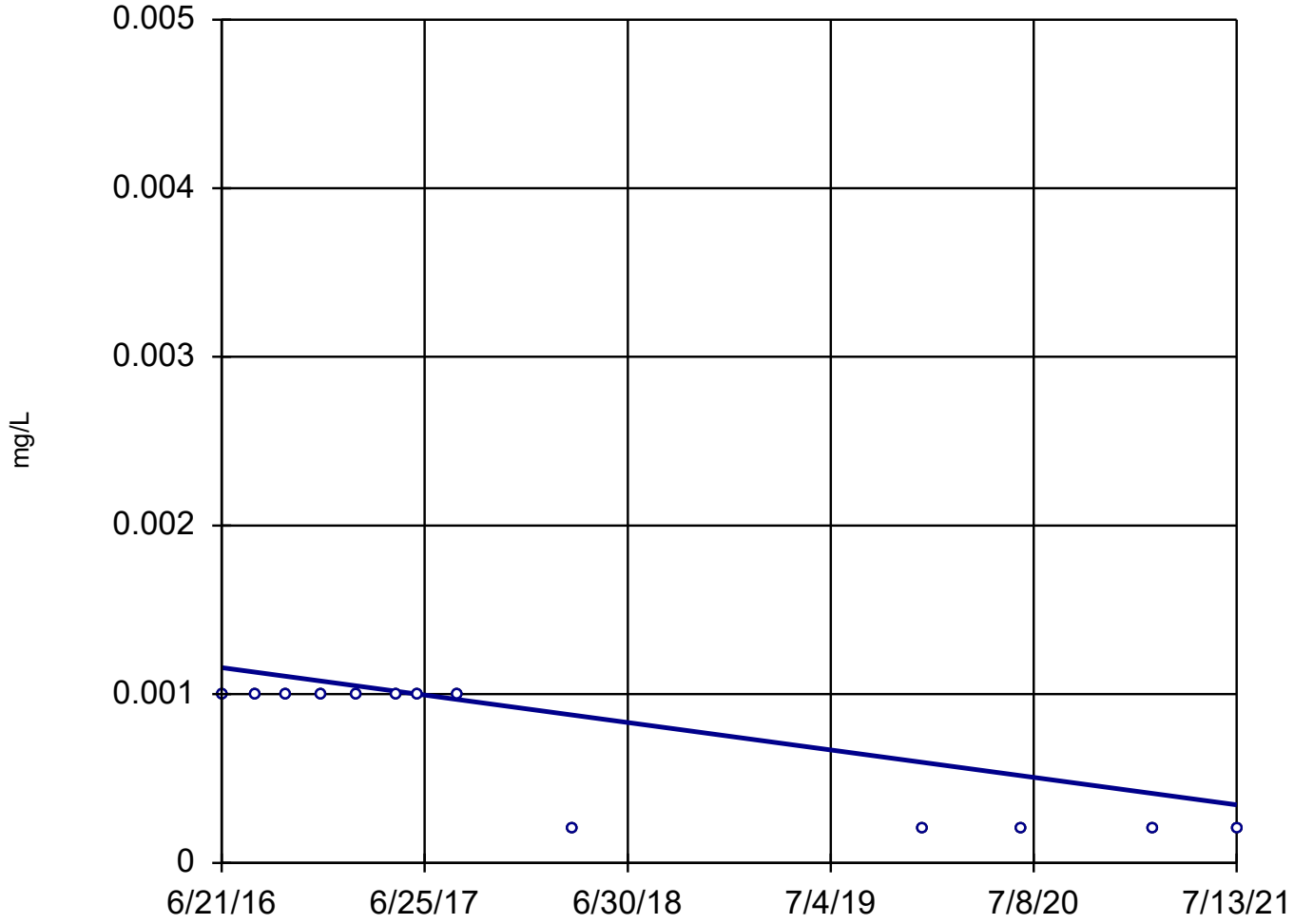
Constituent: Mercury Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 13

Slope = -0.0001608 units per year.

Mann-Kendall statistic = -40
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

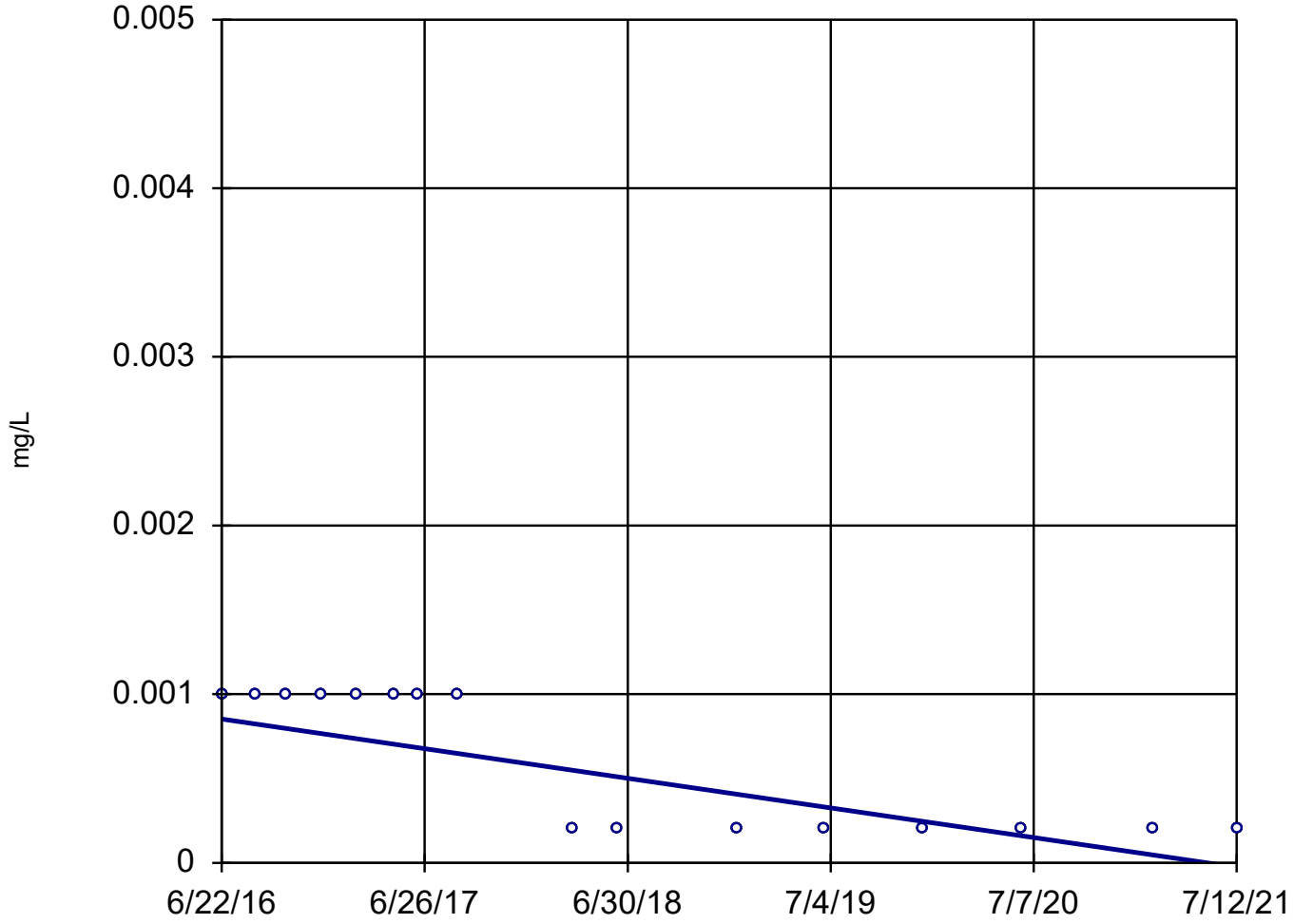
Constituent: Mercury Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 16

Slope = -0.0001739 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

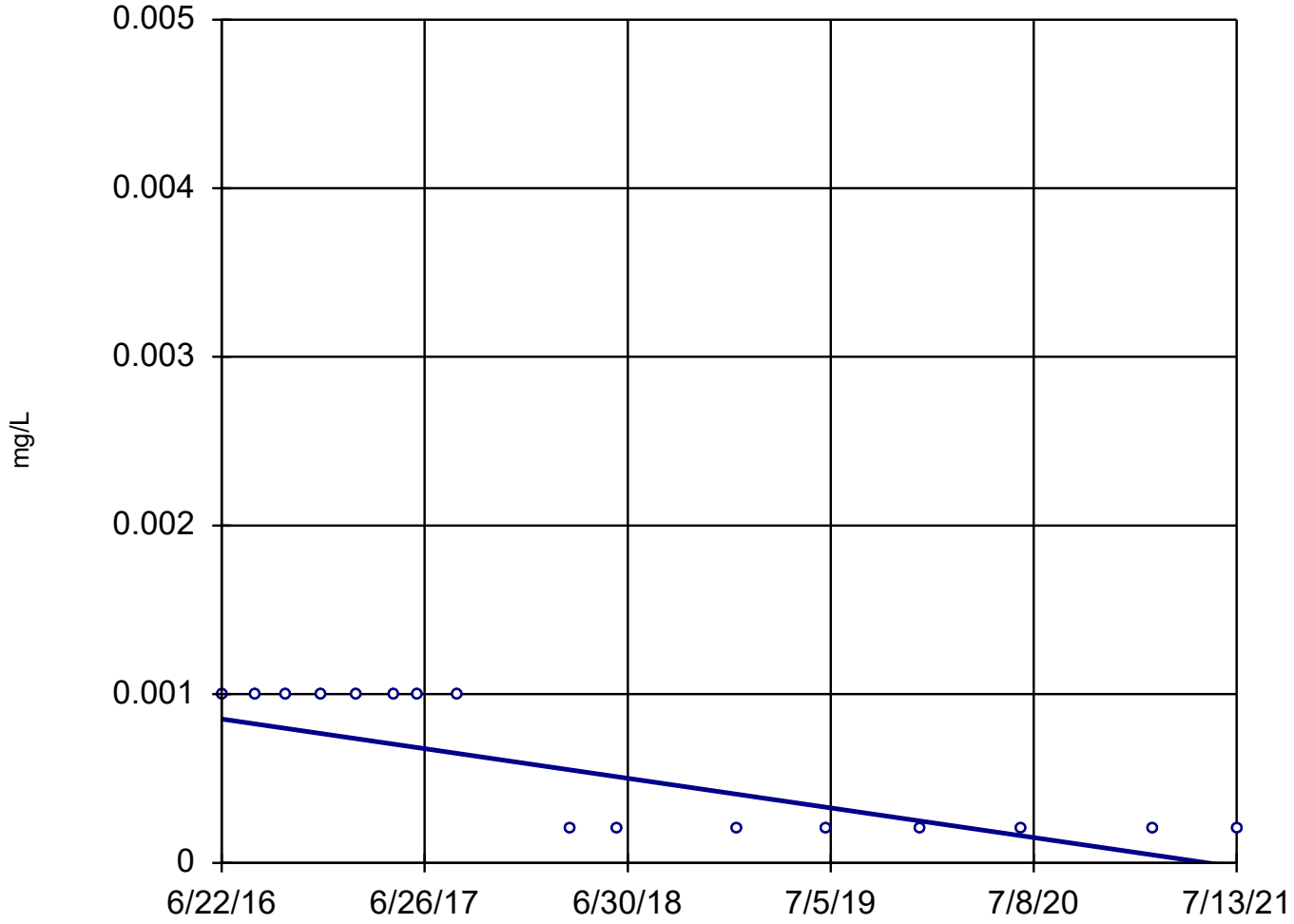
Constituent: Mercury Analysis Run 8/19/2021 10:25 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.0001739 units per year.

Mann-Kendall statistic = -64
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

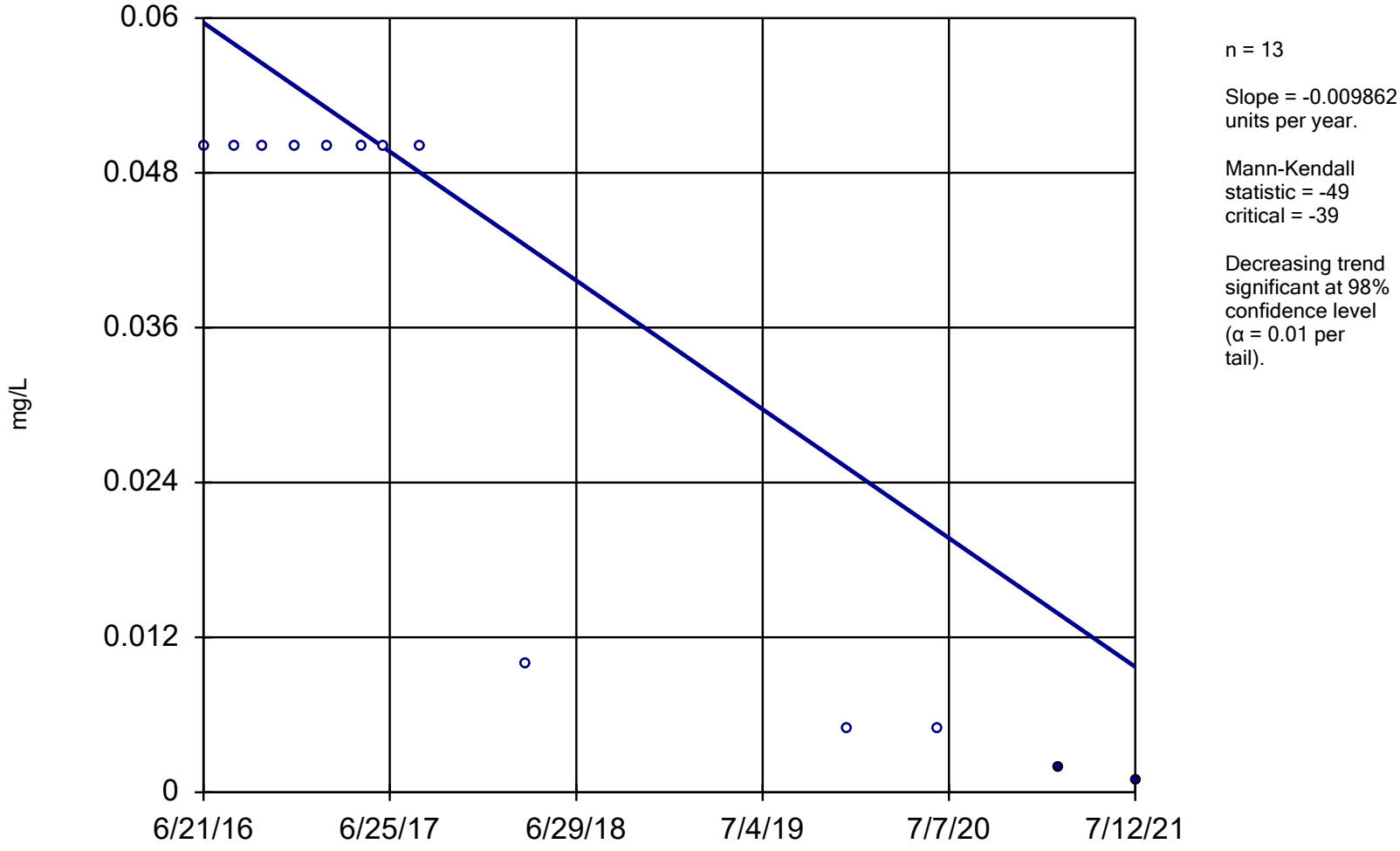
Constituent: Mercury Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 13

Slope = -0.009862 units per year.

Mann-Kendall statistic = -49
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

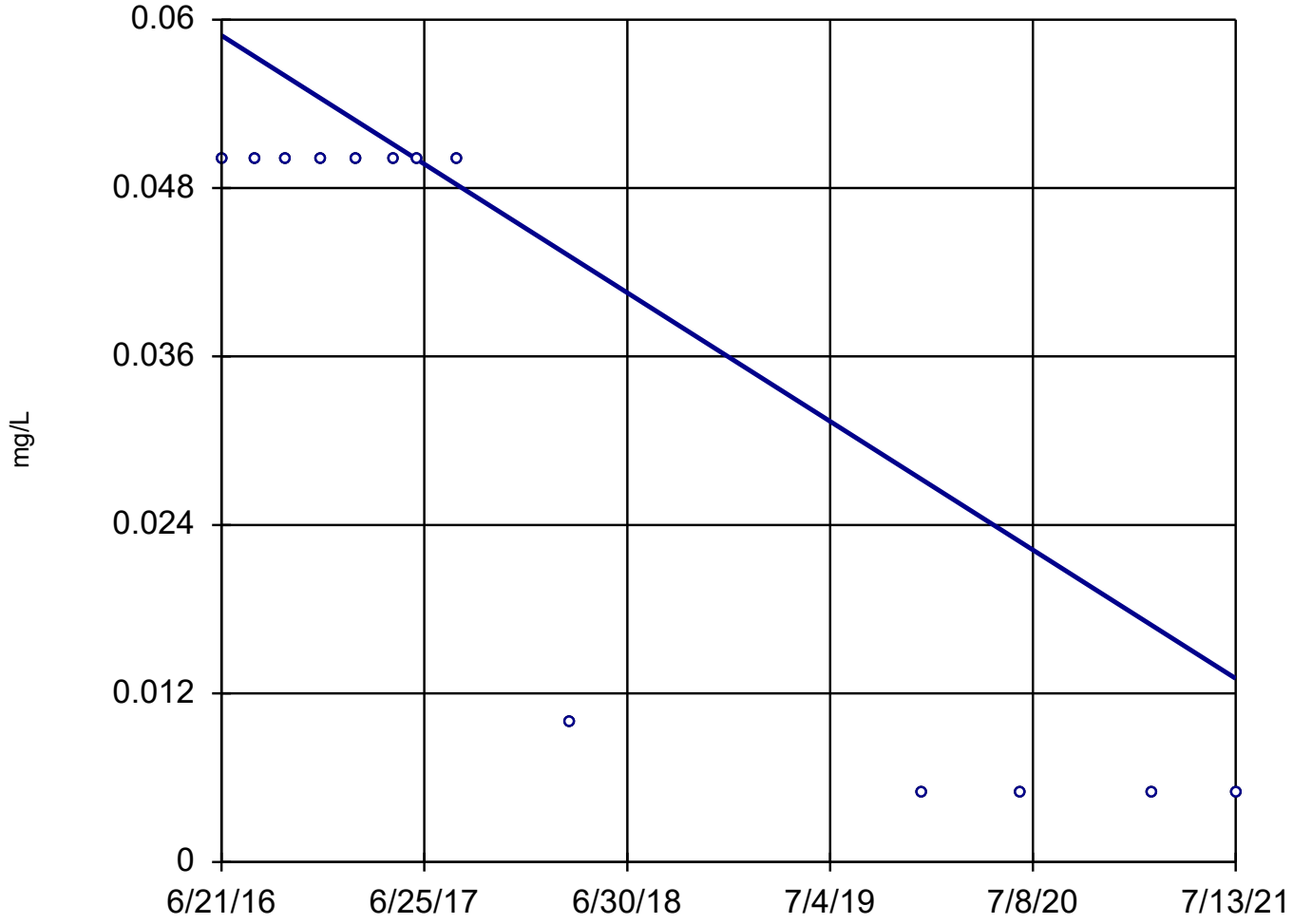
Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 13

Slope = -0.009045 units per year.

Mann-Kendall statistic = -44
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

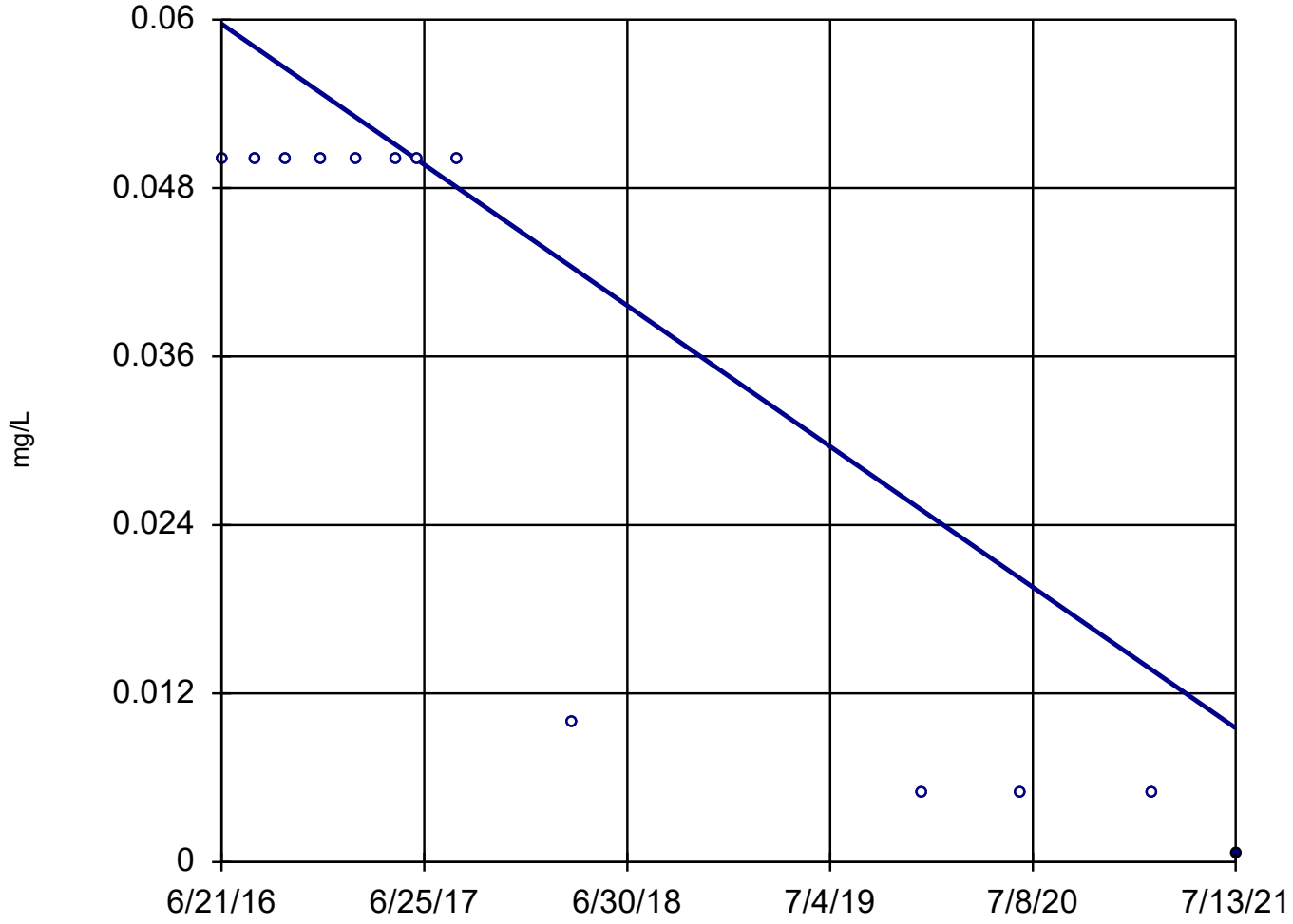
Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 13

Slope = -0.009904 units per year.

Mann-Kendall statistic = -47
critical = -39

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

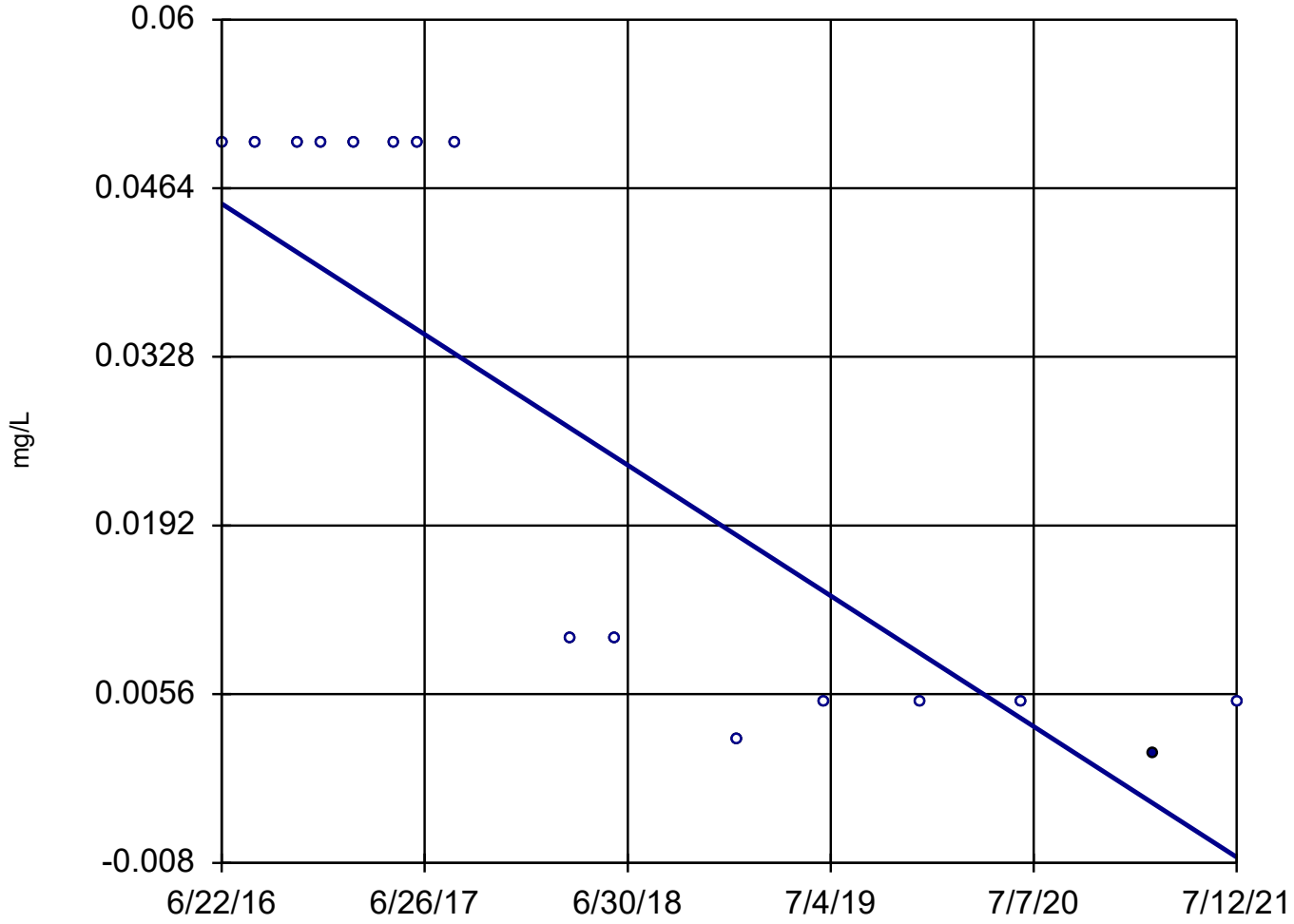
Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 16

Slope = -0.01042 units per year.

Mann-Kendall statistic = -75
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

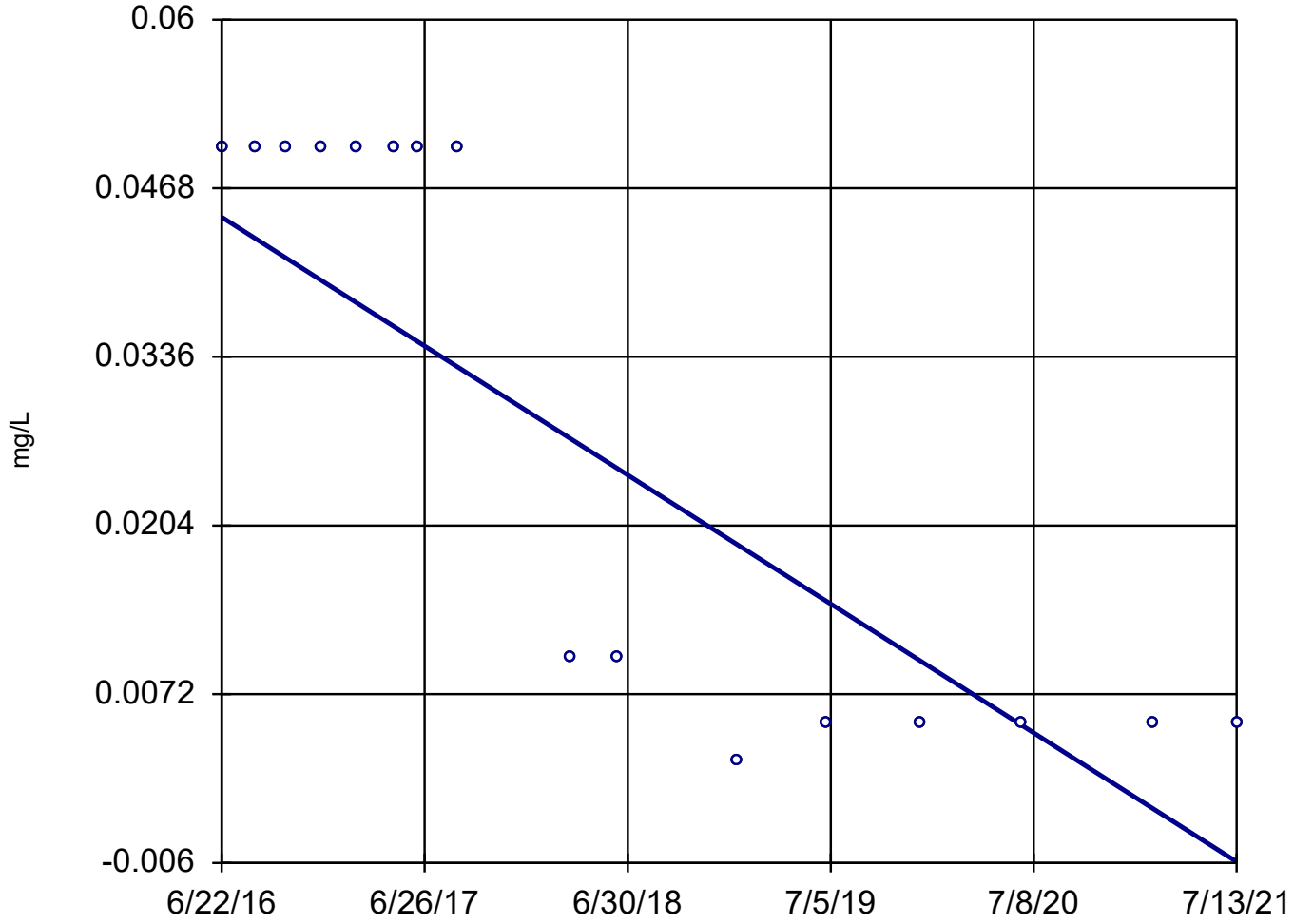
Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 16

Slope = -0.009968 units per year.

Mann-Kendall statistic = -71
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

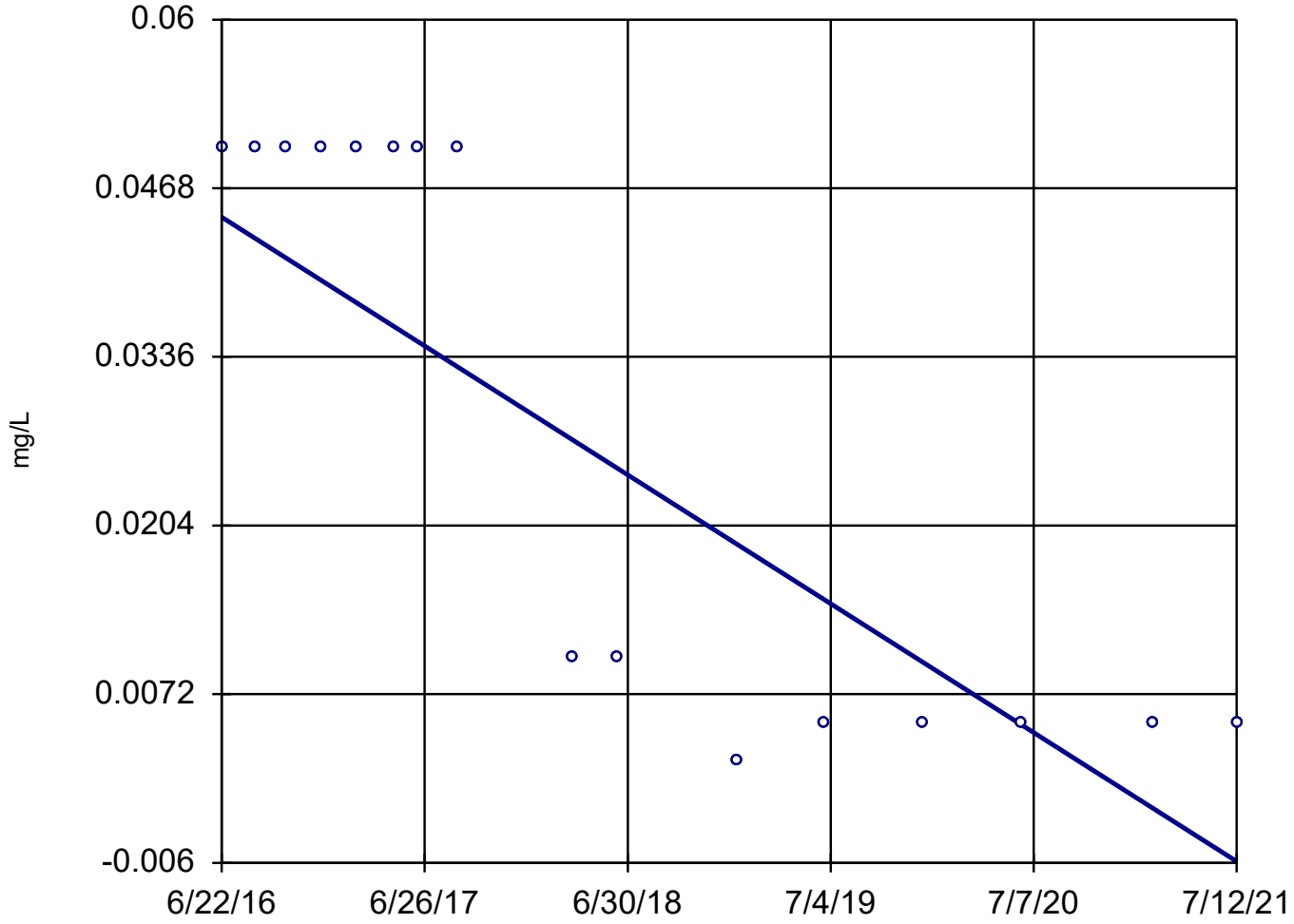
Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 16

Slope = -0.009971 units per year.

Mann-Kendall statistic = -71
critical = -53

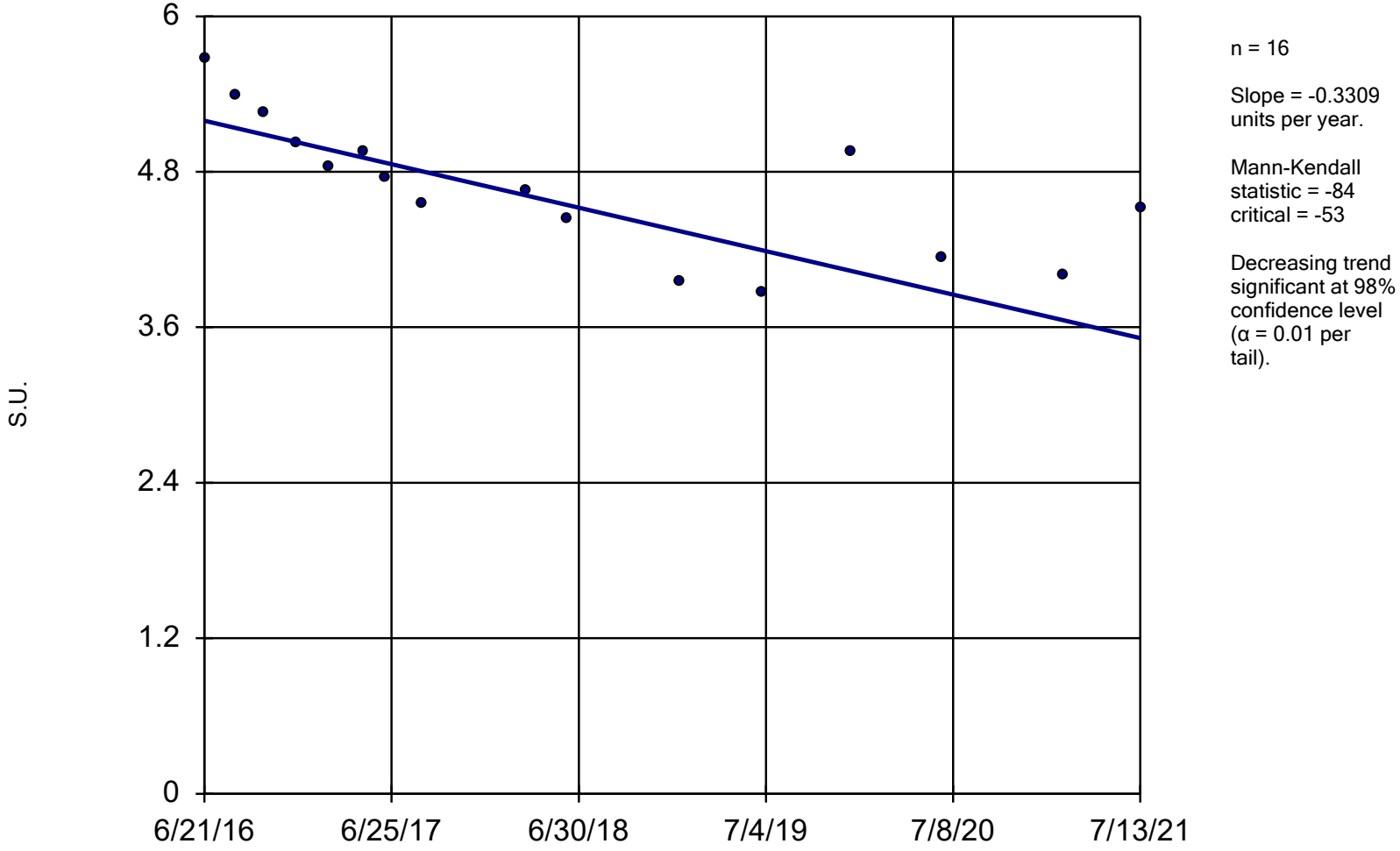
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.3309 units per year.

Mann-Kendall statistic = -84
critical = -53

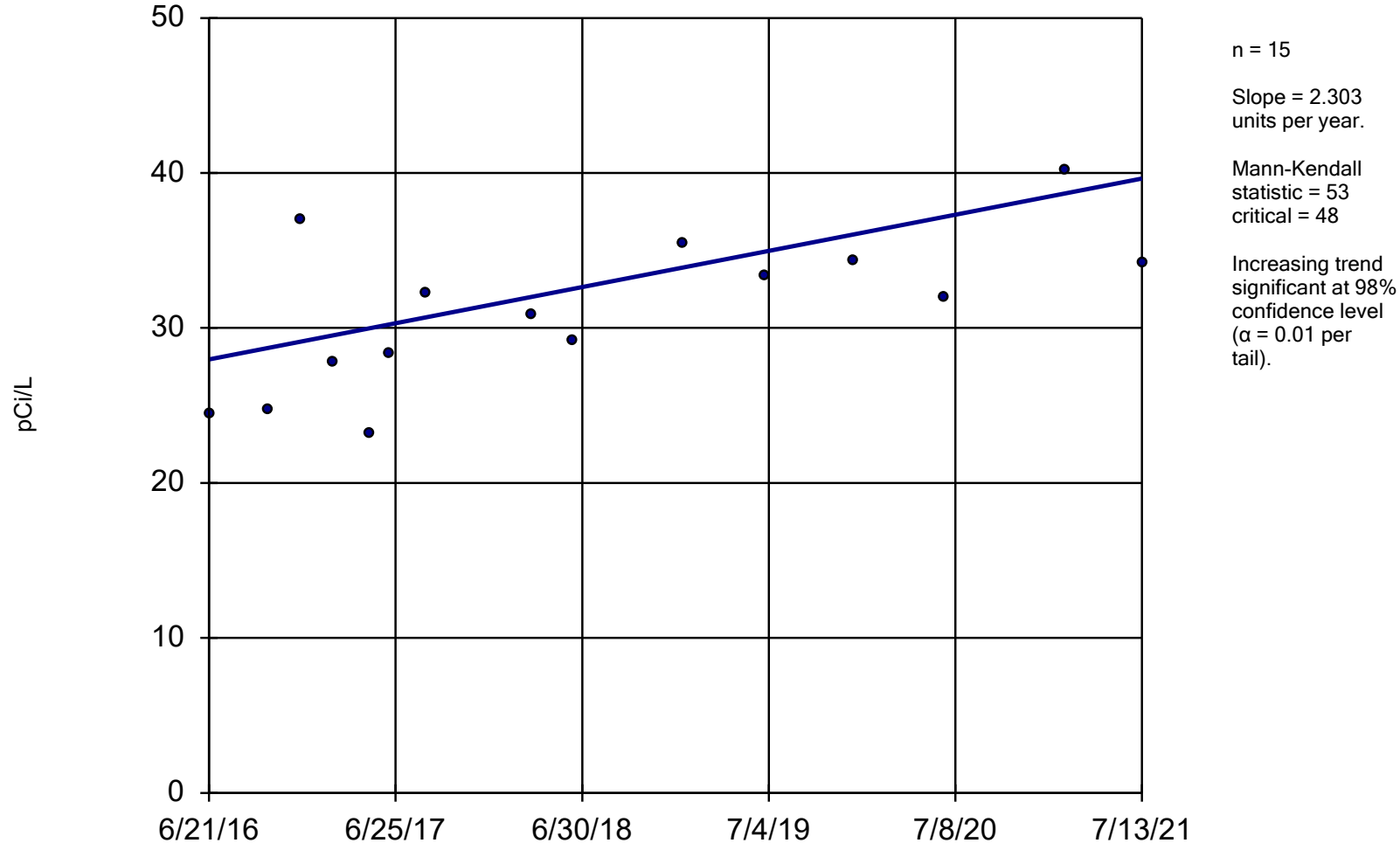
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 15

Slope = 2.303 units per year.

Mann-Kendall statistic = 53
critical = 48

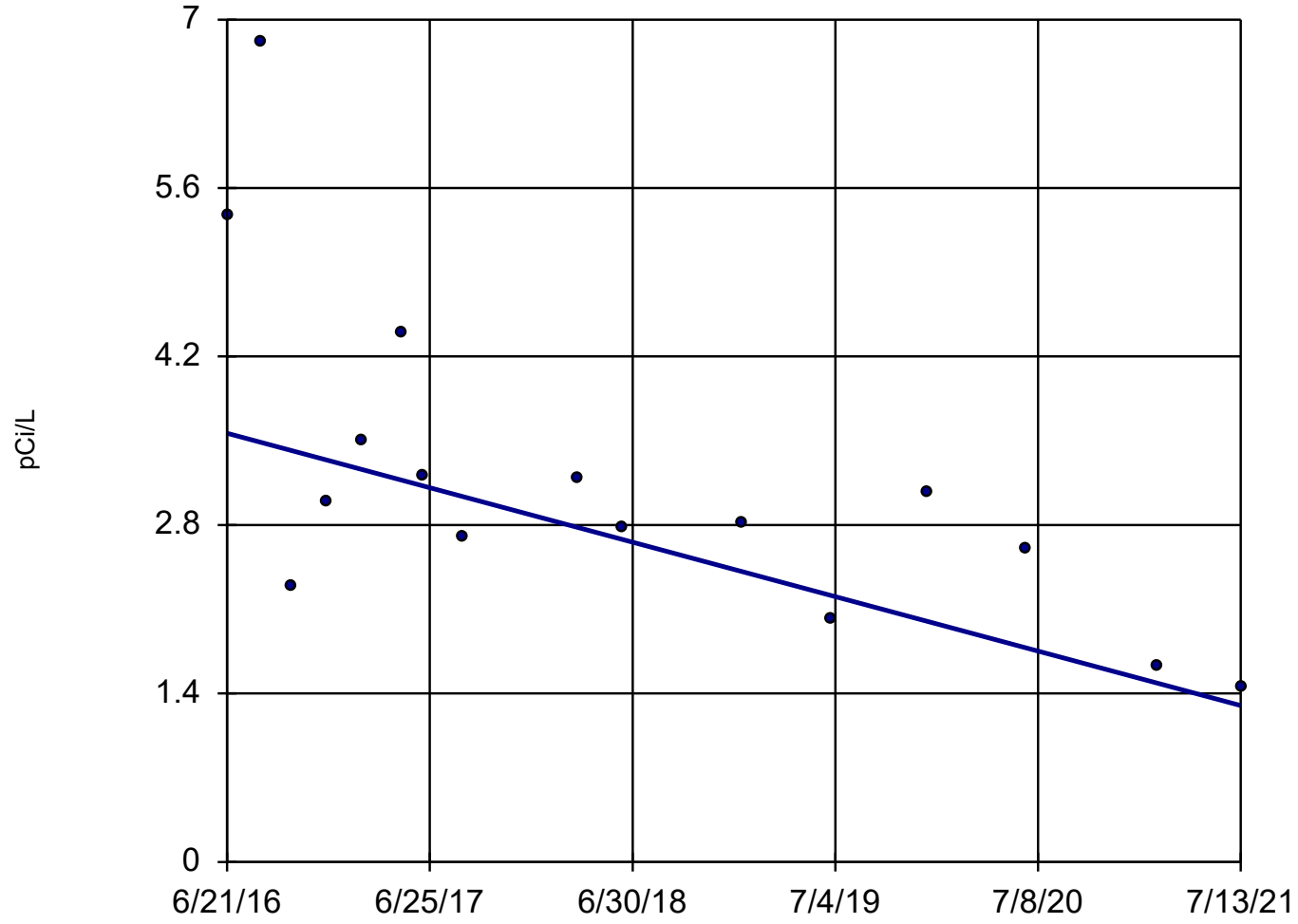
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = -0.4467 units per year.

Mann-Kendall statistic = -68
critical = -53

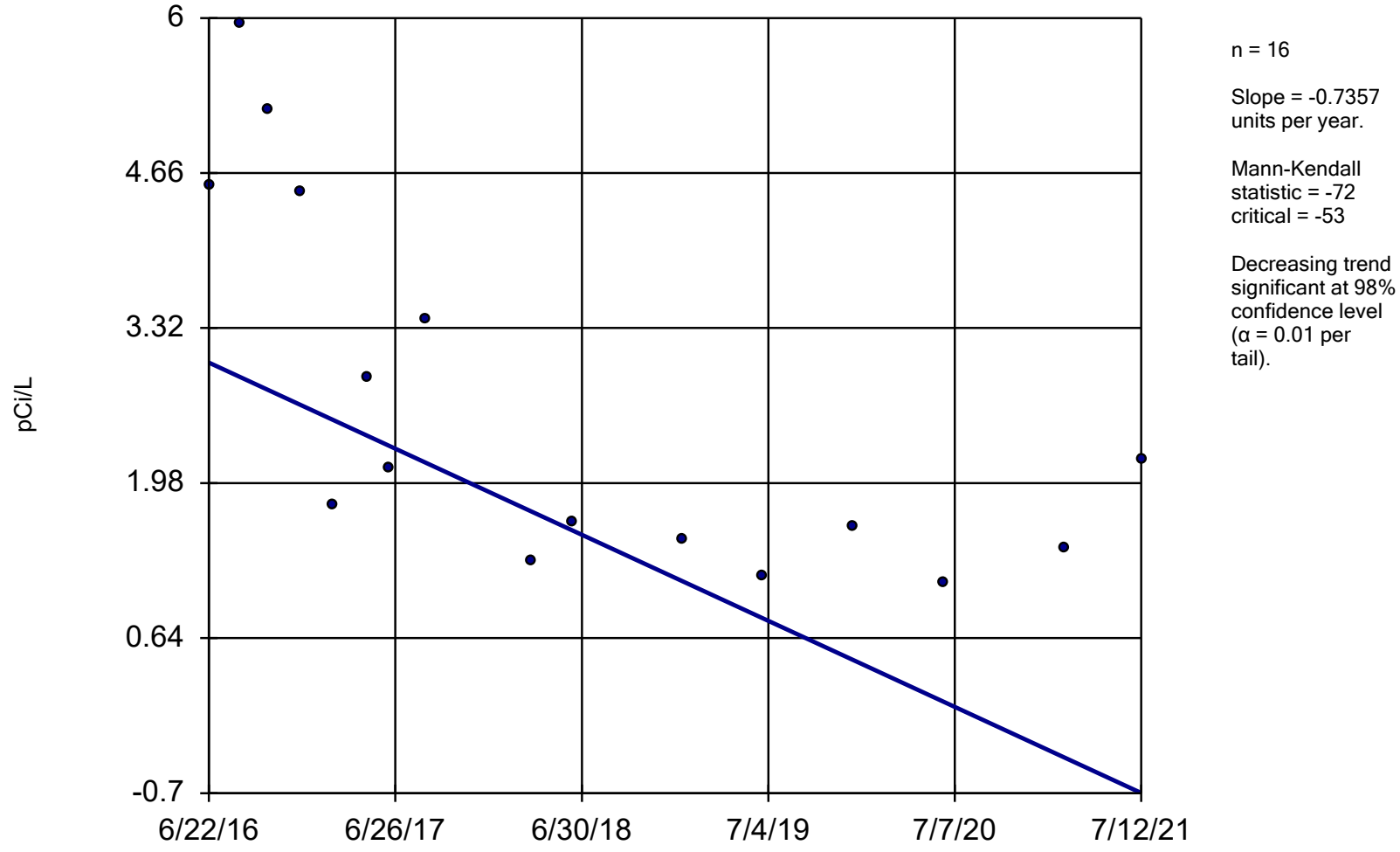
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 16

Slope = -0.7357 units per year.

Mann-Kendall statistic = -72
critical = -53

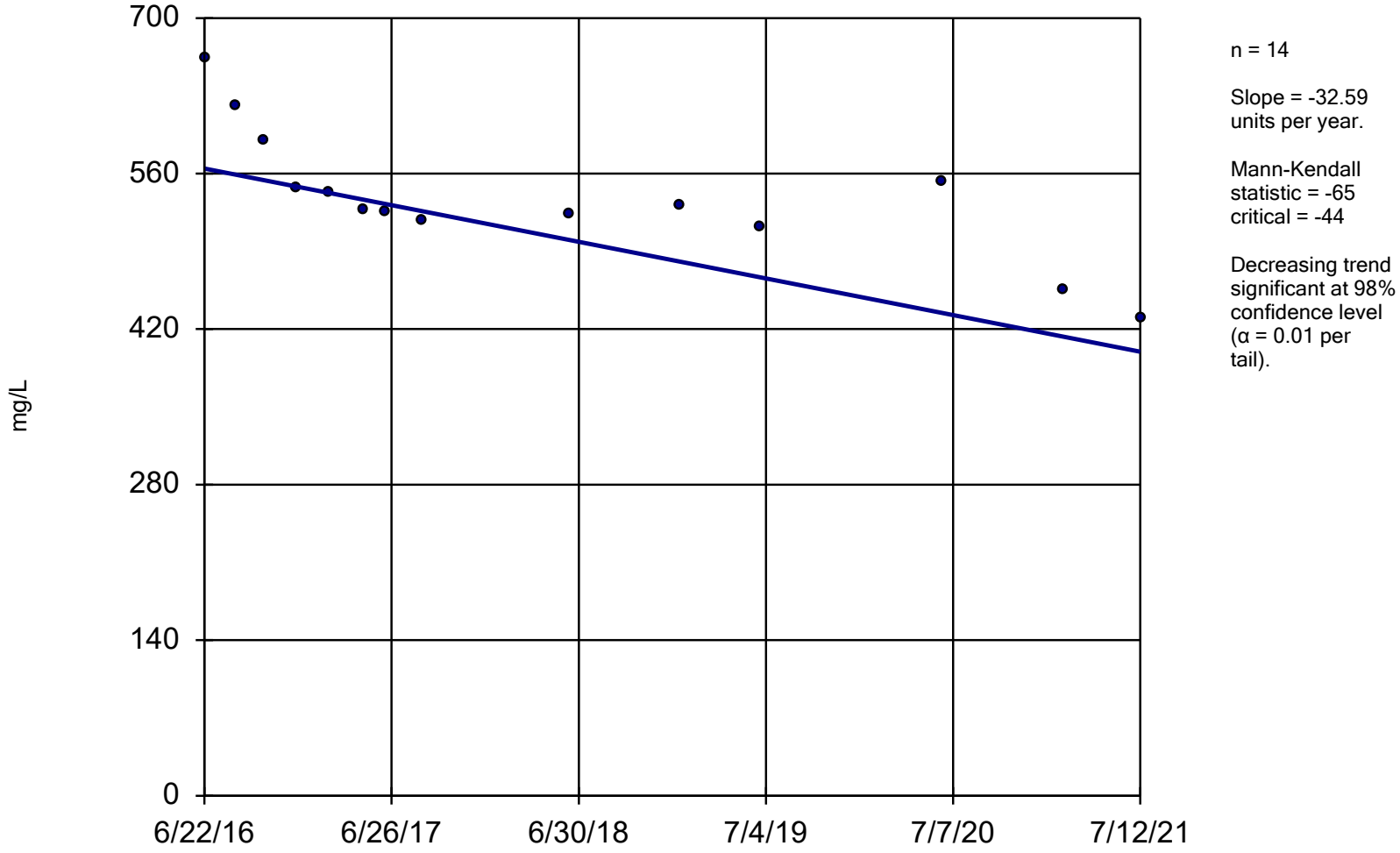
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 14

Slope = -32.59 units per year.

Mann-Kendall statistic = -65
critical = -44

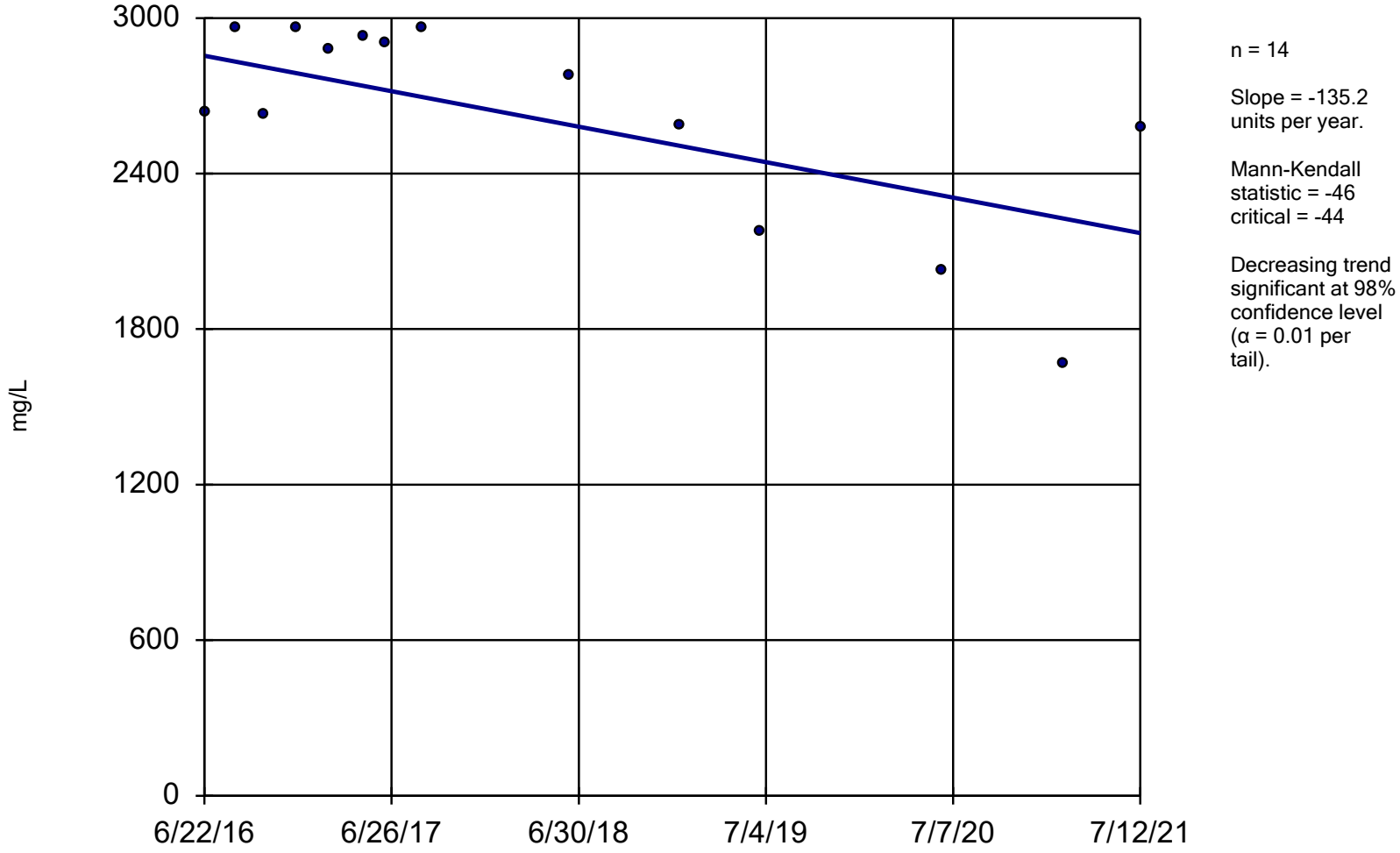
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 14

Slope = -135.2 units per year.

Mann-Kendall statistic = -46
critical = -44

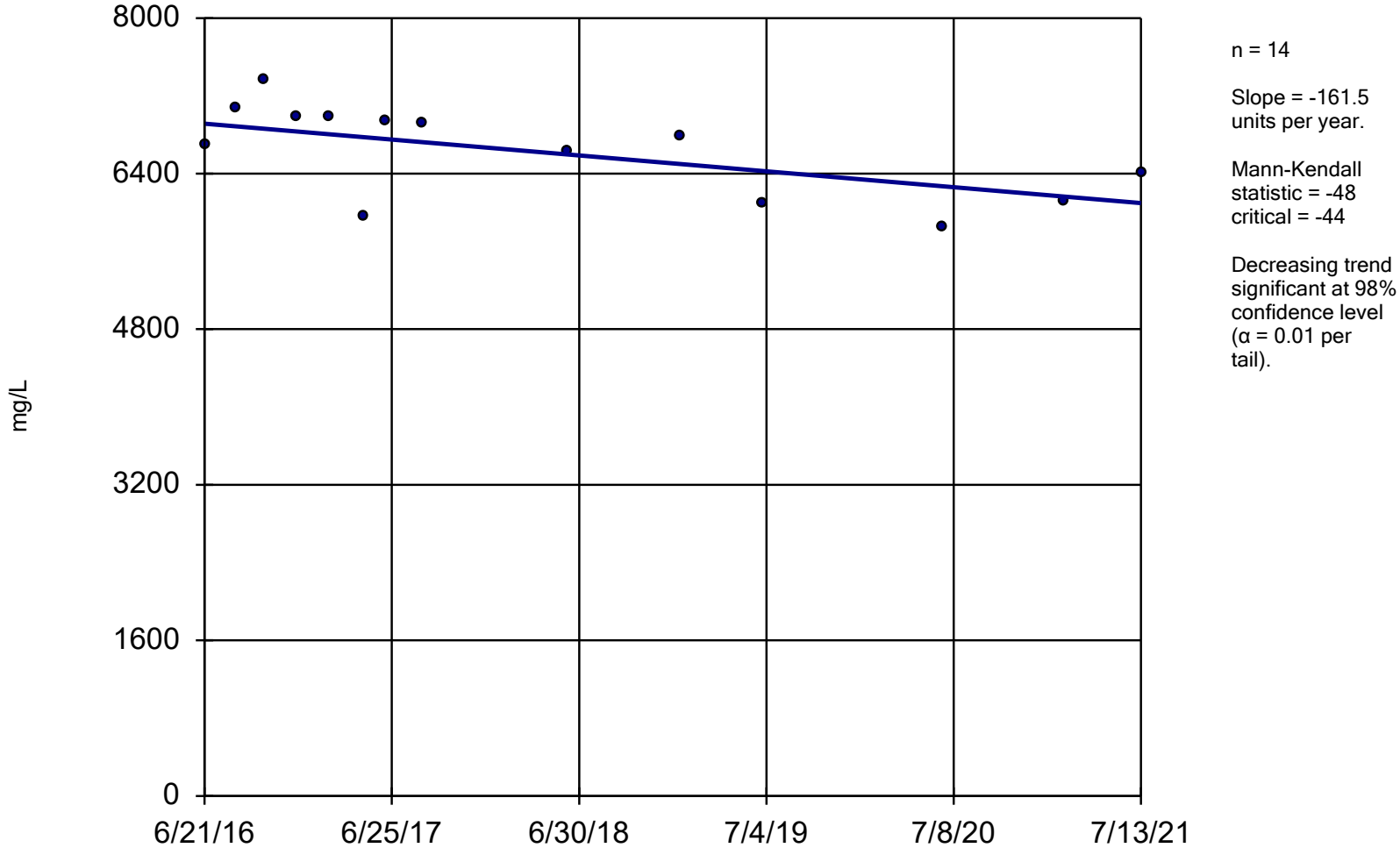
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 14

Slope = -161.5 units per year.

Mann-Kendall statistic = -48
critical = -44

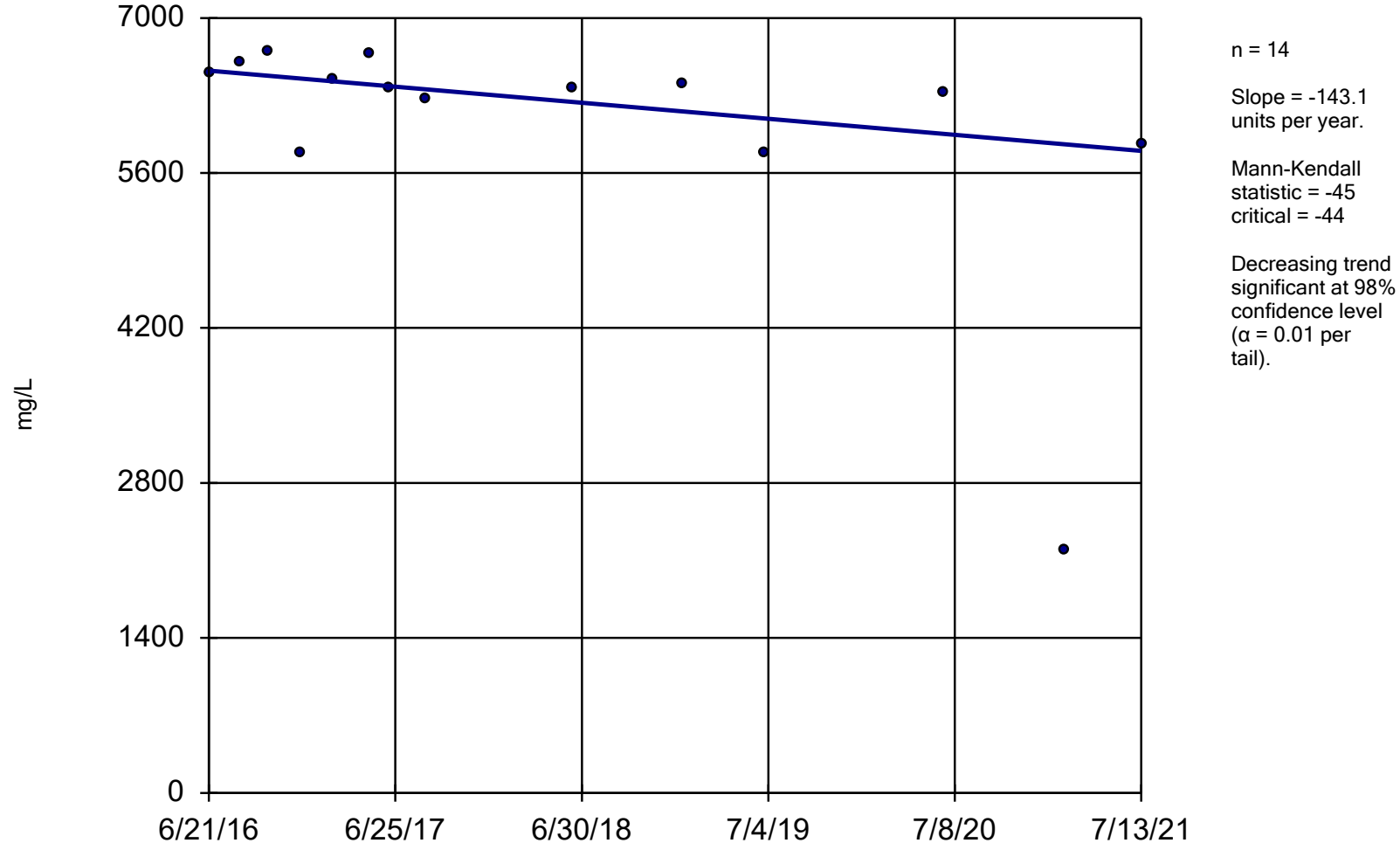
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 14

Slope = -143.1 units per year.

Mann-Kendall statistic = -45
critical = -44

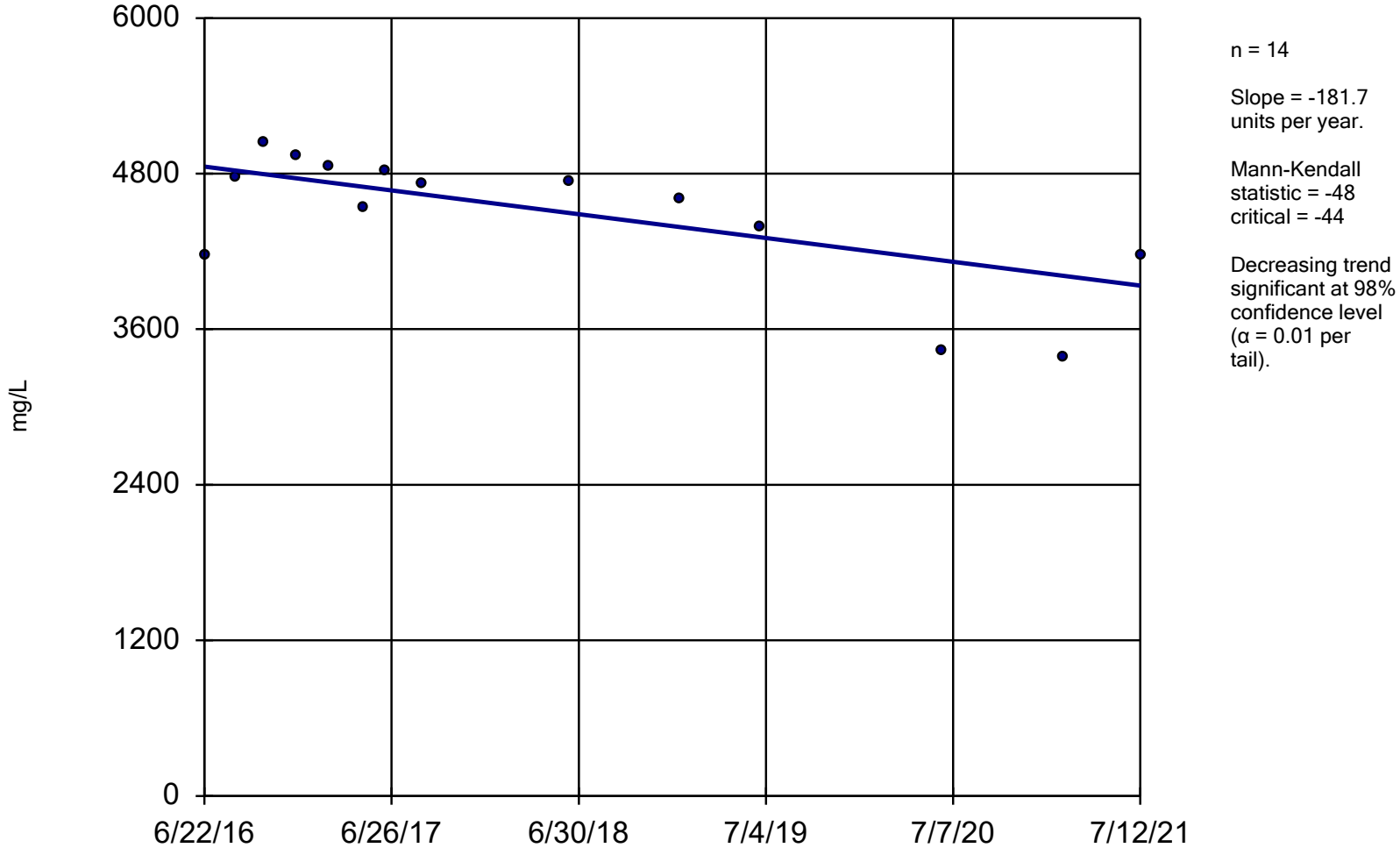
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 14

Slope = -181.7 units per year.

Mann-Kendall statistic = -48
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

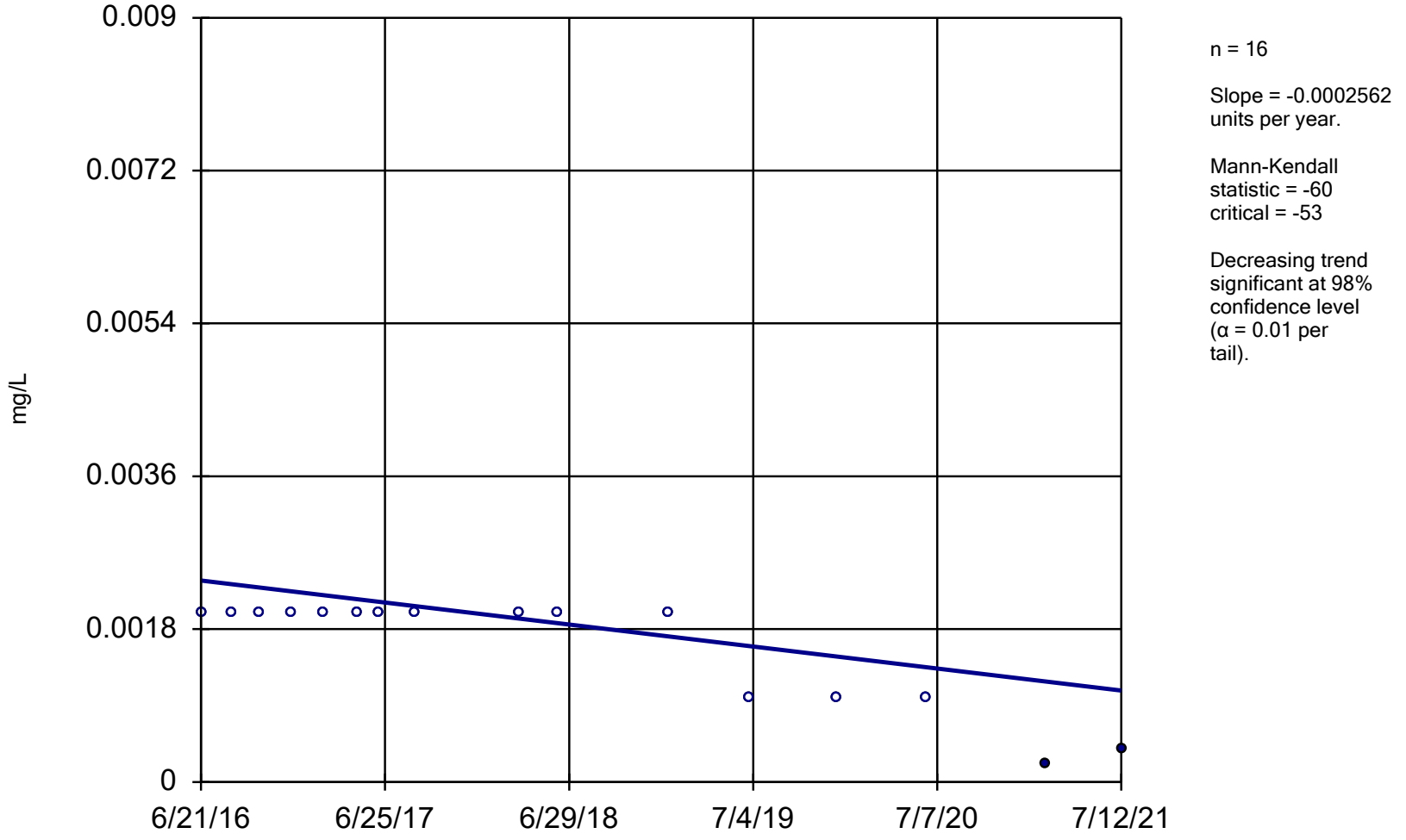
Constituent: TDS Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 16

Slope = -0.0002562 units per year.

Mann-Kendall statistic = -60
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

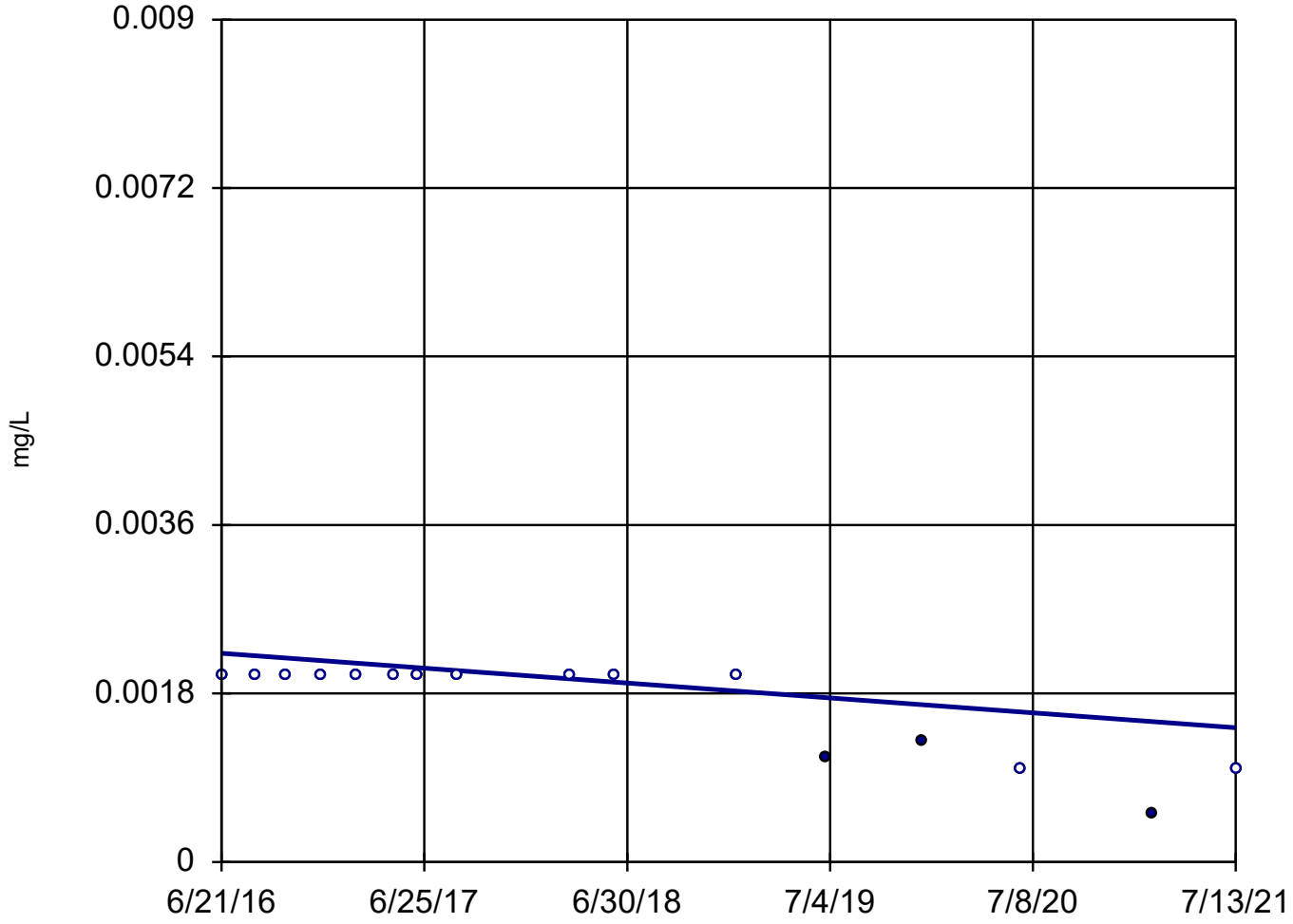
Constituent: Thallium Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.0001572 units per year.

Mann-Kendall statistic = -60
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

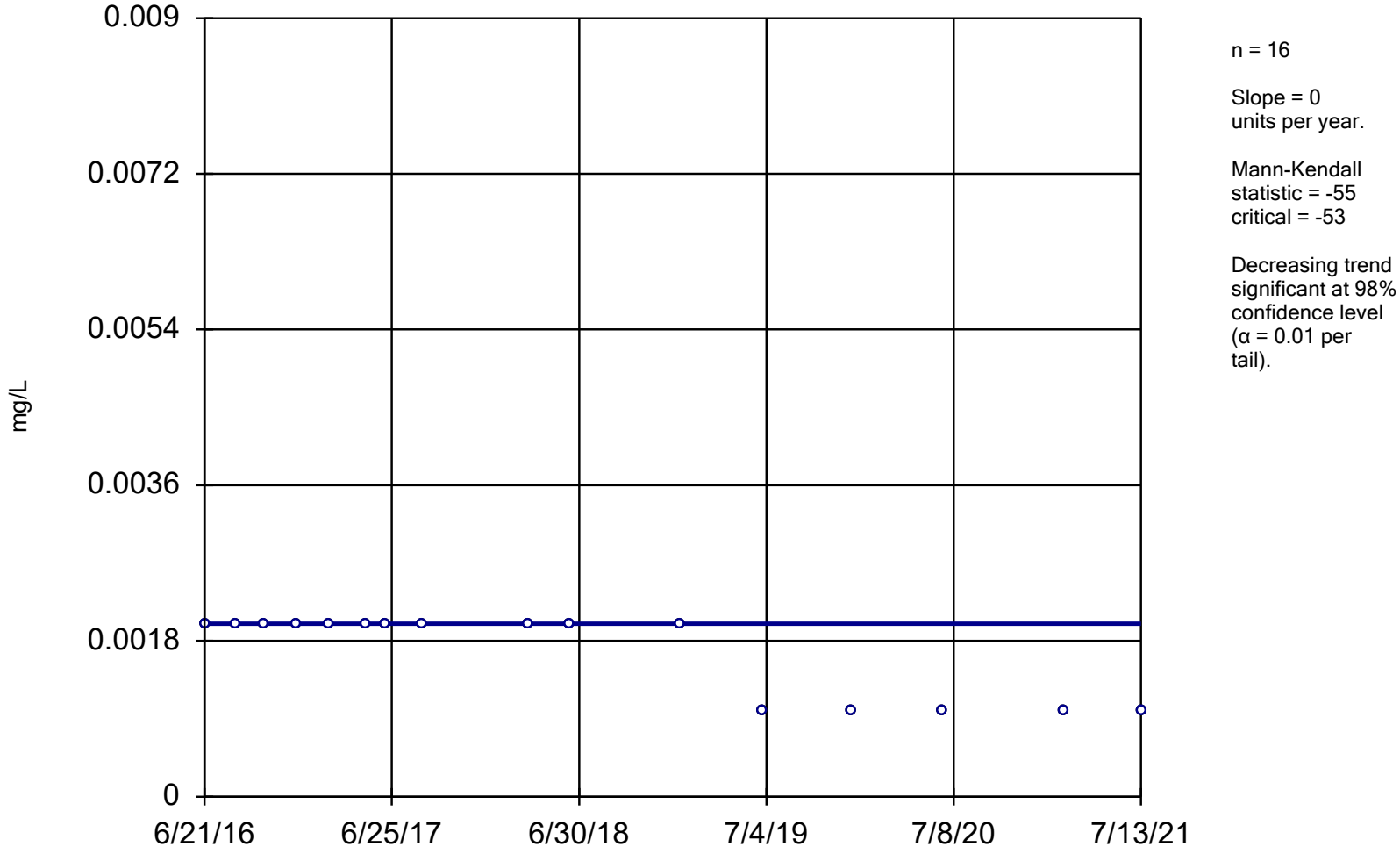
Constituent: Thallium Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 16

Slope = 0
units per year.

Mann-Kendall
statistic = -55
critical = -53

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Thallium Analysis Run 8/19/2021 10:26 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:44 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-47**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SSPMW-2**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SSPMW-3**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**SSPMW-4**	**-0.00...**	**-47**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**APMW-1D**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**APMW-3**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**APMW-4**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Antimony (mg/L)	**APMW-5**	**-0.00...**	**-49**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-69**	**-53**	**Yes**	**16**	**56.25**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**SSPMW-2**	**-0.00...**	**-54**	**-53**	**Yes**	**16**	**50**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SSPMW-3	-0.00...	-50	-53	No	16	62.5	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SSPMW-4**	**-0.00...**	**-85**	**-53**	**Yes**	**16**	**75**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**APMW-1D**	**-0.00...**	**-64**	**-53**	**Yes**	**16**	**18.75**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**APMW-3**	**-0.0019**	**-70**	**-53**	**Yes**	**16**	**81.25**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	**APMW-4**	**-0.00...**	**-82**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	APMW-5	0	-12	-53	No	16	18.75	n/a	n/a	0.02	NP
Barium (mg/L)	SSP/APMW-1 (bg)	0.003347	14	39	No	13	15.38	n/a	n/a	0.02	NP
Barium (mg/L)	SSPMW-2	-0.00...	-34	-39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	SSPMW-3	-0.00...	-32	-39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	SSPMW-4	-0.00...	-14	-39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-1D	0	0	39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-3	0	-3	-39	No	13	7.692	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-4	-0.00...	-21	-35	No	12	0	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-5	0.00106	12	39	No	13	23.08	n/a	n/a	0.02	NP
Beryllium (mg/L)	SSP/APMW-1 (bg)	-0.00...	-37	-48	No	15	80	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SSPMW-2**	**0.01252**	**83**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SSPMW-3**	**-0.00...**	**-62**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SSPMW-4	-0.00...	-49	-53	No	16	93.75	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-1D	-0.00042	-49	-53	No	16	100	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-3	0	-10	-53	No	16	12.5	n/a	n/a	0.02	NP
Beryllium (mg/L)	**APMW-4**	**-0.00...**	**-56**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**APMW-5**	**-0.00...**	**-64**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	SSP/APMW-1 (bg)	-0.05448	-42	-44	No	14	7.143	n/a	n/a	0.02	NP
Boron (mg/L)	SSPMW-2	0.01205	5	44	No	14	14.29	n/a	n/a	0.02	NP
Boron (mg/L)	SSPMW-3	-0.06354	-23	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	SSPMW-4	-0.0465	-27	-44	No	14	7.143	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-1D	-0.06463	-14	-35	No	12	0	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-3	-0.01594	-7	-44	No	14	0	n/a	n/a	0.02	NP
Boron (mg/L)	**APMW-4**	**0.07988**	**46**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	APMW-5	0.02338	7	39	No	13	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	SSPMW-2	0	-44	-44	No	14	71.43	n/a	n/a	0.02	NP
Cadmium (mg/L)	**SSPMW-3**	**0.003877**	**56**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**SSPMW-4**	**-0.00...**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**APMW-1D**	**-0.00...**	**-69**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**APMW-3**	**-0.00...**	**-61**	**-53**	**Yes**	**16**	**62.5**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	**APMW-4**	**-0.00...**	**-60**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	APMW-5	-0.00...	-49	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSP/APMW-1 (bg)	-8.439	-34	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSPMW-2	-23.93	-25	-44	No	14	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:44 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	SSPMW-3	3.011	11	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSPMW-4	-2.728	-14	-44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-1D	0.7395	12	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-3	1.645	21	44	No	14	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-4	0.1324	1	39	No	13	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-5	-7.395	-19	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSP/APMW-1 (bg)	33.18	26	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-2	3.321	2	31	No	11	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-3	-2.191	-3	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-4	-25.58	-17	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**APMW-1D**	**-16.04**	**-55**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	APMW-3	3.685	41	44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	APMW-4	-10.97	-30	-44	No	14	0	n/a	n/a	0.02	NP
Chloride (mg/L)	APMW-5	-21.35	-40	-44	No	14	0	n/a	n/a	0.02	NP
Chromium (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-43**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**SSPMW-2**	**-0.00...**	**-51**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	SSPMW-3	0	-18	-39	No	13	61.54	n/a	n/a	0.02	NP
Chromium (mg/L)	SSPMW-4	0	-20	-39	No	13	76.92	n/a	n/a	0.02	NP
Chromium (mg/L)	**APMW-1D**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**APMW-3**	**-0.00...**	**-45**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**APMW-4**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Chromium (mg/L)	**APMW-5**	**-0.00...**	**-43**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-80**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	SSPMW-2	0.002736	24	53	No	16	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	SSPMW-3	-0.00...	-22	-48	No	15	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**SSPMW-4**	**-0.00...**	**-87**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	APMW-1D	0.001456	14	20	No	8	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**APMW-3**	**-0.00...**	**-52**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**APMW-4**	**-0.00...**	**-85**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	**APMW-5**	**-0.01049**	**-62**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	SSP/APMW-1 (bg)	0.04485	24	53	No	16	43.75	n/a	n/a	0.02	NP
Fluoride (mg/L)	**SSPMW-2**	**0.08698**	**56**	**53**	**Yes**	**16**	**25**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	SSPMW-3	-0.07605	-41	-44	No	14	21.43	n/a	n/a	0.02	NP
Fluoride (mg/L)	SSPMW-4	0.03069	46	53	No	16	75	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-1D	0.001341	12	53	No	16	12.5	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-3	0	-22	-53	No	16	37.5	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-4	2.2e-9	27	53	No	16	81.25	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-5	0.05625	15	53	No	16	6.25	n/a	n/a	0.02	NP
Lead (mg/L)	SSP/APMW-1 (bg)	-0.00...	-52	-53	No	16	81.25	n/a	n/a	0.02	NP
Lead (mg/L)	**SSPMW-2**	**-0.00...**	**-78**	**-53**	**Yes**	**16**	**56.25**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SSPMW-3**	**-0.00...**	**-67**	**-53**	**Yes**	**16**	**50**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**SSPMW-4**	**-0.00...**	**-86**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**APMW-1D**	**-0.00...**	**-47**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**APMW-3**	**-0.00...**	**-46**	**-39**	**Yes**	**13**	**76.92**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**APMW-4**	**-0.00...**	**-45**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	**APMW-5**	**-0.00...**	**-42**	**-39**	**Yes**	**13**	**69.23**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SSP/APMW-1 (bg)	-0.00...	-6	-48	No	15	0	n/a	n/a	0.02	NP
Lithium (mg/L)	**SSPMW-2**	**-0.06986**	**-57**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SSPMW-3	-0.02738	-48	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SSPMW-4	-0.05187	-53	-53	No	16	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:44 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	APMW-1D	-0.00...	-50	-53	No	16	18.75	n/a	n/a	0.02	NP
Lithium (mg/L)	APMW-3	-0.00...	-40	-48	No	15	6.667	n/a	n/a	0.02	NP
Lithium (mg/L)	APMW-4	-0.0488	-48	-53	No	16	0	n/a	n/a	0.02	NP
Lithium (mg/L)	**APMW-5**	**-0.03995**	**-72**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-40**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SSPMW-2**	**-0.00...**	**-40**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SSPMW-3**	**-0.00...**	**-42**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**SSPMW-4**	**-0.00...**	**-40**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	**APMW-1D**	**-0.00...**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	APMW-3	0	-28	-53	No	16	75	n/a	n/a	0.02	NP
Mercury (mg/L)	**APMW-4**	**-0.00...**	**-64**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	APMW-5	-0.00...	-29	-48	No	15	60	n/a	n/a	0.02	NP
Molybdenum (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-49**	**-39**	**Yes**	**13**	**84.62**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SSPMW-2**	**-0.00...**	**-44**	**-39**	**Yes**	**13**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**SSPMW-3**	**-0.00...**	**-47**	**-39**	**Yes**	**13**	**92.31**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	SSPMW-4	0	-25	-39	No	13	84.62	n/a	n/a	0.02	NP
Molybdenum (mg/L)	APMW-1D	0.004297	20	20	No	8	0	n/a	n/a	0.02	NP
Molybdenum (mg/L)	**APMW-3**	**-0.01042**	**-75**	**-53**	**Yes**	**16**	**93.75**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**APMW-4**	**-0.00...**	**-71**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	**APMW-5**	**-0.00...**	**-71**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SSP/APMW-1 (bg)	-0.04492	-26	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	**SSPMW-2**	**-0.3309**	**-84**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SSPMW-3	-0.02454	-29	-44	No	14	0	n/a	n/a	0.02	NP
pH (S.U.)	SSPMW-4	0.08834	31	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-1D	0.005778	4	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-3	-0.02126	-15	-48	No	15	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-4	0	-2	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-5	-0.06096	-33	-48	No	15	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	SSP/APMW-1 (bg)	-0.02307	-5	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	SSPMW-2	0.02607	11	48	No	15	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	**SSPMW-3**	**2.303**	**53**	**48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 ...	**SSPMW-4**	**-0.4467**	**-68**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 ...	APMW-1D	-0.09719	-17	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	APMW-3	0	0	48	No	15	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	APMW-4	-0.319	-48	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 ...	**APMW-5**	**-0.7357**	**-72**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SSP/APMW-1 (bg)	0	-36	-39	No	13	100	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-2	0	-19	-35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-3	-0.00...	-35	-35	No	12	91.67	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-4	-0.00...	-39	-39	No	13	92.31	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-1D	-0.00...	-39	-39	No	13	84.62	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-3	0	-36	-39	No	13	100	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-4	0	-36	-39	No	13	100	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-5	-4.7e-10	-24	-31	No	11	63.64	n/a	n/a	0.02	NP
Sulfate (mg/L)	SSP/APMW-1 (bg)	49.73	39	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SSPMW-2	50.69	44	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SSPMW-3	0	2	44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SSPMW-4	-31.77	-21	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**APMW-1D**	**-32.59**	**-65**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	APMW-3	-4.053	-9	-44	No	14	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:44 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	APMW-4	-21.07	-10	-44	No	14	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**APMW-5**	**-135.2**	**-46**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SSP/APMW-1 (bg)	-46.01	-7	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SSPMW-2**	**-161.5**	**-48**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	**SSPMW-3**	**-143.1**	**-45**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SSPMW-4	-92.02	-32	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	APMW-1D	-37.59	-38	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	APMW-3	0	-7	-39	No	13	0	n/a	n/a	0.02	NP
TDS (mg/L)	APMW-4	-20.17	-16	-44	No	14	0	n/a	n/a	0.02	NP
TDS (mg/L)	**APMW-5**	**-181.7**	**-48**	**-44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SSP/APMW-1 (bg)**	**-0.00...**	**-60**	**-53**	**Yes**	**16**	**87.5**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	**SSPMW-2**	**-0.00...**	**-60**	**-53**	**Yes**	**16**	**81.25**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	SSPMW-3	0.000...	11	53	No	16	0	n/a	n/a	0.02	NP
Thallium (mg/L)	**SSPMW-4**	**0**	**-55**	**-53**	**Yes**	**16**	**100**	**n/a**	**n/a**	**0.02**	**NP**
Thallium (mg/L)	APMW-1D	-0.00...	-39	-39	No	13	84.62	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-3	-0.00...	-39	-39	No	13	84.62	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-4	0	-37	-39	No	13	92.31	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-5	0.000...	34	39	No	13	23.08	n/a	n/a	0.02	NP

Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 4/20/2021, 11:36 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	SSPMW-2	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	SSPMW-3	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	SSPMW-4	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	APMW-1D	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	APMW-3	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	APMW-4	0.00200	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Antimony (mg/L)	APMW-5	0.00200	2/10/2021	0.000664J	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Arsenic (mg/L)	**SSPMW-2**	**0.00501**	**2/10/2021**	**0.00643**	**Yes**	**13**	**SSP/APMW-1**	**69.23**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	**SSPMW-3**	**0.00501**	**2/10/2021**	**0.00831**	**Yes**	**13**	**SSP/APMW-1**	**69.23**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	SSPMW-4	0.00501	2/10/2021	0.000941J	No	13	SSP/APMW-1	69.23	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	**APMW-1D**	**0.00501**	**2/10/2021**	**0.00953**	**Yes**	**13**	**SSP/APMW-1**	**69.23**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Arsenic (mg/L)	APMW-3	0.00501	2/10/2021	0.00154	No	13	SSP/APMW-1	69.23	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	APMW-4	0.00501	2/10/2021	0.000628J	No	13	SSP/APMW-1	69.23	n/a	n/a	0.05969	NP Inter (NDs)
Arsenic (mg/L)	**APMW-5**	**0.00501**	**2/10/2021**	**0.0095**	**Yes**	**13**	**SSP/APMW-1**	**69.23**	**n/a**	**n/a**	**0.05969**	**NP Inter (NDs)**
Barium (mg/L)	SSPMW-2	0.189	2/10/2021	0.0197	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	SSPMW-3	0.189	2/10/2021	0.0218	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	SSPMW-4	0.189	2/10/2021	0.027	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	APMW-1D	0.189	2/10/2021	0.0137	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	APMW-3	0.189	2/10/2021	0.0236	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	APMW-4	0.189	2/10/2021	0.0144	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Barium (mg/L)	APMW-5	0.189	2/10/2021	0.0556	No	12	SSP/APMW-1	16.67	Kaplan-Meier	sqrt(x)	0.01	Param Inter
Beryllium (mg/L)	**SSPMW-2**	**0.00157**	**2/10/2021**	**0.0704**	**Yes**	**14**	**SSP/APMW-1**	**85.71**	**n/a**	**n/a**	**0.05628**	**NP Inter (NDs)**
Beryllium (mg/L)	**SSPMW-3**	**0.00157**	**2/10/2021**	**0.12**	**Yes**	**14**	**SSP/APMW-1**	**85.71**	**n/a**	**n/a**	**0.05628**	**NP Inter (NDs)**
Beryllium (mg/L)	SSPMW-4	0.00157	2/10/2021	0.001ND	No	14	SSP/APMW-1	85.71	n/a	n/a	0.05628	NP Inter (NDs)
Beryllium (mg/L)	APMW-1D	0.00157	2/10/2021	0.001ND	No	14	SSP/APMW-1	85.71	n/a	n/a	0.05628	NP Inter (NDs)
Beryllium (mg/L)	**APMW-3**	**0.00157**	**2/10/2021**	**0.00264**	**Yes**	**14**	**SSP/APMW-1**	**85.71**	**n/a**	**n/a**	**0.05628**	**NP Inter (NDs)**
Beryllium (mg/L)	APMW-4	0.00157	2/10/2021	0.000436J	No	14	SSP/APMW-1	85.71	n/a	n/a	0.05628	NP Inter (NDs)
Beryllium (mg/L)	**APMW-5**	**0.00157**	**2/10/2021**	**0.052**	**Yes**	**14**	**SSP/APMW-1**	**85.71**	**n/a**	**n/a**	**0.05628**	**NP Inter (NDs)**
Boron (mg/L)	SSPMW-2	1.5	2/10/2021	0.81	No	13	SSP/APMW-1	7.692	None	x^(1/3)	0.01	Param Inter
Boron (mg/L)	**SSPMW-3**	**1.5**	**2/10/2021**	**2.87**	**Yes**	**13**	**SSP/APMW-1**	**7.692**	**None**	**x^(1/3)**	**0.01**	**Param Inter**
Boron (mg/L)	SSPMW-4	1.5	2/10/2021	1.12	No	13	SSP/APMW-1	7.692	None	x^(1/3)	0.01	Param Inter
Boron (mg/L)	**APMW-1D**	**1.5**	**2/10/2021**	**6.27**	**Yes**	**13**	**SSP/APMW-1**	**7.692**	**None**	**x^(1/3)**	**0.01**	**Param Inter**
Boron (mg/L)	**APMW-3**	**1.5**	**2/10/2021**	**4.13**	**Yes**	**13**	**SSP/APMW-1**	**7.692**	**None**	**x^(1/3)**	**0.01**	**Param Inter**
Boron (mg/L)	**APMW-4**	**1.5**	**2/10/2021**	**2.58**	**Yes**	**13**	**SSP/APMW-1**	**7.692**	**None**	**x^(1/3)**	**0.01**	**Param Inter**
Boron (mg/L)	**APMW-5**	**1.5**	**2/10/2021**	**3.53**	**Yes**	**13**	**SSP/APMW-1**	**7.692**	**None**	**x^(1/3)**	**0.01**	**Param Inter**
Cadmium (mg/L)	**SSPMW-2**	**0.00100**	**2/10/2021**	**0.00446**	**Yes**	**15**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cadmium (mg/L)	**SSPMW-3**	**0.00100**	**2/10/2021**	**0.0736**	**Yes**	**15**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cadmium (mg/L)	SSPMW-4	0.00100	2/10/2021	0.001ND	No	15	SSP/APMW-1	100	n/a	n/a	0.05324	NP Inter (NDs)
Cadmium (mg/L)	APMW-1D	0.00100	2/10/2021	0.000408J	No	15	SSP/APMW-1	100	n/a	n/a	0.05324	NP Inter (NDs)
Cadmium (mg/L)	**APMW-3**	**0.00100**	**2/10/2021**	**0.00382**	**Yes**	**15**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cadmium (mg/L)	APMW-4	0.00100	2/10/2021	0.001ND	No	15	SSP/APMW-1	100	n/a	n/a	0.05324	NP Inter (NDs)
Cadmium (mg/L)	**APMW-5**	**0.00100**	**2/10/2021**	**0.00523**	**Yes**	**15**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Calcium (mg/L)	**SSPMW-2**	**716**	**2/10/2021**	**728**	**Yes**	**12**	**SSP/APMW-1**	**0**	**None**	**No**	**0.01**	**Param Inter**
Calcium (mg/L)	SSPMW-3	716	2/10/2021	712	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Calcium (mg/L)	SSPMW-4	716	2/10/2021	398	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Calcium (mg/L)	APMW-1D	716	2/10/2021	96.5	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Calcium (mg/L)	APMW-3	716	2/10/2021	134	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Calcium (mg/L)	APMW-4	716	2/10/2021	533	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Calcium (mg/L)	APMW-5	716	2/10/2021	354	No	12	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	**SSPMW-2**	**1780**	**2/10/2021**	**1810**	**Yes**	**13**	**SSP/APMW-1**	**0**	**None**	**No**	**0.01**	**Param Inter**

Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 4/20/2021, 11:36 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Chloride (mg/L)	SSPMW-3	1780	2/10/2021	1700	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	SSPMW-4	1780	2/10/2021	990	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	APMW-1D	1780	2/10/2021	151	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	APMW-3	1780	2/10/2021	144	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	APMW-4	1780	2/10/2021	436	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chloride (mg/L)	APMW-5	1780	2/10/2021	322	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Chromium (mg/L)	SSPMW-2	0.00248	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Chromium (mg/L)	**SSPMW-3**	**0.00248**	**2/10/2021**	**0.00575**	**Yes**	**12**	**SSP/APMW-1**	**91.67**	**n/a**	**n/a**	**0.06354**	**NP Inter (NDs)**
Chromium (mg/L)	**SSPMW-4**	**0.00248**	**2/10/2021**	**0.00259**	**Yes**	**12**	**SSP/APMW-1**	**91.67**	**n/a**	**n/a**	**0.06354**	**NP Inter (NDs)**
Chromium (mg/L)	APMW-1D	0.00248	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Chromium (mg/L)	APMW-3	0.00248	2/10/2021	0.00173J	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Chromium (mg/L)	APMW-4	0.00248	2/10/2021	0.002ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Chromium (mg/L)	APMW-5	0.00248	2/10/2021	0.00228	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Cobalt (mg/L)	**SSPMW-2**	**0.00174**	**2/10/2021**	**0.116**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cobalt (mg/L)	**SSPMW-3**	**0.00174**	**2/10/2021**	**0.584**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cobalt (mg/L)	SSPMW-4	0.00174	2/10/2021	0.000336J	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Cobalt (mg/L)	**APMW-1D**	**0.00174**	**2/10/2021**	**0.0139**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cobalt (mg/L)	**APMW-3**	**0.00174**	**2/10/2021**	**0.0476**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Cobalt (mg/L)	APMW-4	0.00174	2/10/2021	0.0005ND	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Cobalt (mg/L)	**APMW-5**	**0.00174**	**2/10/2021**	**0.115**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Fluoride (mg/L)	**SSPMW-2**	**0.500**	**2/10/2021**	**0.509**	**Yes**	**15**	**SSP/APMW-1**	**46.67**	**n/a**	**n/a**	**0.05324**	**NP Inter (normality)**
Fluoride (mg/L)	SSPMW-3	0.500	2/10/2021	0.441J	No	15	SSP/APMW-1	46.67	n/a	n/a	0.05324	NP Inter (normality)
Fluoride (mg/L)	SSPMW-4	0.500	2/10/2021	0.5ND	No	15	SSP/APMW-1	46.67	n/a	n/a	0.05324	NP Inter (normality)
Fluoride (mg/L)	**APMW-1D**	**0.500**	**2/10/2021**	**0.606**	**Yes**	**15**	**SSP/APMW-1**	**46.67**	**n/a**	**n/a**	**0.05324**	**NP Inter (normality)**
Fluoride (mg/L)	APMW-3	0.500	2/10/2021	0.0558J	No	15	SSP/APMW-1	46.67	n/a	n/a	0.05324	NP Inter (normality)
Fluoride (mg/L)	APMW-4	0.500	2/10/2021	0.5ND	No	15	SSP/APMW-1	46.67	n/a	n/a	0.05324	NP Inter (normality)
Fluoride (mg/L)	**APMW-5**	**0.500**	**2/10/2021**	**1.18**	**Yes**	**15**	**SSP/APMW-1**	**46.67**	**n/a**	**n/a**	**0.05324**	**NP Inter (normality)**
Lead (mg/L)	SSPMW-2	0.0106	2/10/2021	0.00227	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	SSPMW-3	0.0106	2/10/2021	0.00533	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	SSPMW-4	0.0106	2/10/2021	0.000161J	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	APMW-1D	0.0106	2/10/2021	0.001ND	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	APMW-3	0.0106	2/10/2021	0.000456J	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	APMW-4	0.0106	2/10/2021	0.000276J	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lead (mg/L)	APMW-5	0.0106	2/10/2021	0.00473	No	15	SSP/APMW-1	86.67	n/a	n/a	0.05324	NP Inter (NDs)
Lithium (mg/L)	SSPMW-2	1.66	2/10/2021	0.564	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	SSPMW-3	1.66	2/10/2021	0.593	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	SSPMW-4	1.66	2/10/2021	0.727	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	APMW-1D	1.66	2/10/2021	0.027	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	APMW-3	1.66	2/10/2021	0.053	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	APMW-4	1.66	2/10/2021	0.875	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Lithium (mg/L)	APMW-5	1.66	2/10/2021	0.381	No	14	SSP/APMW-1	0	None	No	0.01	Param Inter
Mercury (mg/L)	SSPMW-2	0.000200	2/10/2021	0.0002ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Mercury (mg/L)	SSPMW-3	0.000200	2/10/2021	0.000162J	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Mercury (mg/L)	SSPMW-4	0.000200	2/10/2021	0.0002ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Mercury (mg/L)	APMW-1D	0.000200	2/10/2021	0.0002ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Mercury (mg/L)	**APMW-3**	**0.000200**	**2/10/2021**	**0.000455**	**Yes**	**12**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.06354**	**NP Inter (NDs)**
Mercury (mg/L)	APMW-4	0.000200	2/10/2021	0.0002ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Mercury (mg/L)	**APMW-5**	**0.000200**	**2/10/2021**	**0.00643**	**Yes**	**12**	**SSP/APMW-1**	**100**	**n/a**	**n/a**	**0.06354**	**NP Inter (NDs)**
Molybdenum (mg/L)	SSPMW-2	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Molybdenum (mg/L)	SSPMW-3	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)

Prediction Limit

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 4/20/2021, 11:36 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	SSPMW-4	0.00500	2/10/2021	0.00321J	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Molybdenum (mg/L)	**APMW-1D**	**0.00500**	**2/10/2021**	**0.0283**	**Yes**	**12**	**SSP/APMW-1**	**91.67**	**n/a**	**n/a**	**0.06354**	**NP Inter (NDs)**
Molybdenum (mg/L)	APMW-3	0.00500	2/10/2021	0.000848J	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Molybdenum (mg/L)	APMW-4	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
Molybdenum (mg/L)	APMW-5	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	91.67	n/a	n/a	0.06354	NP Inter (NDs)
pH (S.U.)	**SSPMW-2**	**6.36**	**2/10/2021**	**4**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	**SSPMW-3**	**6.36**	**2/9/2021**	**4.29**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	**SSPMW-4**	**6.36**	**2/9/2021**	**6.63**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	APMW-1D	6.36	2/10/2021	6.13	No	15	SSP/APMW-1	0	None	No	0.005	Param Inter
pH (S.U.)	**APMW-3**	**6.36**	**2/10/2021**	**5.18**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.005**	**Param Inter**
pH (S.U.)	APMW-4	6.36	2/10/2021	5.74	No	15	SSP/APMW-1	0	None	No	0.005	Param Inter
pH (S.U.)	**APMW-5**	**6.36**	**2/10/2021**	**3.68**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.005**	**Param Inter**
Radium 226 + 228 (pCi/L)	SSPMW-2	4.02	2/10/2021	2.33	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	**SSPMW-3**	**4.02**	**2/10/2021**	**40.2**	**Yes**	**15**	**SSP/APMW-1**	**0**	**None**	**No**	**0.01**	**Param Inter**
Radium 226 + 228 (pCi/L)	SSPMW-4	4.02	2/10/2021	1.62	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	APMW-1D	4.02	2/10/2021	1.1	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	APMW-3	4.02	2/10/2021	1.87	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	APMW-4	4.02	2/10/2021	1.72	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Radium 226 + 228 (pCi/L)	APMW-5	4.02	2/10/2021	1.41	No	15	SSP/APMW-1	0	None	No	0.01	Param Inter
Selenium (mg/L)	SSPMW-2	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SSPMW-3	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	SSPMW-4	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	APMW-1D	0.00500	2/10/2021	0.00154J	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	APMW-3	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	APMW-4	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Selenium (mg/L)	APMW-5	0.00500	2/10/2021	0.005ND	No	12	SSP/APMW-1	100	n/a	n/a	0.06354	NP Inter (NDs)
Sulfate (mg/L)	SSPMW-2	3340	2/10/2021	2250	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SSPMW-3	3340	2/10/2021	2430	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	SSPMW-4	3340	2/10/2021	982	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	APMW-1D	3340	2/10/2021	456	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	APMW-3	3340	2/10/2021	645	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	APMW-4	3340	2/10/2021	2050	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Sulfate (mg/L)	APMW-5	3340	2/10/2021	1670	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	SSPMW-2	8180	2/10/2021	6120	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	SSPMW-3	8180	2/10/2021	2200	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	SSPMW-4	8180	2/10/2021	2890	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	APMW-1D	8180	2/10/2021	1250	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	APMW-3	8180	2/10/2021	1370	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	APMW-4	8180	2/10/2021	4040	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
TDS (mg/L)	APMW-5	8180	2/10/2021	3380	No	13	SSP/APMW-1	0	None	No	0.01	Param Inter
Thallium (mg/L)	SSPMW-2	0.00100	2/10/2021	0.000516J	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	**SSPMW-3**	**0.00100**	**2/10/2021**	**0.0101**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**
Thallium (mg/L)	SSPMW-4	0.00100	2/10/2021	0.001ND	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	APMW-1D	0.00100	2/10/2021	0.00031J	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	APMW-3	0.00100	2/10/2021	0.000267J	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	APMW-4	0.00100	2/10/2021	0.000172J	No	15	SSP/APMW-1	93.33	n/a	n/a	0.05324	NP Inter (NDs)
Thallium (mg/L)	**APMW-5**	**0.00100**	**2/10/2021**	**0.00213**	**Yes**	**15**	**SSP/APMW-1**	**93.33**	**n/a**	**n/a**	**0.05324**	**NP Inter (NDs)**

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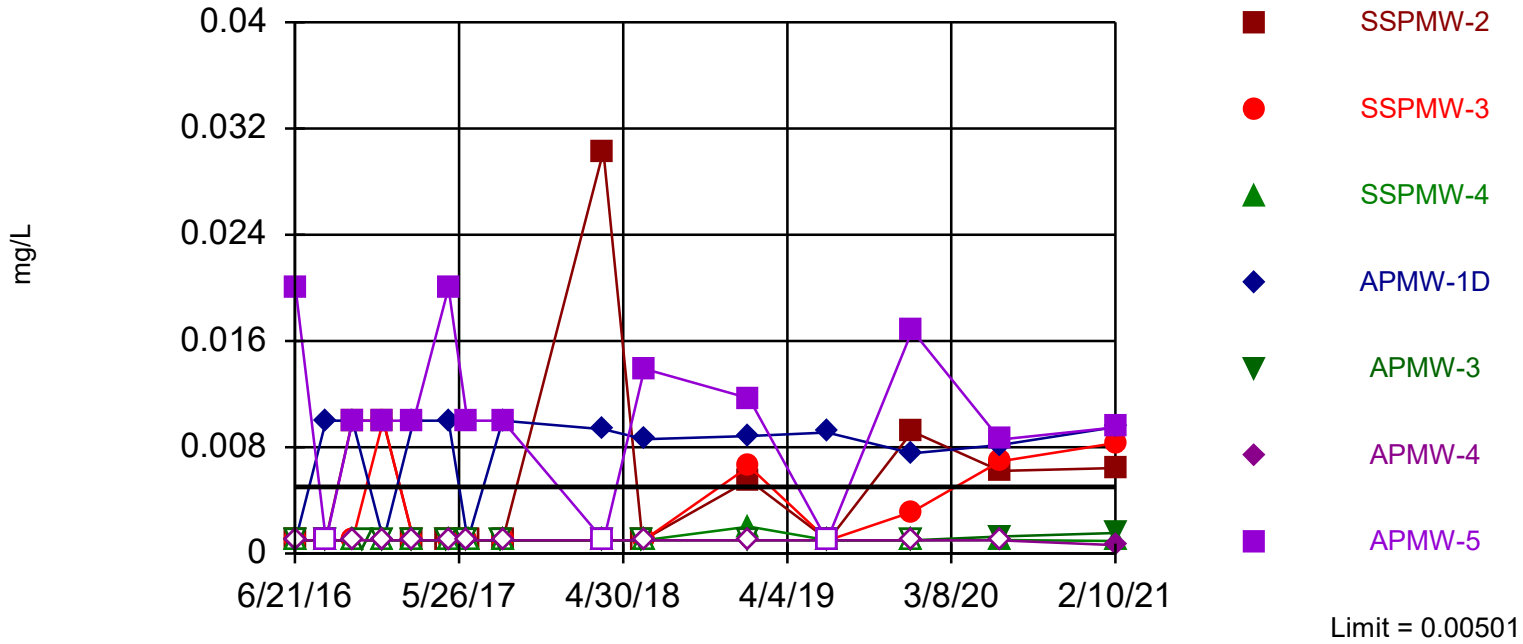
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-2, SSPMW-3, APMW-1D, APMW-5

Prediction Limit

Interwell Non-parametric



Limit = 0.00501

Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 69.23% NDs. Report alpha = 0.35. Individual comparison alpha = 0.05969. Most recent point for each compliance well compared to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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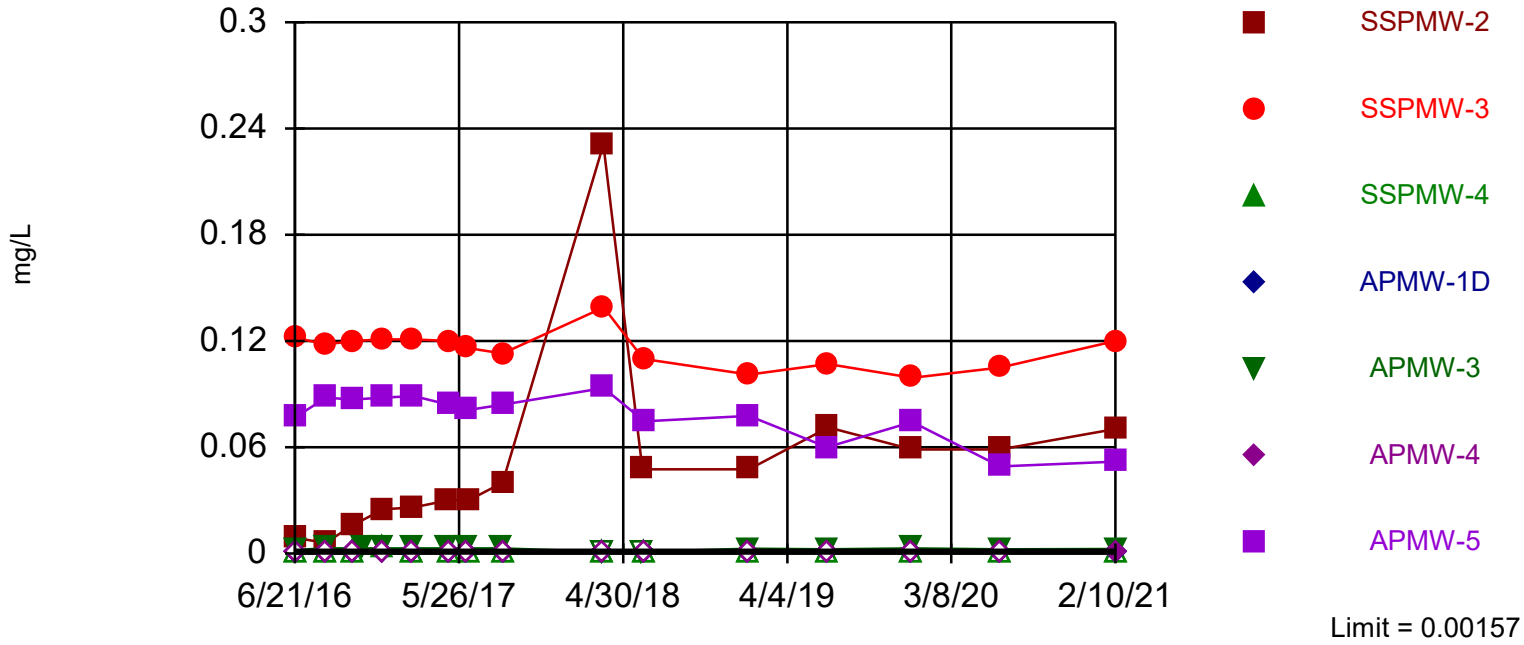
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-2, SSPMW-3, APMW-3, APMW-5

Prediction Limit

Interwell Non-parametric



Limit = 0.00157

Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 14 background values. 85.71% NDs. Report alpha = 0.3333. Individual comparison alpha = 0.05628. Most recent point for each compliance well compared to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Beryllium Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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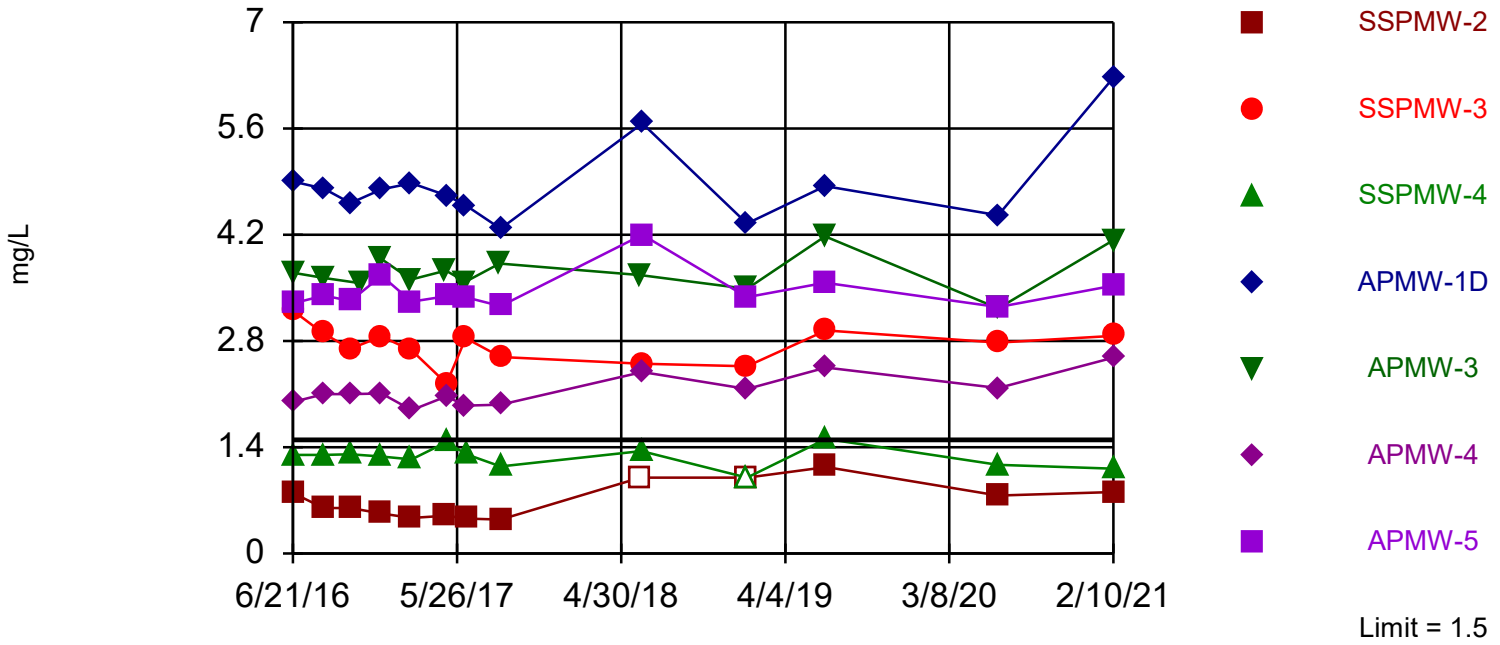
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-3, APMW-1D, APMW-3, APMW-4, APMW-5

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=0.9604, Std. Dev.=0.0662, n=13, 7.692% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8725, critical = 0.866. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Boron Analysis Run 4/20/2021 11:35 AM View: SSP & AP

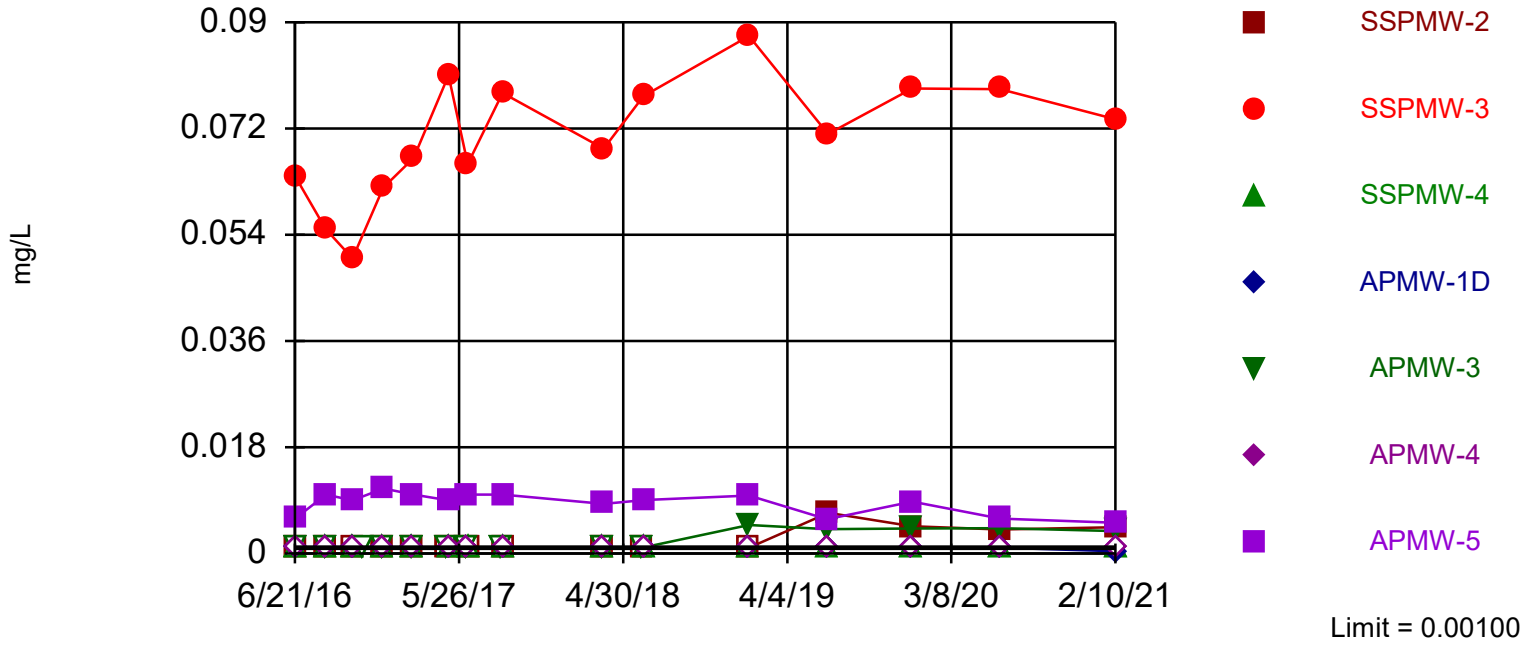
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-2, SSPMW-3, APMW-3, APMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 15) were censored; limit is most recent reporting limit. Report alpha = 0.3182. Individual comparison alpha = 0.05324. Most recent point for each compliance well compared to limit. Seasonality was not detected with 95% confidence.

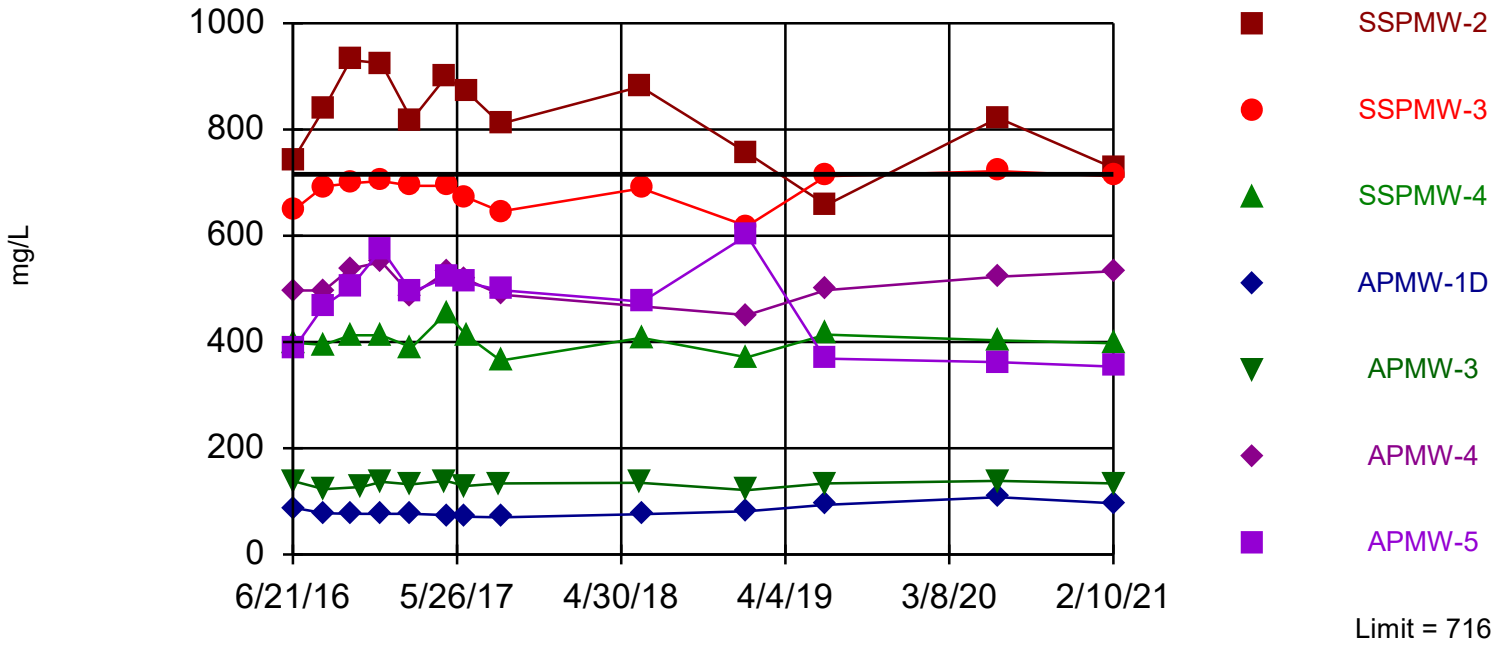
Constituent: Cadmium Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SSPMW-2

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=661.1, Std. Dev.=19.52, n=12. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9356, critical = 0.859. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

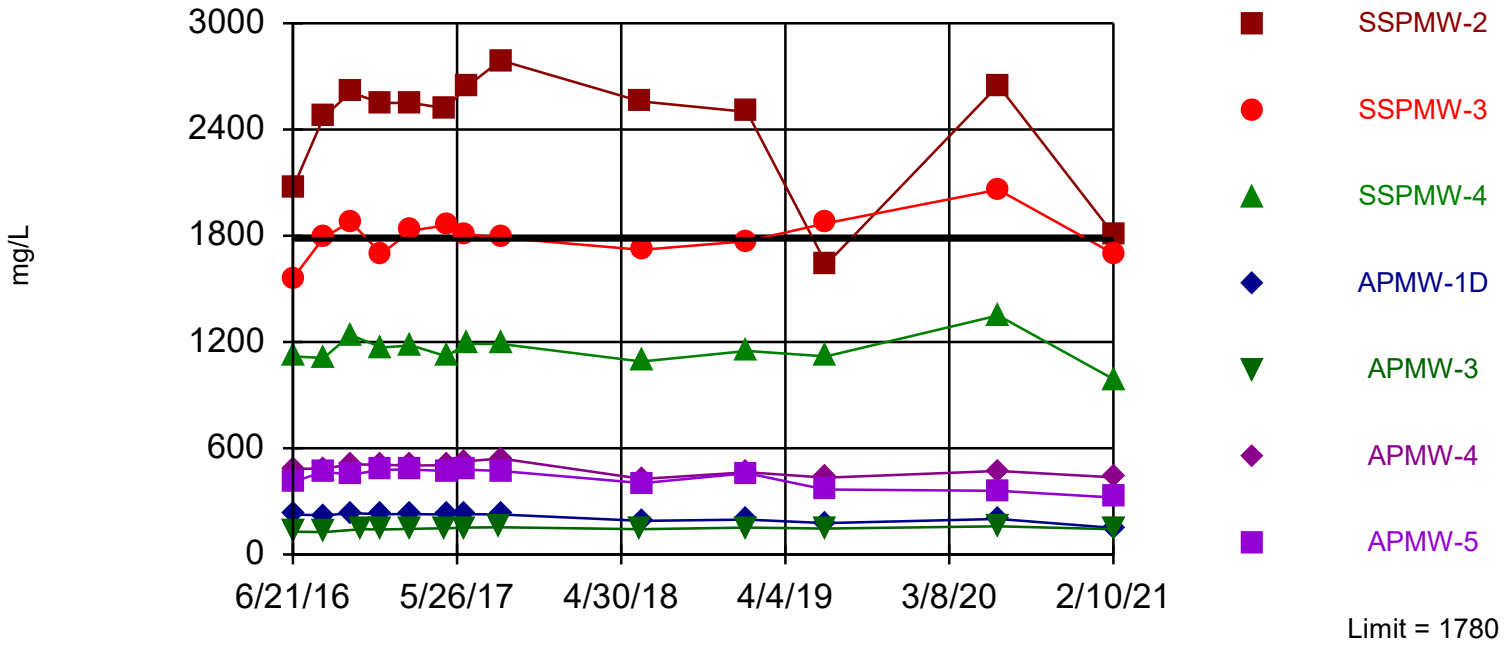
Constituent: Calcium Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SSPMW-2

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=1542, Std. Dev.=86.4, n=13. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9692, critical = 0.866. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Chloride Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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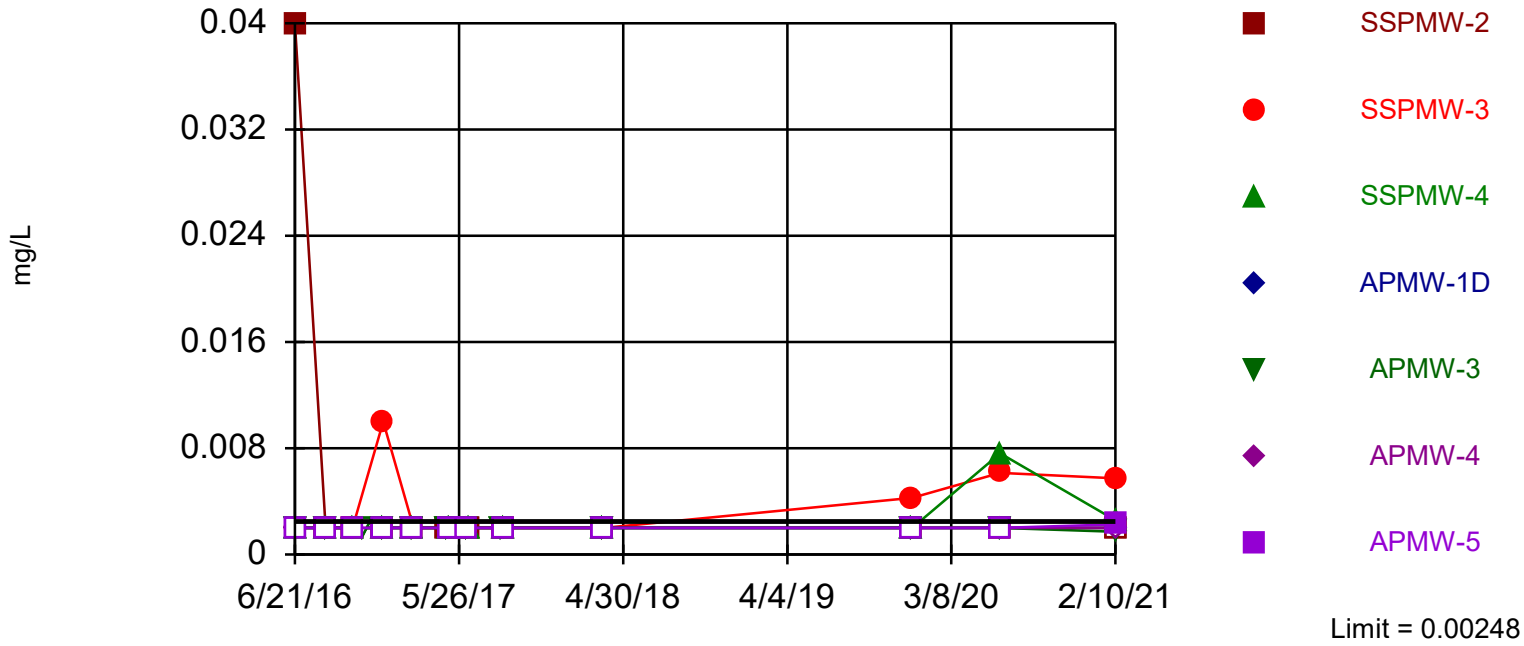
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-3, SSPMW-4

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 12 background values. 91.67% NDs. Report alpha = 0.3684. Individual comparison alpha = 0.06354. Most recent point for each compliance well compared to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Chromium Analysis Run 4/20/2021 11:35 AM View: SSP & AP

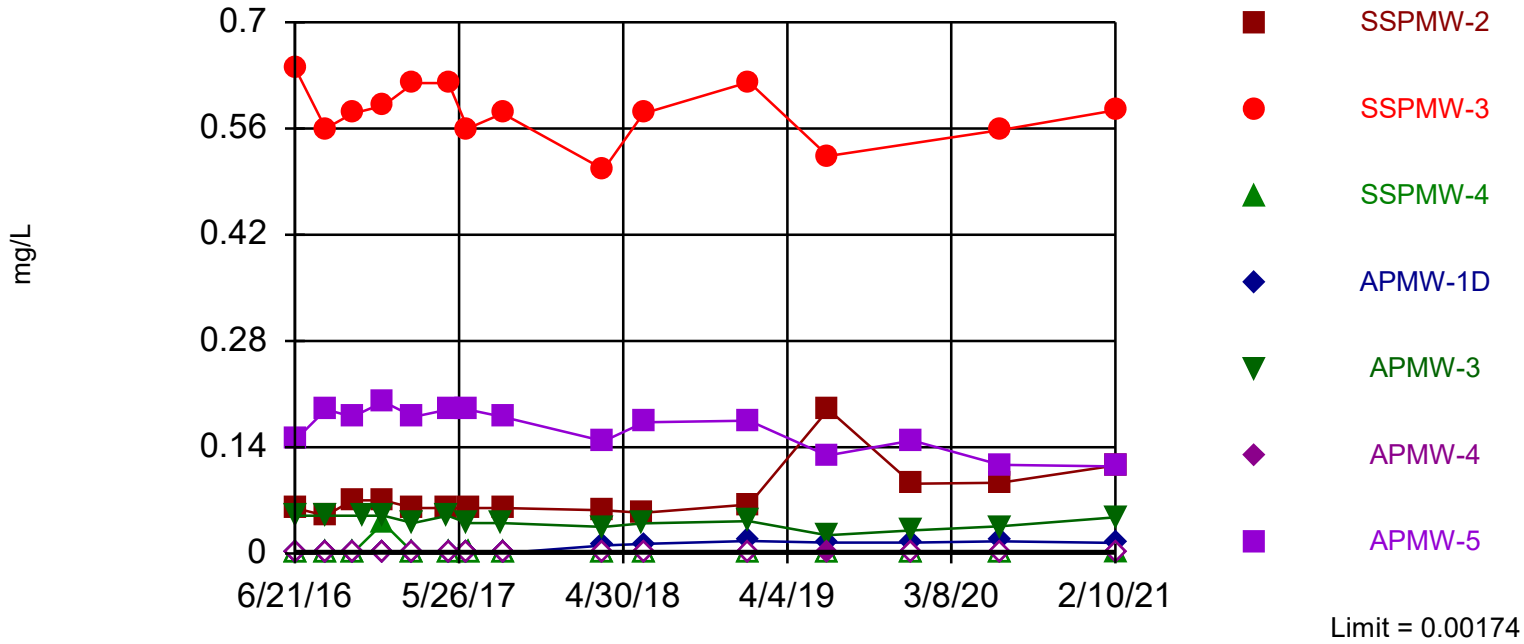
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-2, SSPMW-3, APMW-1D, APMW-3, APMW-5

Prediction Limit

Interwell Non-parametric



Limit = 0.00174

Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 93.33% NDs. Report alpha = 0.3182. Individual comparison alpha = 0.05324. Most recent point for each compliance well compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 4/20/2021 11:35 AM View: SSP & AP

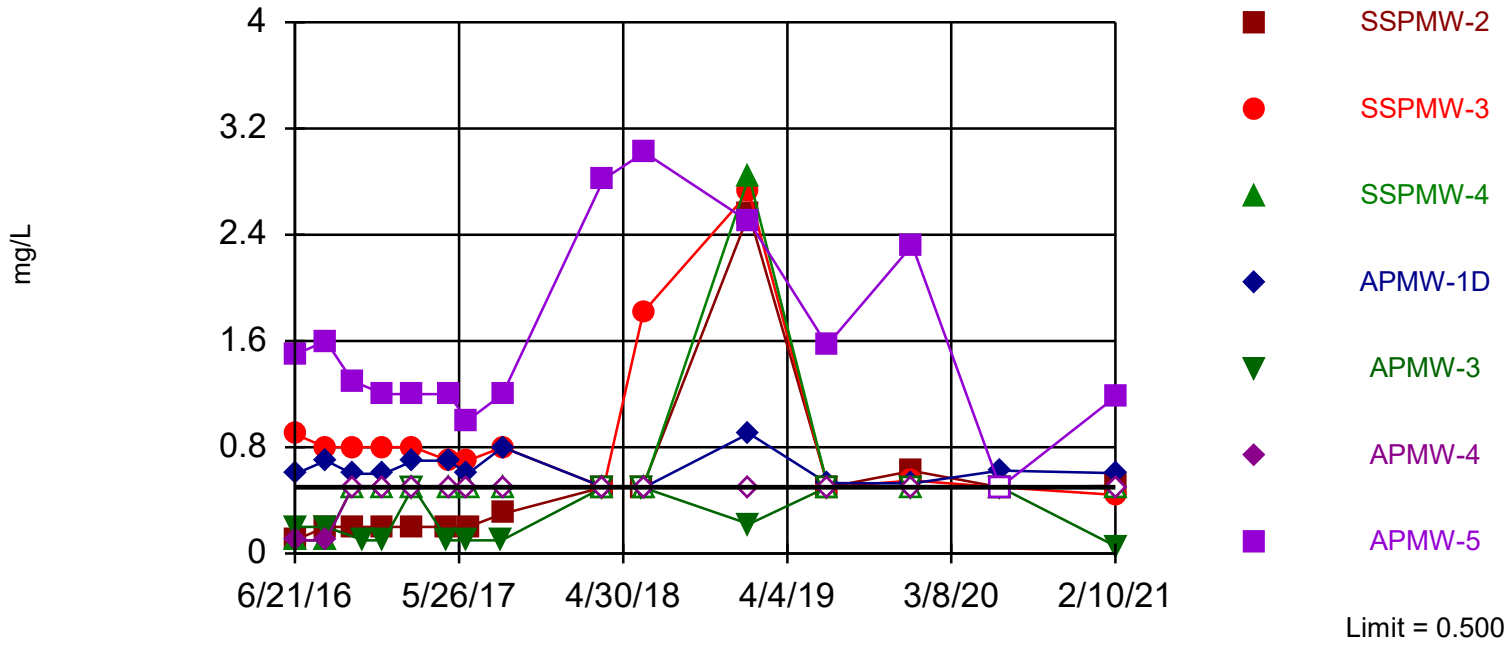
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-2, APMW-1D, APMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 15 background values. 46.67% NDs. Report alpha = 0.3182. Individual comparison alpha = 0.05324. Most recent point for each compliance well compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 4/20/2021 11:35 AM View: SSP & AP

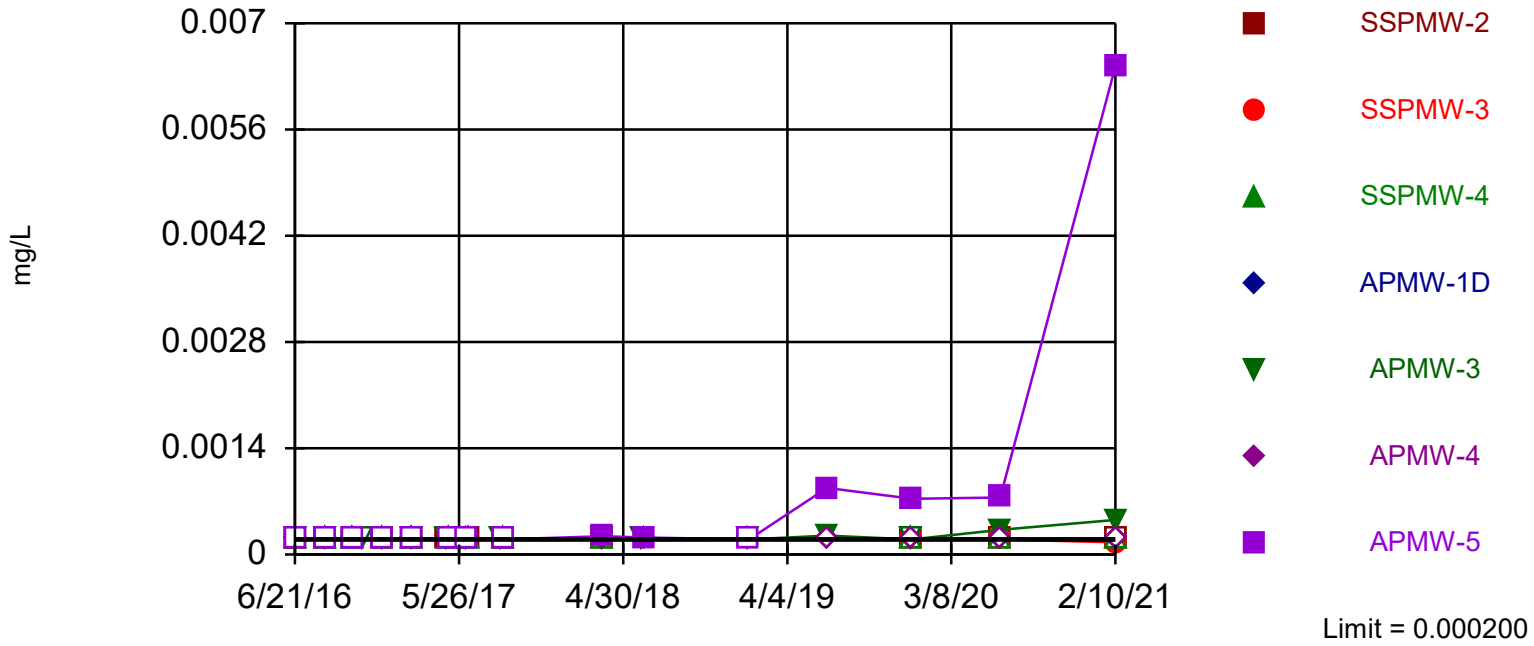
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: APMW-3, APMW-5

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 12) were censored; limit is most recent reporting limit. Report alpha = 0.3684. Individual comparison alpha = 0.06354. Most recent point for each compliance well compared to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Mercury Analysis Run 4/20/2021 11:35 AM View: SSP & AP

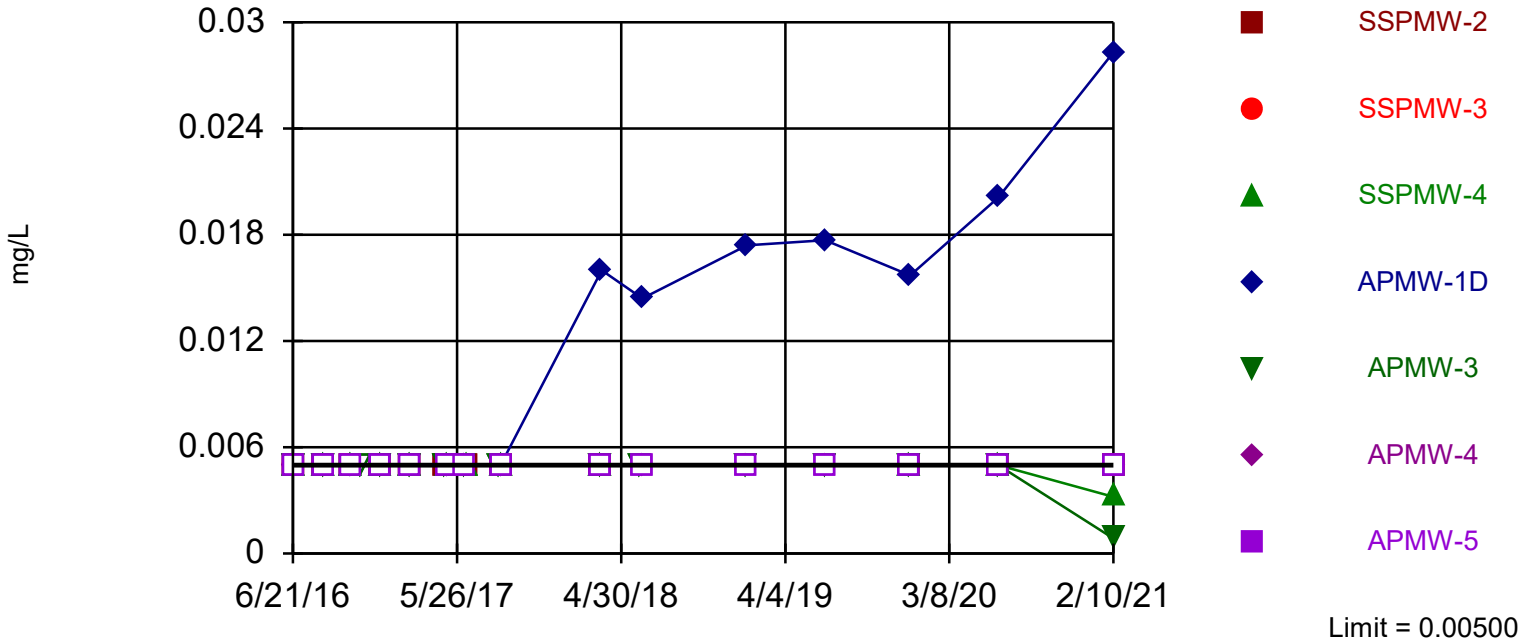
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: APMW-1D

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 12 background values. 91.67% NDs. Report alpha = 0.3684. Individual comparison alpha = 0.06354. Most recent point for each compliance well compared to limit. Insufficient data to test for seasonality; data will not be deseasonalized.

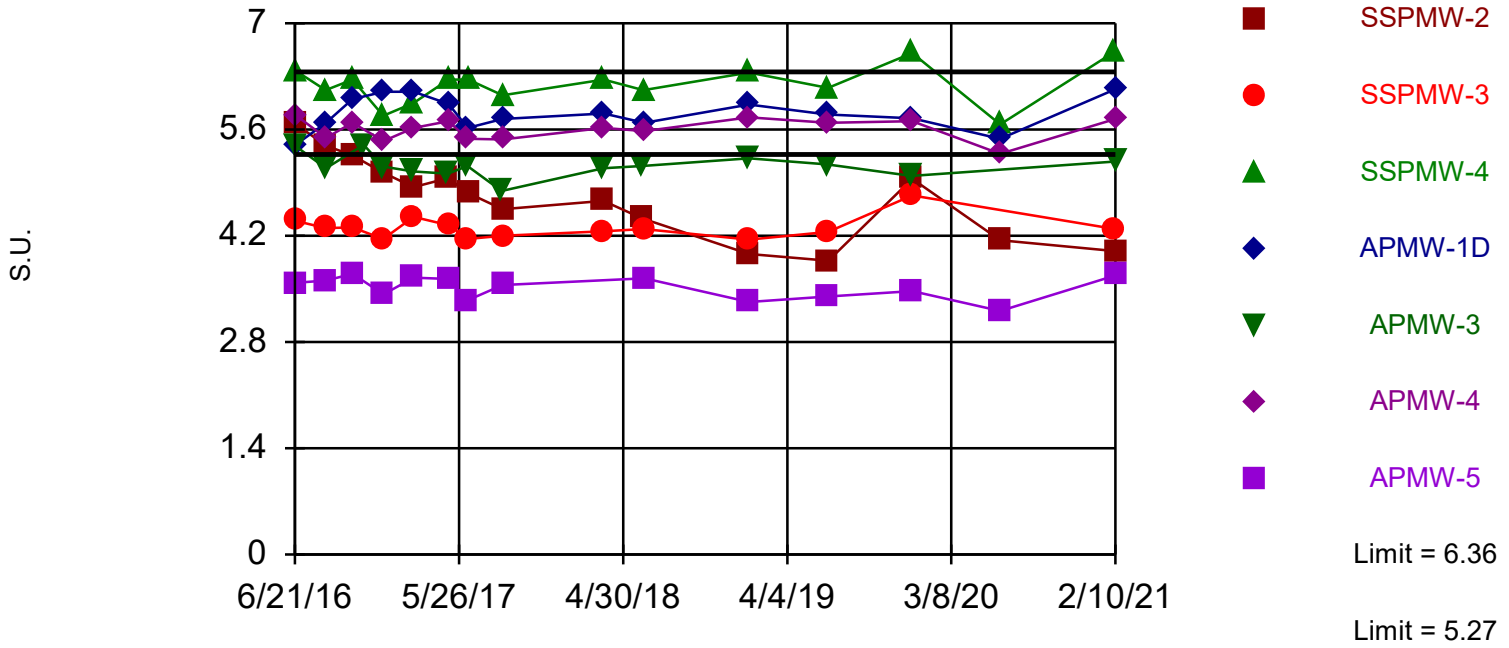
Constituent: Molybdenum Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limits: SSPMW-2, SSPMW-3, SSPMW-4, APMW-3, APMW-5

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=5.817, Std. Dev.=0.178, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9538, critical = 0.881. Report alpha = 0.06793. Individual comparison alpha = 0.005. Most recent point for each compliance well compared to limit.

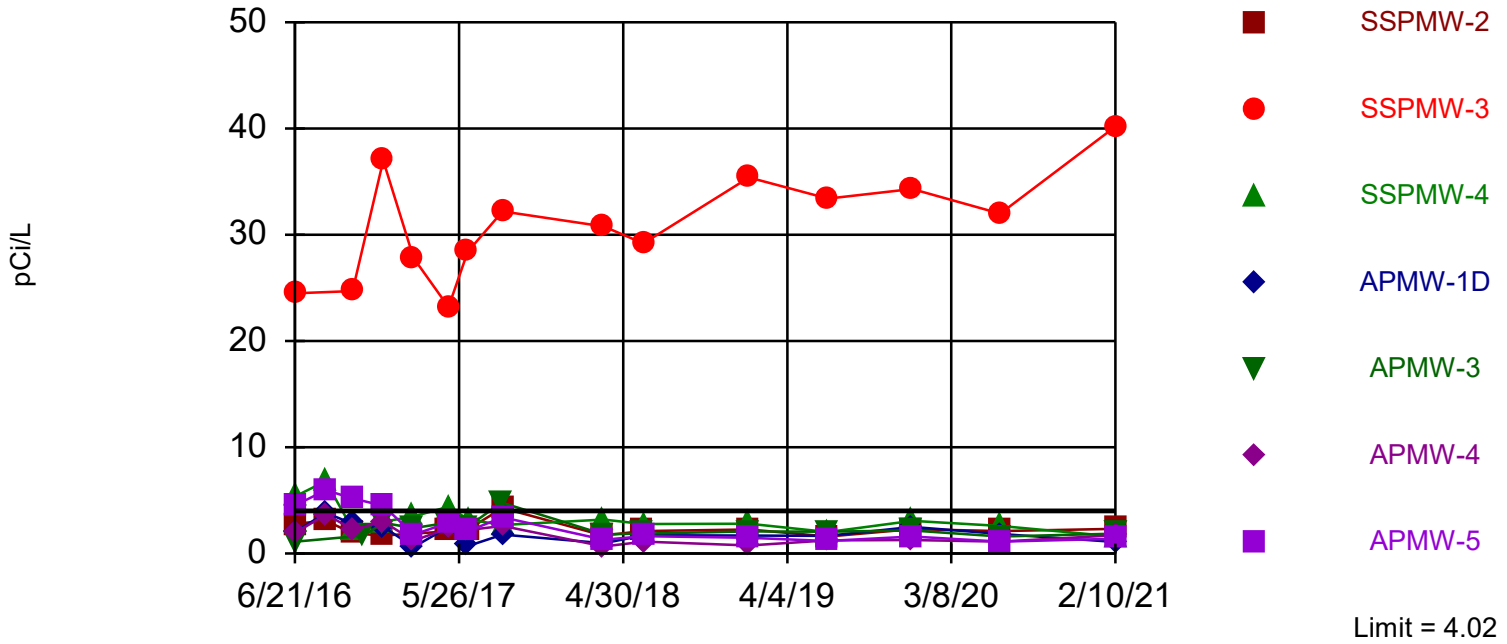
Constituent: pH Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Exceeds Limit: SSPMW-3

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=1.663, Std. Dev.=0.8686, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9683, critical = 0.881. Report alpha = 0.06793. Individual comparison alpha = 0.01. Most recent point for each compliance well compared to limit.

Constituent: Radium 226 + 228 Analysis Run 4/20/2021 11:35 AM View: SSP & AP

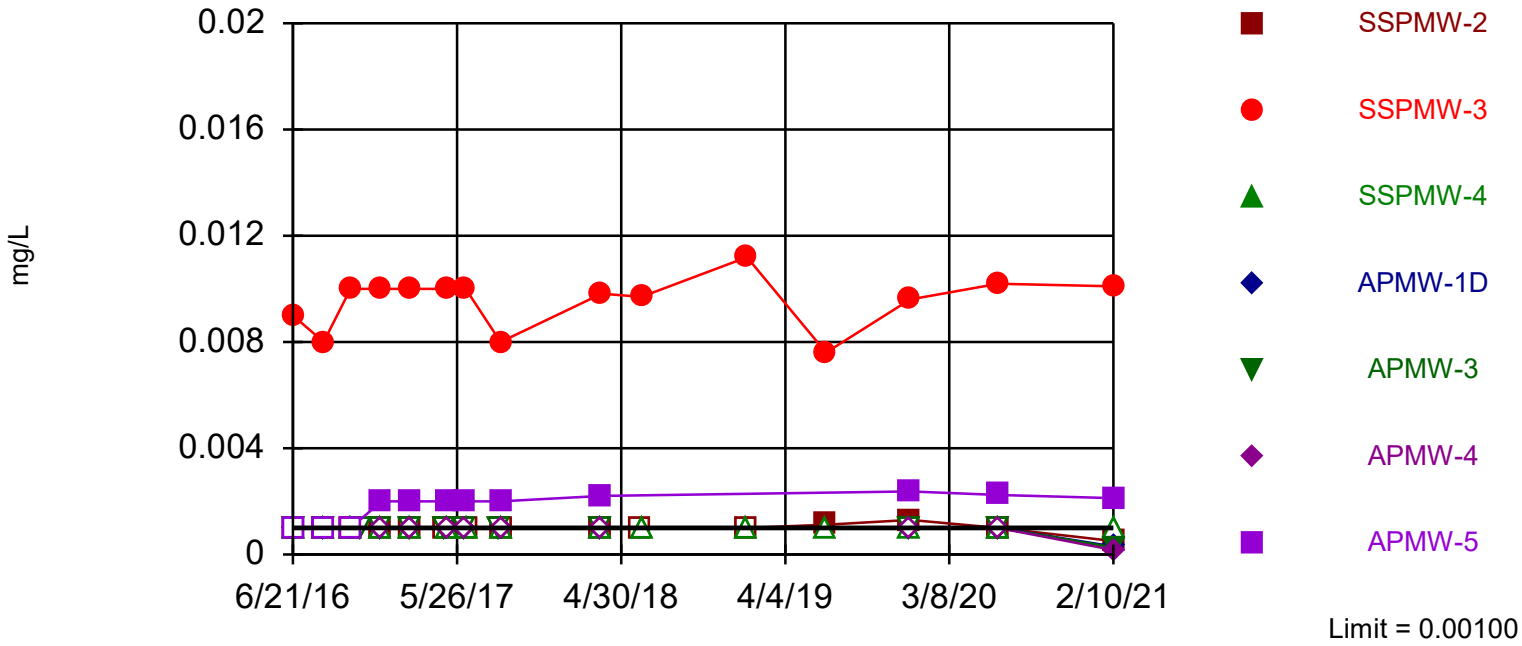
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.28 Sanitas software licensed to HDR. EPA
Hollow symbols indicate censored values.

Exceeds Limit: SSPMW-3, APMW-5

Prediction Limit

Interwell Non-parametric



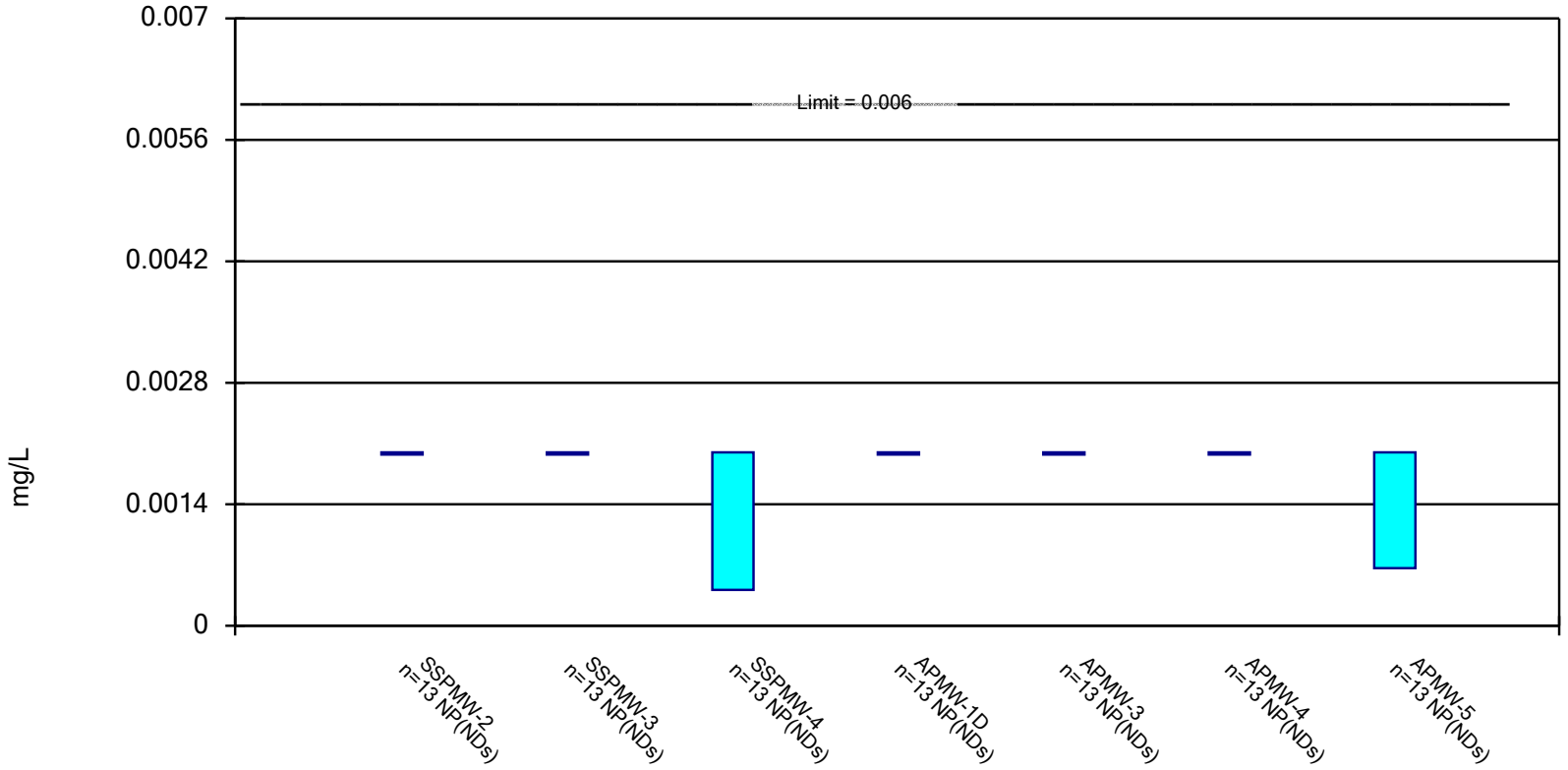
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 93.33% NDs. Report alpha = 0.3182. Individual comparison alpha = 0.05324. Most recent point for each compliance well compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Thallium Analysis Run 4/20/2021 11:35 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

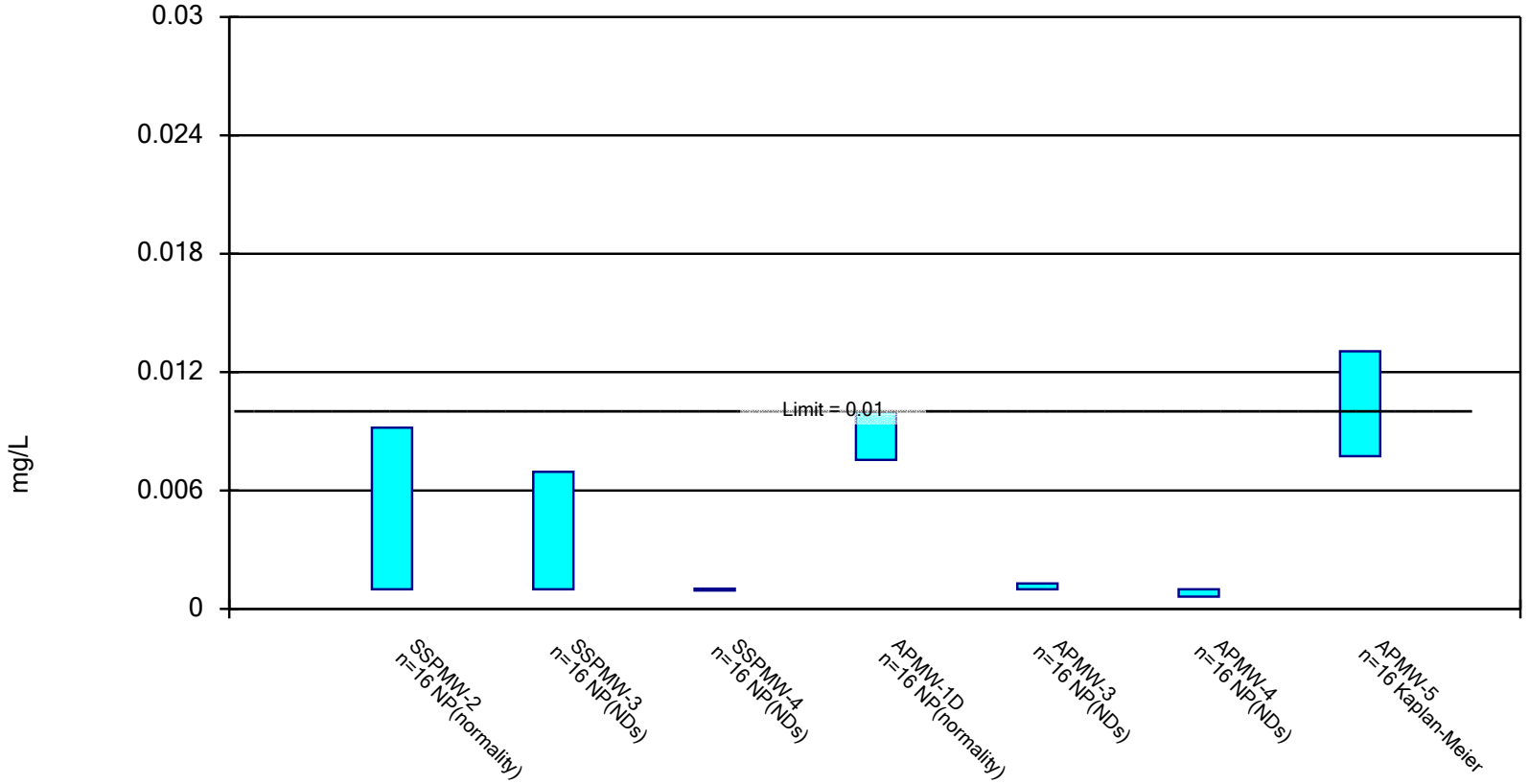


Constituent: Antimony Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

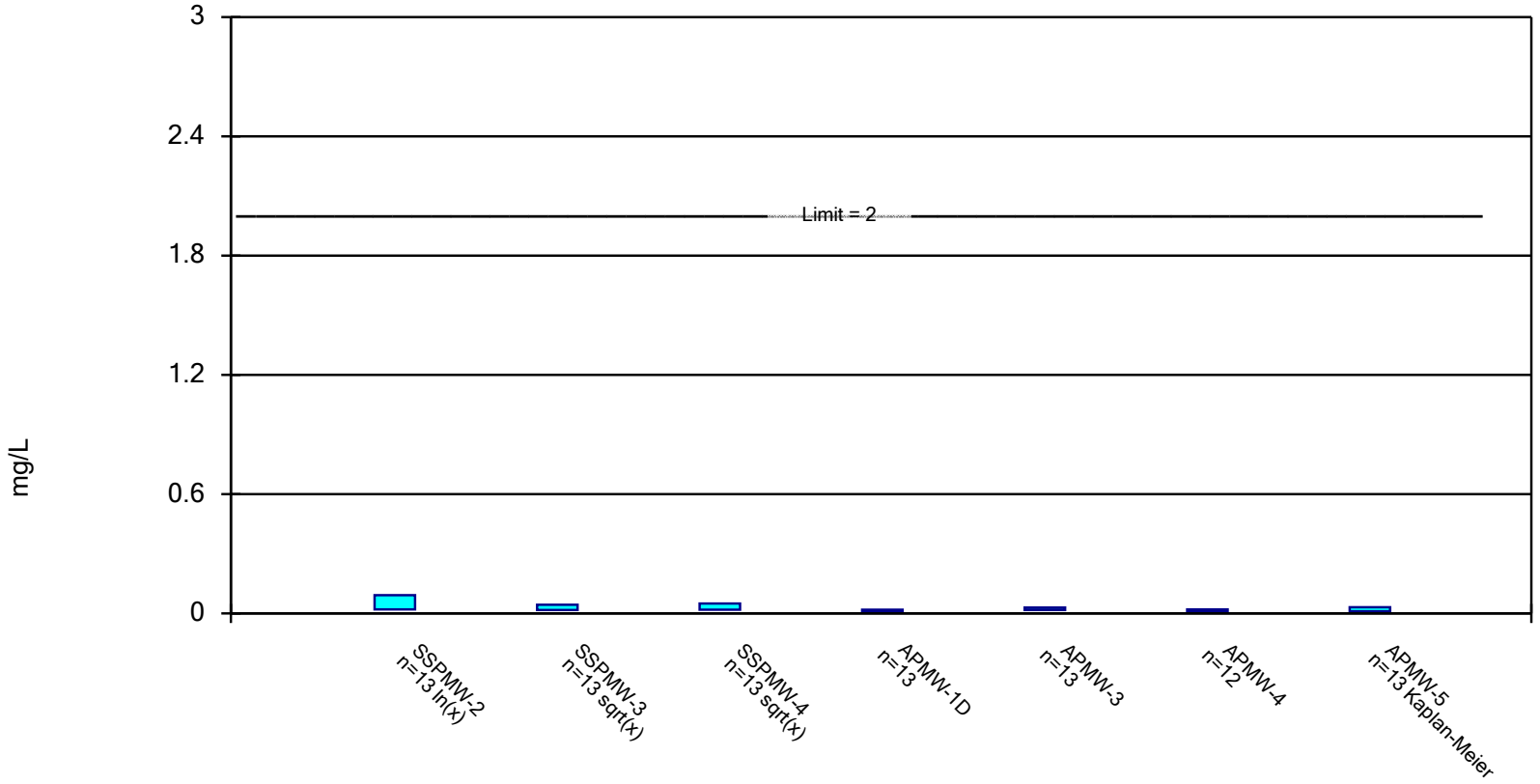


Constituent: Arsenic Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

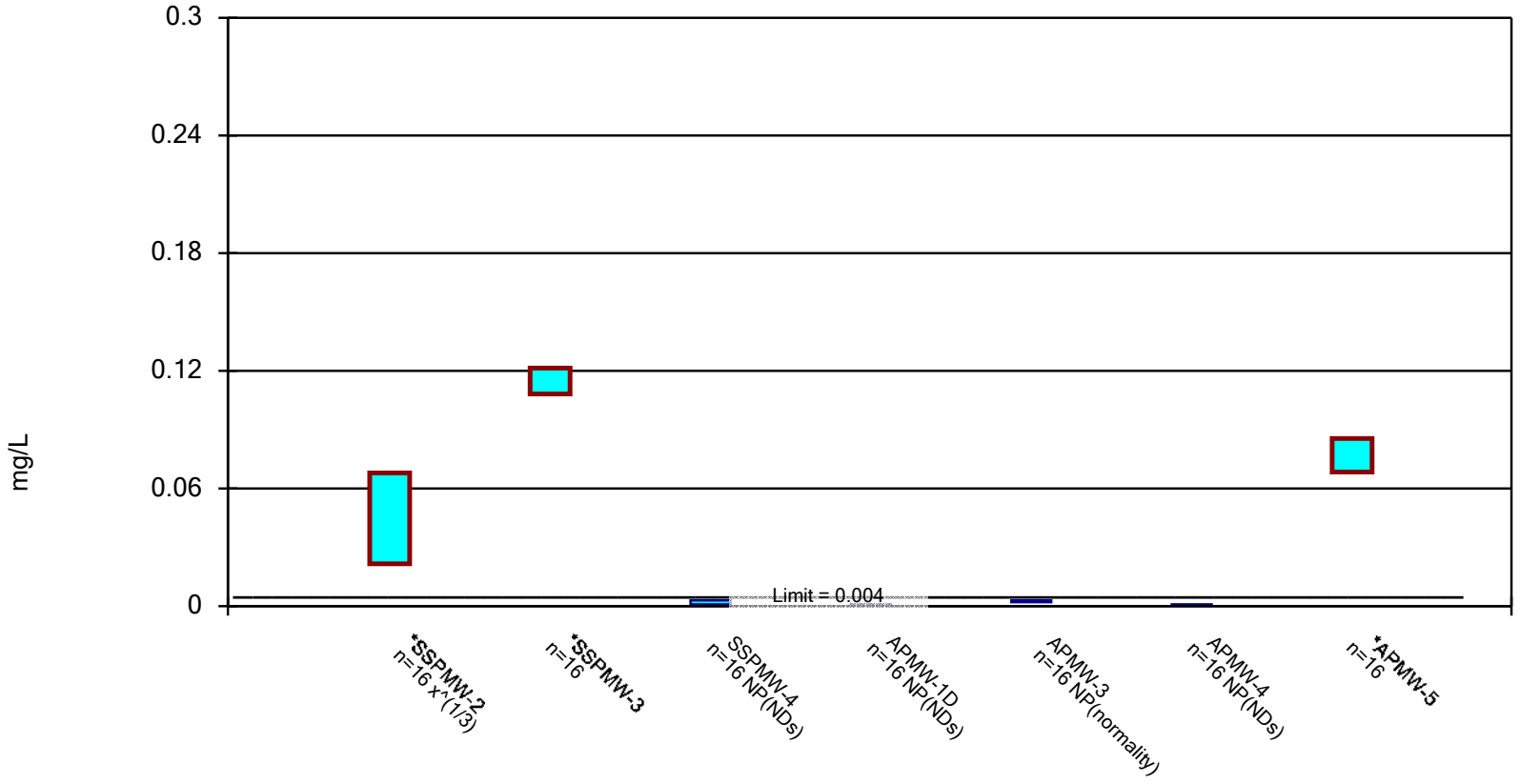


Constituent: Barium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

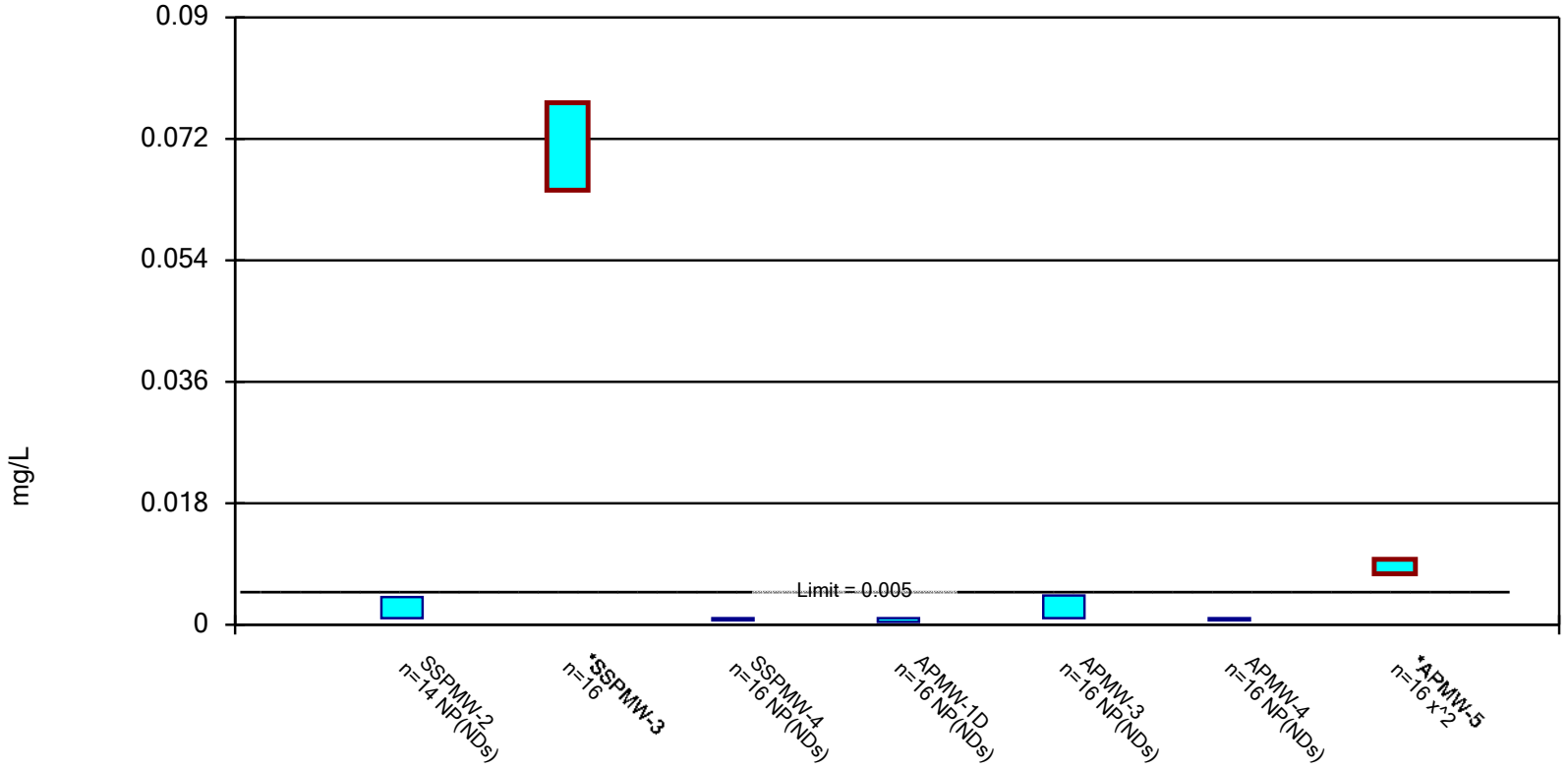


Constituent: Beryllium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

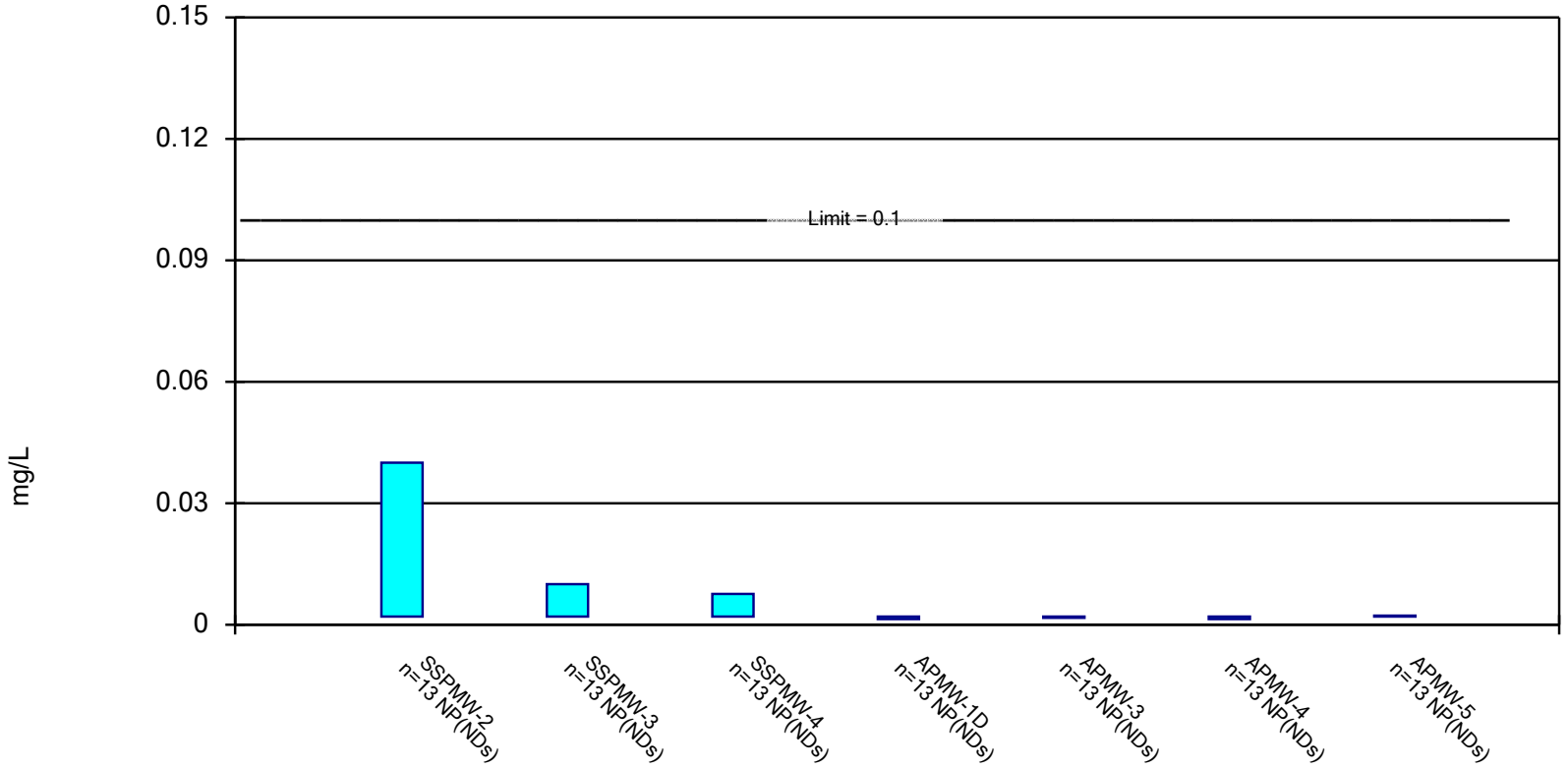


Constituent: Cadmium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

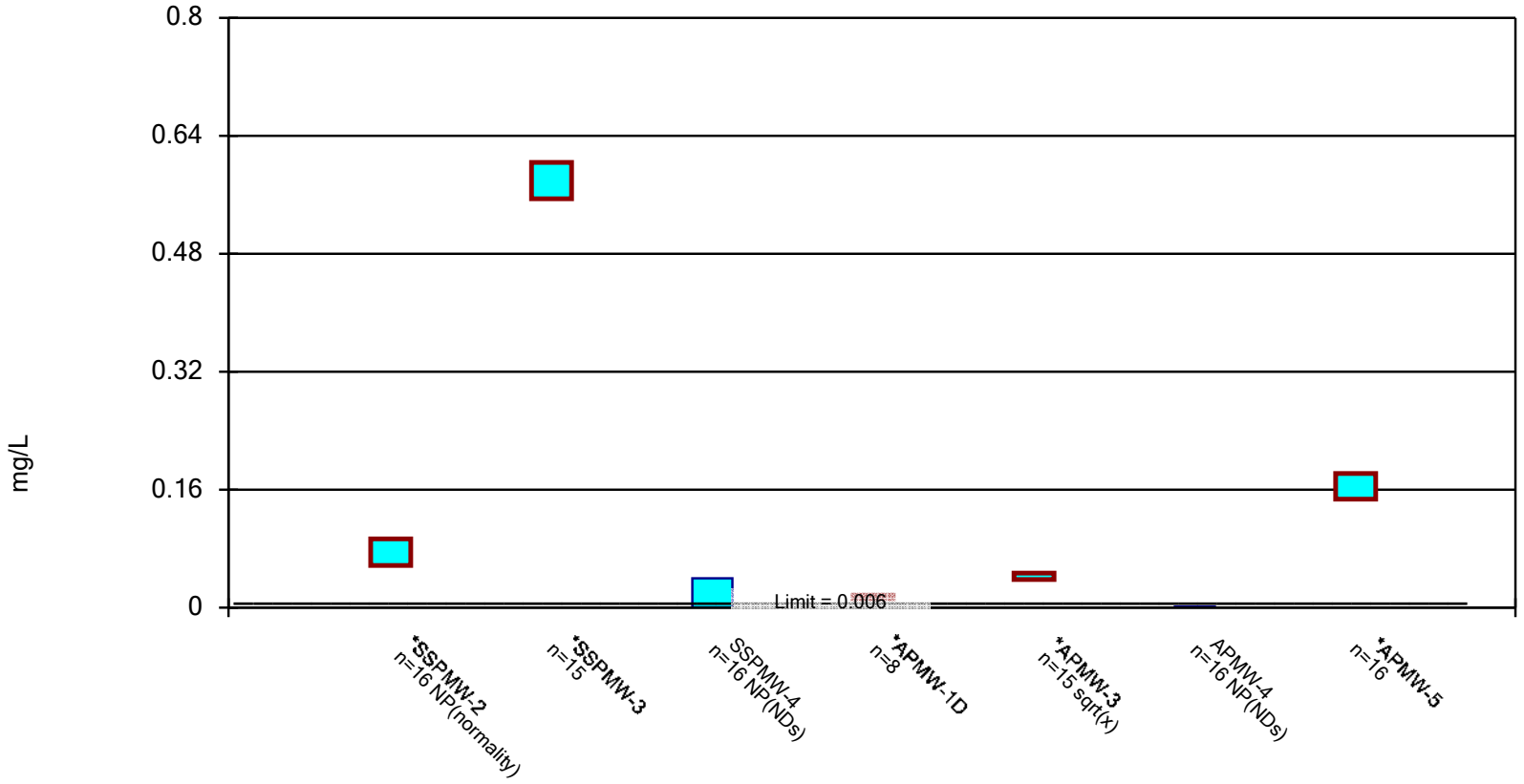


Constituent: Chromium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

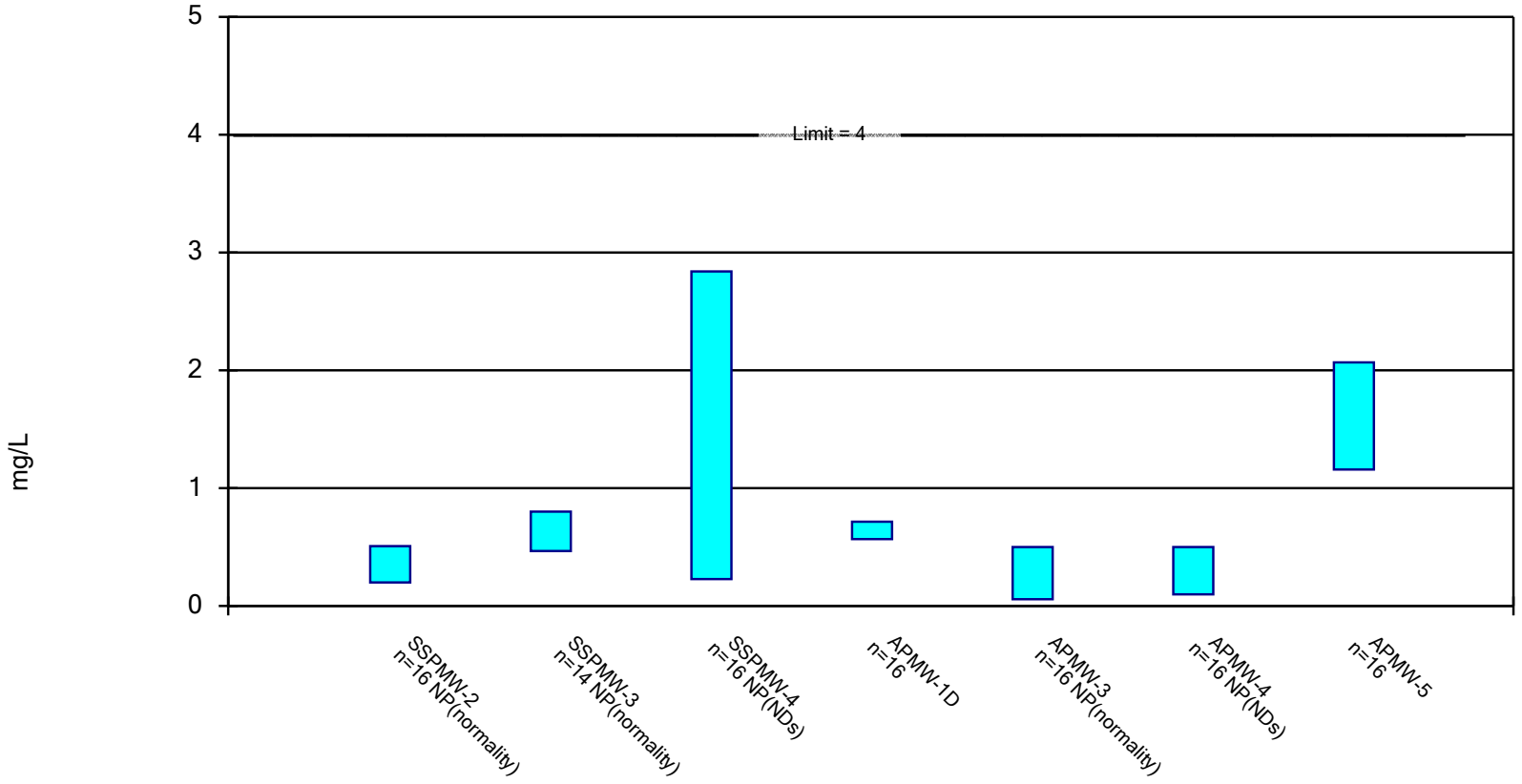


Constituent: Cobalt Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

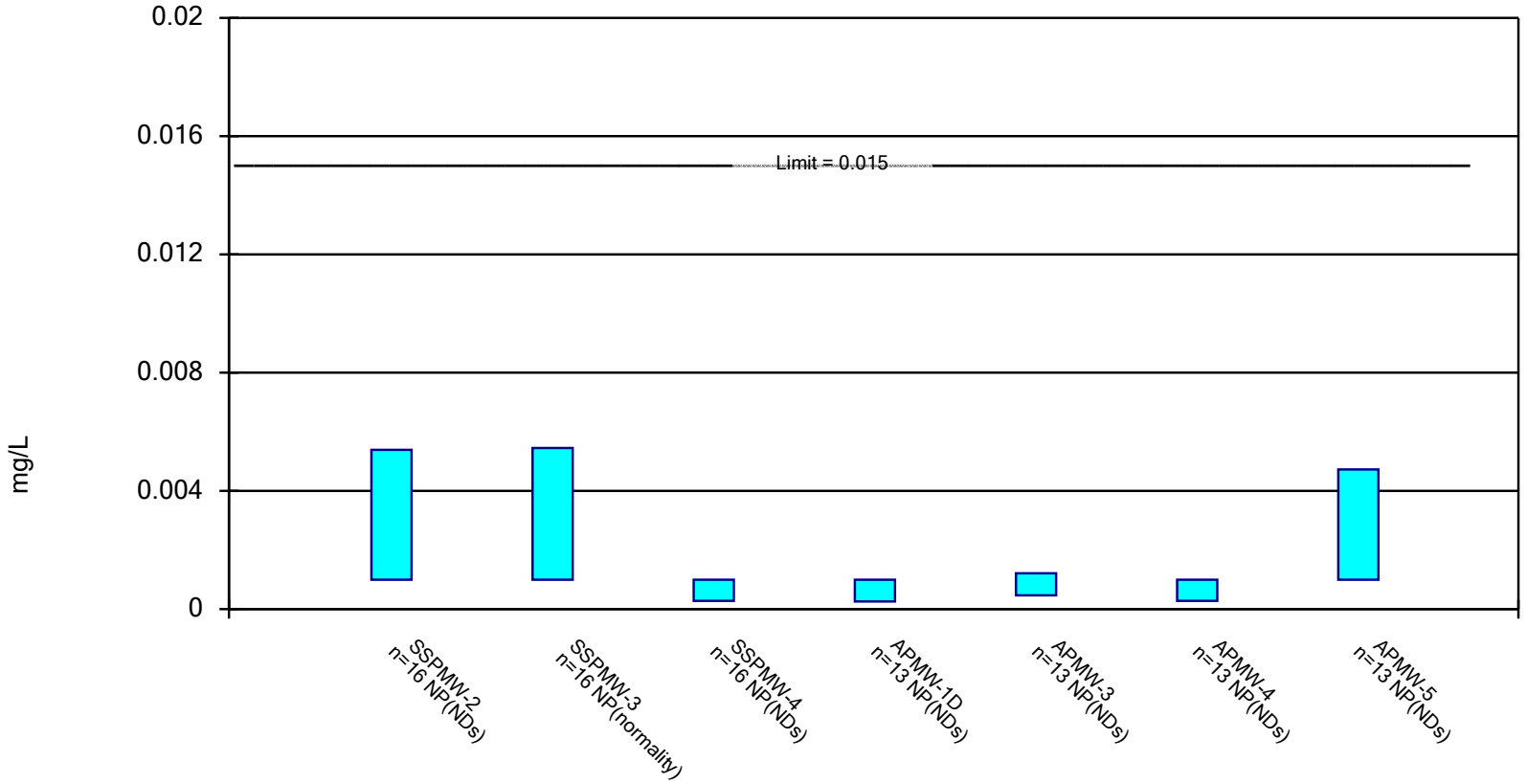


Constituent: Fluoride Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

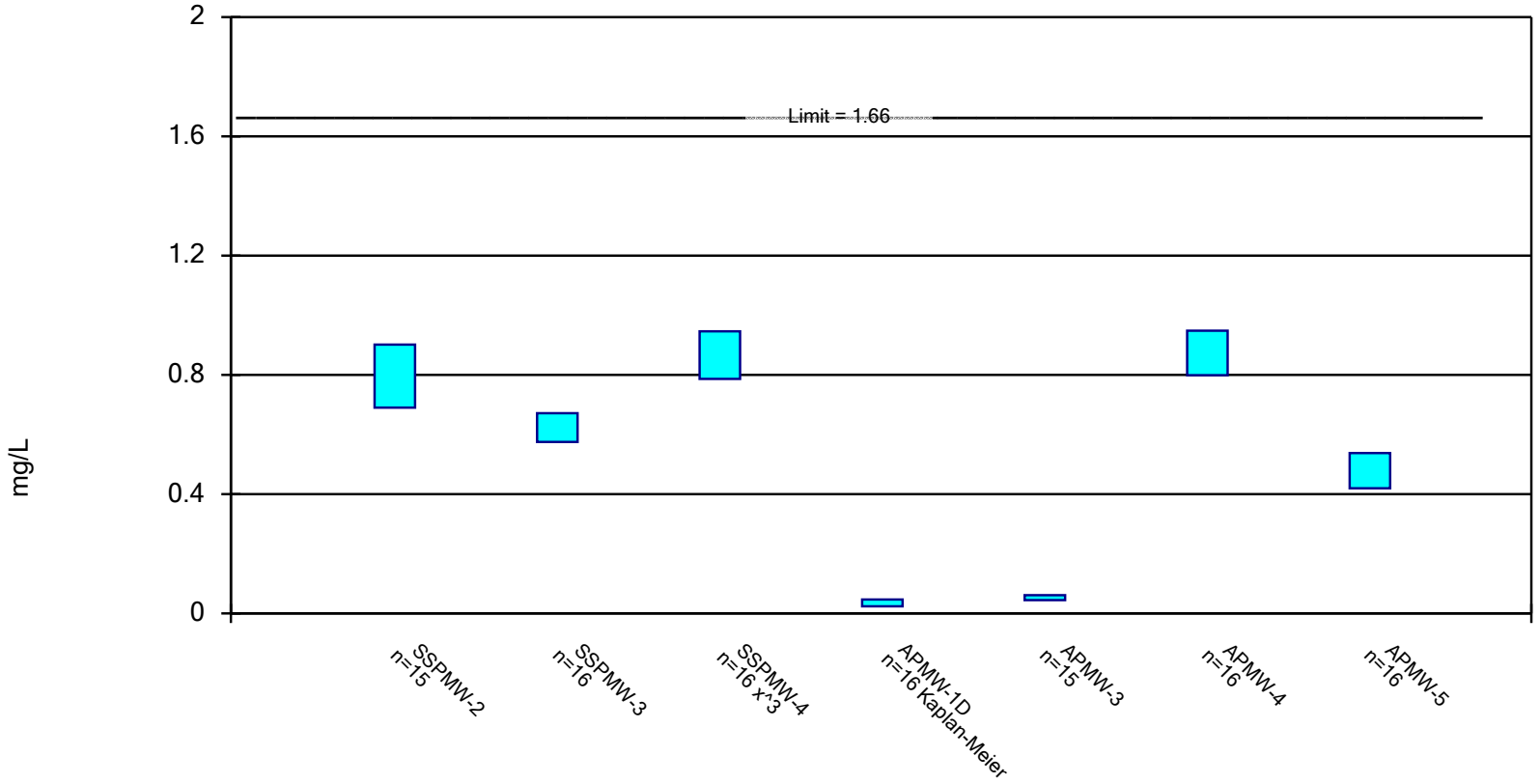


Constituent: Lead Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

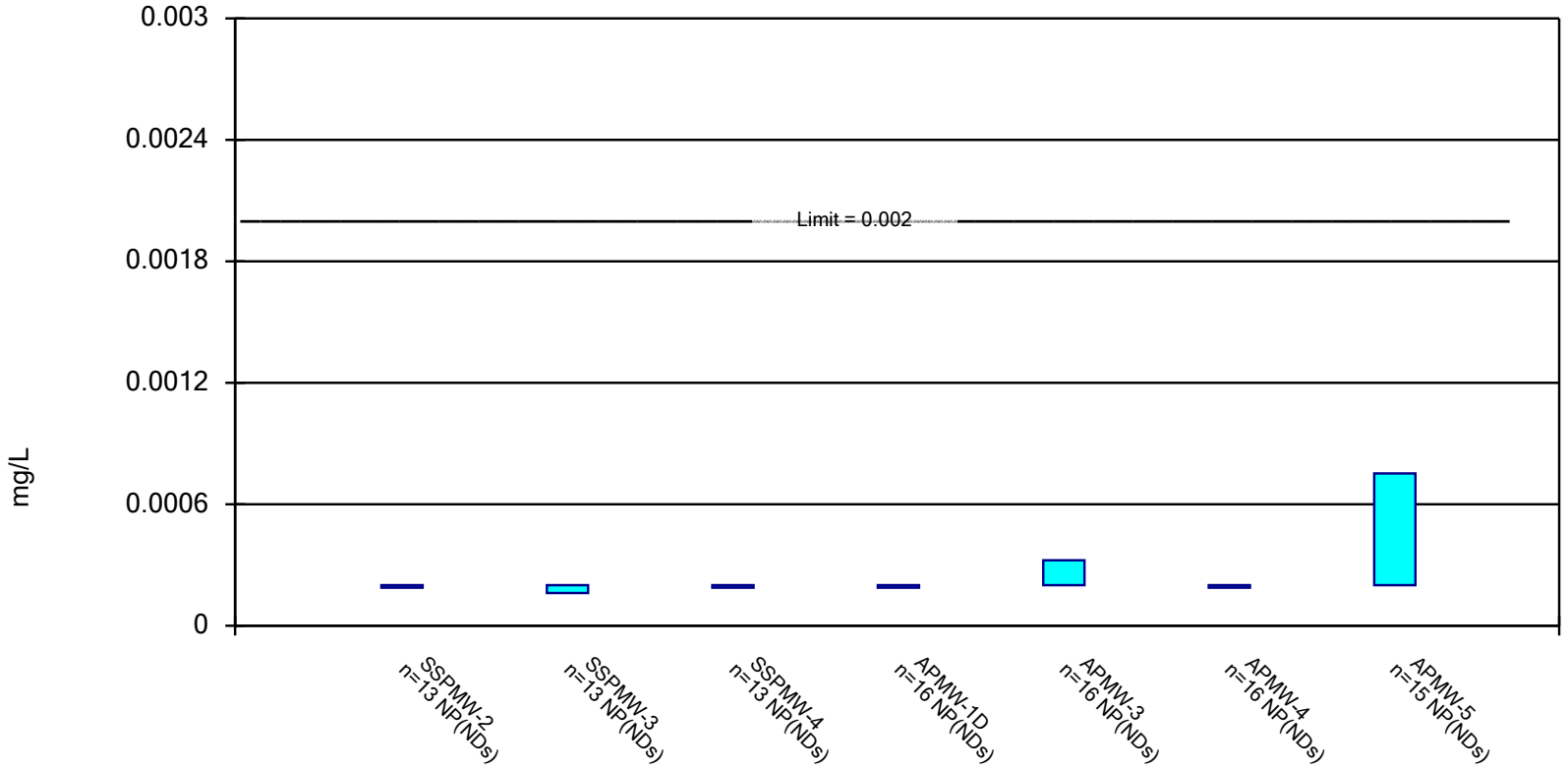


Constituent: Lithium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

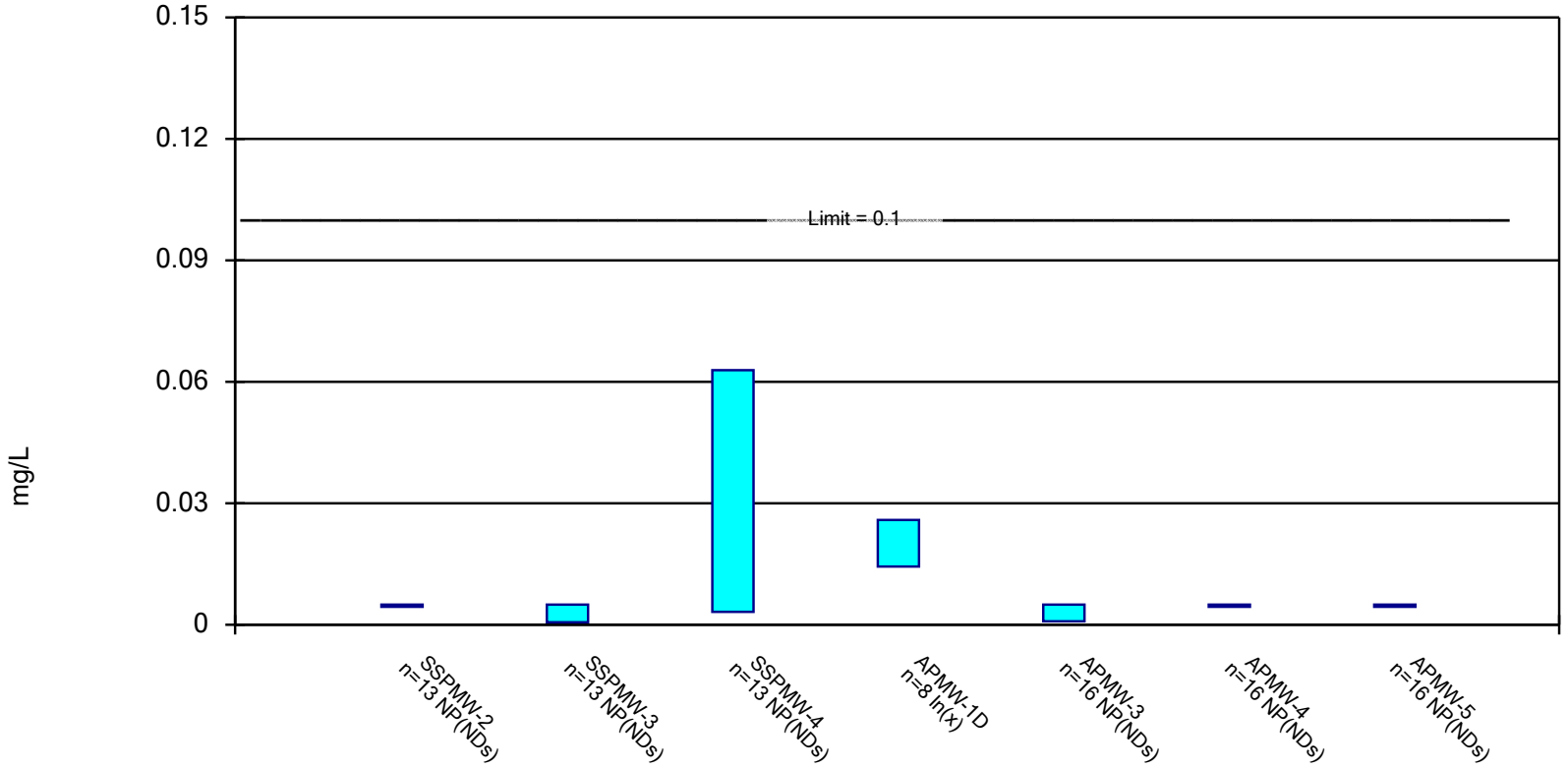


Constituent: Mercury Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

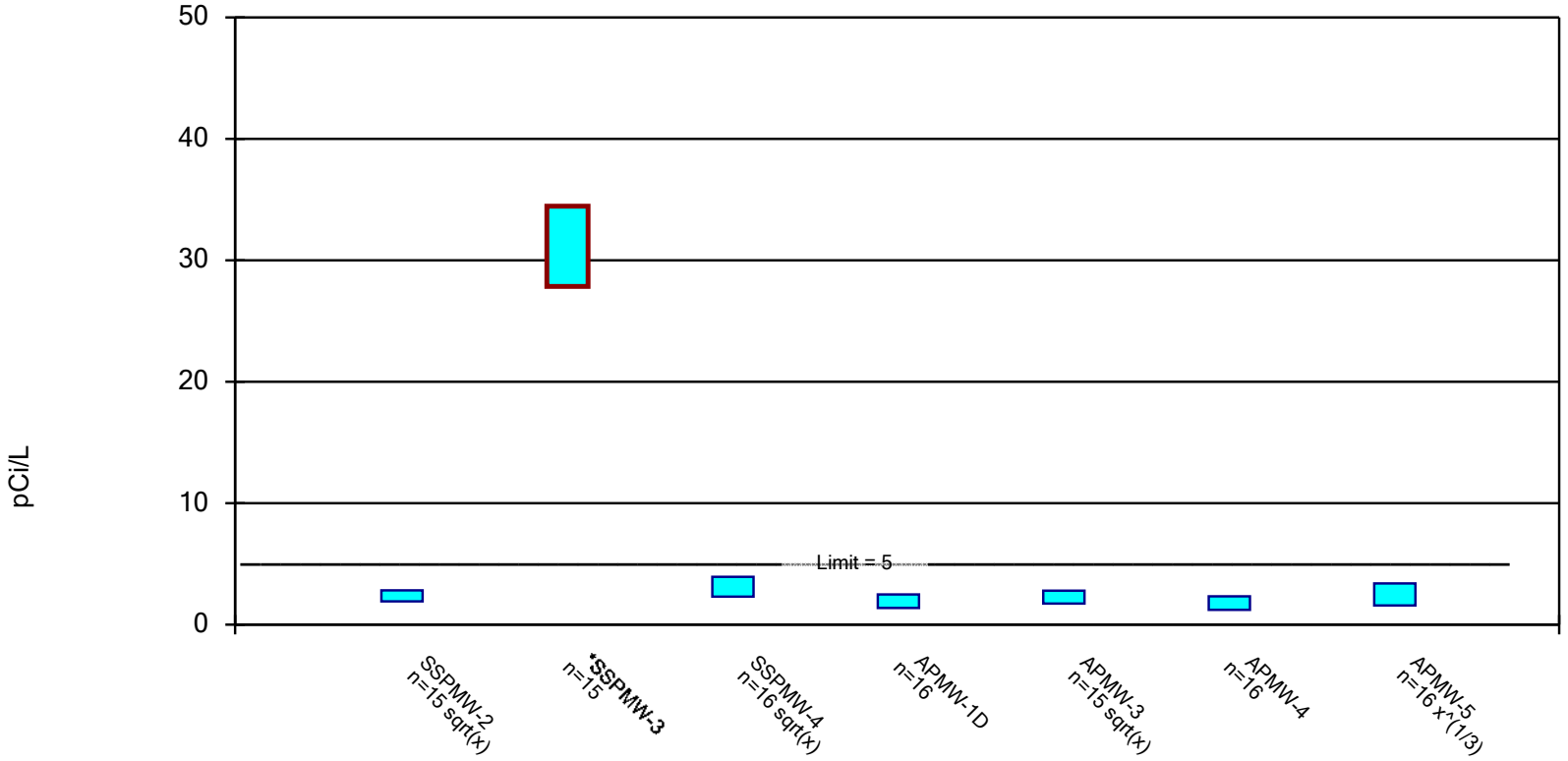


Constituent: Molybdenum Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

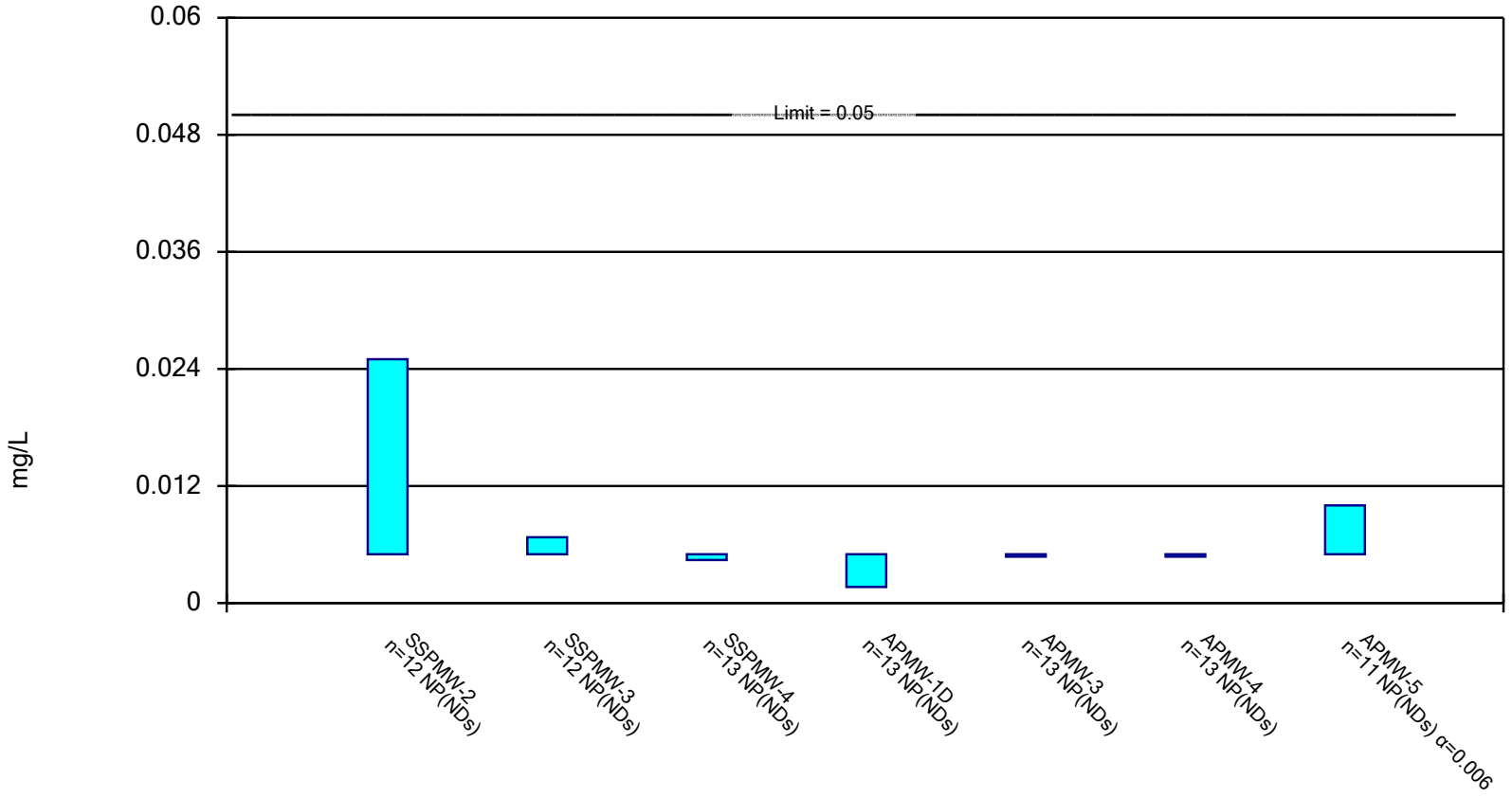


Constituent: Radium 226 + 228 Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

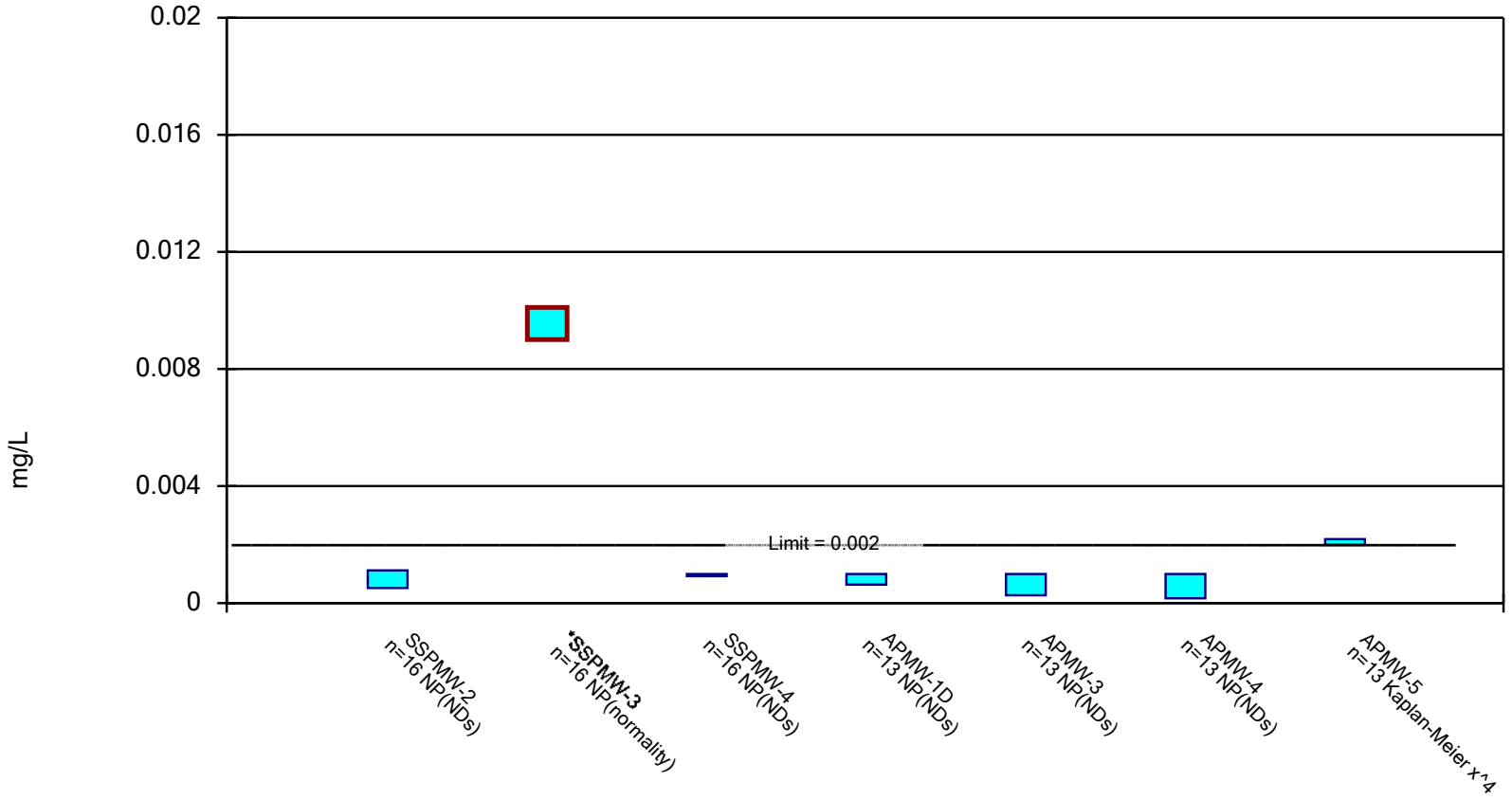


Constituent: Selenium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 8/19/2021 10:47 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:48 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SSPMW-2	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SSPMW-3	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	SSPMW-4	0.002	0.000415	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-1D	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-3	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-4	0.002	0.002	0.006	No	13	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-5	0.002	0.000664	0.006	No	13	84.62	No	0.01	NP (NDs)
Arsenic (mg/L)	SSPMW-2	0.00918	0.001	0.01	No	16	50	No	0.01	NP (normality)
Arsenic (mg/L)	SSPMW-3	0.00695	0.001	0.01	No	16	62.5	No	0.01	NP (NDs)
Arsenic (mg/L)	SSPMW-4	0.00103	0.000941	0.01	No	16	75	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-1D	0.01	0.00756	0.01	No	16	18.75	No	0.01	NP (normality)
Arsenic (mg/L)	APMW-3	0.00129	0.001	0.01	No	16	81.25	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-4	0.001	0.000628	0.01	No	16	93.75	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-5	0.01305	0.007734	0.01	No	16	18.75	No	0.01	Param.
Barium (mg/L)	SSPMW-2	0.0911	0.01991	2	No	13	7.692	ln(x)	0.01	Param.
Barium (mg/L)	SSPMW-3	0.04405	0.0172	2	No	13	7.692	sqrt(x)	0.01	Param.
Barium (mg/L)	SSPMW-4	0.05029	0.0182	2	No	13	7.692	sqrt(x)	0.01	Param.
Barium (mg/L)	APMW-1D	0.01816	0.009948	2	No	13	7.692	No	0.01	Param.
Barium (mg/L)	APMW-3	0.0296	0.01749	2	No	13	7.692	No	0.01	Param.
Barium (mg/L)	APMW-4	0.02104	0.01181	2	No	12	0	No	0.01	Param.
Barium (mg/L)	APMW-5	0.03163	0.01066	2	No	13	23.08	No	0.01	Param.
Beryllium (mg/L)	**SSPMW-2**	**0.06792**	**0.02169**	**0.004**	**Yes**	**16**	**0**	**x^(1/3)**	**0.01**	**Param.**
Beryllium (mg/L)	**SSPMW-3**	**0.1214**	**0.1082**	**0.004**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SSPMW-4	0.003	0.001	0.004	No	16	93.75	No	0.01	NP (NDs)
Beryllium (mg/L)	APMW-1D	0.001	0.001	0.004	No	16	100	No	0.01	NP (NDs)
Beryllium (mg/L)	APMW-3	0.003	0.002	0.004	No	16	12.5	No	0.01	NP (normality)
Beryllium (mg/L)	APMW-4	0.001	0.000436	0.004	No	16	87.5	No	0.01	NP (NDs)
Beryllium (mg/L)	**APMW-5**	**0.08548**	**0.06833**	**0.004**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-2	0.0041	0.001	0.005	No	14	71.43	No	0.01	NP (NDs)
Cadmium (mg/L)	**SSPMW-3**	**0.07737**	**0.06441**	**0.005**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-4	0.001	0.001	0.005	No	16	100	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-1D	0.001	0.000408	0.005	No	16	87.5	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-3	0.00432	0.001	0.005	No	16	62.5	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-4	0.001	0.001	0.005	No	16	100	No	0.01	NP (NDs)
Cadmium (mg/L)	**APMW-5**	**0.009715**	**0.007553**	**0.005**	**Yes**	**16**	**0**	**x^2**	**0.01**	**Param.**
Chromium (mg/L)	SSPMW-2	0.04	0.002	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	SSPMW-3	0.01	0.002	0.1	No	13	61.54	No	0.01	NP (NDs)
Chromium (mg/L)	SSPMW-4	0.00762	0.002	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-1D	0.002	0.002	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-3	0.002	0.00173	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-4	0.002	0.002	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-5	0.00228	0.002	0.1	No	13	92.31	No	0.01	NP (NDs)
Cobalt (mg/L)	**SSPMW-2**	**0.0933**	**0.0571**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**NP (normality)**
Cobalt (mg/L)	**SSPMW-3**	**0.604**	**0.5545**	**0.006**	**Yes**	**15**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SSPMW-4	0.04	0.000336	0.006	No	16	87.5	No	0.01	NP (NDs)
Cobalt (mg/L)	**APMW-1D**	**0.01696**	**0.01221**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**APMW-3**	**0.04702**	**0.03817**	**0.006**	**Yes**	**15**	**0**	**sqrt(x)**	**0.01**	**Param.**
Cobalt (mg/L)	APMW-4	0.00109	0.0005	0.006	No	16	93.75	No	0.01	NP (NDs)
Cobalt (mg/L)	**APMW-5**	**0.1821**	**0.1472**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SSPMW-2	0.509	0.2	4	No	16	25	No	0.01	NP (normality)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:48 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SSPMW-3	0.8	0.466	4	No	14	21.43	No	0.01	NP (normality)
Fluoride (mg/L)	SSPMW-4	2.84	0.227	4	No	16	75	No	0.01	NP (NDs)
Fluoride (mg/L)	APMW-1D	0.715	0.5676	4	No	16	12.5	No	0.01	Param.
Fluoride (mg/L)	APMW-3	0.5	0.0577	4	No	16	37.5	No	0.01	NP (normality)
Fluoride (mg/L)	APMW-4	0.5	0.1	4	No	16	81.25	No	0.01	NP (NDs)
Fluoride (mg/L)	APMW-5	2.068	1.158	4	No	16	6.25	No	0.01	Param.
Lead (mg/L)	SSPMW-2	0.00539	0.001	0.015	No	16	56.25	No	0.01	NP (NDs)
Lead (mg/L)	SSPMW-3	0.00545	0.001	0.015	No	16	50	No	0.01	NP (normality)
Lead (mg/L)	SSPMW-4	0.001	0.000276	0.015	No	16	87.5	No	0.01	NP (NDs)
Lead (mg/L)	APMW-1D	0.001	0.000256	0.015	No	13	92.31	No	0.01	NP (NDs)
Lead (mg/L)	APMW-3	0.00121	0.00047	0.015	No	13	76.92	No	0.01	NP (NDs)
Lead (mg/L)	APMW-4	0.001	0.000276	0.015	No	13	92.31	No	0.01	NP (NDs)
Lead (mg/L)	APMW-5	0.00473	0.001	0.015	No	13	69.23	No	0.01	NP (NDs)
Lithium (mg/L)	SSPMW-2	0.9018	0.6905	1.66	No	15	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-3	0.6714	0.5753	1.66	No	16	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-4	0.9463	0.7861	1.66	No	16	0	x^3	0.01	Param.
Lithium (mg/L)	APMW-1D	0.04693	0.02407	1.66	No	16	18.75	No	0.01	Param.
Lithium (mg/L)	APMW-3	0.06137	0.04466	1.66	No	15	6.667	No	0.01	Param.
Lithium (mg/L)	APMW-4	0.9476	0.7987	1.66	No	16	0	No	0.01	Param.
Lithium (mg/L)	APMW-5	0.5373	0.4193	1.66	No	16	0	No	0.01	Param.
Mercury (mg/L)	SSPMW-2	0.0002	0.0002	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	SSPMW-3	0.0002	0.000162	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	SSPMW-4	0.0002	0.0002	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-1D	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-3	0.000324	0.0002	0.002	No	16	75	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-4	0.0002	0.0002	0.002	No	16	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-5	0.000753	0.0002	0.002	No	15	60	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-2	0.005	0.005	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-3	0.005	0.000667	0.1	No	13	92.31	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-4	0.0629	0.00321	0.1	No	13	84.62	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-1D	0.02588	0.01439	0.1	No	8	0	ln(x)	0.01	Param.
Molybdenum (mg/L)	APMW-3	0.005	0.000848	0.1	No	16	93.75	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-4	0.005	0.005	0.1	No	16	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-5	0.005	0.005	0.1	No	16	100	No	0.01	NP (NDs)
Radium 226 + 228 (pCi/L)	SSPMW-2	2.834	1.923	5	No	15	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	**SSPMW-3**	**34.45**	**27.85**	**5**	**Yes**	**15**	**0**	**No**	**0.01**	**Param.**
Radium 226 + 228 (pCi/L)	SSPMW-4	3.928	2.295	5	No	16	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-1D	2.496	1.381	5	No	16	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-3	2.796	1.742	5	No	15	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-4	2.332	1.212	5	No	16	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-5	3.404	1.591	5	No	16	0	x^(1/3)	0.01	Param.
Selenium (mg/L)	SSPMW-2	0.025	0.005	0.05	No	12	91.67	No	0.01	NP (NDs)
Selenium (mg/L)	SSPMW-3	0.00676	0.005	0.05	No	12	91.67	No	0.01	NP (NDs)
Selenium (mg/L)	SSPMW-4	0.005	0.00441	0.05	No	13	92.31	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-1D	0.005	0.00164	0.05	No	13	84.62	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-3	0.005	0.005	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-4	0.005	0.005	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-5	0.01	0.005	0.05	No	11	63.64	No	0.006	NP (NDs)
Thallium (mg/L)	SSPMW-2	0.00112	0.000516	0.002	No	16	81.25	No	0.01	NP (NDs)
Thallium (mg/L)	**SSPMW-3**	**0.0101**	**0.009**	**0.002**	**Yes**	**16**	**0**	**No**	**0.01**	**NP (normality)**

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 8/19/2021, 10:48 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	SSPMW-4	0.001	0.001	0.002	No	16	100	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-1D	0.001	0.000636	0.002	No	13	84.62	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-3	0.001	0.000271	0.002	No	13	84.62	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-4	0.001	0.000172	0.002	No	13	92.31	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-5	0.002186	0.001987	0.002	No	13	23.08	x^4	0.01	Param.

Attachment A-5

Statistical Analysis

-July 2022

-SSP/AP

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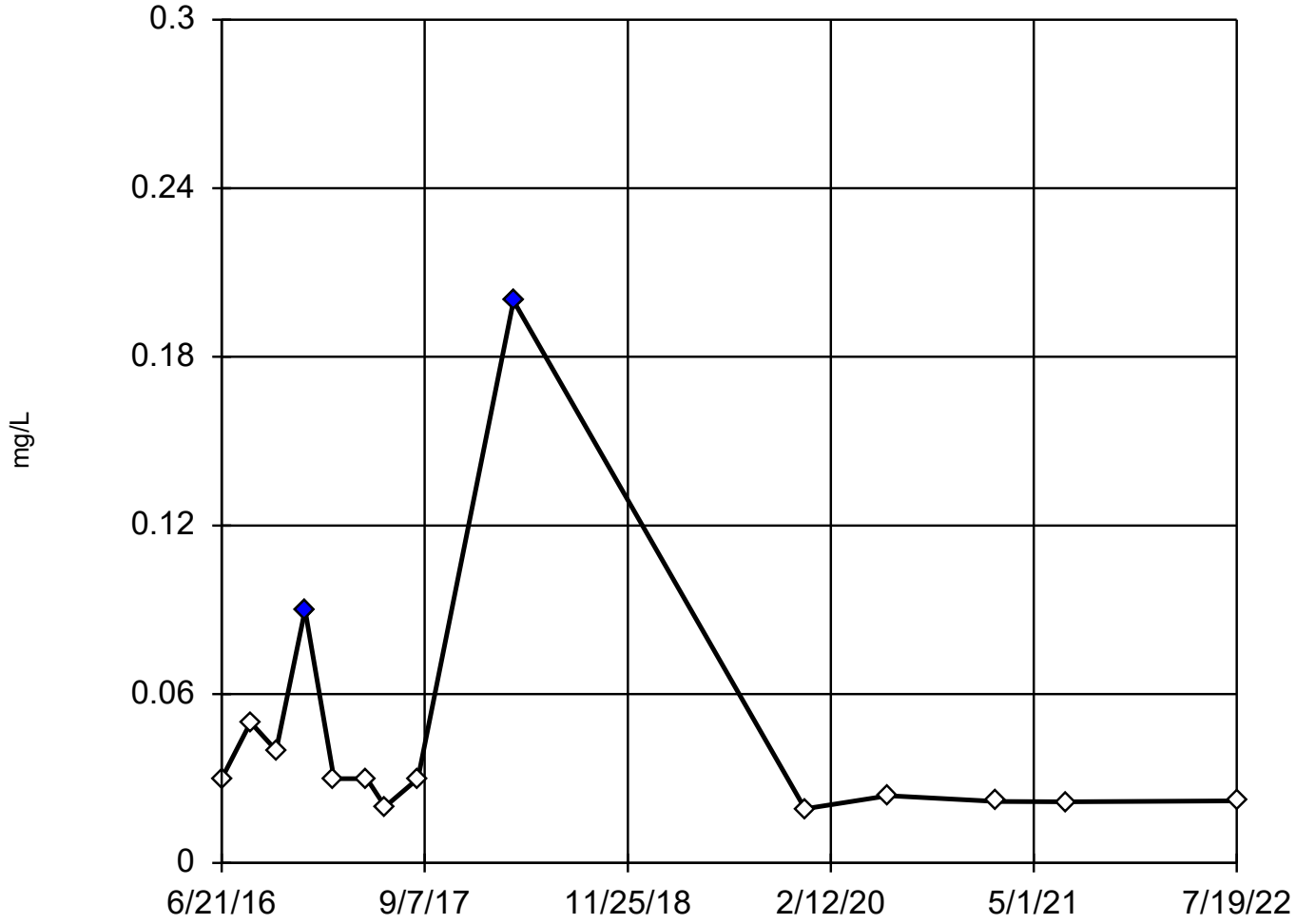
Dixon's Outlier Test

SSPMW-3



n = 14

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 0.04491.
Std. Dev. = 0.04831.
0.09: c = 0.5701
tabl = 0.546.
Alpha = 0.05.

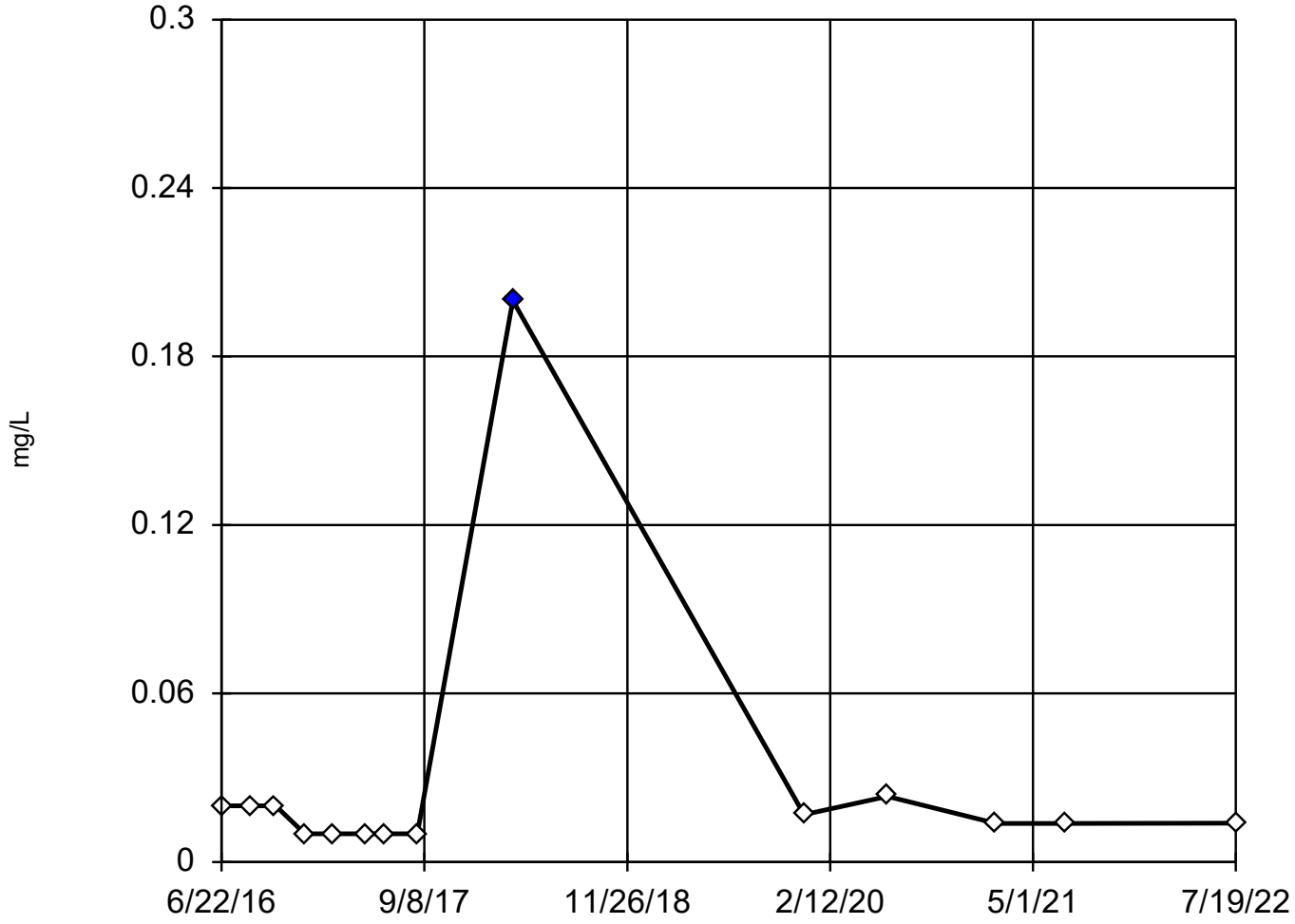
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8995
Critical = 0.859 (after natural log transformation)
The distribution, after removal of suspect values, was found to be log-normal.

Constituent: Barium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-1D



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

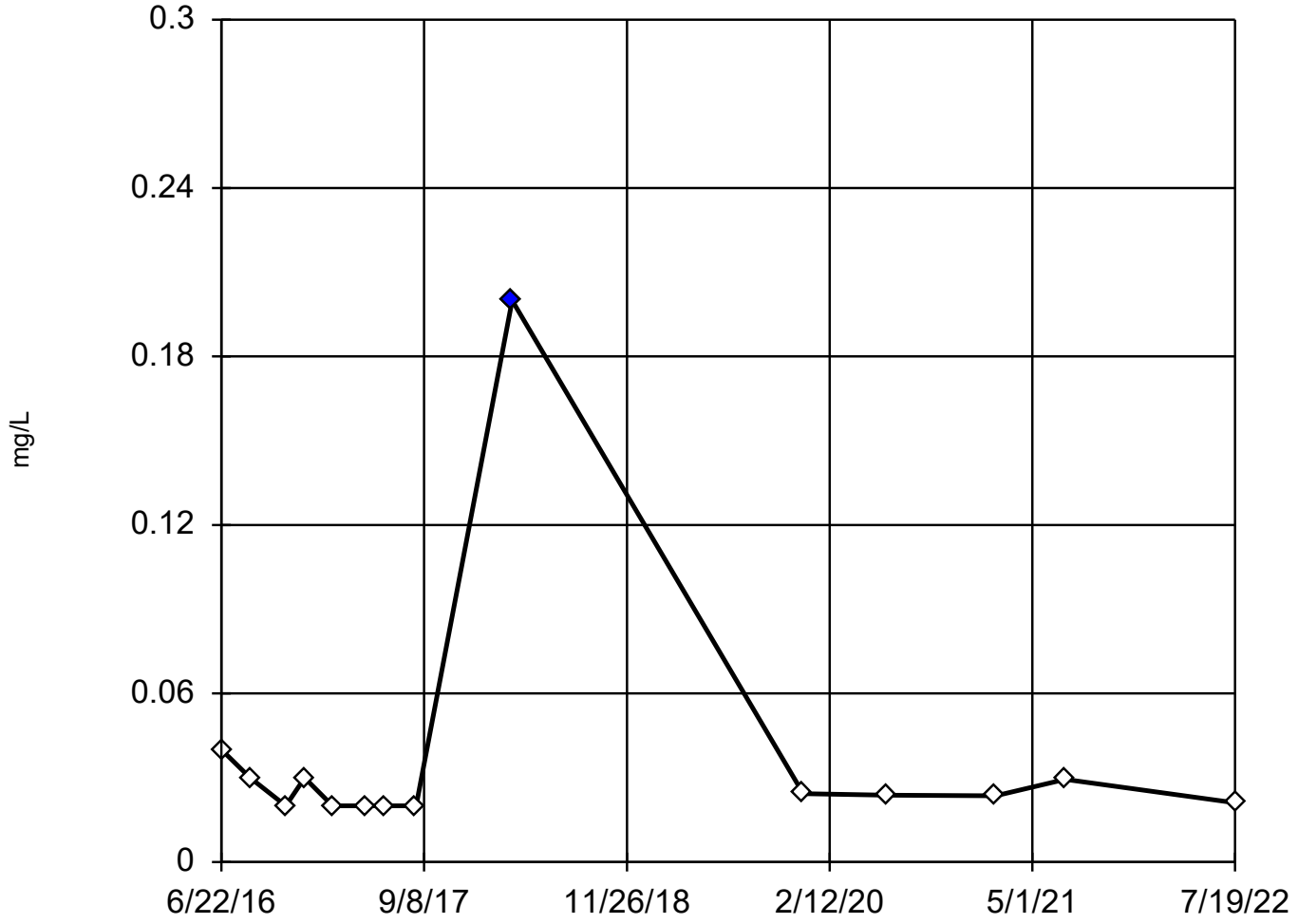
High cutoff = 0.16, low cutoff = 0.00125, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-3



n = 14

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

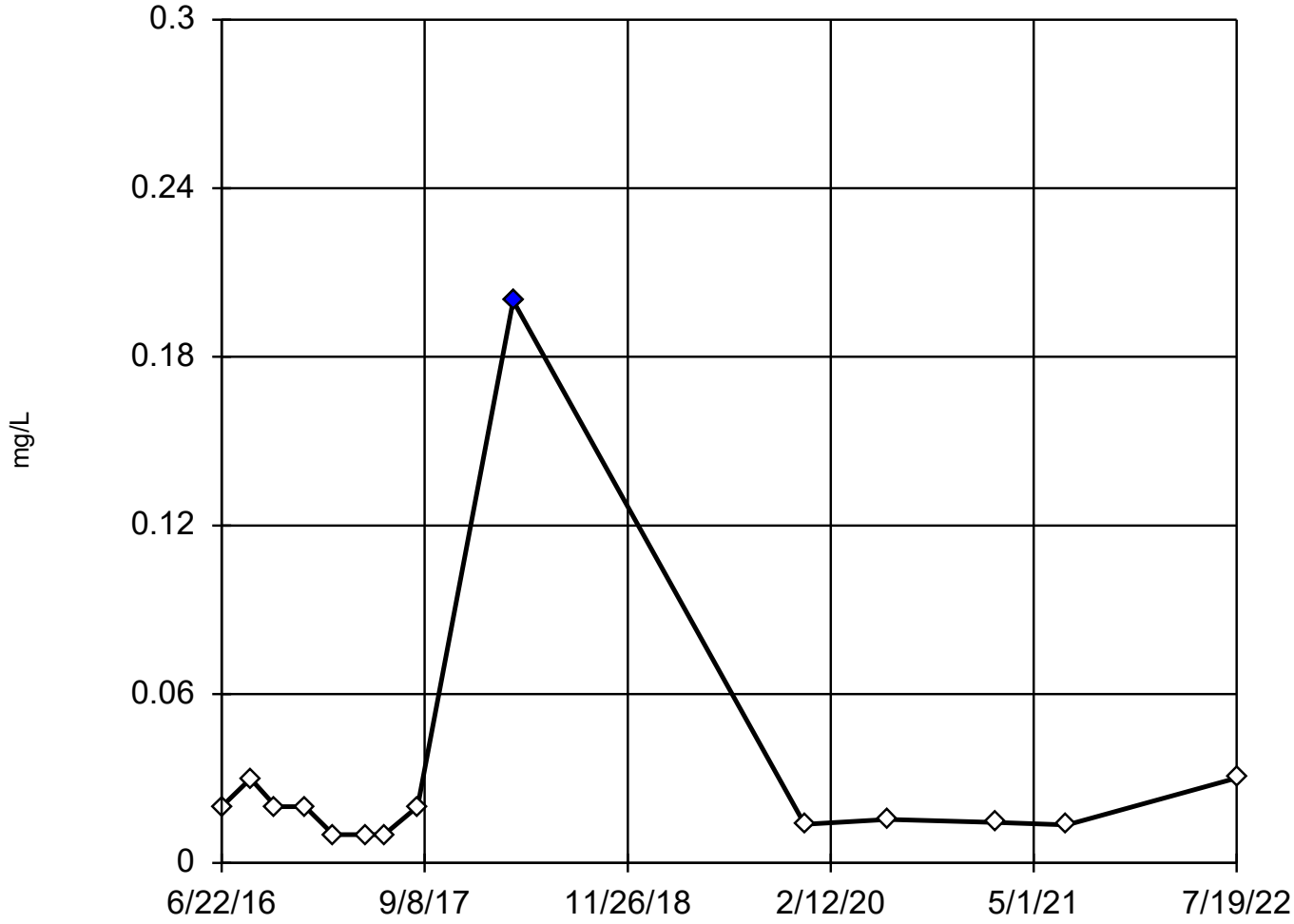
High cutoff = 0.1013, low cutoff = 0.005926, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 14

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.03052.
Std. Dev. = 0.04922.
<0.2 (o): c = 0.8947
tabl = 0.546.
Alpha = 0.05.

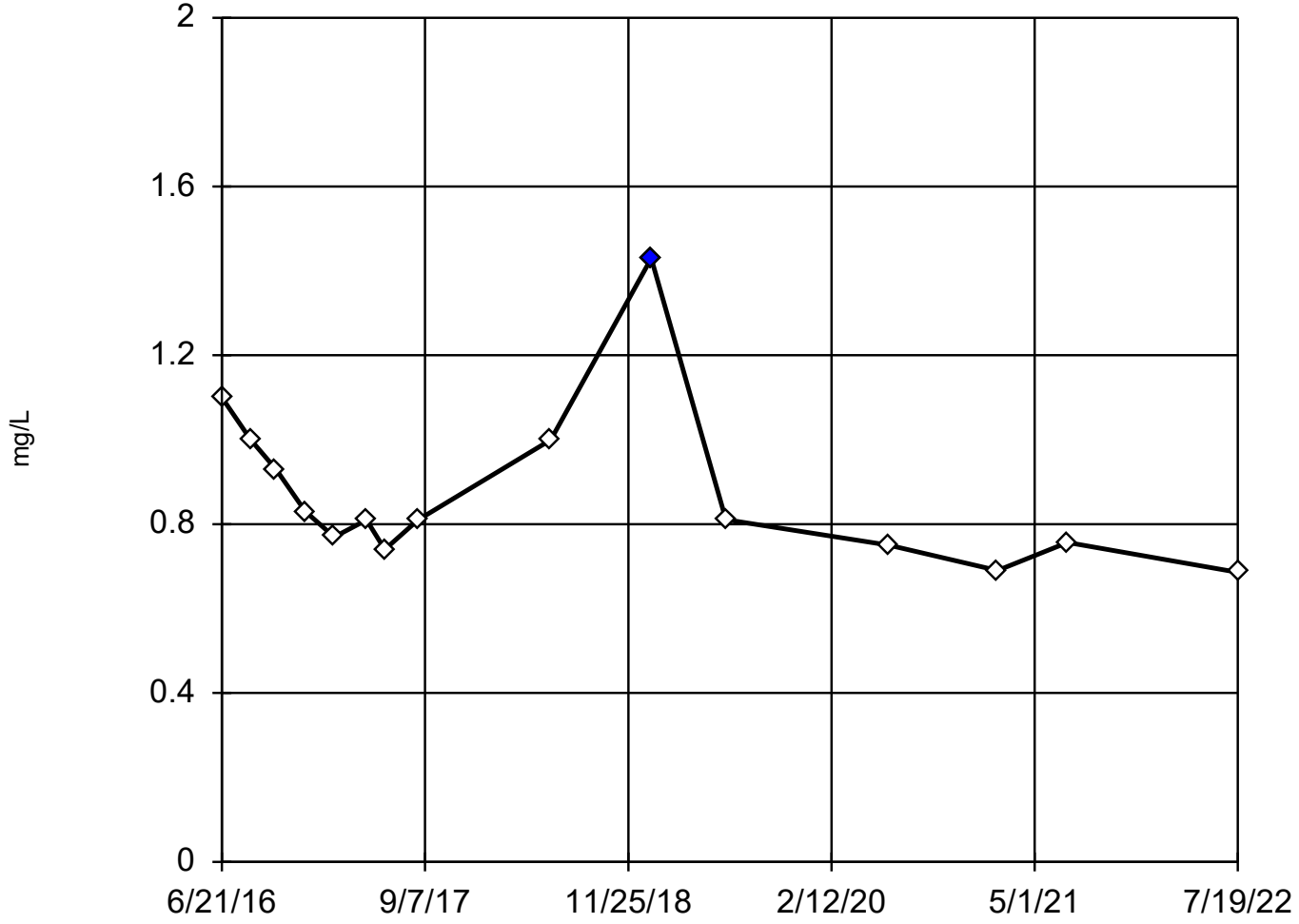
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8708
Critical = 0.866
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSP/APMW-1 (bg)



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.8743.
Std. Dev. = 0.1957.
1.43: c = 0.6232
tabl = 0.525.
Alpha = 0.05.

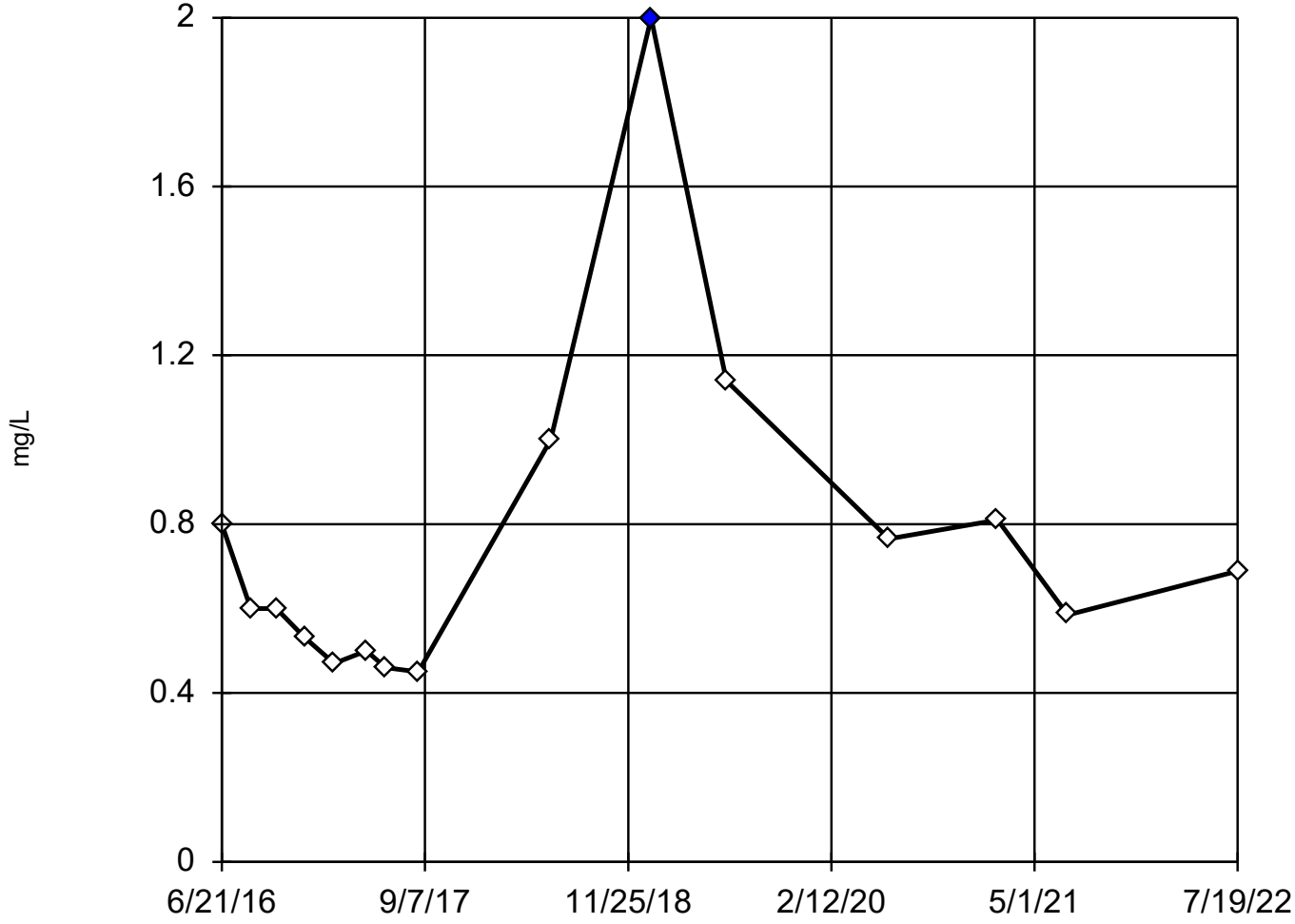
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.895
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.7599.
Std. Dev. = 0.3983.
<2: c = 0.6536
tabl = 0.525.
Alpha = 0.05.

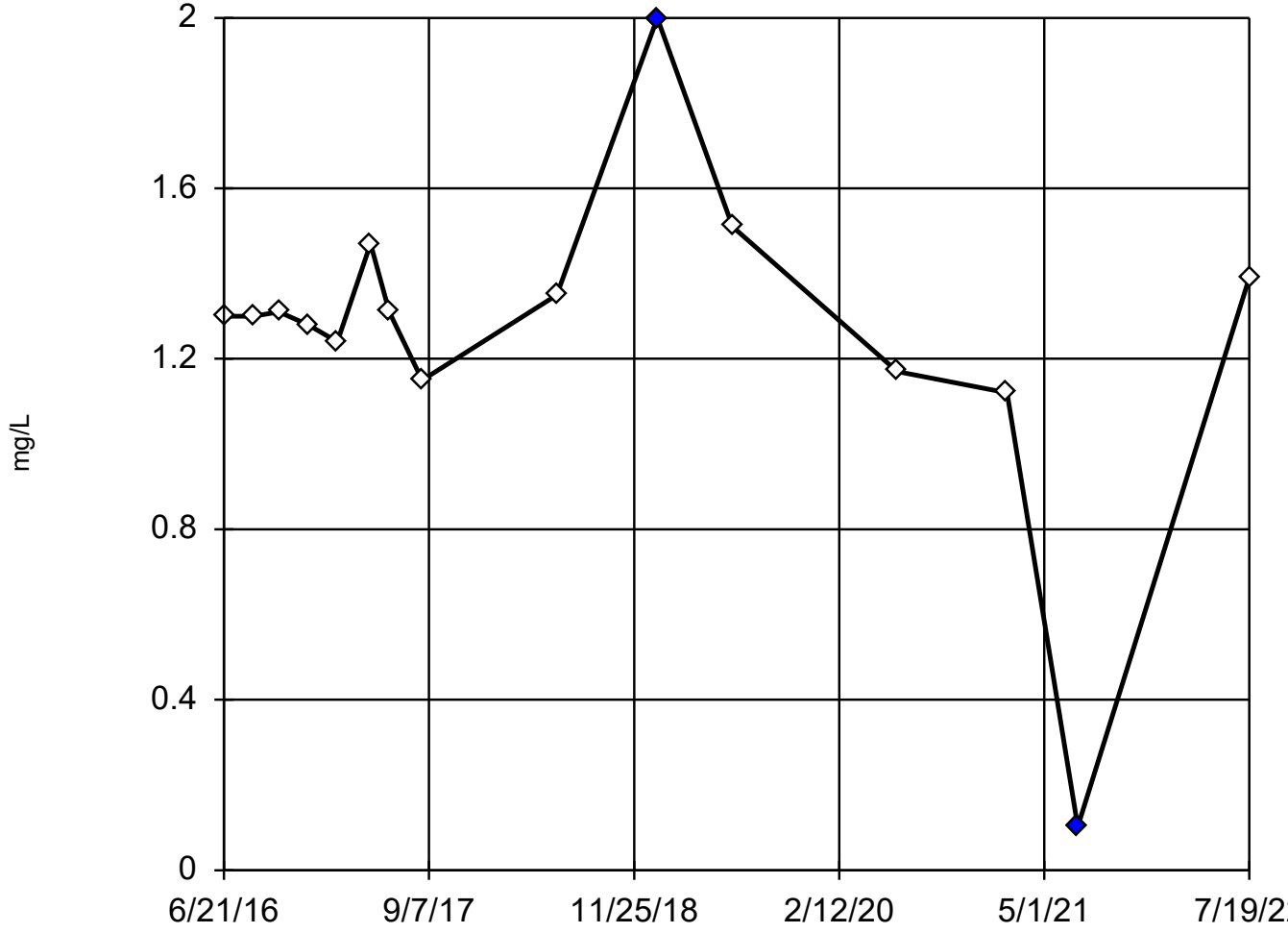
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8933
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 15

Statistical outliers are drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 1.267.
Std. Dev. = 0.3844.
<2: c = 0.6235
tabl = 0.525.
0.102: c = 0.7661
tabl = 0.525.
Alpha = 0.05.

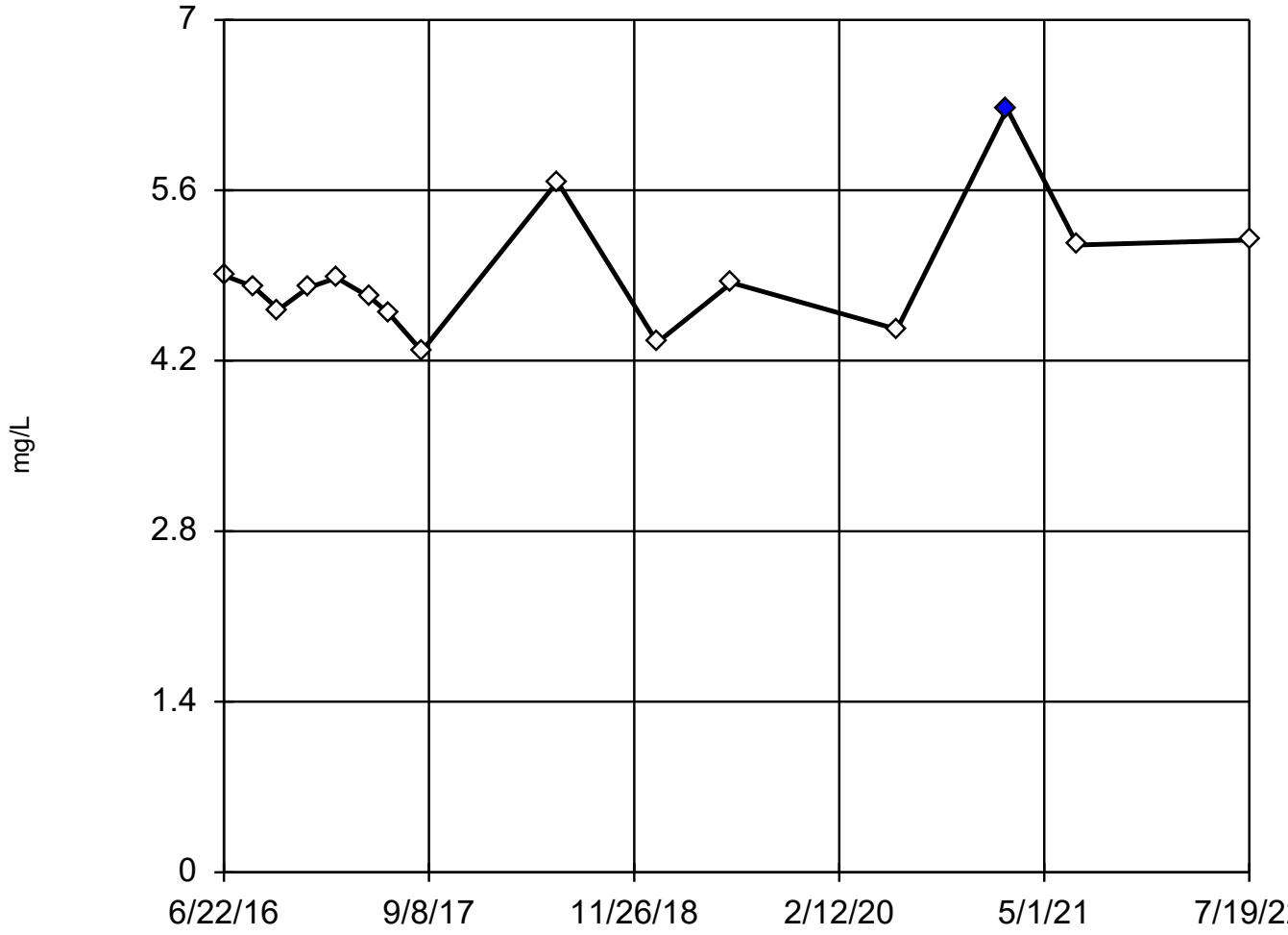
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9583
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-1D



n = 15

Statistical outlier is drawn as solid.
2 values manually flagged as outliers.
Testing for 1 high outlier.
Mean = 4.902.
Std. Dev. = 0.5159.
6.27 (o): c = 0.5967
tabl = 0.525.
Alpha = 0.05.

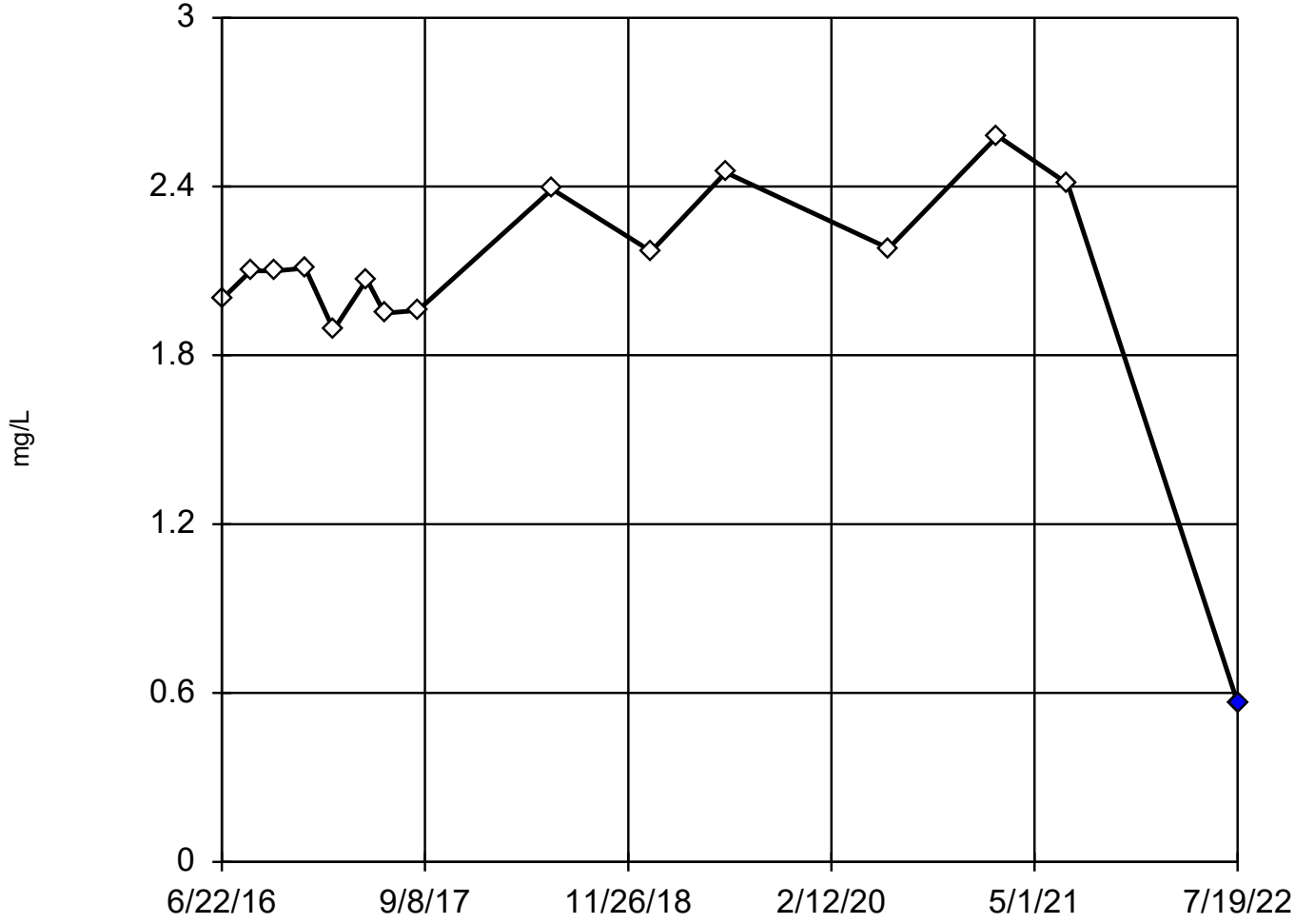
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9453
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 2.062.
Std. Dev. = 0.4608.
0.566 (B): c = 0.7505
tabl = 0.525.
Alpha = 0.05.

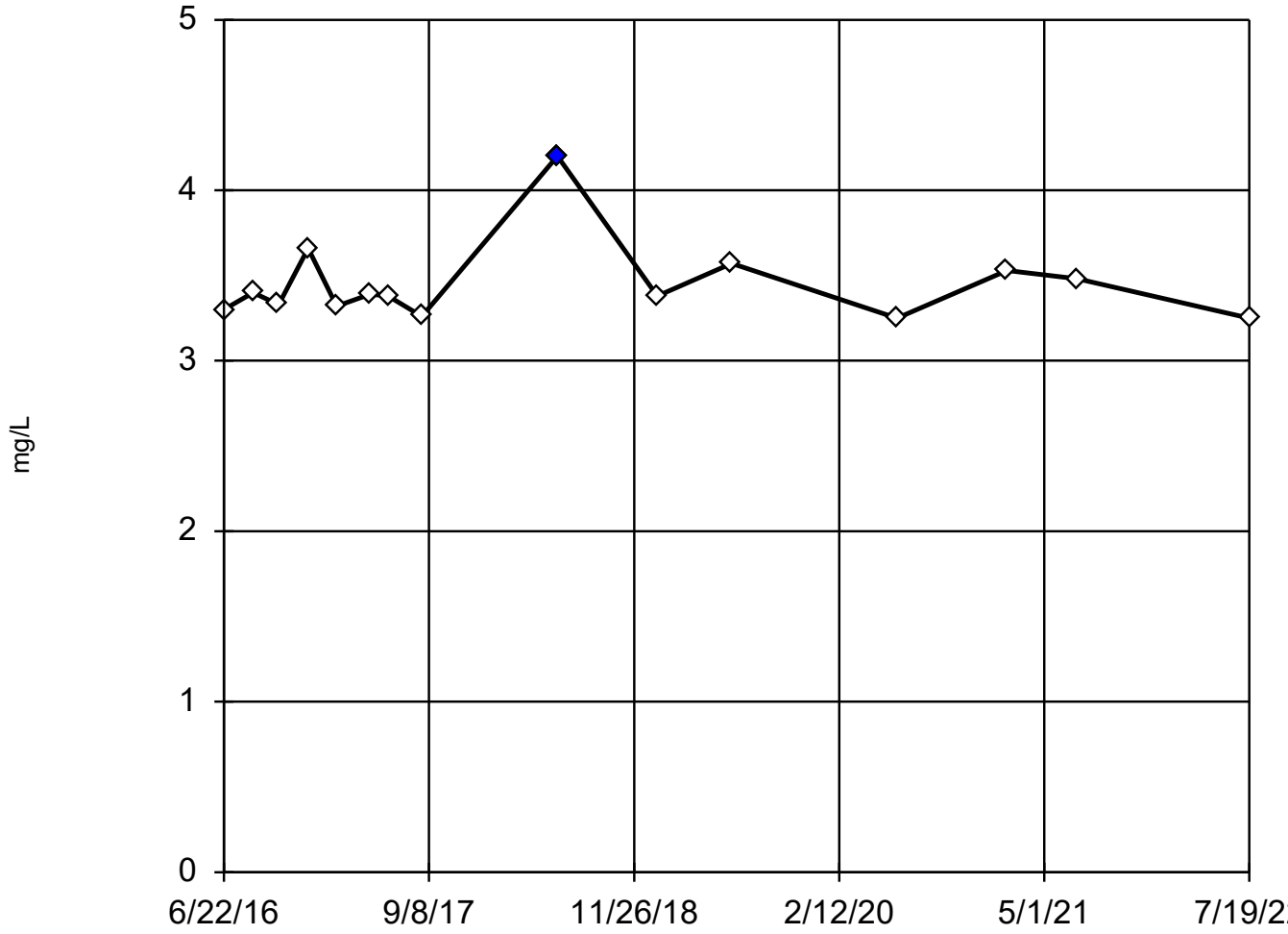
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9209
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.447.
Std. Dev. = 0.2411.
4.2 (o): c = 0.6702
tabl = 0.525.
Alpha = 0.05.

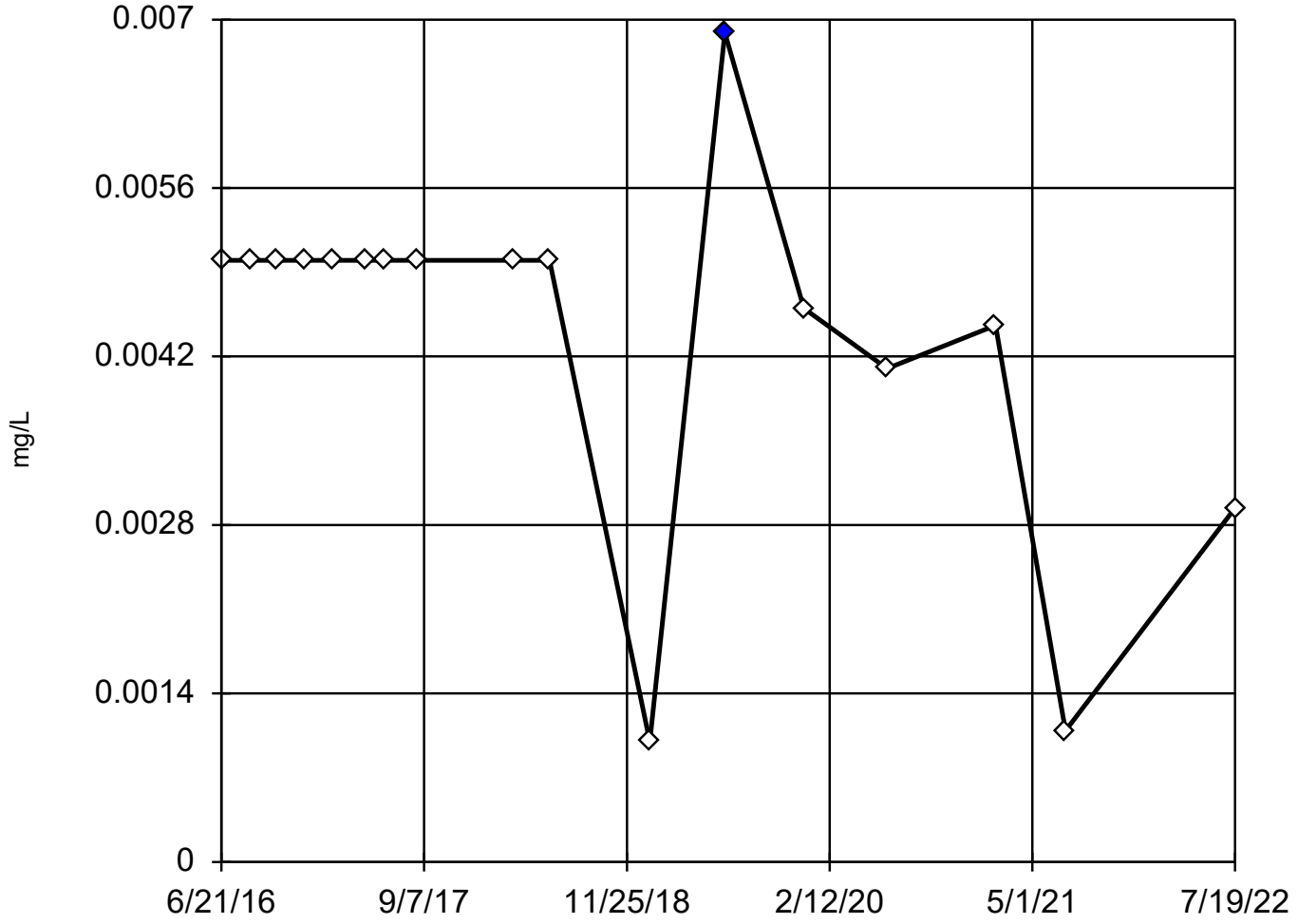
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9174
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SSPMW-2



n = 17

Outlier is drawn as solid. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

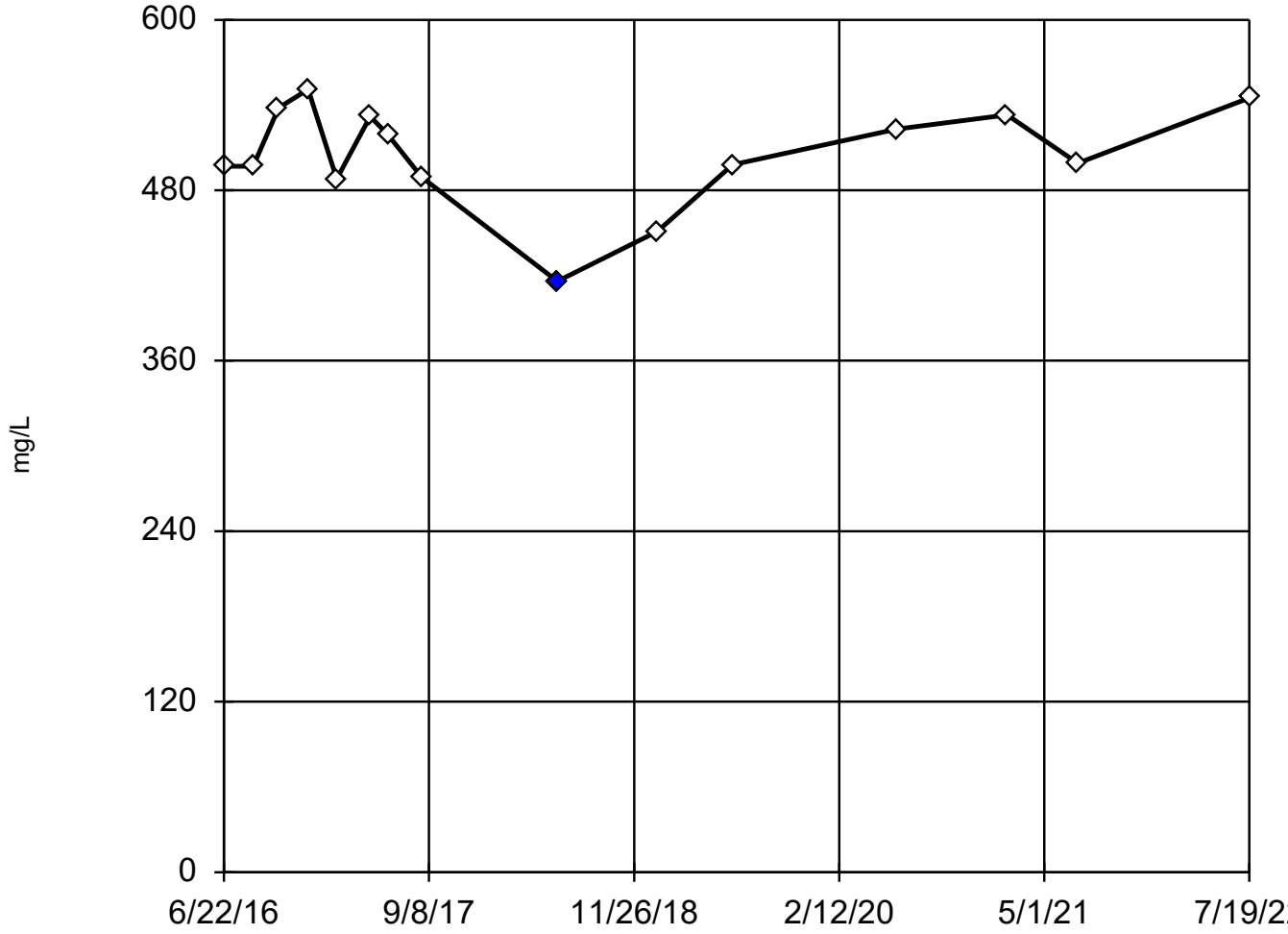
High cutoff = 0.006704, low cutoff = -0.001264, based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 505.1.
Std. Dev. = 36.29.
416 (o): c = 0.5902
tabl = 0.525.
Alpha = 0.05.

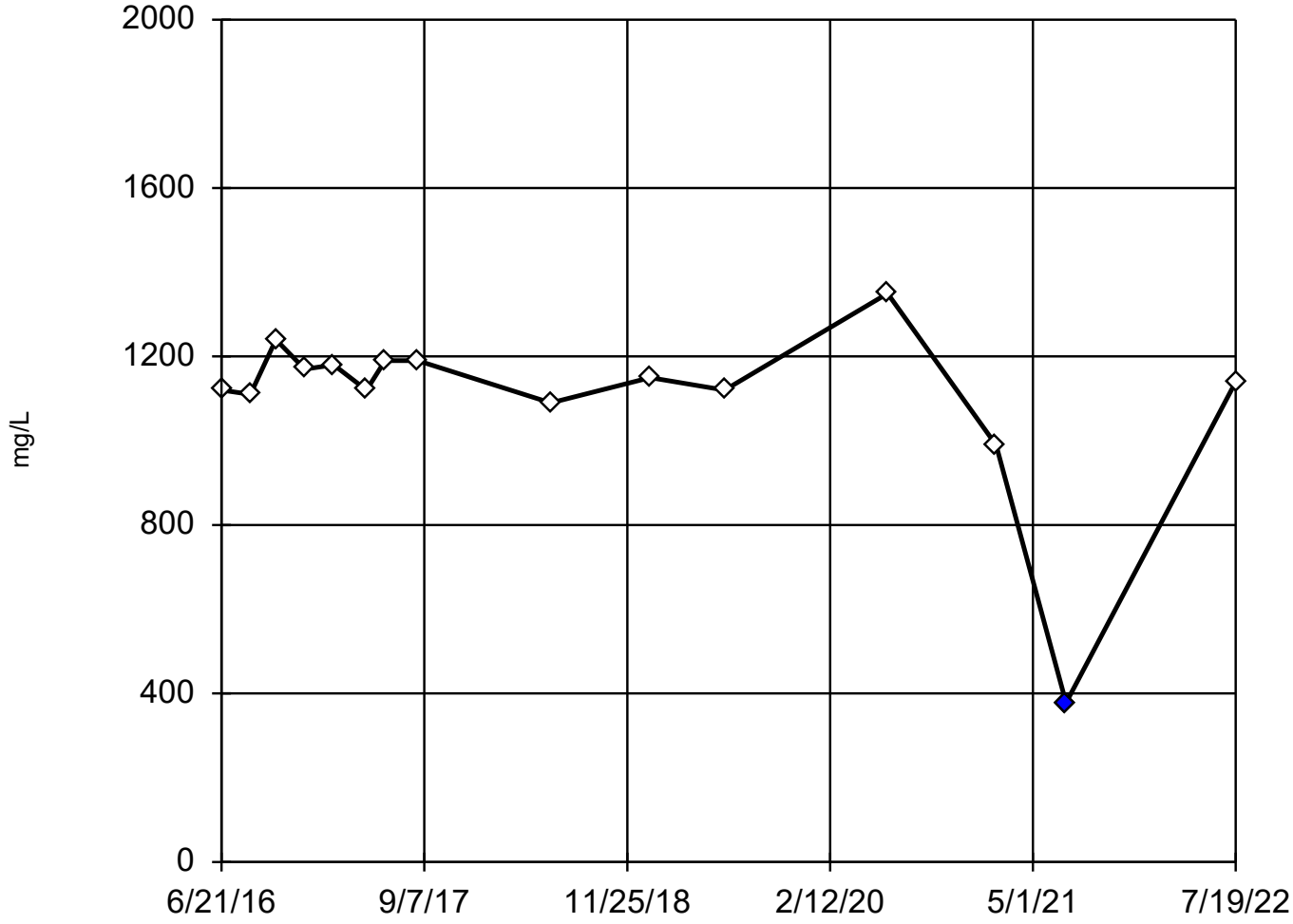
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9394
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1103.
Std. Dev. = 215.2.
378: c = 0.8768
tabl = 0.525.
Alpha = 0.05.

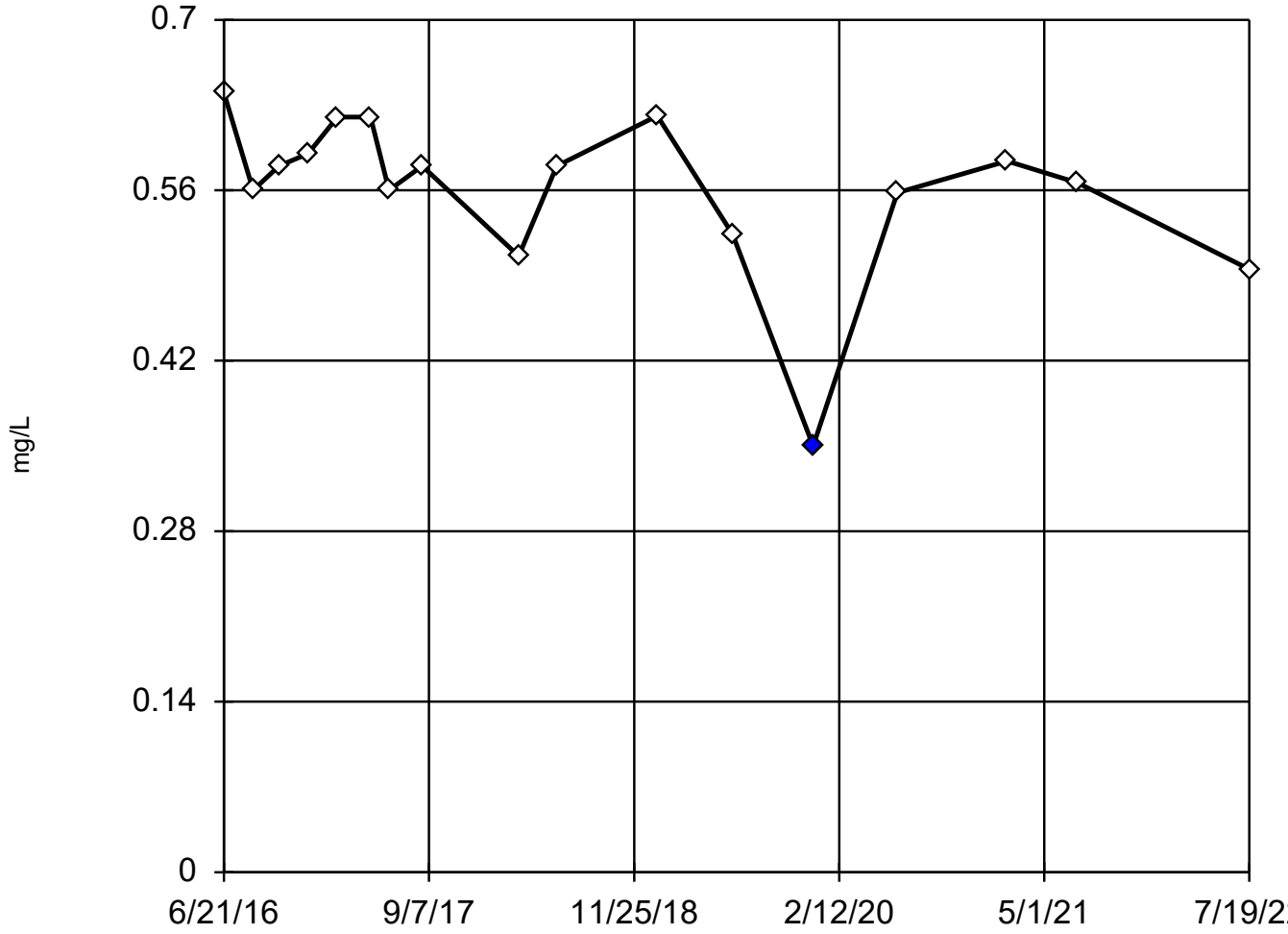
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.928
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.5608.
Std. Dev. = 0.06734.
0.35 (o): c = 0.5778
tabl = 0.49.
Alpha = 0.05.

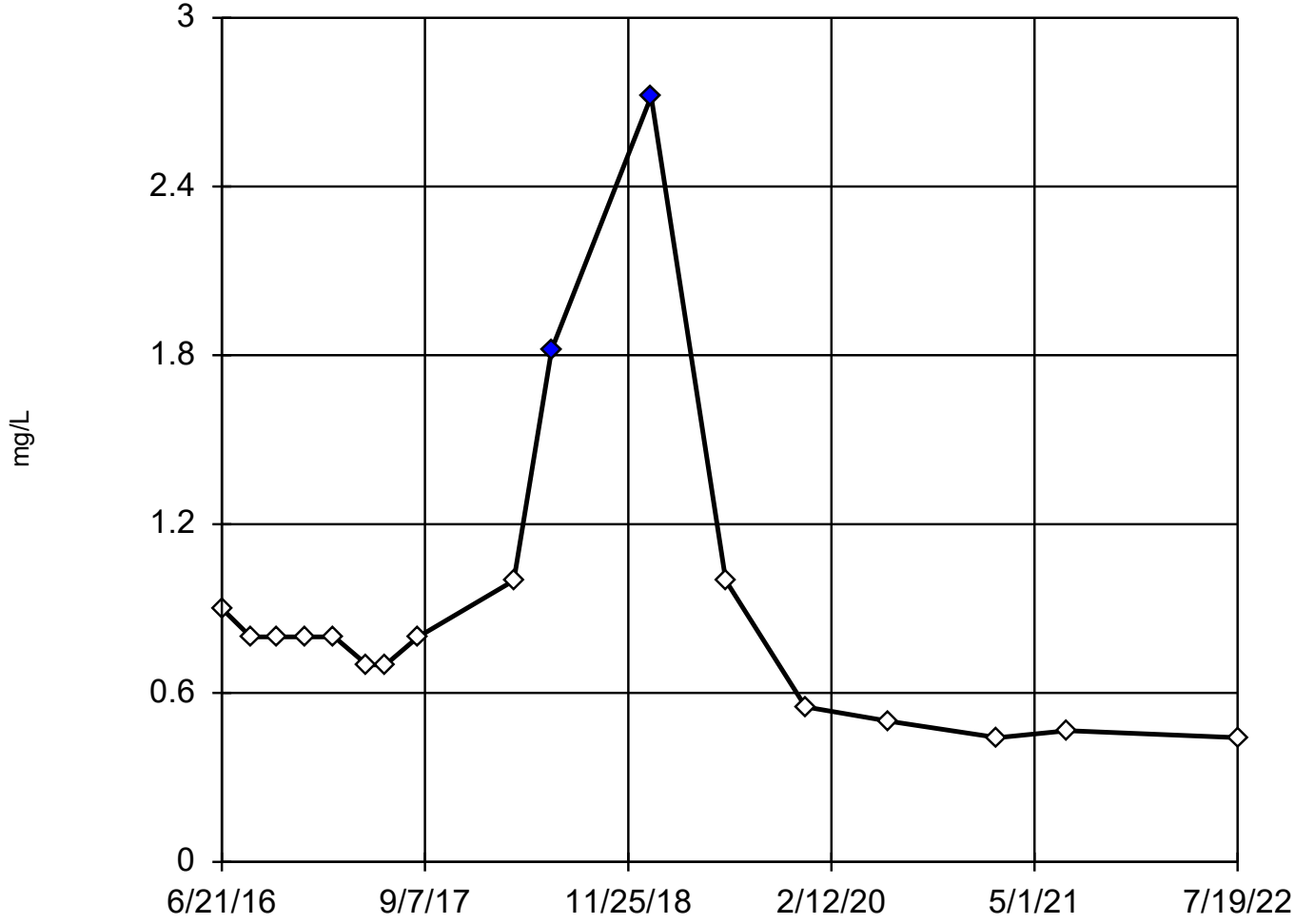
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9476
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Cobalt Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 17

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high outliers.
Mean = 0.8964.
Std. Dev. = 0.5701.
1.82 (o): c = 0.6056
tabl = 0.49.
Alpha = 0.05.

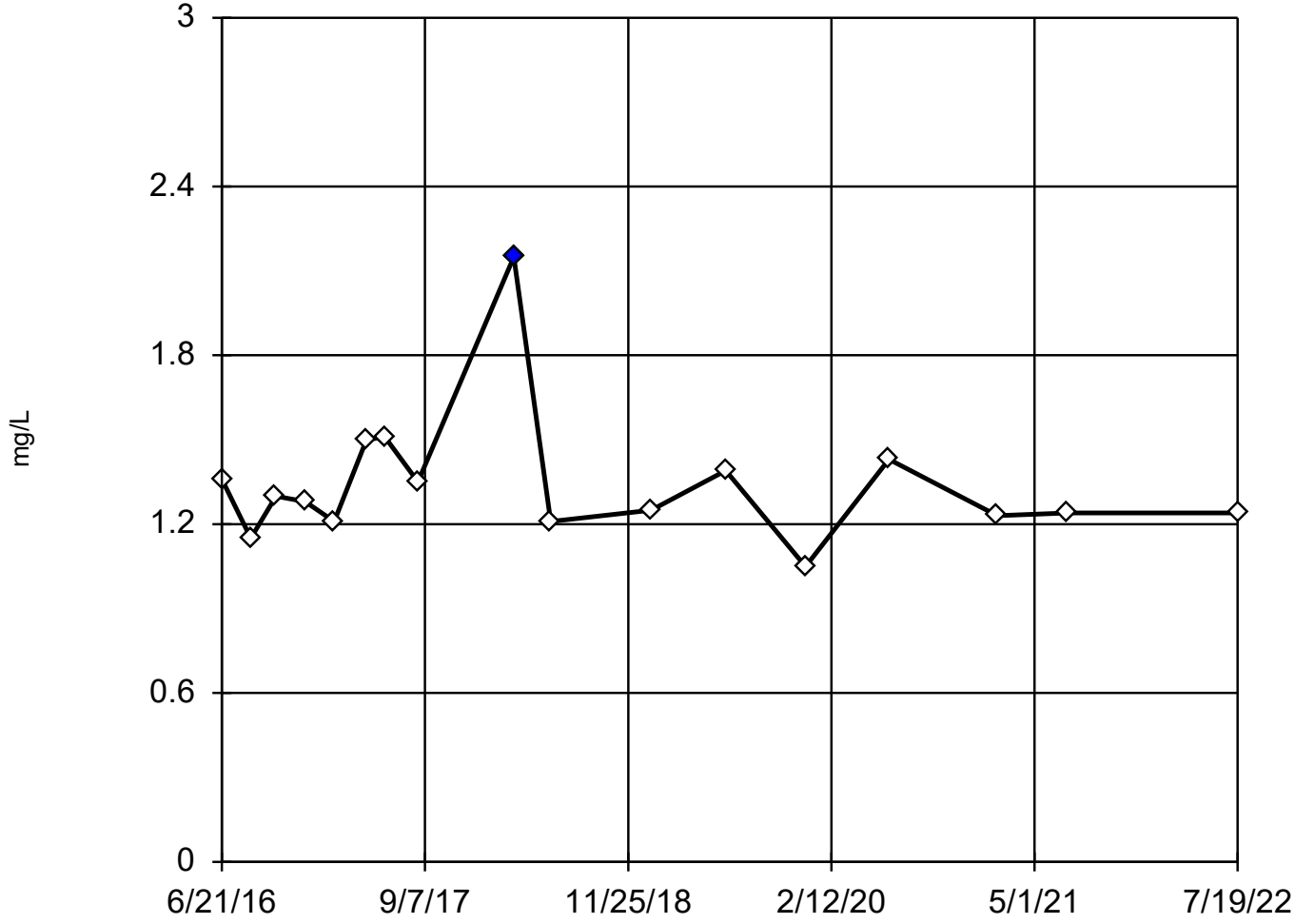
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9027
Critical = 0.881
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Fluoride Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSP/APMW-1 (bg)



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.344.
Std. Dev. = 0.2399.
2.15 (o): c = 0.6915
tabl = 0.49.
Alpha = 0.05.

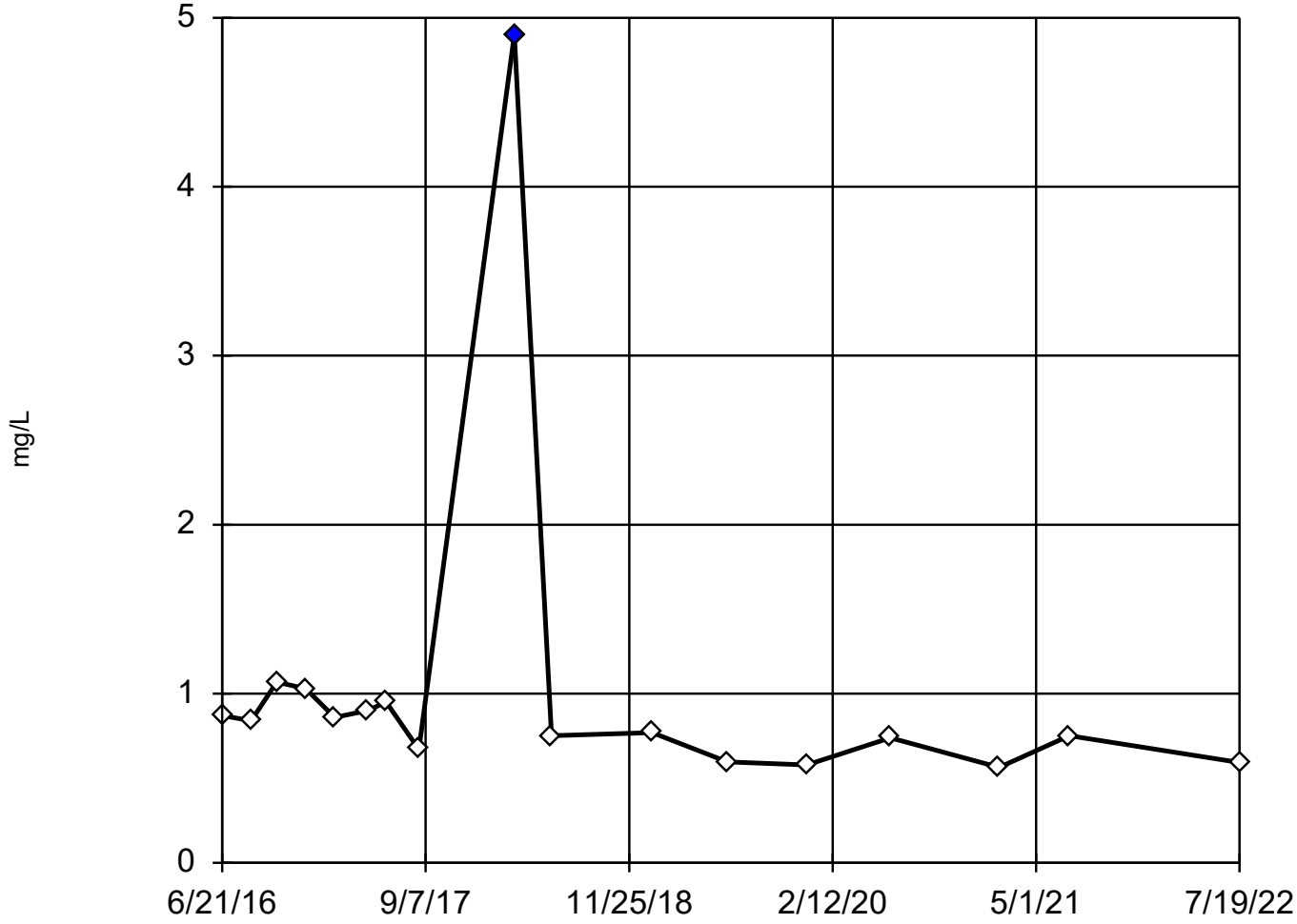
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9658
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.026.
Std. Dev. = 1.01.
4.9 (o): c = 0.8985
tabl = 0.49.
Alpha = 0.05.

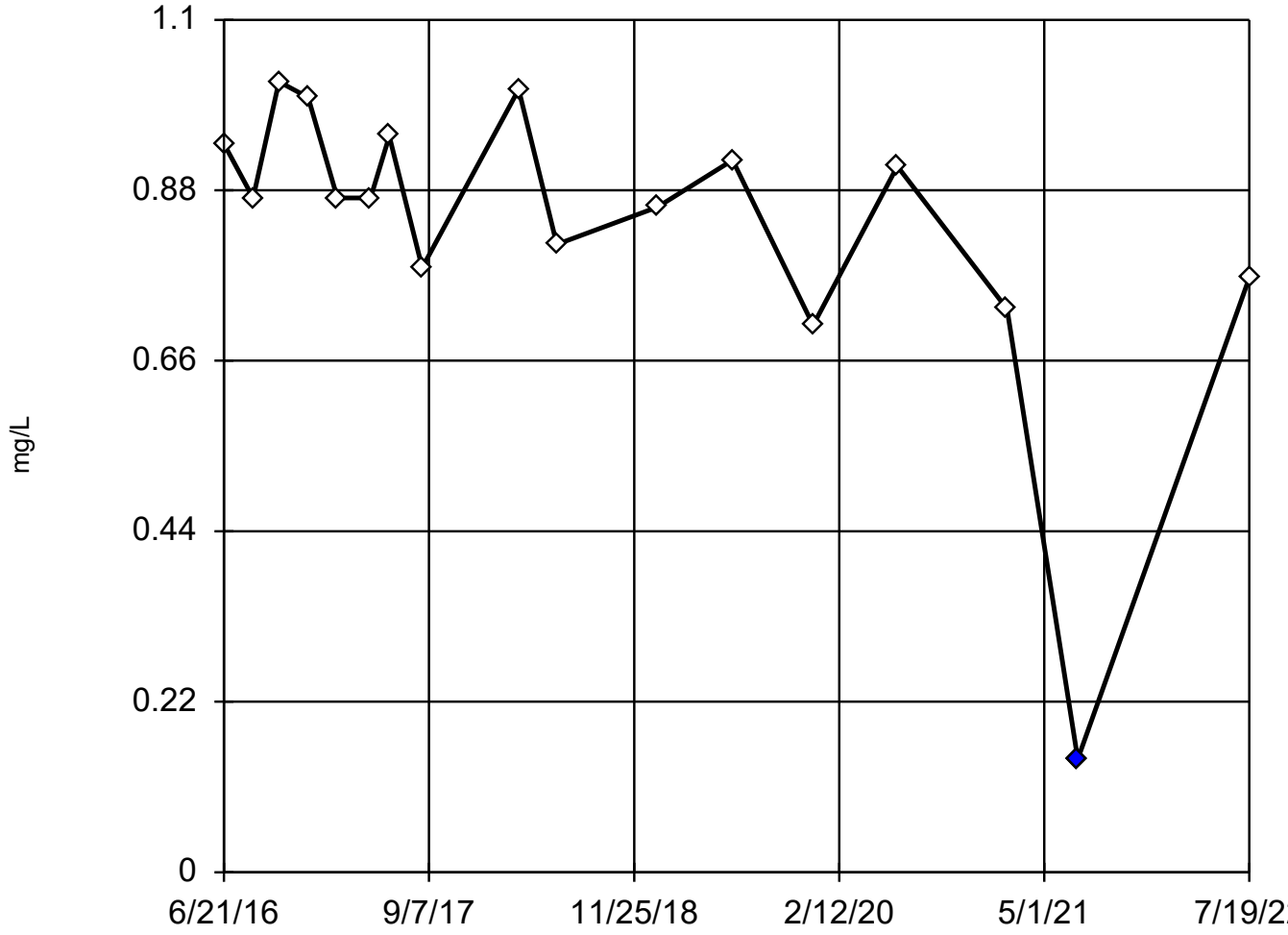
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9493
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 3:00 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 17

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.8326.
Std. Dev. = 0.2007.
0.146: c = 0.6803
tabl = 0.49.
Alpha = 0.05.

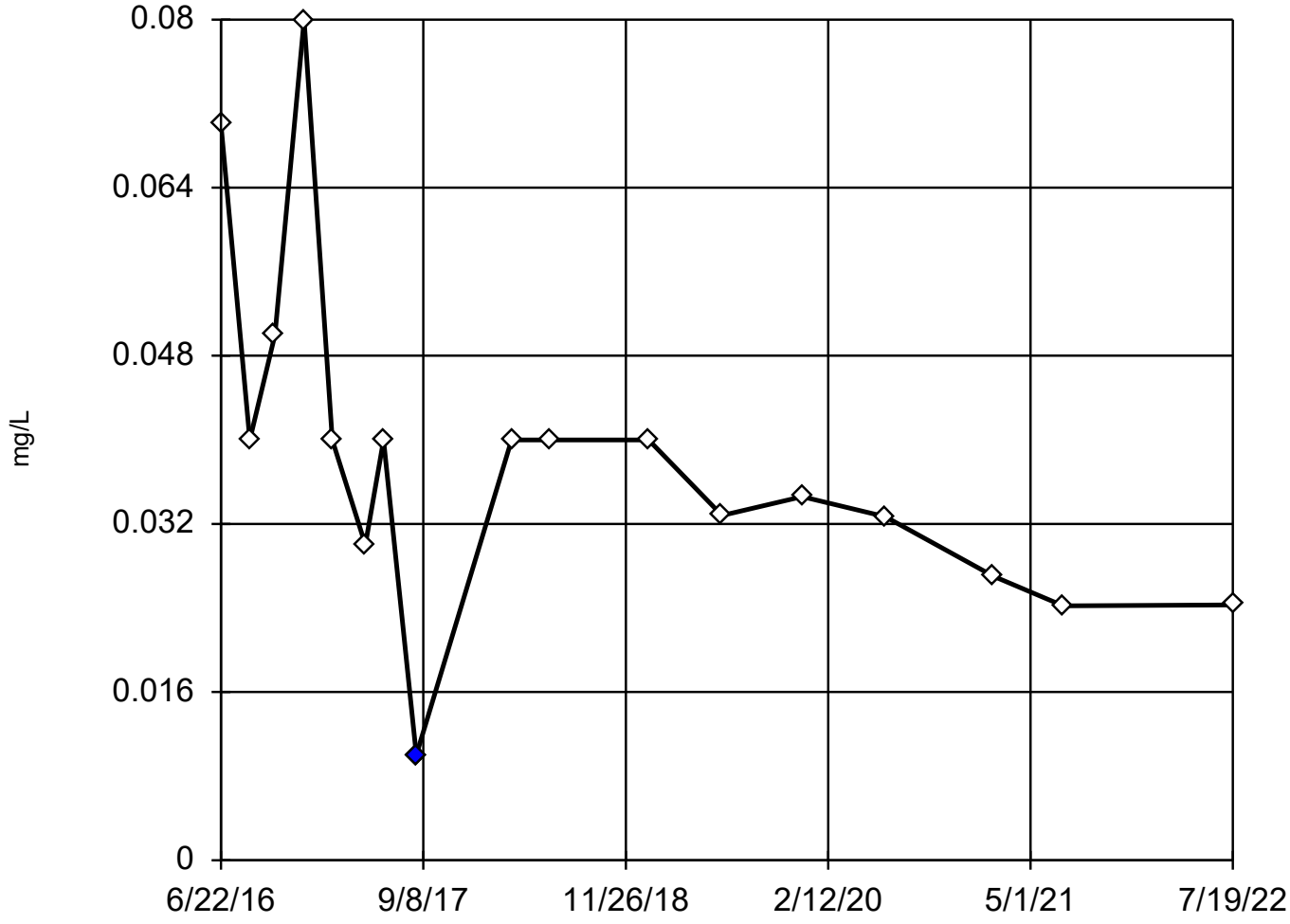
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9576
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-1D



n = 17

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.03856.
Std. Dev. = 0.01652.
-4.605: c = 0.5517
tabl = 0.49.
Alpha = 0.05.

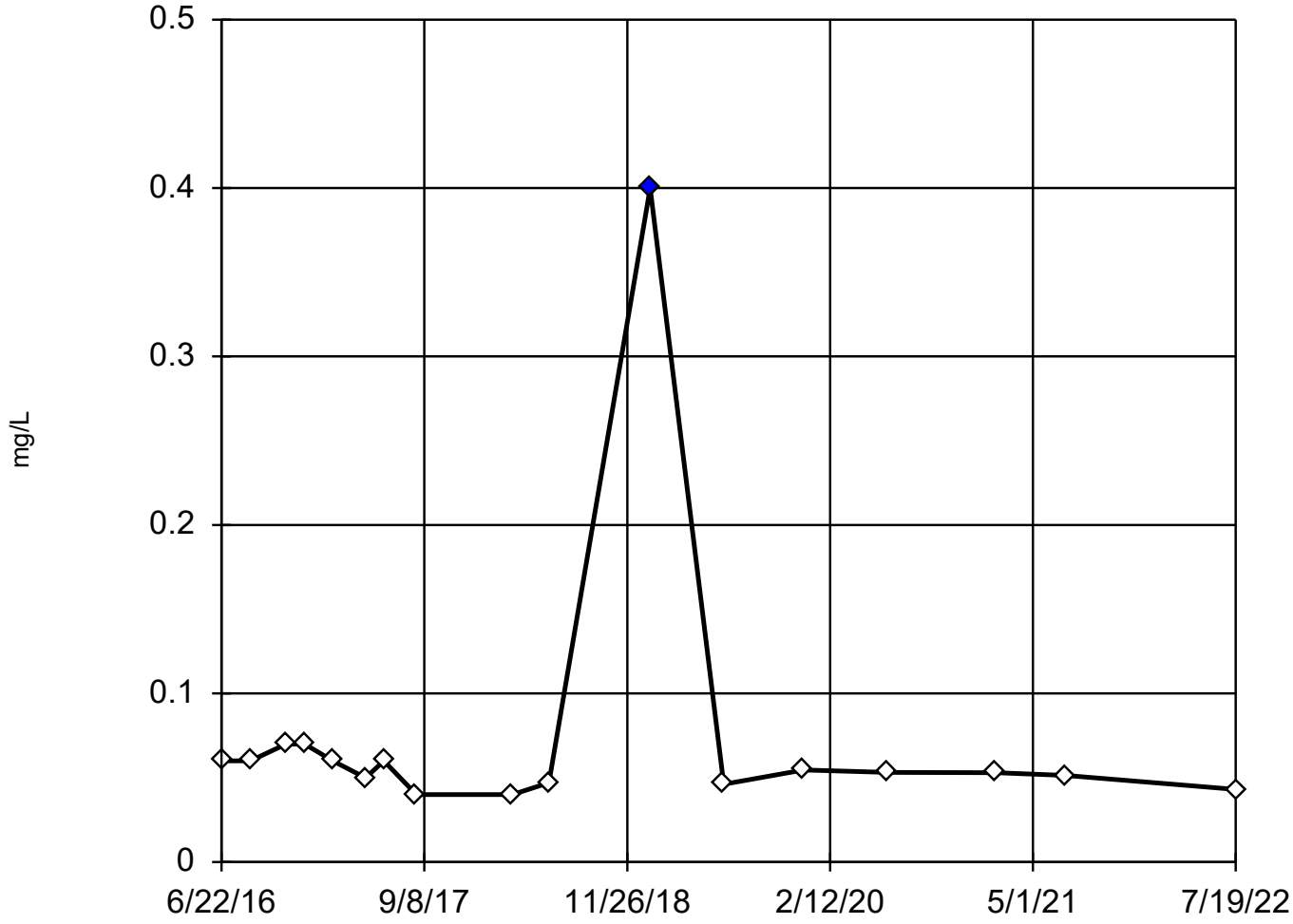
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9056
Critical = 0.887 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Lithium Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.07402.
Std. Dev. = 0.08449.
<0.4 (o): c = 0.9246
tabl = 0.49.
Alpha = 0.05.

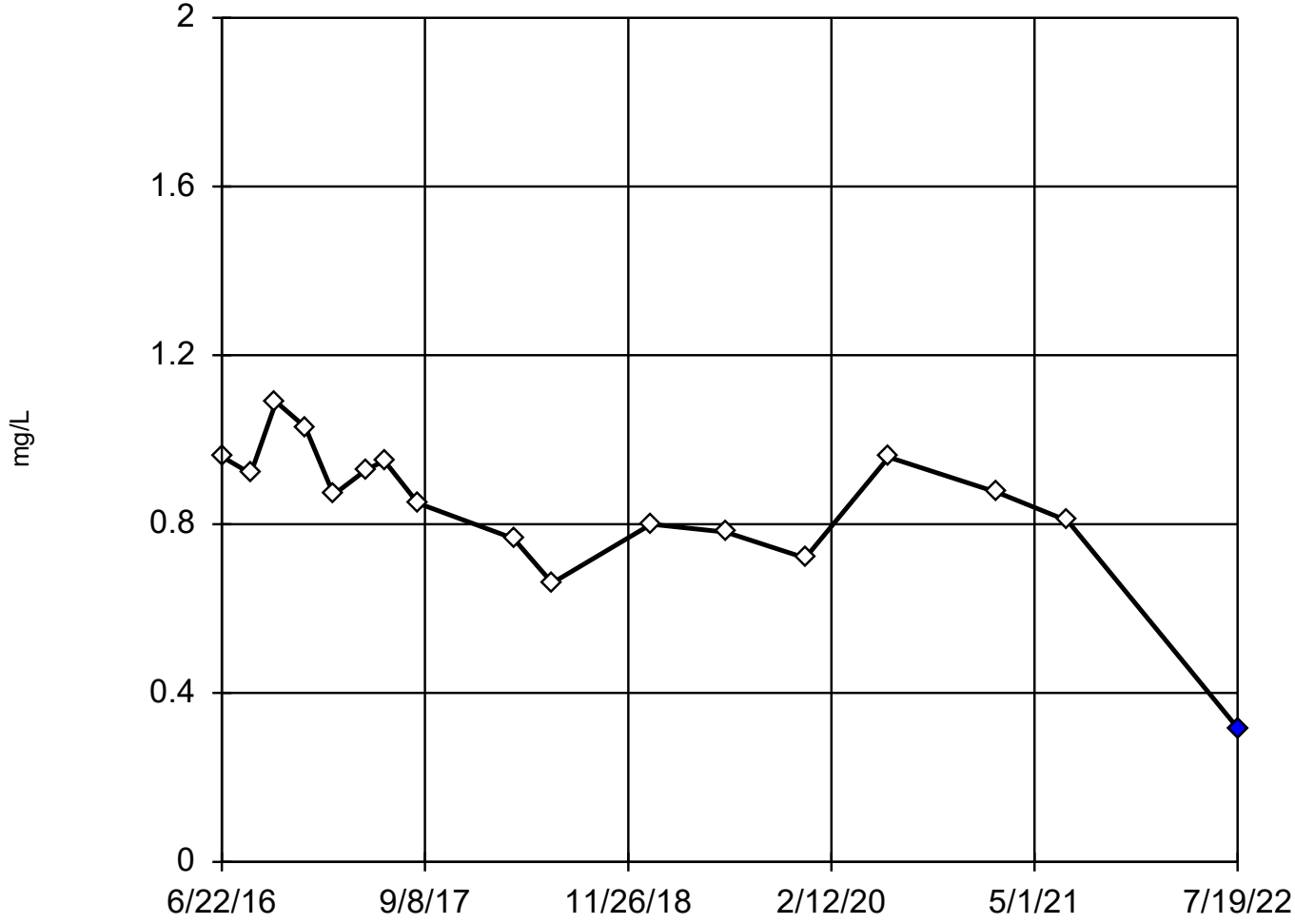
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9453
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 17

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.8404.
Std. Dev. = 0.1746.
0.317: c = 0.6267
tabl = 0.49.
Alpha = 0.05.

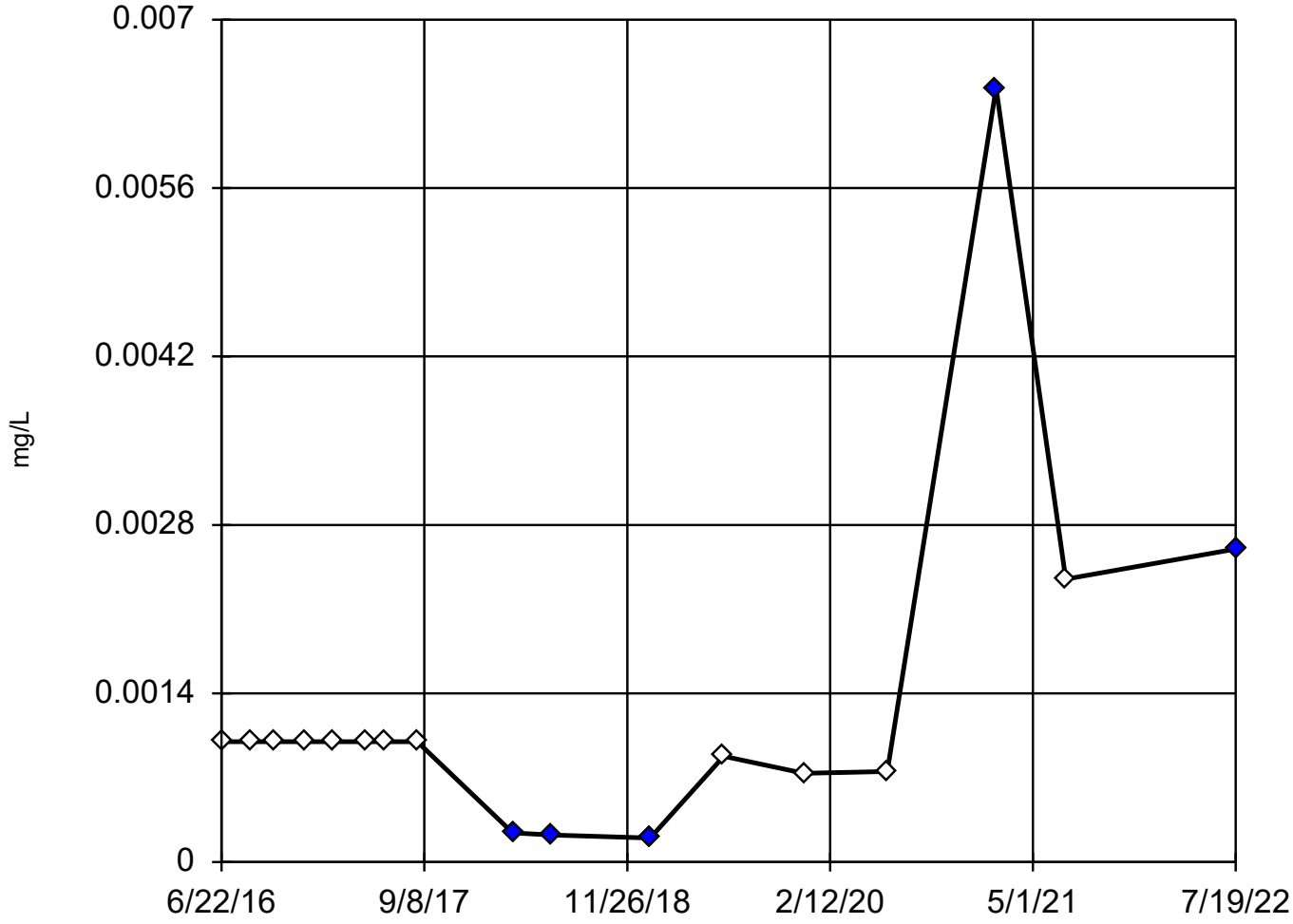
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9879
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-5



n = 17

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

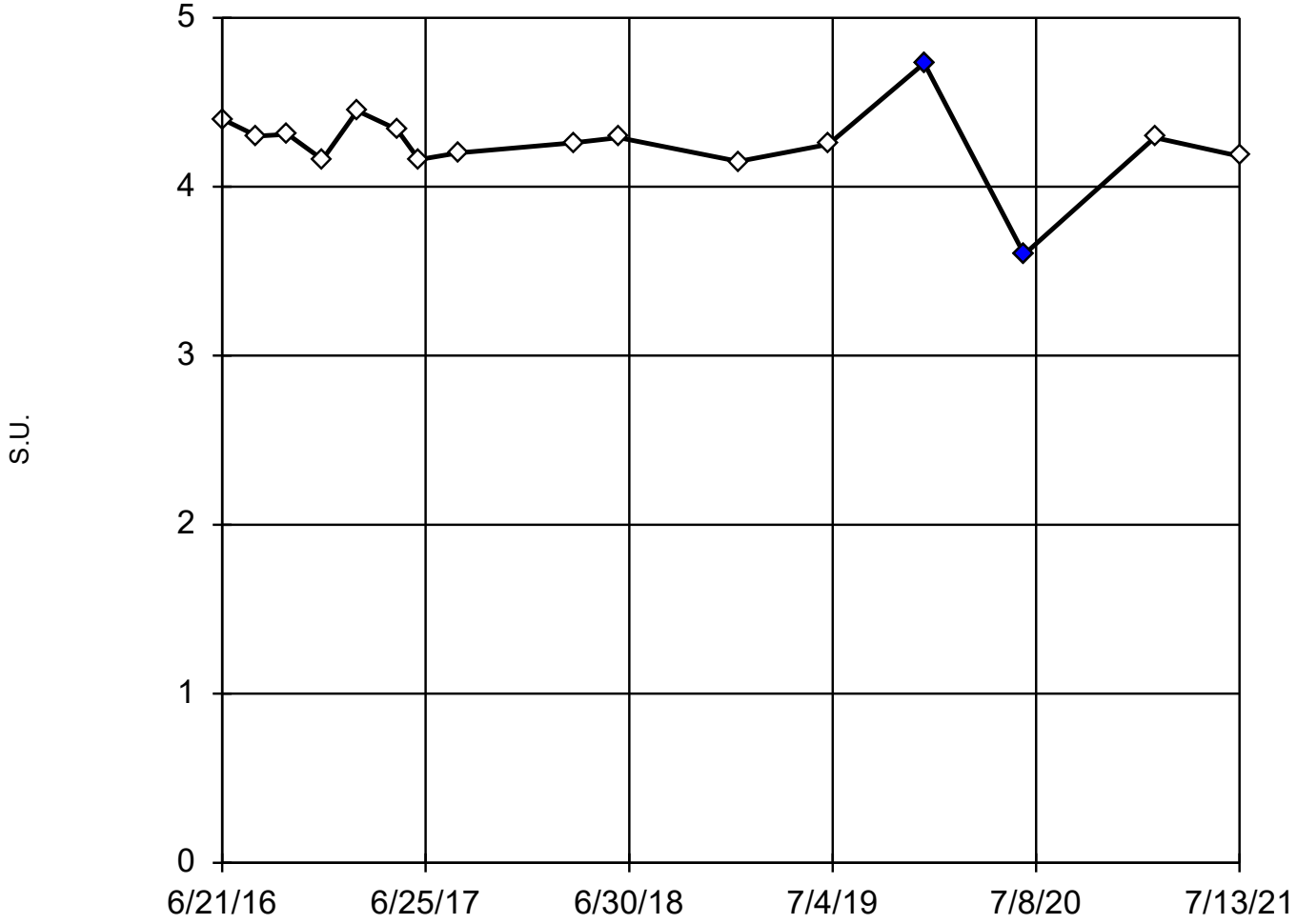
High cutoff = 0.002424, low cutoff = 0.0003071, based on IQR multiplier of 3.

Constituent: Mercury Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 16

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 1 high and 1 low outliers.
Mean = 4.254.
Std. Dev. = 0.226.
4.73 (o): c = 0.5789
tabl = 0.507.
3.6 (o): c = 0.7
tabl = 0.507.
Alpha = 0.05.

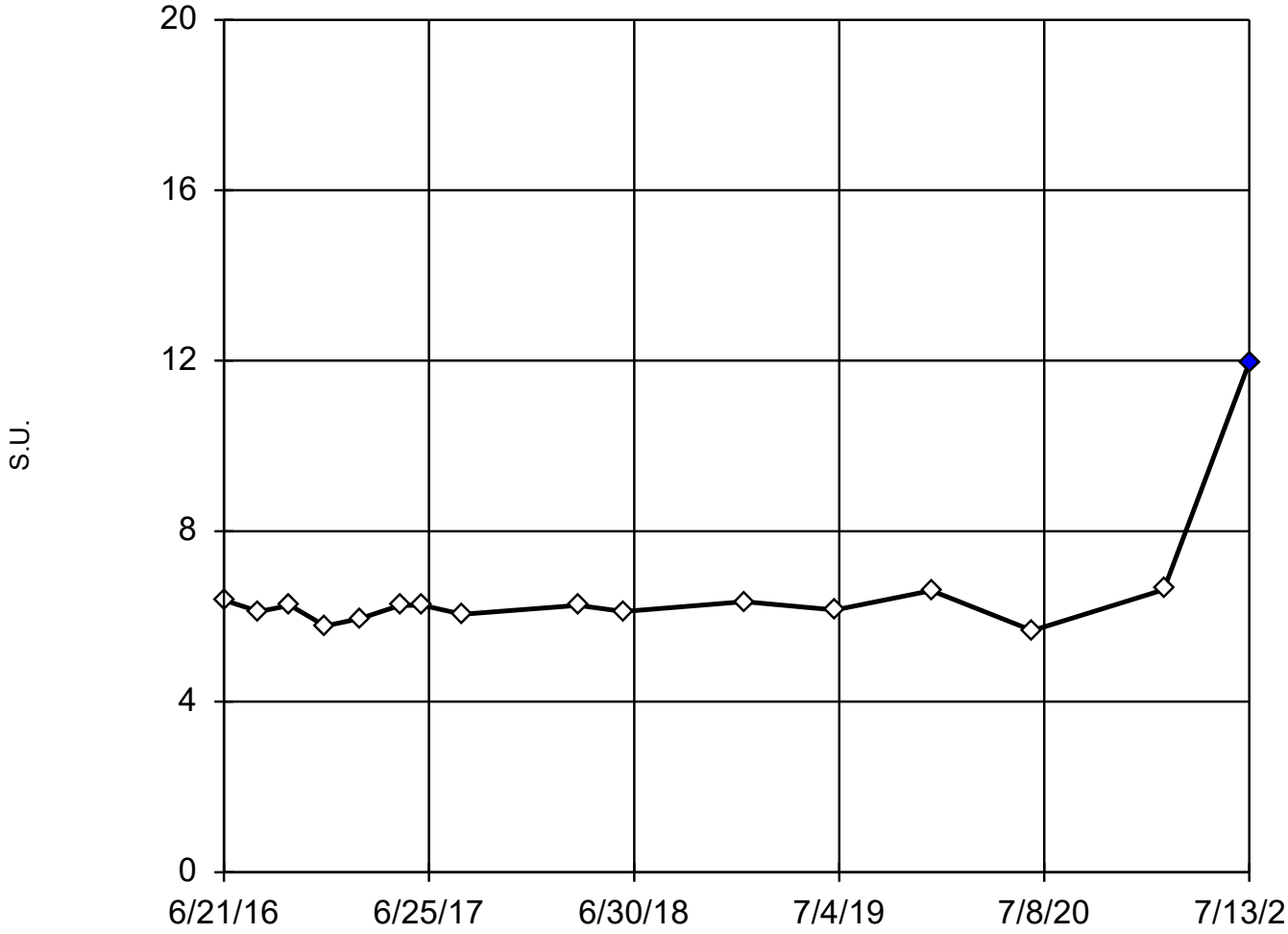
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9405
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 6.551.
Std. Dev. = 1.465.
11.96: c = 0.8902
tabl = 0.507.
Alpha = 0.05.

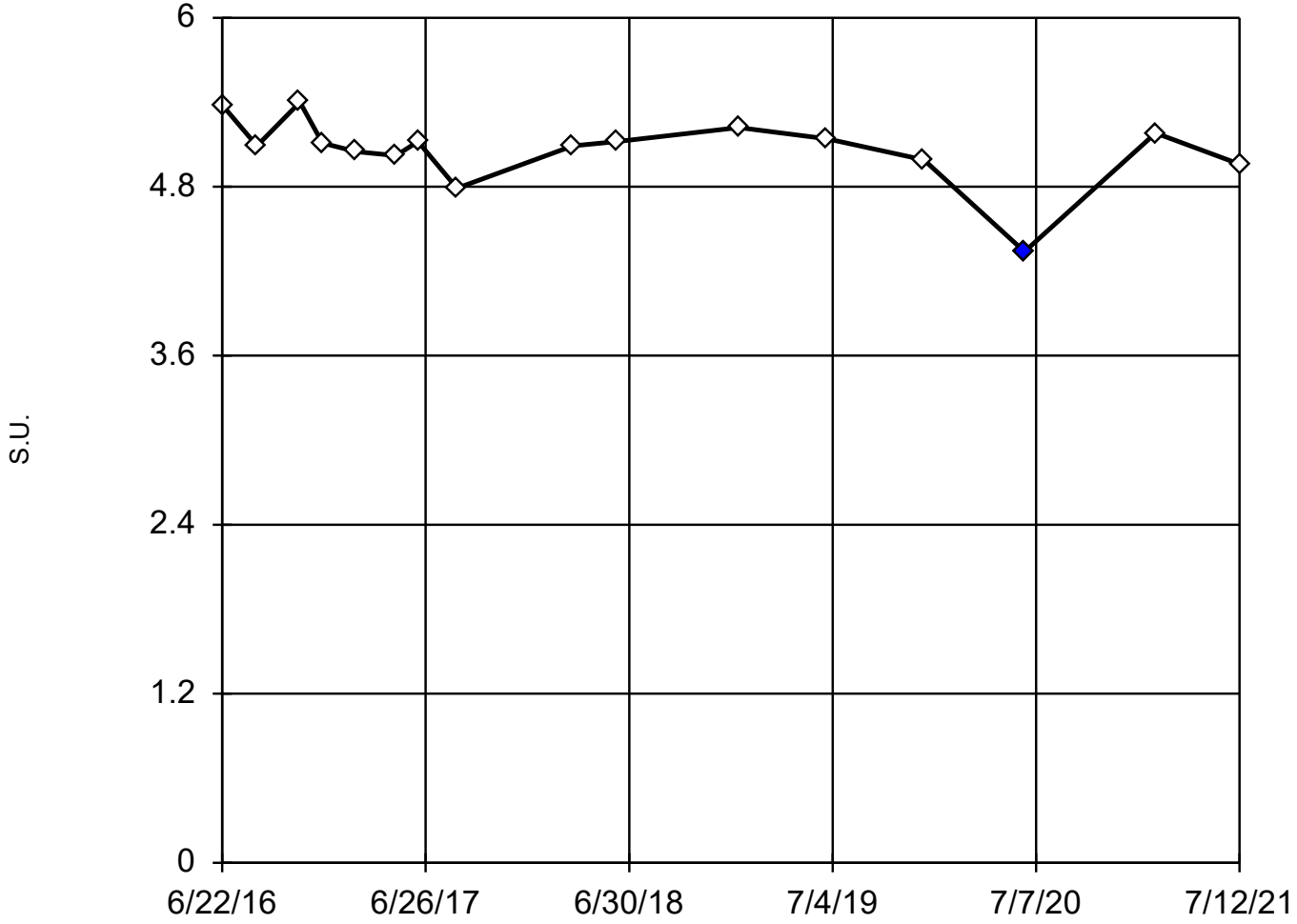
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9586
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 5.063.
Std. Dev. = 0.2427.
4.34 (o): c = 0.7045
tabl = 0.507.
Alpha = 0.05.

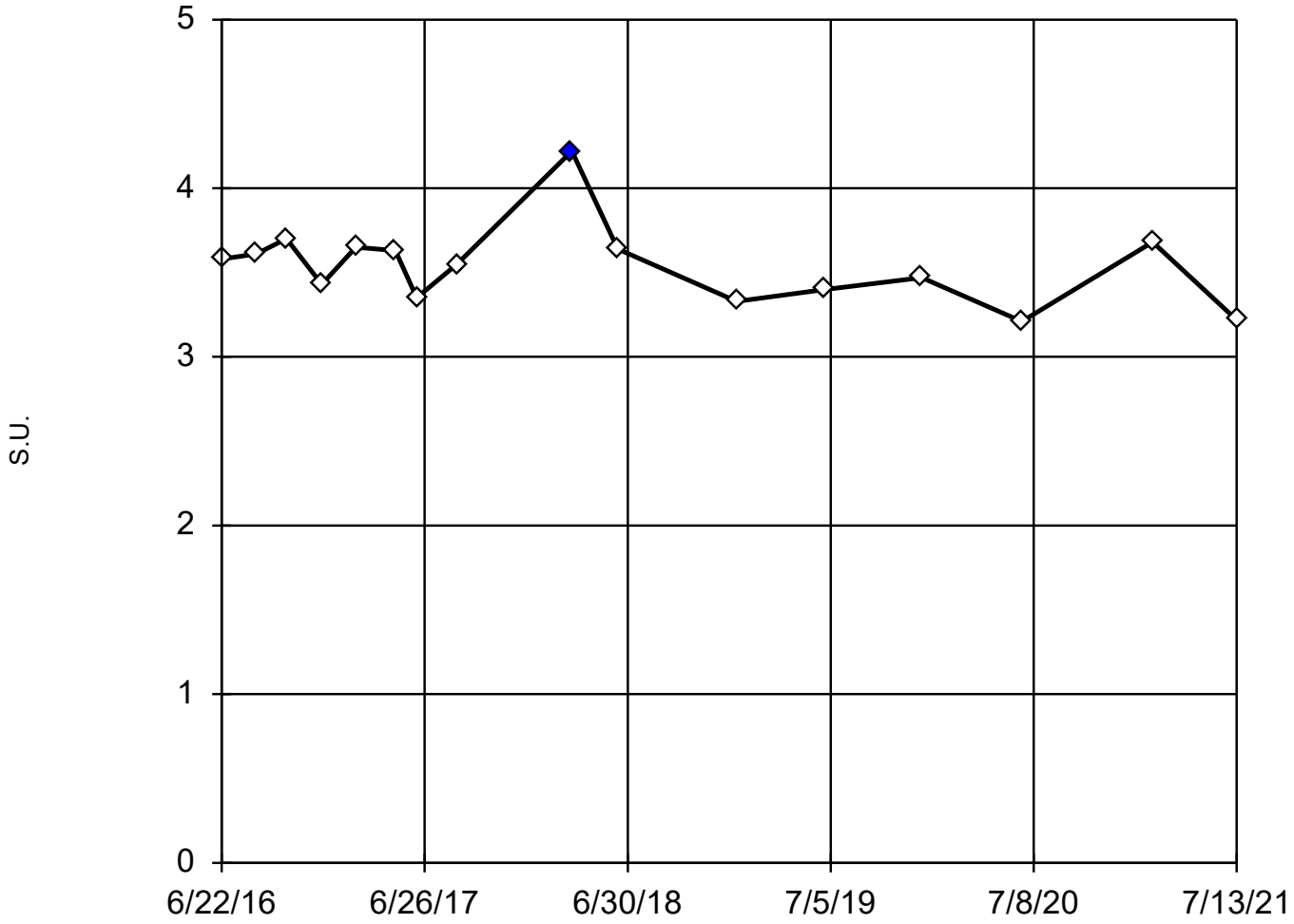
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9476
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.542.
Std. Dev. = 0.2412.
4.22 (o): c = 0.6067
tabl = 0.507.
Alpha = 0.05.

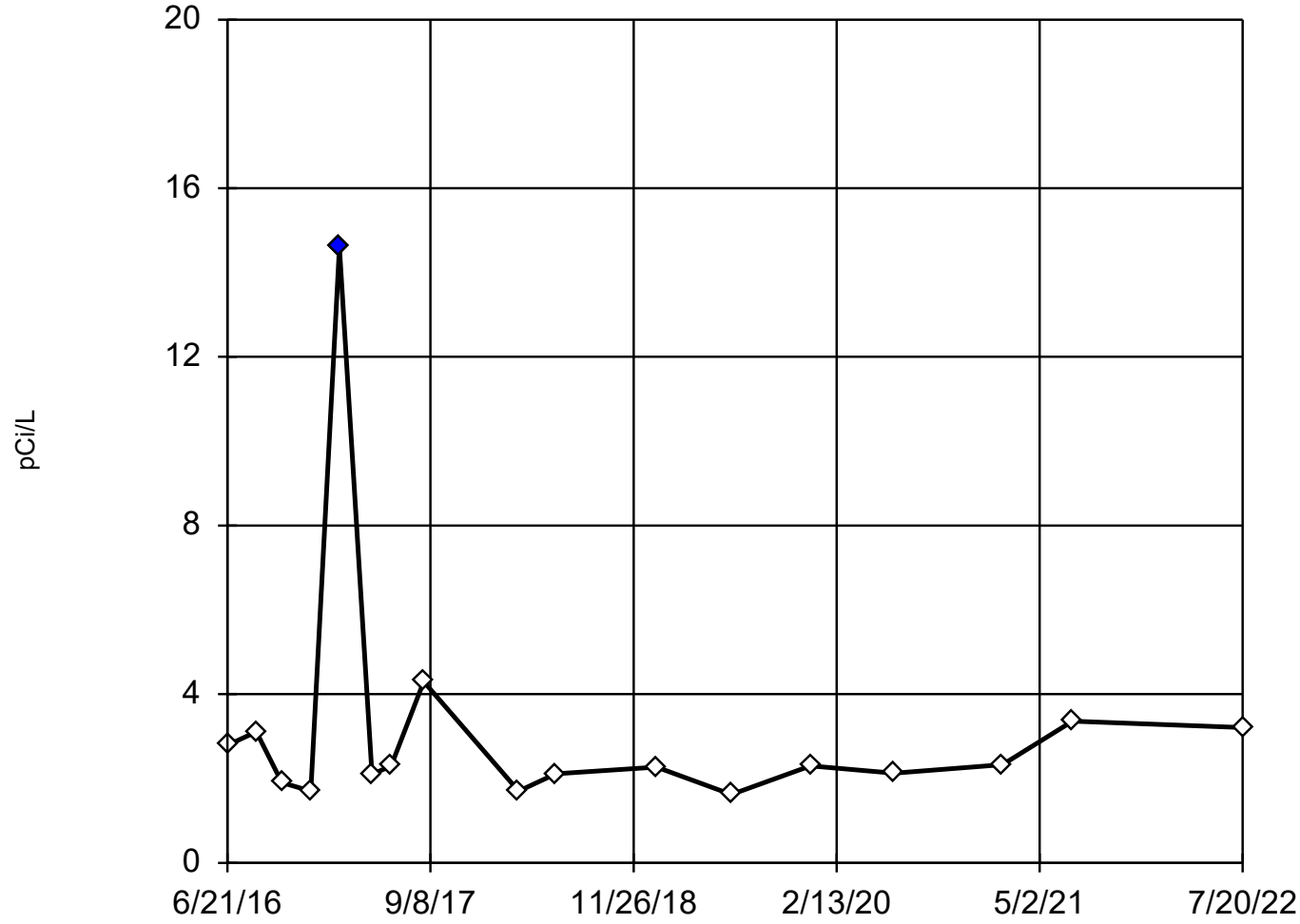
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9128
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.166.
Std. Dev. = 3.029.
14.6 (o): c = 0.6832
tabl = 0.49.
Alpha = 0.05.

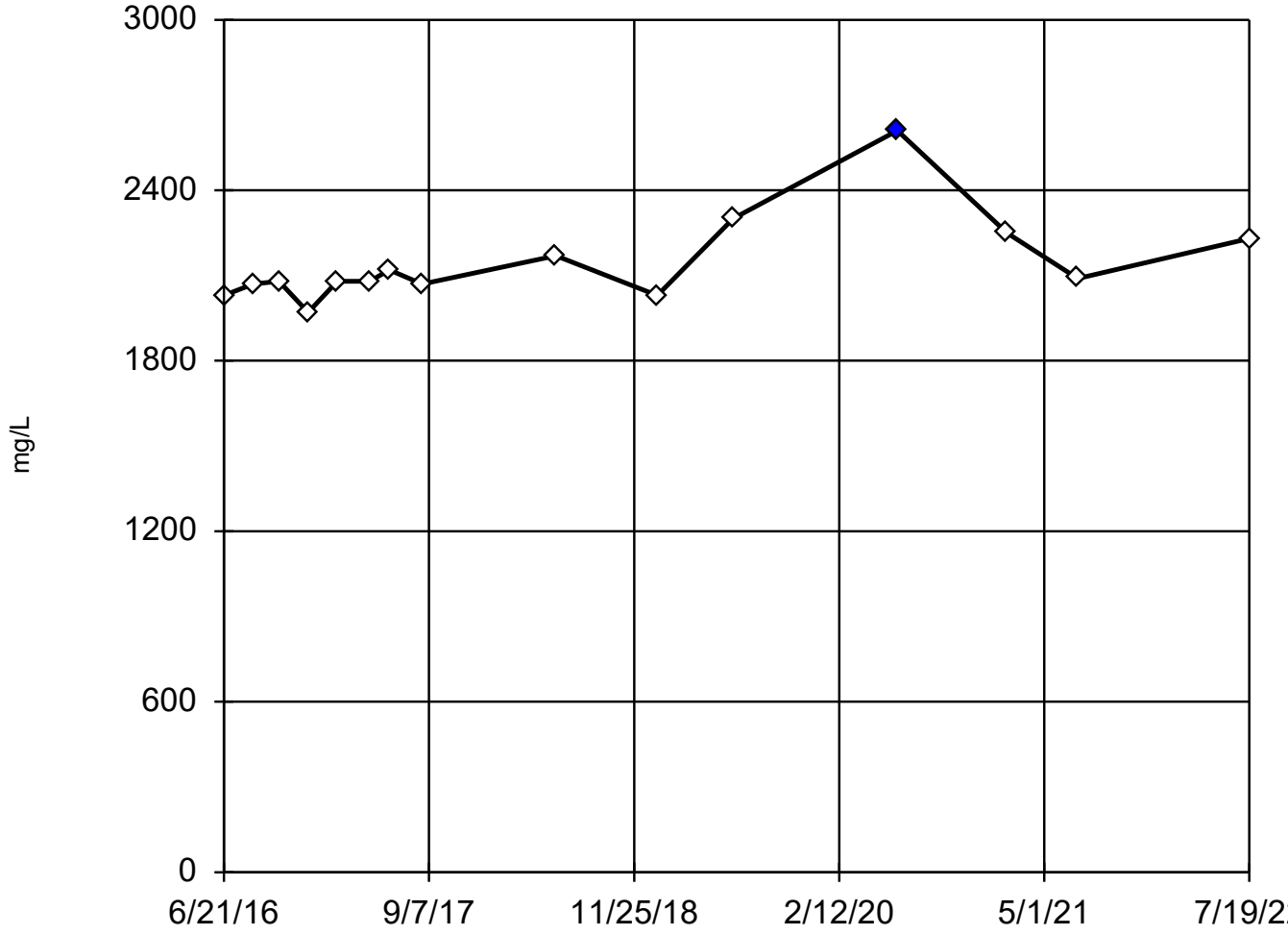
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9403
Critical = 0.887 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2145.
Std. Dev. = 156.7.
2610: c = 0.6207
tabl = 0.525.
Alpha = 0.05.

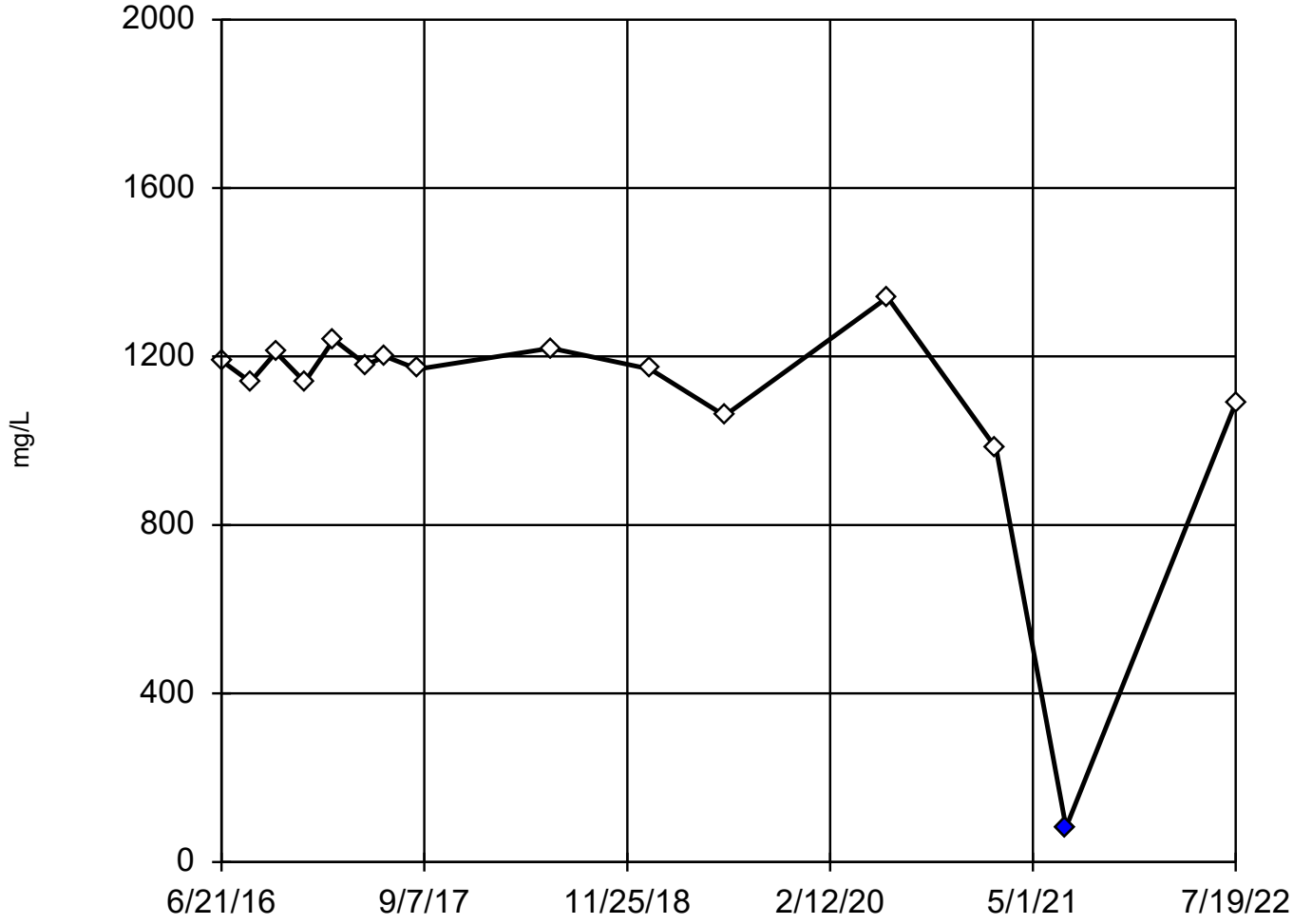
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9132
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1094.
Std. Dev. = 291.8.
82.2: c = 0.8594
tabl = 0.525.
Alpha = 0.05.

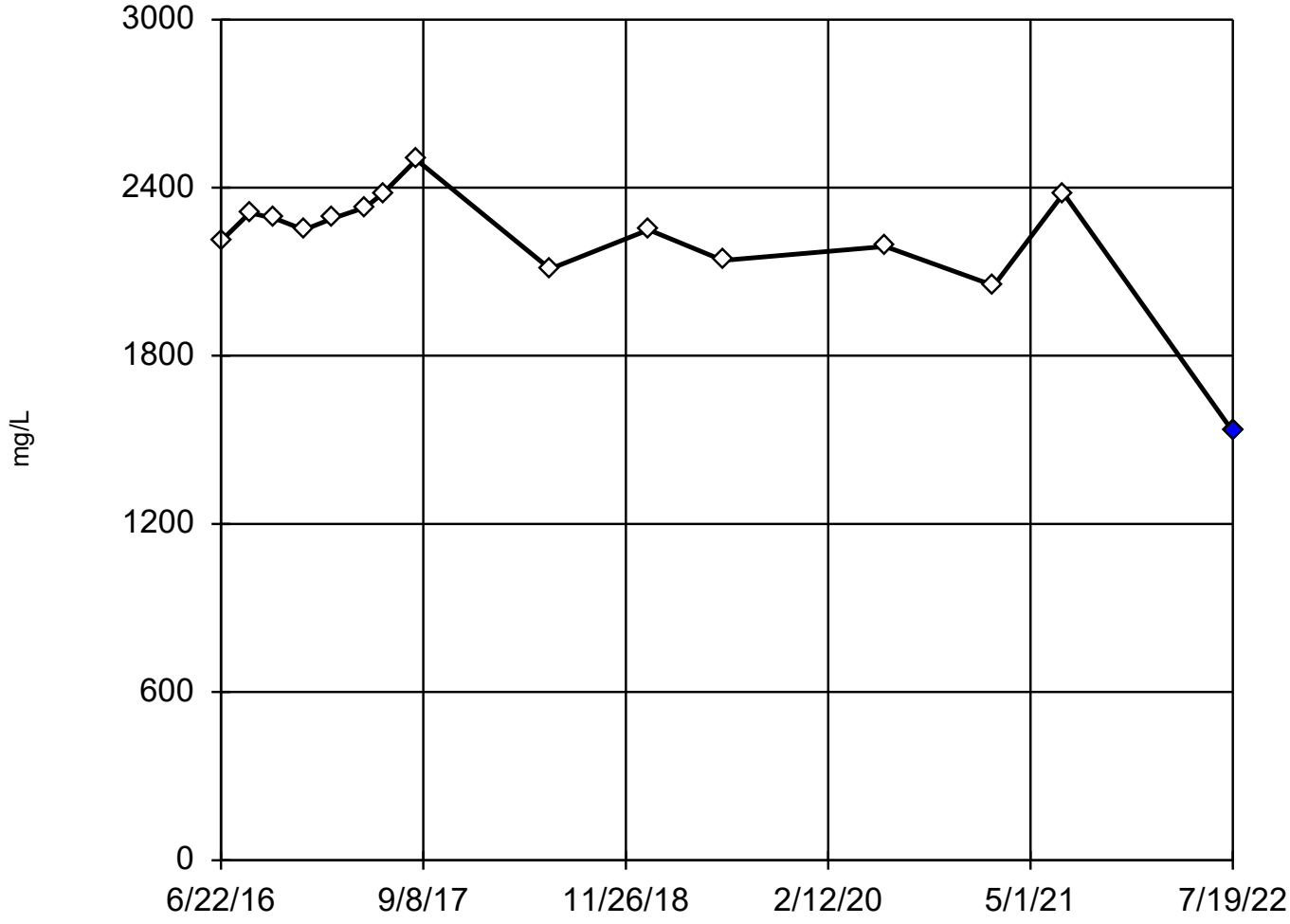
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9587
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 2214.
Std. Dev. = 221.3.
1530: c = 0.6824
tabl = 0.525.
Alpha = 0.05.

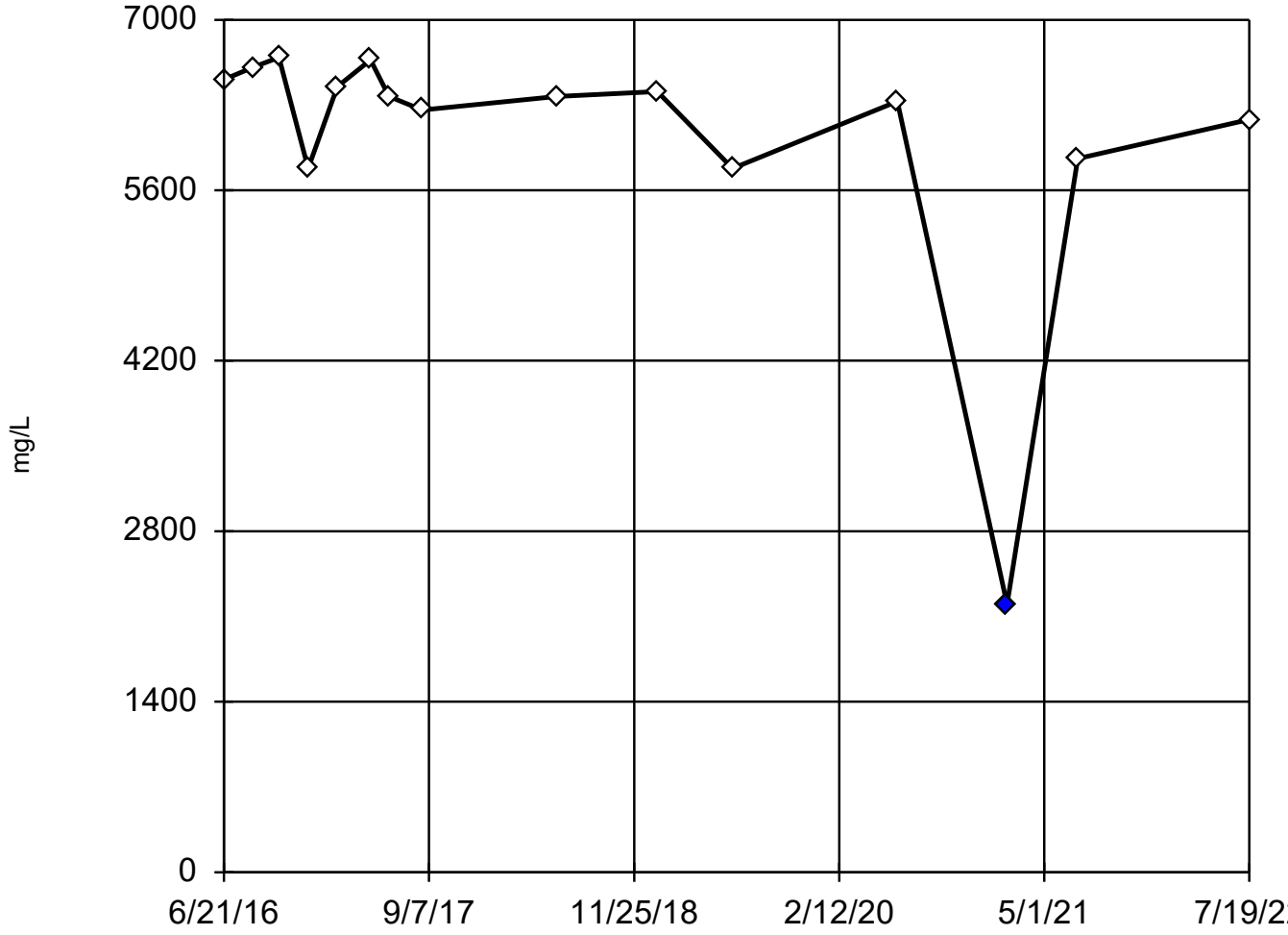
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9878
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 15

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 6031.
Std. Dev. = 1100.
2200: c = 0.8118
tabl = 0.525.
Alpha = 0.05.

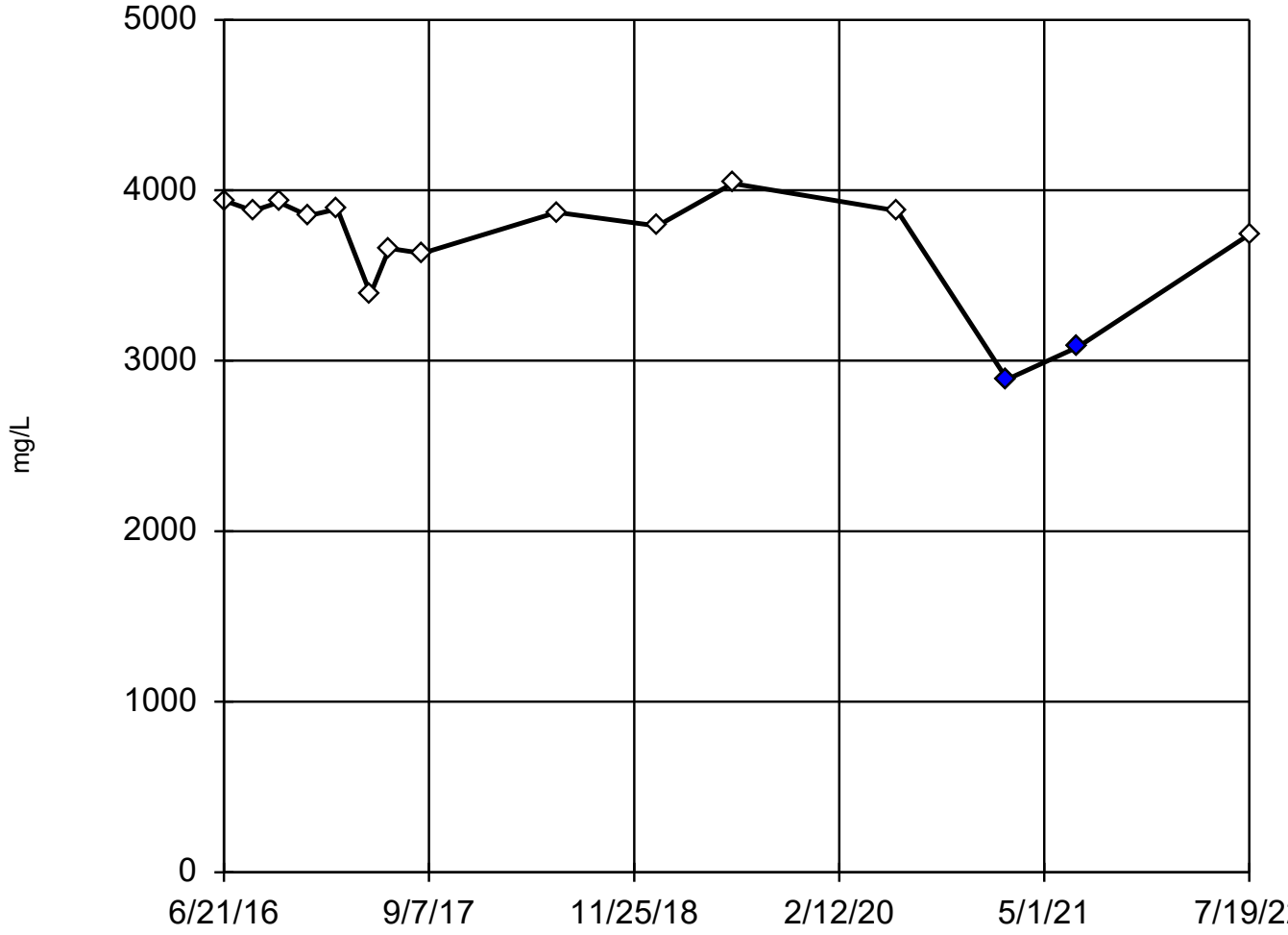
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8943
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 15

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 3697.
Std. Dev. = 330.7.
3390: c = 0.5
tabl = 0.525.
Alpha = 0.05.
3080 (H): c = 0.6471
tabl = 0.525.
Alpha = 0.05.

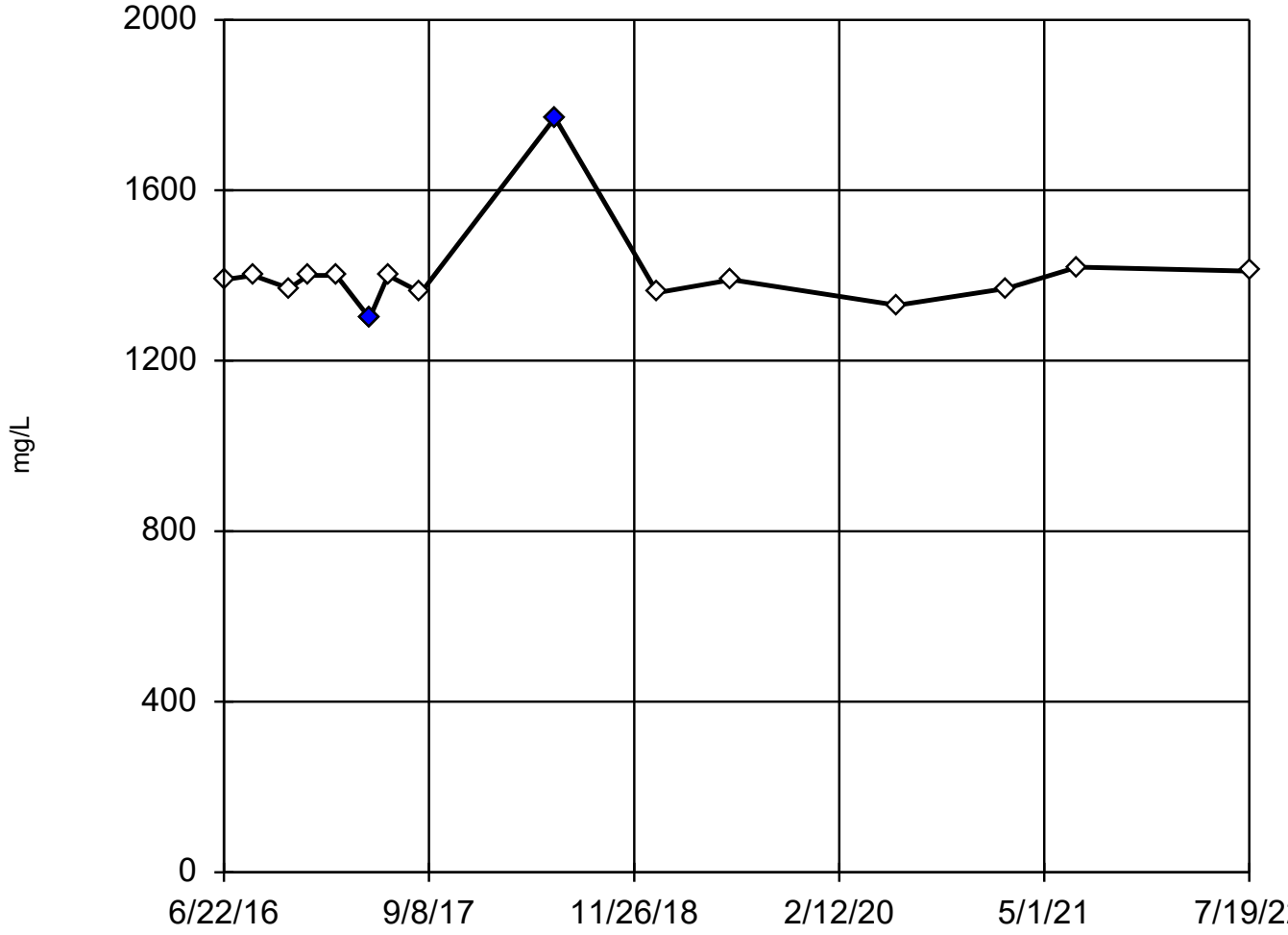
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8961
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 15

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 1405.
Std. Dev. = 106.
1770 (o): c = 0.878
tabl = 0.525.
1300: c = 0.5455
tabl = 0.525.
Alpha = 0.05.

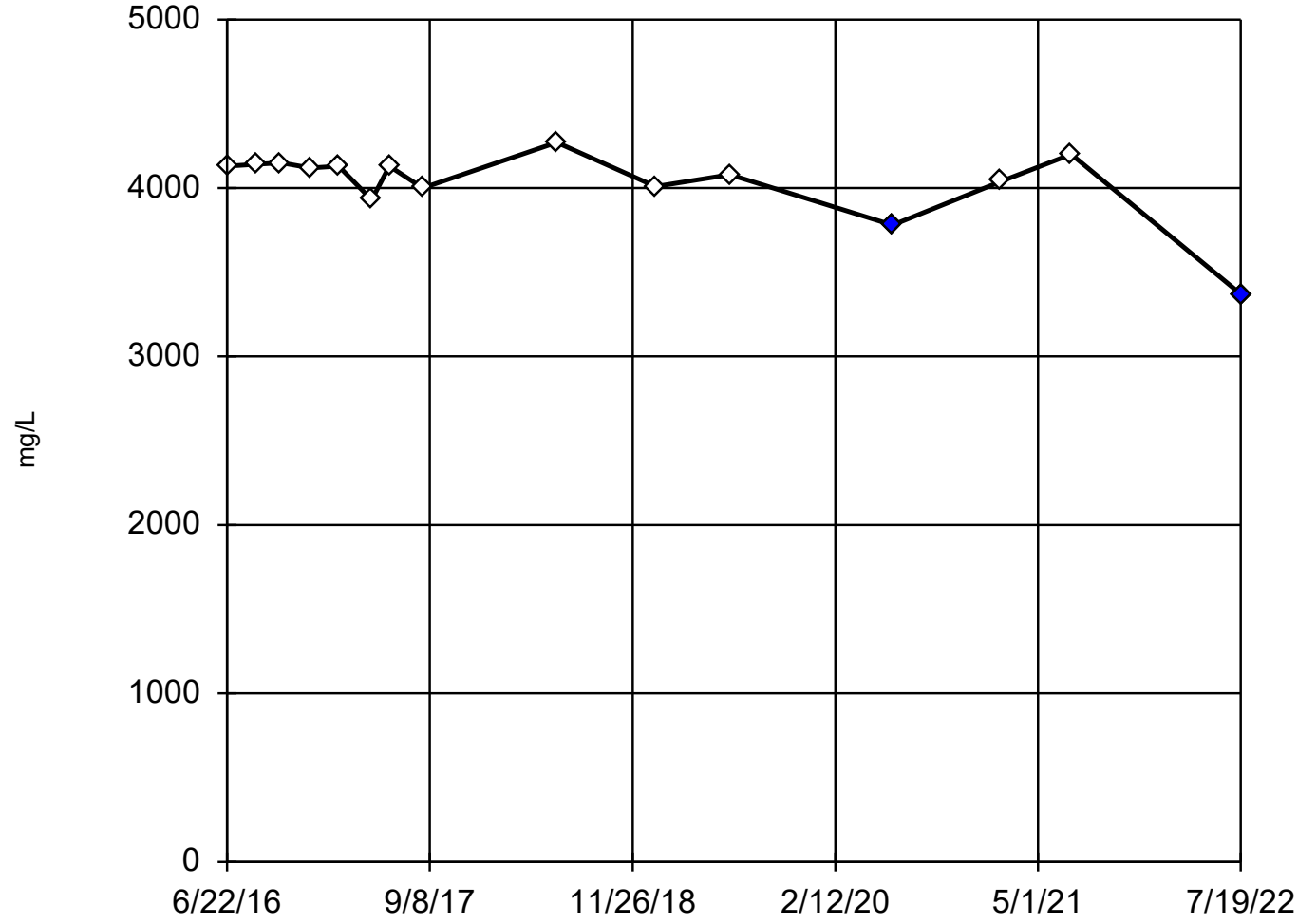
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9259
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 15

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 4032.
Std. Dev. = 217.6.
3780: c = 0.5946
tabl = 0.525.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9624
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 10/19/2022 3:01 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:02 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Antimony (mg/L)	SSP/APM...	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002288	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002059	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002167	unknown	ShapiroWilk
Antimony (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.001985	unknown	ShapiroWilk
Antimony (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002284	unknown	ShapiroWilk
Arsenic (mg/L)	SSP/APM...	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.003285	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.005742	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004595	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004188	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0007682	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004086	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004068	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.005187	ln(x)	ShapiroWilk
Barium (mg/L)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	14	0.0...	0.05459	ln(x)	ShapiroWilk
Barium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	14	0.0...	0.1023	ln(x)	ShapiroWilk
Barium (mg/L)	**SSPMW-3**	**Yes**	**0.09,0.2**	**12/20/2016,3/21/2018**	**Dixon`s**	**0.05**	**14**	**0.0...**	**0.04831**	**ln(x)**	**ShapiroWilk**
Barium (mg/L)	SSPMW-4	No	n/a	n/a	Dixon`s	0.05	14	0.0...	0.04905	ln(x)	ShapiroWilk
Barium (mg/L)	**APMW-1D**	**Yes**	**0.2**	**3/21/2018**	**NP (nrm)**	**NaN**	**14**	**0.0...**	**0.04973**	**unknown**	**ShapiroWilk**
Barium (mg/L)	**APMW-3**	**Yes**	**0.2**	**3/20/2018**	**NP (nrm)**	**NaN**	**14**	**0.0373**	**0.04719**	**unknown**	**ShapiroWilk**
Barium (mg/L)	**APMW-4**	**Yes**	**0.2**	**3/21/2018**	**Dixon`s**	**0.05**	**14**	**0.0...**	**0.04922**	**normal**	**ShapiroWilk**
Barium (mg/L)	APMW-5	No	n/a	n/a	Dixon`s	0.05	14	0.0...	0.04899	ln(x)	ShapiroWilk
Beryllium (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001124	unknown	ShapiroWilk
Beryllium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.05043	ln(x)	ShapiroWilk
Beryllium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.1133	0.01145	normal	ShapiroWilk
Beryllium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001115	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001115	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004961	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001235	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.01534	normal	ShapiroWilk
Boron (mg/L)	**SSP/APM...**	**Yes**	**1.43**	**1/15/2019**	**Dixon`s**	**0.05**	**15**	**0.8743**	**0.1957**	**normal**	**ShapiroWilk**
Boron (mg/L)	**SSPMW-2**	**Yes**	**2**	**1/15/2019**	**Dixon`s**	**0.05**	**15**	**0.7599**	**0.3983**	**normal**	**ShapiroWilk**
Boron (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	15	2.699	0.2514	normal	ShapiroWilk
Boron (mg/L)	**SSPMW-4**	**Yes**	**2,0.102**	**1/15/2019,7/13/2021**	**Dixon`s**	**0.05**	**15**	**1.267**	**0.3844**	**normal**	**ShapiroWilk**
Boron (mg/L)	**APMW-1D**	**Yes**	**6.27**	**2/10/2021**	**Dixon`s**	**0.05**	**15**	**4.902**	**0.5159**	**normal**	**ShapiroWilk**
Boron (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	15	3.734	0.28	normal	ShapiroWilk
Boron (mg/L)	**APMW-4**	**Yes**	**0.566**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**2.062**	**0.4608**	**normal**	**ShapiroWilk**
Boron (mg/L)	**APMW-5**	**Yes**	**4.2**	**6/13/2018**	**Dixon`s**	**0.05**	**15**	**3.447**	**0.2411**	**normal**	**ShapiroWilk**
Cadmium (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002029	unknown	ShapiroWilk
Cadmium (mg/L)	**SSPMW-2**	**Yes**	**0.00689**	**6/28/2019**	**NP (nrm)**	**NaN**	**17**	**0.0...**	**0.00147**	**unknown**	**ShapiroWilk**
Cadmium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.0...	0.009648	normal	ShapiroWilk
Cadmium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002029	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002165	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0003915	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.002029	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.001764	unknown	ShapiroWilk
Calcium (mg/L)	SSP/APM...	No	n/a	n/a	Dixon`s	0.05	15	655.8	36.72	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	15	824	77.16	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:02 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Calcium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	15	683.3	29.15	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	15	403.6	21.89	normal	ShapiroWilk
Calcium (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	15	82.55	10.91	ln(x)	ShapiroWilk
Calcium (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	15	134.1	7.009	normal	ShapiroWilk
Calcium (mg/L)	**APMW-4**	**Yes**	**416**	**6/13/2018**	**Dixon`s**	**0.05**	**15**	**505.1**	**36.29**	**normal**	**ShapiroWilk**
Calcium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	15	481.8	83.12	normal	ShapiroWilk
Chloride (mg/L)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	15	1535	82.71	normal	ShapiroWilk
Chloride (mg/L)	SSPMW-2	No	n/a	n/a	Dixon`s	0.05	15	2387	329.6	normal	ShapiroWilk
Chloride (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	15	1780	117	normal	ShapiroWilk
Chloride (mg/L)	**SSPMW-4**	**Yes**	**378**	**7/13/2021**	**Dixon`s**	**0.05**	**15**	**1103**	**215.2**	**normal**	**ShapiroWilk**
Chloride (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	15	200.6	35.53	unknown	ShapiroWilk
Chloride (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	15	145.9	8.746	normal	ShapiroWilk
Chloride (mg/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	15	483.9	37.67	normal	ShapiroWilk
Chloride (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	15	432.9	54.82	unknown	ShapiroWilk
Chromium (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003883	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.009723	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003085	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.04509	unknown	ShapiroWilk
Chromium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003926	unknown	ShapiroWilk
Chromium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003952	unknown	ShapiroWilk
Chromium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003926	unknown	ShapiroWilk
Chromium (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0039	unknown	ShapiroWilk
Cobalt (mg/L)	SSP/APM...	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.009415	unknown	ShapiroWilk
Cobalt (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.03415	unknown	ShapiroWilk
Cobalt (mg/L)	**SSPMW-3**	**Yes**	**0.35**	**12/18/2019**	**Dixon`s**	**0.05**	**17**	**0.5608**	**0.06734**	**normal**	**ShapiroWilk**
Cobalt (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.01176	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.00312	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-3	No	n/a	n/a	Dixon`s	0.05	17	0.0...	0.007851	ln(x)	ShapiroWilk
Cobalt (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.00946	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	17	0.1671	0.02787	normal	ShapiroWilk
Fluoride (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.3722	0.3349	unknown	ShapiroWilk
Fluoride (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	17	0.5675	0.5978	ln(x)	ShapiroWilk
Fluoride (mg/L)	**SSPMW-3**	**Yes**	**1.82,2.72**	**6/11/2018,1/15/2019**	**Dixon`s**	**0.05**	**17**	**0.8964**	**0.5701**	**normal**	**ShapiroWilk**
Fluoride (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.4982	0.6954	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	17	0.7095	0.1492	ln(x)	ShapiroWilk
Fluoride (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.2265	0.2969	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	17	0.2676	0.3072	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	17	1.792	0.6812	unknown	ShapiroWilk
Lead (mg/L)	SSP/APM...	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.003928	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.00484	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.00615	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.004463	unknown	ShapiroWilk
Lead (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004472	unknown	ShapiroWilk
Lead (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.00456	unknown	ShapiroWilk
Lead (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.004534	unknown	ShapiroWilk
Lead (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003477	unknown	ShapiroWilk
Lithium (mg/L)	**SSP/APM...**	**Yes**	**2.15**	**3/21/2018**	**Dixon`s**	**0.05**	**17**	**1.344**	**0.2399**	**normal**	**ShapiroWilk**
Lithium (mg/L)	**SSPMW-2**	**Yes**	**4.9**	**3/20/2018**	**Dixon`s**	**0.05**	**17**	**1.026**	**1.01**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	17	0.6168	0.0765	normal	ShapiroWilk
Lithium (mg/L)	**SSPMW-4**	**Yes**	**0.146**	**7/13/2021**	**Dixon`s**	**0.05**	**17**	**0.8326**	**0.2007**	**normal**	**ShapiroWilk**

Outlier Analysis

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Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Lithium (mg/L)	**APMW-1D**	**Yes**	**0.01**	**8/24/2017**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.01652**	**ln(x)**	**ShapiroWilk**
Lithium (mg/L)	**APMW-3**	**Yes**	**0.4**	**1/15/2019**	**Dixon`s**	**0.05**	**17**	**0.0...**	**0.08449**	**normal**	**ShapiroWilk**
Lithium (mg/L)	**APMW-4**	**Yes**	**0.317**	**7/19/2022**	**Dixon`s**	**0.05**	**17**	**0.8404**	**0.1746**	**normal**	**ShapiroWilk**
Lithium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	17	0.4809	0.08841	normal	ShapiroWilk
Mercury (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0004108	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0004108	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0003931	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0004108	unknown	ShapiroWilk
Mercury (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004653	unknown	ShapiroWilk
Mercury (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004116	unknown	ShapiroWilk
Mercury (mg/L)	**APMW-5**	**Yes**	**0.000241,0.000224...**	**3/21/2018,6/13/20...**	**NP (nrm)**	**NaN**	**17**	**0.0...**	**0.00146**	**unknown**	**ShapiroWilk**
Molybdenum (mg/L)	SSP/APM...	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02371	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02272	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.02348	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0235	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.01553	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.02309	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0231	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.02283	unknown	ShapiroWilk
pH (S.U.)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	16	5.804	0.1804	normal	ShapiroWilk
pH (S.U.)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	4.688	0.5278	normal	ShapiroWilk
pH (S.U.)	**SSPMW-3**	**Yes**	**4.73,3.6**	**12/18/2019,6/17/2020**	**Dixon`s**	**0.05**	**16**	**4.254**	**0.226**	**normal**	**ShapiroWilk**
pH (S.U.)	**SSPMW-4**	**Yes**	**11.96**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**6.551**	**1.465**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	5.818	0.2156	normal	ShapiroWilk
pH (S.U.)	**APMW-3**	**Yes**	**4.34**	**6/17/2020**	**Dixon`s**	**0.05**	**16**	**5.063**	**0.2427**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-4	No	n/a	n/a	EPA 1989	0.05	16	5.598	0.1427	normal	ShapiroWilk
pH (S.U.)	**APMW-5**	**Yes**	**4.22**	**3/21/2018**	**Dixon`s**	**0.05**	**16**	**3.542**	**0.2412**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	17	1.761	0.8701	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SSPMW-2**	**Yes**	**14.6**	**2/21/2017**	**Dixon`s**	**0.05**	**17**	**3.166**	**3.029**	**ln(x)**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	17	32.02	6.527	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	17	3.149	1.331	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	17	1.893	0.8504	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	17	2.768	1.604	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	17	1.714	0.8664	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	17	2.747	1.592	ln(x)	ShapiroWilk
Selenium (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002486	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0125	0.01189	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0109	0.01163	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002549	unknown	ShapiroWilk
Selenium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.003563	unknown	ShapiroWilk
Selenium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.00299	unknown	ShapiroWilk
Selenium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.002486	unknown	ShapiroWilk
Selenium (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.01591	unknown	ShapiroWilk
Sulfate (mg/L)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	15	3006	113.9	normal	ShapiroWilk
Sulfate (mg/L)	**SSPMW-2**	**Yes**	**2610**	**6/17/2020**	**Dixon`s**	**0.05**	**15**	**2145**	**156.7**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	15	2461	121.1	normal	ShapiroWilk
Sulfate (mg/L)	**SSPMW-4**	**Yes**	**82.2**	**7/13/2021**	**Dixon`s**	**0.05**	**15**	**1094**	**291.8**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	15	531.2	63.59	normal	ShapiroWilk
Sulfate (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	15	705.1	54.32	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:02 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distrib...	Normality...
Sulfate (mg/L)	**APMW-4**	**Yes**	**1530**	**7/19/2022**	**Dixon`s**	**0.05**	**15**	**2214**	**221.3**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	15	2633	386.8	unknown	ShapiroWilk
TDS (mg/L)	SSP/APM...	No	n/a	n/a	EPA 1989	0.05	15	6735	552	normal	ShapiroWilk
TDS (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	15	6635	451.6	normal	ShapiroWilk
TDS (mg/L)	**SSPMW-3**	**Yes**	**2200**	**2/10/2021**	**Dixon`s**	**0.05**	**15**	**6031**	**1100**	**normal**	**ShapiroWilk**
TDS (mg/L)	**SSPMW-4**	**Yes**	**3080,2890**	**7/13/2021,2/10/2021**	**Dixon`s**	**0.05**	**15**	**3697**	**330.7**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	15	1326	101.7	normal	ShapiroWilk
TDS (mg/L)	**APMW-3**	**Yes**	**1770,1300**	**6/8/2018,5/3/2017**	**Dixon`s**	**0.05**	**15**	**1405**	**106**	**normal**	**ShapiroWilk**
TDS (mg/L)	**APMW-4**	**Yes**	**3780,3370**	**6/17/2020,7/19/2022**	**Dixon`s**	**0.05**	**15**	**4032**	**217.6**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	15	4505	522.4	unknown	ShapiroWilk
Thallium (mg/L)	SSP/APM...	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0006418	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0005186	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0009978	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	17	0.0...	0.0004926	unknown	ShapiroWilk
Thallium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0006263	unknown	ShapiroWilk
Thallium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0007191	unknown	ShapiroWilk
Thallium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0006149	unknown	ShapiroWilk
Thallium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	14	0.0...	0.0001312	unknown	ShapiroWilk

Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:30 PM

	SSPMW-3 Barium (mg/L)	APMW-1D Barium (mg/L)	APMW-3 Barium (mg/L)	APMW-4 Barium (mg/L)	SSPMW-2 Boron (mg/L)	APMW-1D Boron (mg/L)	APMW-5 Boron (mg/L)	SSPMW-2 Cadmium (mg/L)	APMW-4 Calcium (mg/L)	SSPMW-3 Cobalt (mg/L)
6/22/2016										
8/24/2016										
10/18/2016										
12/20/2016	0.09 (o)									
12/21/2016										
2/21/2017										
5/4/2017										
6/13/2017										
8/24/2017										
3/20/2018			<0.2 (o)							
3/21/2018	<0.2 (o)	<0.2 (o)		<0.2 (o)						
6/8/2018										
6/11/2018										
6/13/2018							4.2 (o)		416 (o)	
1/15/2019					<2 (o)					
6/28/2019								0.00689 (o)		
12/18/2019										0.35 (o)
6/17/2020										
2/10/2021						6.27 (o)				
7/13/2021										

Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:30 PM

	APMW-1D Cobalt (mg/L)	SSPMW-3 Fluoride (mg/L)	SSP/APMW-1 Lithium (mg/L)	SSPMW-2 Lithium (mg/L)	SSPMW-4 Lithium (mg/L)	APMW-3 Lithium (mg/L)	APMW-5 Mercury (mg/L)	APMW-1D Molybdenum (mg/L)	SSPMW-3 pH (S.U.)	APMW-3 pH (S.U.)
6/22/2016	<0.02 (o)							<0.05 (o)		
8/24/2016	<0.02 (o)							<0.05 (o)		
10/18/2016	<0.02 (o)							<0.05 (o)		
12/20/2016										
12/21/2016	<0.02 (o)							<0.05 (o)		
2/21/2017	<0.02 (o)							<0.05 (o)		
5/4/2017	<0.02 (o)							<0.05 (o)		
6/13/2017	<0.02 (o)							<0.05 (o)		
8/24/2017	<0.02 (o)							<0.05 (o)		
3/20/2018				4.9 (o)						
3/21/2018			2.15 (o)							
6/8/2018										
6/11/2018		1.82 (o)								
6/13/2018										
1/15/2019		2.72 (o)				<0.4 (o)				
6/28/2019										
12/18/2019									4.73 (o)	
6/17/2020									3.6 (o)	4.34 (o)
2/10/2021							0.00643 (o)			
7/13/2021					0.146 (o)					

Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:30 PM

	APMW-5 pH (S.U.)	SSPMW-2 Radium 226 + 228 (pCi/L)	SSPMW-3 TDS (mg/L)	APMW-3 TDS (mg/L)
6/22/2016				
8/24/2016				
10/18/2016				
12/20/2016				
12/21/2016				
2/21/2017		14.6 (o)		
5/4/2017				
6/13/2017				
8/24/2017				
3/20/2018				
3/21/2018	4.22 (o)			
6/8/2018				1770 (o)
6/11/2018				
6/13/2018				
1/15/2019				
6/28/2019				
12/18/2019				
6/17/2020				
2/10/2021			2200 (o)	
7/13/2021				

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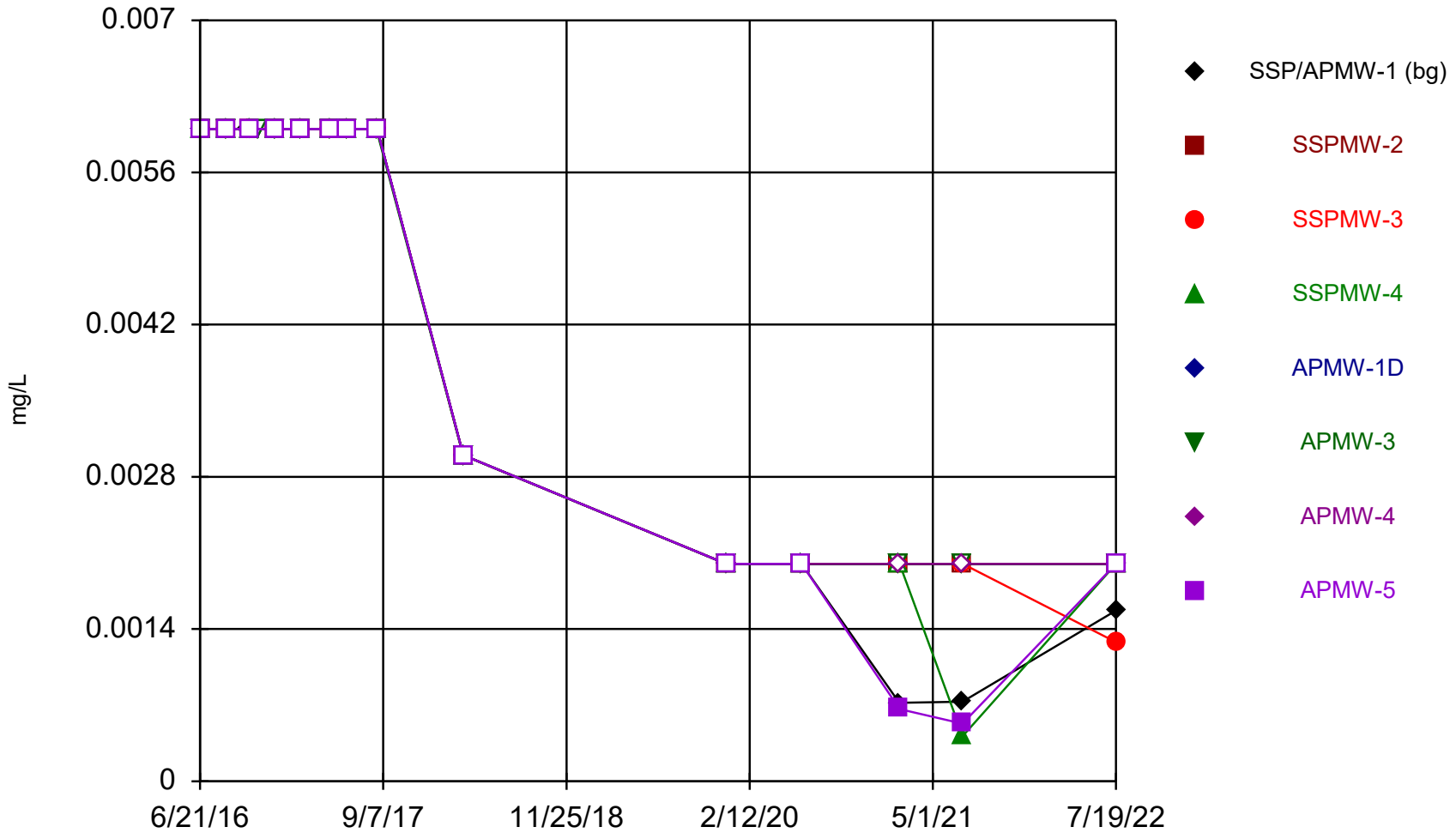
Hollow symbols indicate censored values.

Time Series



Constituent: Antimony Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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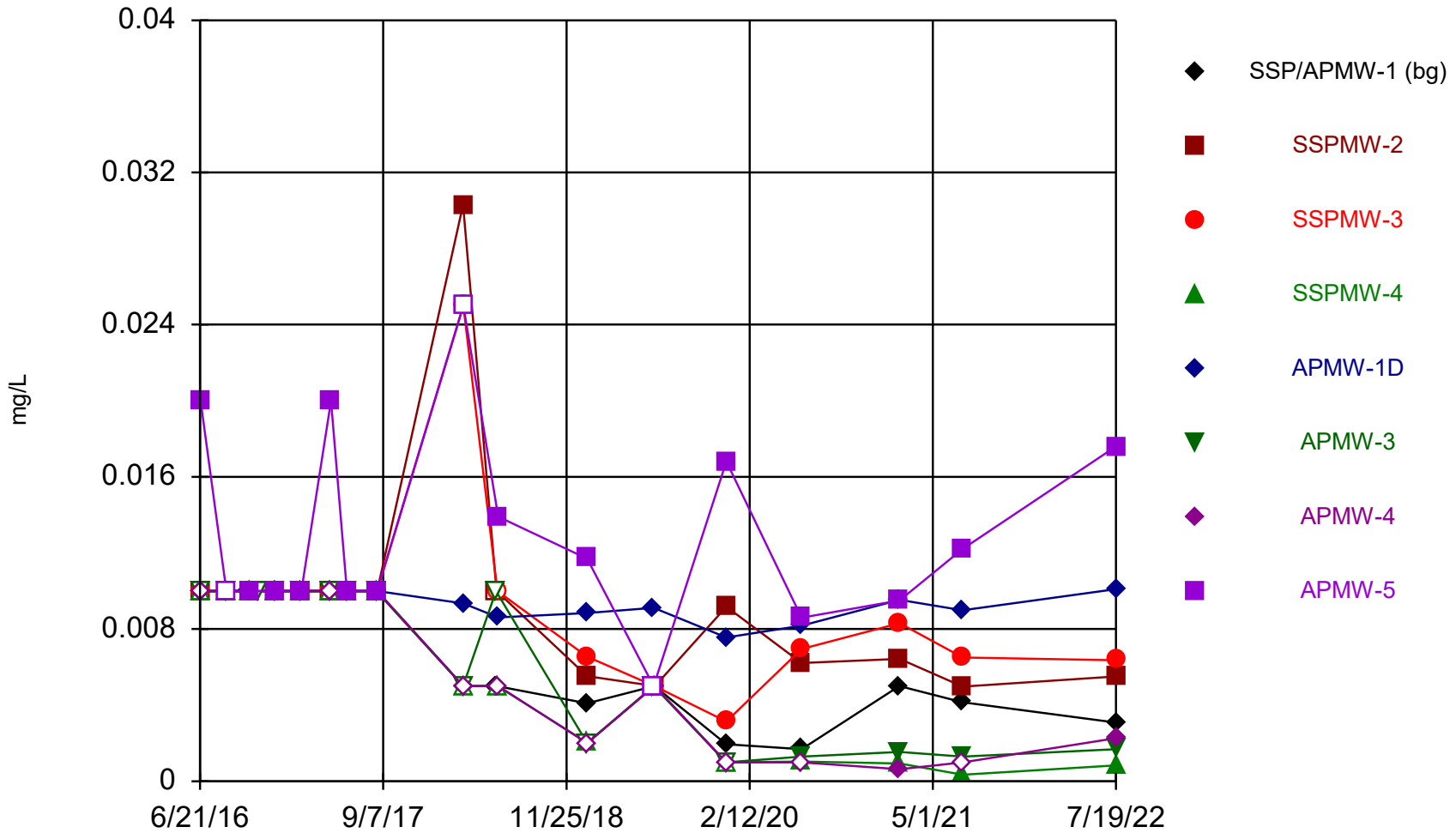
Hollow symbols indicate censored values.

Time Series

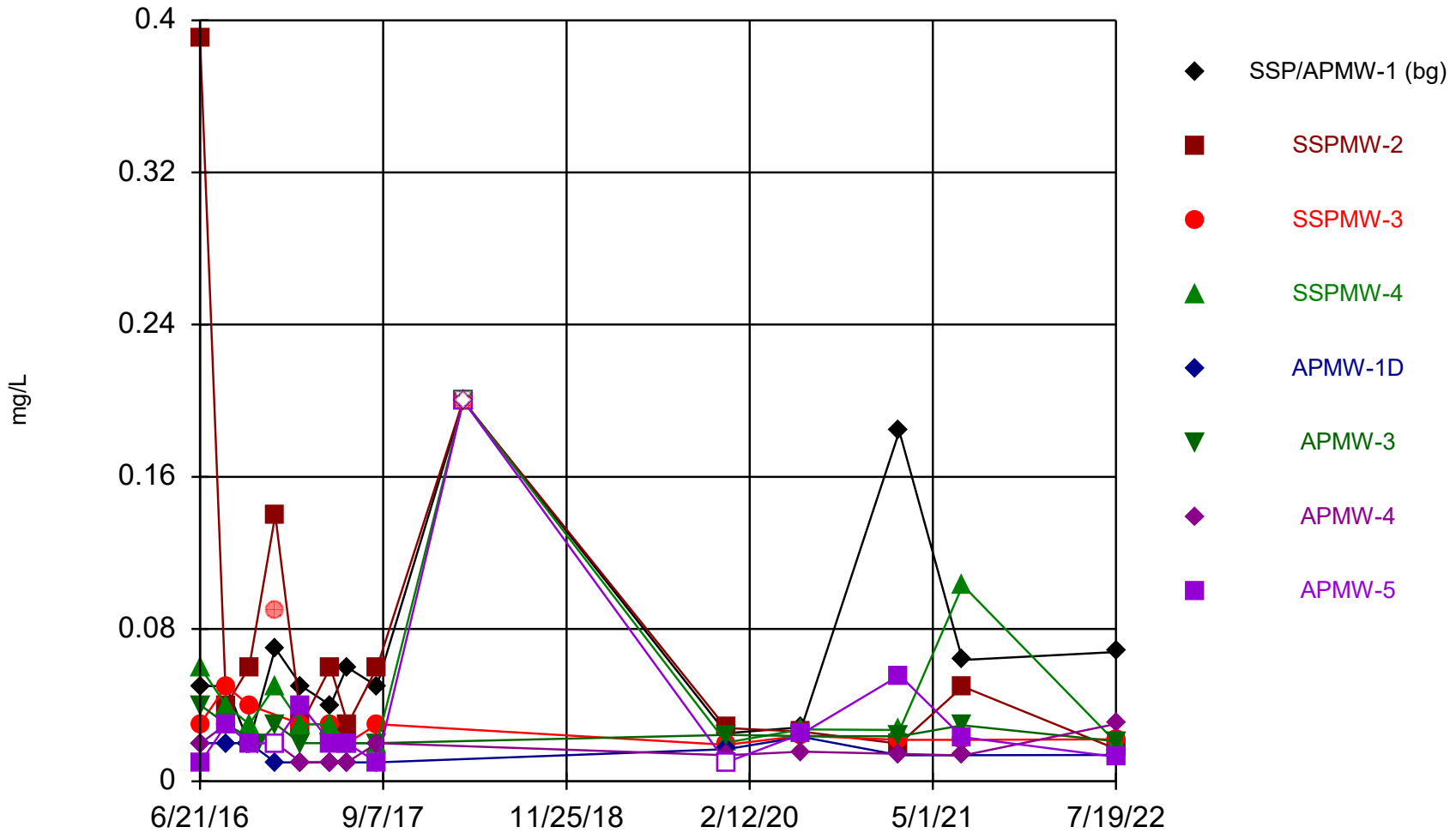


Constituent: Arsenic Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

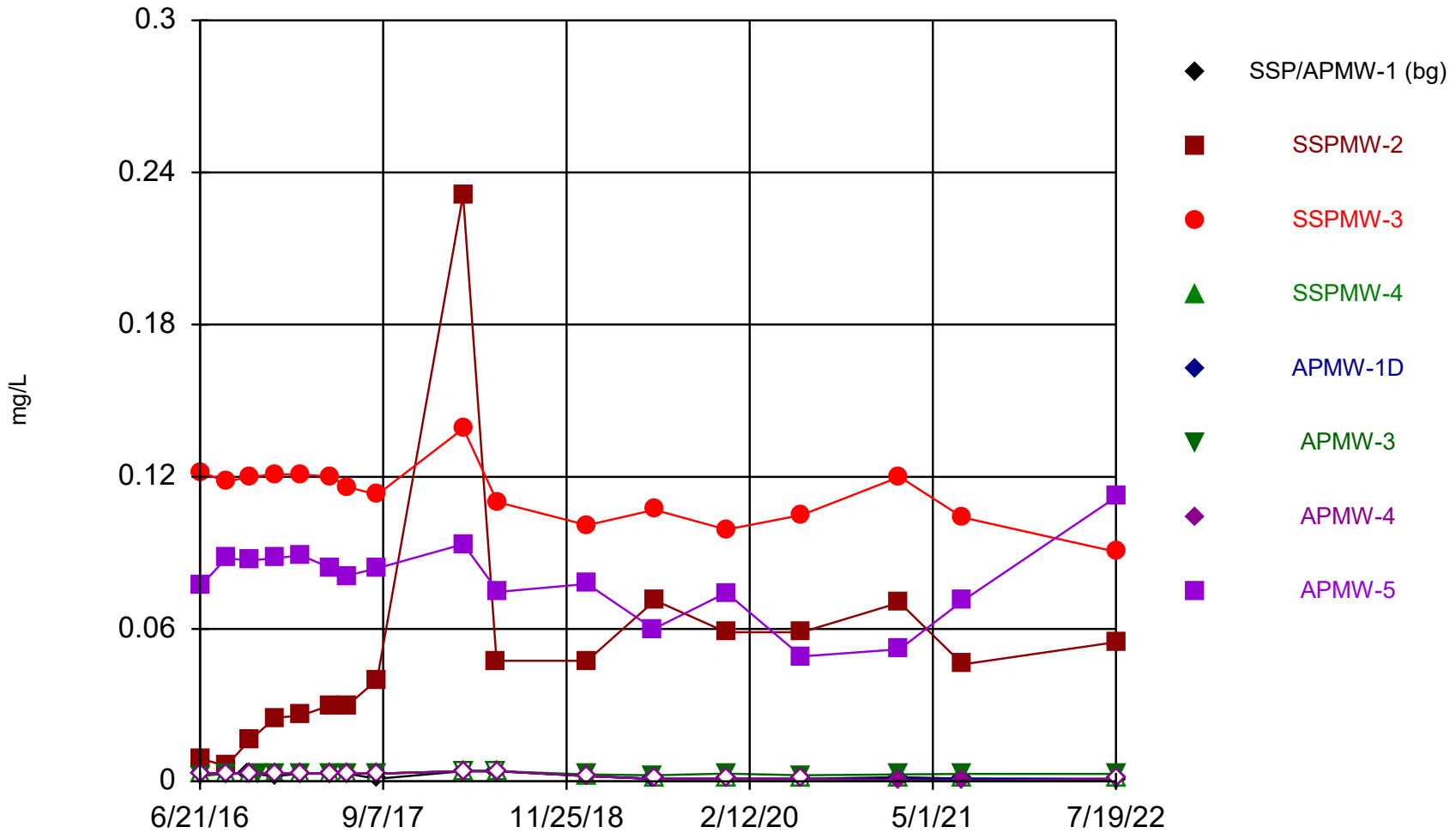


Constituent: Barium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Beryllium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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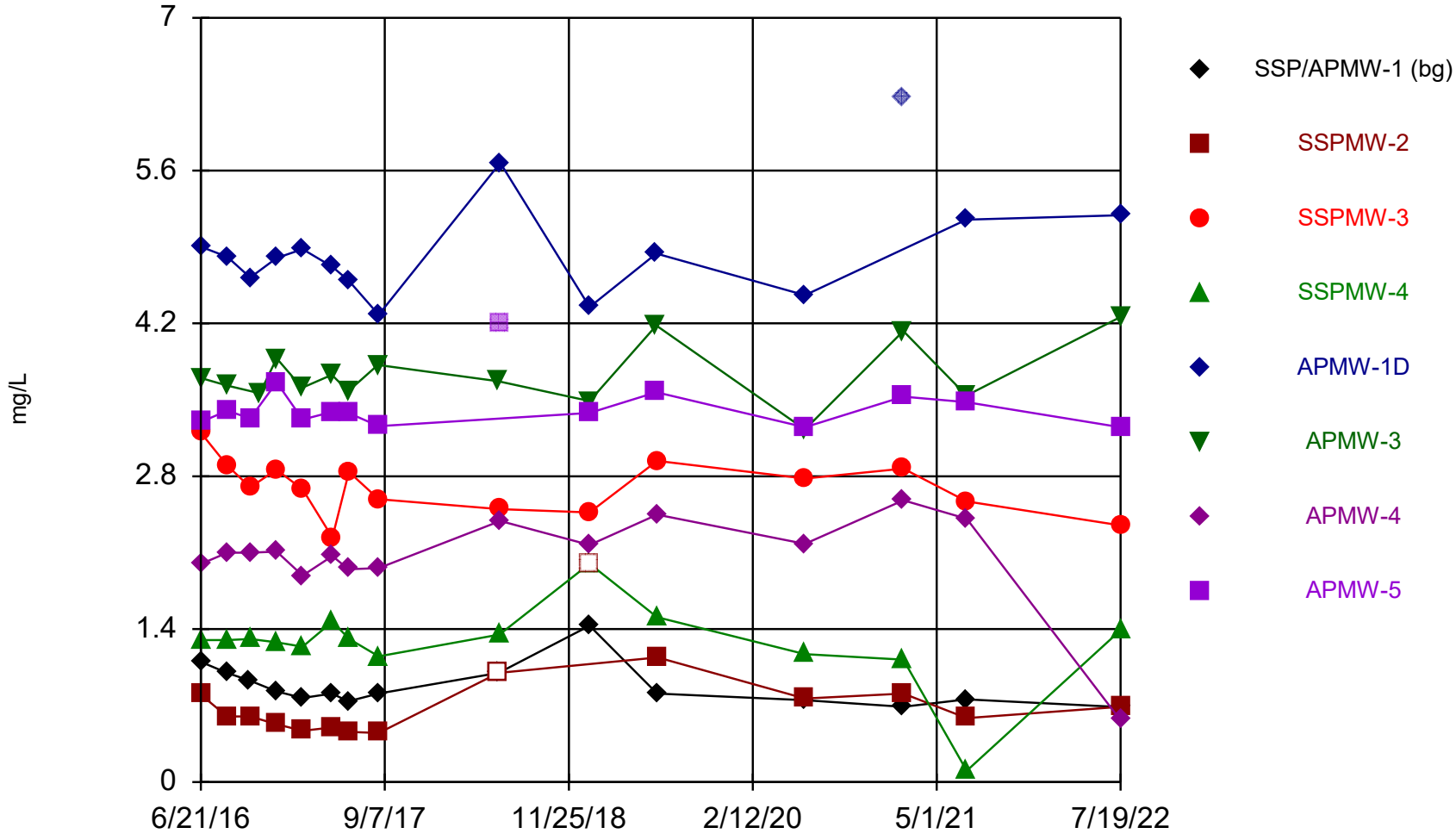
Hollow symbols indicate censored values.

Time Series

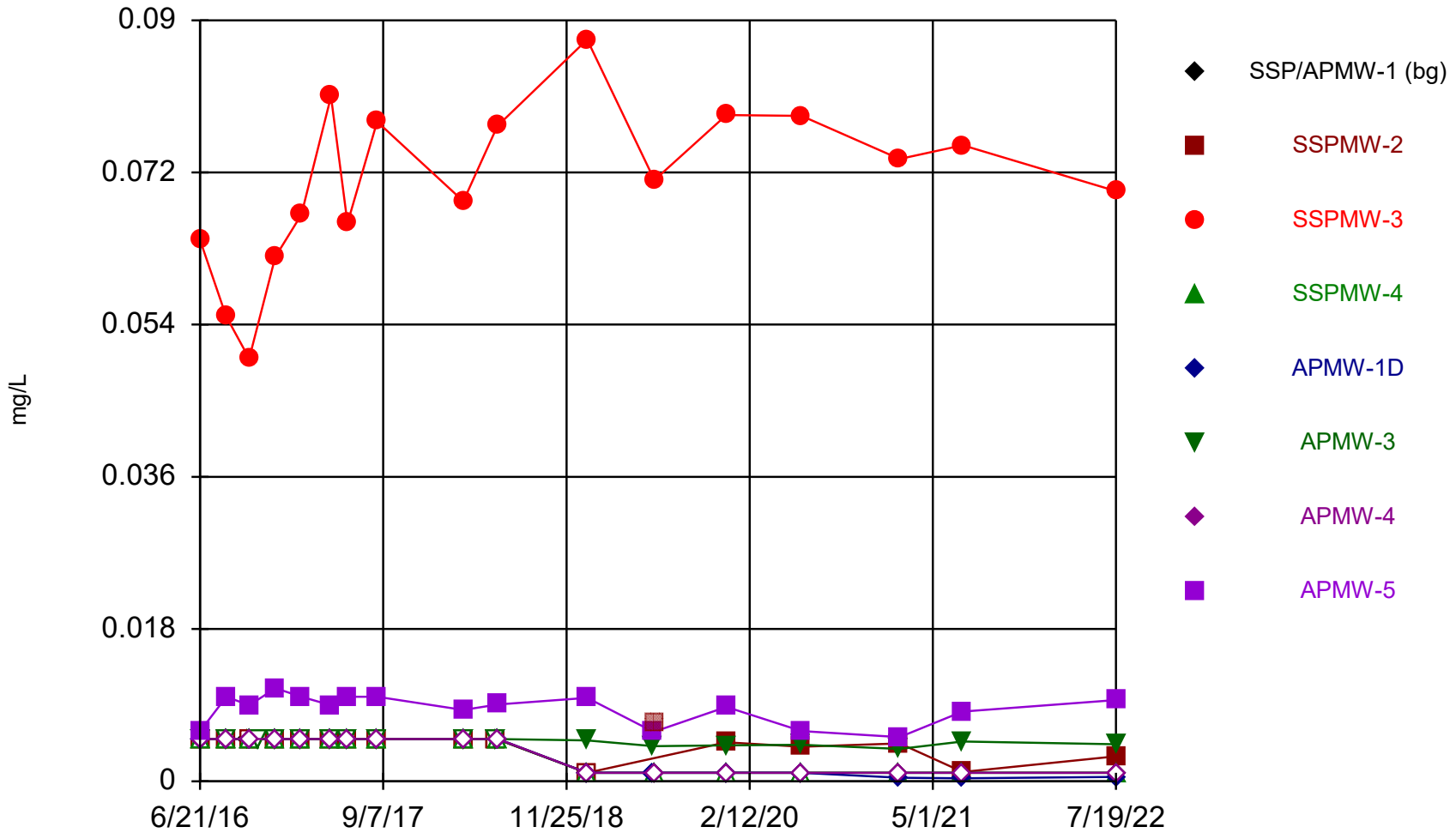


Constituent: Boron Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

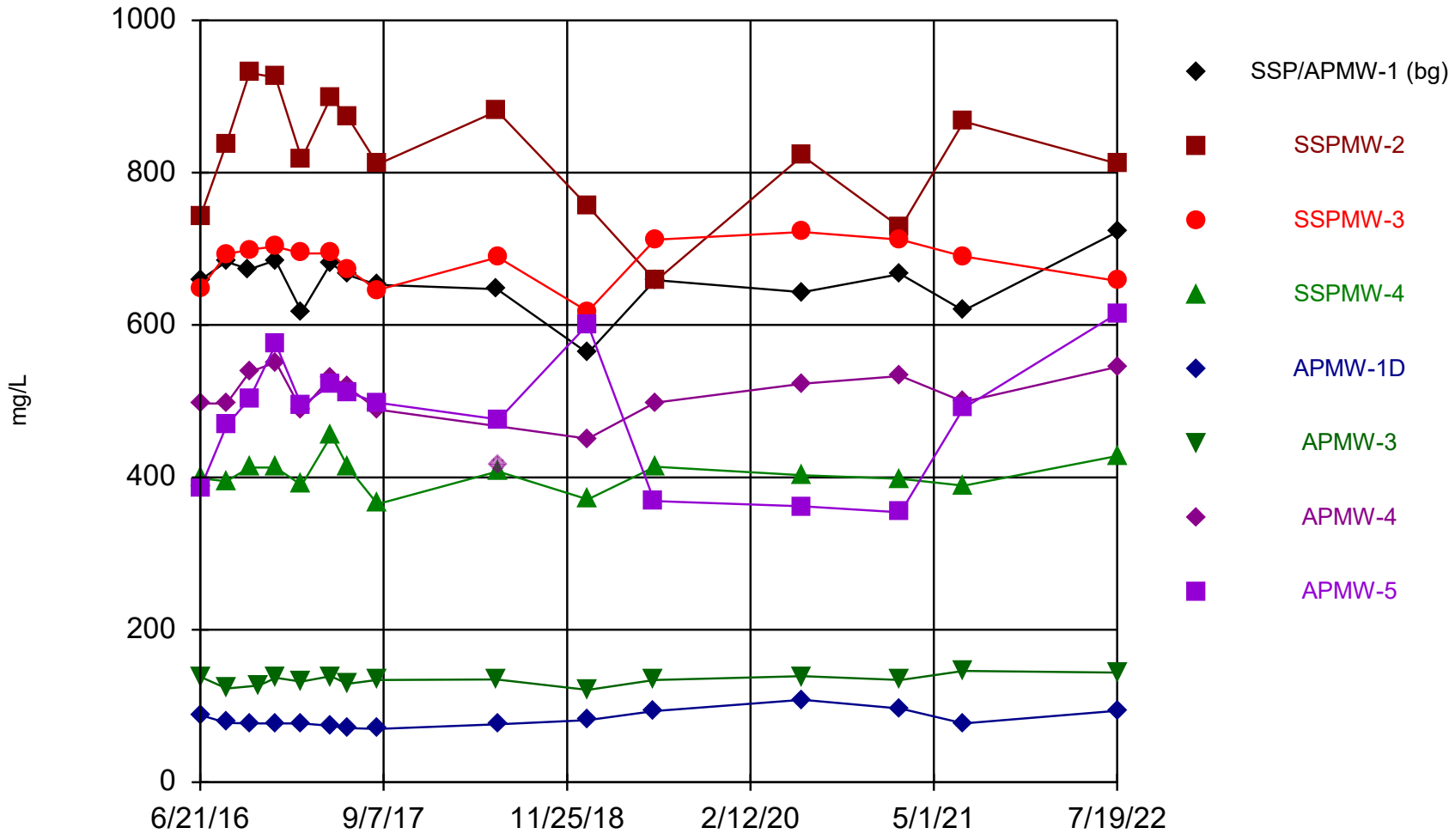
Time Series



Constituent: Cadmium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

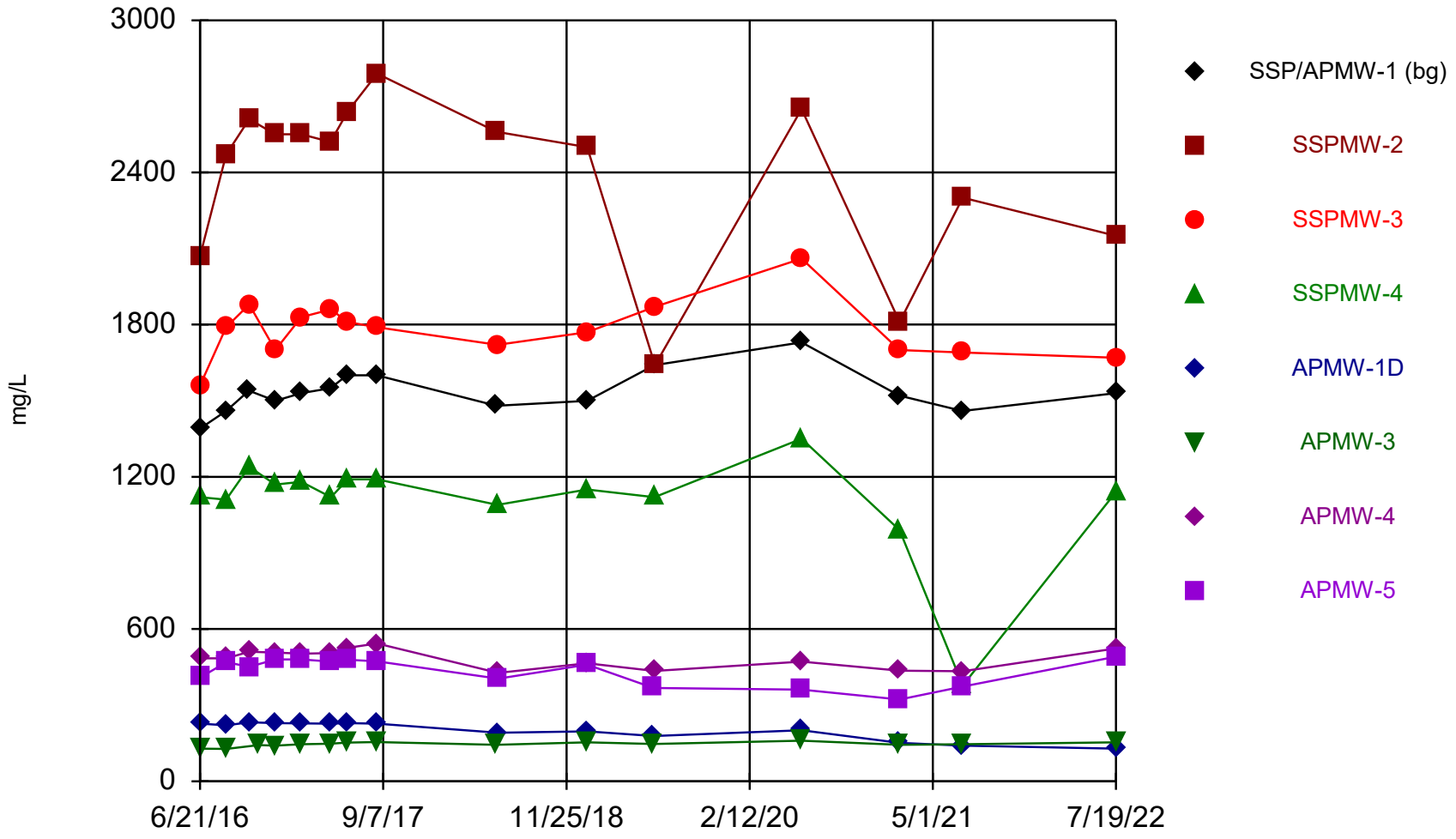
Time Series



Constituent: Calcium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

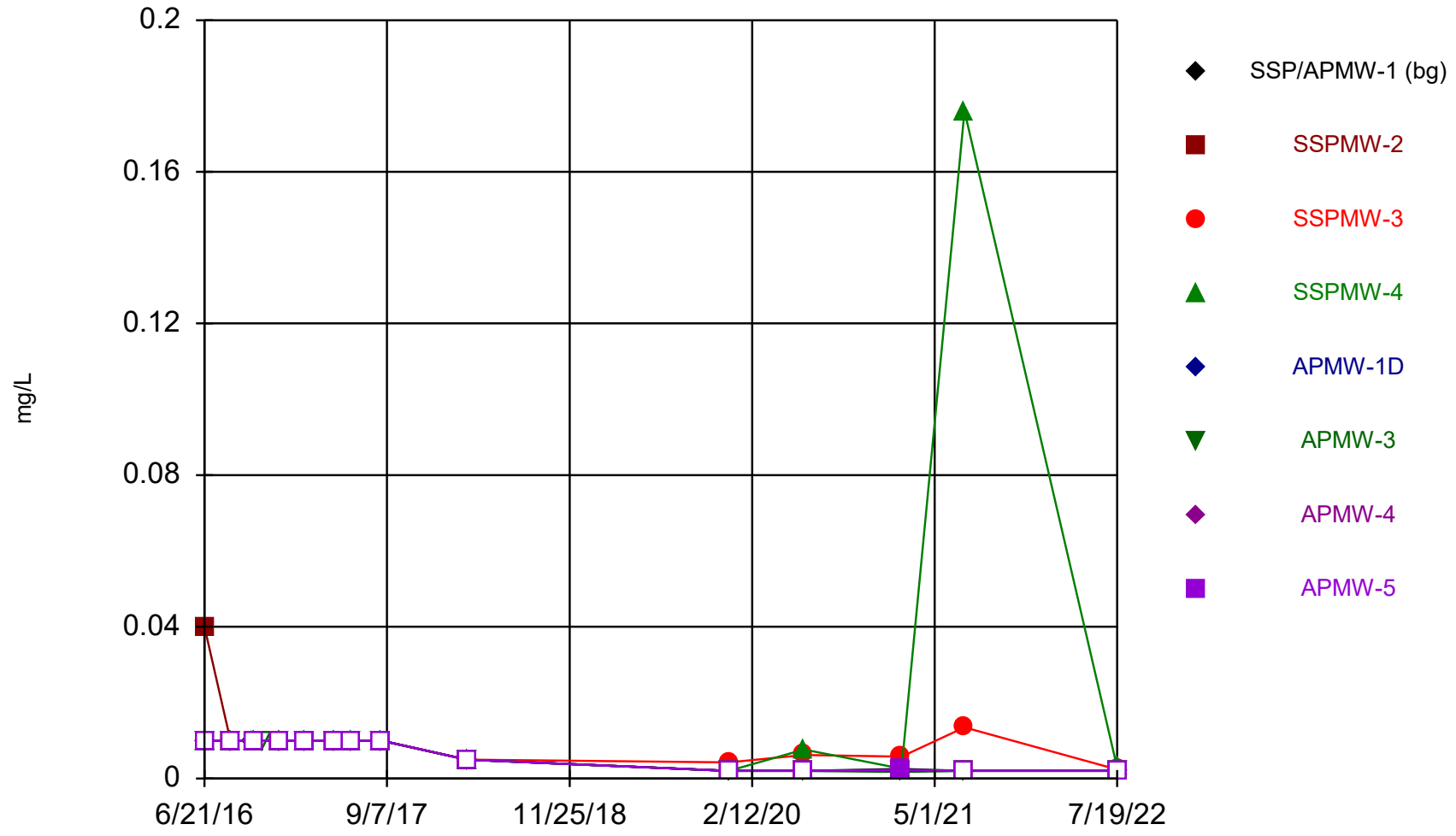


Constituent: Chloride Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Chromium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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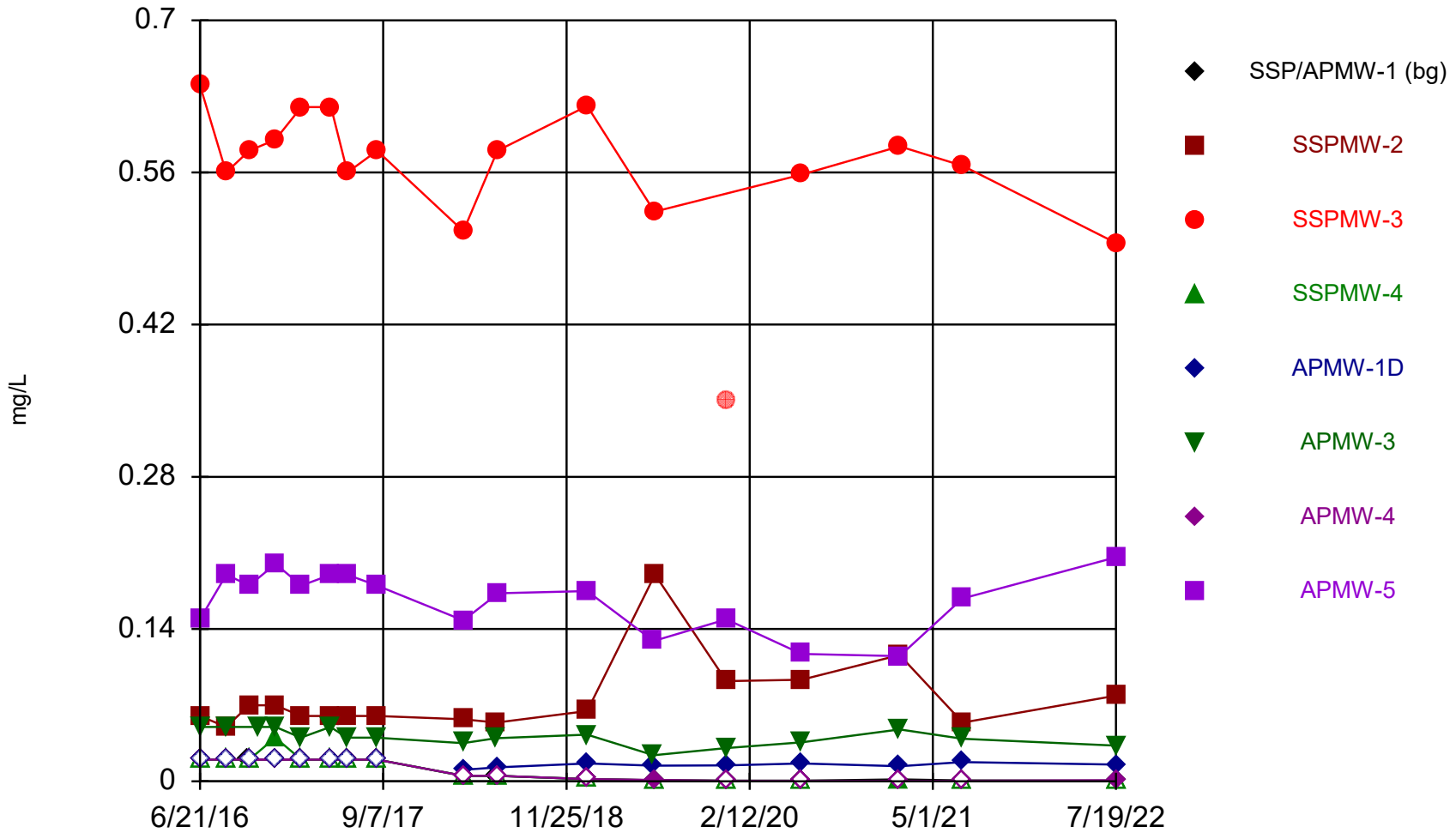
Time Series

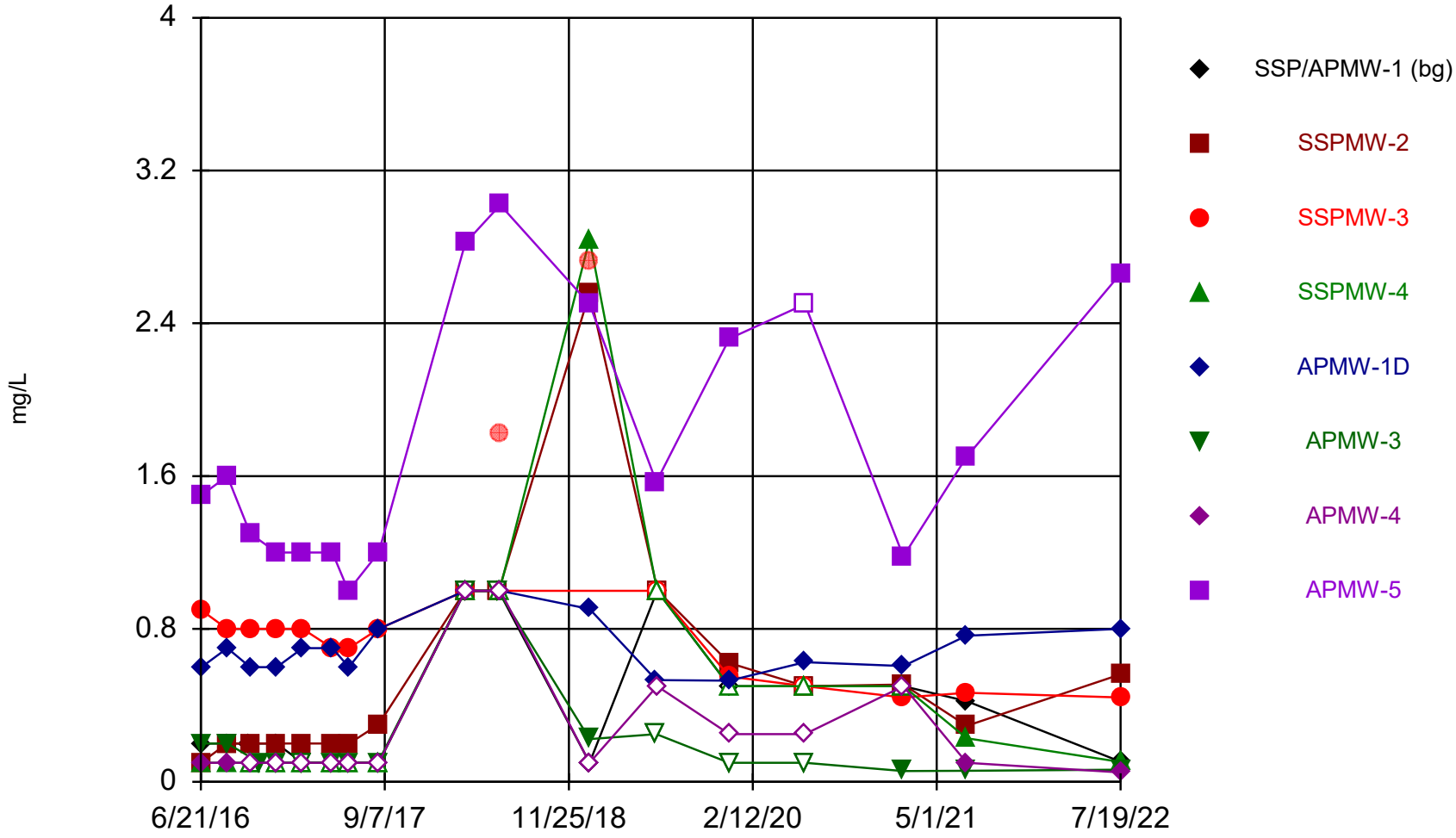


Constituent: Cobalt Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

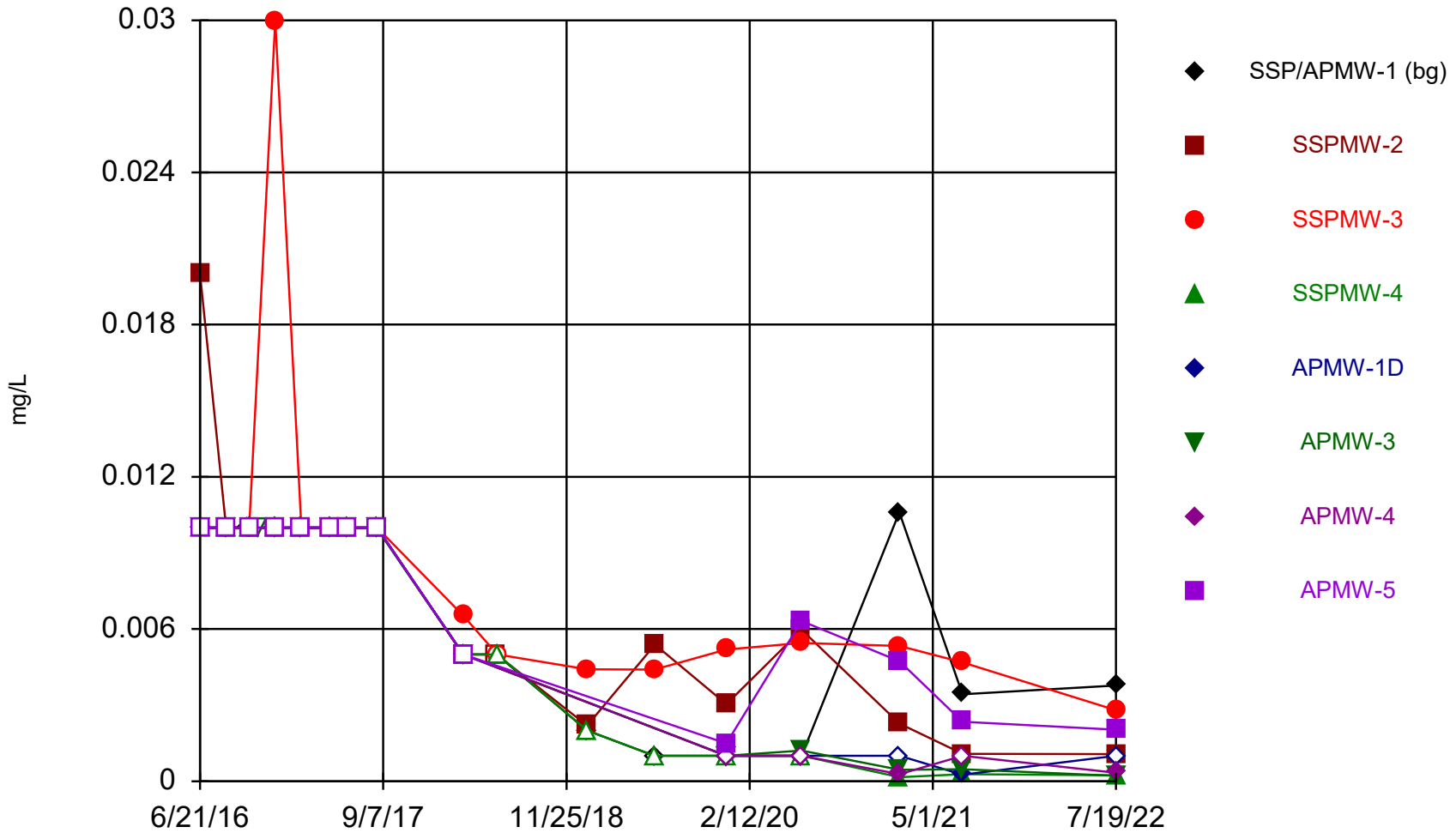


Constituent: Fluoride Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Lead Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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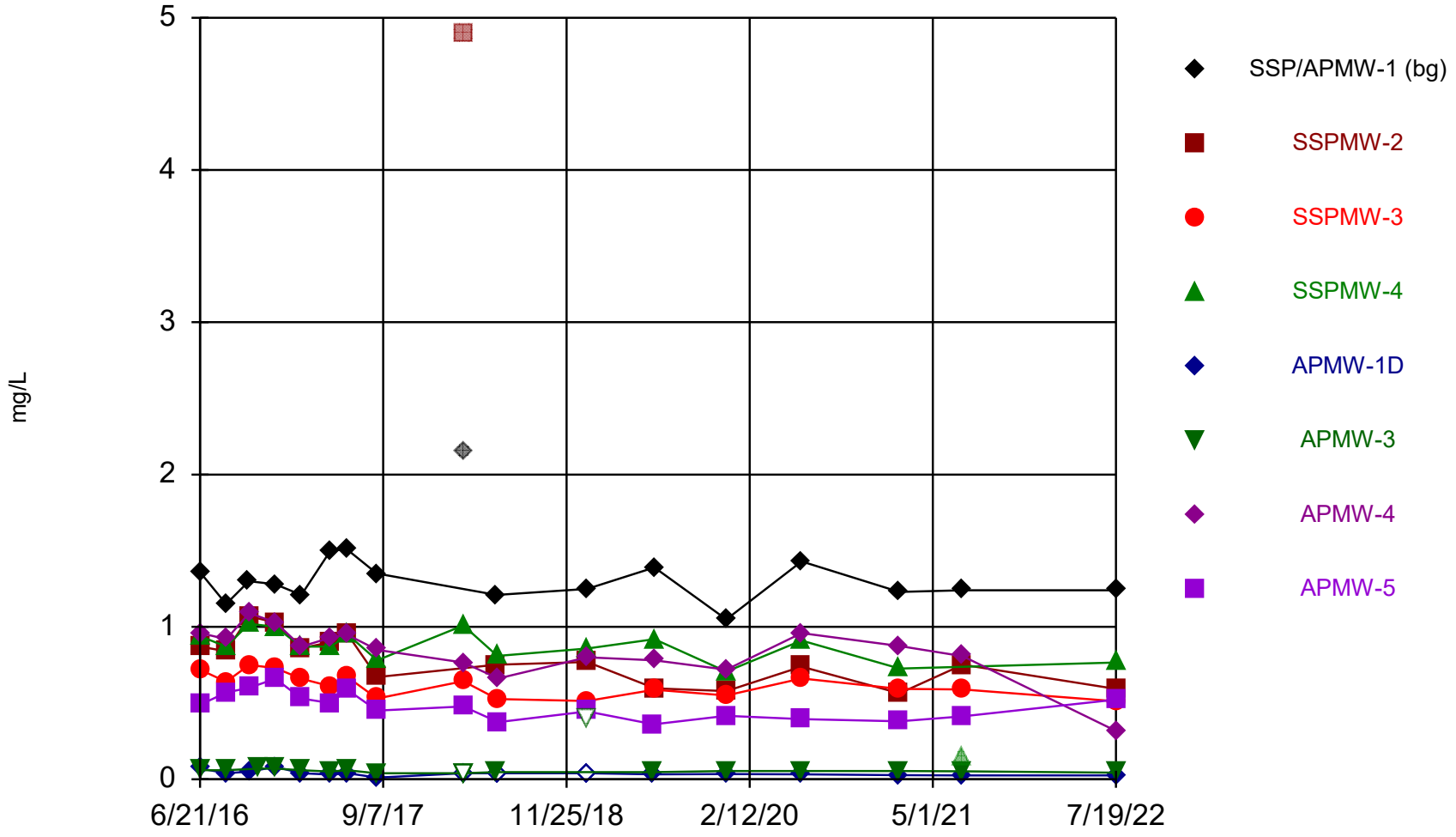
Hollow symbols indicate censored values.

Time Series



Constituent: Lithium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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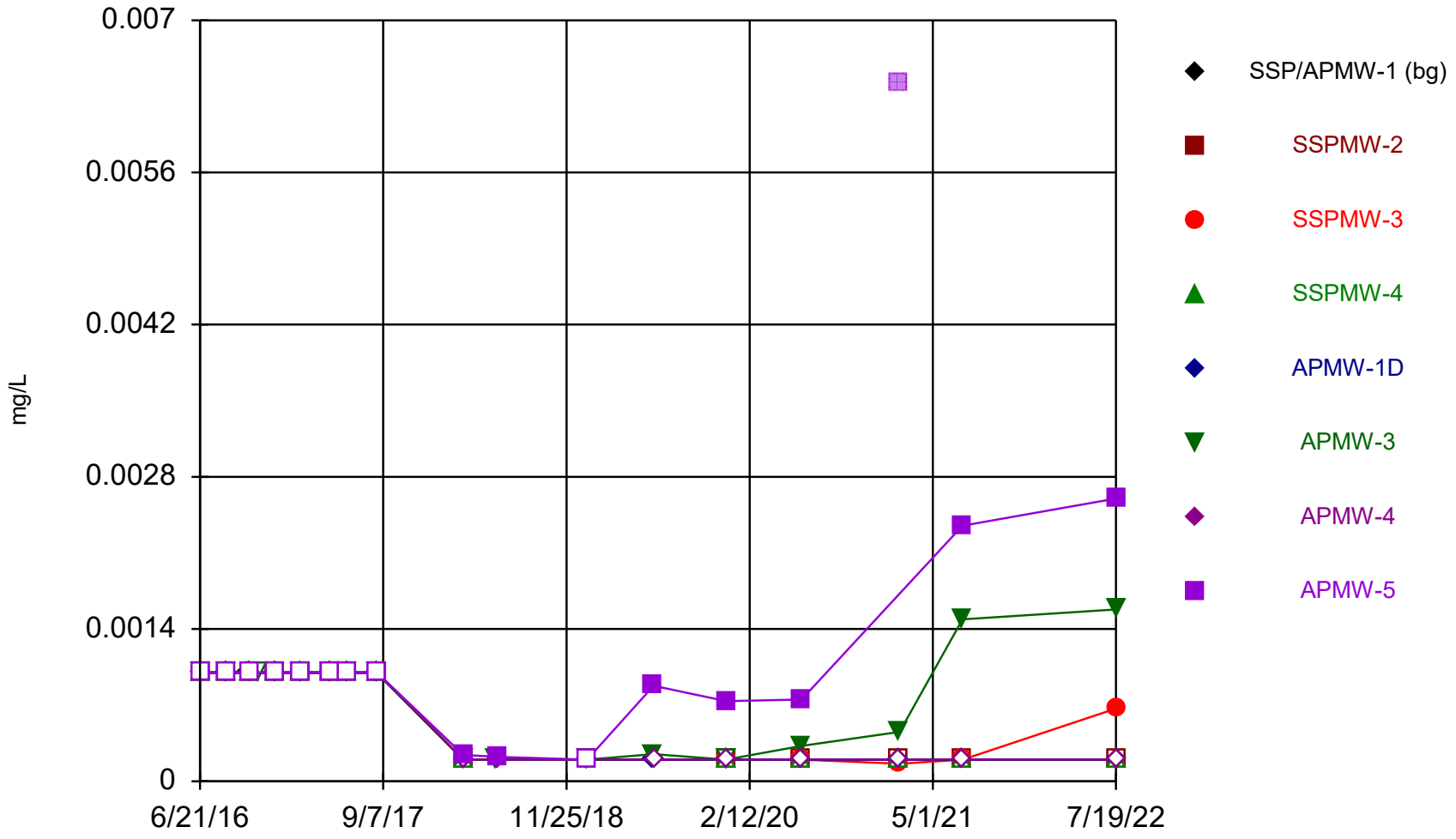
Hollow symbols indicate censored values.

Time Series



Constituent: Mercury Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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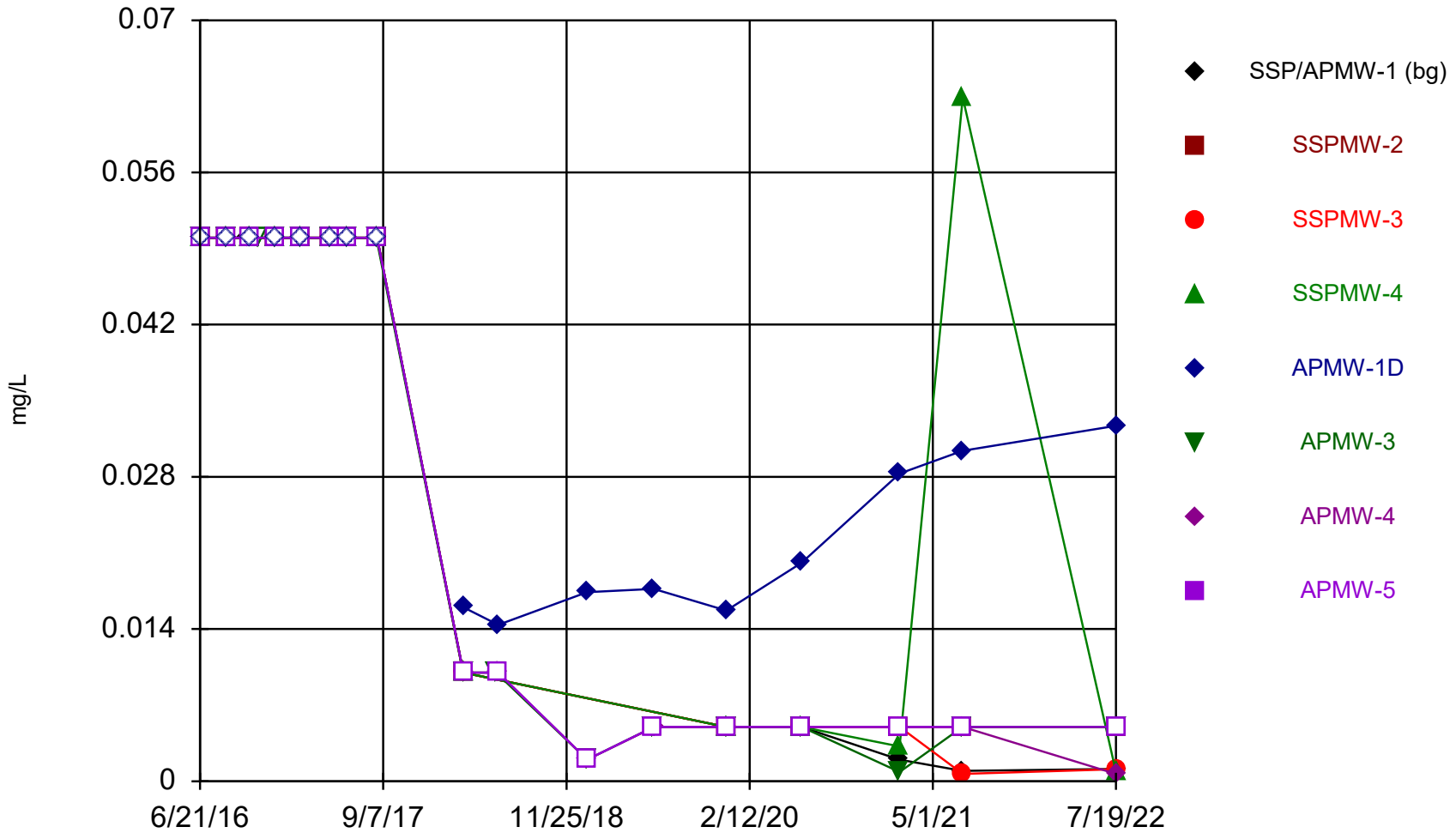
Hollow symbols indicate censored values.

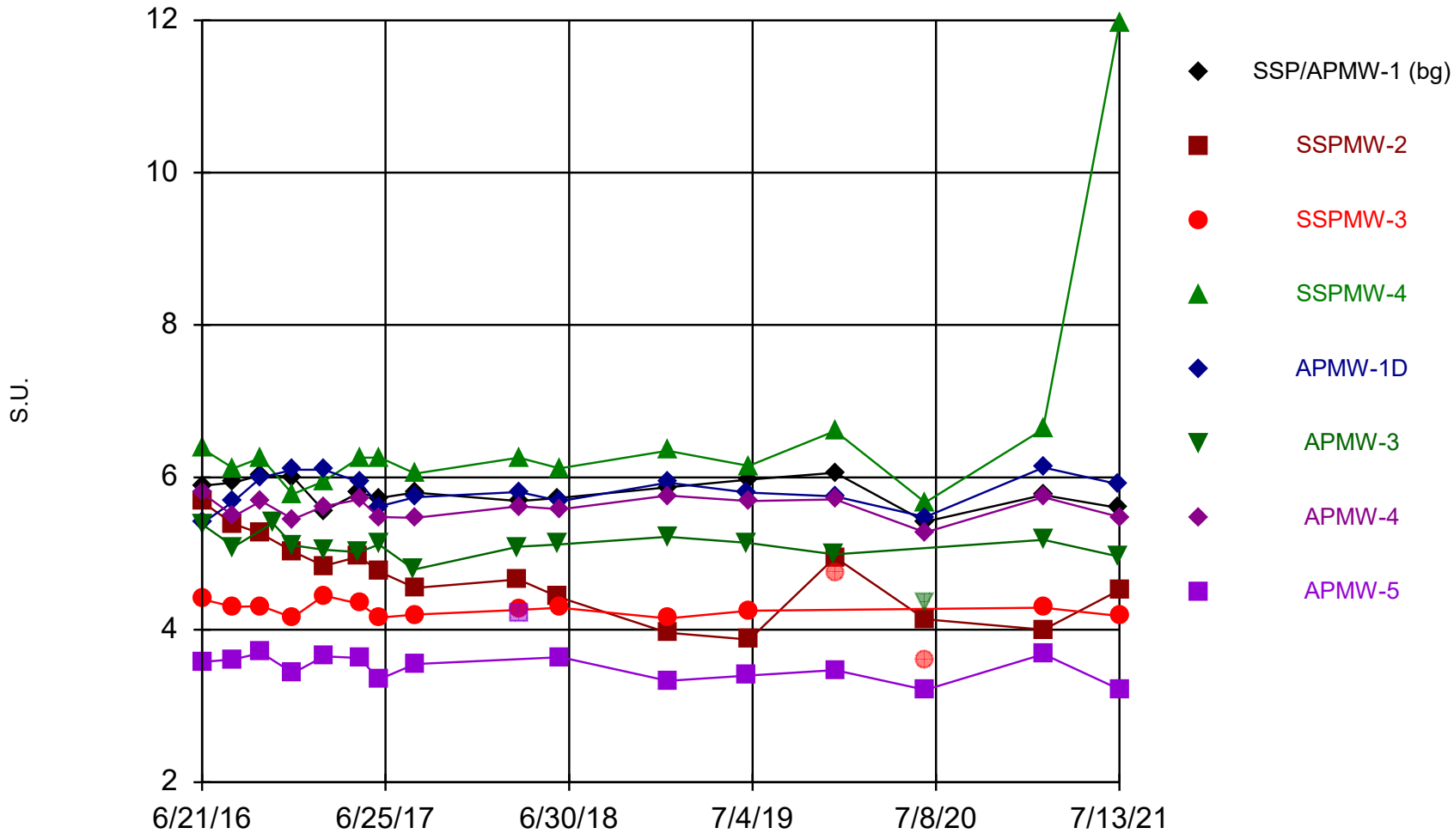
Time Series



Constituent: Molybdenum Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series



Constituent: pH Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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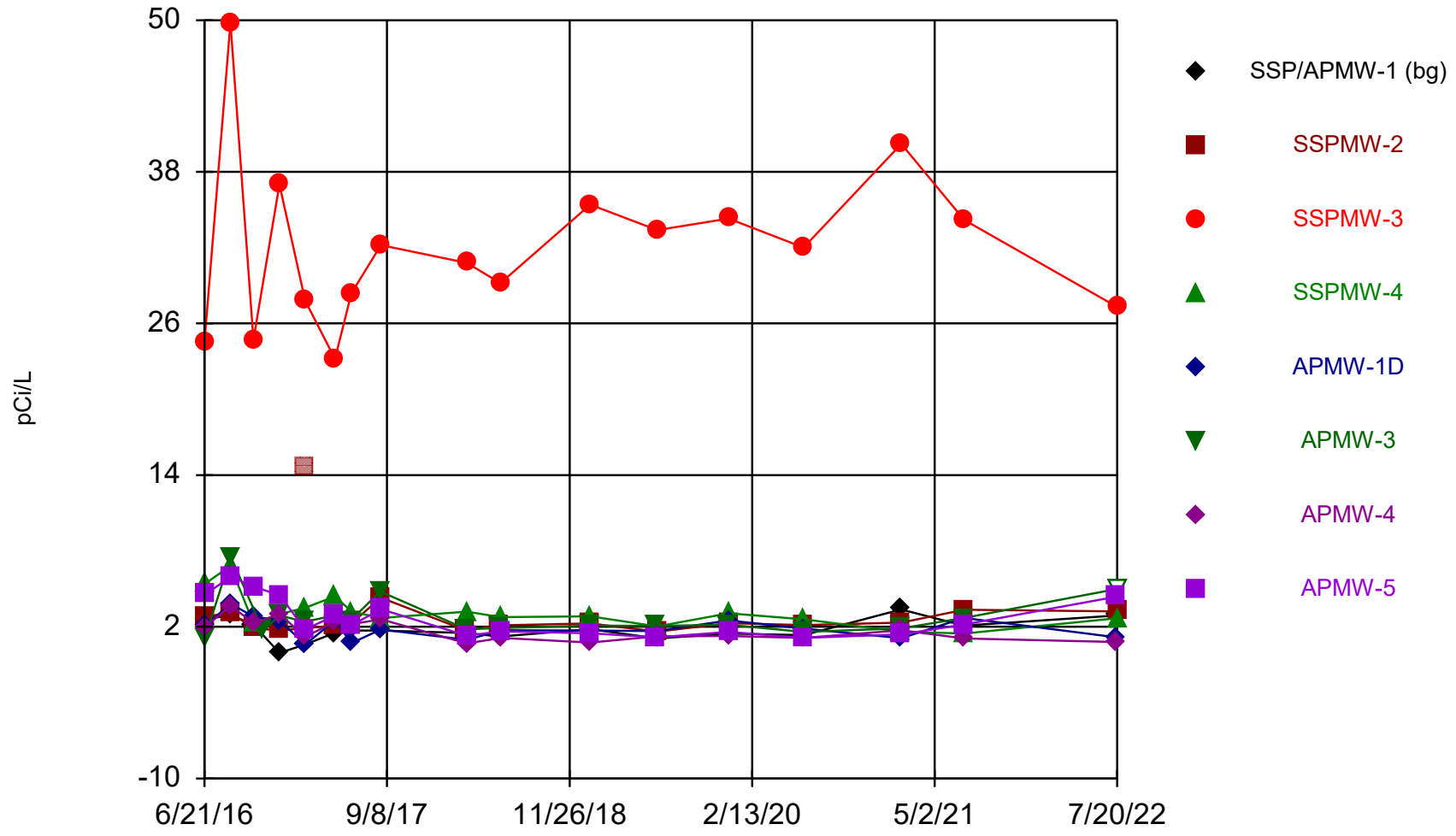
Hollow symbols indicate censored values.

Time Series



Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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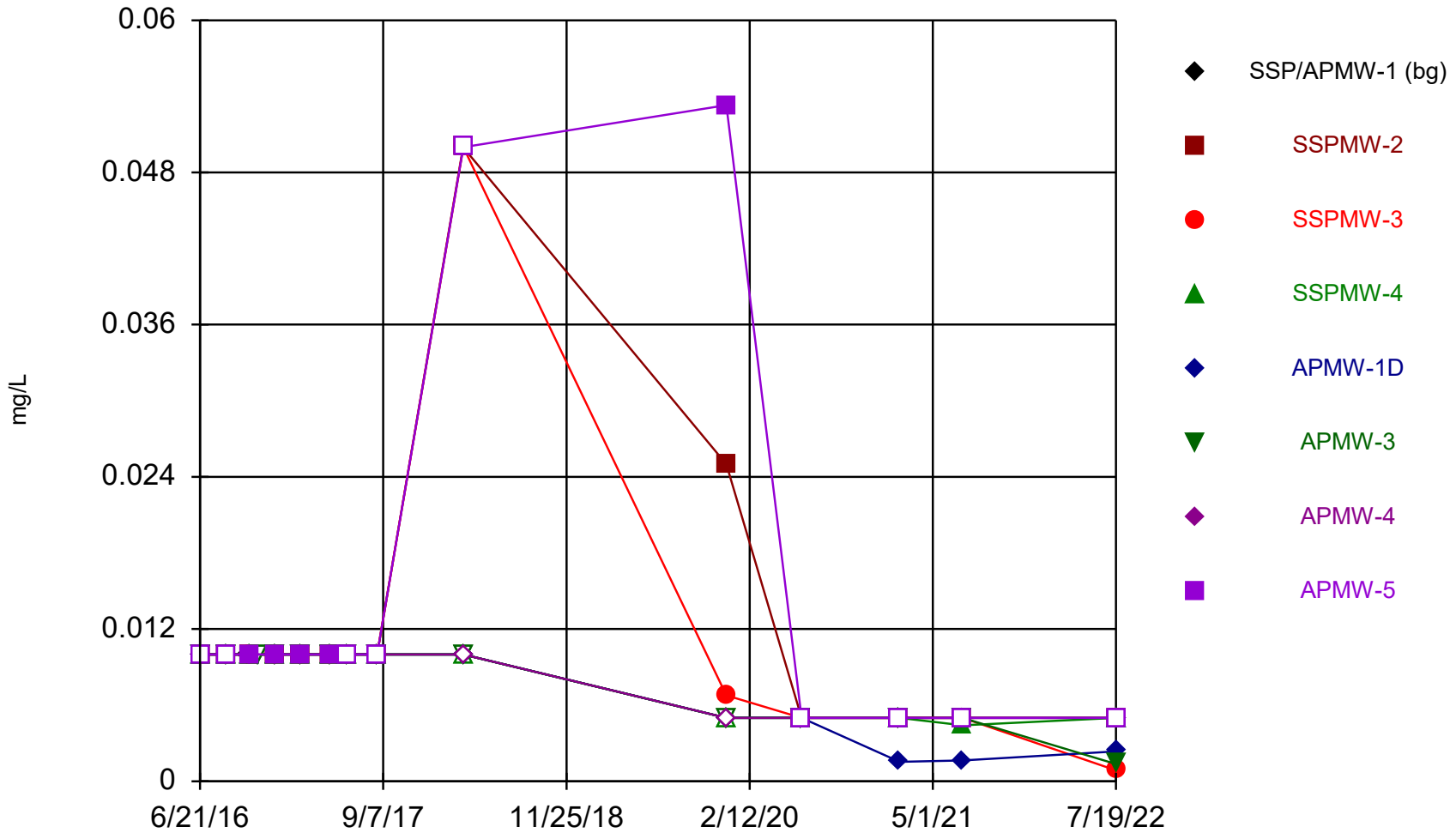
Hollow symbols indicate censored values.

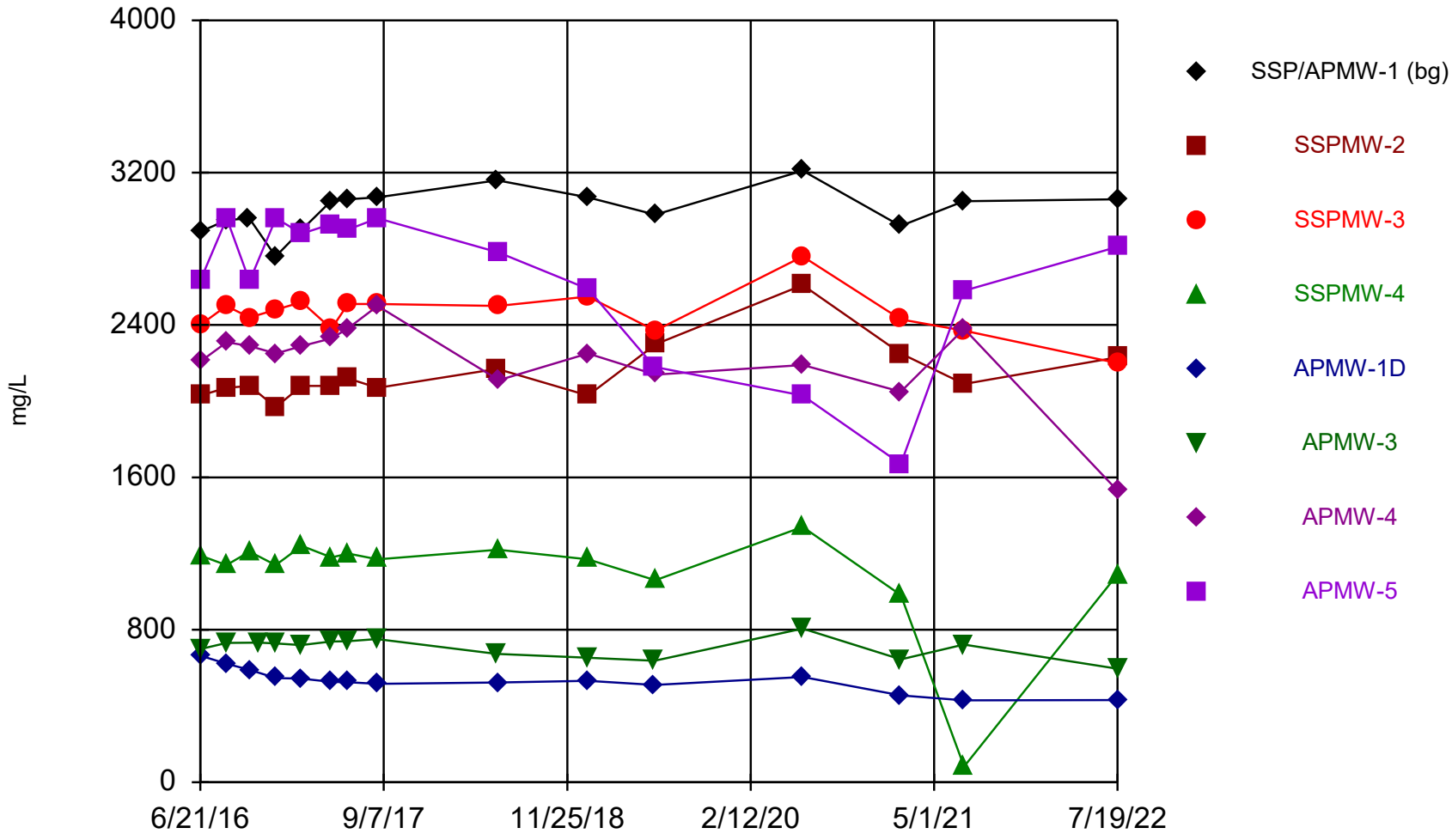
Time Series



Constituent: Selenium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

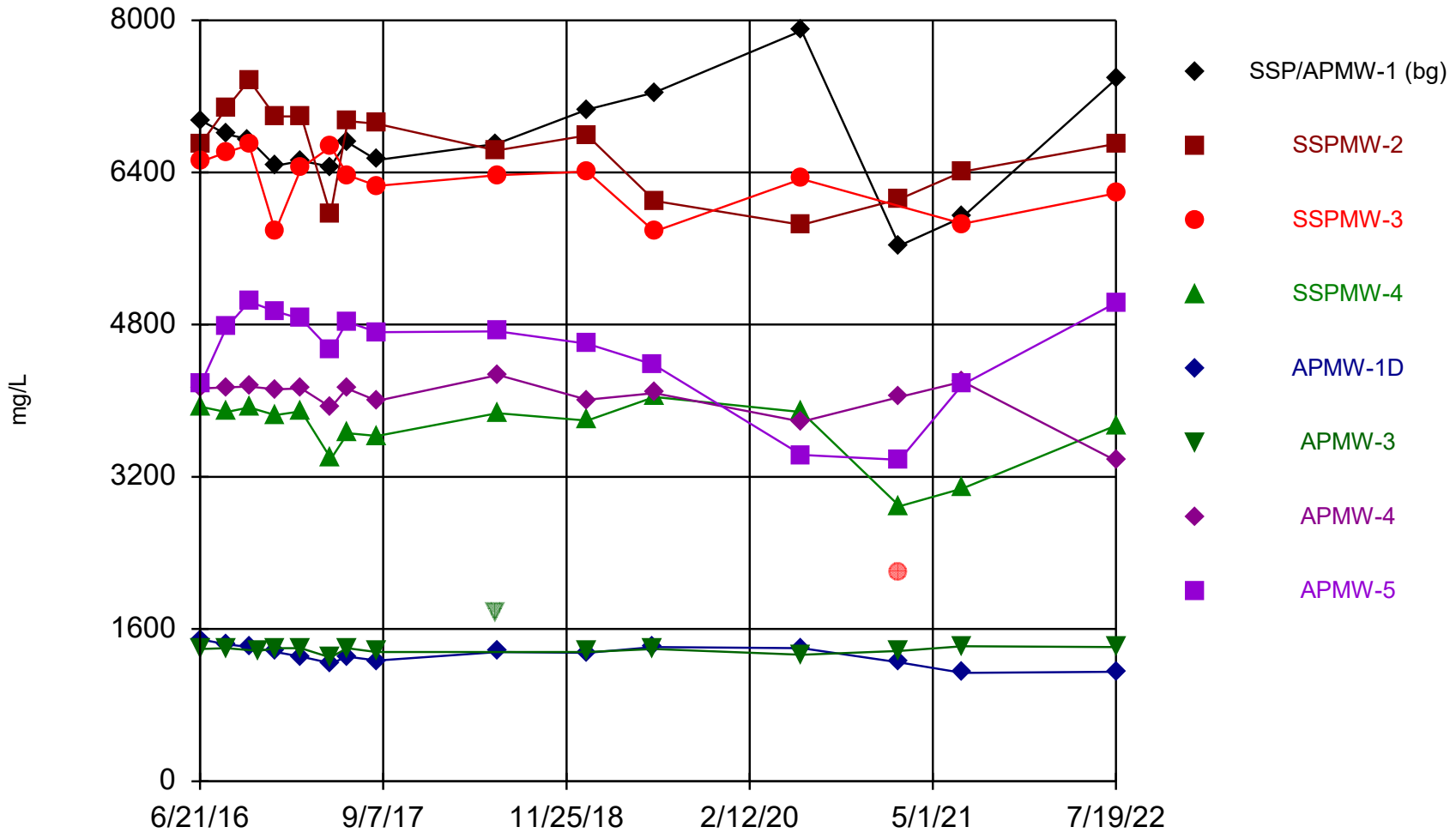
Time Series



Constituent: Sulfate Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

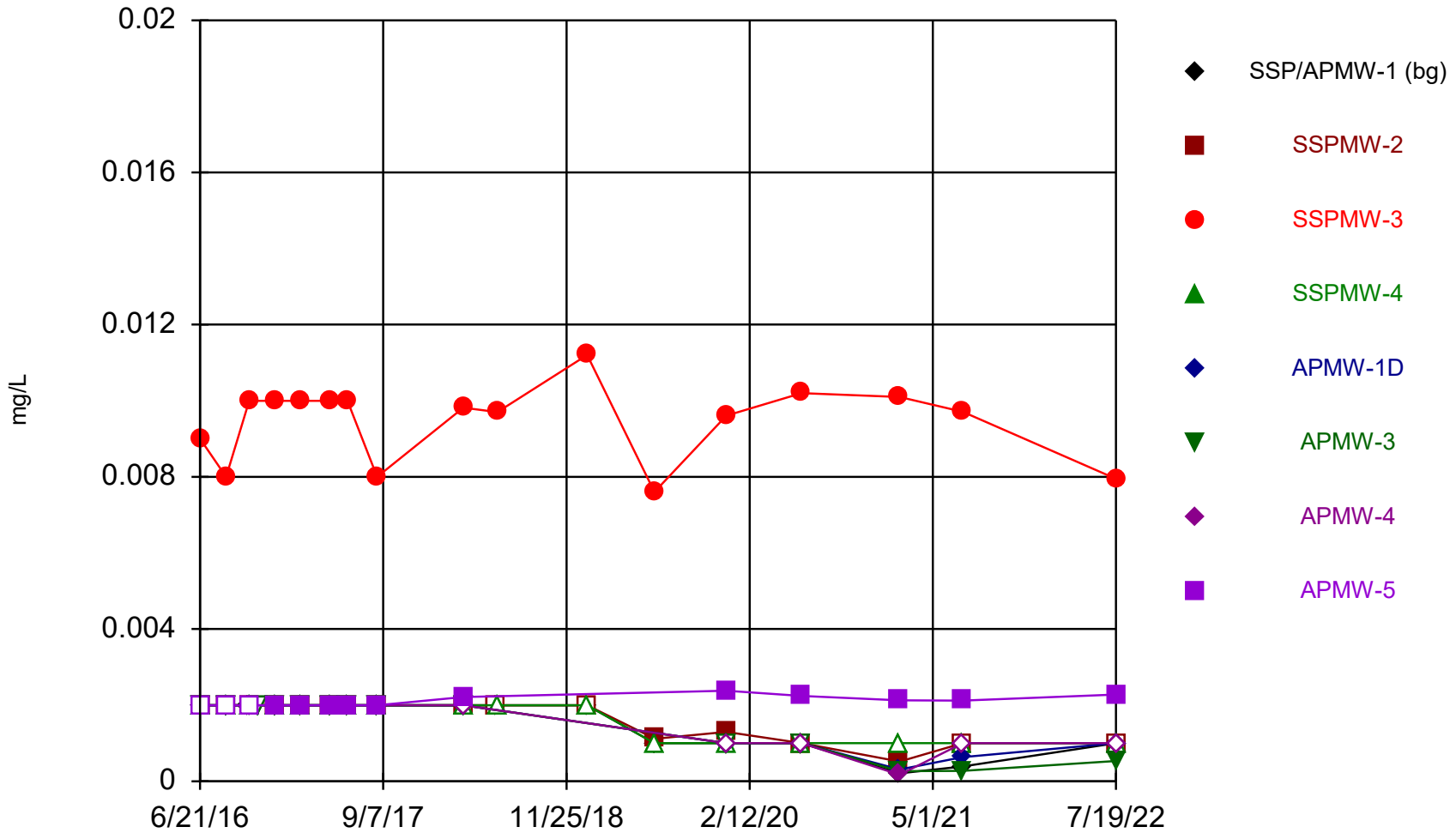


Constituent: TDS Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

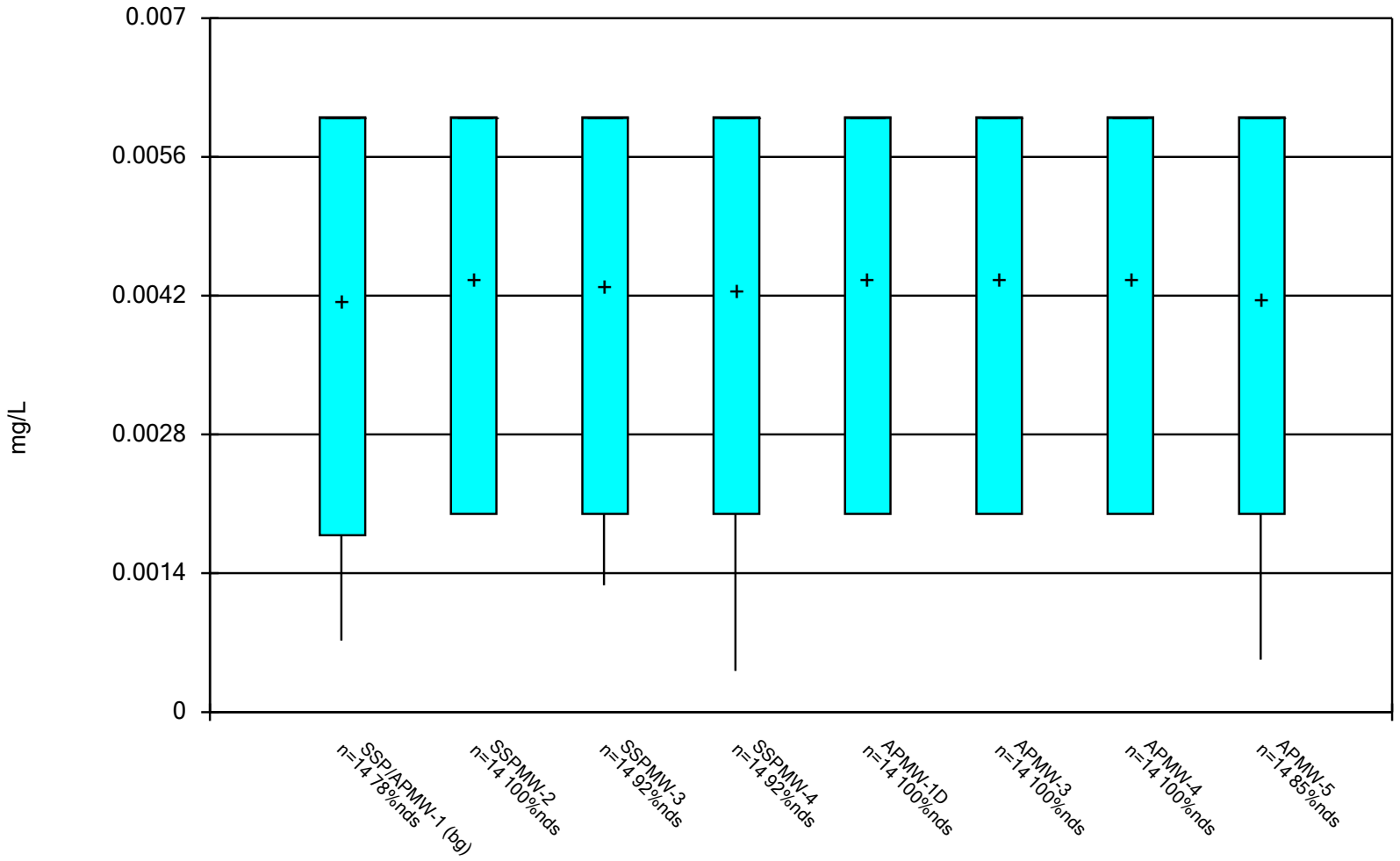
Time Series



Constituent: Thallium Analysis Run 10/19/2022 3:31 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

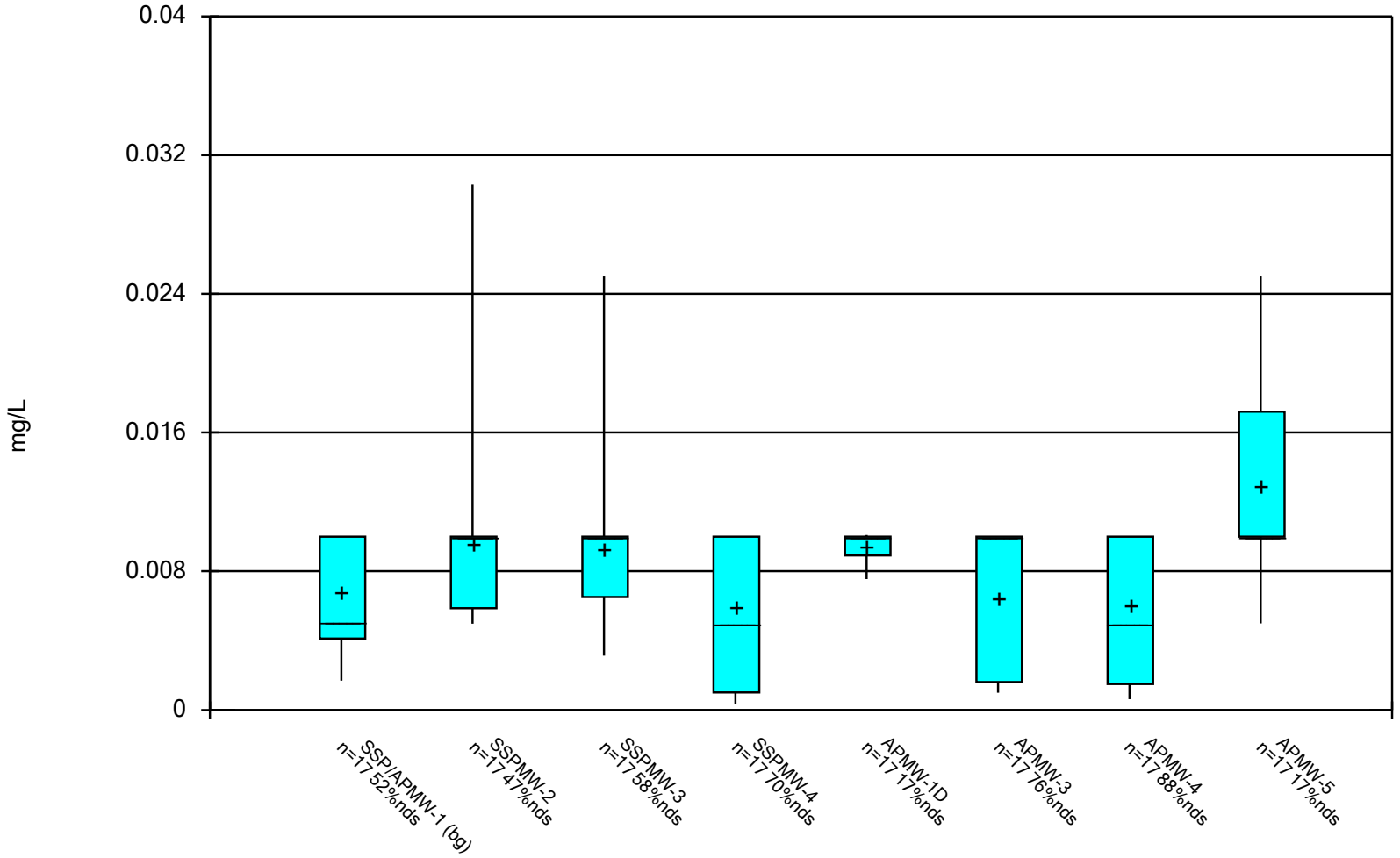
Box & Whiskers Plot



Constituent: Antimony Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

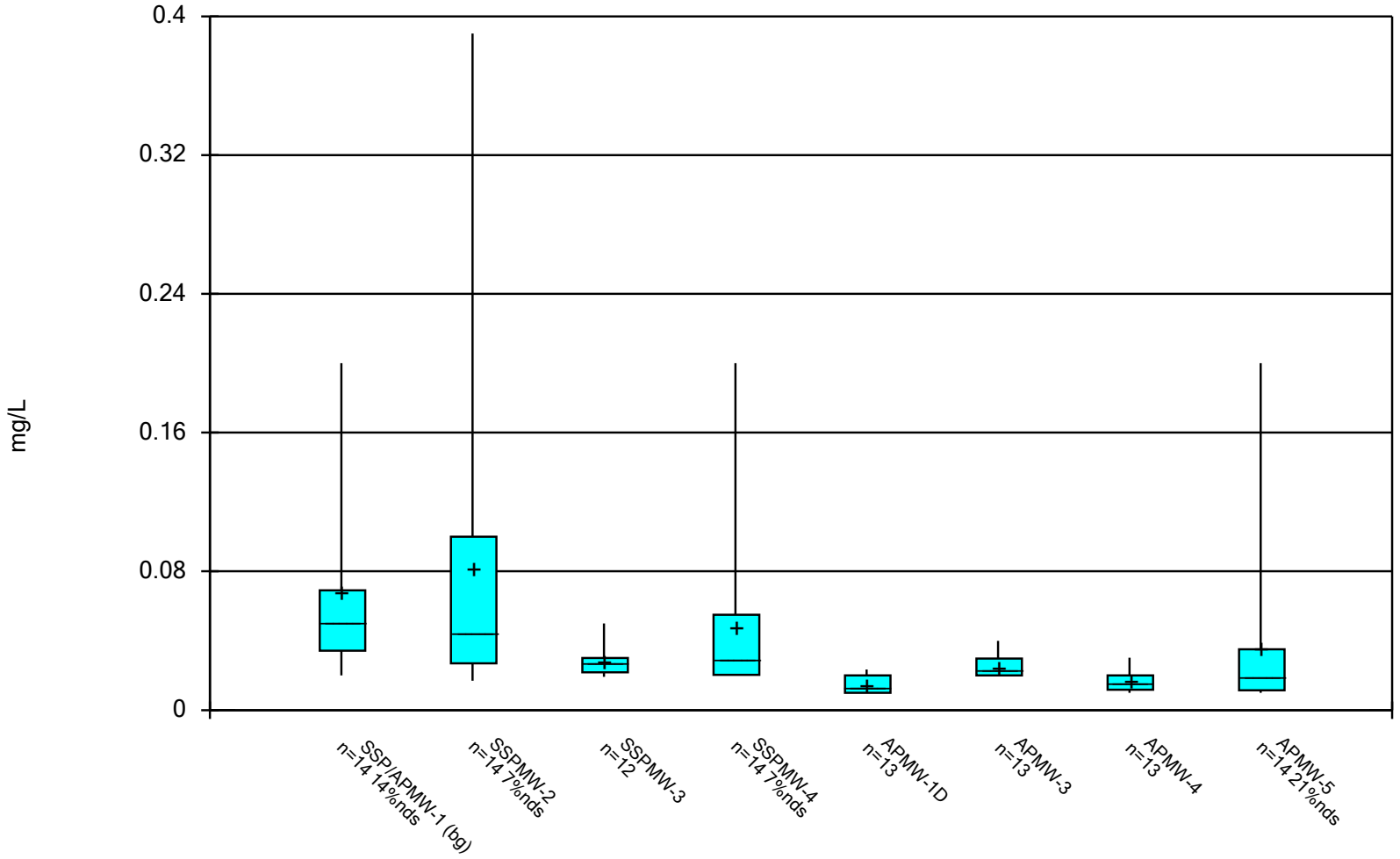
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

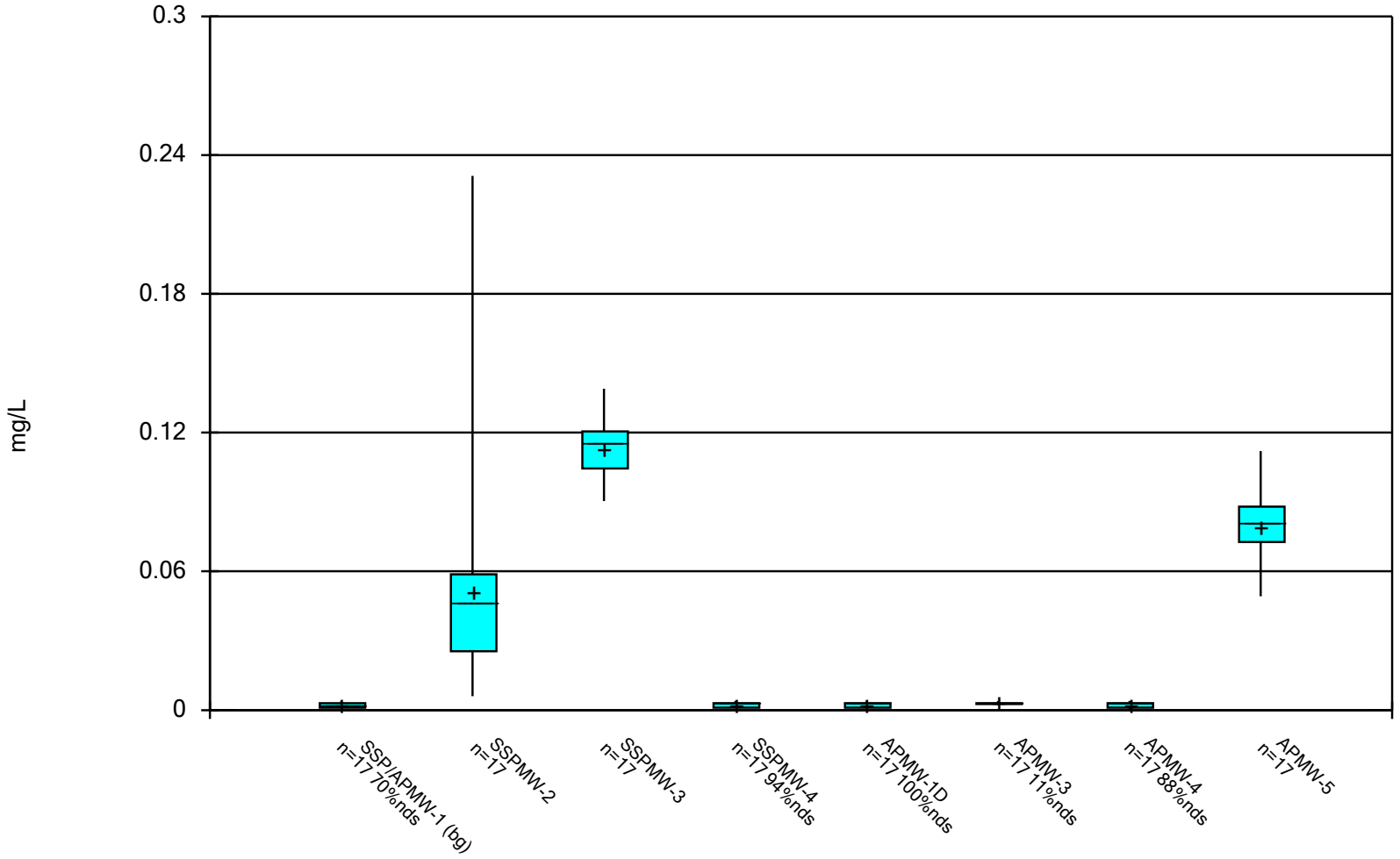
Box & Whiskers Plot



Constituent: Barium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

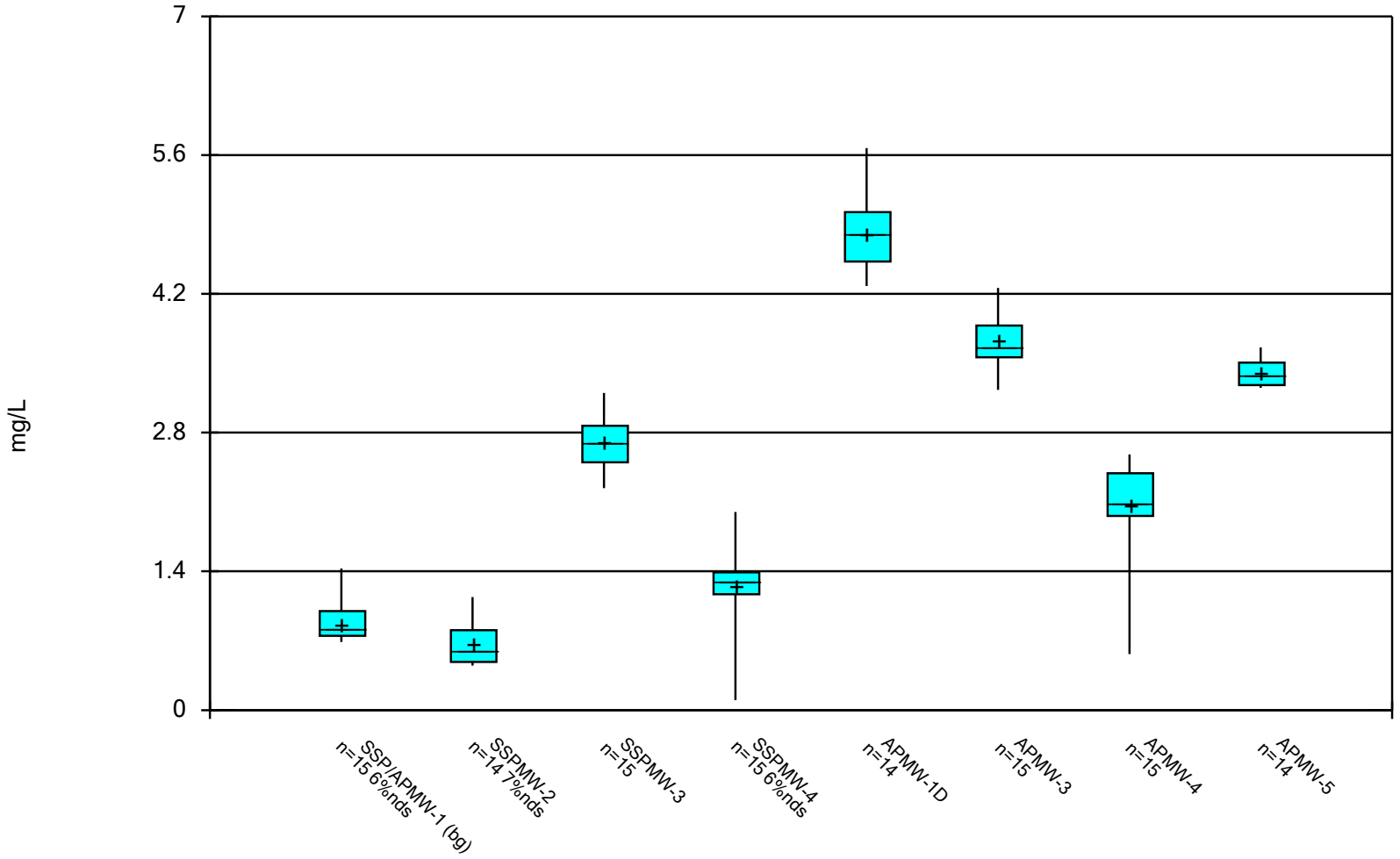
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

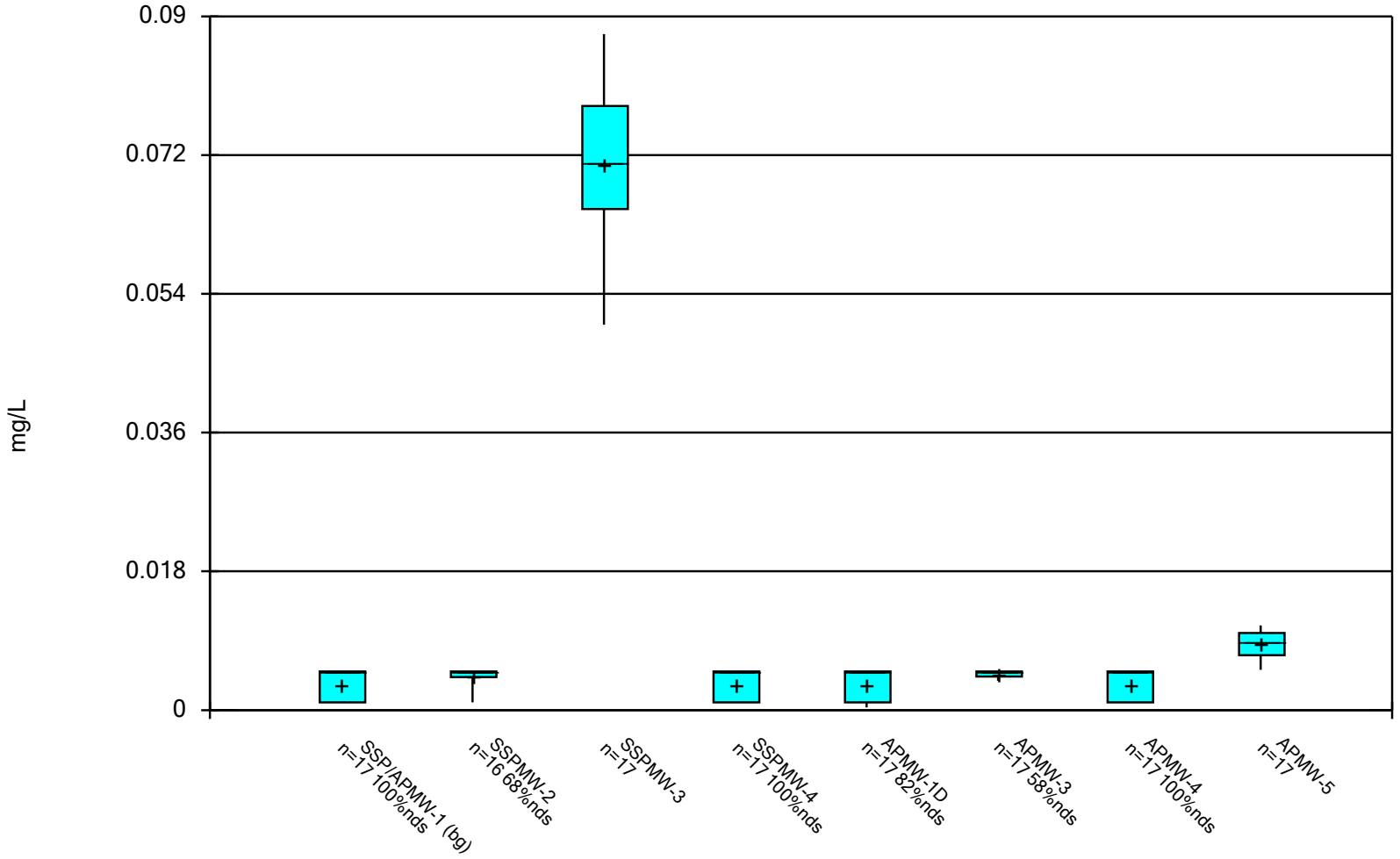
Box & Whiskers Plot



Constituent: Boron Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

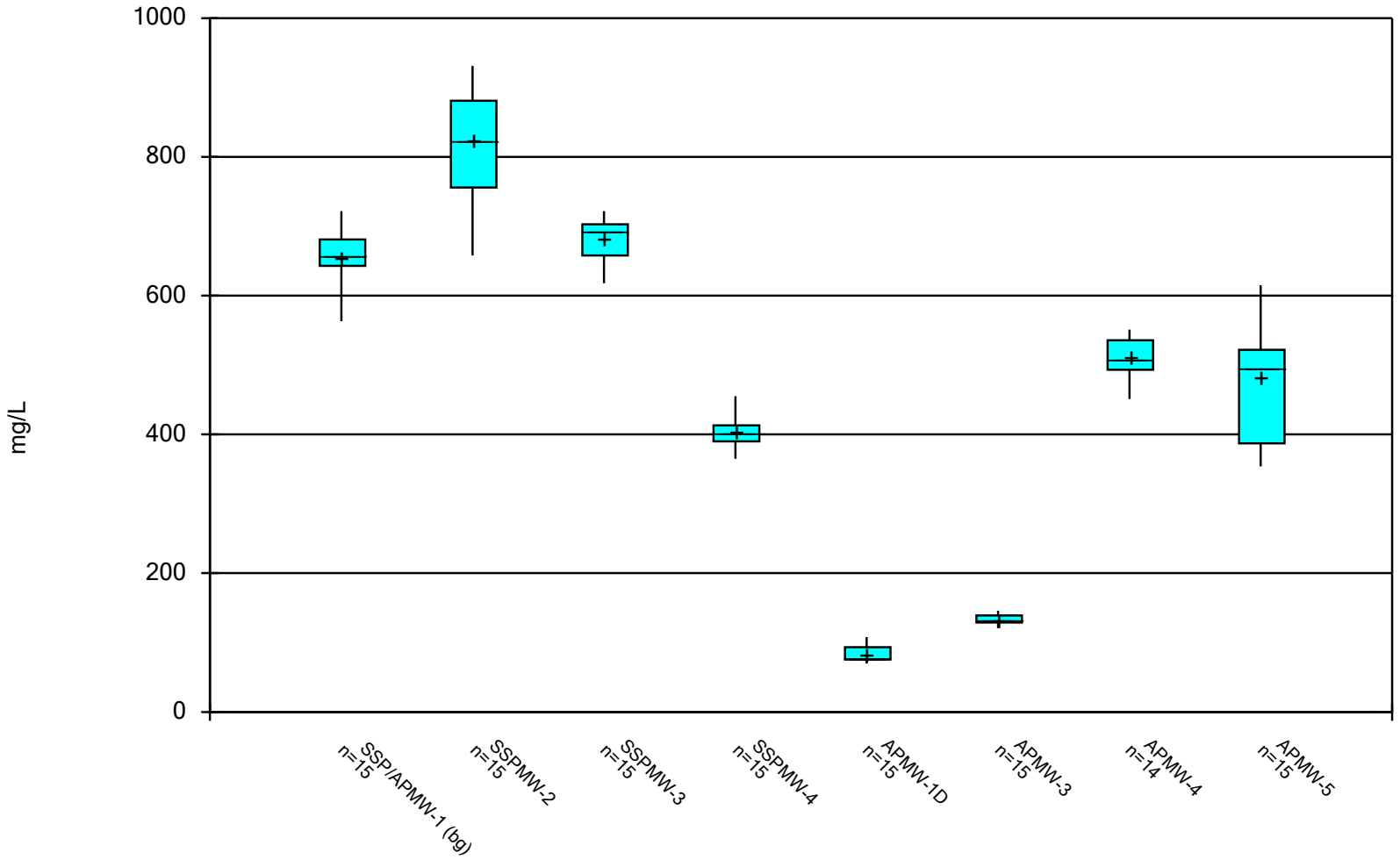
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

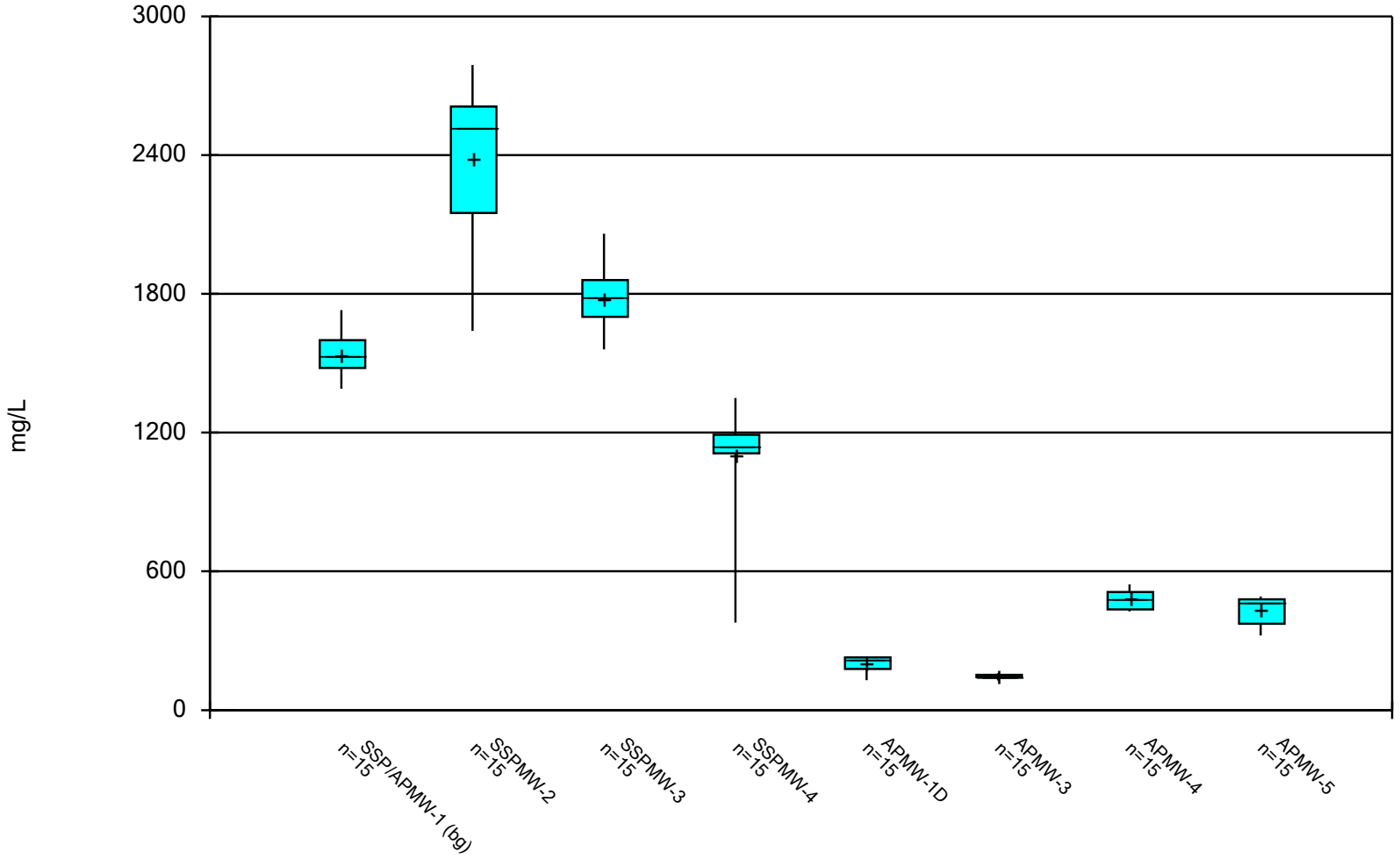
Box & Whiskers Plot



Constituent: Calcium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

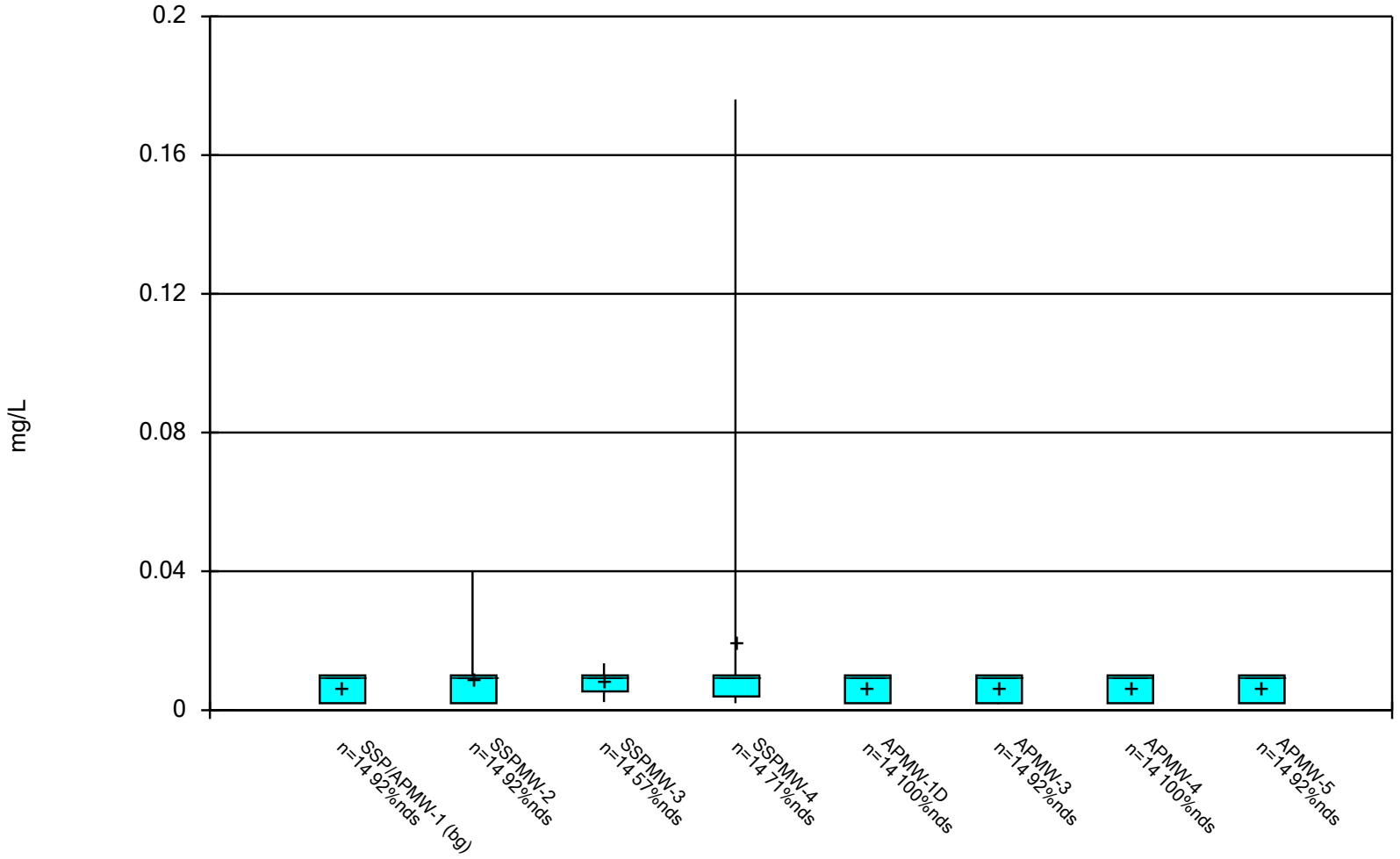
Box & Whiskers Plot



Constituent: Chloride Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

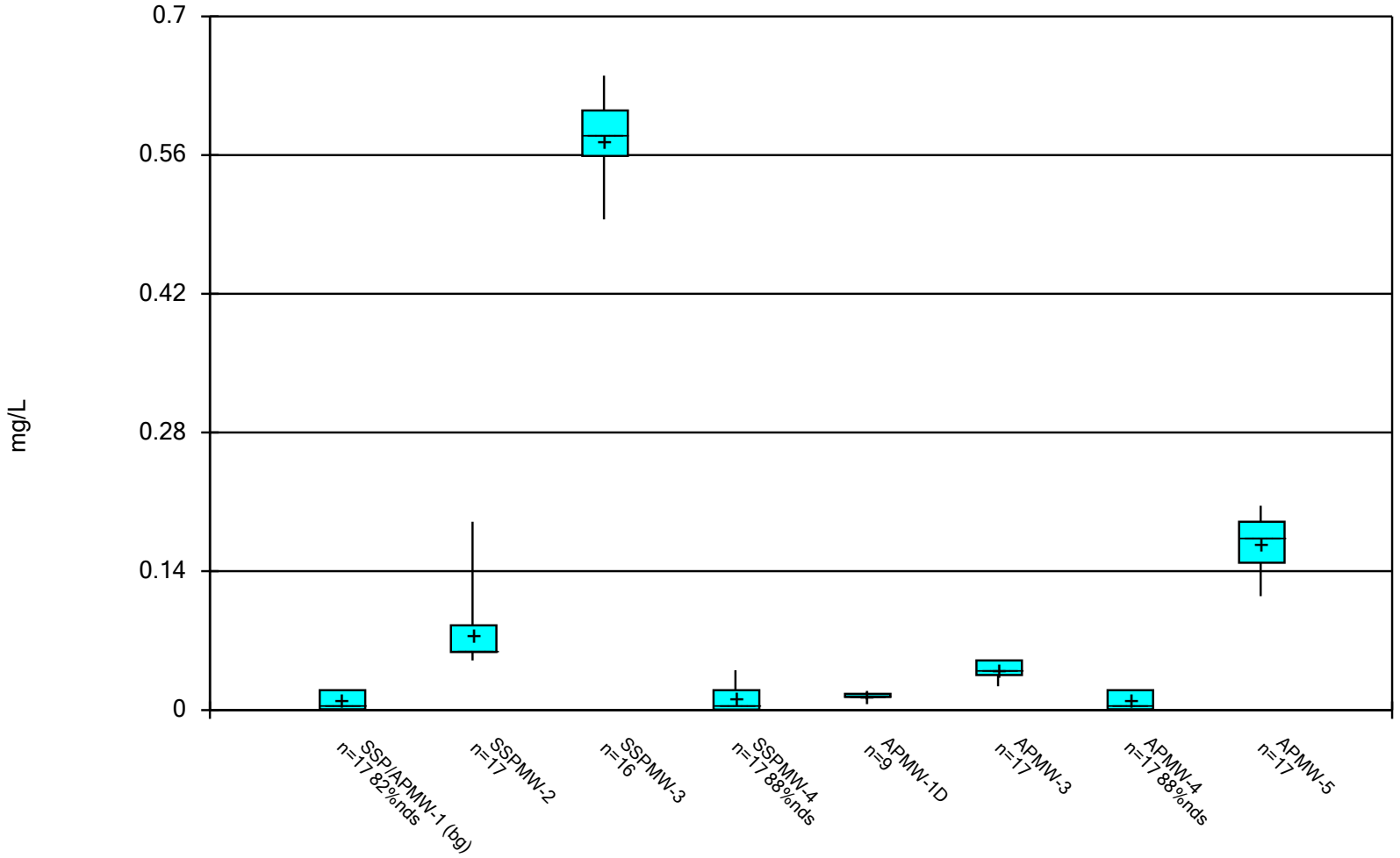
Box & Whiskers Plot



Constituent: Chromium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

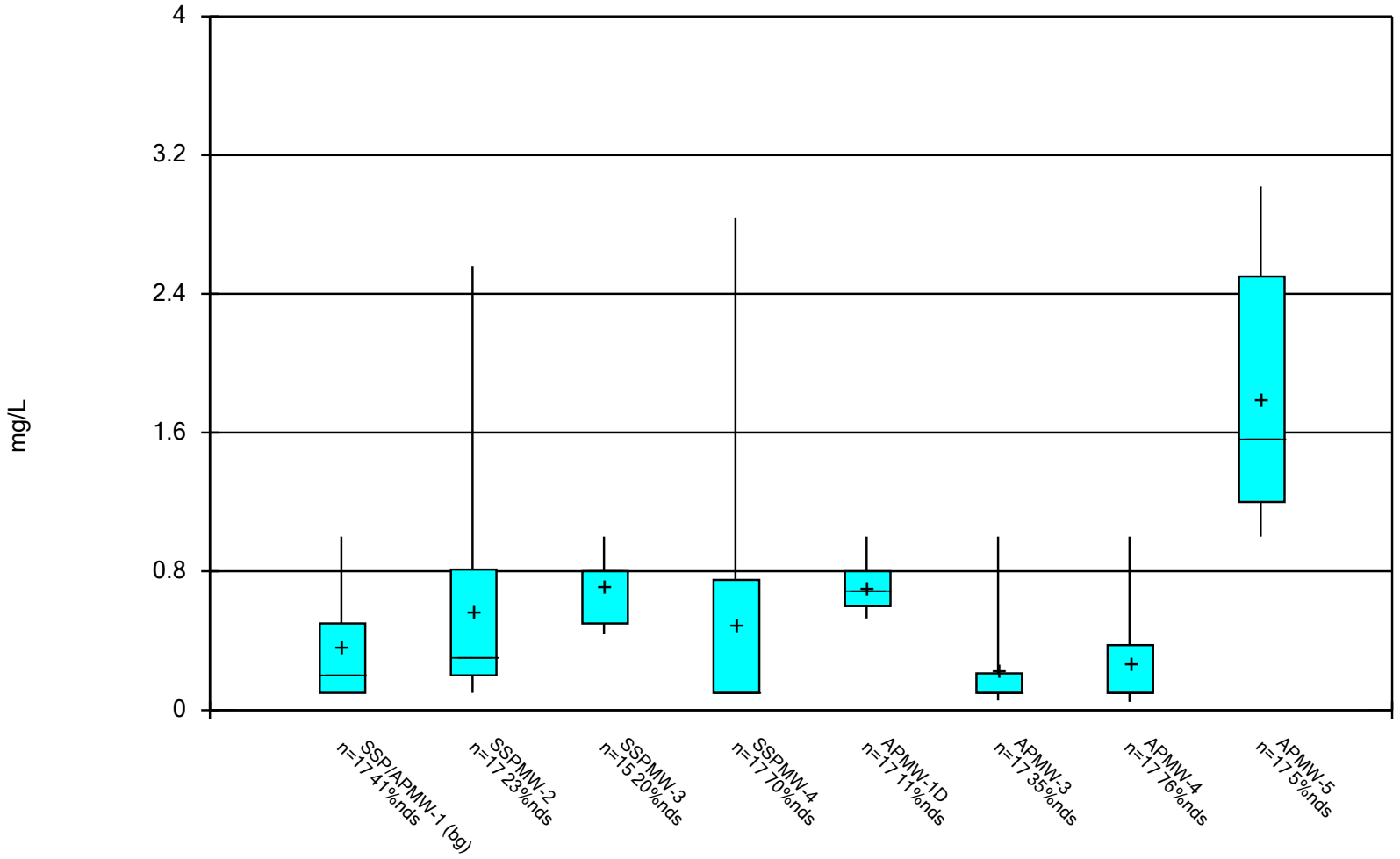
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

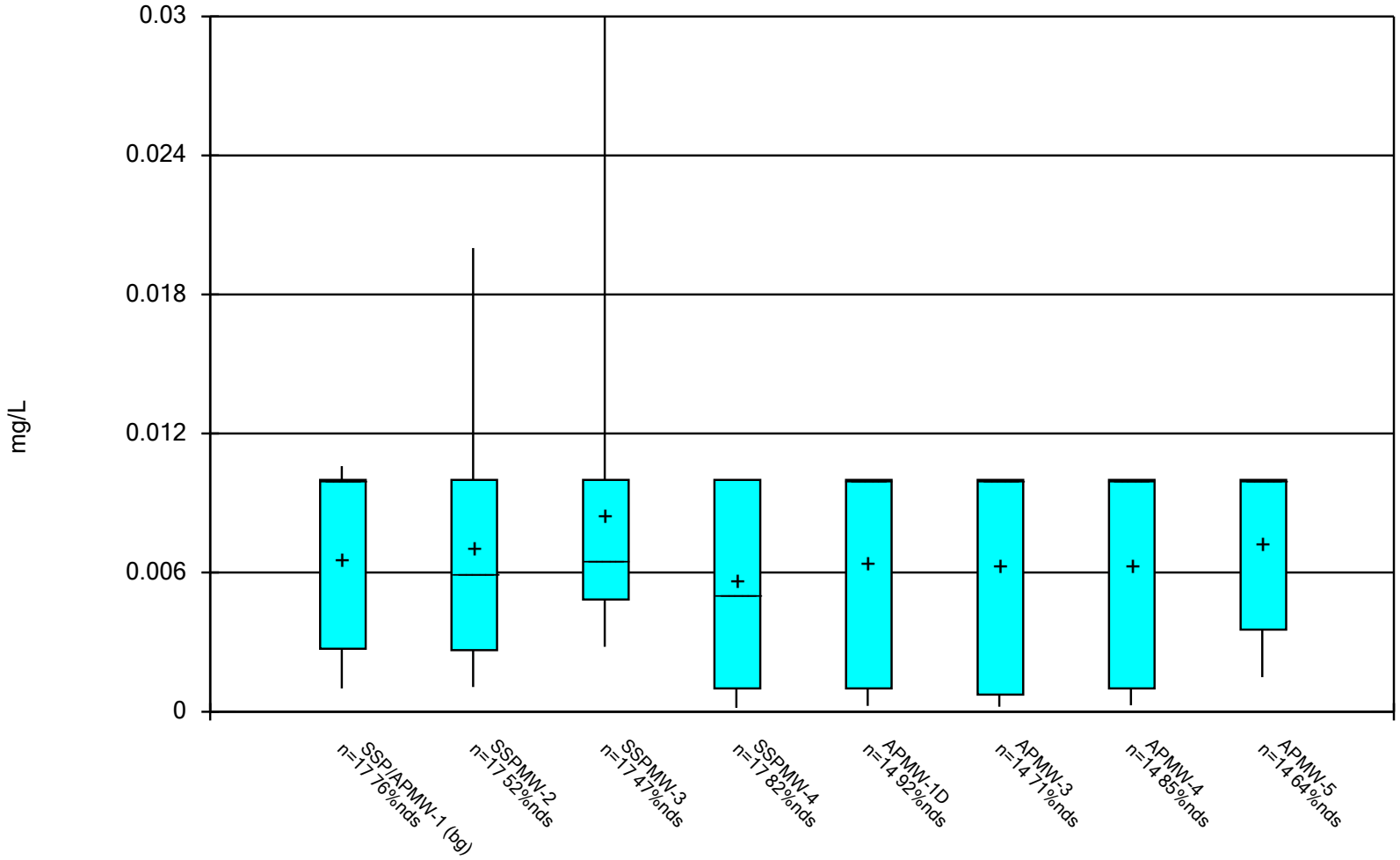
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

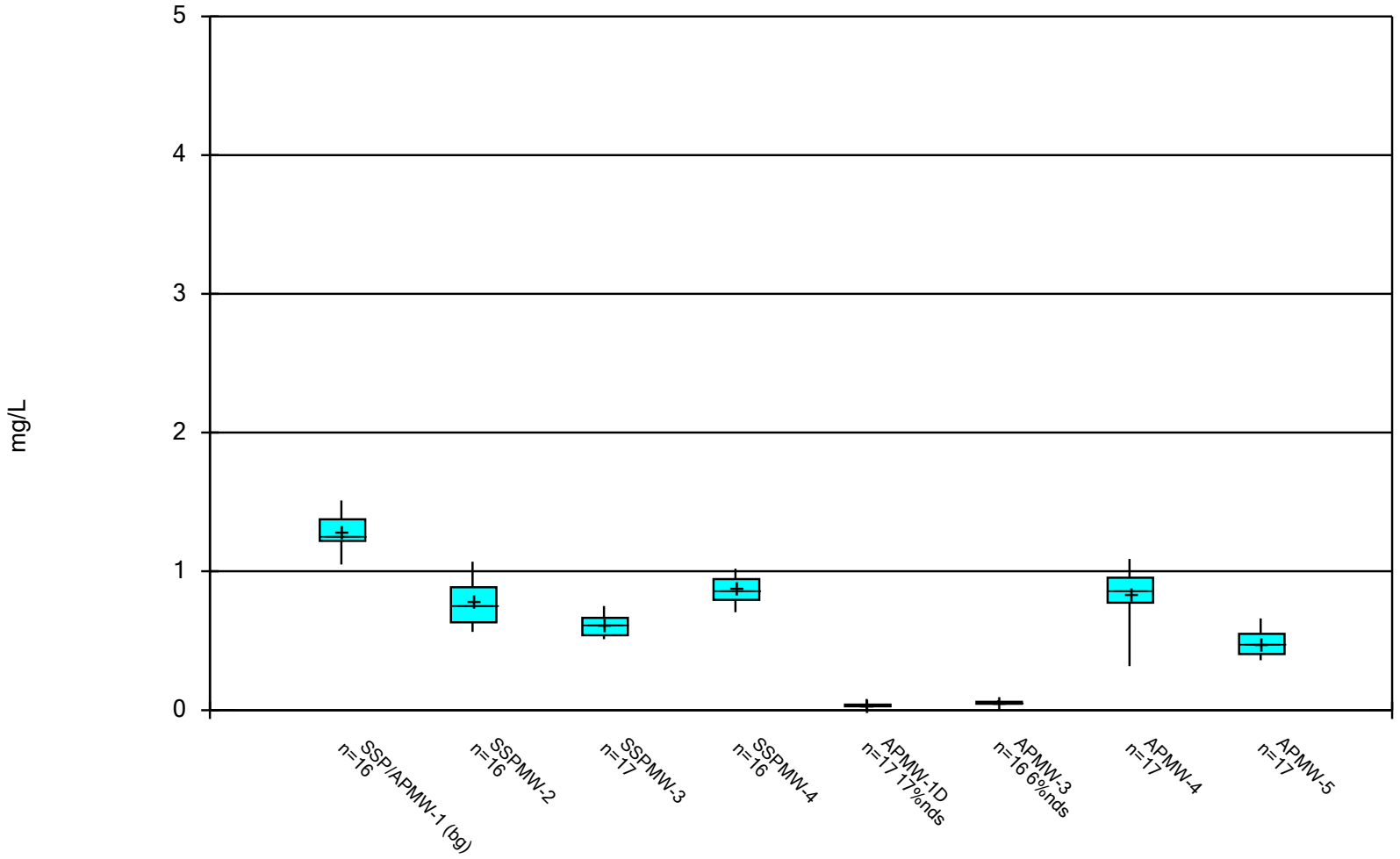
Box & Whiskers Plot



Constituent: Lead Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

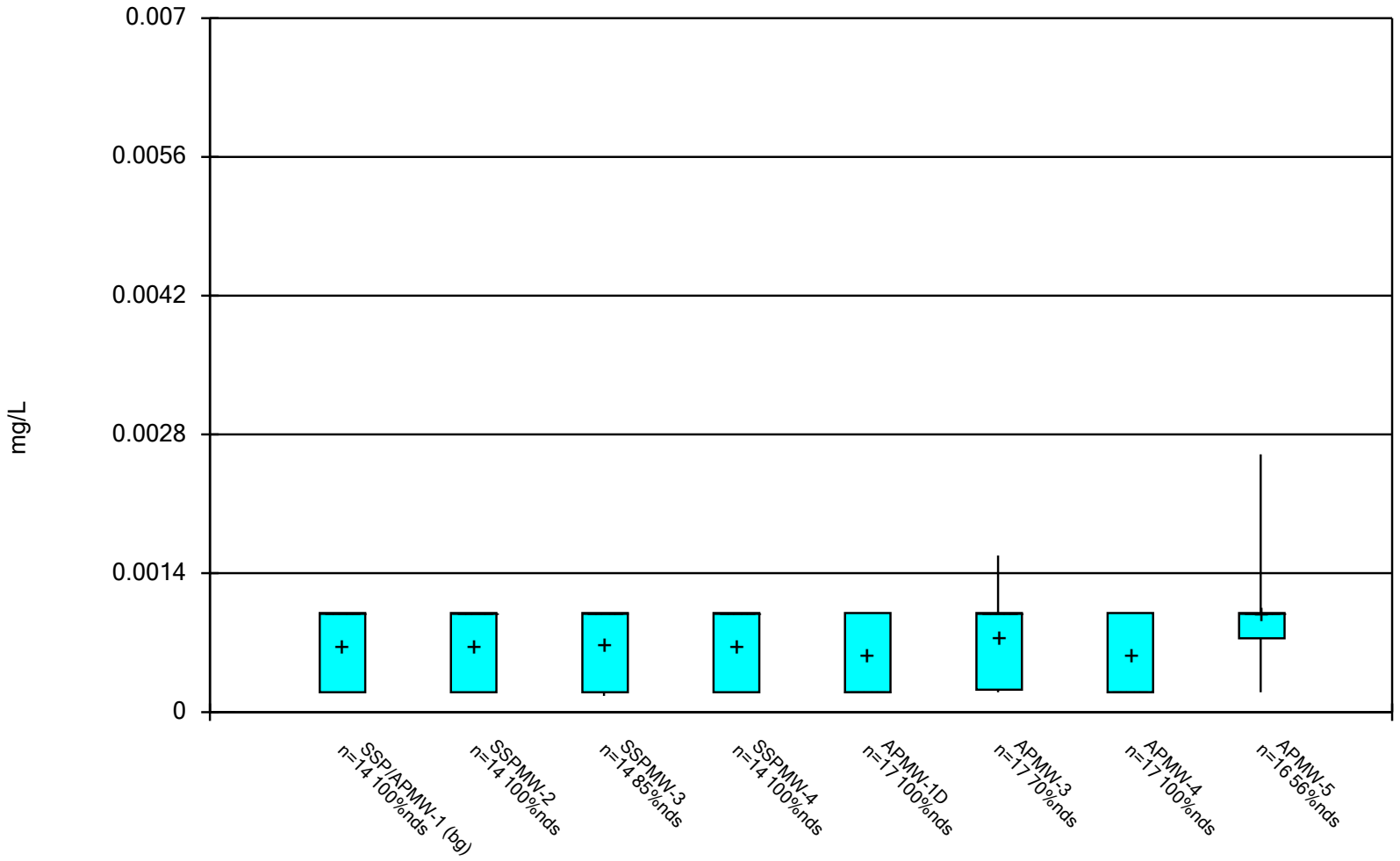
Box & Whiskers Plot



Constituent: Lithium Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

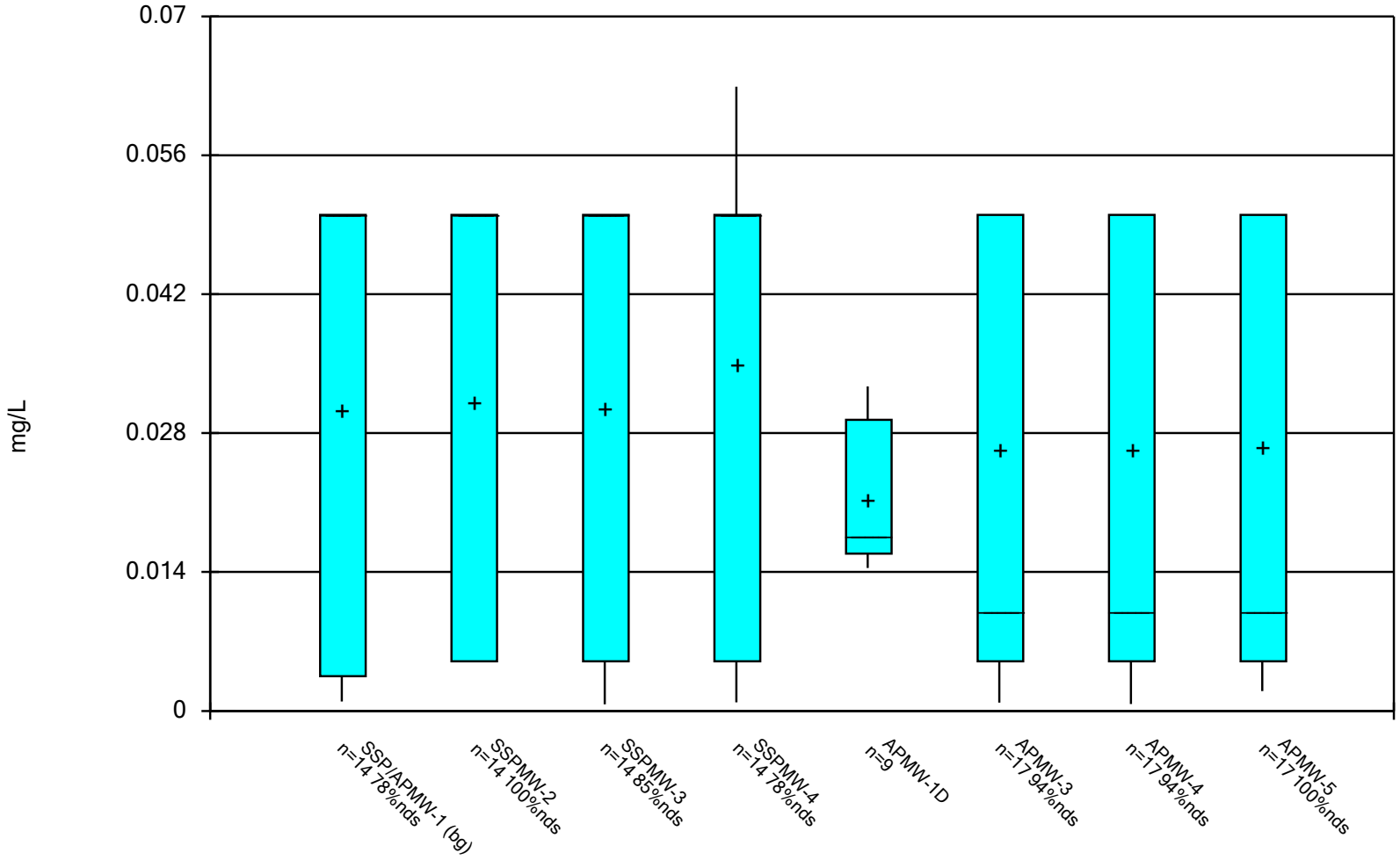
Box & Whiskers Plot



Constituent: Mercury Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

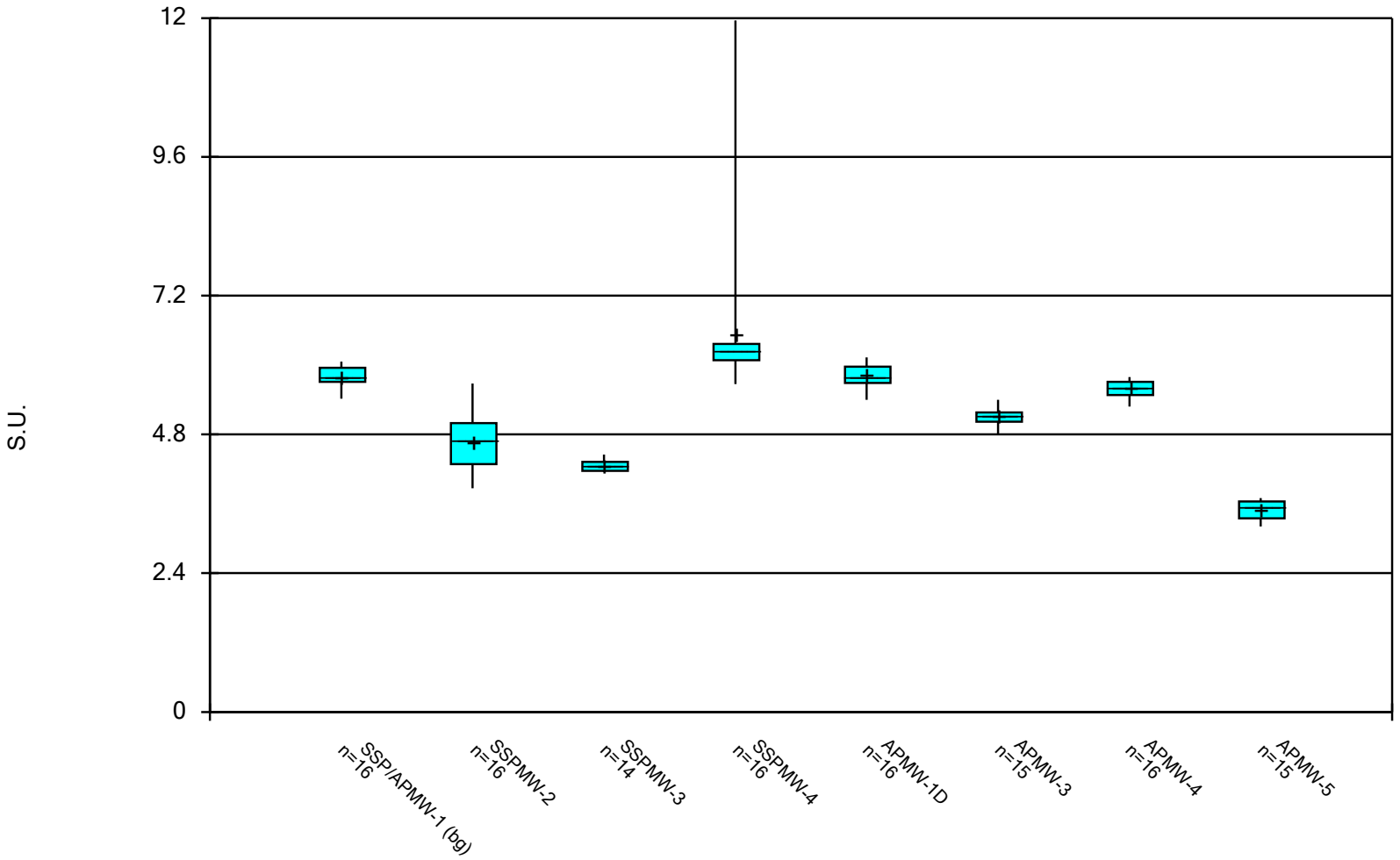
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

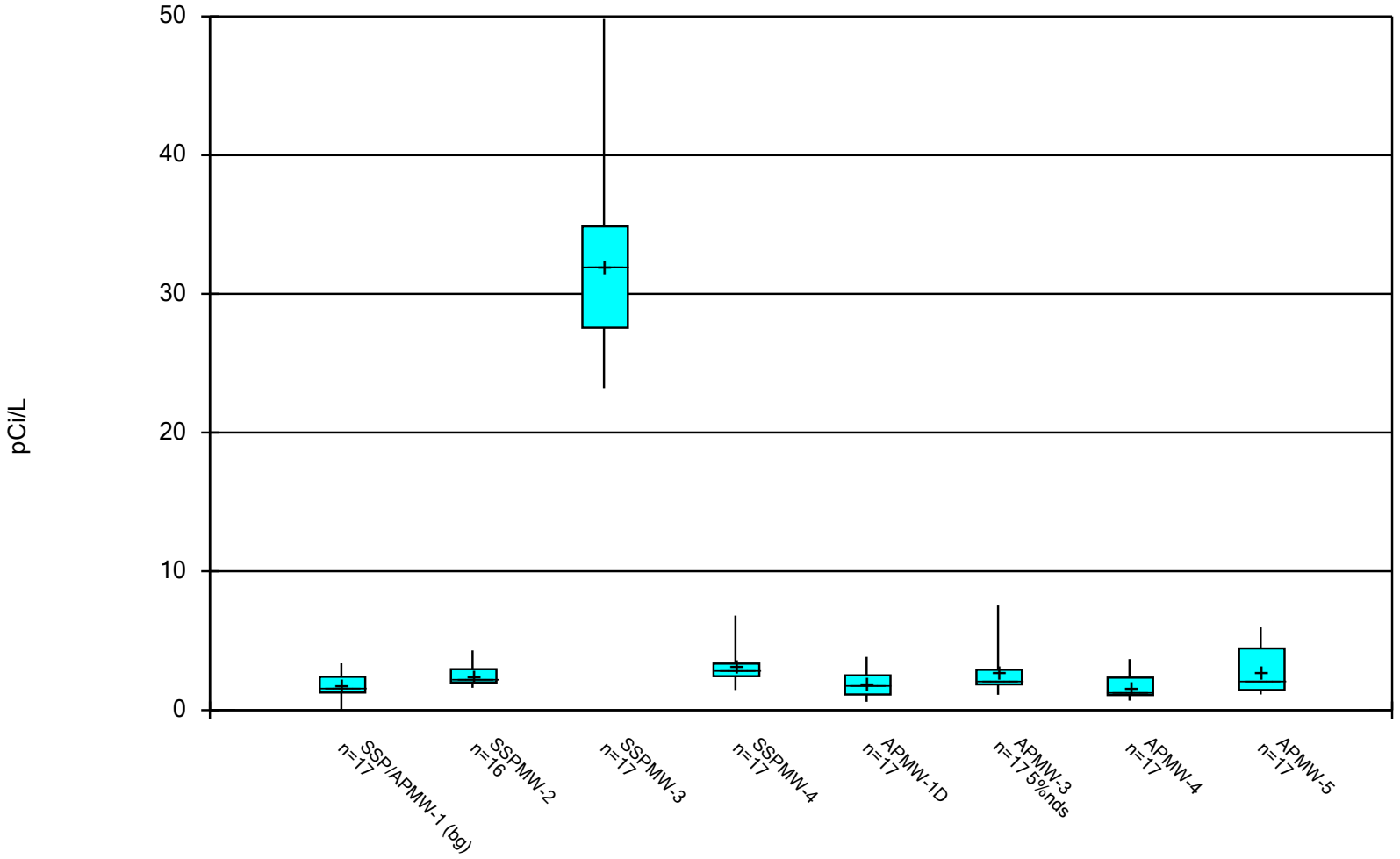
Box & Whiskers Plot



Constituent: pH Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

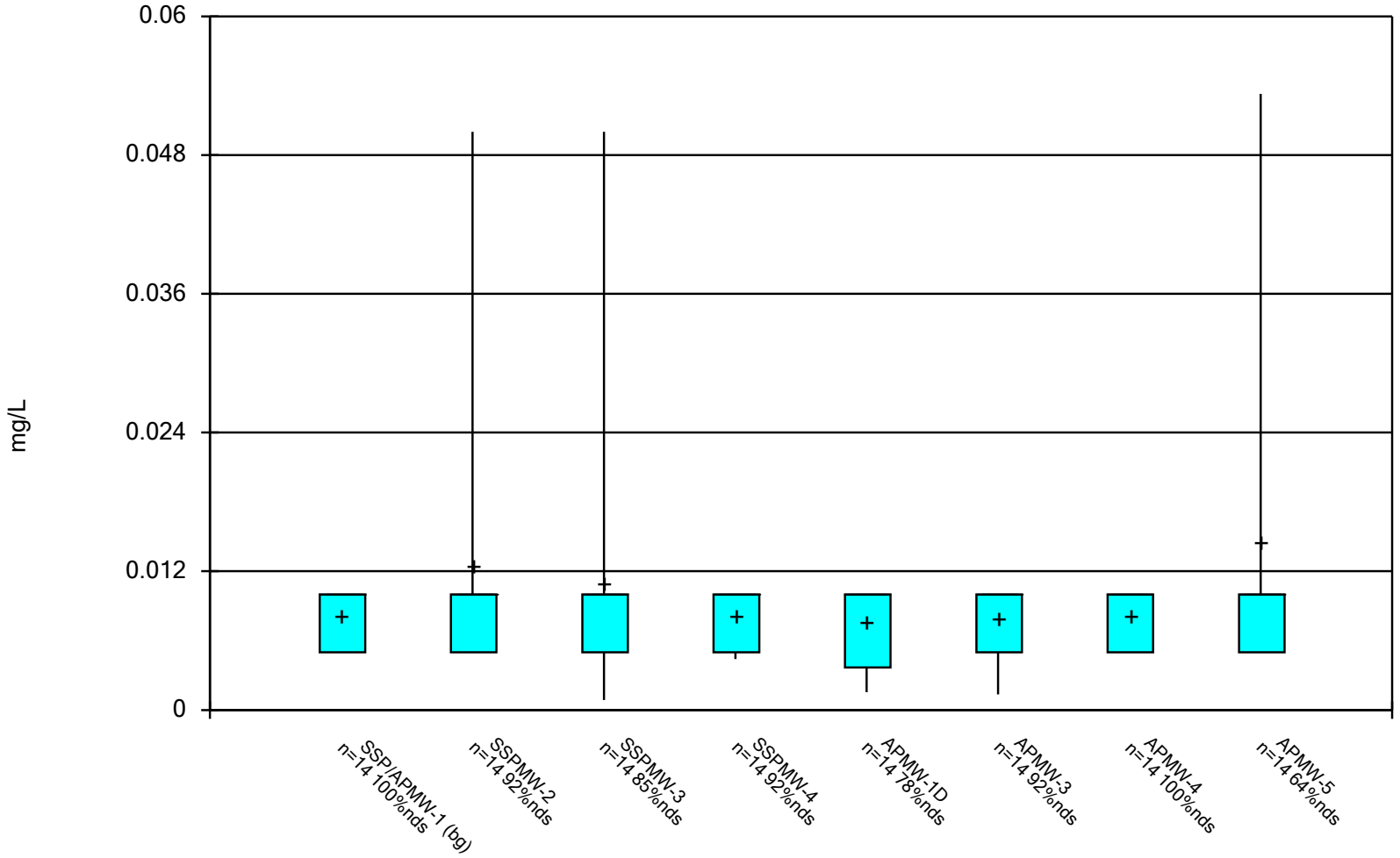
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:32 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

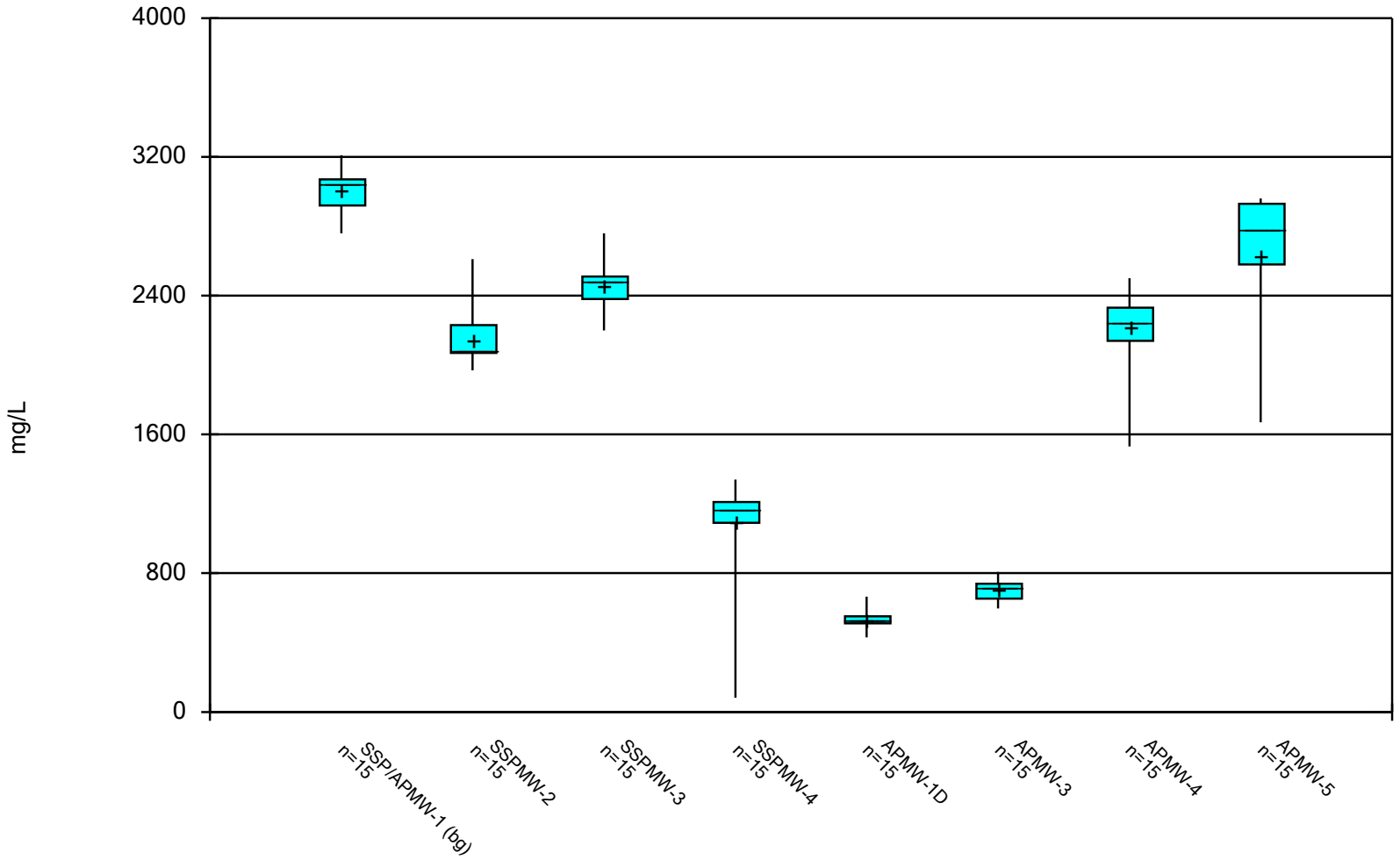
Box & Whiskers Plot



Constituent: Selenium Analysis Run 10/19/2022 3:33 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

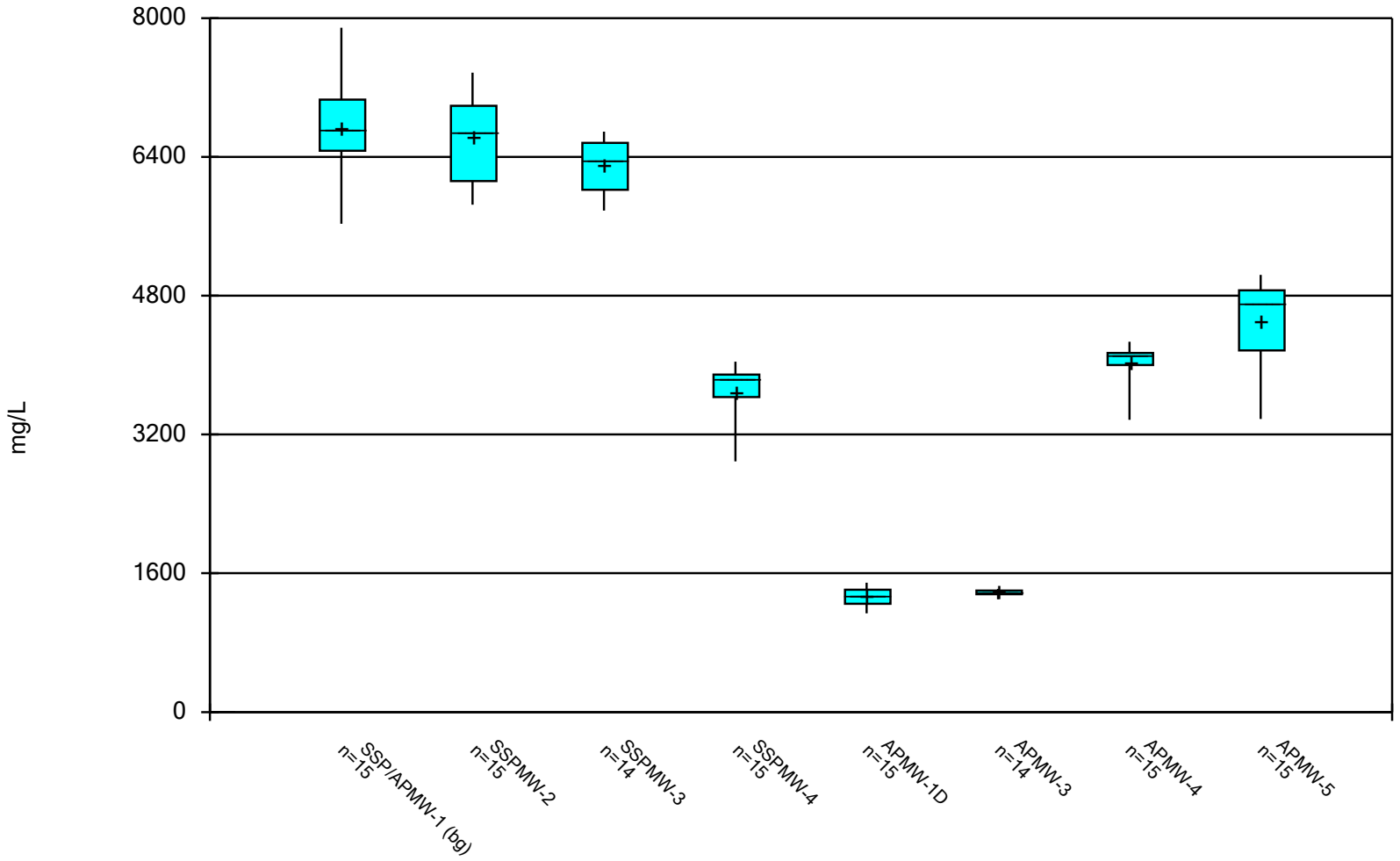
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 10/19/2022 3:33 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

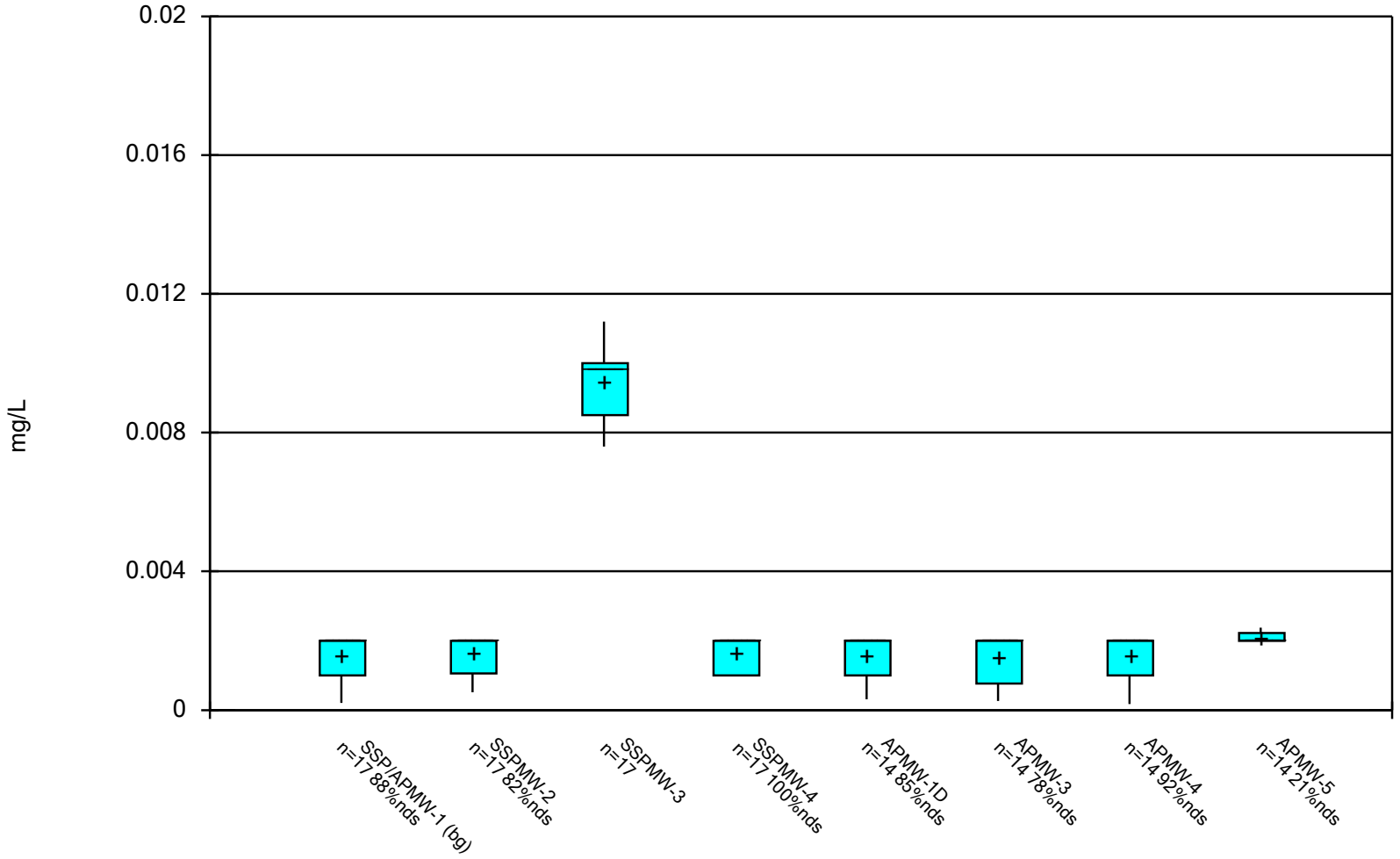
Box & Whiskers Plot



Constituent: TDS Analysis Run 10/19/2022 3:33 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 10/19/2022 3:33 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:33 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	SSP/APMW-...	14	0.004145	0.002288	0.0006114	0.006	0.000721	0.006	78.57
Antimony (mg/L)	SSPMW-2	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	SSPMW-3	14	0.004306	0.002059	0.0005502	0.006	0.00128	0.006	92.86
Antimony (mg/L)	SSPMW-4	14	0.004244	0.002167	0.000579	0.006	0.000415	0.006	92.86
Antimony (mg/L)	APMW-1D	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-3	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-4	14	0.004357	0.001985	0.0005305	0.006	0.002	0.006	100
Antimony (mg/L)	APMW-5	14	0.004157	0.002284	0.0006105	0.006	0.000529	0.006	85.71
Arsenic (mg/L)	SSP/APMW-...	17	0.006764	0.003285	0.0007967	0.00501	0.00169	0.01	52.94
Arsenic (mg/L)	SSPMW-2	17	0.009596	0.005742	0.001393	0.01	0.00498	0.0303	47.06
Arsenic (mg/L)	SSPMW-3	17	0.009283	0.004595	0.001115	0.01	0.00314	0.025	58.82
Arsenic (mg/L)	SSPMW-4	17	0.005952	0.004188	0.001016	0.005	0.000344	0.01	70.59
Arsenic (mg/L)	APMW-1D	17	0.009428	0.0007682	0.0001863	0.01	0.00756	0.0101	17.65
Arsenic (mg/L)	APMW-3	17	0.006401	0.004086	0.000991	0.01	0.001	0.01	76.47
Arsenic (mg/L)	APMW-4	17	0.006052	0.004068	0.0009867	0.005	0.000628	0.01	88.24
Arsenic (mg/L)	APMW-5	17	0.01296	0.005187	0.001258	0.01	0.005	0.025	17.65
Barium (mg/L)	SSP/APMW-...	14	0.06853	0.05459	0.01459	0.05	0.02	0.2	14.29
Barium (mg/L)	SSPMW-2	14	0.08218	0.1023	0.02733	0.04485	0.017	0.39	7.143
Barium (mg/L)	SSPMW-3	12	0.02823	0.009118	0.002632	0.02695	0.0192	0.05	0
Barium (mg/L)	SSPMW-4	14	0.04843	0.04905	0.01311	0.03	0.02	0.2	7.143
Barium (mg/L)	APMW-1D	13	0.01473	0.004814	0.001335	0.0137	0.01	0.0234	0
Barium (mg/L)	APMW-3	13	0.02478	0.006041	0.001675	0.0236	0.02	0.04	0
Barium (mg/L)	APMW-4	13	0.01748	0.006803	0.001887	0.0155	0.01	0.0302	0
Barium (mg/L)	APMW-5	14	0.03546	0.04899	0.01309	0.02	0.01	0.2	21.43
Beryllium (mg/L)	SSP/APMW-...	17	0.002193	0.001124	0.0002725	0.002	0.000706	0.004	70.59
Beryllium (mg/L)	SSPMW-2	17	0.05106	0.05043	0.01223	0.0461	0.006	0.231	0
Beryllium (mg/L)	SSPMW-3	17	0.1133	0.01145	0.002778	0.116	0.0904	0.139	0
Beryllium (mg/L)	SSPMW-4	17	0.002353	0.001115	0.0002704	0.003	0.001	0.004	94.12
Beryllium (mg/L)	APMW-1D	17	0.002353	0.001115	0.0002704	0.003	0.001	0.004	100
Beryllium (mg/L)	APMW-3	17	0.002934	0.0004961	0.0001203	0.003	0.002	0.004	11.76
Beryllium (mg/L)	APMW-4	17	0.002273	0.001235	0.0002995	0.003	0.000204	0.004	88.24
Beryllium (mg/L)	APMW-5	17	0.07897	0.01534	0.003721	0.081	0.0492	0.112	0
Boron (mg/L)	SSP/APMW-...	15	0.8743	0.1957	0.05053	0.81	0.686	1.43	6.667
Boron (mg/L)	SSPMW-2	14	0.6714	0.2101	0.05614	0.6	0.45	1.14	7.143
Boron (mg/L)	SSPMW-3	15	2.699	0.2514	0.0649	2.7	2.24	3.2	0
Boron (mg/L)	SSPMW-4	15	1.267	0.3844	0.09924	1.3	0.102	2	6.667
Boron (mg/L)	APMW-1D	14	4.804	0.3638	0.09723	4.805	4.28	5.67	0
Boron (mg/L)	APMW-3	15	3.734	0.28	0.0723	3.67	3.23	4.26	0
Boron (mg/L)	APMW-4	15	2.062	0.4608	0.119	2.1	0.566	2.58	0
Boron (mg/L)	APMW-5	14	3.393	0.1258	0.03363	3.38	3.25	3.66	0
Cadmium (mg/L)	SSP/APMW-...	17	0.003353	0.002029	0.0004922	0.005	0.001	0.005	100
Cadmium (mg/L)	SSPMW-2	16	0.004262	0.001368	0.000342	0.005	0.001	0.005	68.75
Cadmium (mg/L)	SSPMW-3	17	0.07082	0.009648	0.00234	0.0711	0.05	0.0877	0
Cadmium (mg/L)	SSPMW-4	17	0.003353	0.002029	0.0004922	0.005	0.001	0.005	100
Cadmium (mg/L)	APMW-1D	17	0.00325	0.002165	0.000525	0.005	0.000343	0.005	82.35
Cadmium (mg/L)	APMW-3	17	0.004729	0.0003915	0.0000...	0.005	0.00382	0.005	58.82
Cadmium (mg/L)	APMW-4	17	0.003353	0.002029	0.0004922	0.005	0.001	0.005	100
Cadmium (mg/L)	APMW-5	17	0.008587	0.001764	0.0004277	0.009	0.00523	0.011	0
Calcium (mg/L)	SSP/APMW-...	15	655.8	36.72	9.481	659	563	722	0
Calcium (mg/L)	SSPMW-2	15	824	77.16	19.92	822	658	931	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:33 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Calcium (mg/L)	SSPMW-3	15	683.3	29.15	7.528	693	618	722	0
Calcium (mg/L)	SSPMW-4	15	403.6	21.89	5.652	403	365	455	0
Calcium (mg/L)	APMW-1D	15	82.55	10.91	2.817	77.1	70	108	0
Calcium (mg/L)	APMW-3	15	134.1	7.009	1.81	134	121	146	0
Calcium (mg/L)	APMW-4	14	511.4	27.64	7.388	509	451	551	0
Calcium (mg/L)	APMW-5	15	481.8	83.12	21.46	494	354	615	0
Chloride (mg/L)	SSP/APMW-...	15	1535	82.71	21.36	1530	1390	1730	0
Chloride (mg/L)	SSPMW-2	15	2387	329.6	85.1	2520	1640	2790	0
Chloride (mg/L)	SSPMW-3	15	1780	117	30.21	1790	1560	2060	0
Chloride (mg/L)	SSPMW-4	15	1103	215.2	55.57	1140	378	1350	0
Chloride (mg/L)	APMW-1D	15	200.6	35.53	9.174	221	129	233	0
Chloride (mg/L)	APMW-3	15	145.9	8.746	2.258	146	128	160	0
Chloride (mg/L)	APMW-4	15	483.9	37.67	9.726	485	427	543	0
Chloride (mg/L)	APMW-5	15	432.9	54.82	14.15	460	322	491	0
Chromium (mg/L)	SSP/APMW-...	14	0.00682	0.003883	0.001038	0.01	0.002	0.01	92.86
Chromium (mg/L)	SSPMW-2	14	0.008929	0.009723	0.002599	0.01	0.002	0.04	92.86
Chromium (mg/L)	SSPMW-3	14	0.008359	0.003085	0.0008245	0.01	0.00235	0.0135	57.14
Chromium (mg/L)	SSPMW-4	14	0.01972	0.04509	0.01205	0.01	0.002	0.176	71.43
Chromium (mg/L)	APMW-1D	14	0.006786	0.003926	0.001049	0.01	0.002	0.01	100
Chromium (mg/L)	APMW-3	14	0.006766	0.003952	0.001056	0.01	0.00173	0.01	92.86
Chromium (mg/L)	APMW-4	14	0.006786	0.003926	0.001049	0.01	0.002	0.01	100
Chromium (mg/L)	APMW-5	14	0.006806	0.0039	0.001042	0.01	0.002	0.01	92.86
Cobalt (mg/L)	SSP/APMW-...	17	0.01041	0.009415	0.002283	0.005	0.0005	0.02	82.35
Cobalt (mg/L)	SSPMW-2	17	0.07586	0.03415	0.008283	0.06	0.05	0.19	0
Cobalt (mg/L)	SSPMW-3	16	0.574	0.0411	0.01027	0.58	0.495	0.64	0
Cobalt (mg/L)	SSPMW-4	17	0.01149	0.01176	0.002851	0.005	0.000336	0.04	88.24
Cobalt (mg/L)	APMW-1D	9	0.01468	0.002115	0.0007051	0.0146	0.0106	0.0177	0
Cobalt (mg/L)	APMW-3	17	0.04103	0.007851	0.001904	0.04	0.024	0.05	0
Cobalt (mg/L)	APMW-4	17	0.01036	0.00946	0.002294	0.005	0.0005	0.02	88.24
Cobalt (mg/L)	APMW-5	17	0.1671	0.02787	0.006759	0.175	0.115	0.206	0
Fluoride (mg/L)	SSP/APMW-...	17	0.3722	0.3349	0.08122	0.2	0.1	1	41.18
Fluoride (mg/L)	SSPMW-2	17	0.5675	0.5978	0.145	0.3	0.1	2.56	23.53
Fluoride (mg/L)	SSPMW-3	15	0.7133	0.1924	0.04969	0.8	0.441	1	20
Fluoride (mg/L)	SSPMW-4	17	0.4982	0.6954	0.1687	0.103	0.1	2.84	70.59
Fluoride (mg/L)	APMW-1D	17	0.7095	0.1492	0.03619	0.7	0.529	1	11.76
Fluoride (mg/L)	APMW-3	17	0.2265	0.2969	0.07202	0.1	0.0558	1	35.29
Fluoride (mg/L)	APMW-4	17	0.2676	0.3072	0.07452	0.1	0.0488	1	76.47
Fluoride (mg/L)	APMW-5	17	1.792	0.6812	0.1652	1.57	1	3.02	5.882
Lead (mg/L)	SSP/APMW-...	17	0.006636	0.003928	0.0009526	0.01	0.001	0.0106	76.47
Lead (mg/L)	SSPMW-2	17	0.007118	0.00484	0.001174	0.00597	0.00107	0.02	52.94
Lead (mg/L)	SSPMW-3	17	0.008458	0.00615	0.001491	0.00652	0.0028	0.03	47.06
Lead (mg/L)	SSPMW-4	17	0.005628	0.004463	0.001083	0.005	0.000161	0.01	82.35
Lead (mg/L)	APMW-1D	14	0.006375	0.004472	0.001195	0.01	0.000256	0.01	92.86
Lead (mg/L)	APMW-3	14	0.006311	0.00456	0.001219	0.01	0.000219	0.01	71.43
Lead (mg/L)	APMW-4	14	0.00633	0.004534	0.001212	0.01	0.000276	0.01	85.71
Lead (mg/L)	APMW-5	14	0.00728	0.003477	0.0009294	0.01	0.00149	0.01	64.29
Lithium (mg/L)	SSP/APMW-...	16	1.294	0.124	0.03101	1.265	1.05	1.51	0
Lithium (mg/L)	SSPMW-2	16	0.7834	0.1589	0.03973	0.761	0.564	1.07	0
Lithium (mg/L)	SSPMW-3	17	0.6168	0.0765	0.01855	0.61	0.511	0.75	0
Lithium (mg/L)	SSPMW-4	16	0.8755	0.09788	0.02447	0.87	0.706	1.02	0

Box & Whiskers Plot

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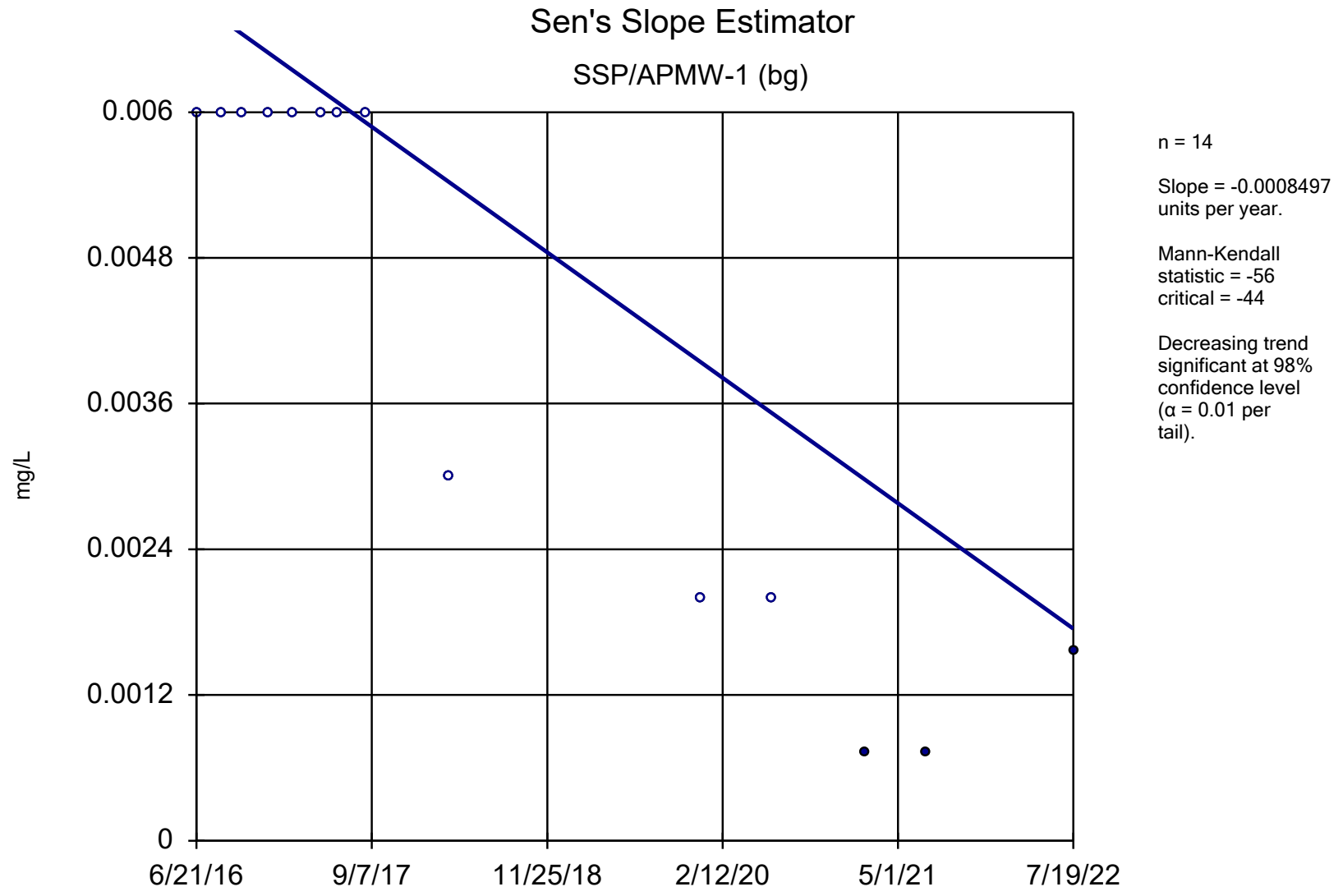
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Lithium (mg/L)	APMW-1D	17	0.03856	0.01652	0.004006	0.04	0.01	0.08	17.65
Lithium (mg/L)	APMW-3	16	0.05364	0.009314	0.002328	0.05305	0.04	0.07	6.25
Lithium (mg/L)	APMW-4	17	0.8404	0.1746	0.04234	0.87	0.317	1.09	0
Lithium (mg/L)	APMW-5	17	0.4809	0.08841	0.02144	0.478	0.36	0.66	0
Mercury (mg/L)	SSP/APMW-...	14	0.000...	0.0004108	0.0001098	0.001	0.0002	0.001	100
Mercury (mg/L)	SSPMW-2	14	0.000...	0.0004108	0.0001098	0.001	0.0002	0.001	100
Mercury (mg/L)	SSPMW-3	14	0.000...	0.0003931	0.000105	0.001	0.000162	0.001	85.71
Mercury (mg/L)	SSPMW-4	14	0.000...	0.0004108	0.0001098	0.001	0.0002	0.001	100
Mercury (mg/L)	APMW-1D	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	APMW-3	17	0.000...	0.0004653	0.0001128	0.001	0.0002	0.00158	70.59
Mercury (mg/L)	APMW-4	17	0.000...	0.0004116	0.0000...	0.0002	0.0002	0.001	100
Mercury (mg/L)	APMW-5	16	0.000...	0.0006505	0.0001626	0.001	0.0002	0.0026	56.25
Molybdenum (mg/L)	SSP/APMW-...	14	0.03029	0.02371	0.006338	0.05	0.000961	0.05	78.57
Molybdenum (mg/L)	SSPMW-2	14	0.03107	0.02272	0.006071	0.05	0.005	0.05	100
Molybdenum (mg/L)	SSPMW-3	14	0.03048	0.02348	0.006275	0.05	0.000667	0.05	85.71
Molybdenum (mg/L)	SSPMW-4	14	0.03478	0.0235	0.00628	0.05	0.000864	0.0629	78.57
Molybdenum (mg/L)	APMW-1D	9	0.02141	0.007056	0.002352	0.0177	0.0144	0.0327	0
Molybdenum (mg/L)	APMW-3	17	0.02634	0.02309	0.005601	0.01	0.000848	0.05	94.12
Molybdenum (mg/L)	APMW-4	17	0.02633	0.0231	0.005603	0.01	0.000686	0.05	94.12
Molybdenum (mg/L)	APMW-5	17	0.02659	0.02283	0.005536	0.01	0.002	0.05	100
pH (S.U.)	SSP/APMW-...	16	5.804	0.1804	0.04509	5.8	5.42	6.06	0
pH (S.U.)	SSPMW-2	16	4.688	0.5278	0.132	4.71	3.87	5.68	0
pH (S.U.)	SSPMW-3	14	4.267	0.09177	0.02453	4.275	4.15	4.45	0
pH (S.U.)	SSPMW-4	16	6.551	1.465	0.3662	6.26	5.67	11.96	0
pH (S.U.)	APMW-1D	16	5.818	0.2156	0.05391	5.805	5.4	6.13	0
pH (S.U.)	APMW-3	15	5.111	0.1528	0.03945	5.11	4.79	5.4	0
pH (S.U.)	APMW-4	16	5.598	0.1427	0.03568	5.62	5.28	5.79	0
pH (S.U.)	APMW-5	15	3.497	0.1652	0.04265	3.55	3.21	3.7	0
Radium 226 + 228 (pCi/L)	SSP/APMW-...	17	1.761	0.8701	0.211	1.7	-0.06	3.38	0
Radium 226 + 228 (pCi/L)	SSPMW-2	16	2.452	0.727	0.1818	2.285	1.62	4.3	0
Radium 226 + 228 (pCi/L)	SSPMW-3	17	32.02	6.527	1.583	32	23.2	49.8	0
Radium 226 + 228 (pCi/L)	SSPMW-4	17	3.149	1.331	0.3228	2.82	1.46	6.82	0
Radium 226 + 228 (pCi/L)	APMW-1D	17	1.893	0.8504	0.2063	1.8	0.6	3.83	0
Radium 226 + 228 (pCi/L)	APMW-3	17	2.768	1.604	0.389	2.17	1.11	7.54	5.882
Radium 226 + 228 (pCi/L)	APMW-4	17	1.714	0.8664	0.2101	1.27	0.678	3.67	0
Radium 226 + 228 (pCi/L)	APMW-5	17	2.747	1.592	0.3861	2.1	1.12	5.96	0
Selenium (mg/L)	SSP/APMW-...	14	0.008214	0.002486	0.0006645	0.01	0.005	0.01	100
Selenium (mg/L)	SSPMW-2	14	0.0125	0.01189	0.003177	0.01	0.005	0.05	92.86
Selenium (mg/L)	SSPMW-3	14	0.0109	0.01163	0.003108	0.01	0.000859	0.05	85.71
Selenium (mg/L)	SSPMW-4	14	0.008172	0.002549	0.0006813	0.01	0.00441	0.01	92.86
Selenium (mg/L)	APMW-1D	14	0.007539	0.003563	0.0009522	0.01	0.00154	0.01	78.57
Selenium (mg/L)	APMW-3	14	0.007954	0.00299	0.000799	0.01	0.00135	0.01	92.86
Selenium (mg/L)	APMW-4	14	0.008214	0.002486	0.0006645	0.01	0.005	0.01	100
Selenium (mg/L)	APMW-5	14	0.01452	0.01591	0.004251	0.01	0.005	0.0533	64.29
Sulfate (mg/L)	SSP/APMW-...	15	3006	113.9	29.42	3050	2760	3210	0
Sulfate (mg/L)	SSPMW-2	15	2145	156.7	40.46	2080	1970	2610	0
Sulfate (mg/L)	SSPMW-3	15	2461	121.1	31.27	2480	2200	2760	0
Sulfate (mg/L)	SSPMW-4	15	1094	291.8	75.35	1170	82.2	1340	0
Sulfate (mg/L)	APMW-1D	15	531.2	63.59	16.42	527	430	664	0
Sulfate (mg/L)	APMW-3	15	705.1	54.32	14.03	722	596	807	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/19/2022, 3:33 PM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Sulfate (mg/L)	APMW-4	15	2214	221.3	57.13	2250	1530	2500	0
Sulfate (mg/L)	APMW-5	15	2633	386.8	99.88	2780	1670	2960	0
TDS (mg/L)	SSP/APMW-...	15	6735	552	142.5	6720	5630	7890	0
TDS (mg/L)	SSPMW-2	15	6635	451.6	116.6	6700	5850	7370	0
TDS (mg/L)	SSPMW-3	14	6305	306.9	82.03	6370	5780	6690	0
TDS (mg/L)	SSPMW-4	15	3697	330.7	85.39	3850	2890	4040	0
TDS (mg/L)	APMW-1D	15	1326	101.7	26.26	1350	1140	1490	0
TDS (mg/L)	APMW-3	14	1379	33.02	8.824	1390	1300	1420	0
TDS (mg/L)	APMW-4	15	4032	217.6	56.19	4120	3370	4270	0
TDS (mg/L)	APMW-5	15	4505	522.4	134.9	4720	3380	5040	0
Thallium (mg/L)	SSP/APMW-...	17	0.001564	0.0006418	0.0001557	0.002	0.000206	0.002	88.24
Thallium (mg/L)	SSPMW-2	17	0.001643	0.0005186	0.0001258	0.002	0.000516	0.002	82.35
Thallium (mg/L)	SSPMW-3	17	0.009464	0.0009978	0.000242	0.00982	0.0076	0.0112	0
Thallium (mg/L)	SSPMW-4	17	0.001647	0.0004926	0.0001195	0.002	0.001	0.002	100
Thallium (mg/L)	APMW-1D	14	0.001568	0.0006263	0.0001674	0.002	0.00031	0.002	85.71
Thallium (mg/L)	APMW-3	14	0.001505	0.0007191	0.0001922	0.002	0.000267	0.002	78.57
Thallium (mg/L)	APMW-4	14	0.001584	0.0006149	0.0001643	0.002	0.000172	0.002	92.86
Thallium (mg/L)	APMW-5	14	0.002097	0.0001312	0.0000...	0.002	0.002	0.00238	21.43

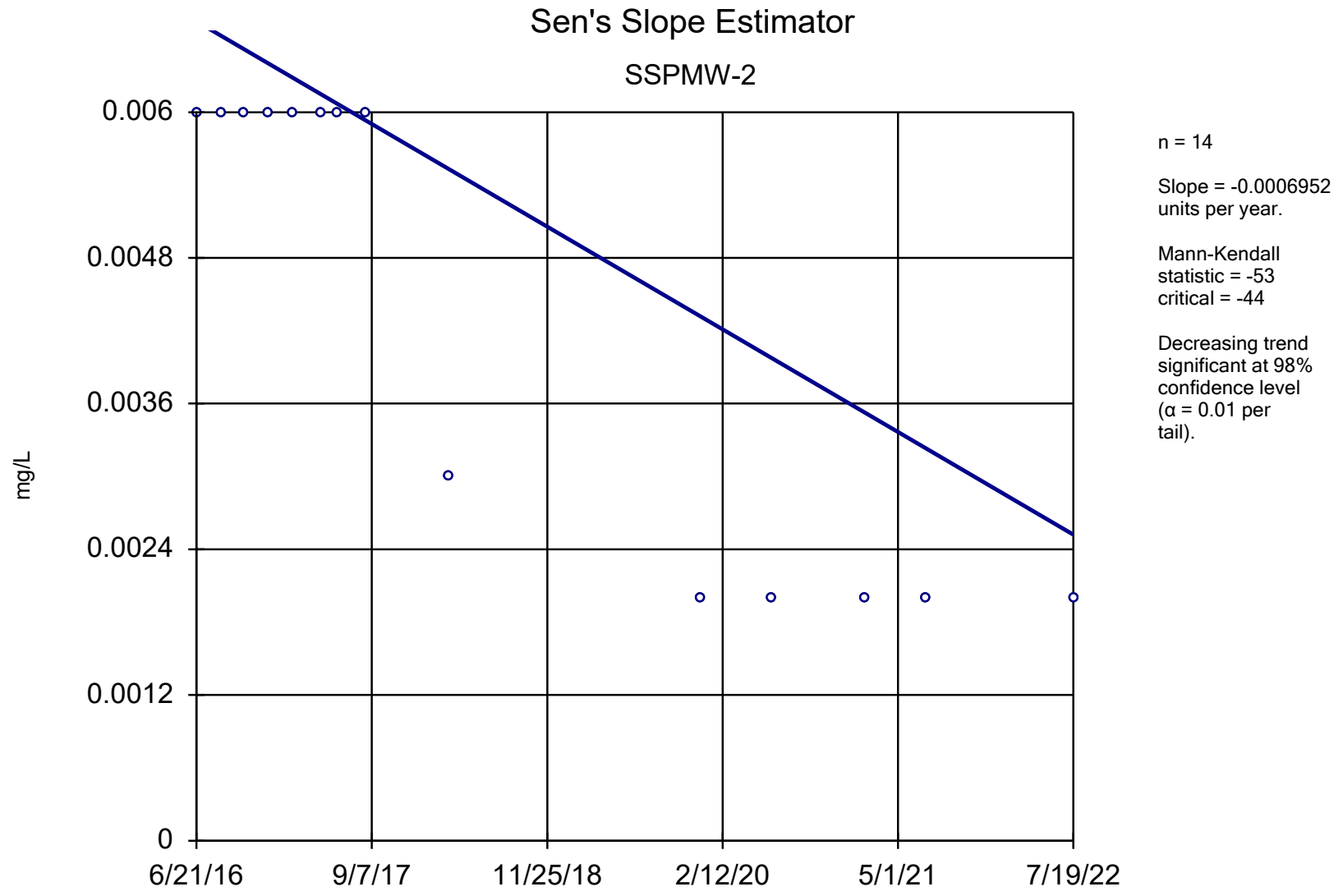
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

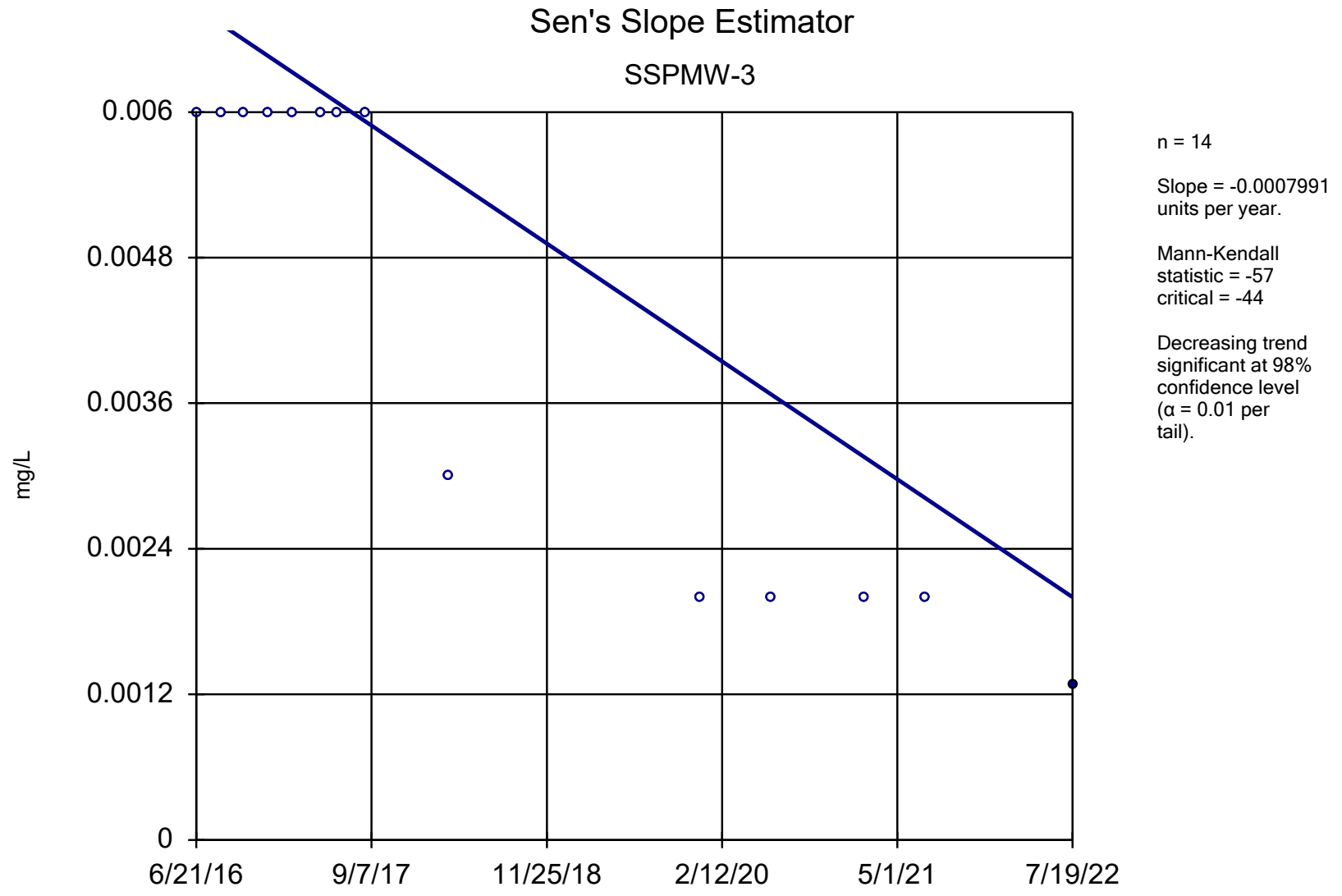
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

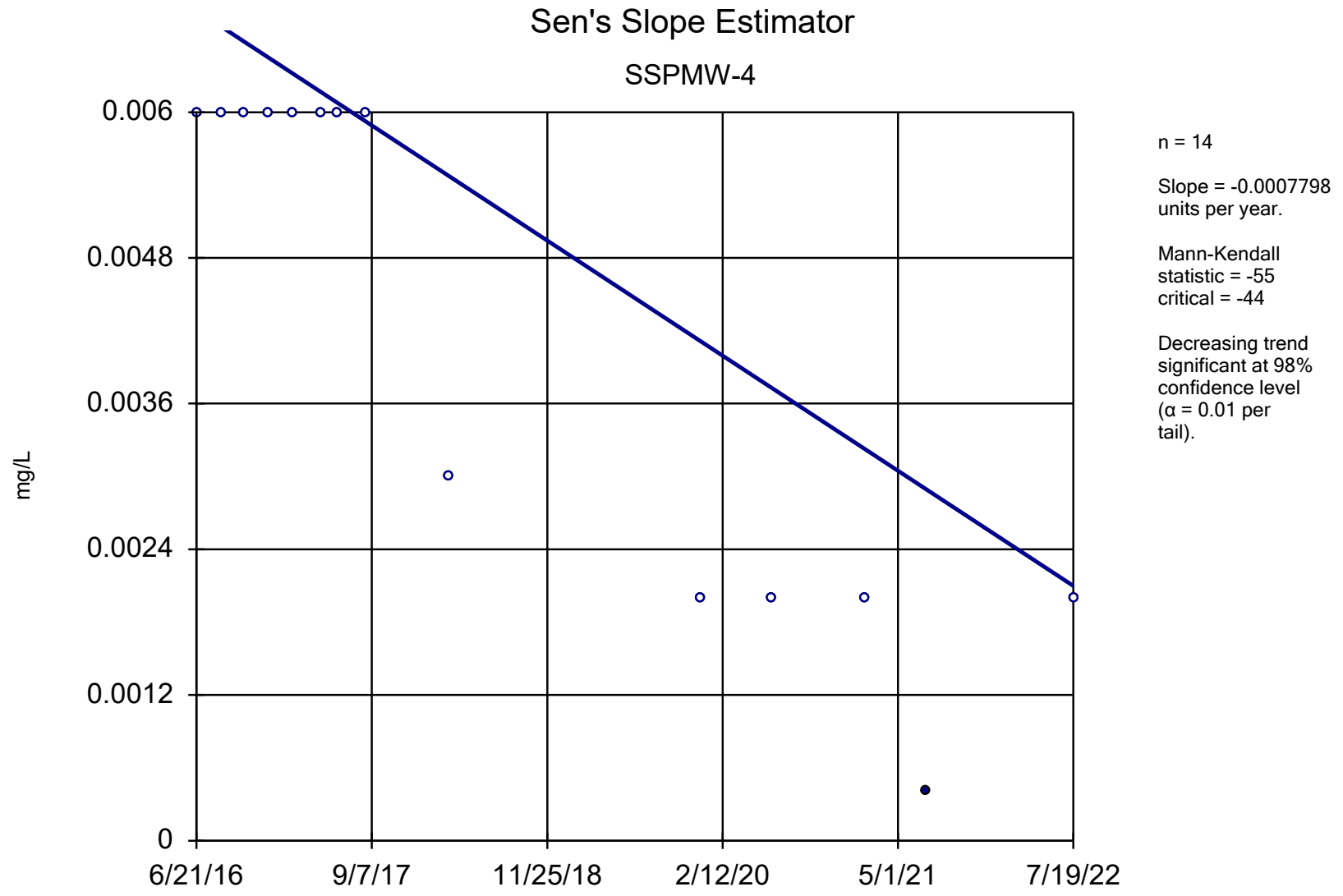
Sanitas™ v.9.6.35 Software licensed to HDR. EPA
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

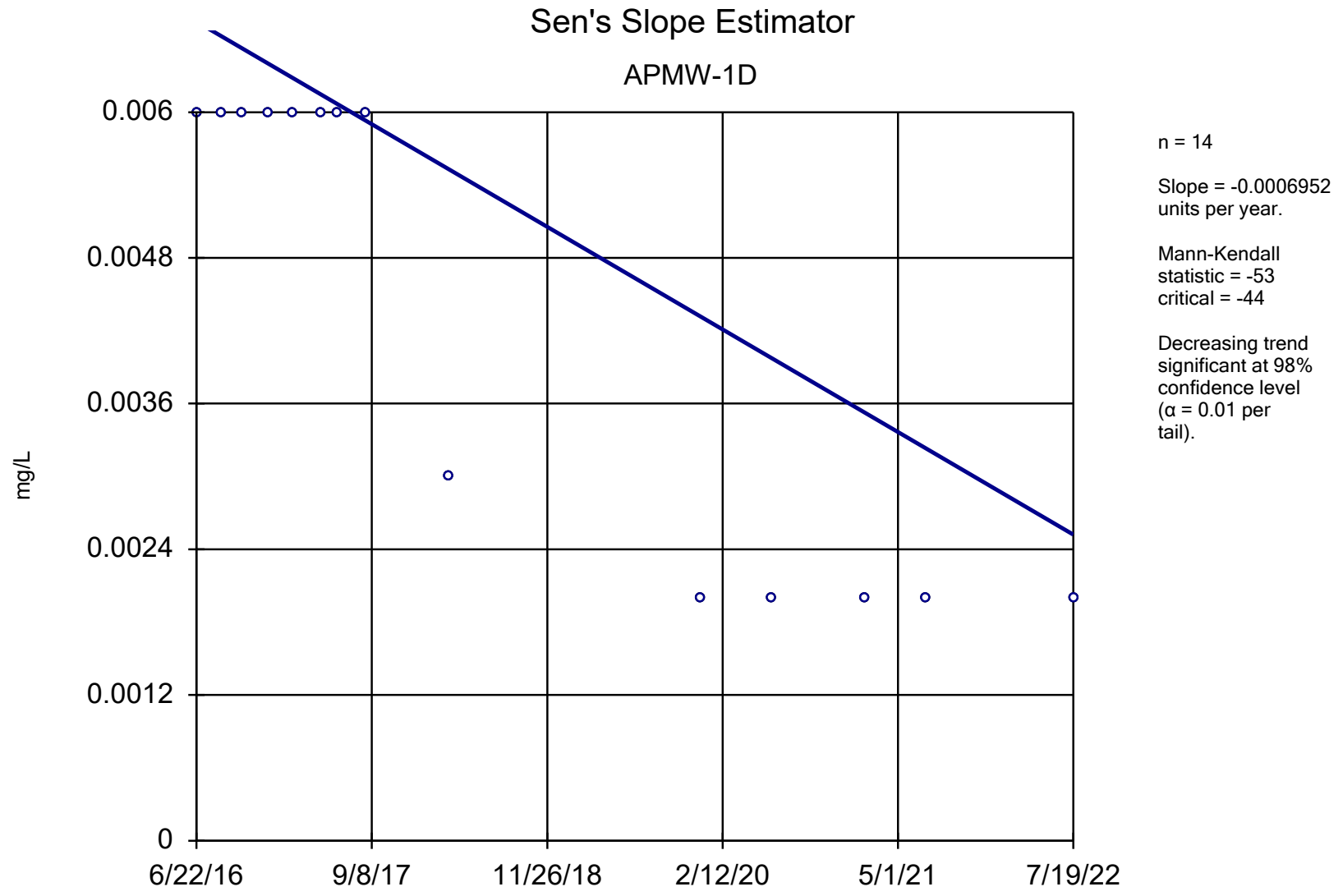
Sanitas™ v.9.6.35 Software licensed to HDR. EPA
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

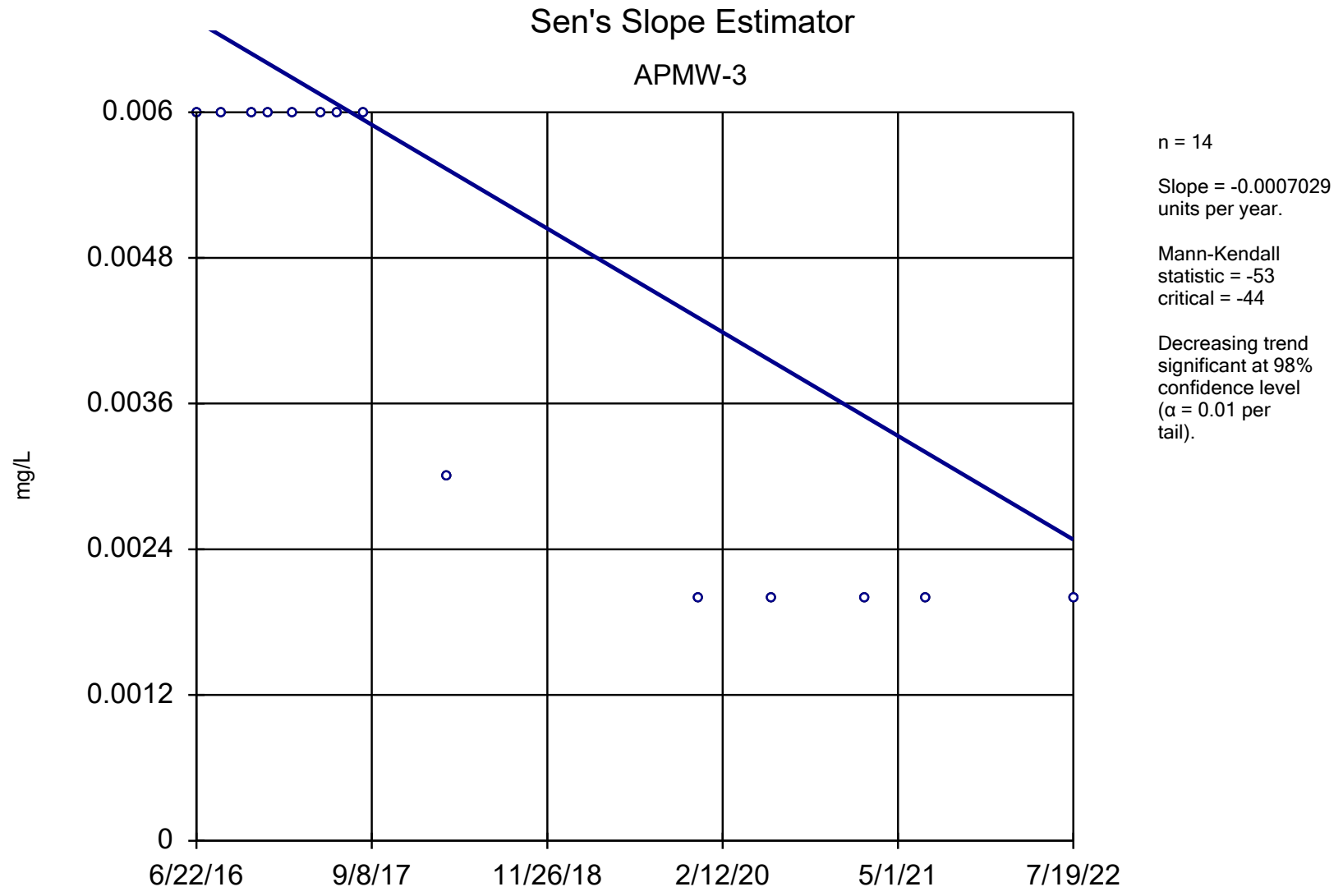
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

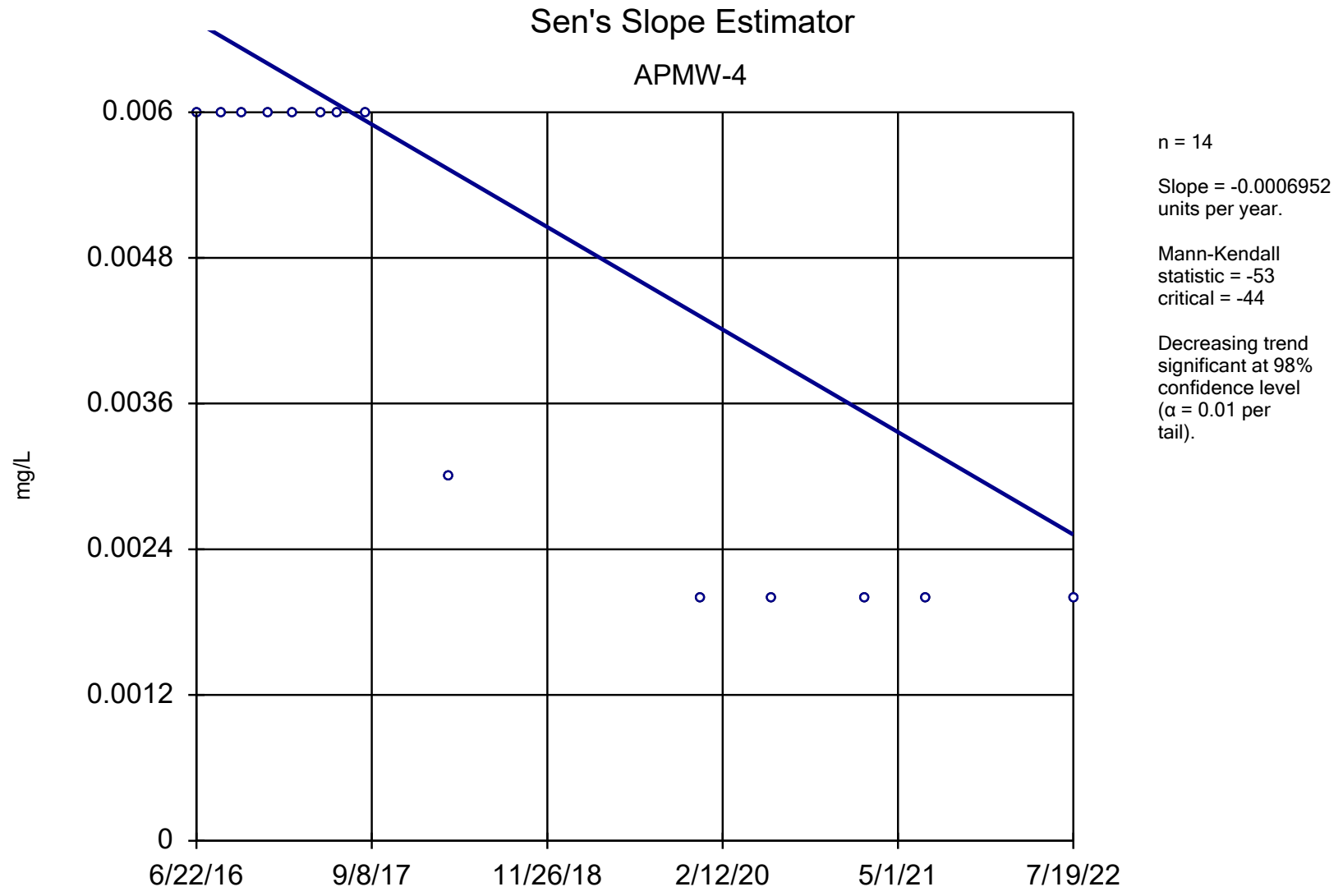
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

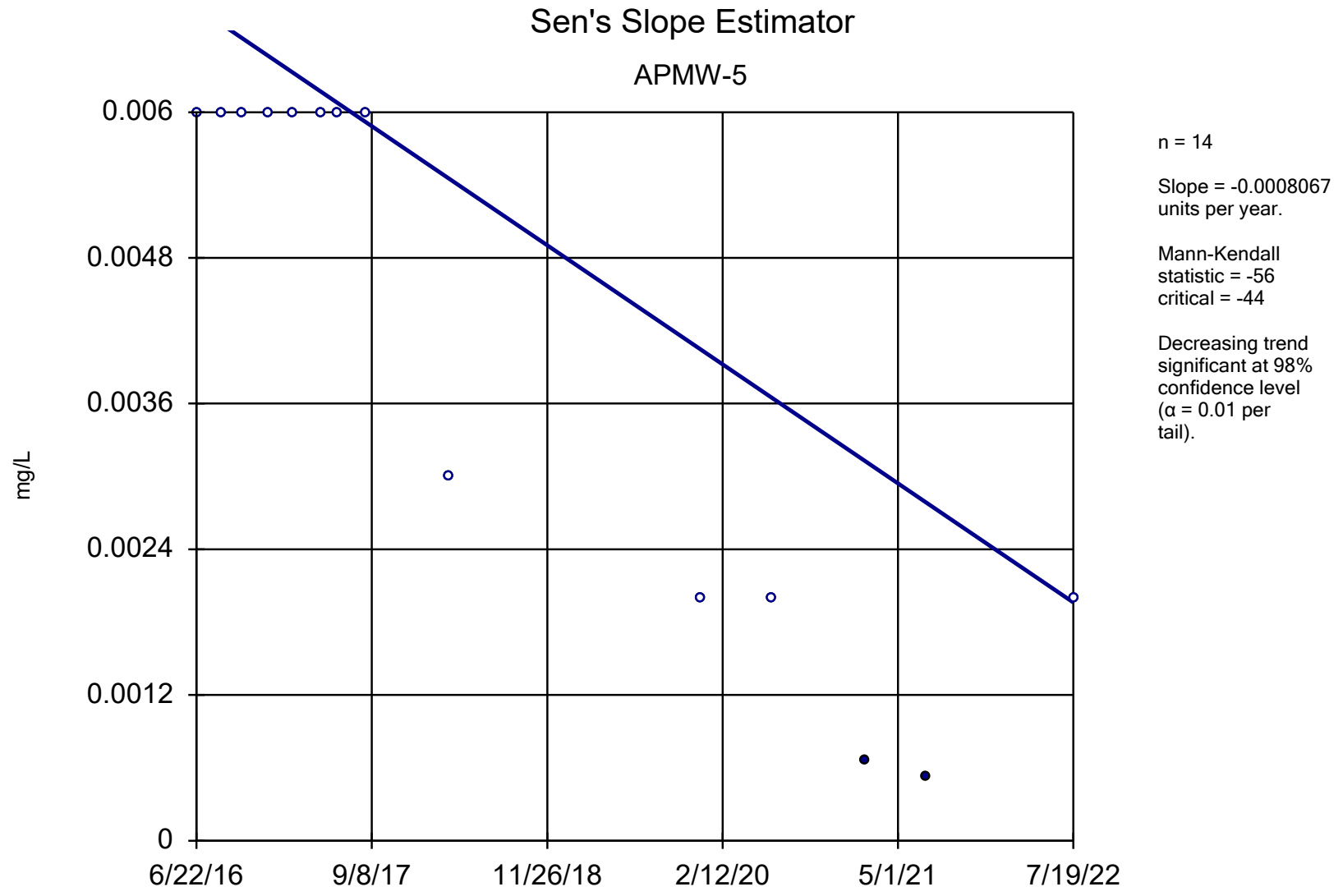
Hollow symbols indicate censored values.



Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.35 Software licensed to HDR. EPA
Hollow symbols indicate censored values.



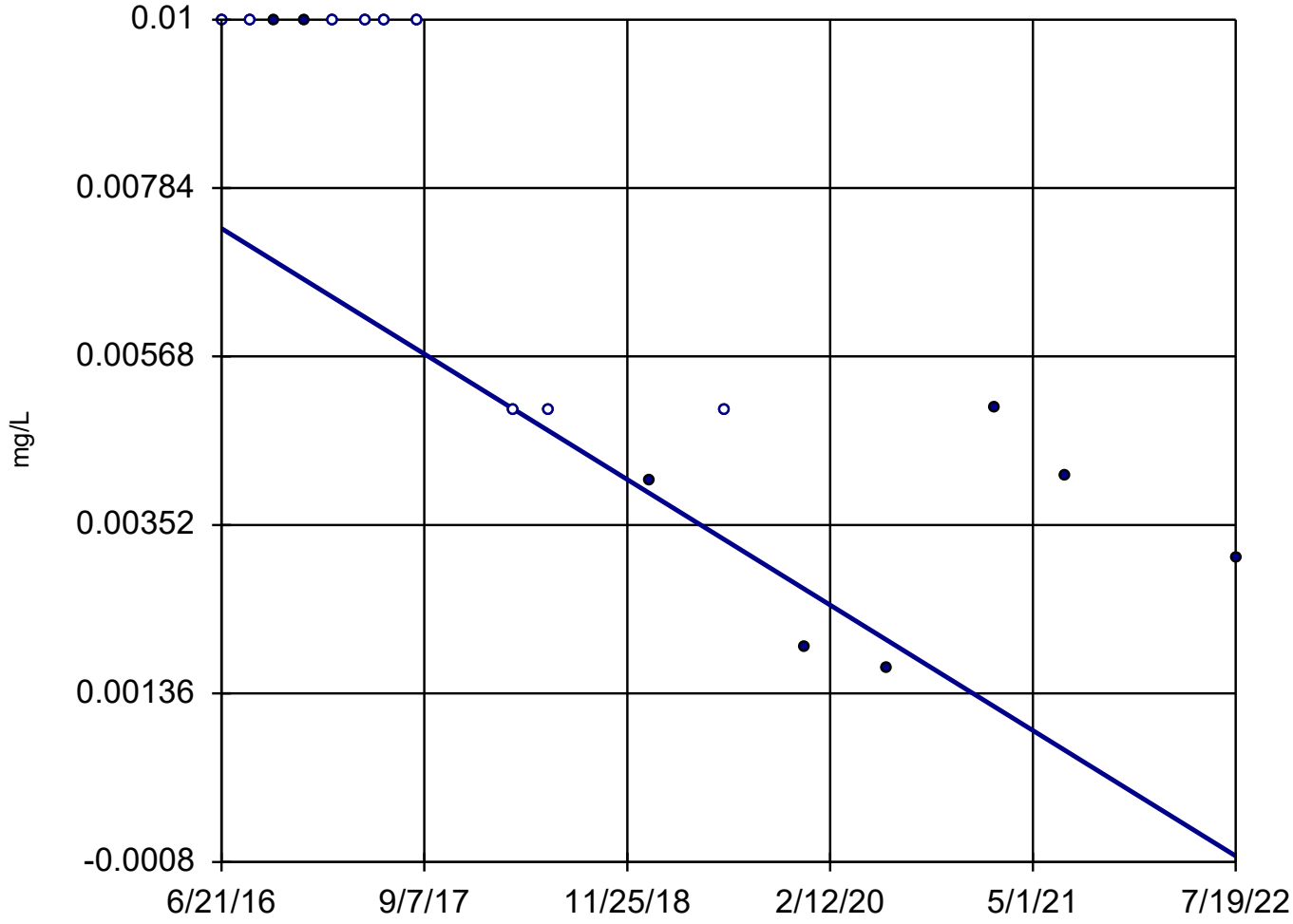
Constituent: Antimony Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 17

Slope = -0.001324 units per year.

Mann-Kendall statistic = -81
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

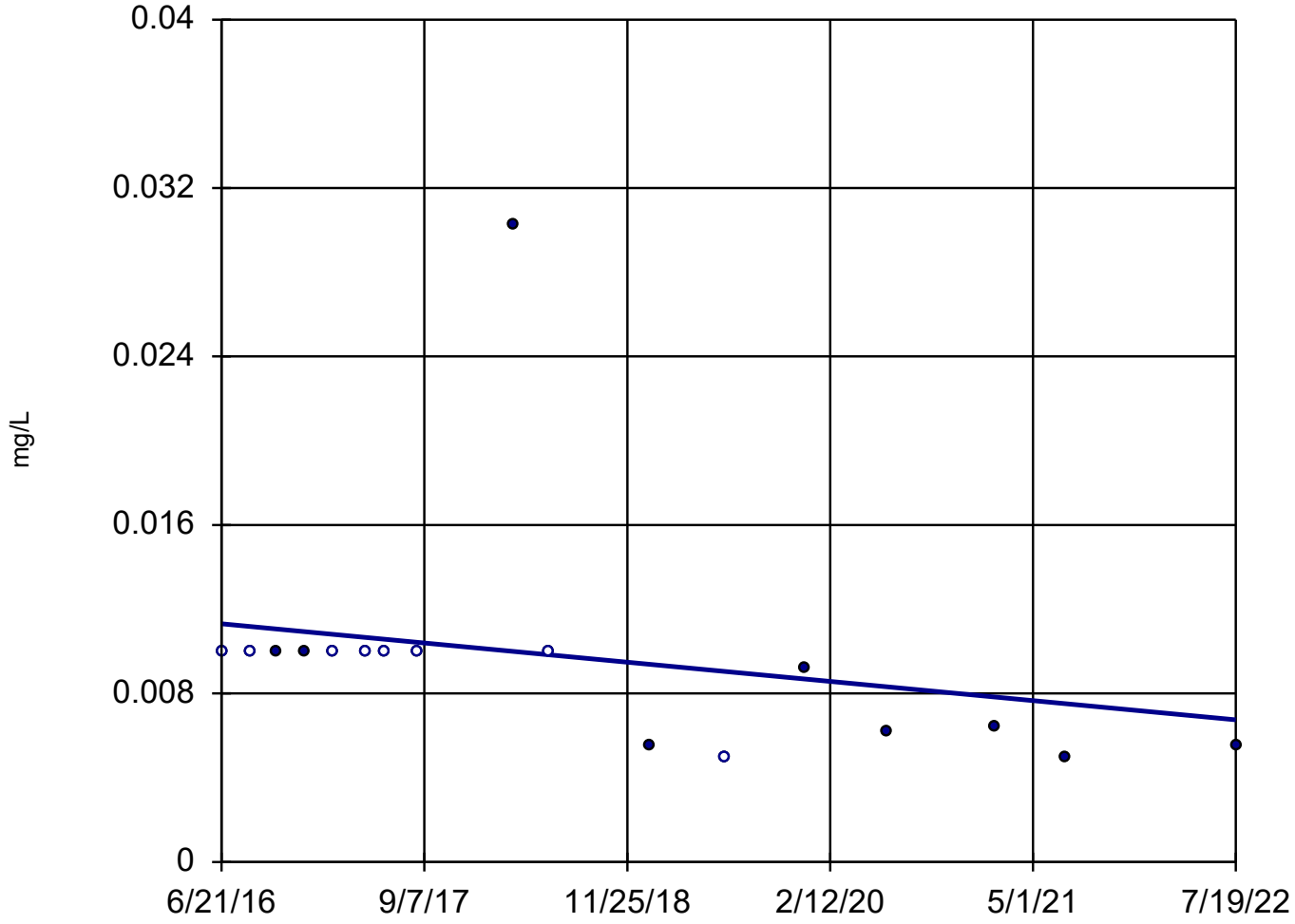
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = -0.0007493 units per year.

Mann-Kendall statistic = -66
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

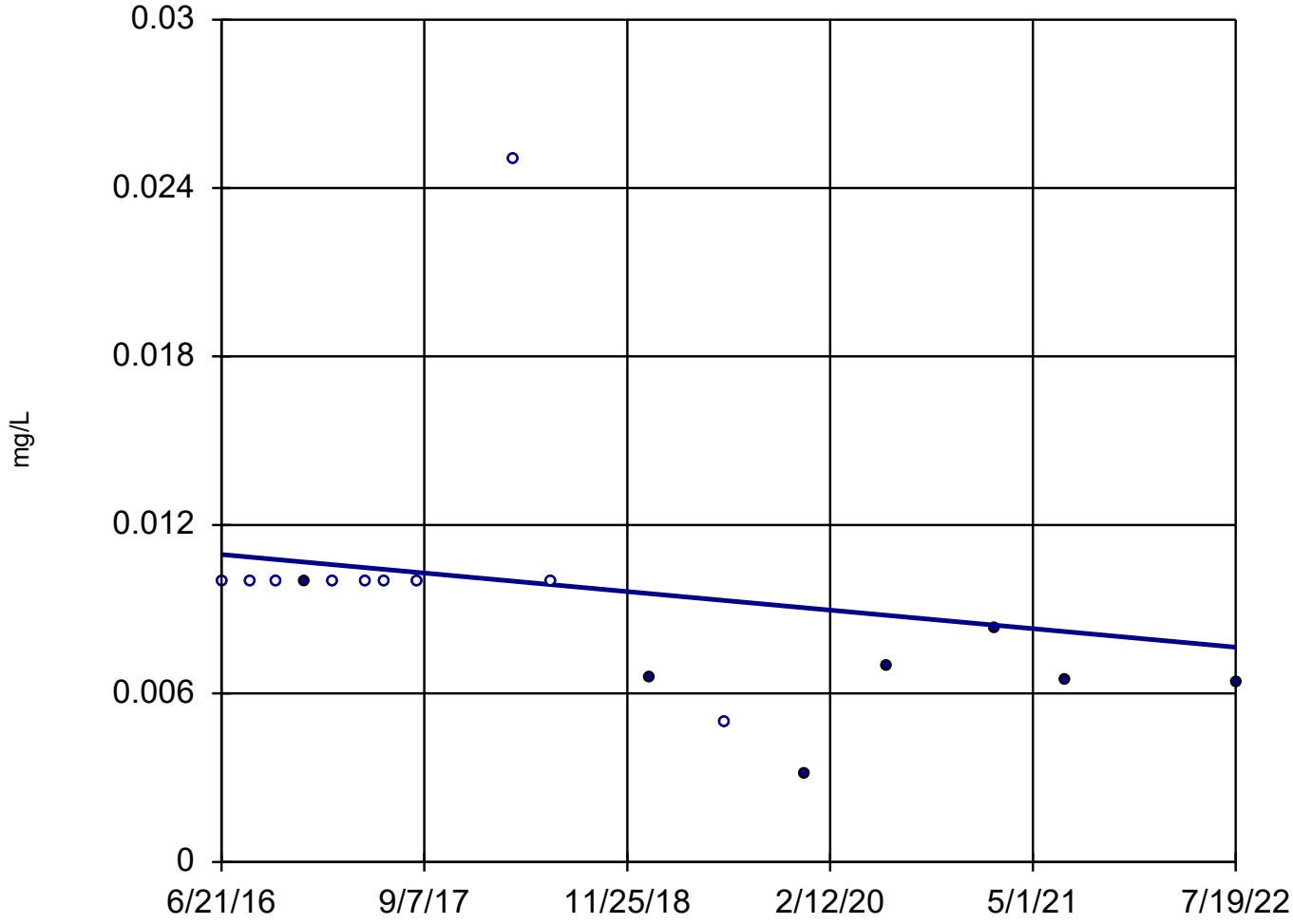
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 17

Slope = -0.000543 units per year.

Mann-Kendall statistic = -62
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

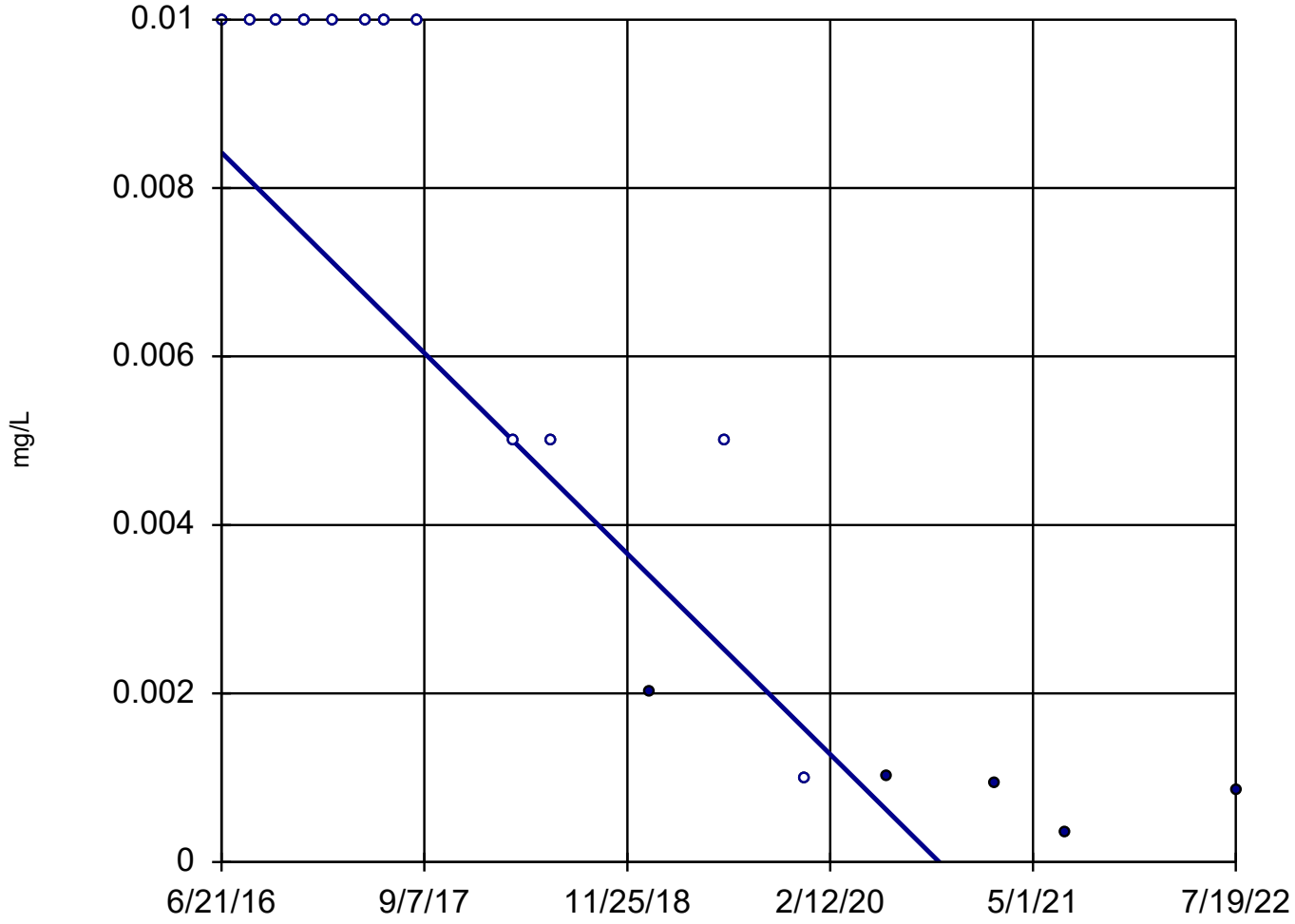
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = -0.001958 units per year.

Mann-Kendall statistic = -99
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

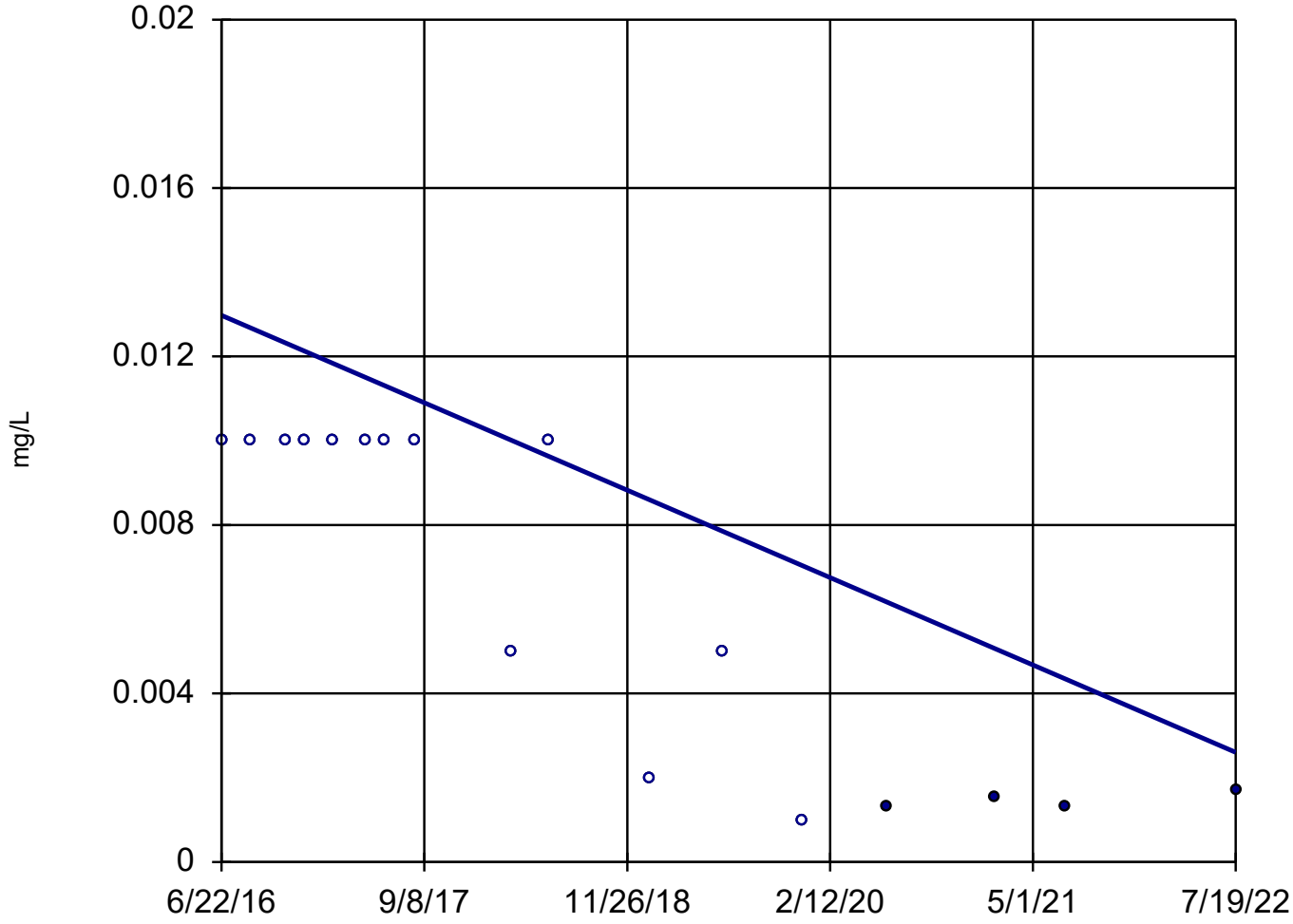
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 17

Slope = -0.001707 units per year.

Mann-Kendall statistic = -78
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

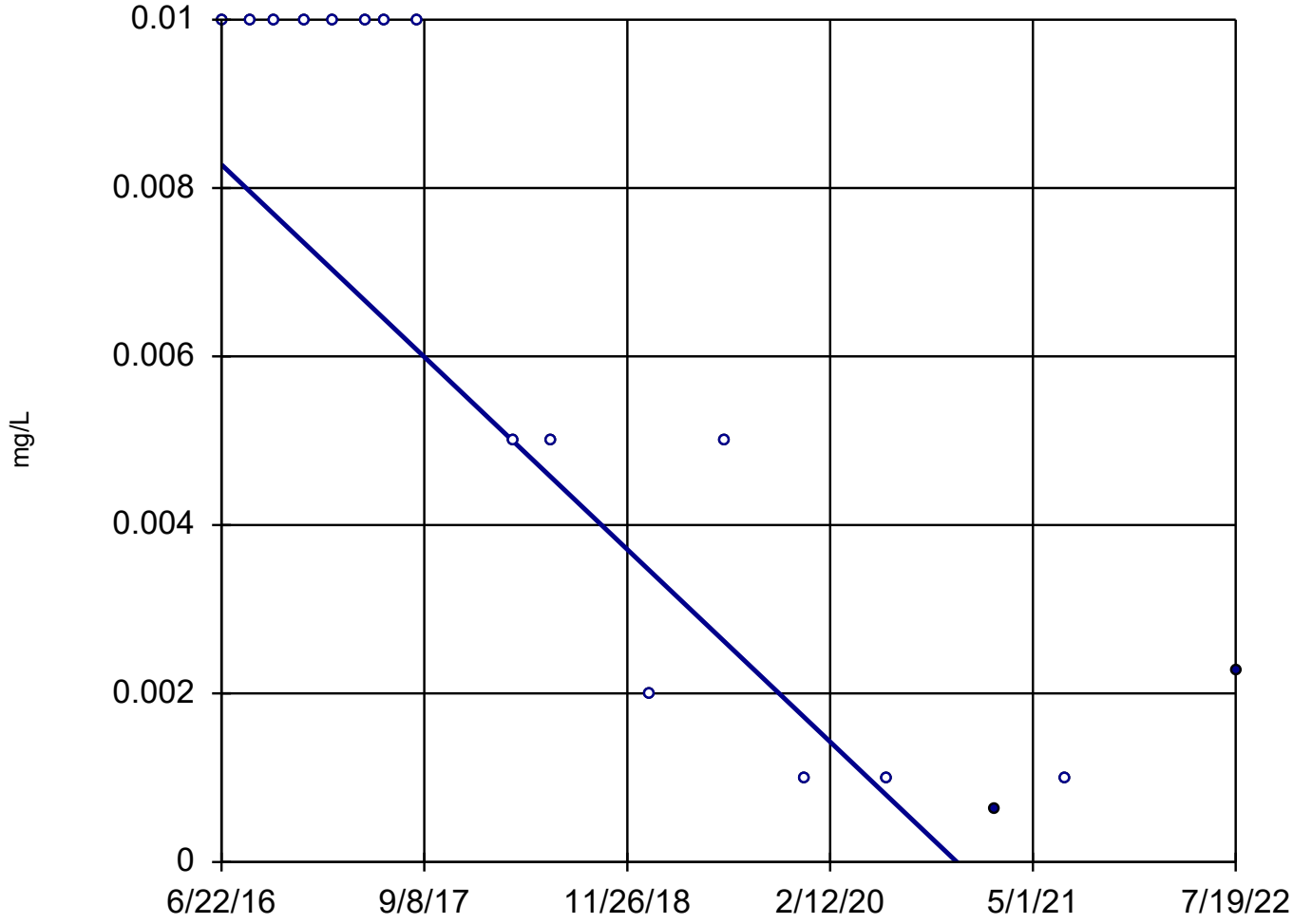
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.001879 units per year.

Mann-Kendall statistic = -88
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

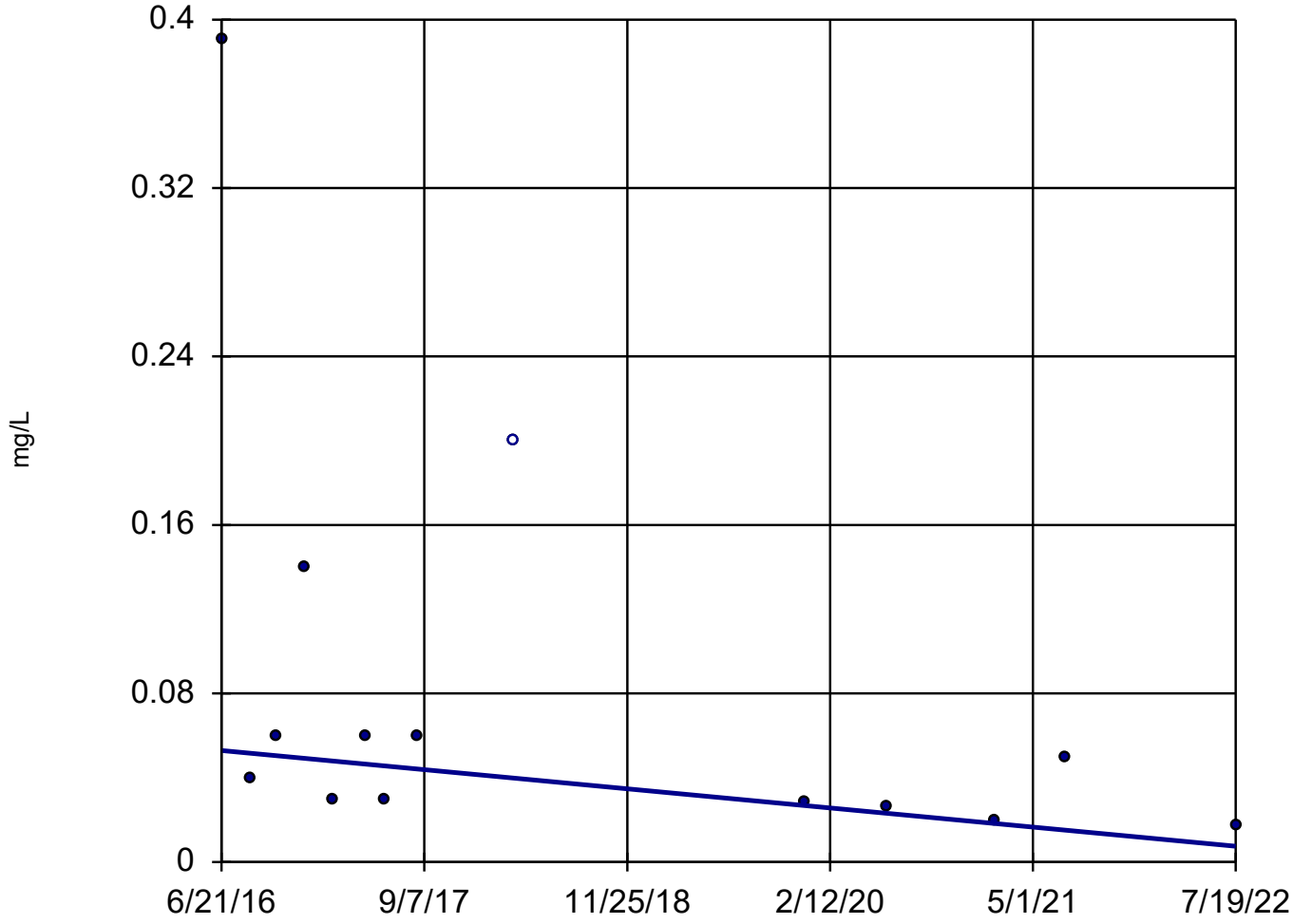
Constituent: Arsenic Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 14

Slope = -0.007474 units per year.

Mann-Kendall statistic = -45
critical = -44

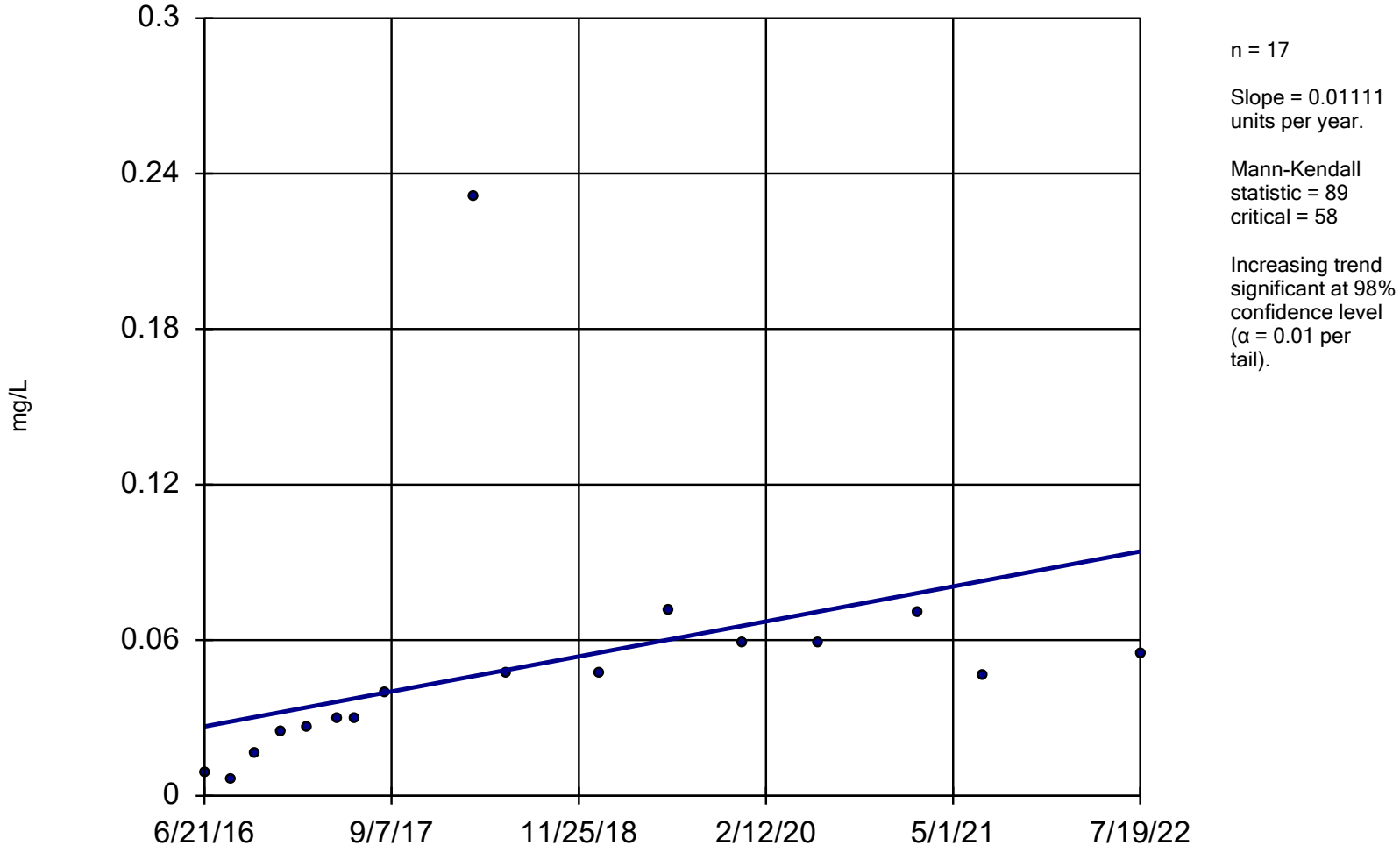
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = 0.01111 units per year.

Mann-Kendall statistic = 89
critical = 58

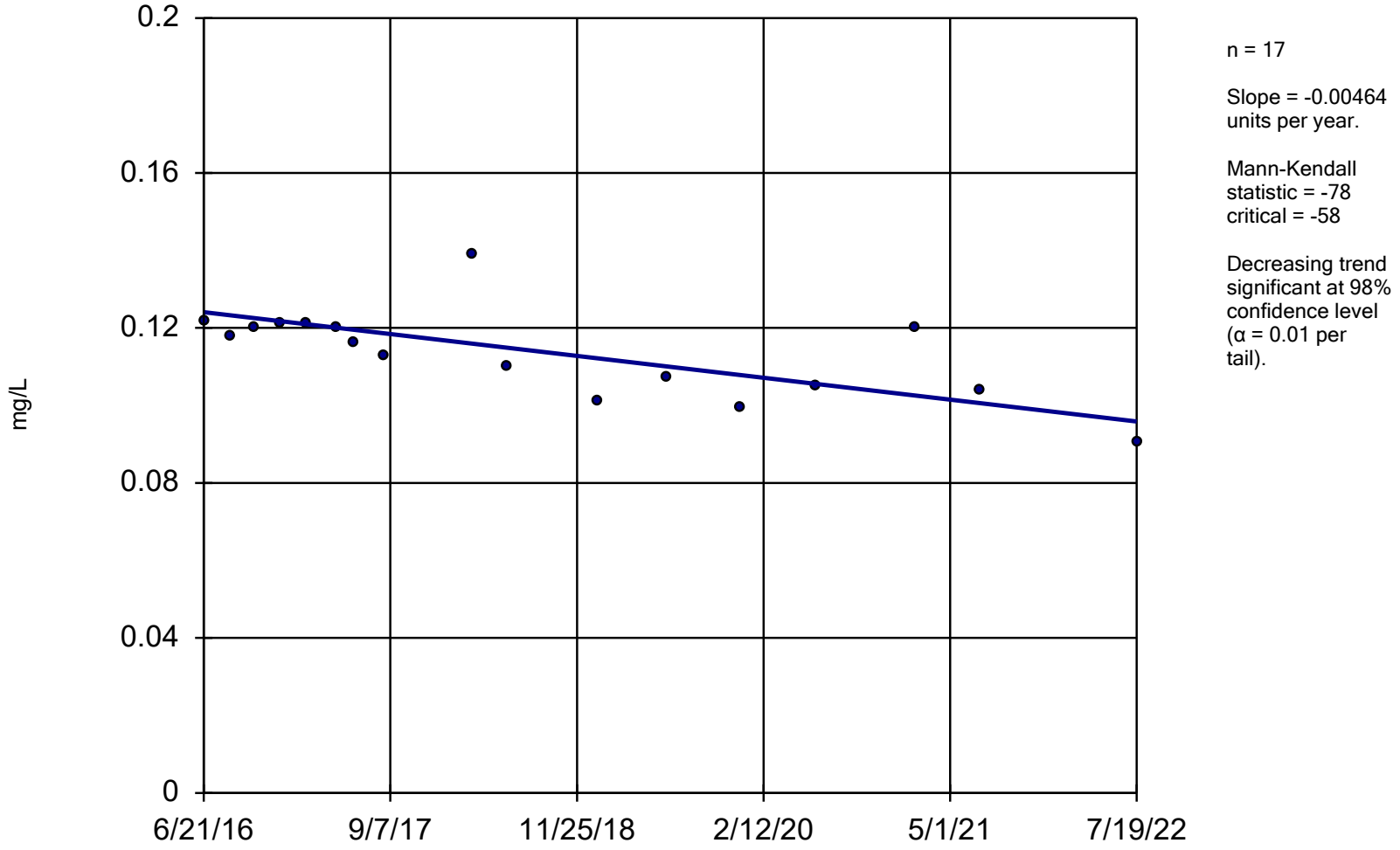
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 17

Slope = -0.00464 units per year.

Mann-Kendall statistic = -78
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

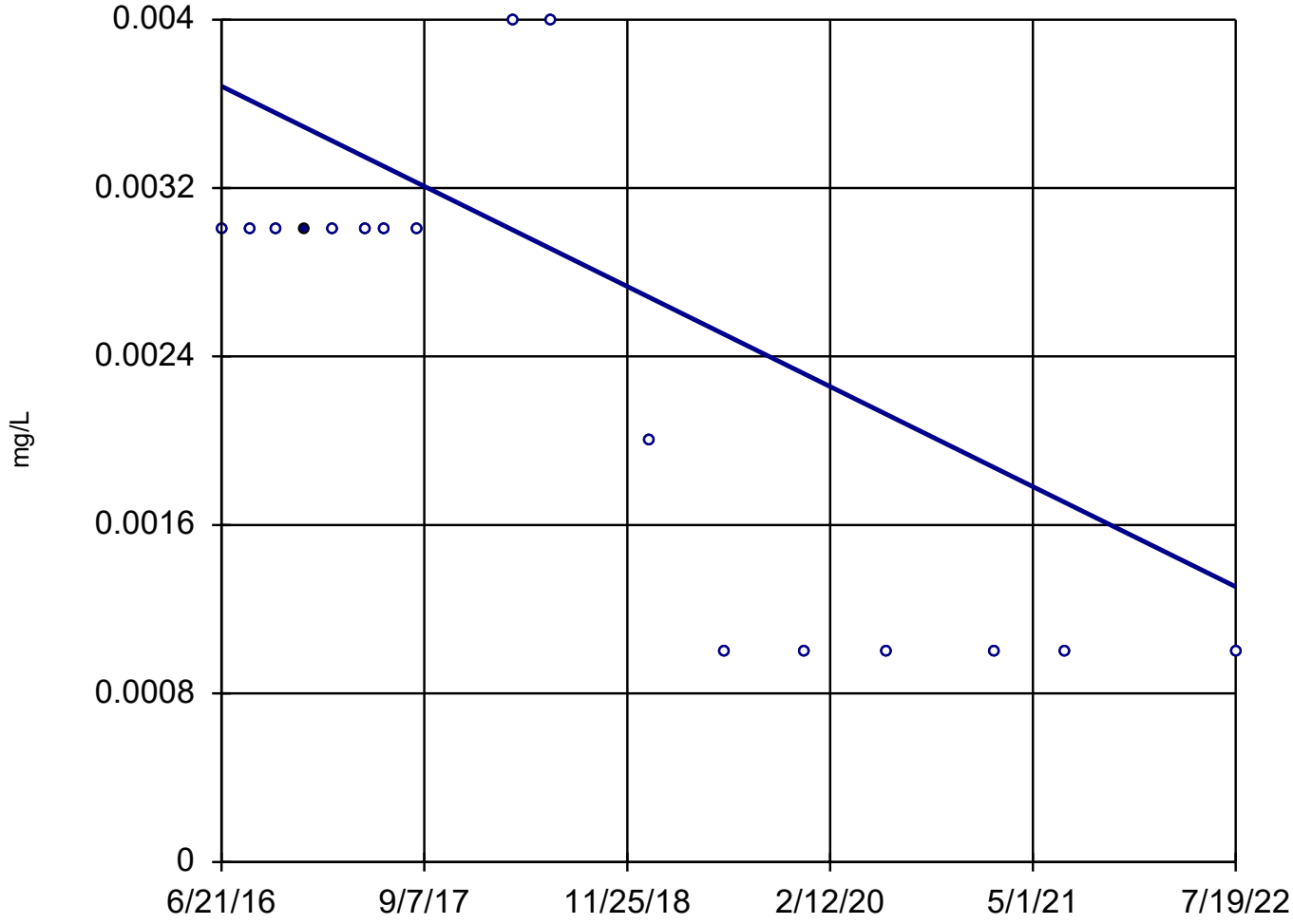
Constituent: Beryllium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = -0.0003907 units per year.

Mann-Kendall statistic = -60
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

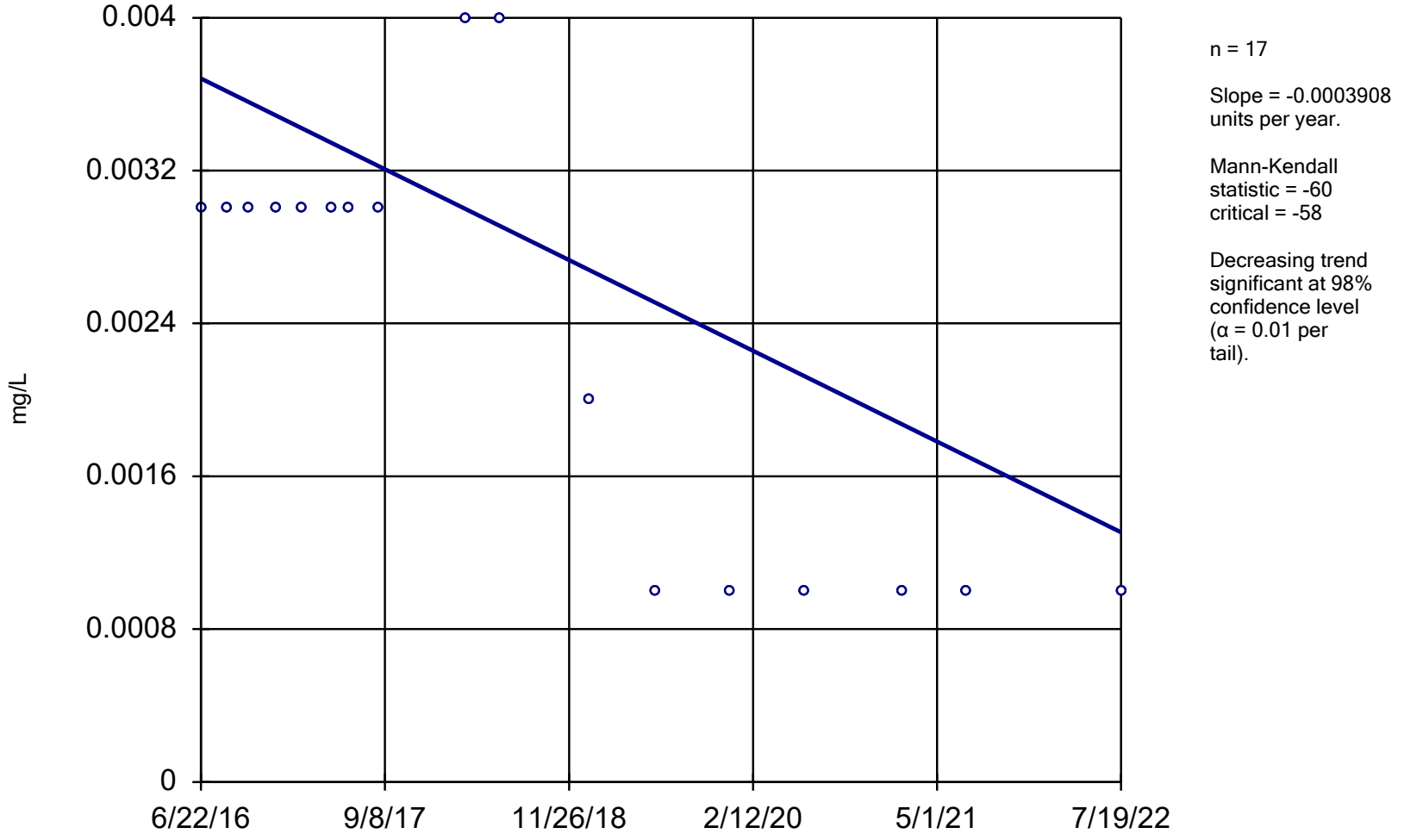
Constituent: Beryllium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 17

Slope = -0.0003908 units per year.

Mann-Kendall statistic = -60
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

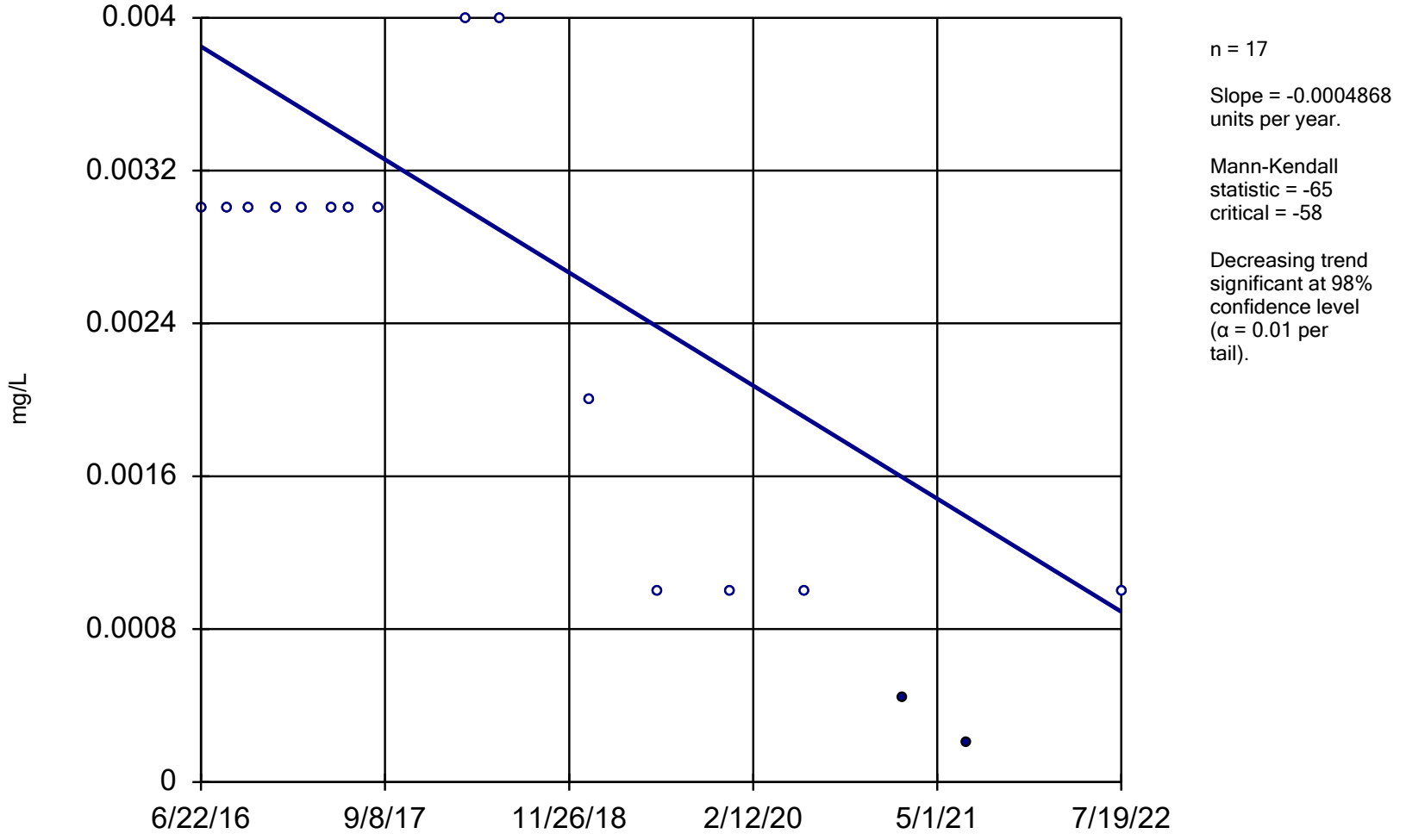
Constituent: Beryllium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.0004868 units per year.

Mann-Kendall statistic = -65
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

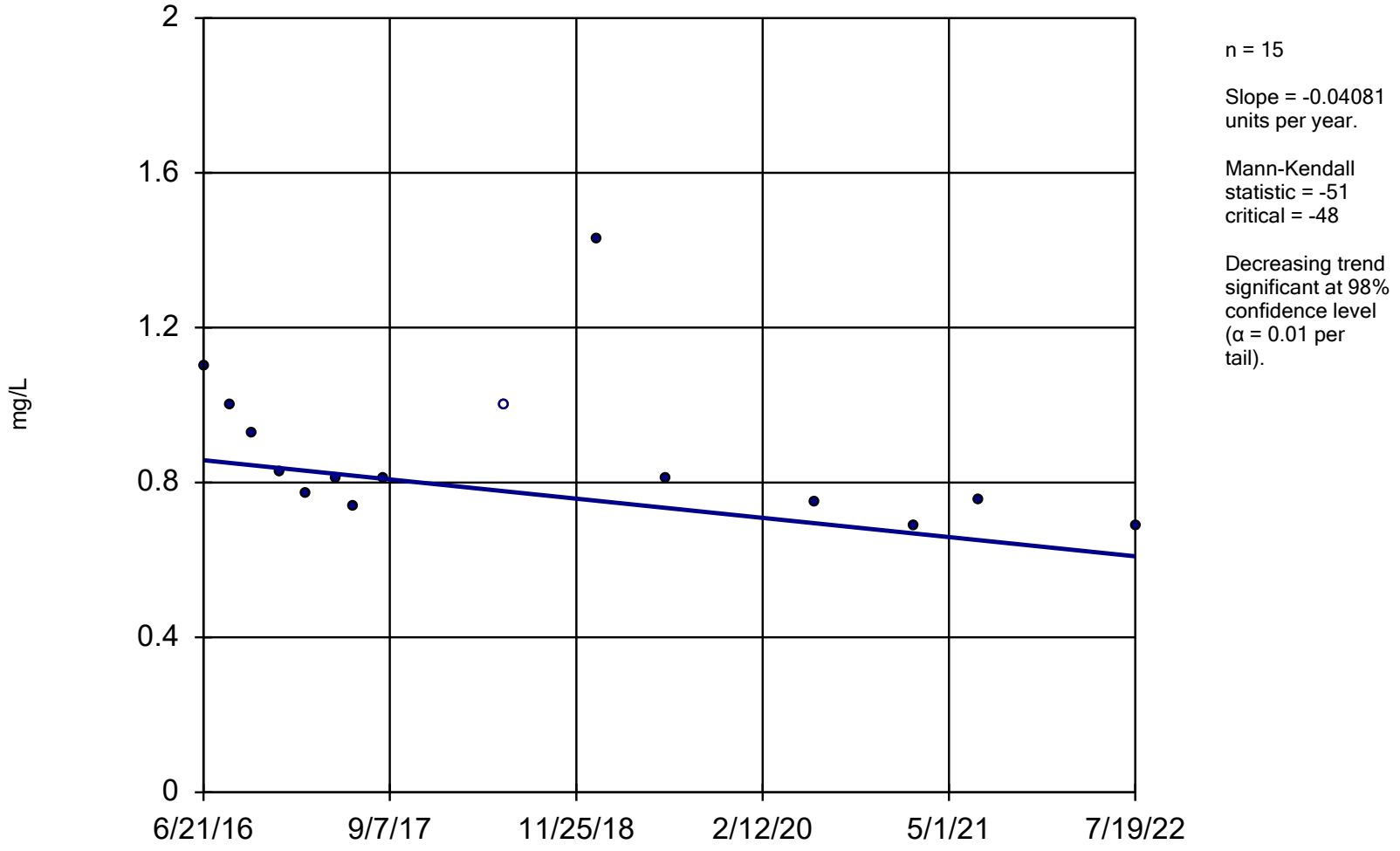
Constituent: Beryllium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 15

Slope = -0.04081 units per year.

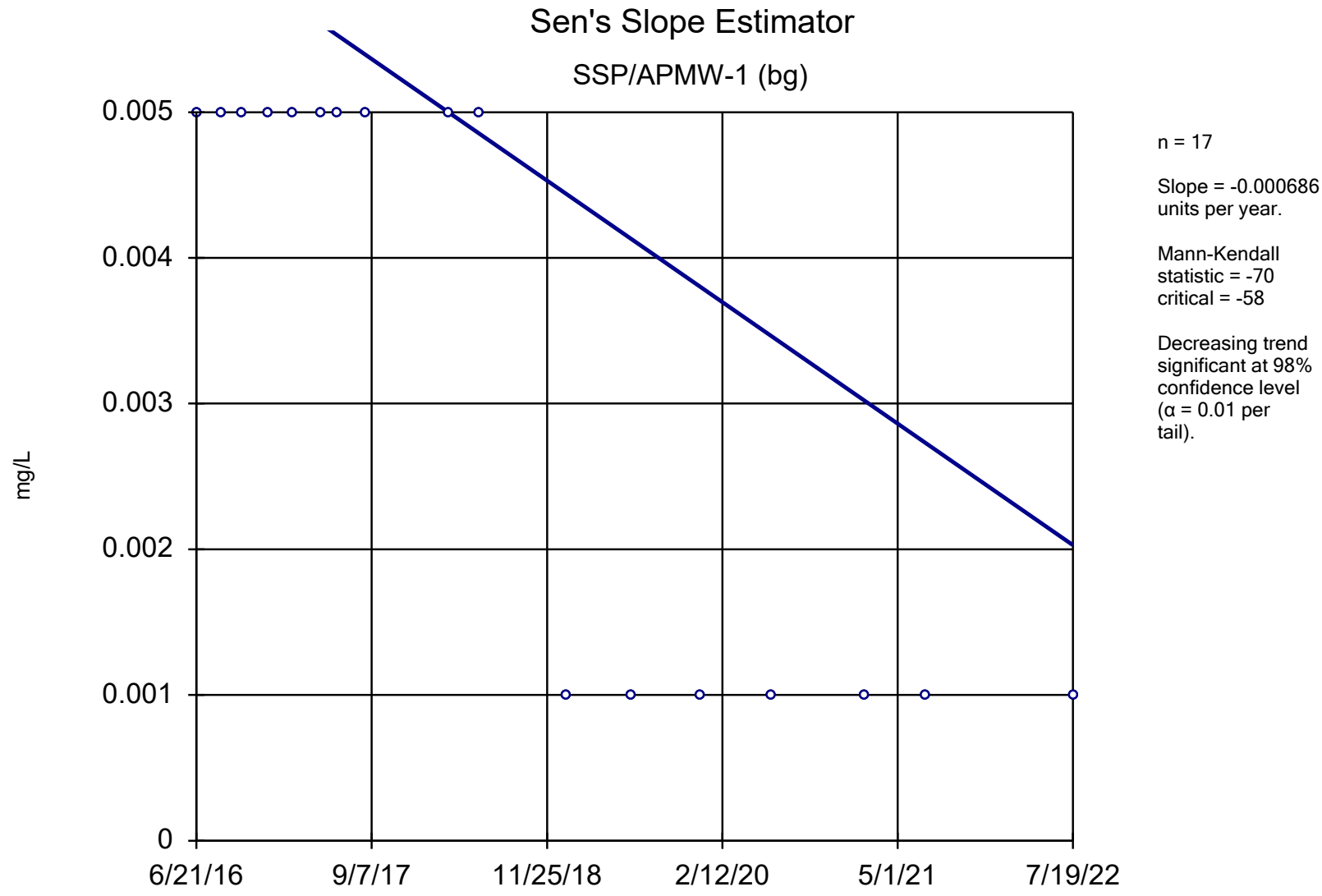
Mann-Kendall statistic = -51
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Boron Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

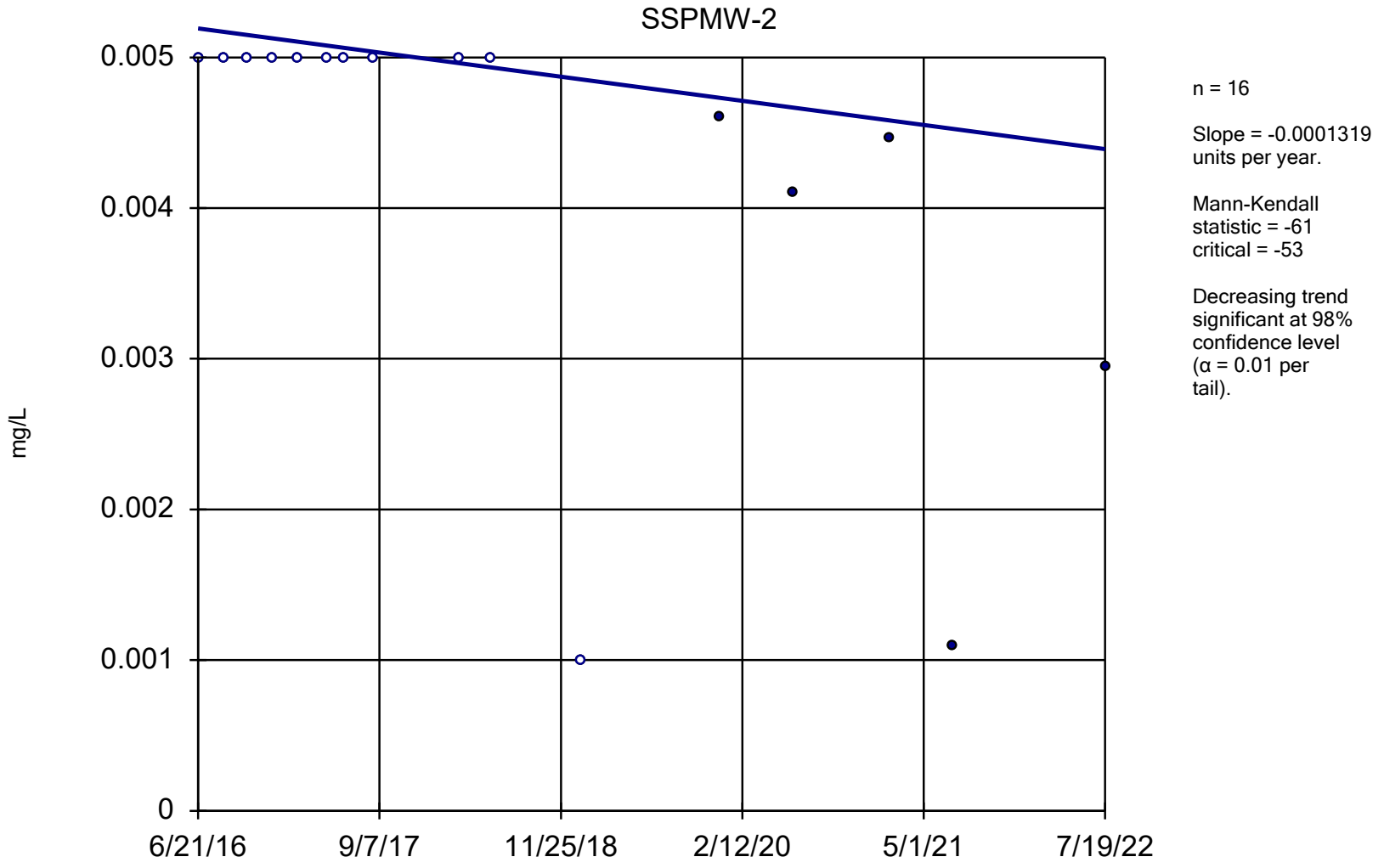


Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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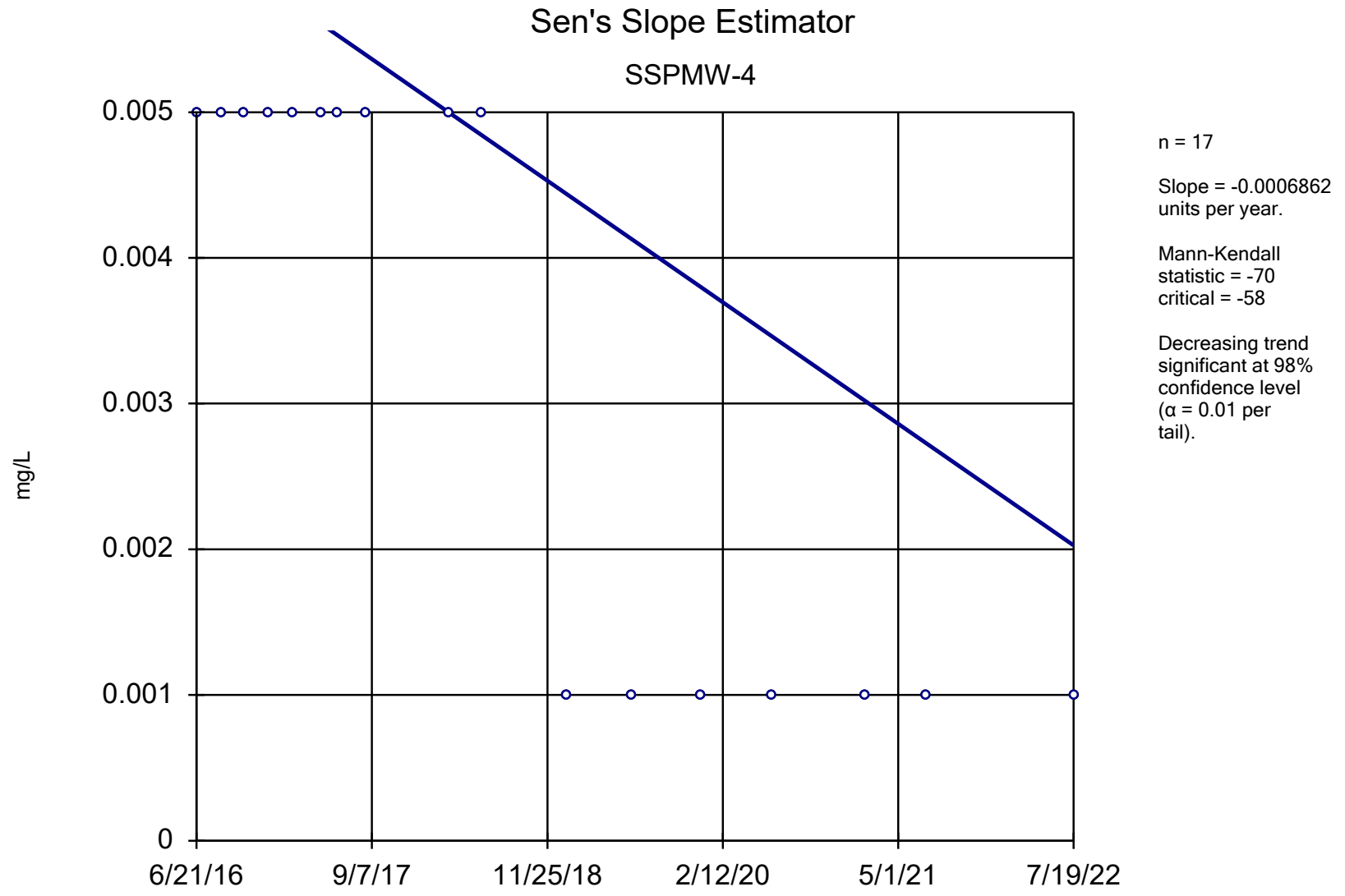
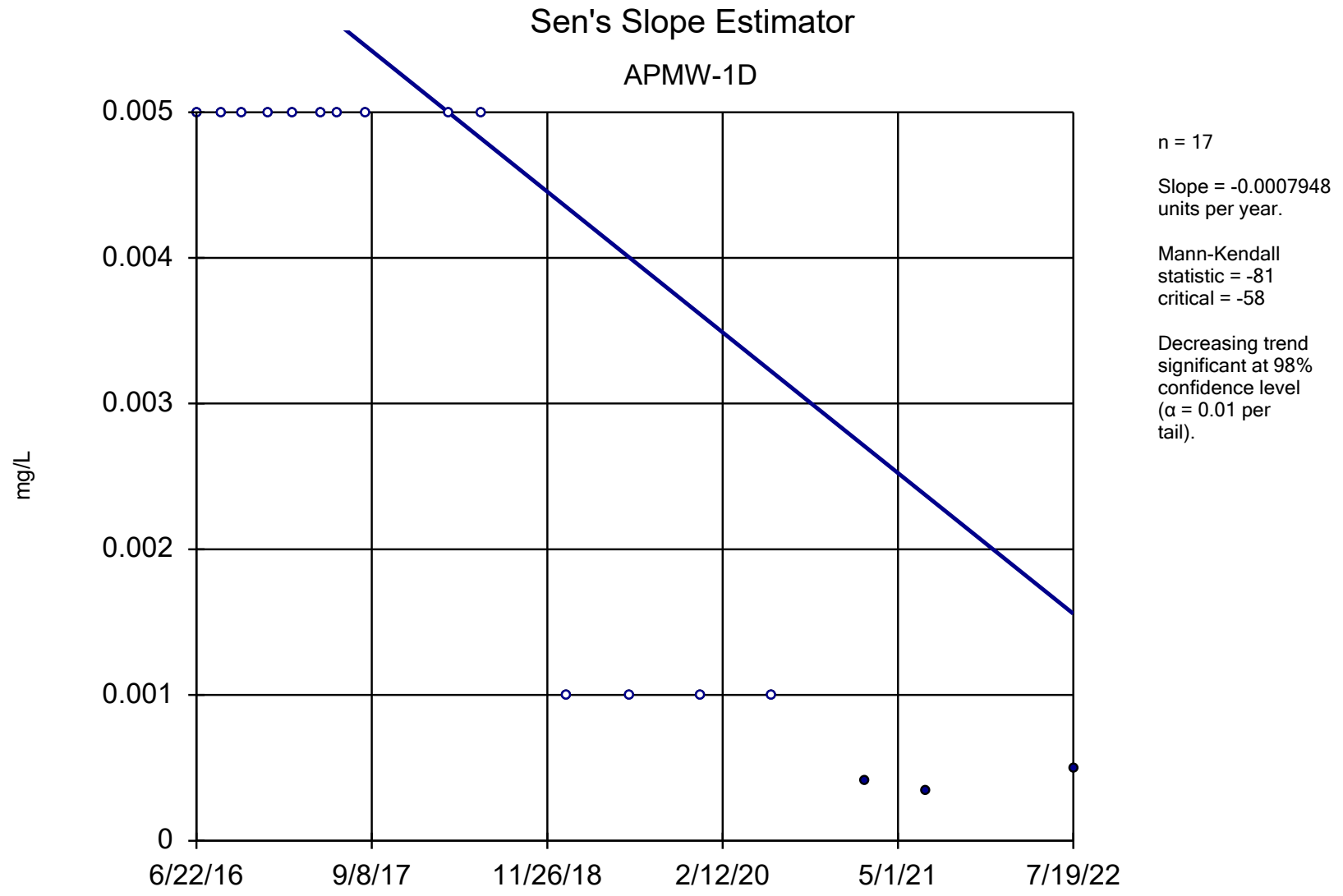
Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

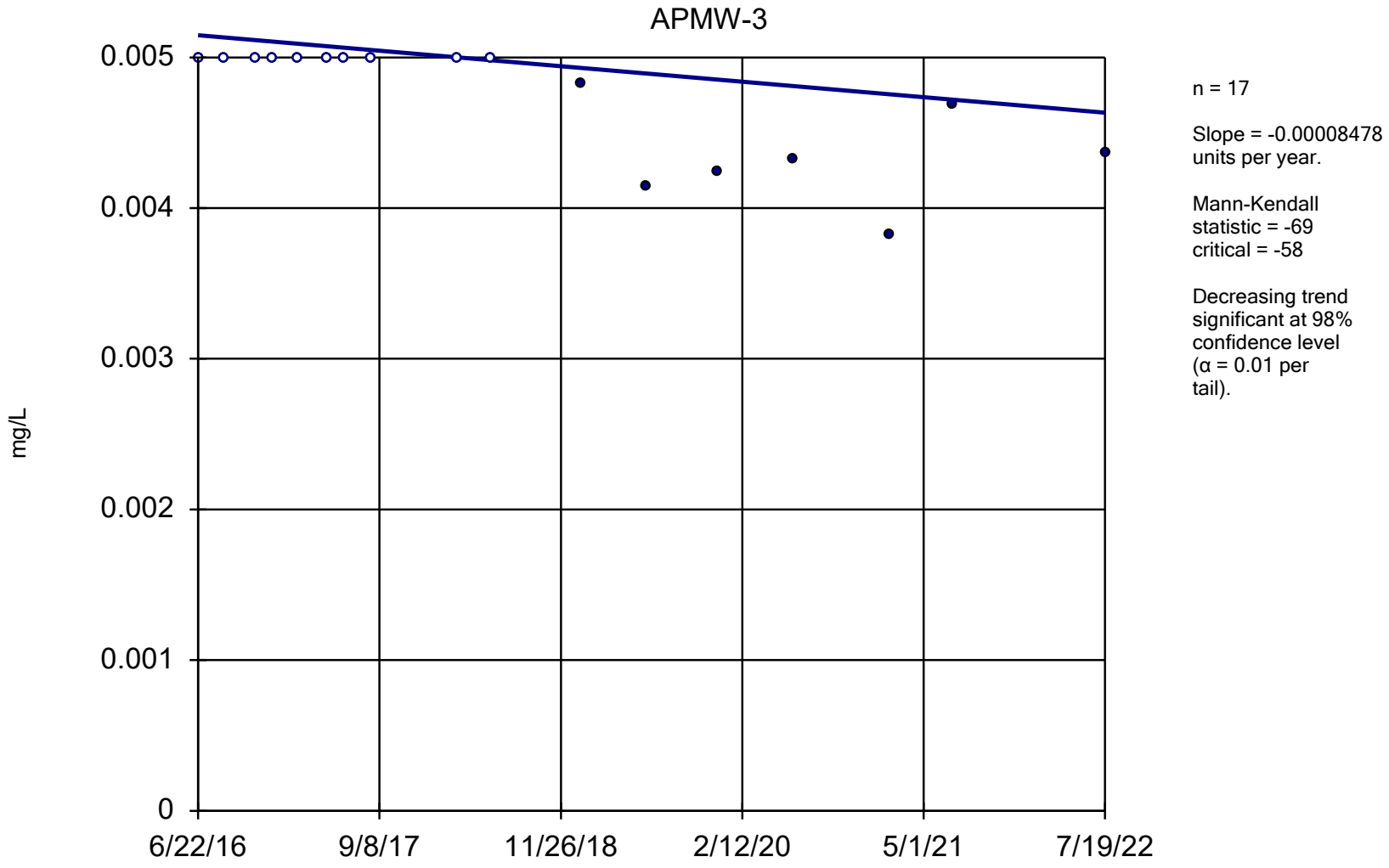


Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

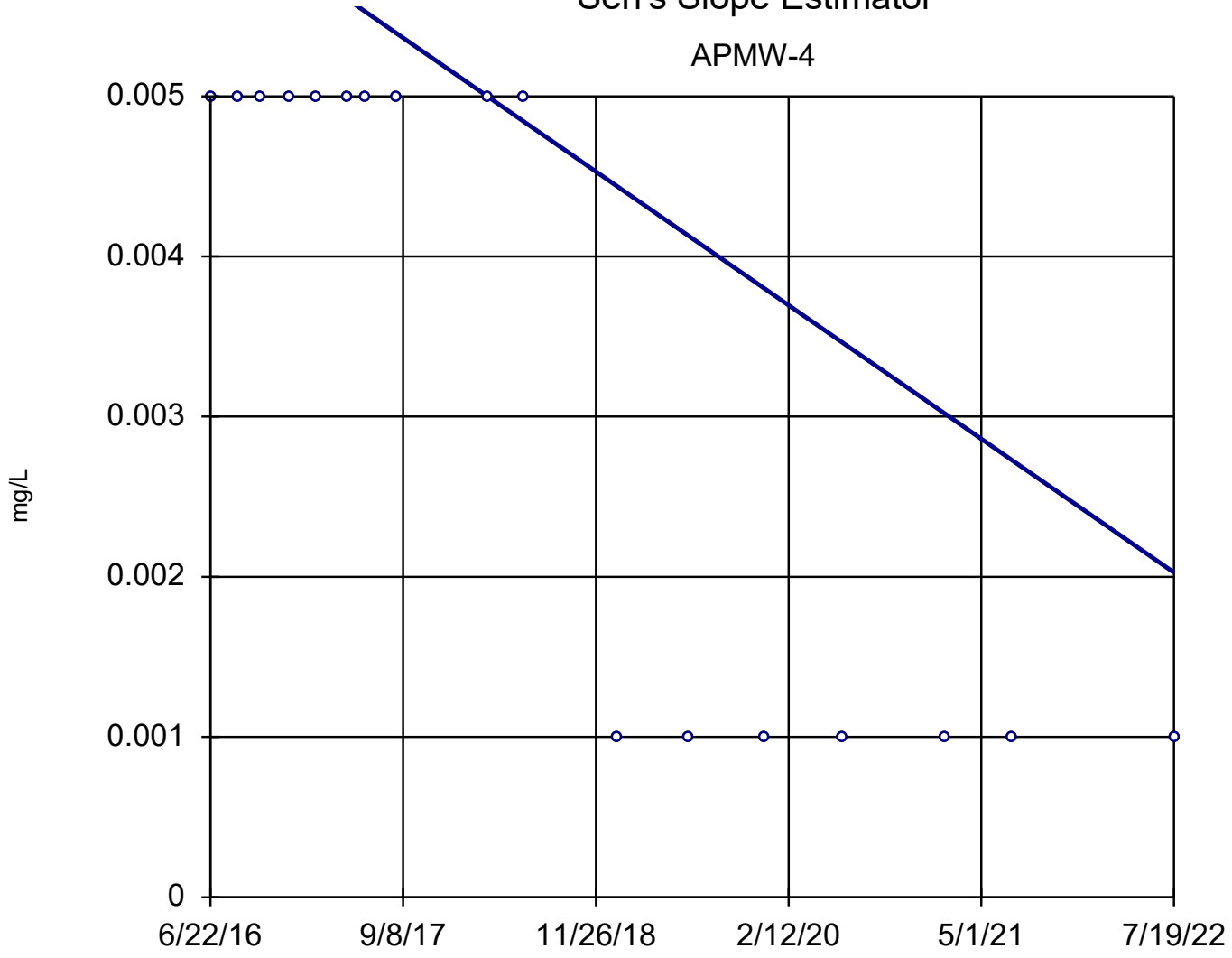
Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.35 Software licensed to HDR. EPA

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.0006864 units per year.

Mann-Kendall statistic = -70
critical = -58

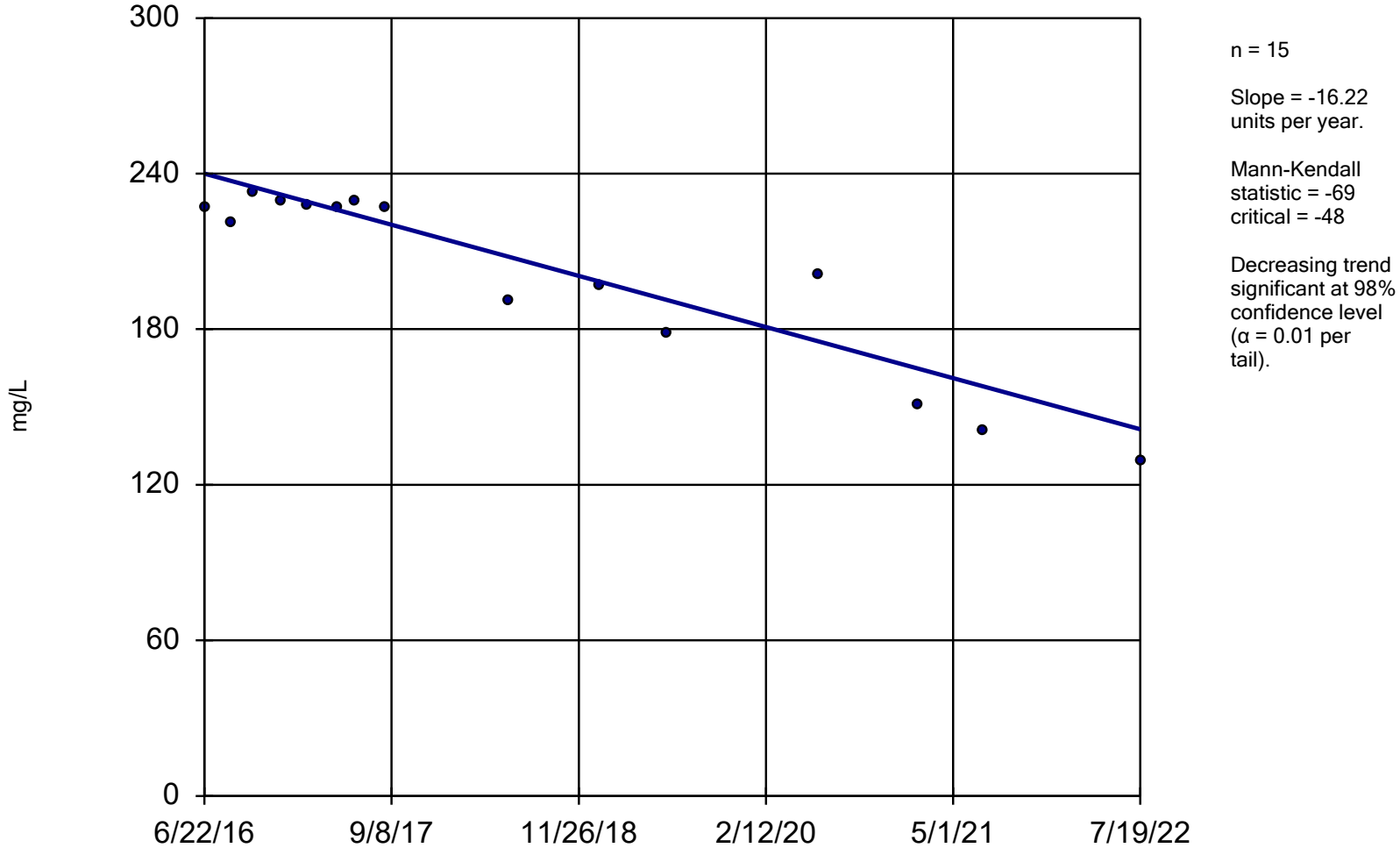
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cadmium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 15

Slope = -16.22 units per year.

Mann-Kendall statistic = -69
critical = -48

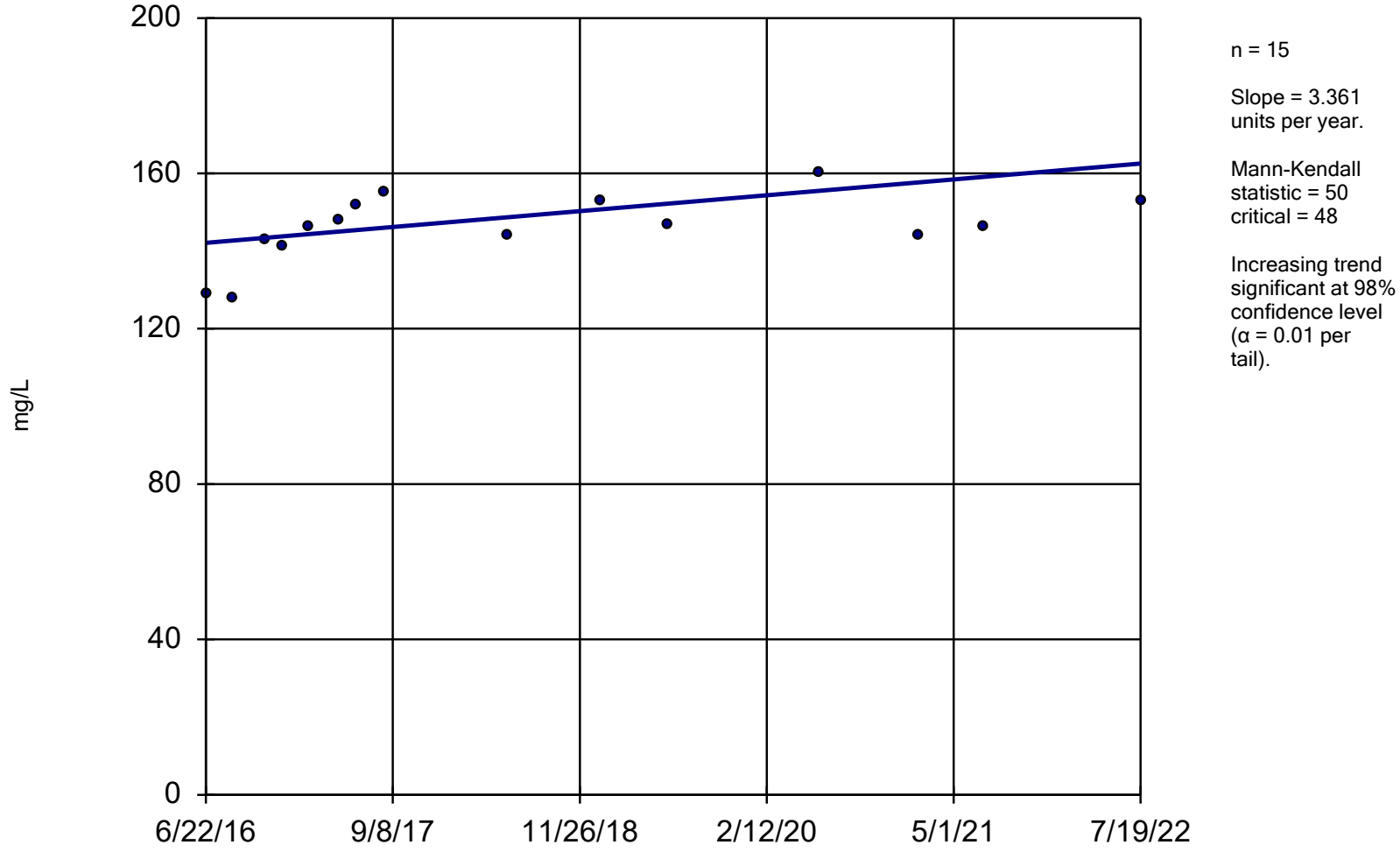
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-3



n = 15

Slope = 3.361 units per year.

Mann-Kendall statistic = 50
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

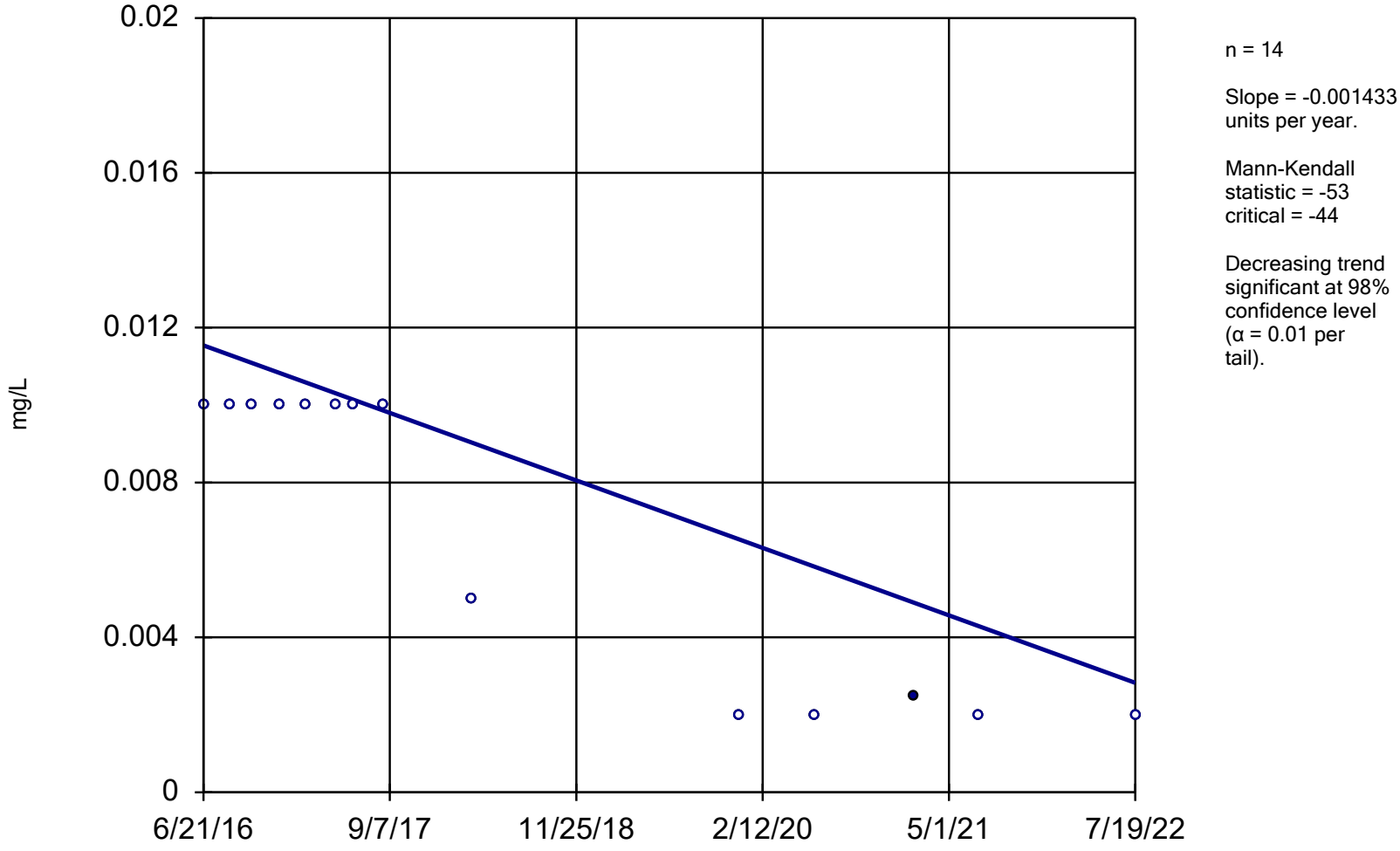
Constituent: Chloride Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 14

Slope = -0.001433 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

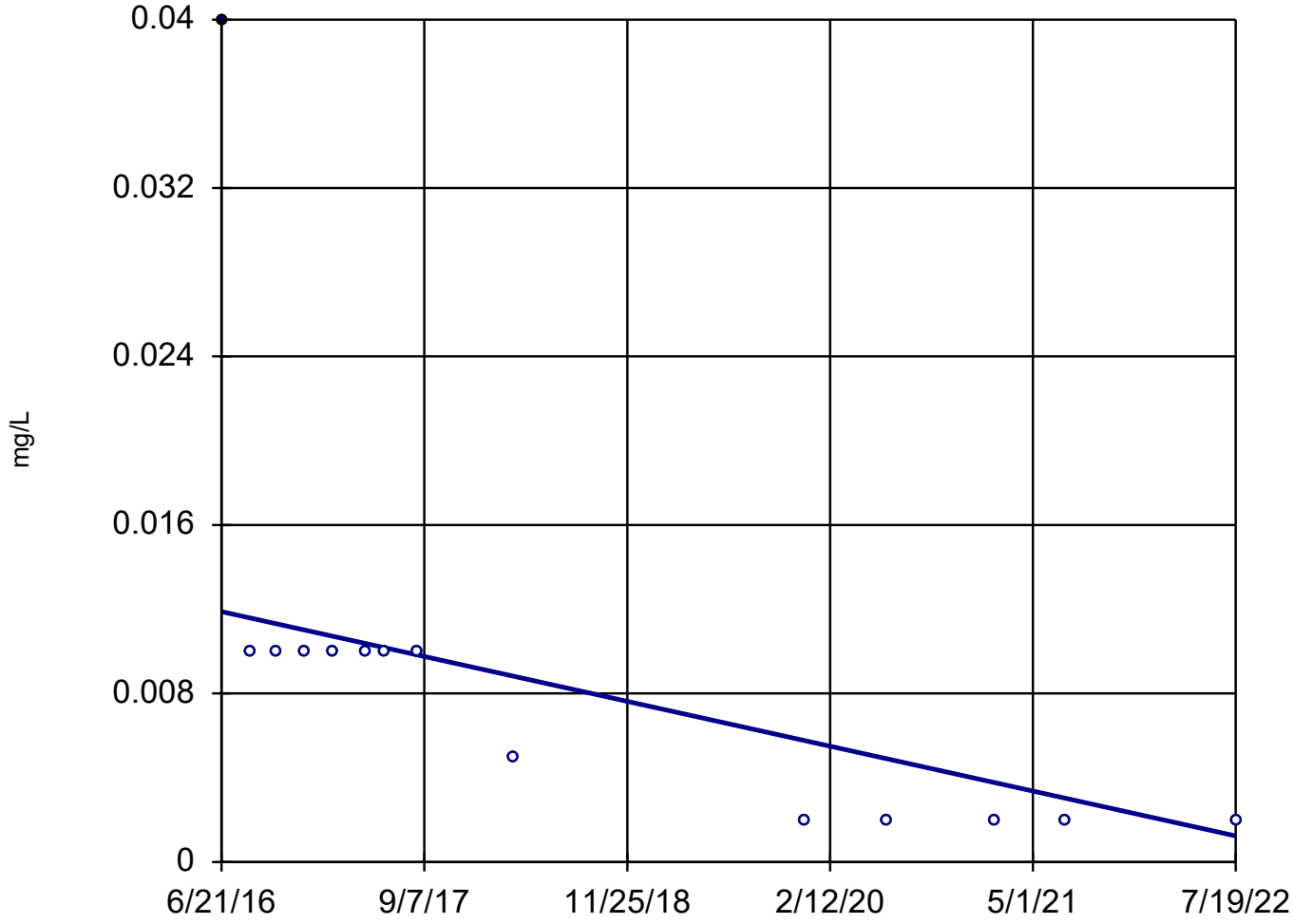
Constituent: Chromium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 14

Slope = -0.001753 units per year.

Mann-Kendall statistic = -60
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

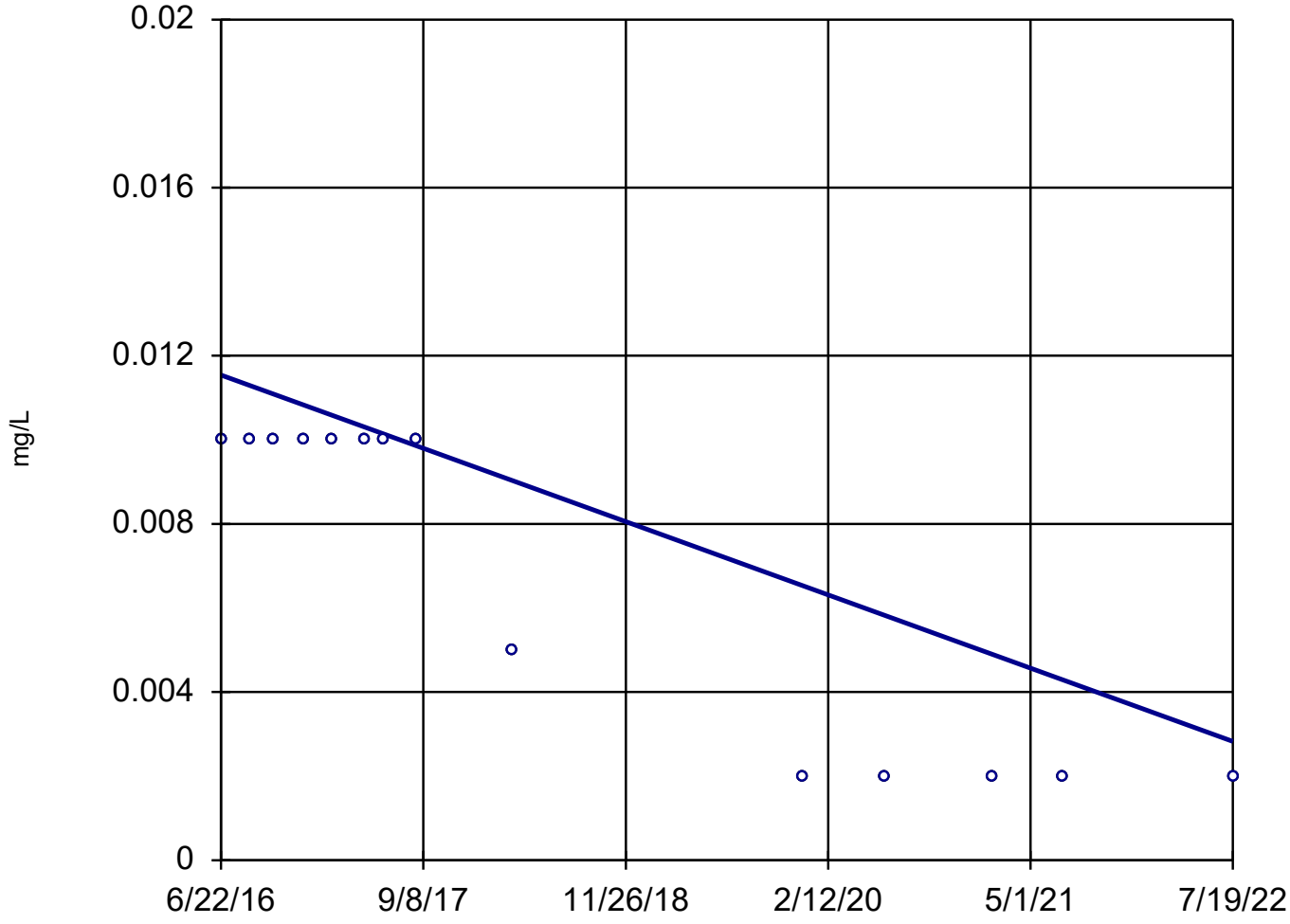
Constituent: Chromium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 14

Slope = -0.001434 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

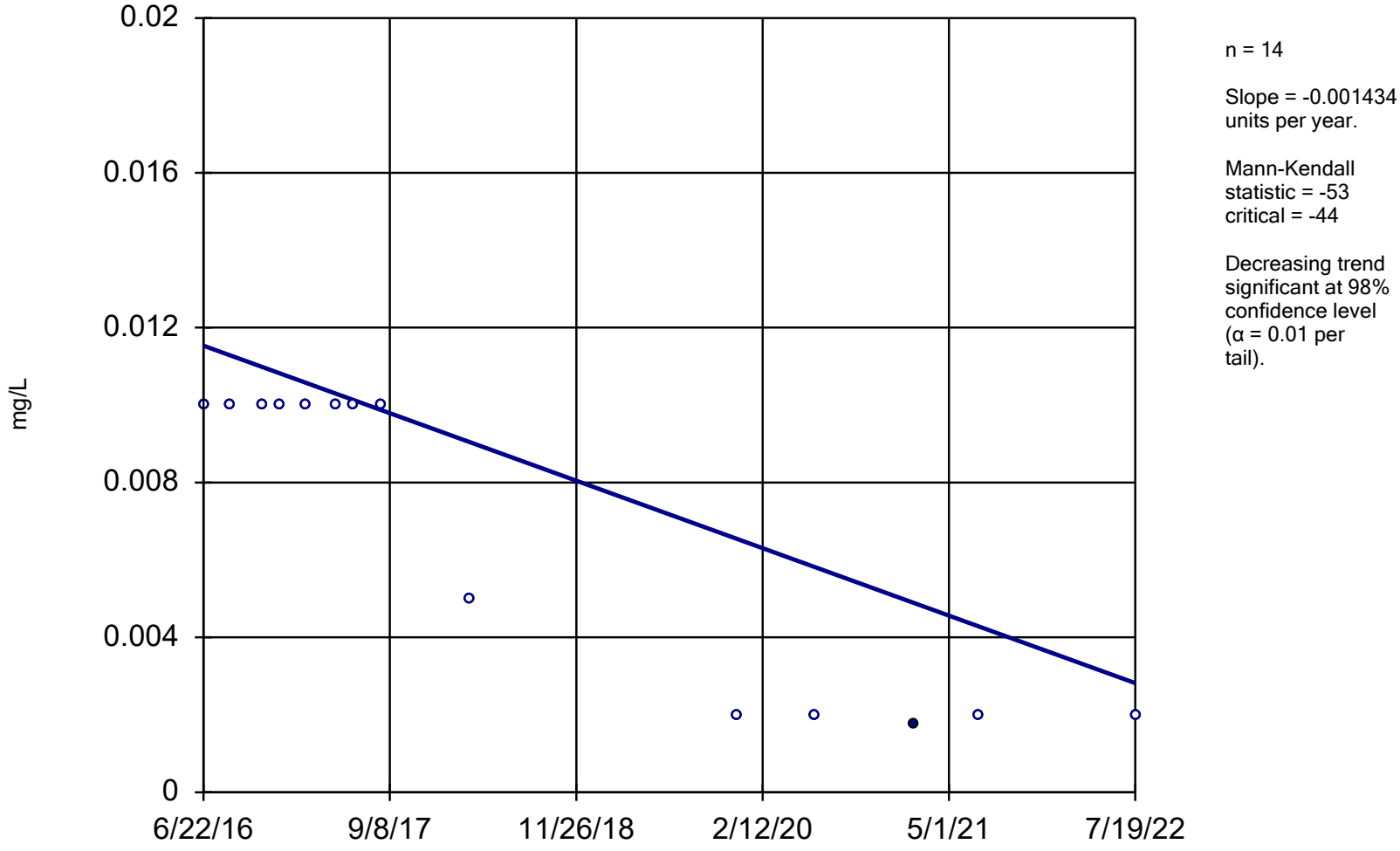
Constituent: Chromium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 14

Slope = -0.001434 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

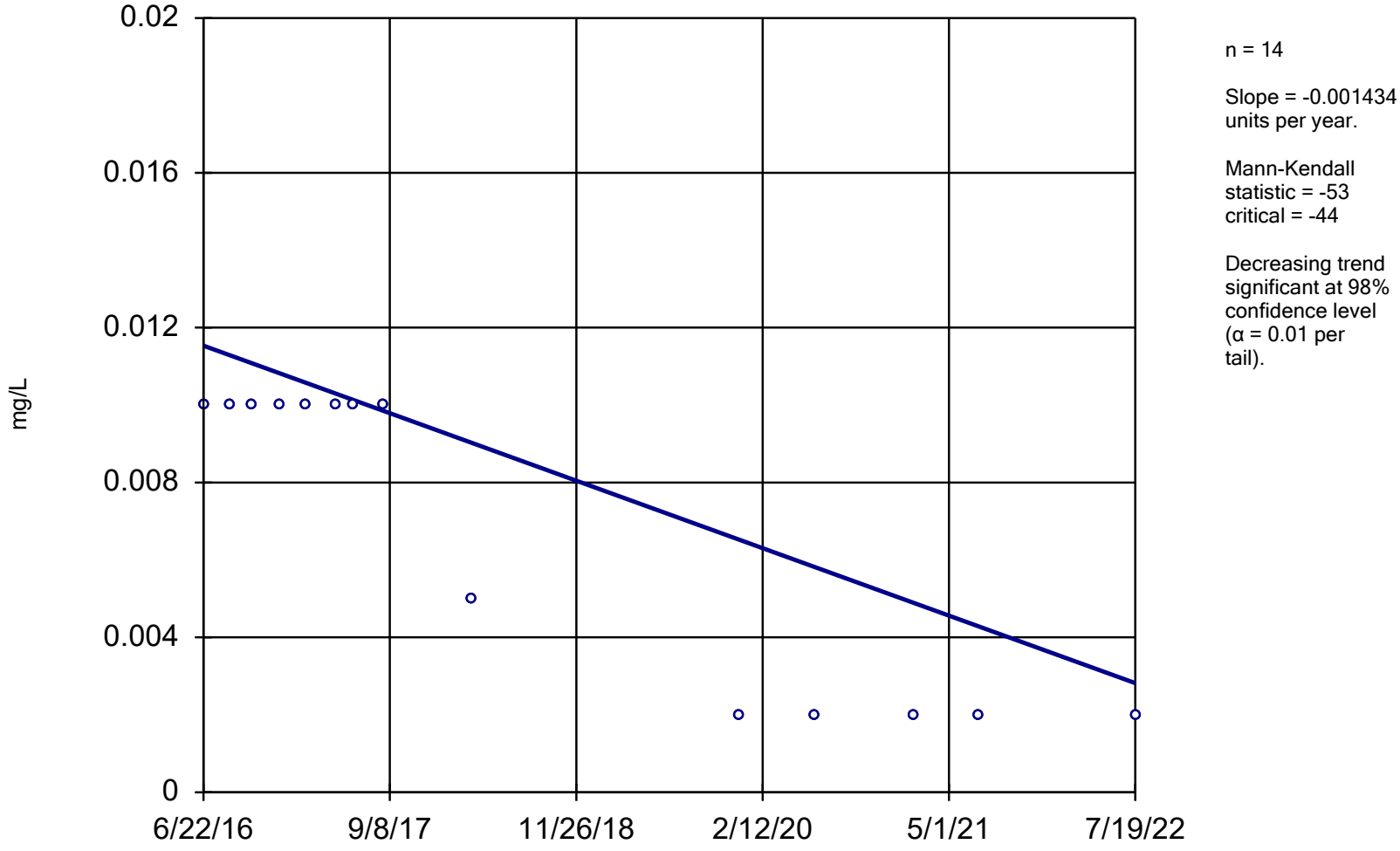
Constituent: Chromium Analysis Run 10/19/2022 3:34 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 14

Slope = -0.001434 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

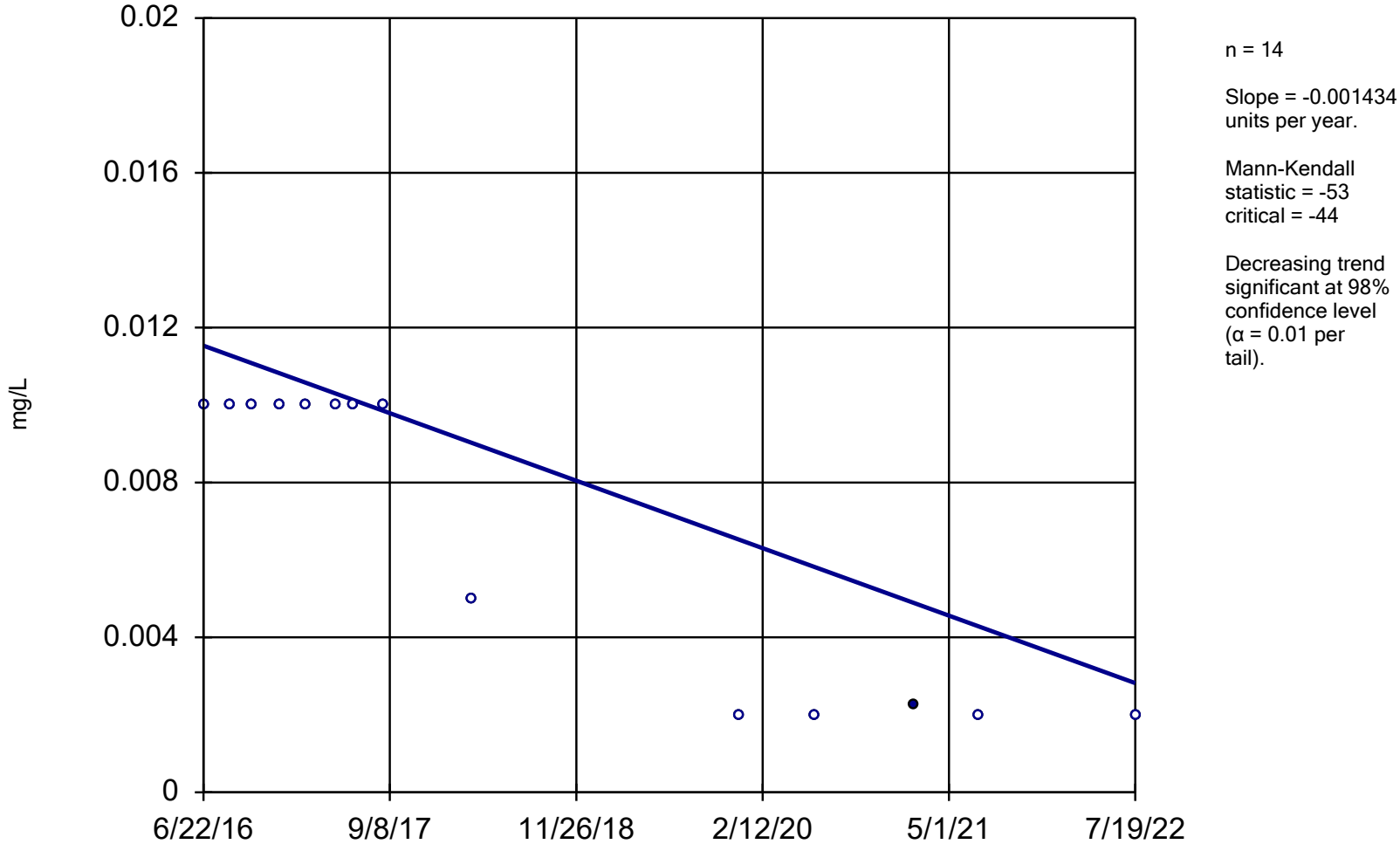
Constituent: Chromium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 14

Slope = -0.001434 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

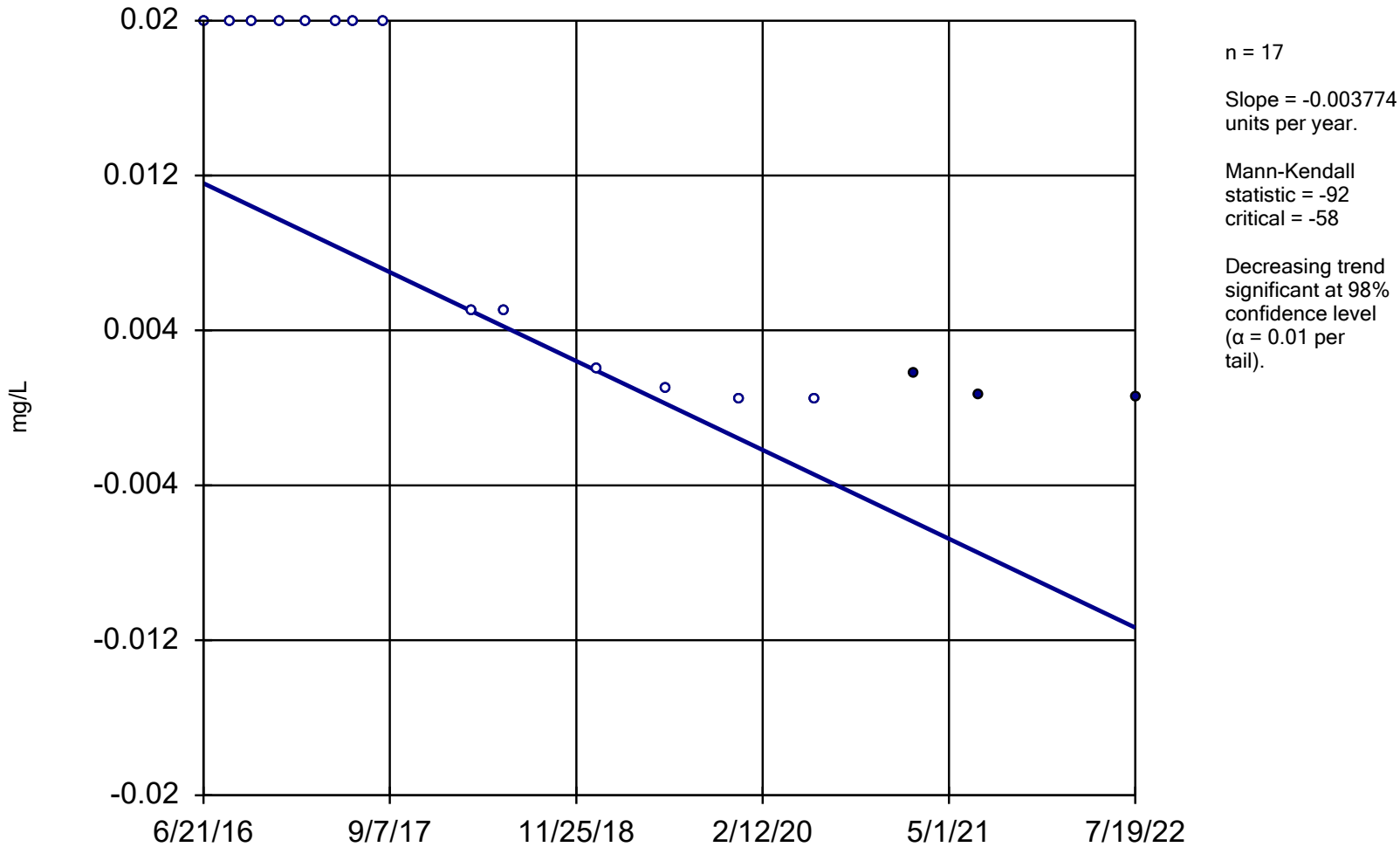
Constituent: Chromium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 17

Slope = -0.003774 units per year.

Mann-Kendall statistic = -92
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

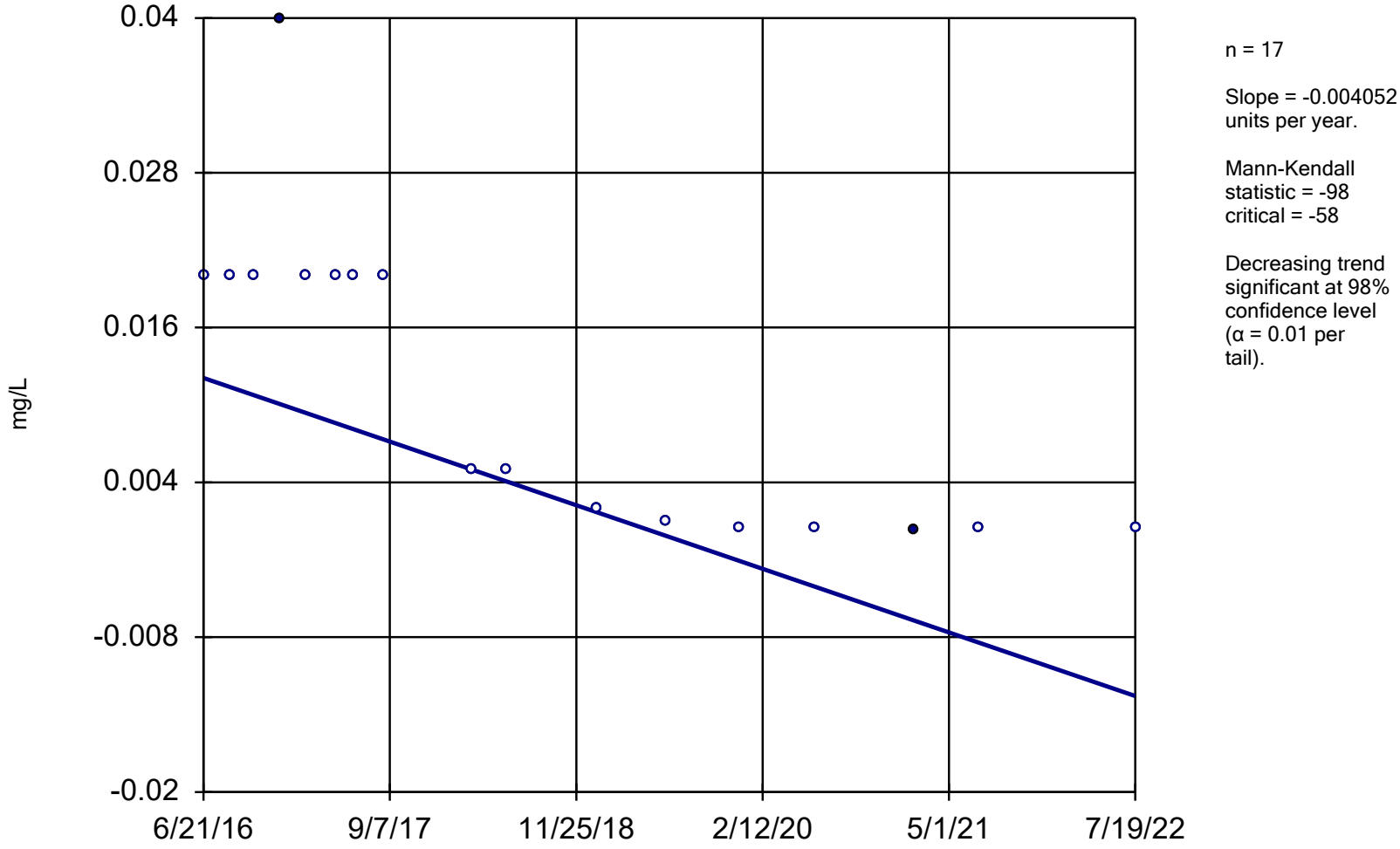
Constituent: Cobalt Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = -0.004052 units per year.

Mann-Kendall statistic = -98
critical = -58

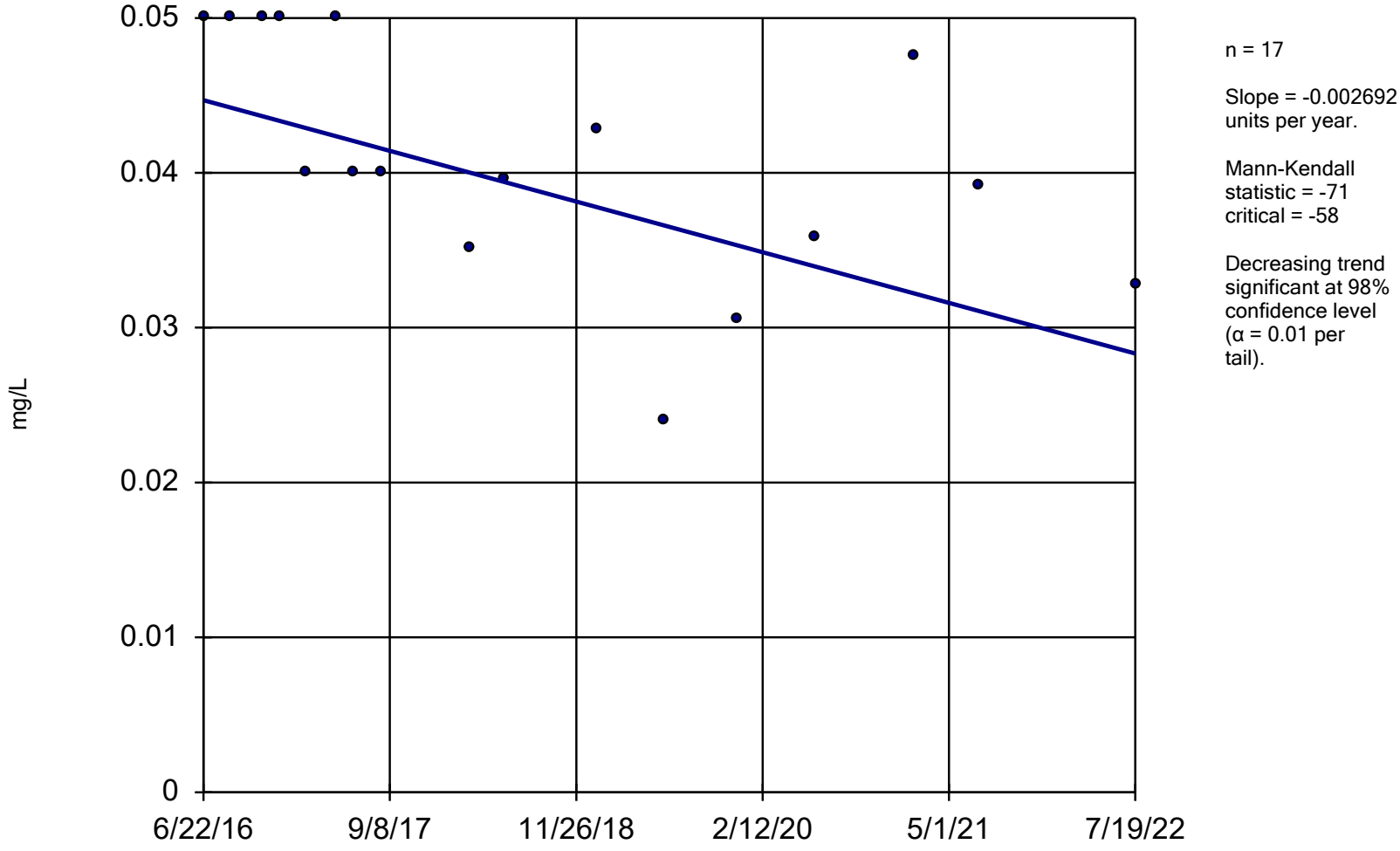
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-3



n = 17

Slope = -0.002692 units per year.

Mann-Kendall statistic = -71
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

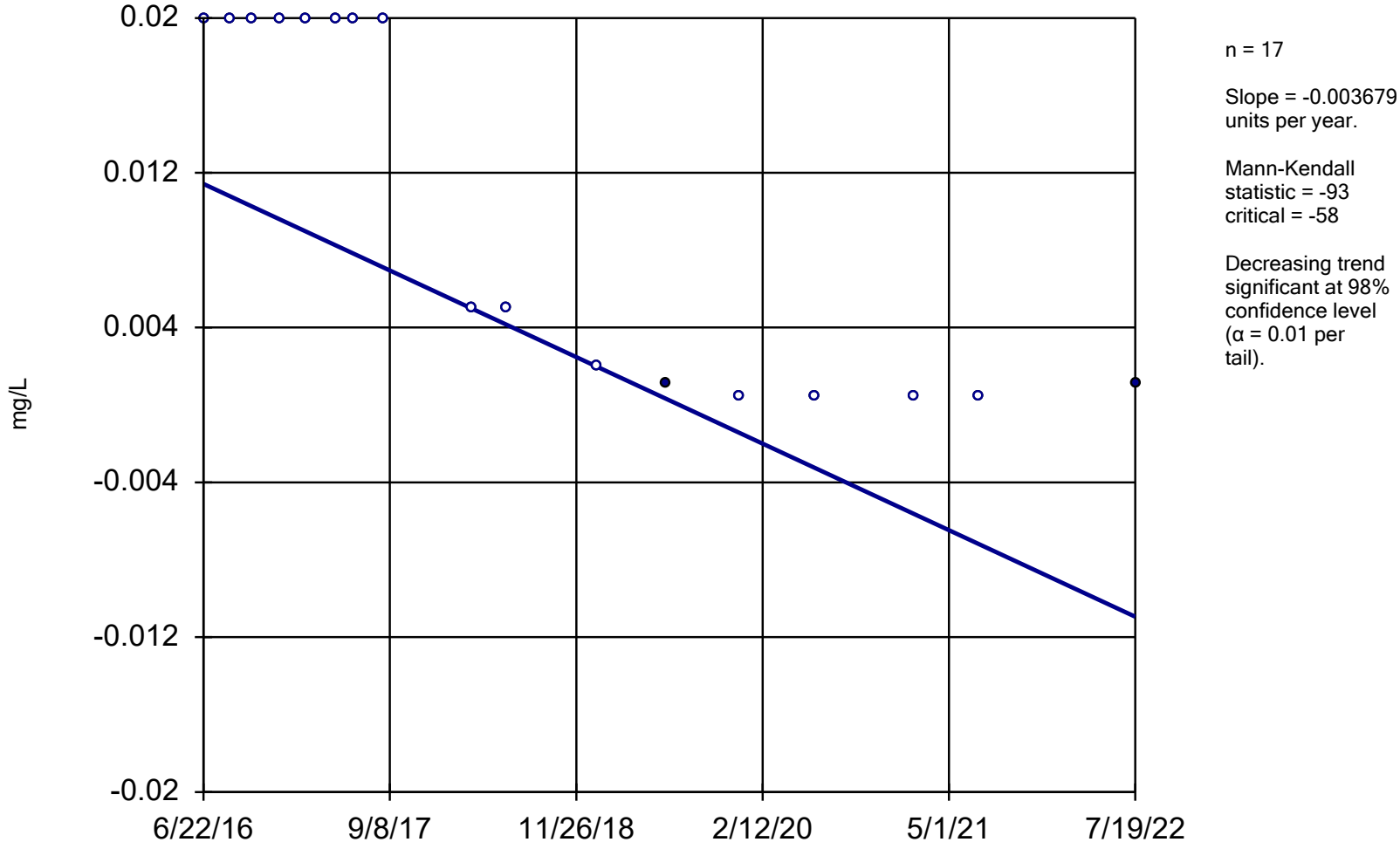
Constituent: Cobalt Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.003679 units per year.

Mann-Kendall statistic = -93
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

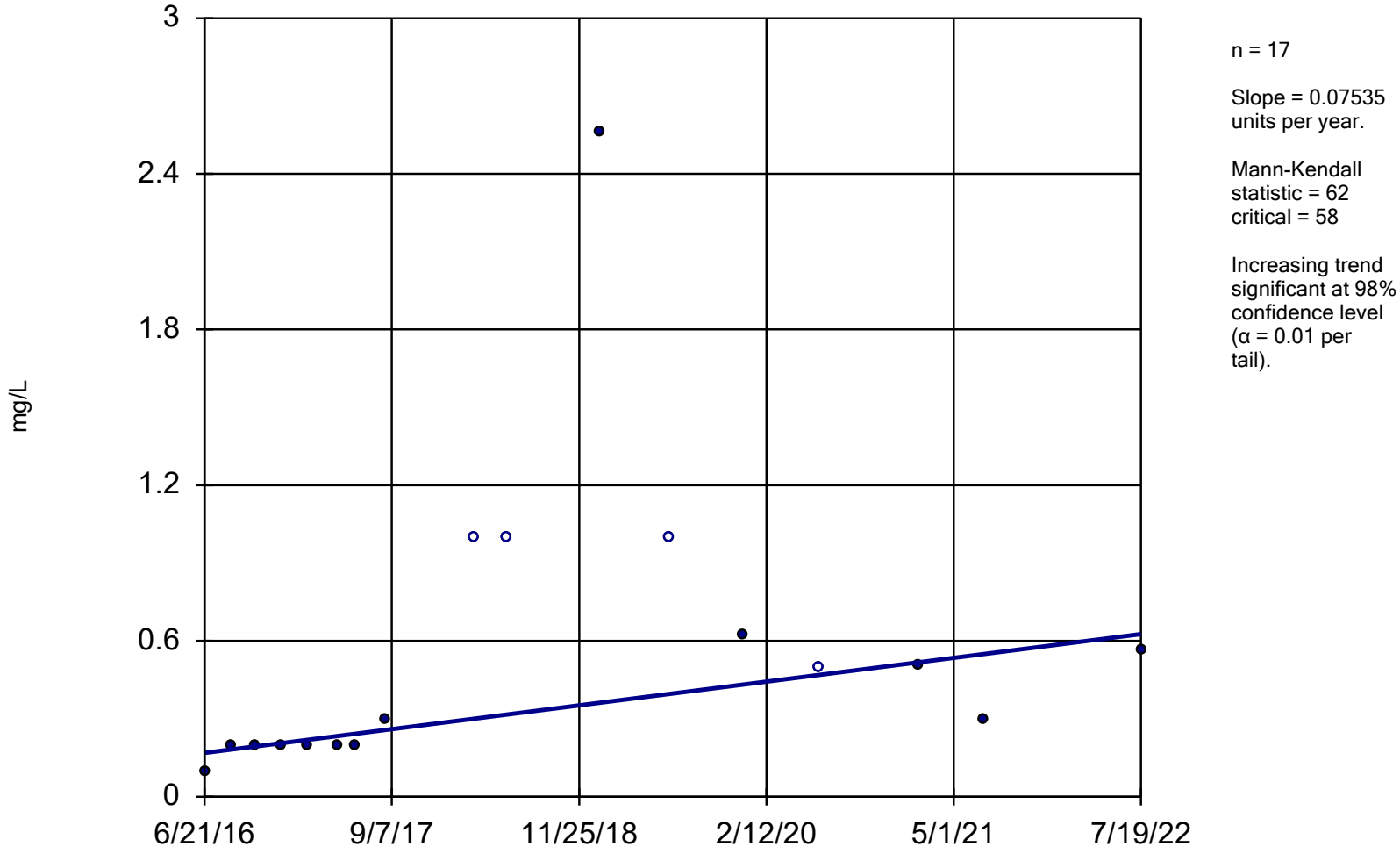
Constituent: Cobalt Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = 0.07535 units per year.

Mann-Kendall statistic = 62
critical = 58

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

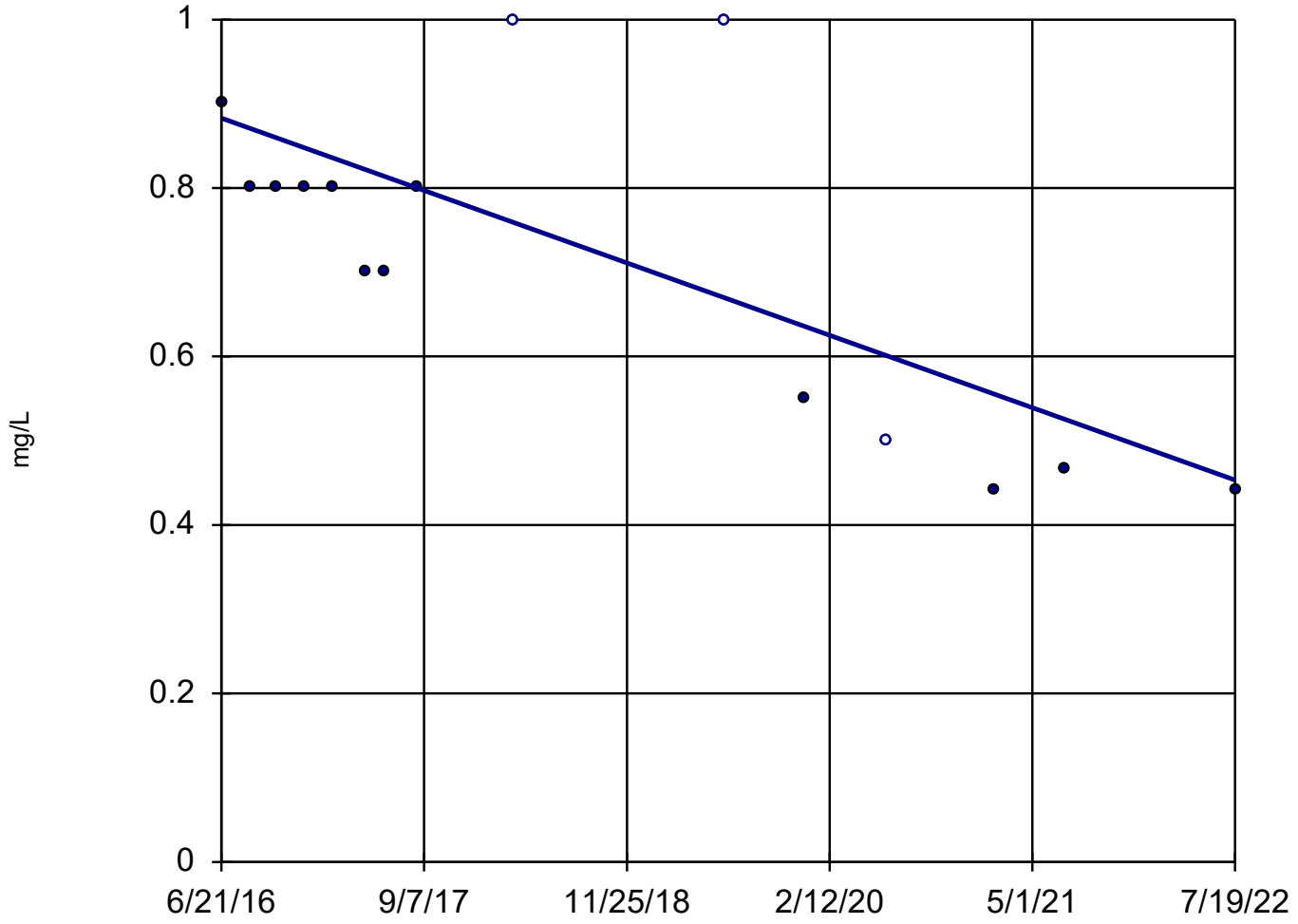
Constituent: Fluoride Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 15

Slope = -0.07065 units per year.

Mann-Kendall statistic = -54
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

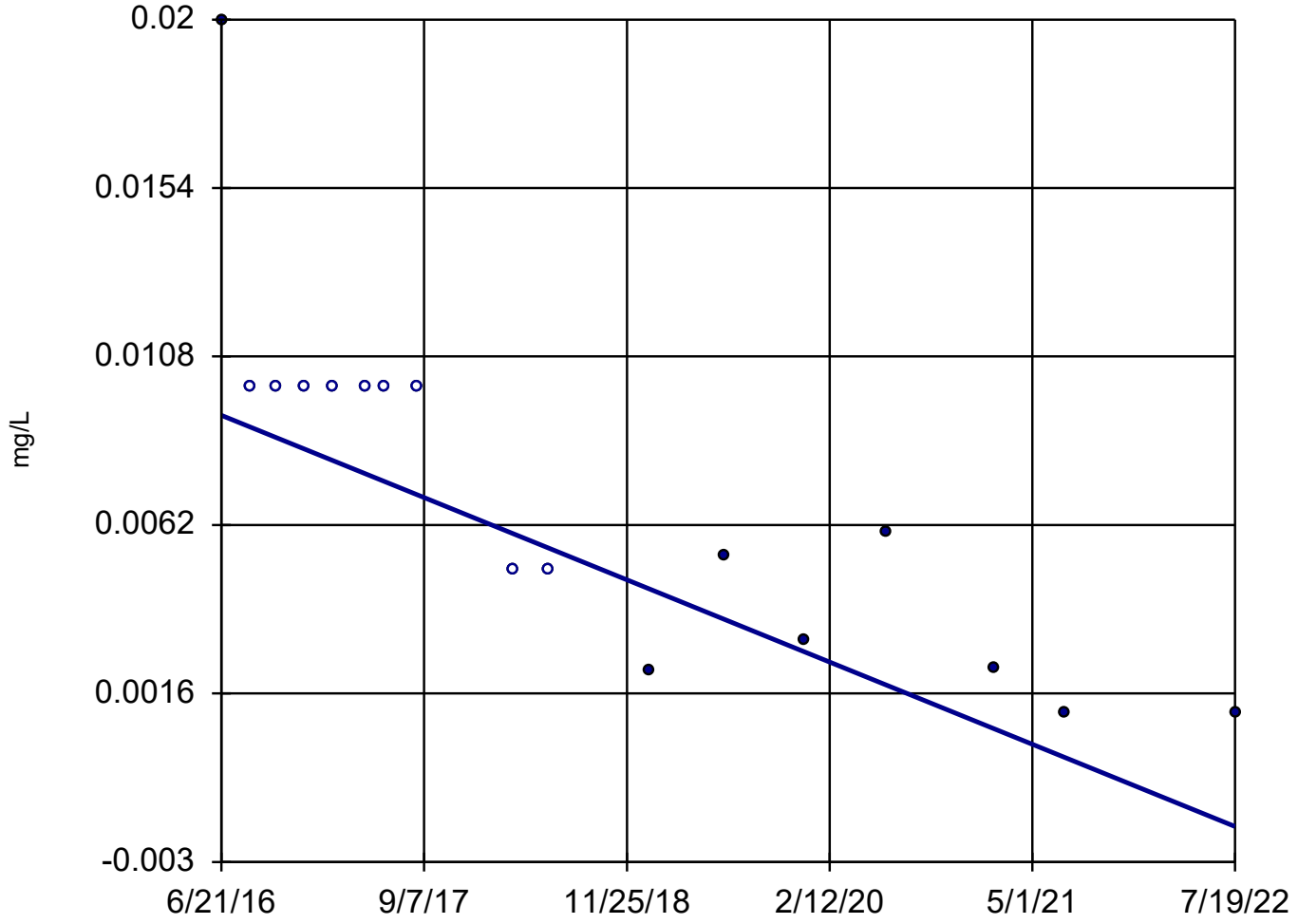
Constituent: Fluoride Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = -0.001847 units per year.

Mann-Kendall statistic = -94
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

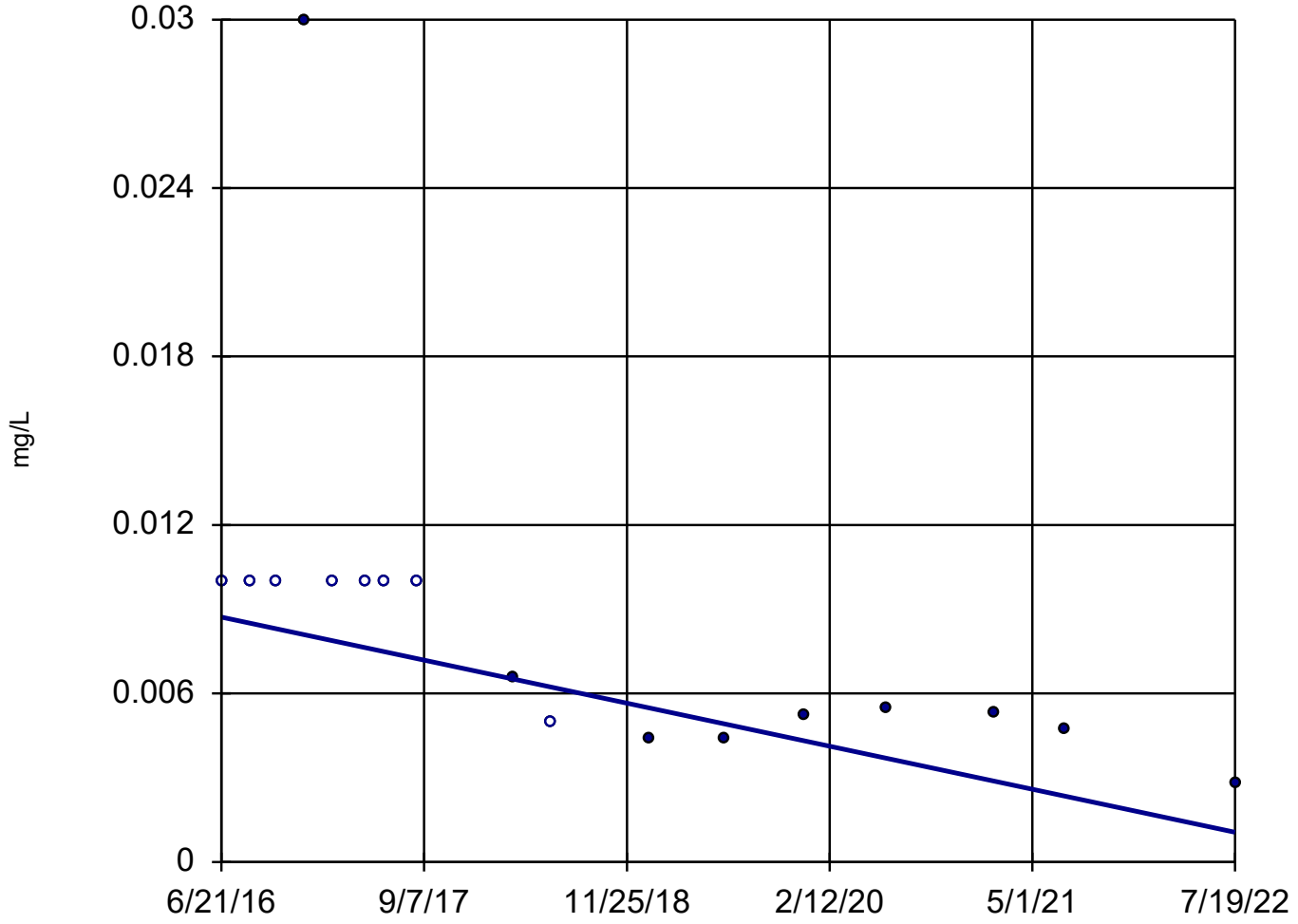
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 17

Slope = -0.00126 units per year.

Mann-Kendall statistic = -83
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

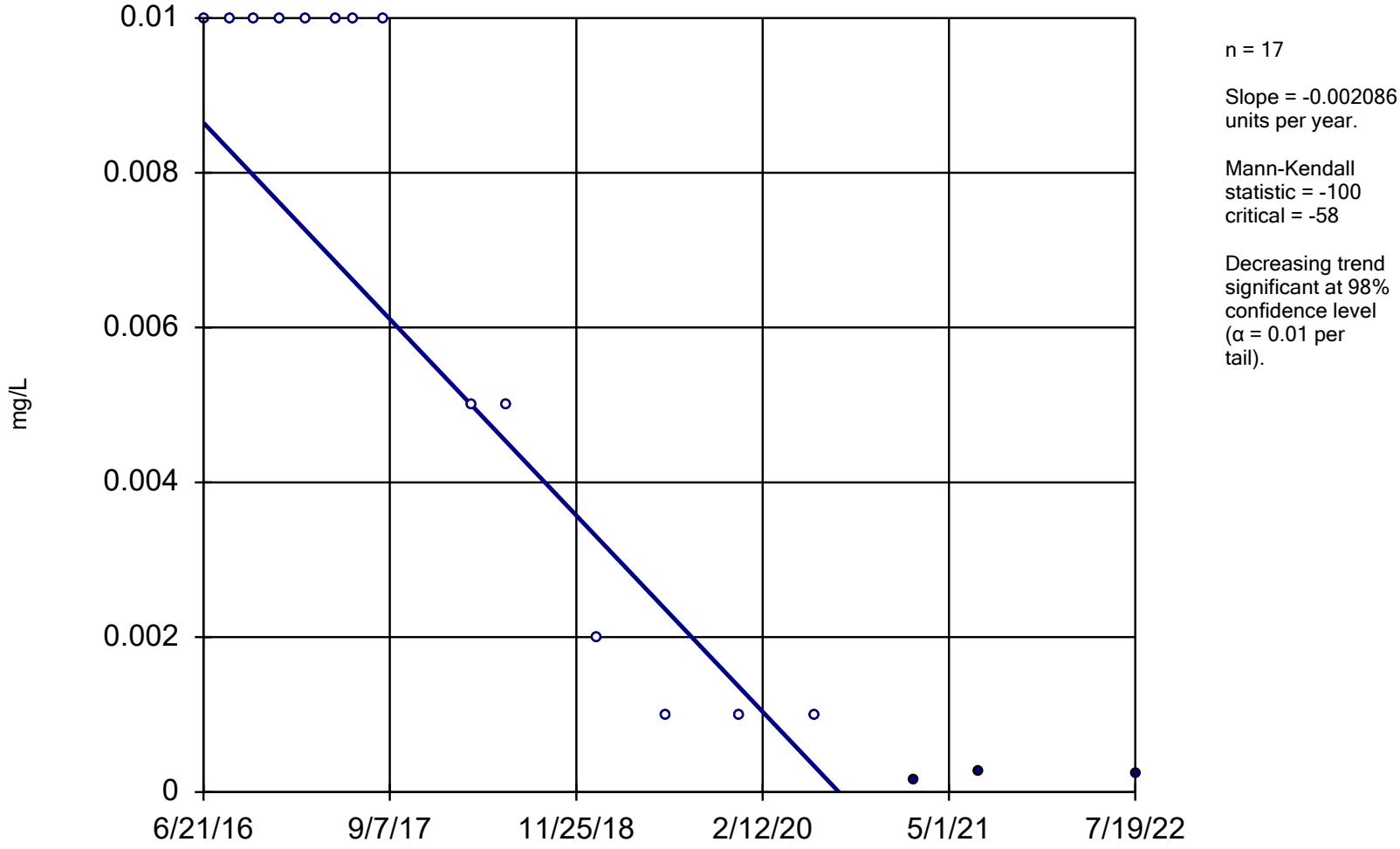
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = -0.002086 units per year.

Mann-Kendall statistic = -100
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

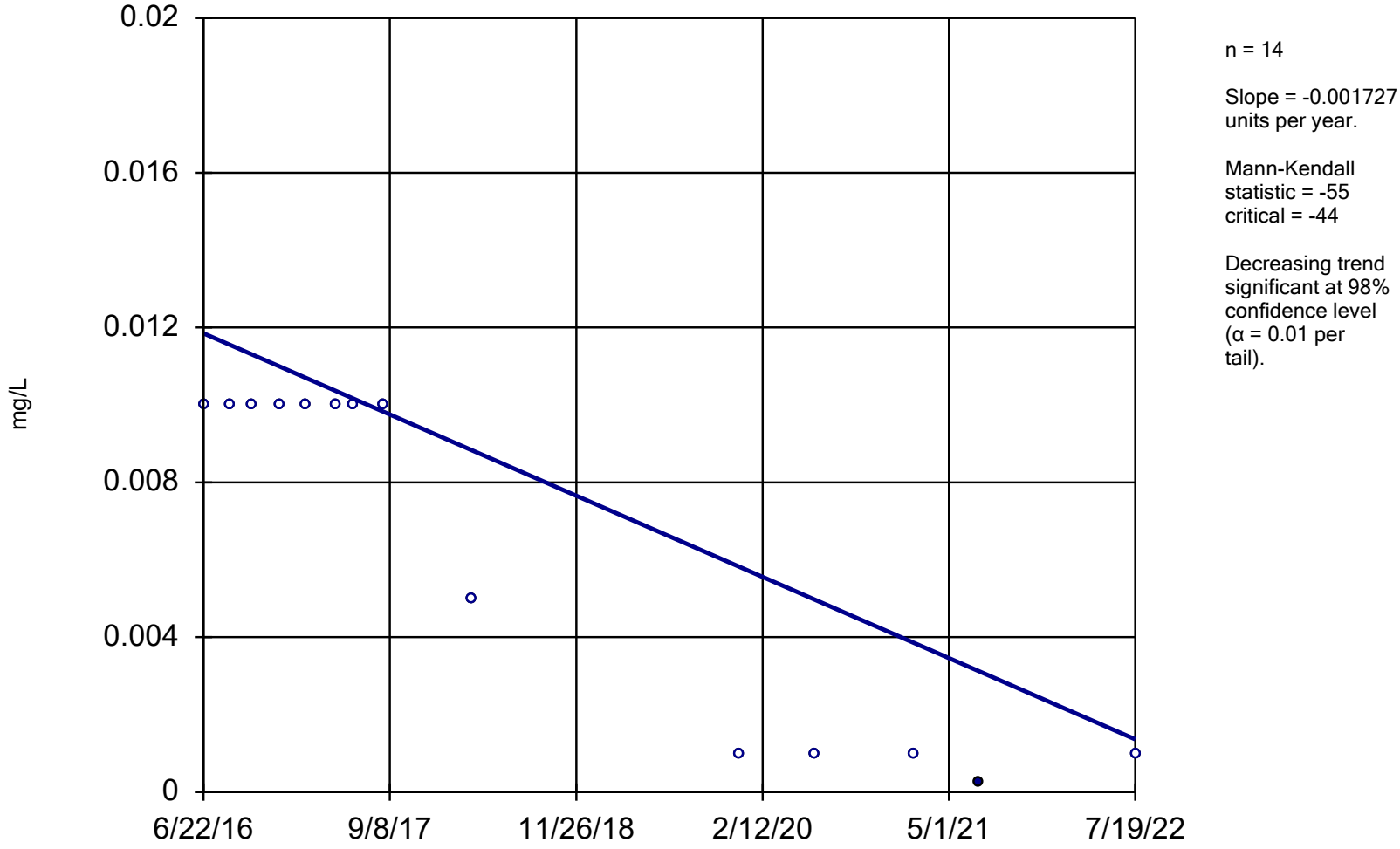
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 14

Slope = -0.001727 units per year.

Mann-Kendall statistic = -55
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

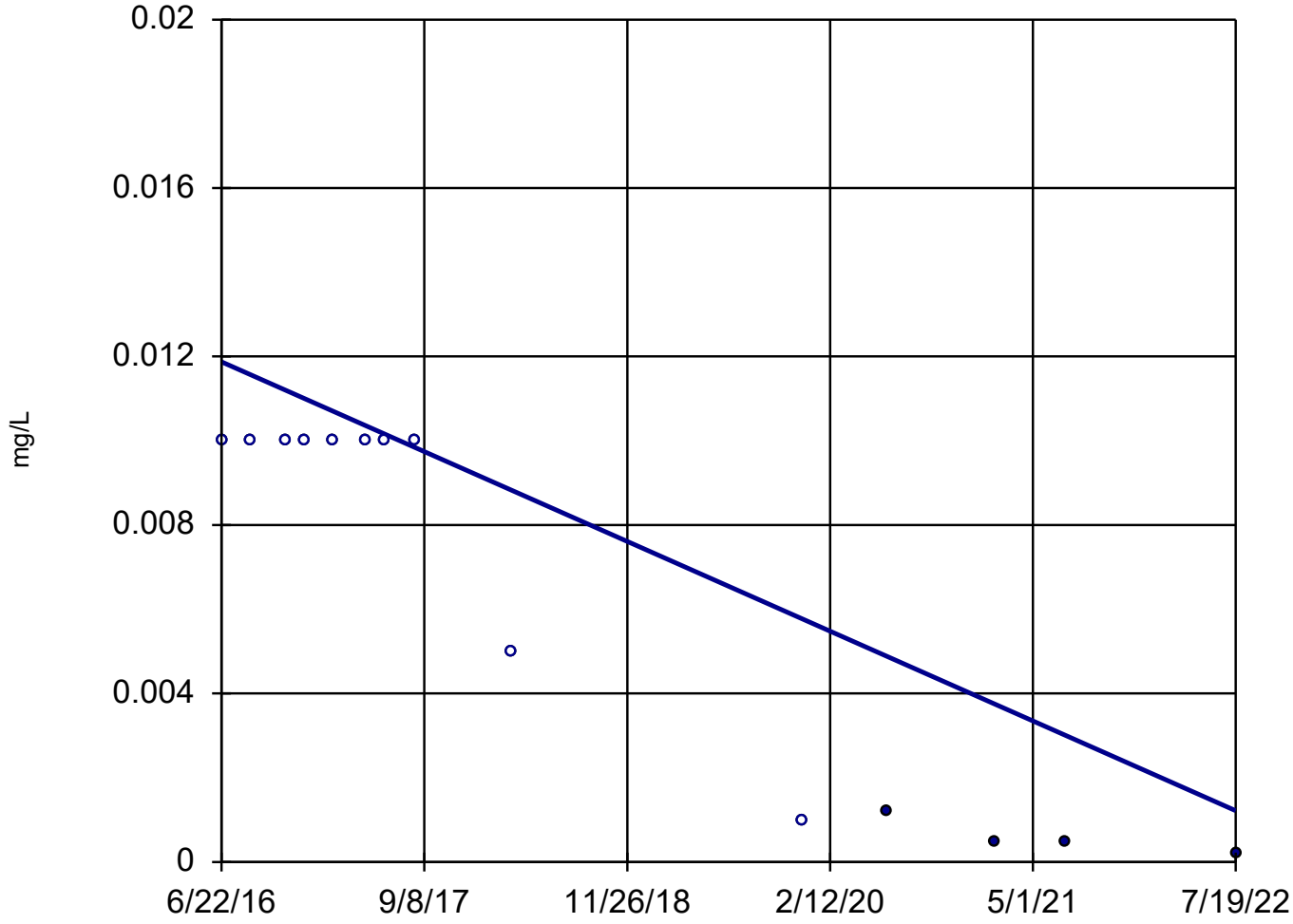
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 14

Slope = -0.001753 units per year.

Mann-Kendall statistic = -59
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

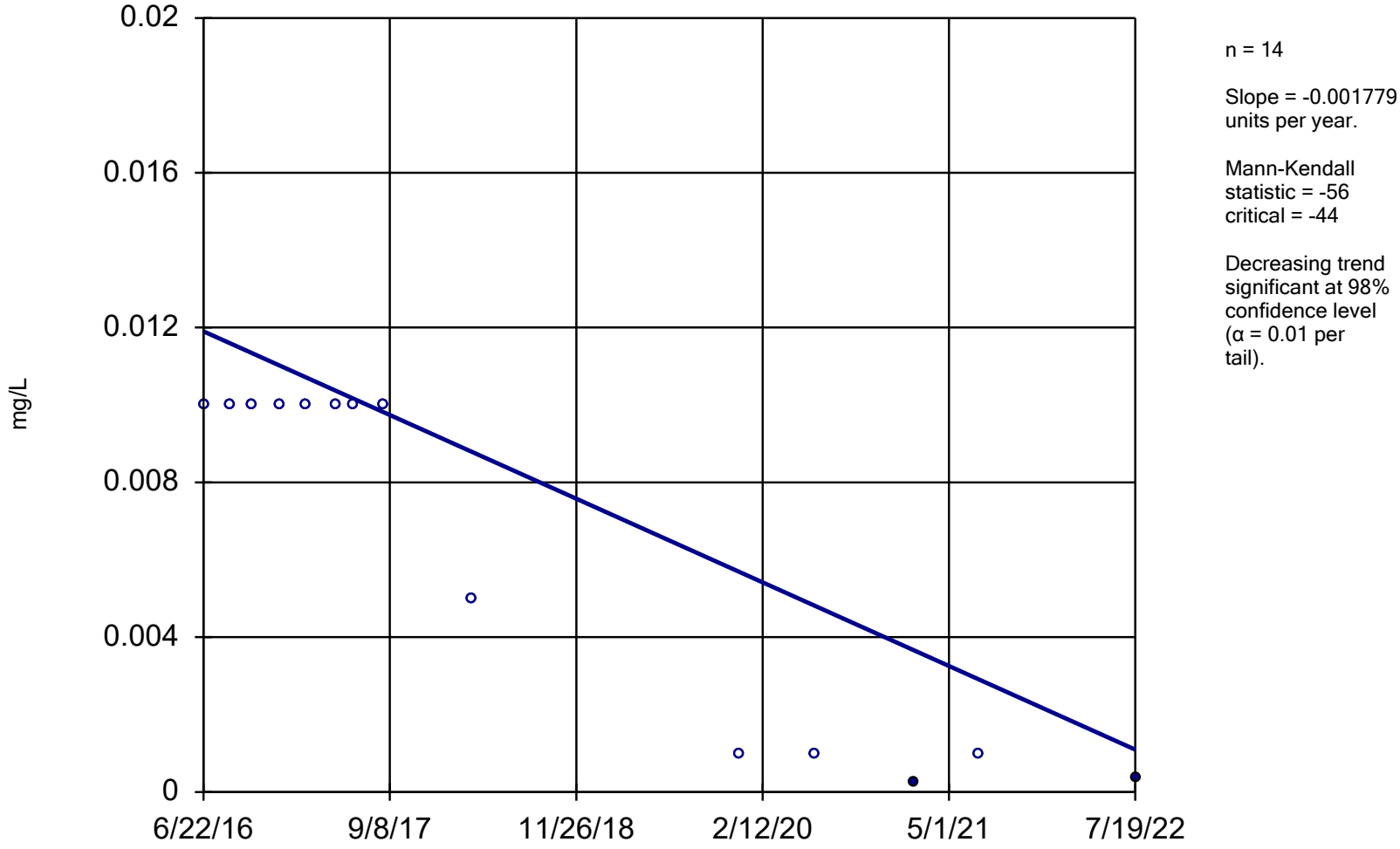
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 14

Slope = -0.001779 units per year.

Mann-Kendall statistic = -56
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

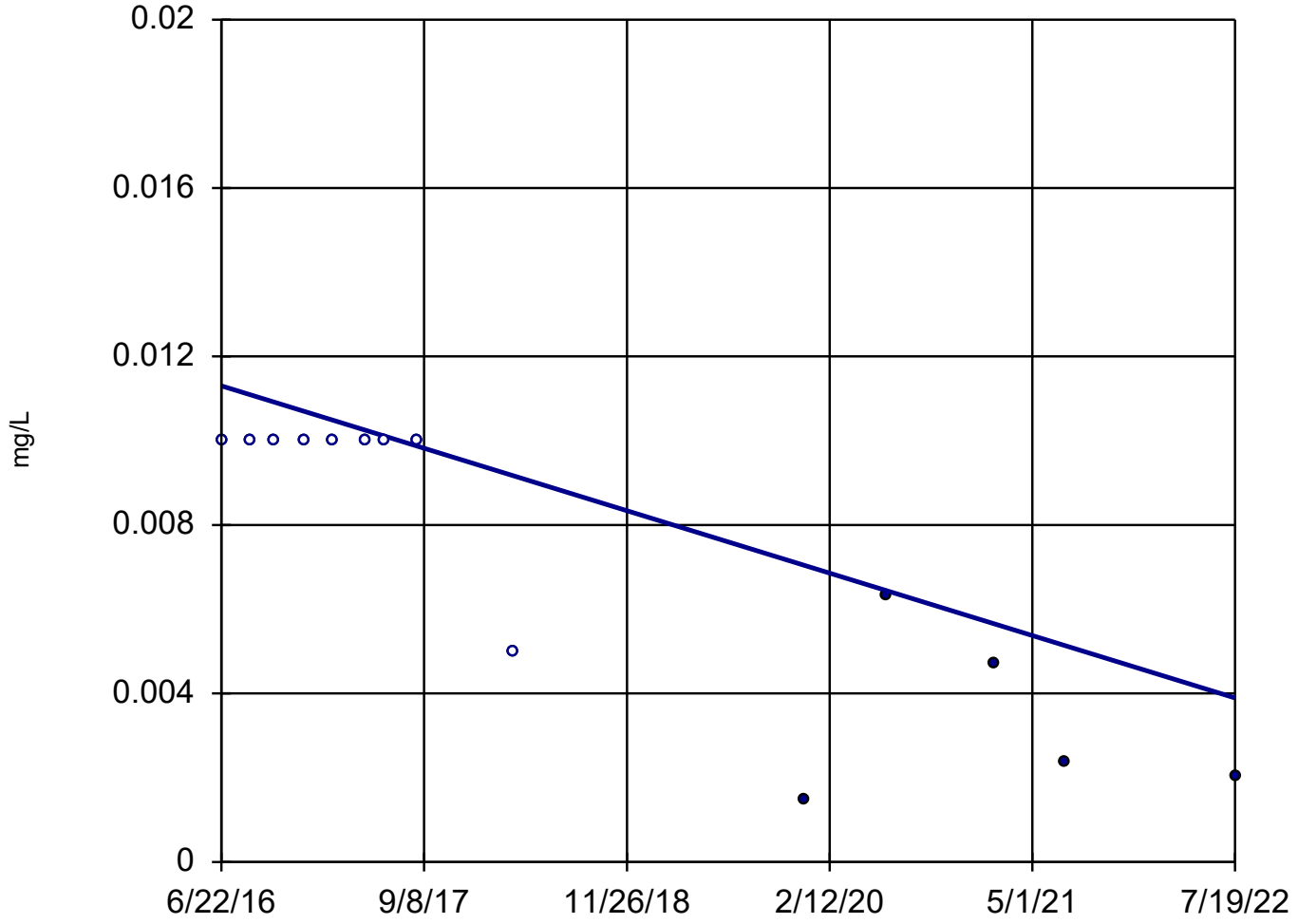
Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 14

Slope = -0.00122 units per year.

Mann-Kendall statistic = -53
critical = -44

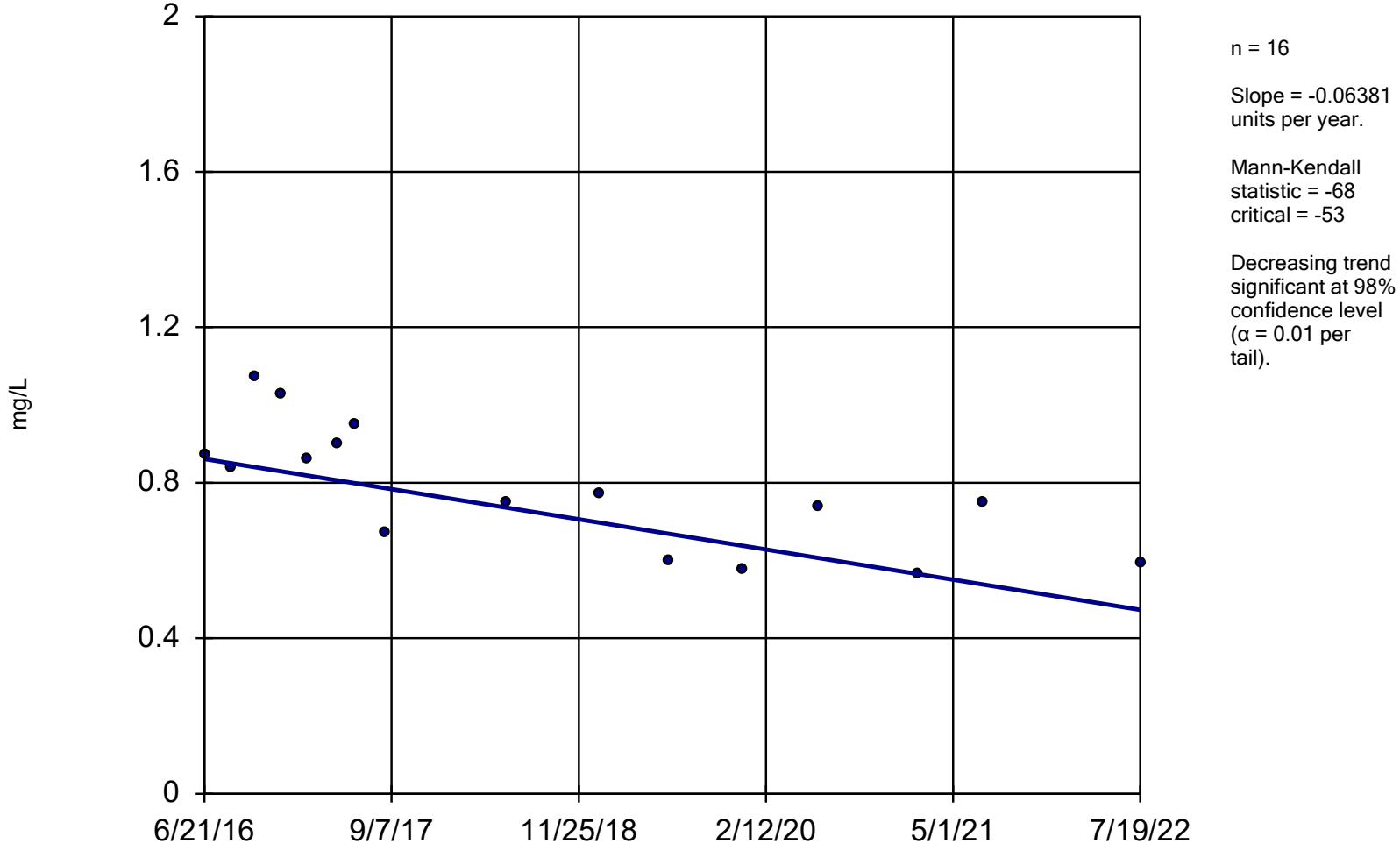
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.06381 units per year.

Mann-Kendall statistic = -68
critical = -53

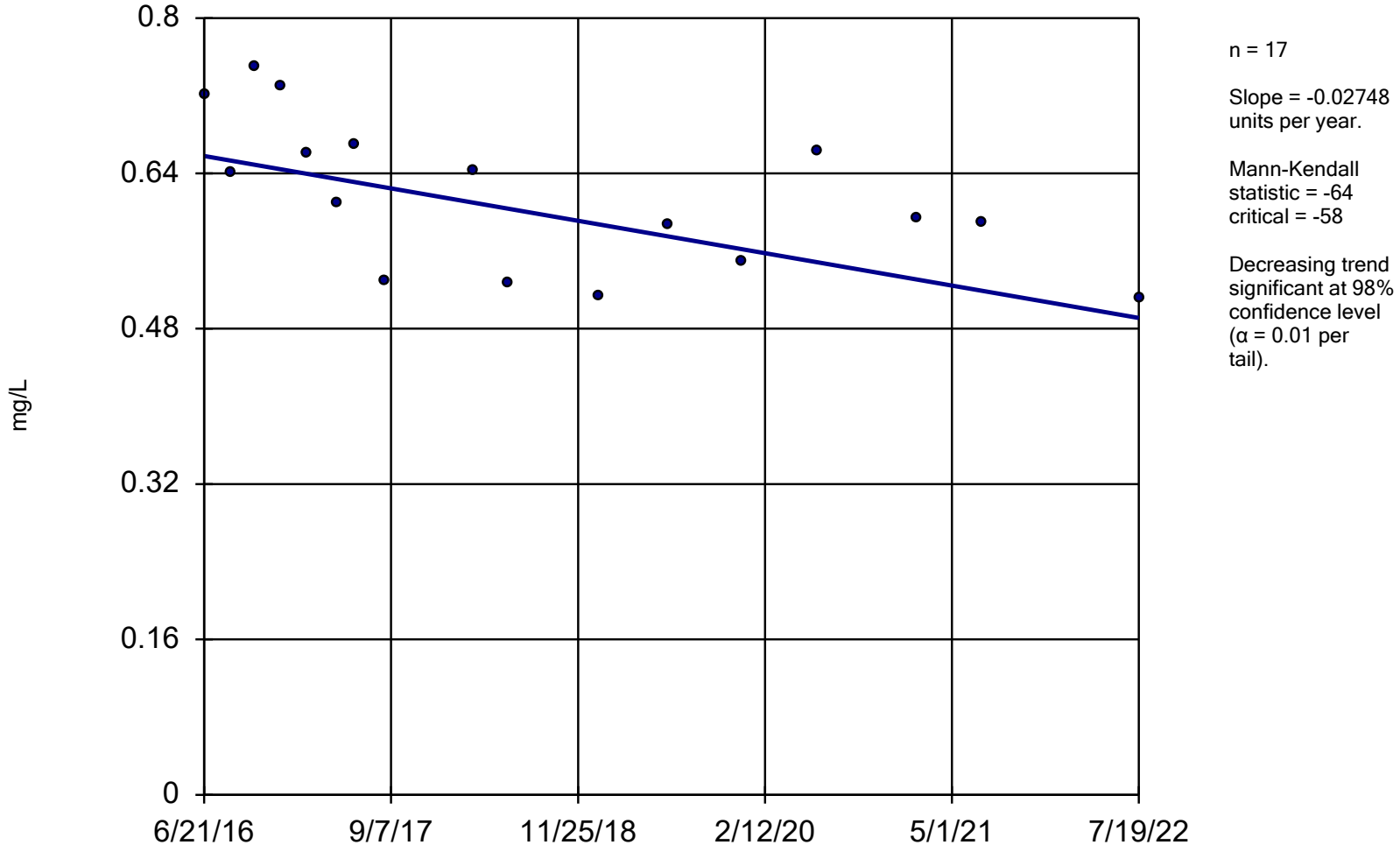
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3



n = 17

Slope = -0.02748 units per year.

Mann-Kendall statistic = -64
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

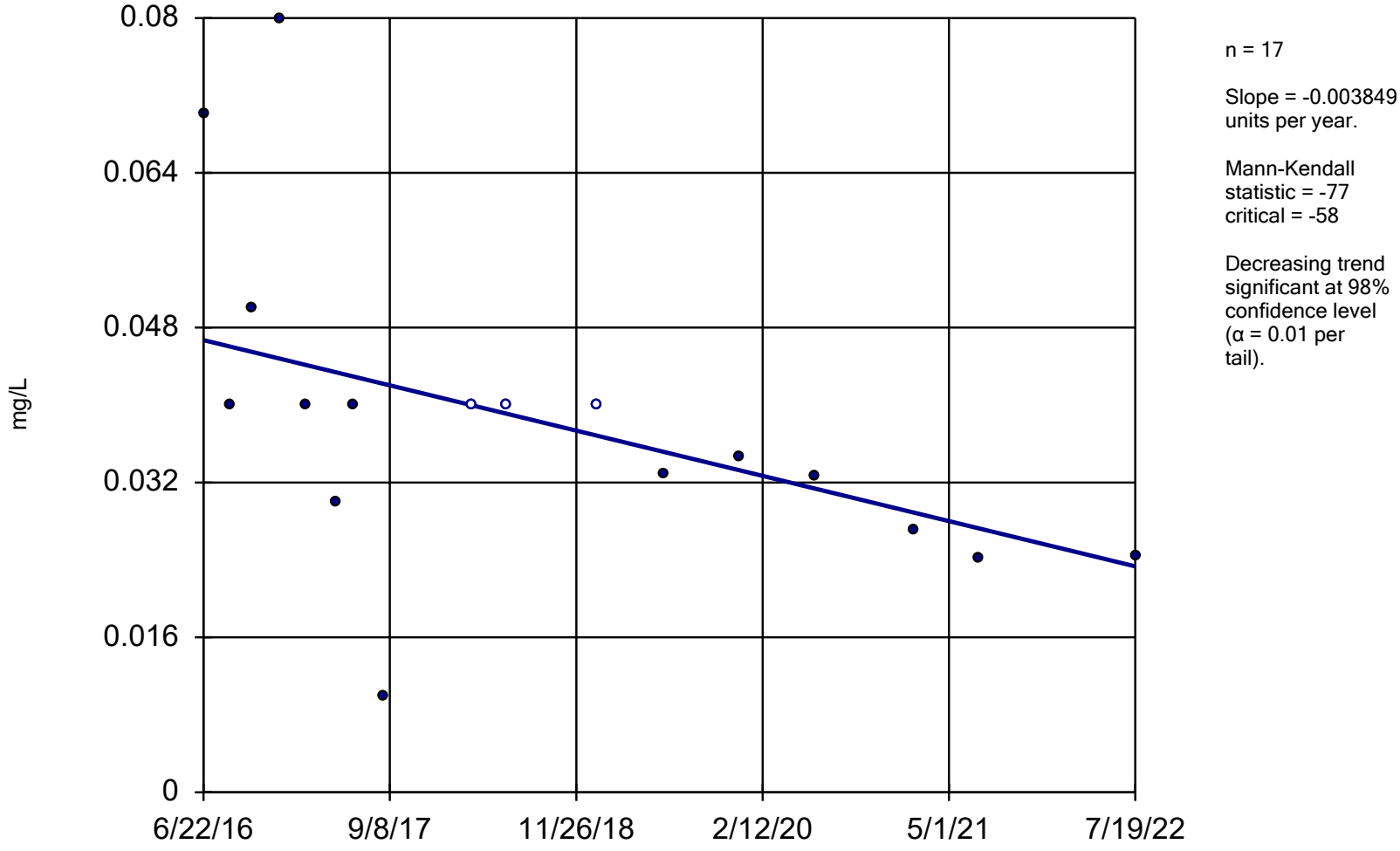
Constituent: Lithium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 17

Slope = -0.003849 units per year.

Mann-Kendall statistic = -77
critical = -58

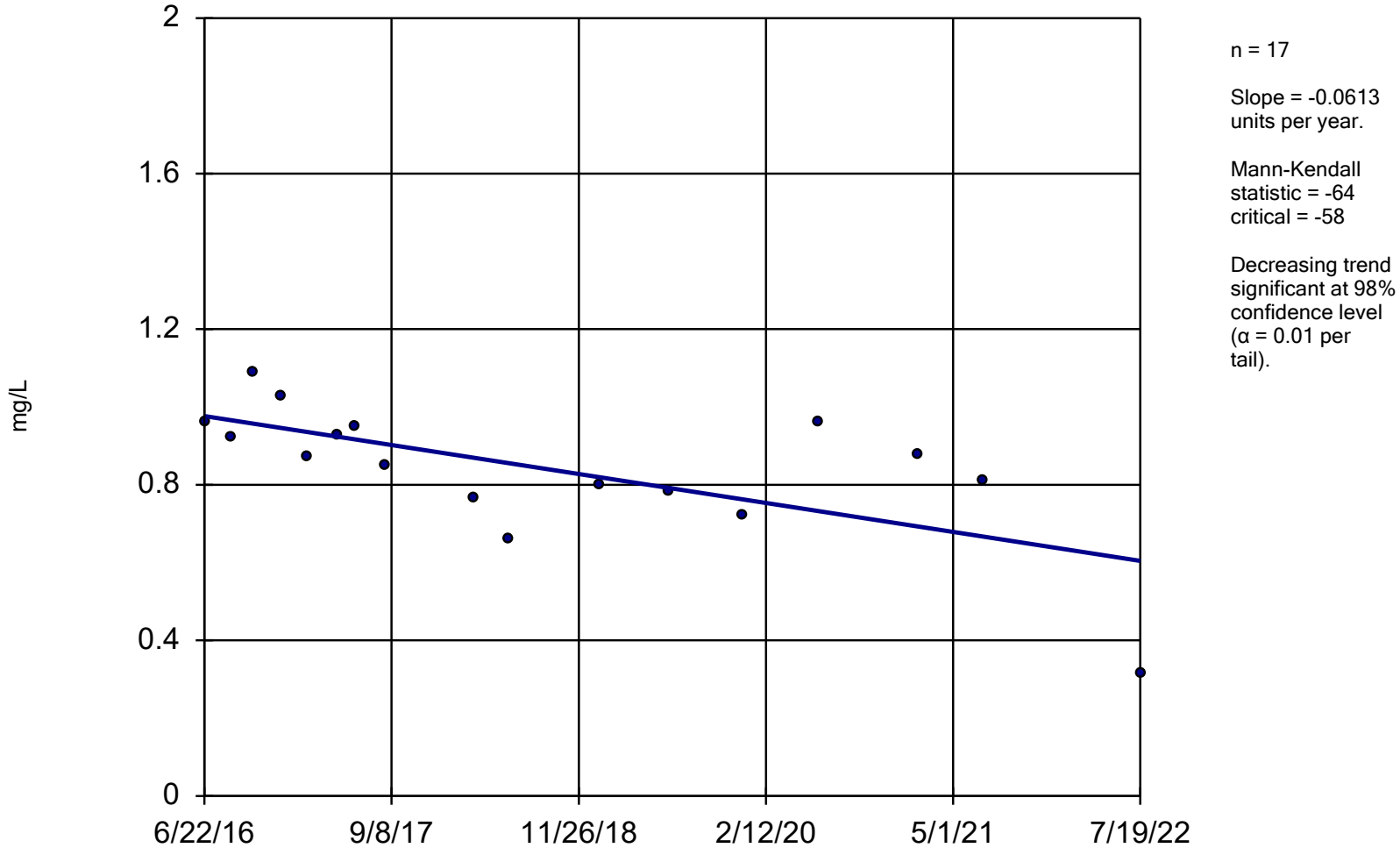
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.0613 units per year.

Mann-Kendall statistic = -64
critical = -58

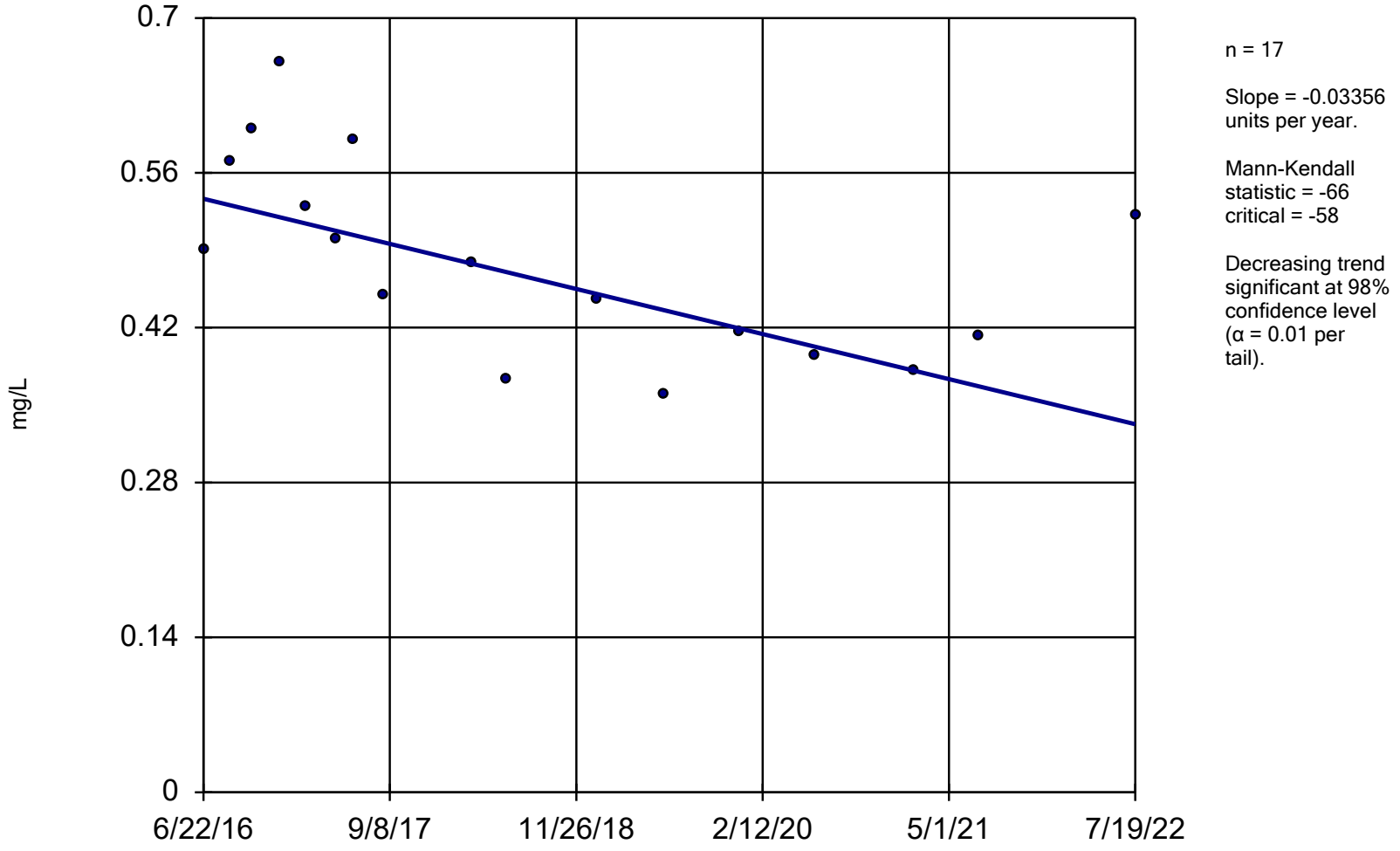
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 17

Slope = -0.03356 units per year.

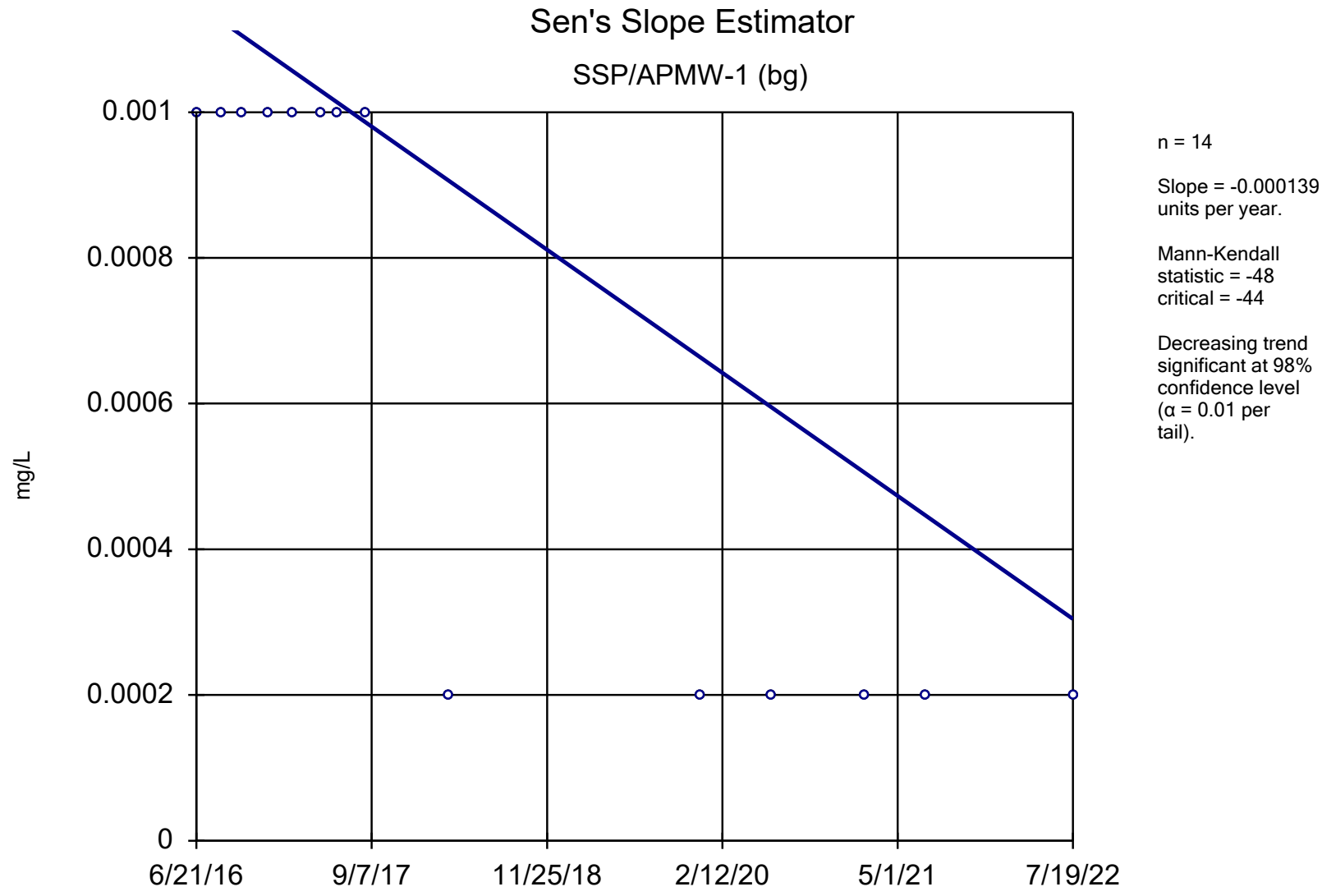
Mann-Kendall statistic = -66
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

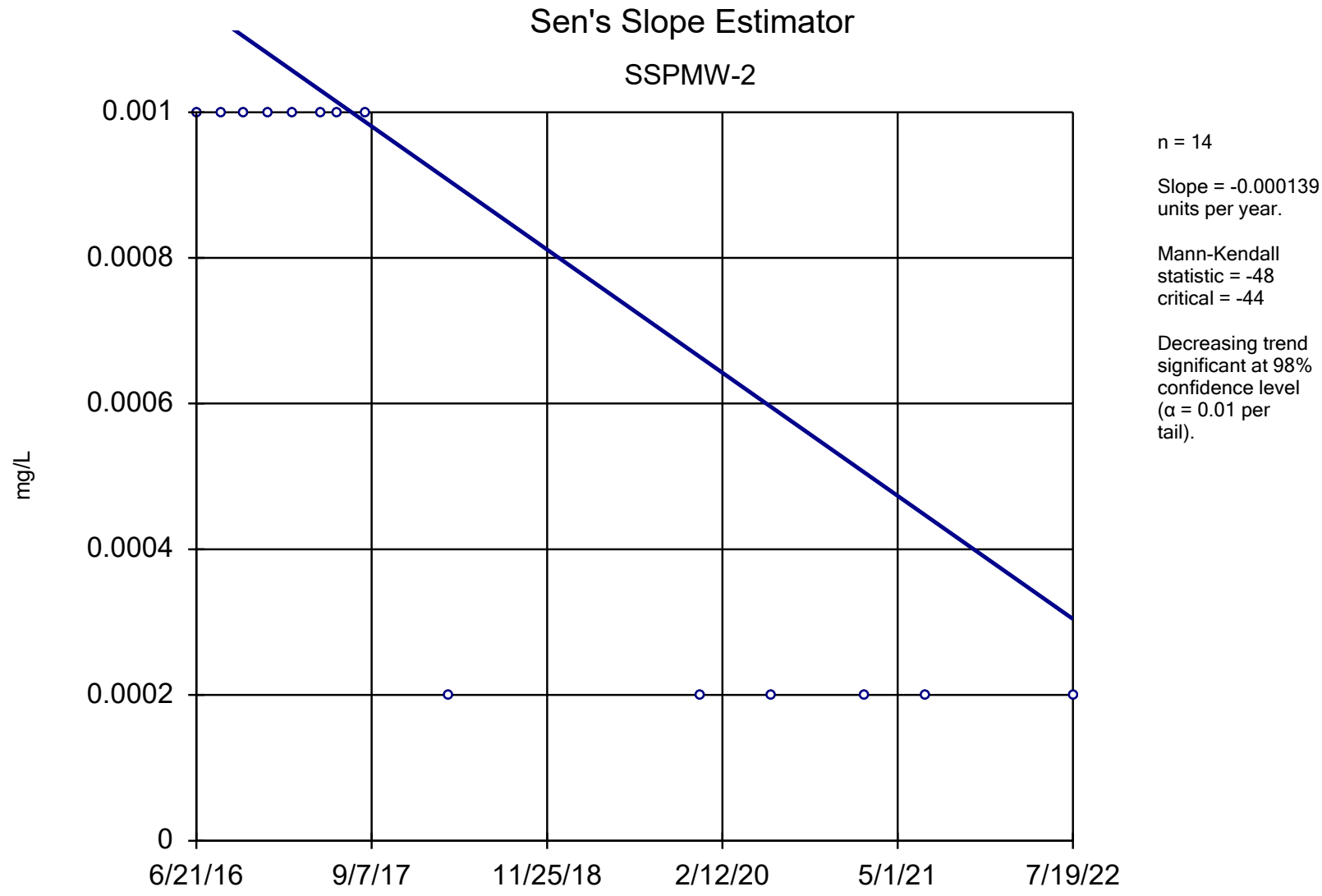
Hollow symbols indicate censored values.



Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

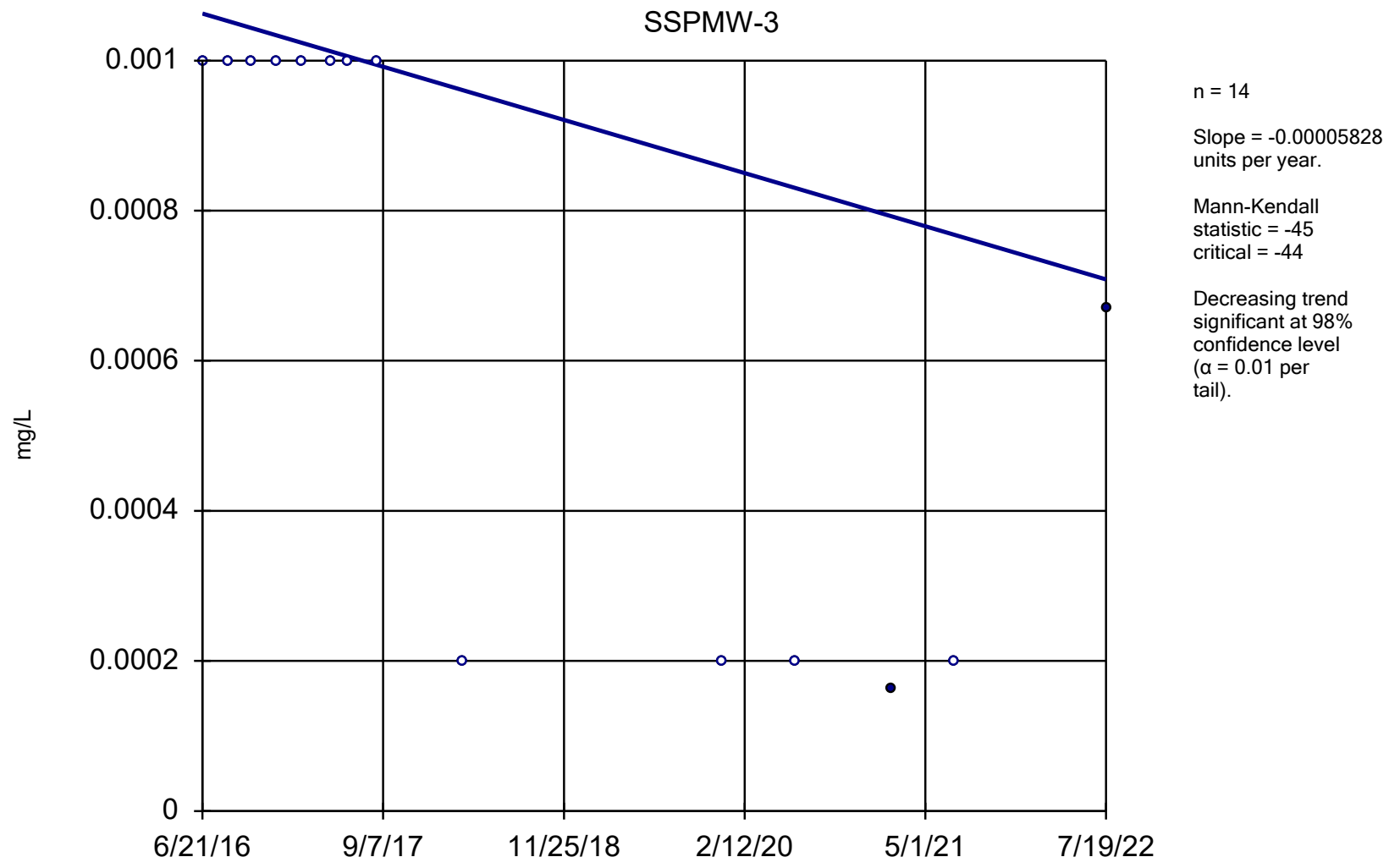


Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

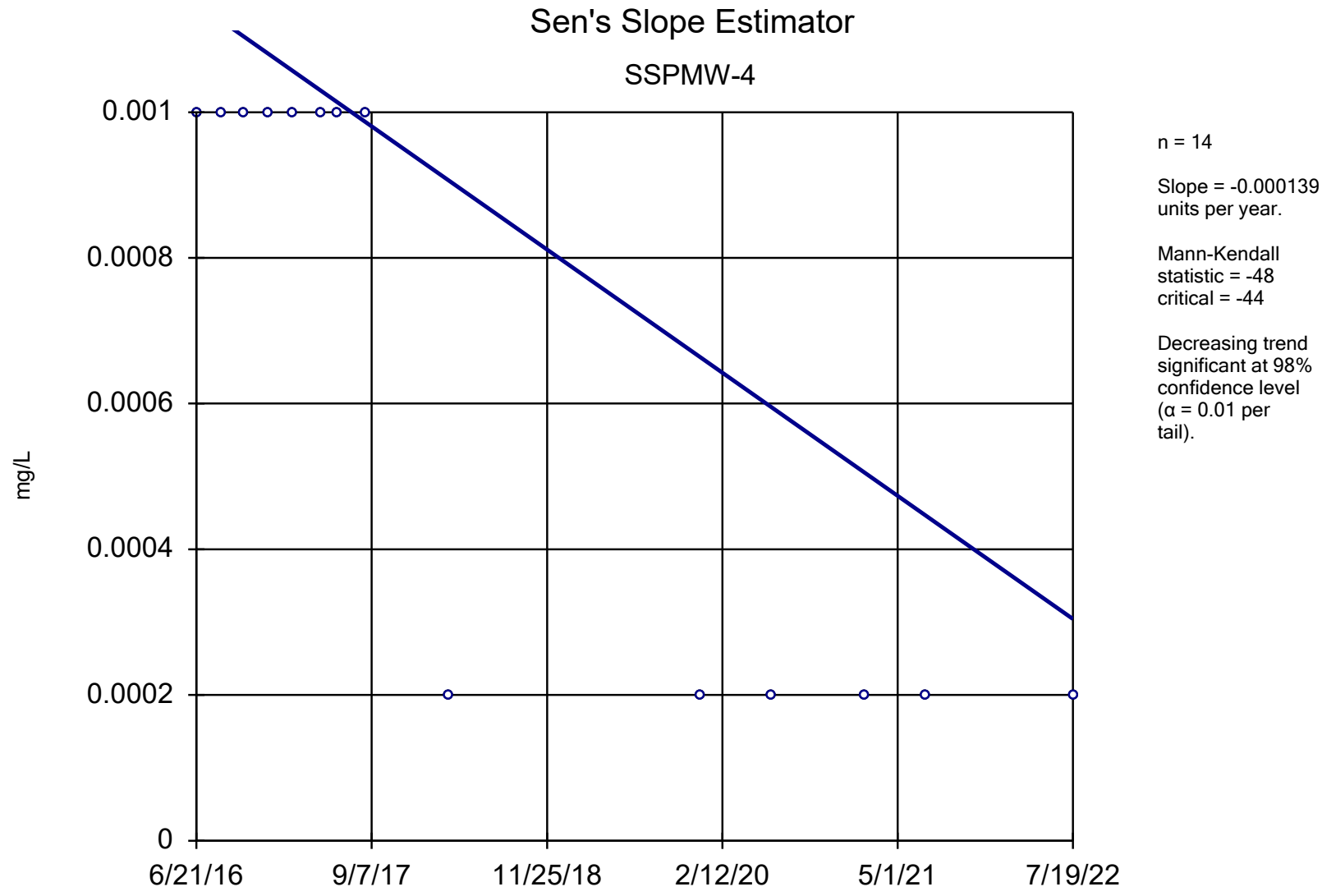
Sen's Slope Estimator



Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



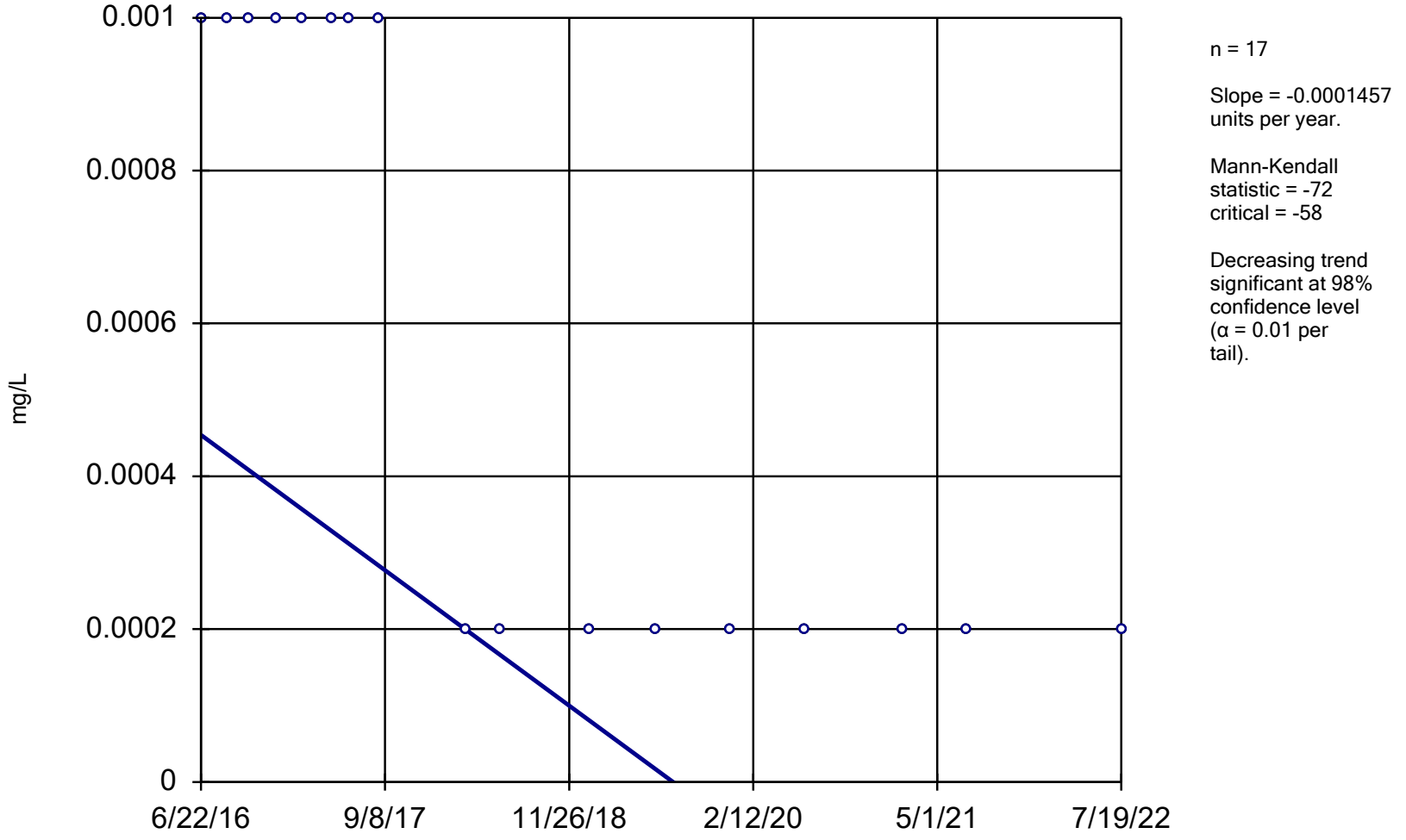
Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

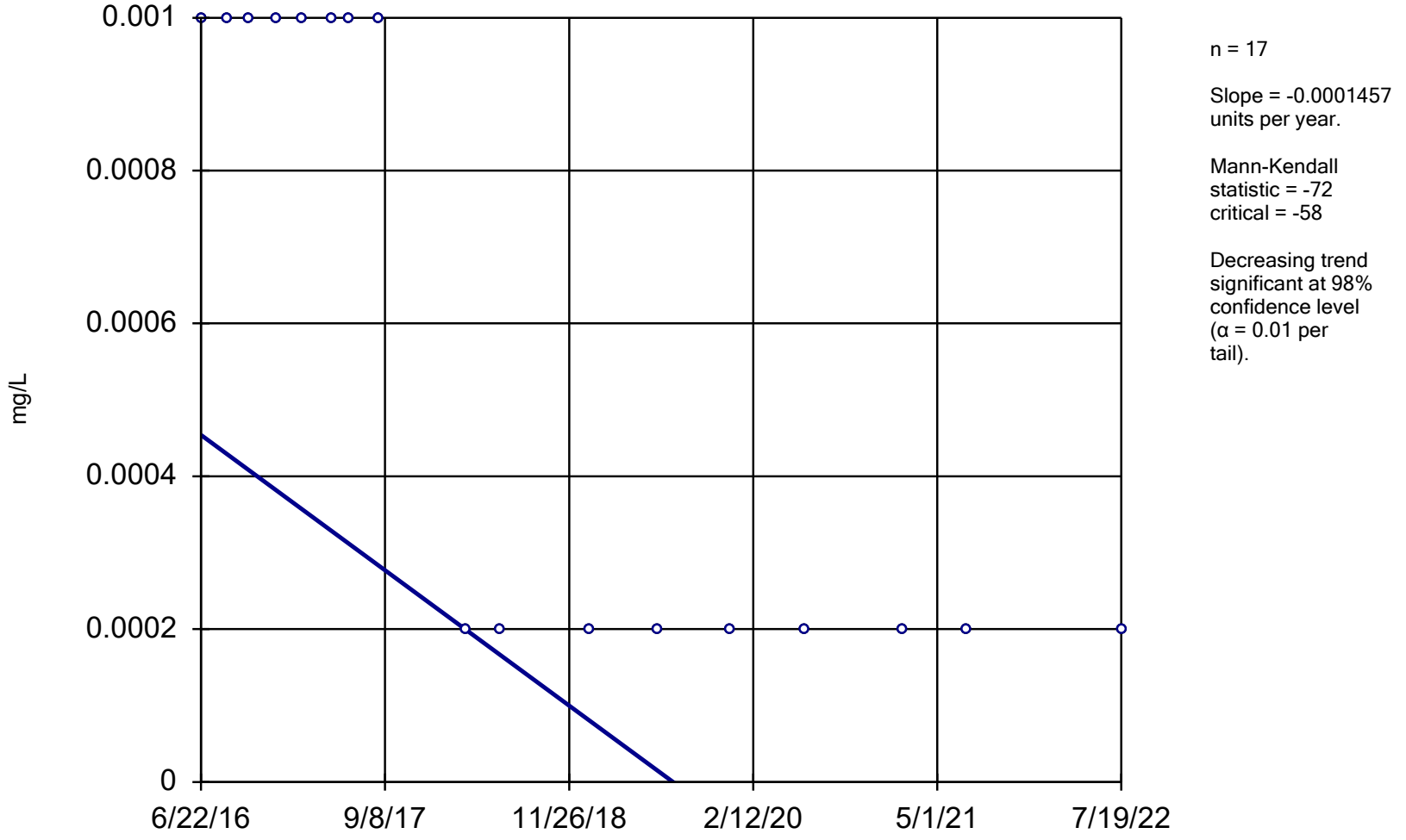
Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.0001457 units per year.

Mann-Kendall statistic = -72
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

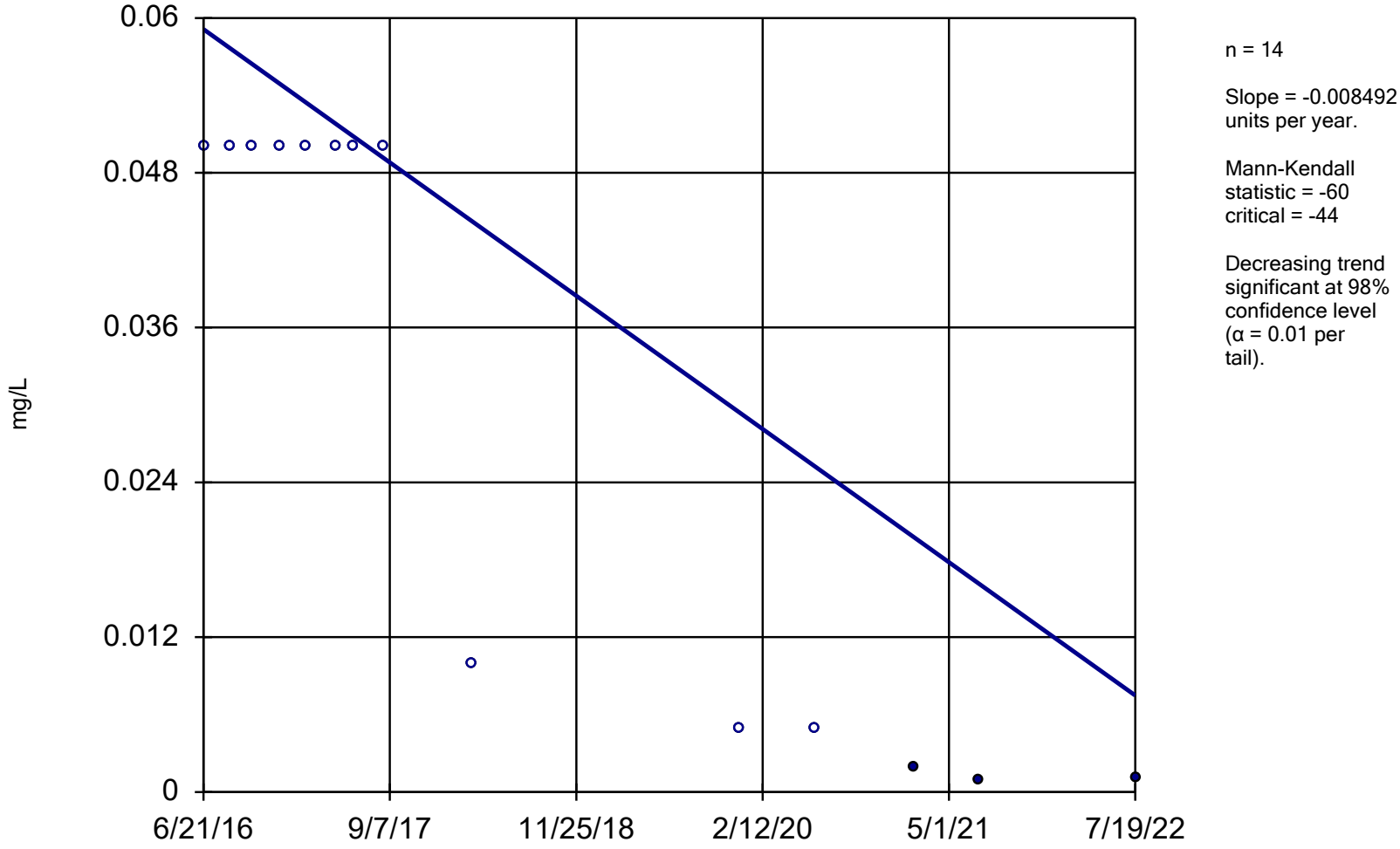
Constituent: Mercury Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 14

Slope = -0.008492 units per year.

Mann-Kendall statistic = -60
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

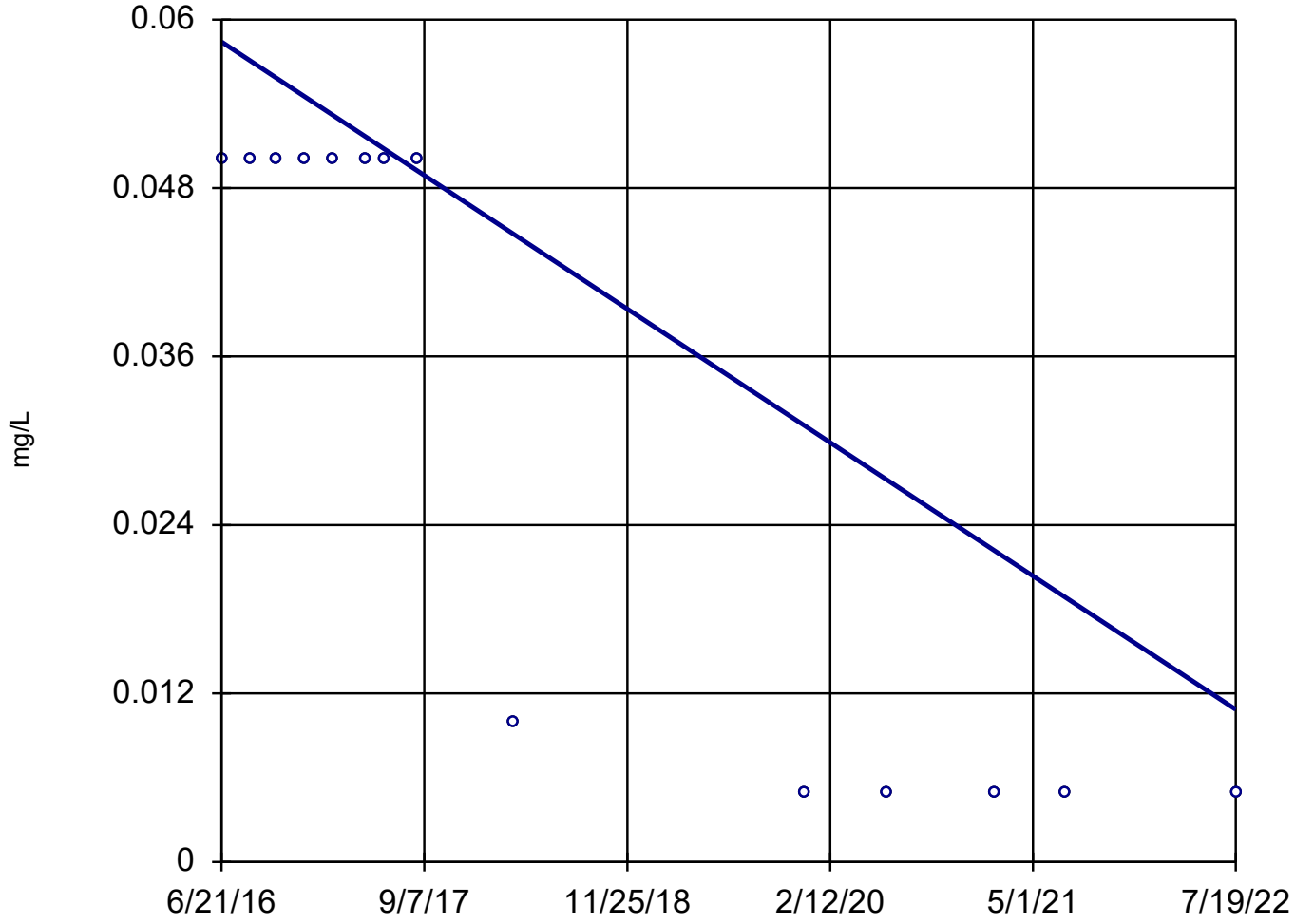
Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 14

Slope = -0.007821 units per year.

Mann-Kendall statistic = -53
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

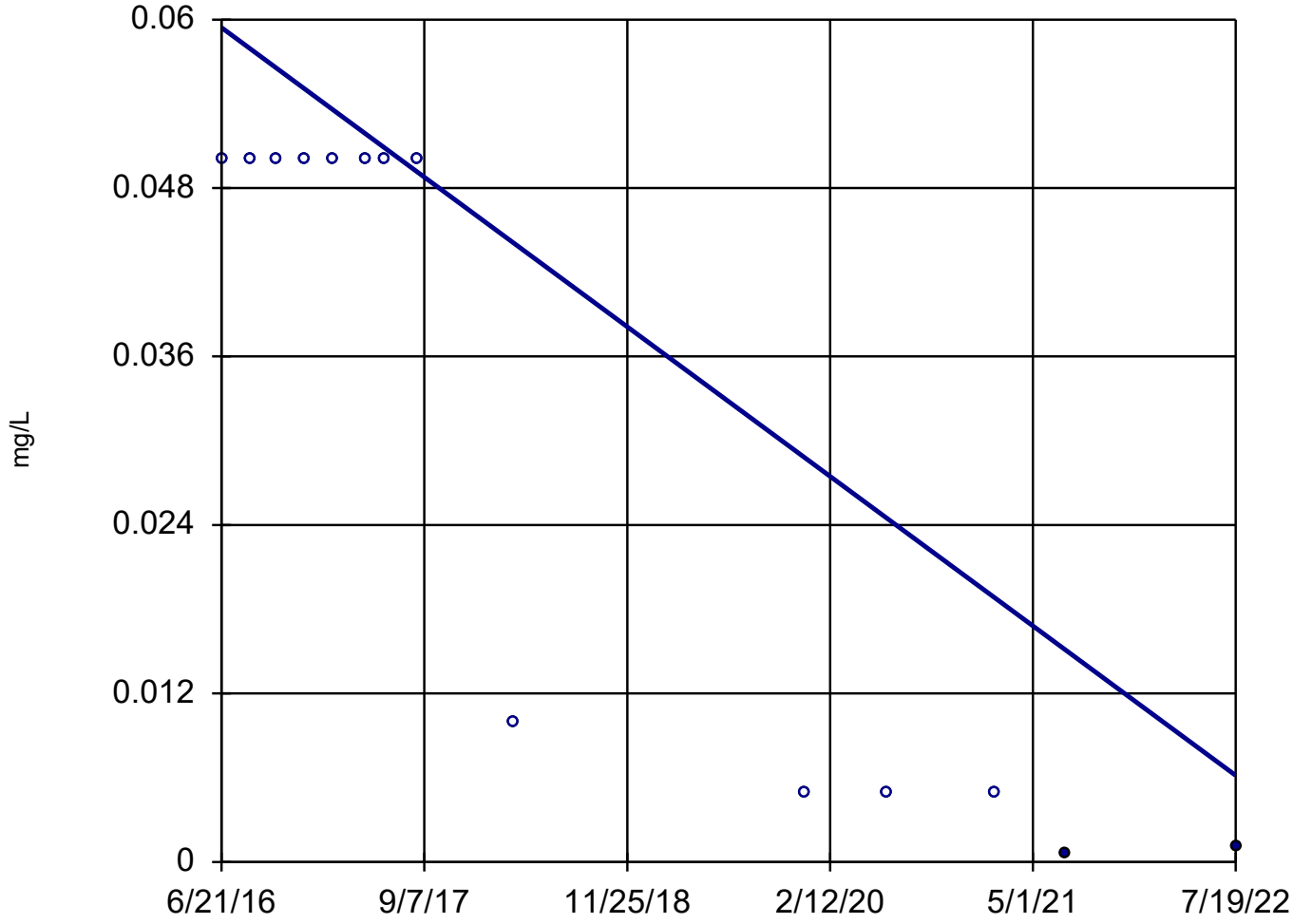
Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 14

Slope = -0.008762 units per year.

Mann-Kendall statistic = -58
critical = -44

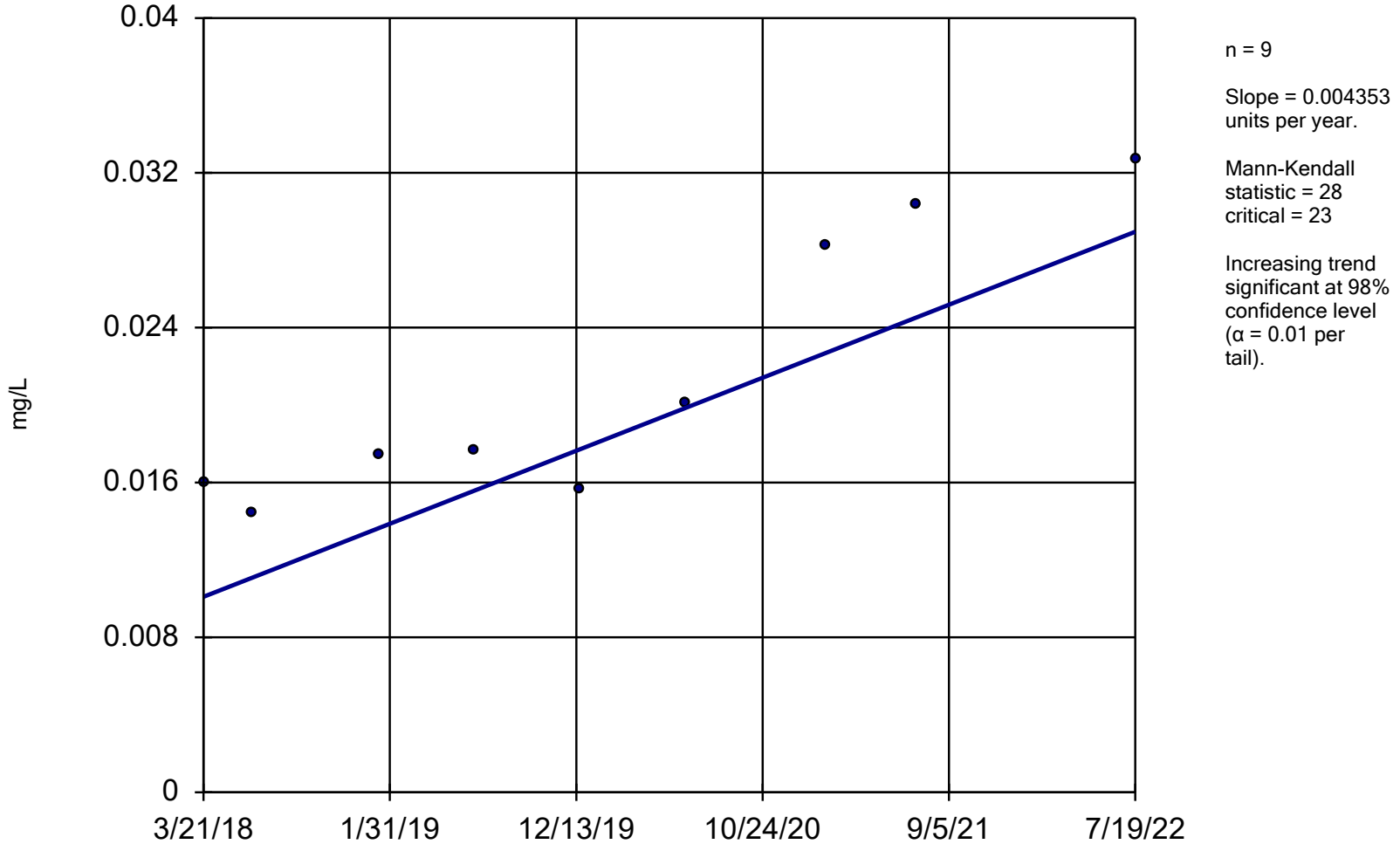
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 9

Slope = 0.004353 units per year.

Mann-Kendall statistic = 28
critical = 23

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

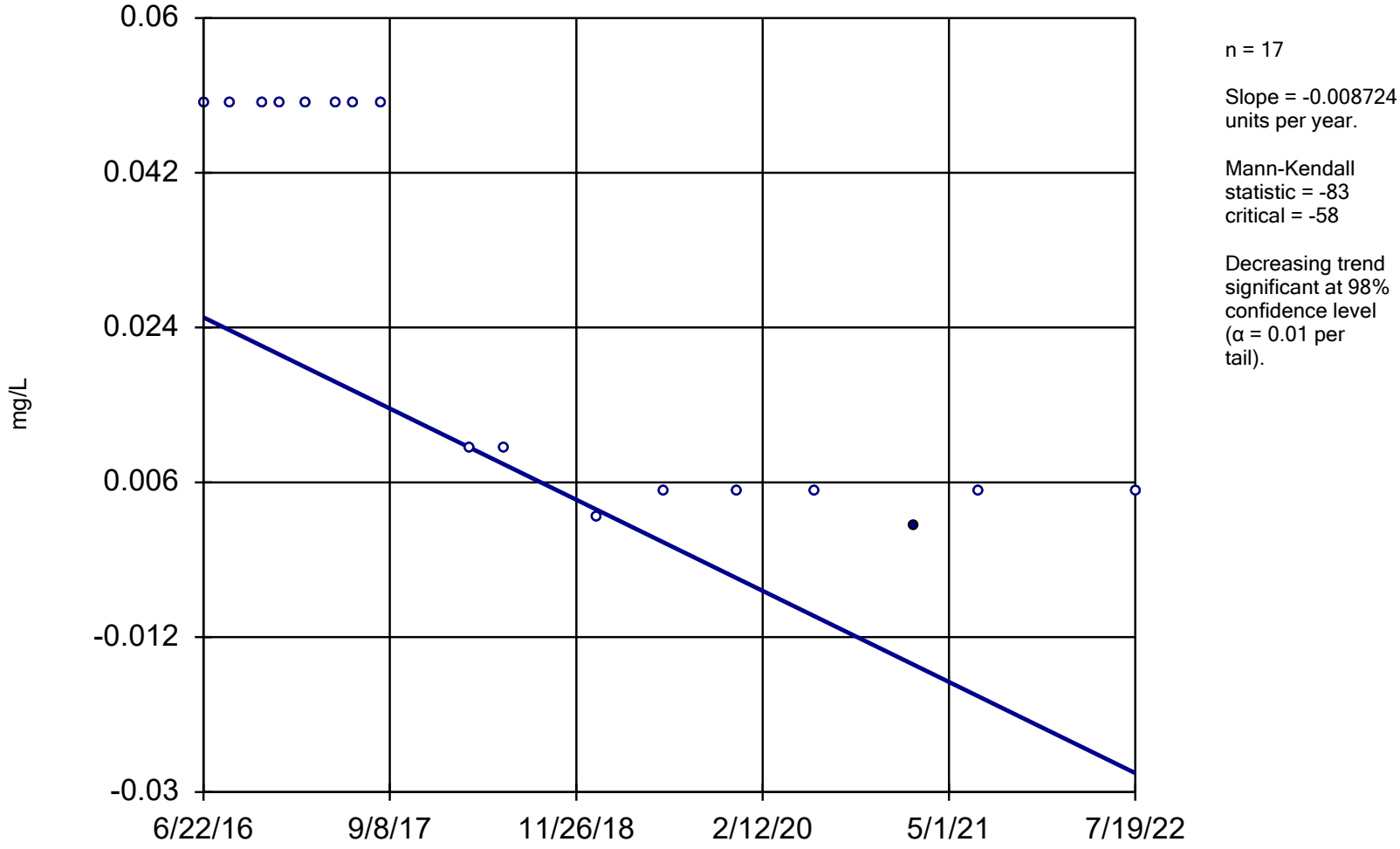
Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 17

Slope = -0.008724 units per year.

Mann-Kendall statistic = -83
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

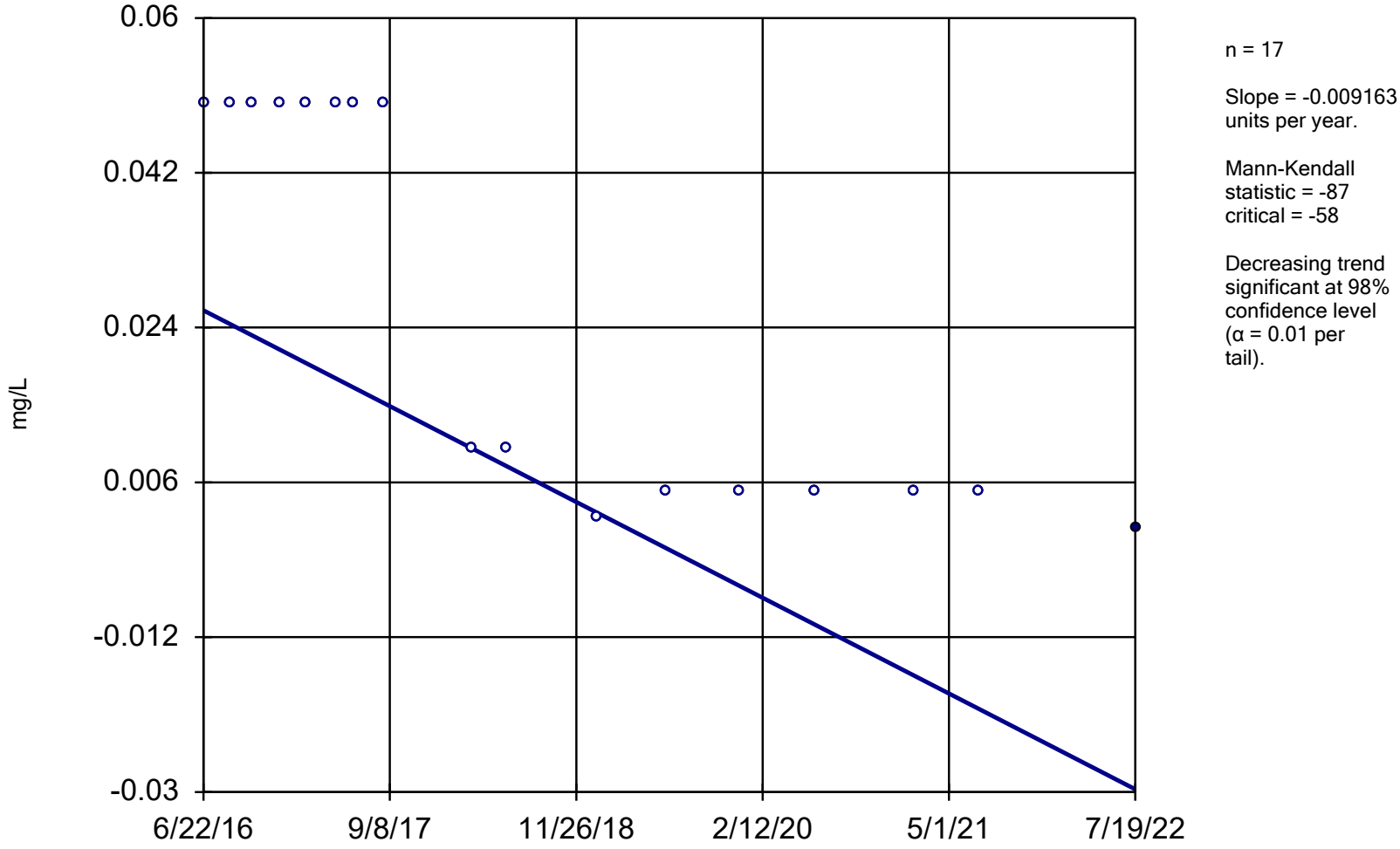
Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.009163 units per year.

Mann-Kendall statistic = -87
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

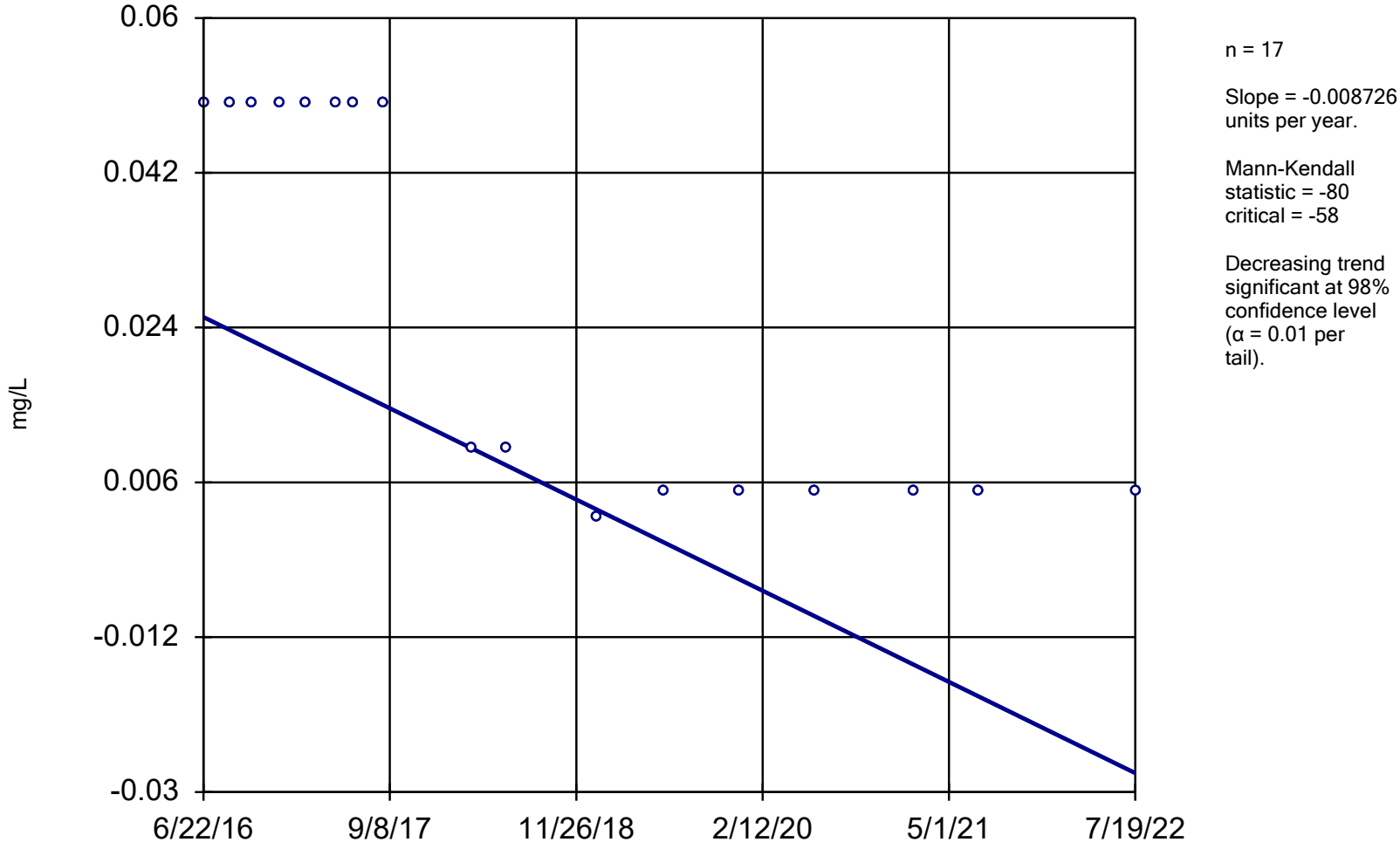
Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 17

Slope = -0.008726 units per year.

Mann-Kendall statistic = -80
critical = -58

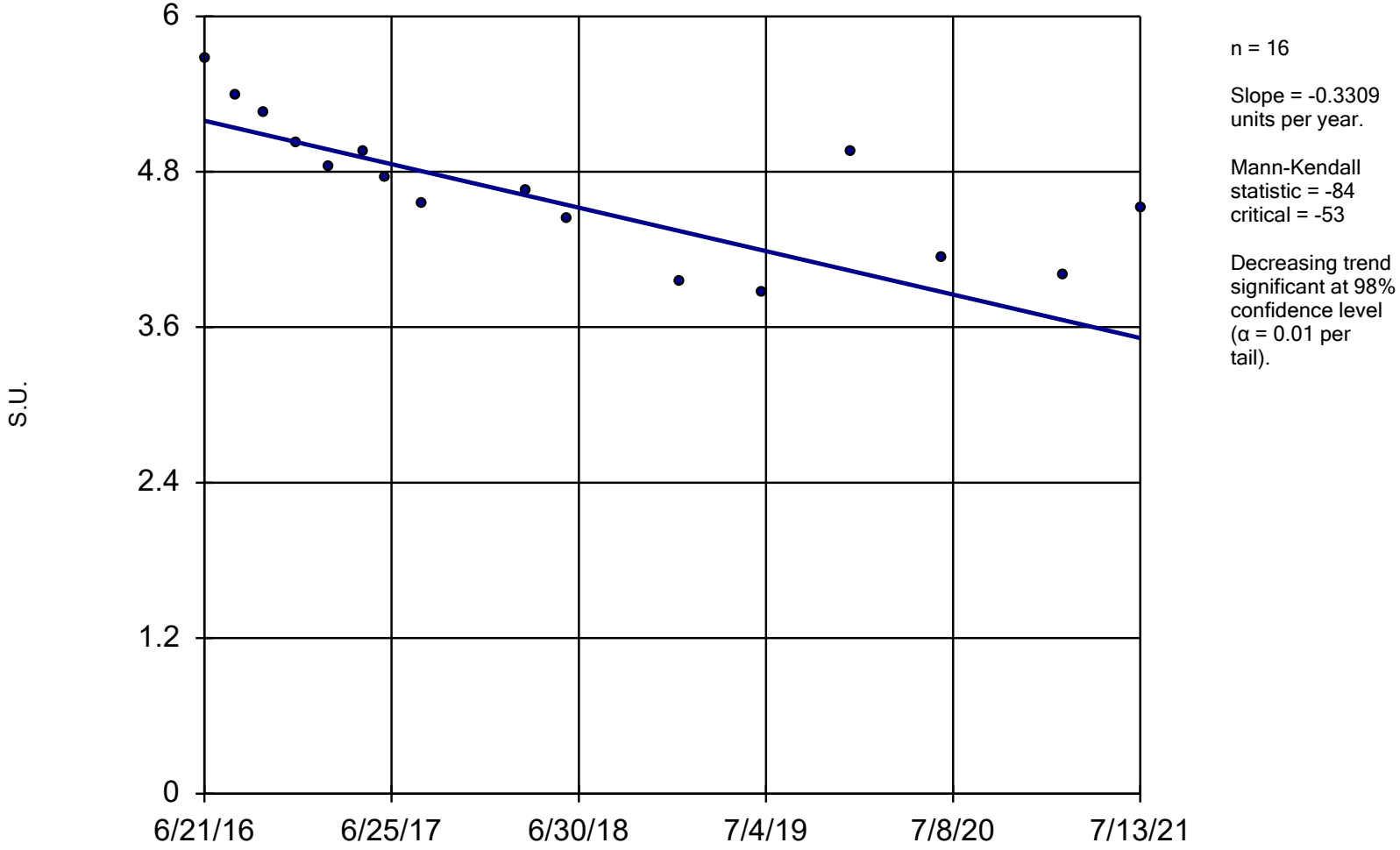
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 16

Slope = -0.3309 units per year.

Mann-Kendall statistic = -84
critical = -53

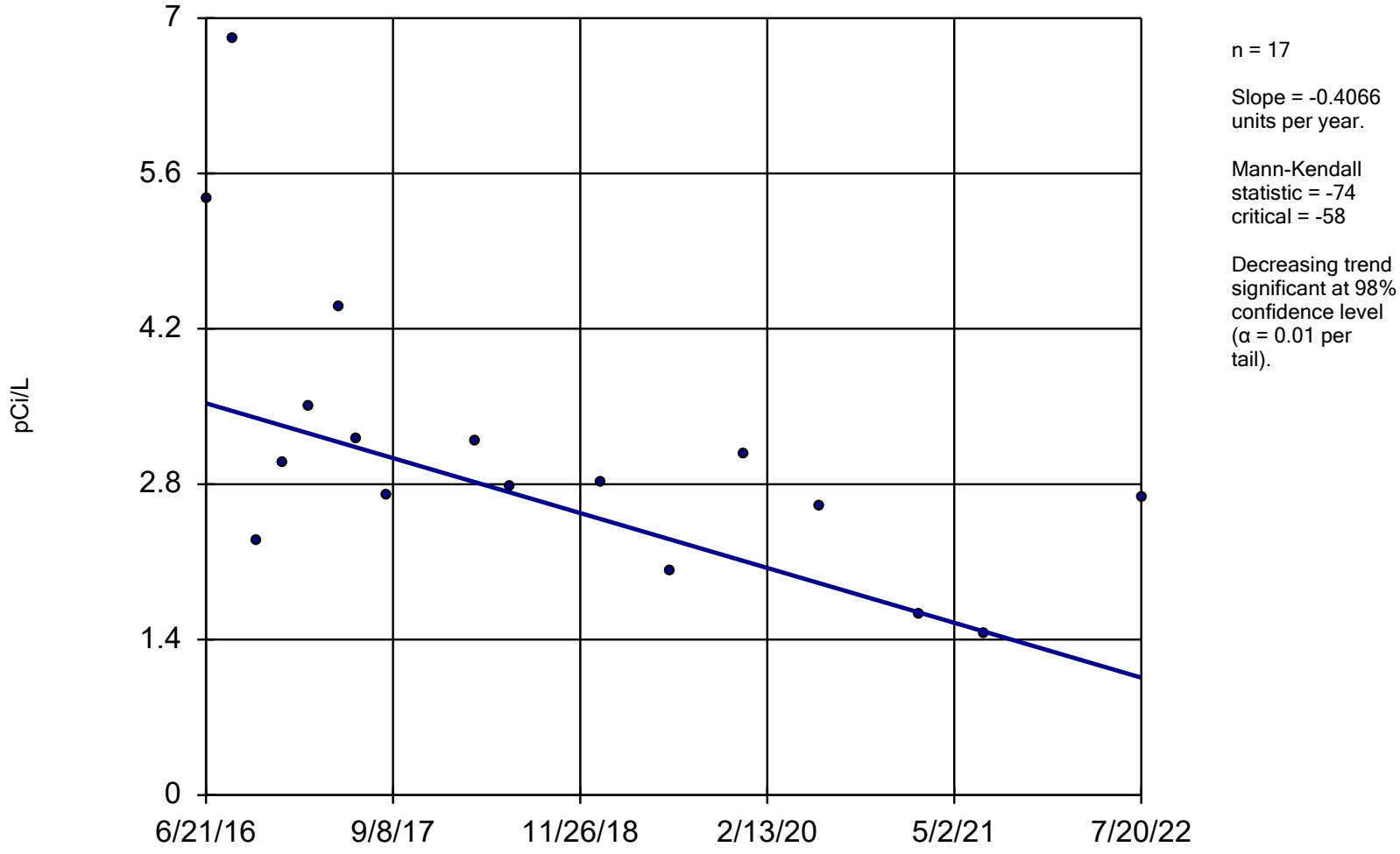
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = -0.4066 units per year.

Mann-Kendall statistic = -74
critical = -58

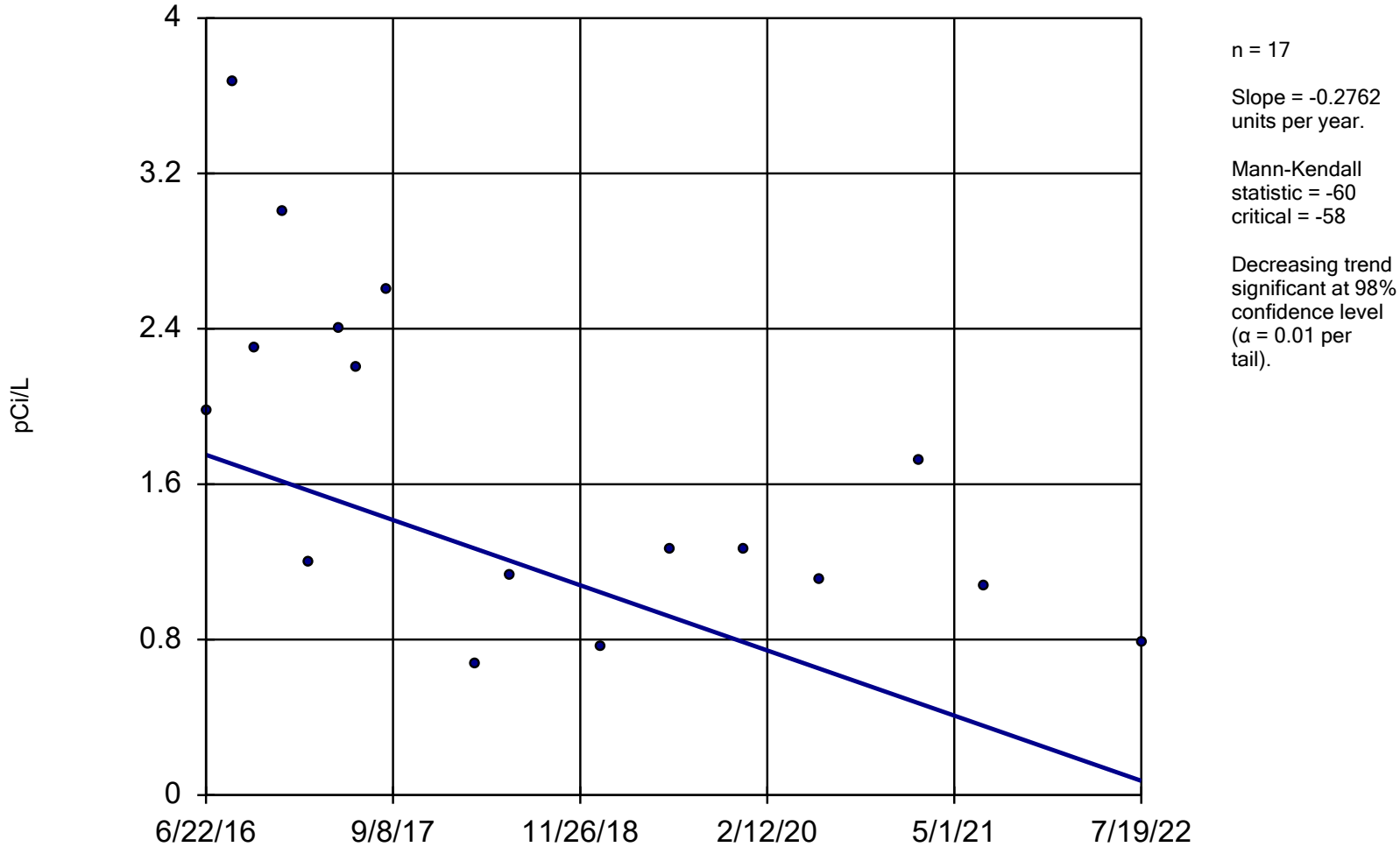
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-4



n = 17

Slope = -0.2762 units per year.

Mann-Kendall statistic = -60
critical = -58

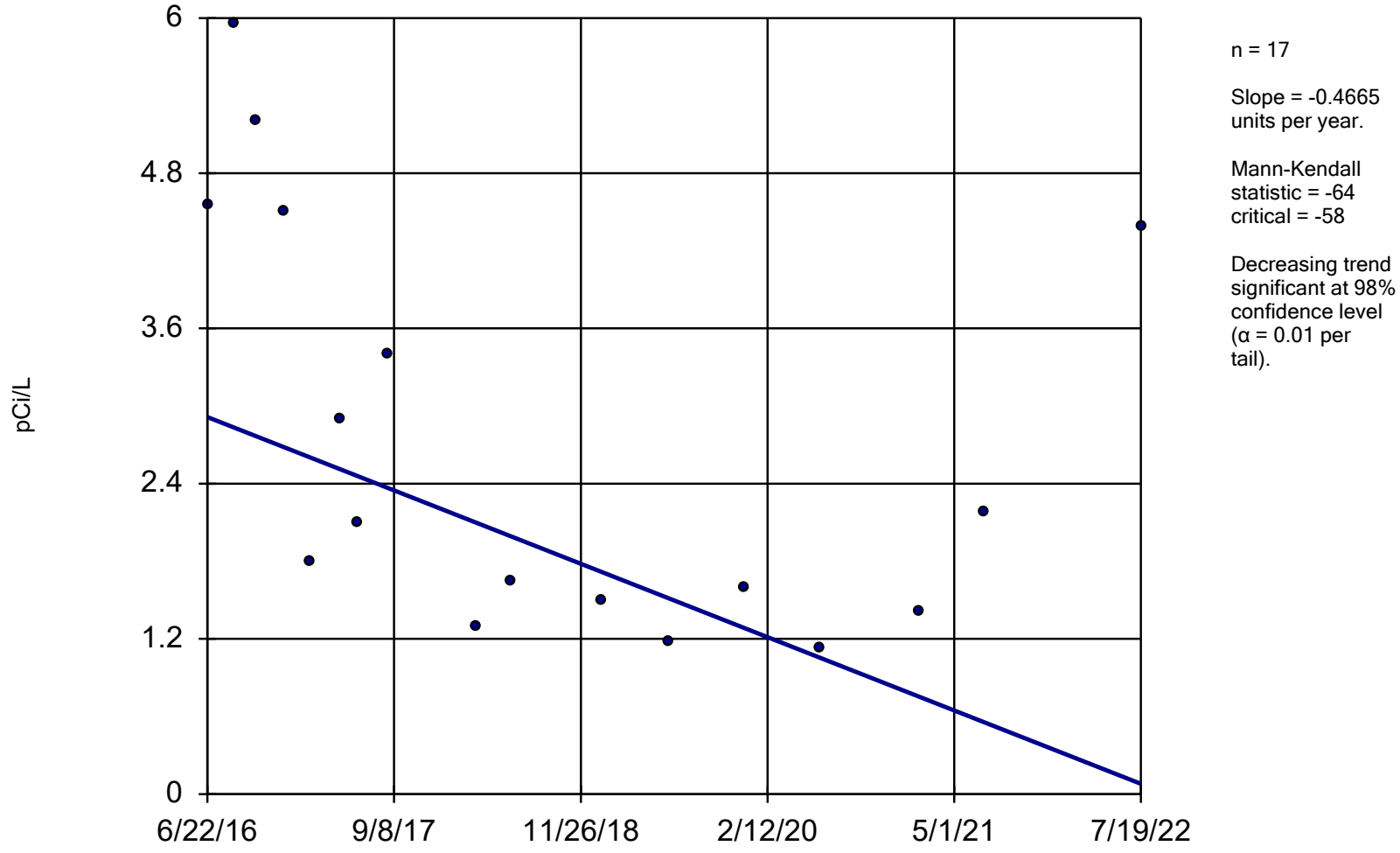
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 17

Slope = -0.4665 units per year.

Mann-Kendall statistic = -64
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

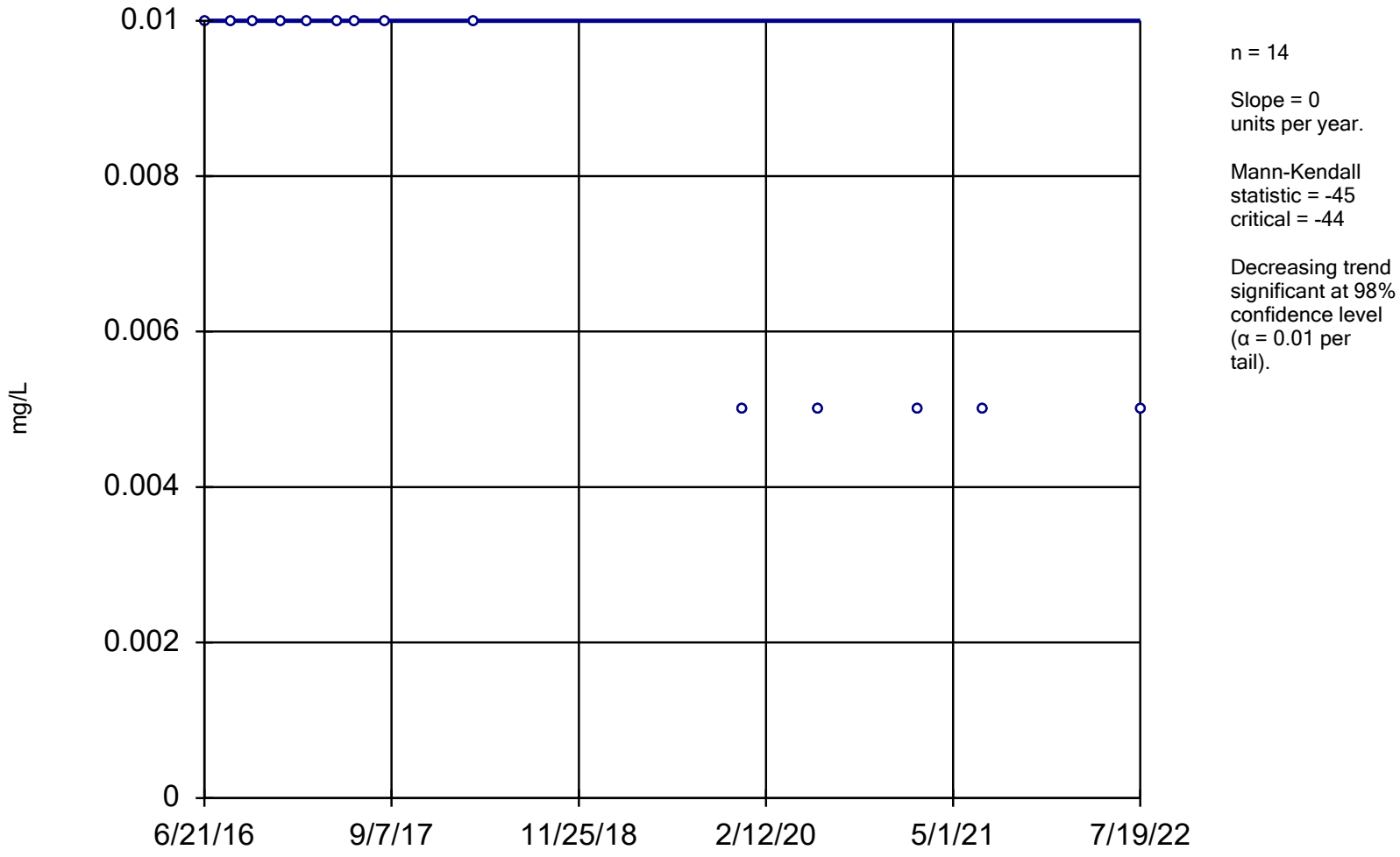
Constituent: Radium 226 + 228 Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSP/APMW-1 (bg)



n = 14

Slope = 0
units per year.

Mann-Kendall
statistic = -45
critical = -44

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

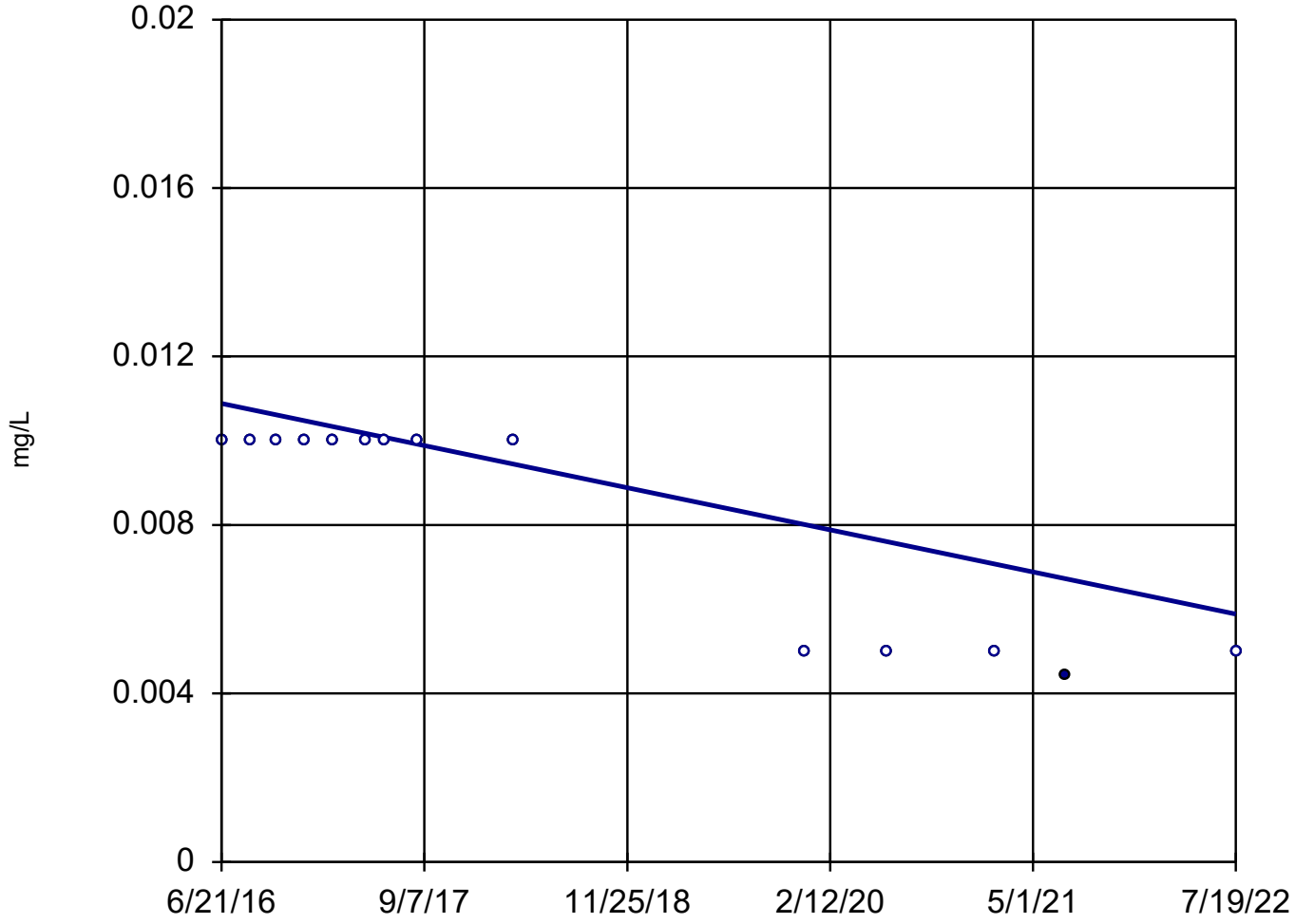
Constituent: Selenium Analysis Run 10/19/2022 3:35 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 14

Slope = -0.0008224 units per year.

Mann-Kendall statistic = -47
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

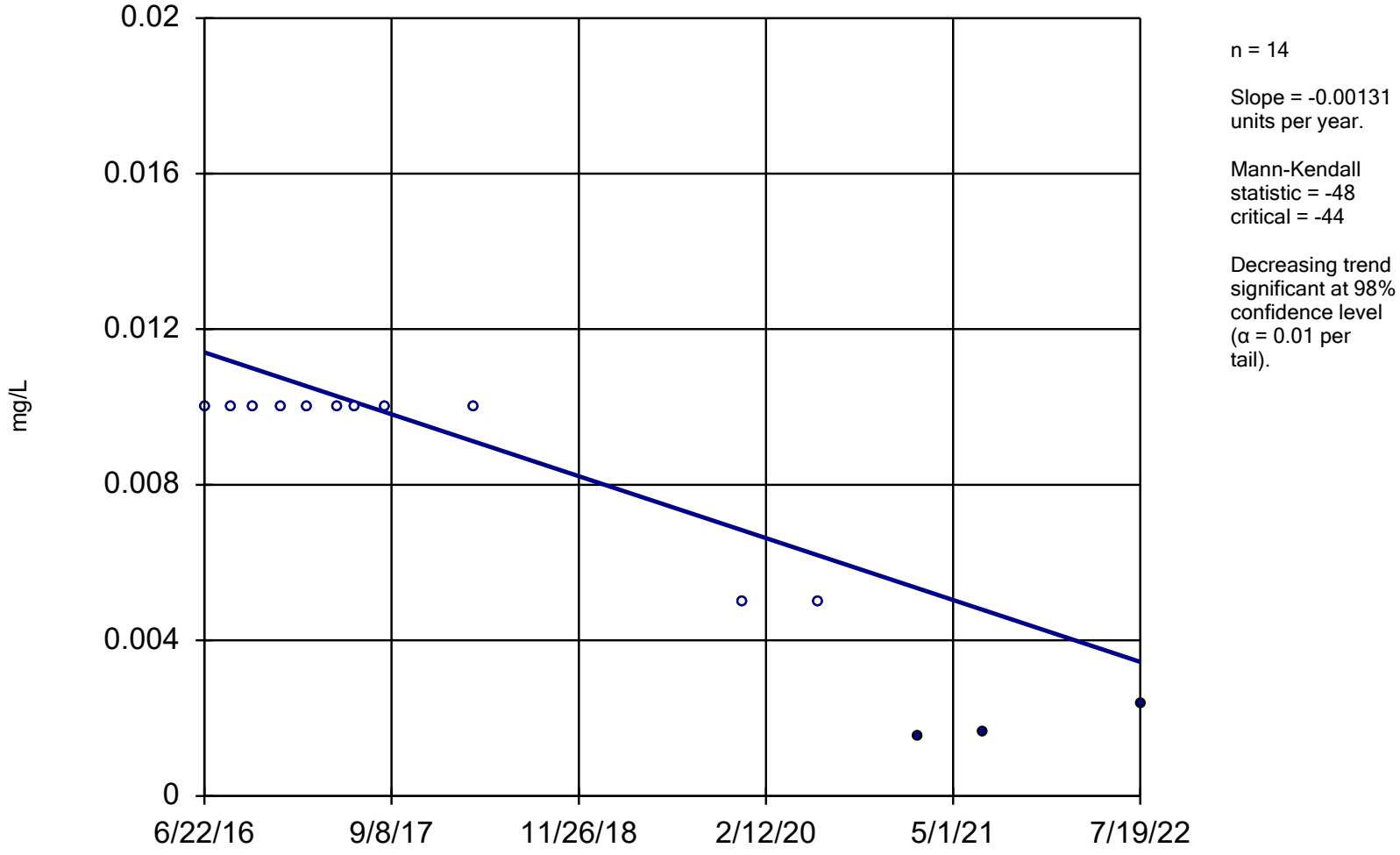
Constituent: Selenium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 14

Slope = -0.00131 units per year.

Mann-Kendall statistic = -48
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

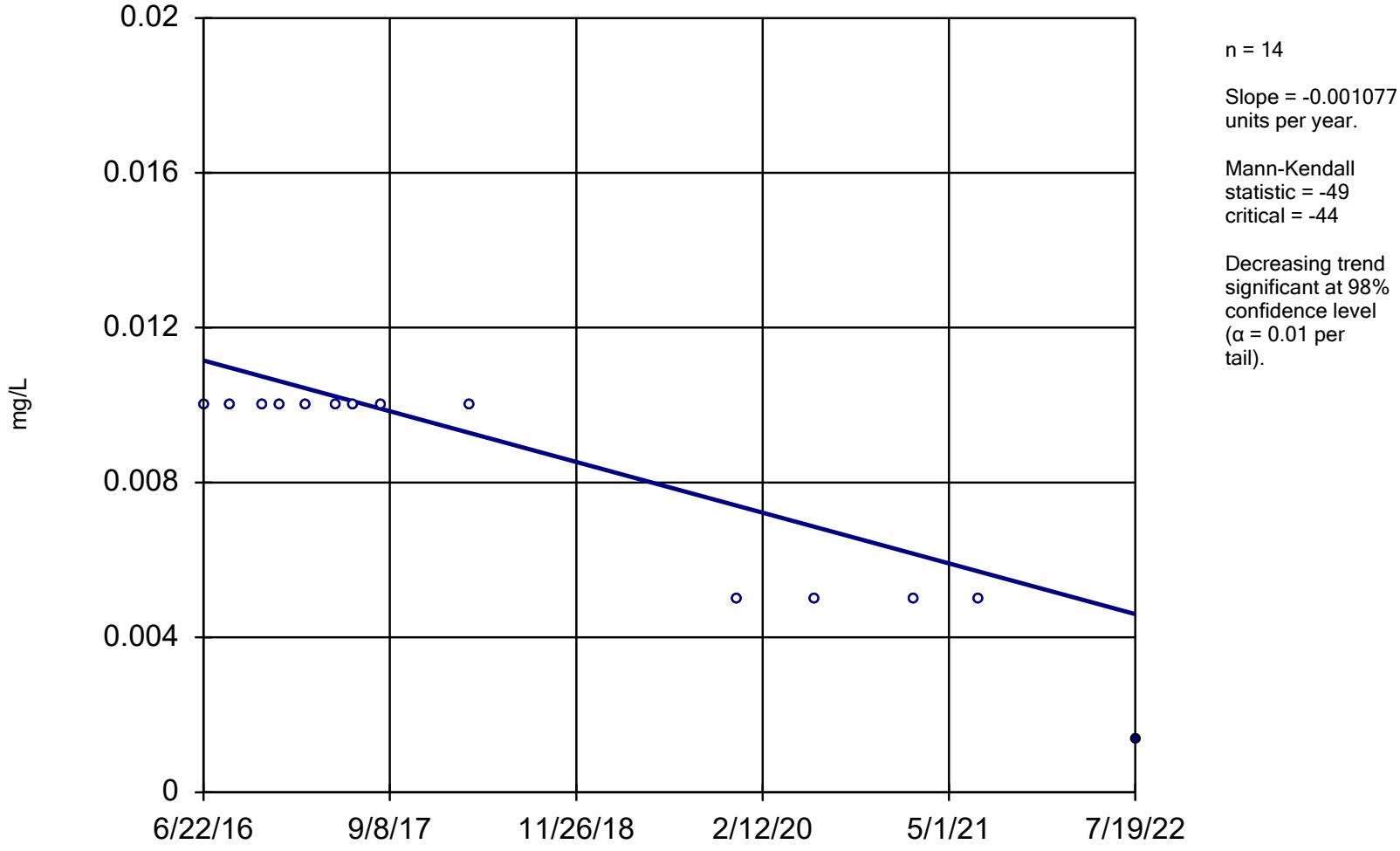
Constituent: Selenium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 14

Slope = -0.001077 units per year.

Mann-Kendall statistic = -49
critical = -44

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

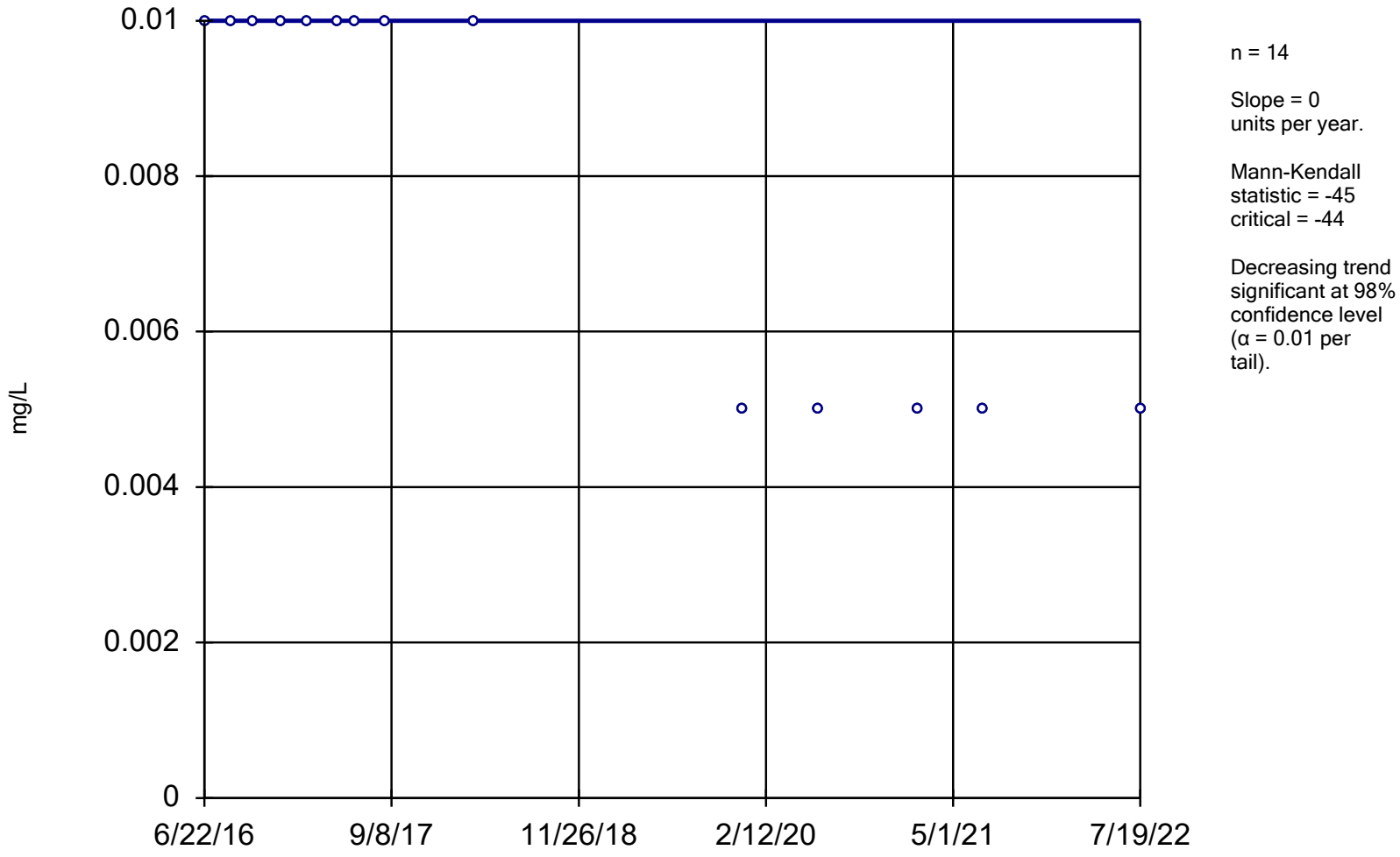
Constituent: Selenium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-4



n = 14

Slope = 0
units per year.

Mann-Kendall
statistic = -45
critical = -44

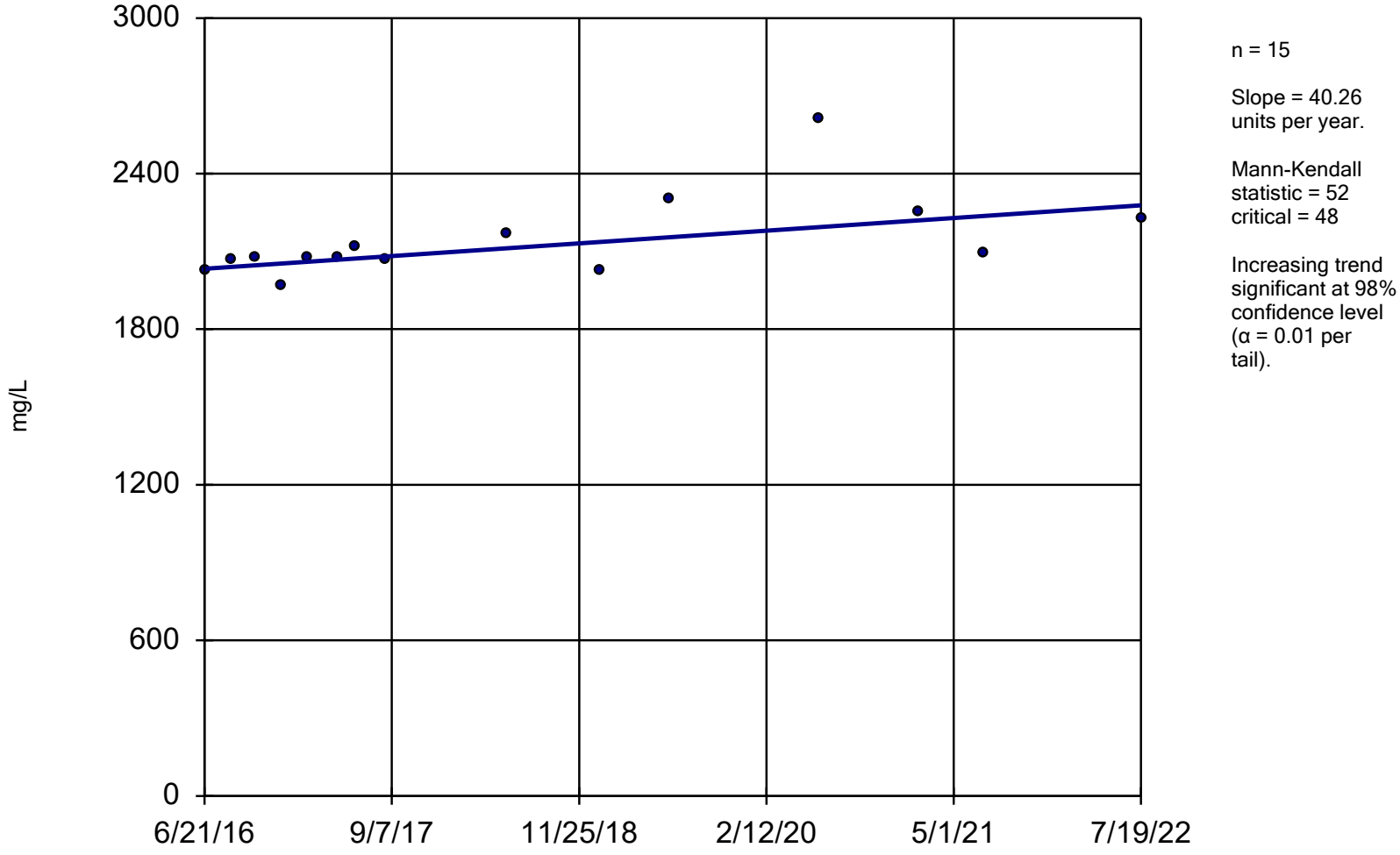
Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Selenium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 15

Slope = 40.26 units per year.

Mann-Kendall statistic = 52
critical = 48

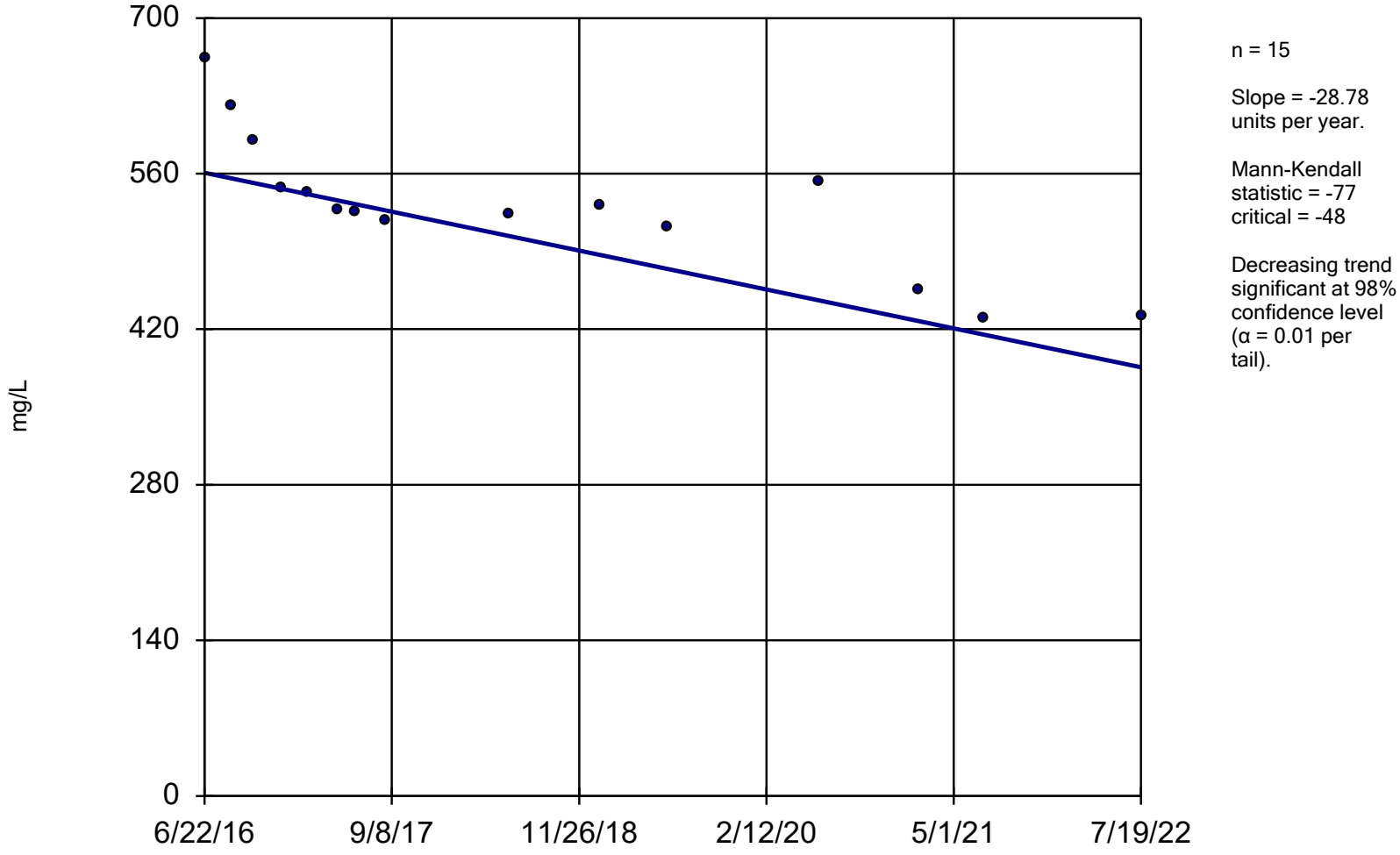
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 15

Slope = -28.78 units per year.

Mann-Kendall statistic = -77
critical = -48

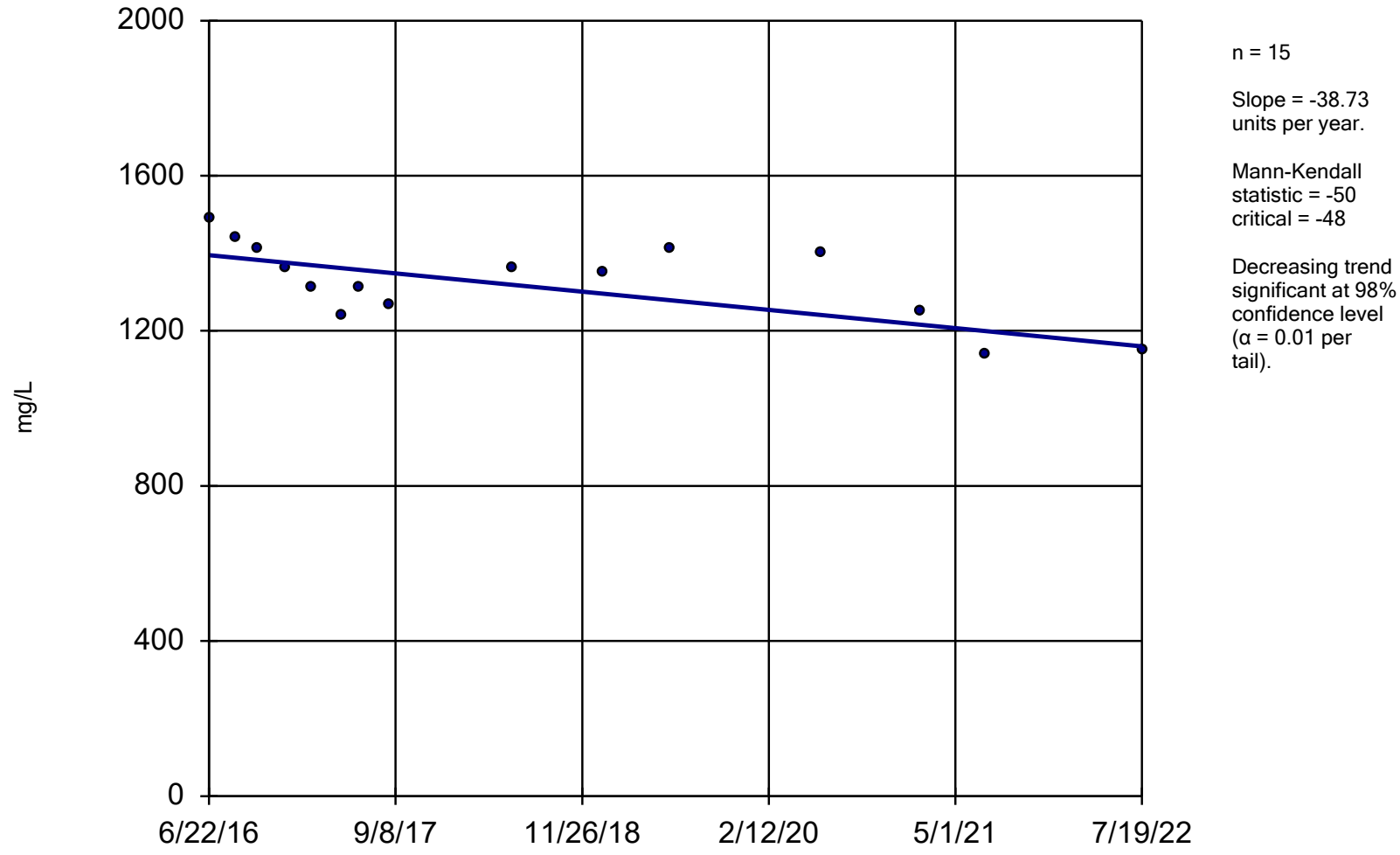
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 15

Slope = -38.73 units per year.

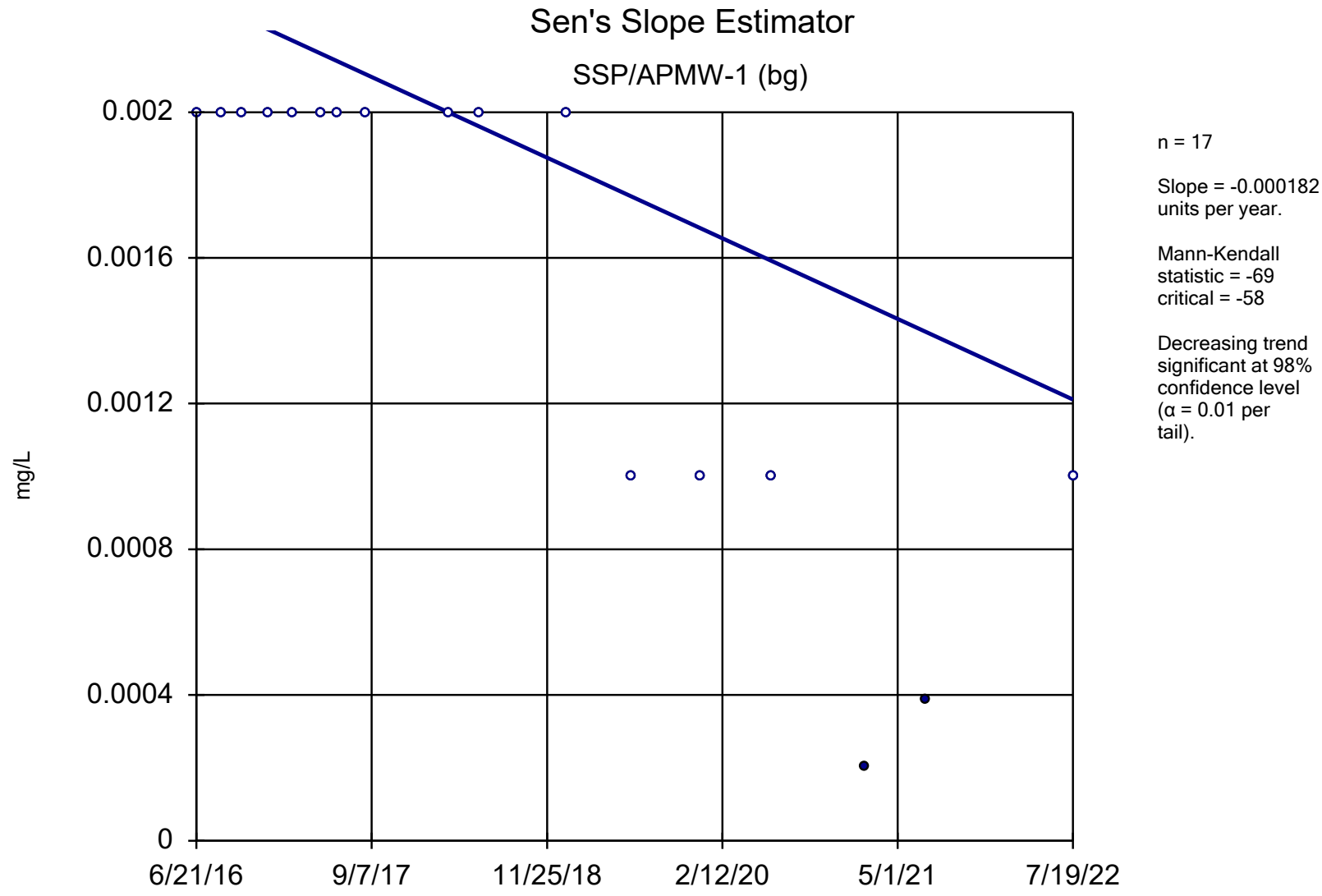
Mann-Kendall statistic = -50
critical = -48

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: TDS Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

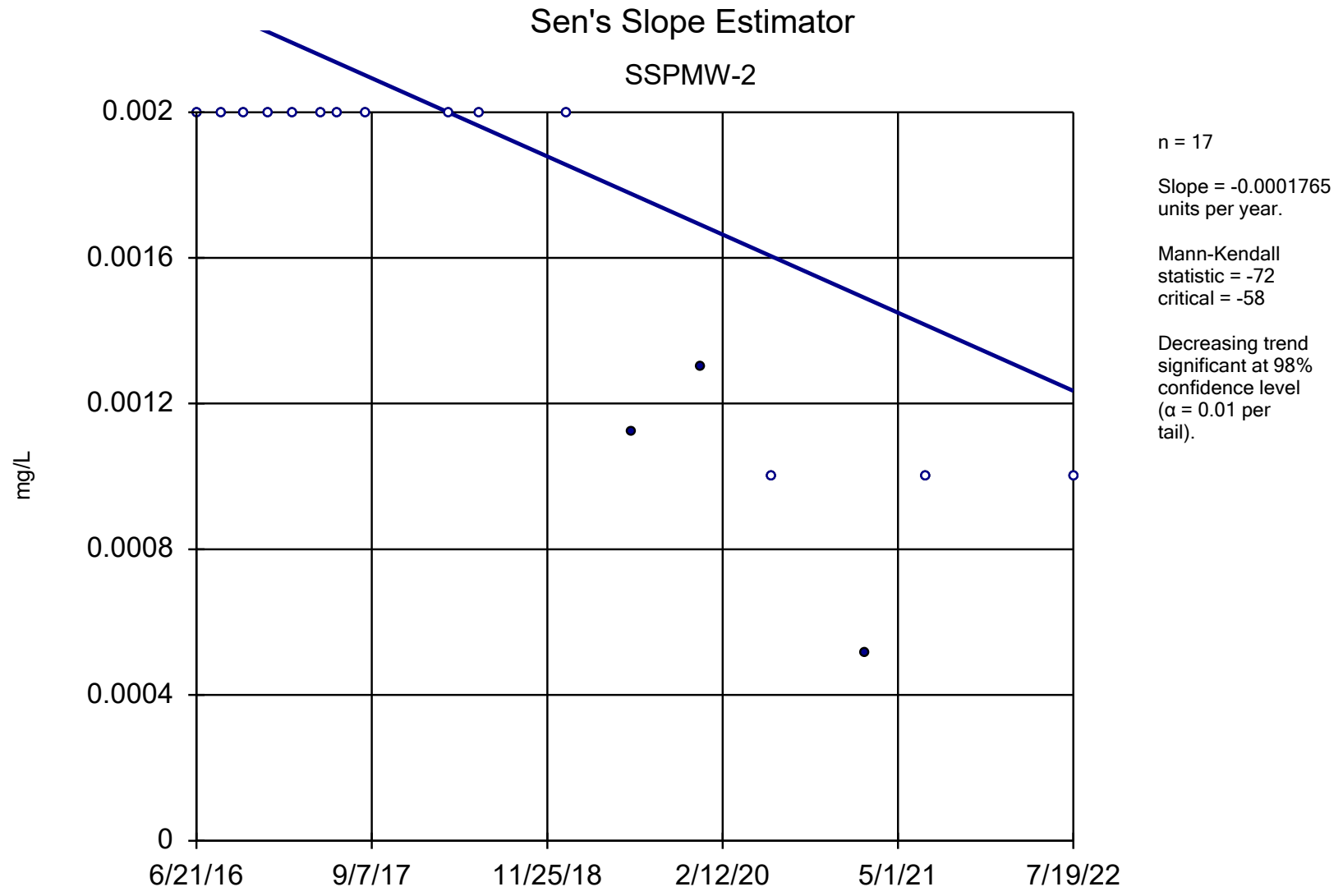
Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.



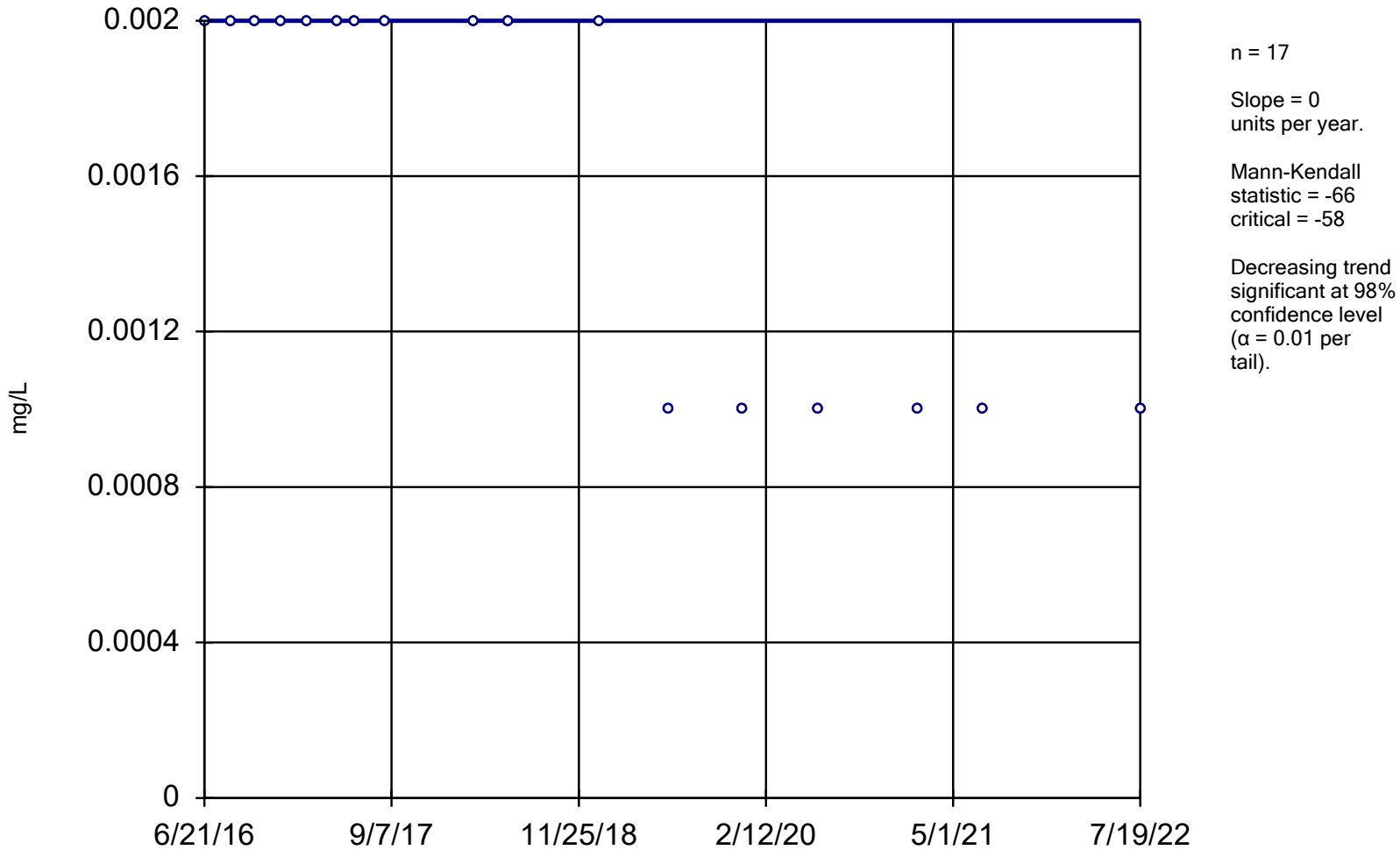
Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-4



n = 17

Slope = 0
units per year.

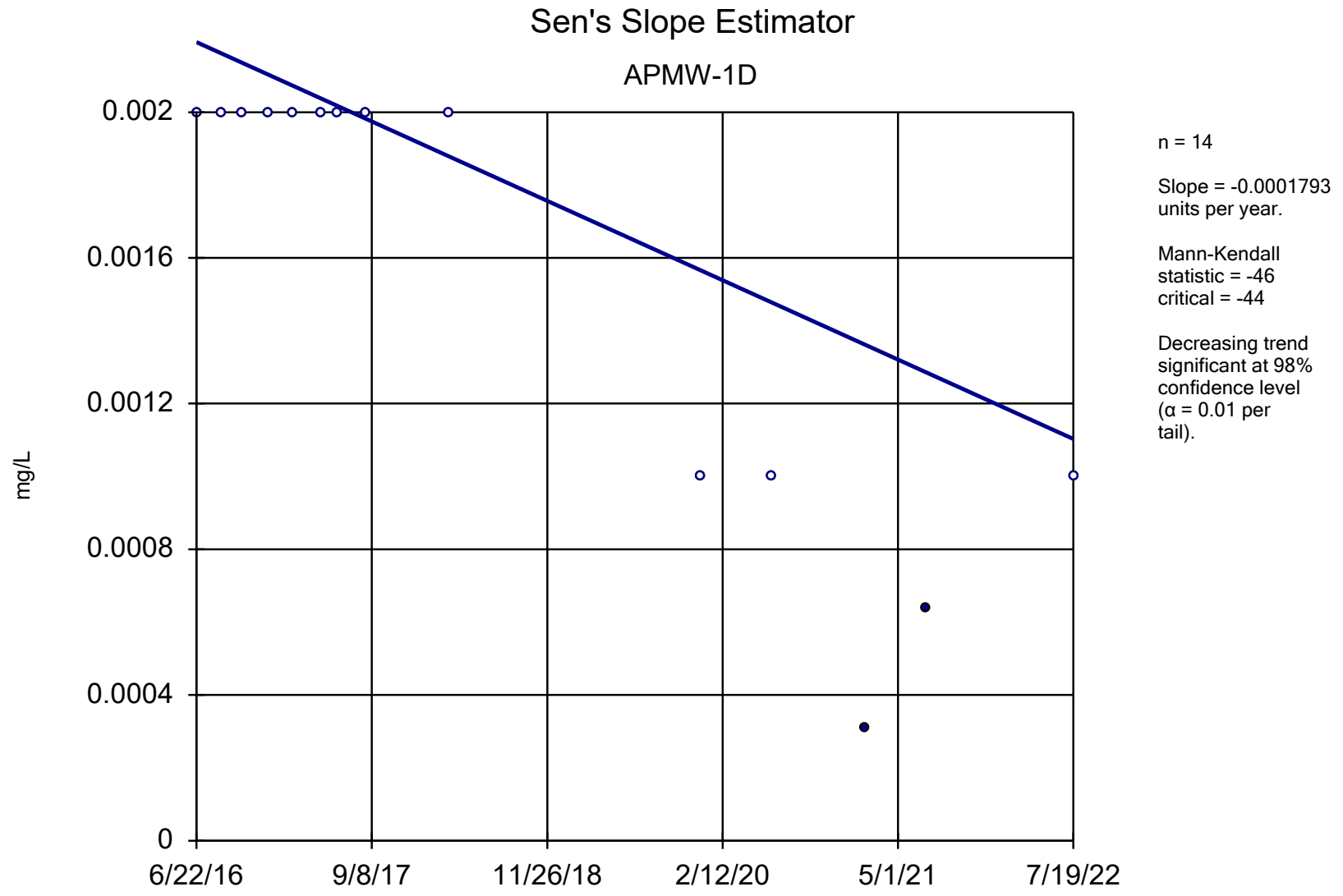
Mann-Kendall
statistic = -66
critical = -58

Decreasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

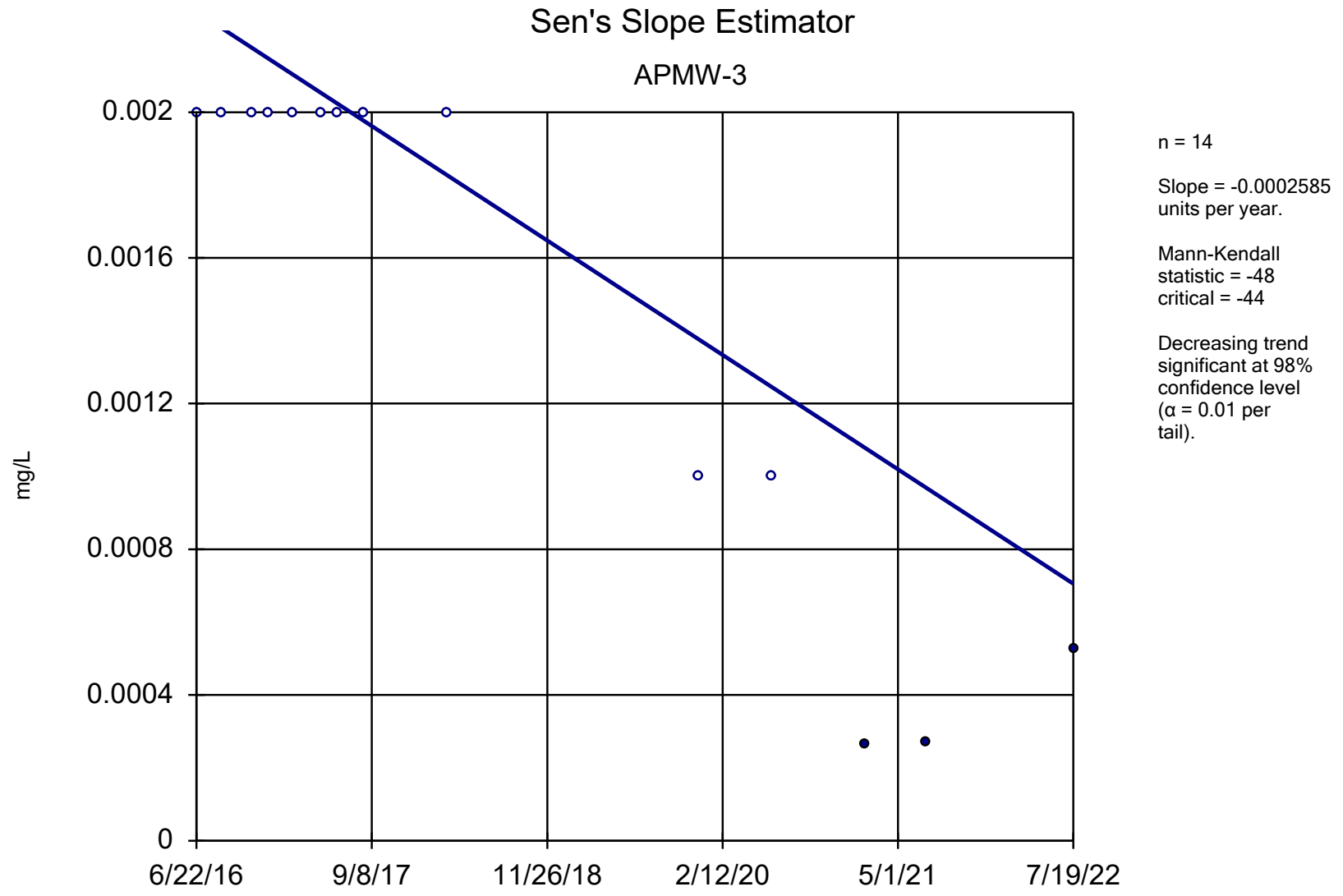
Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

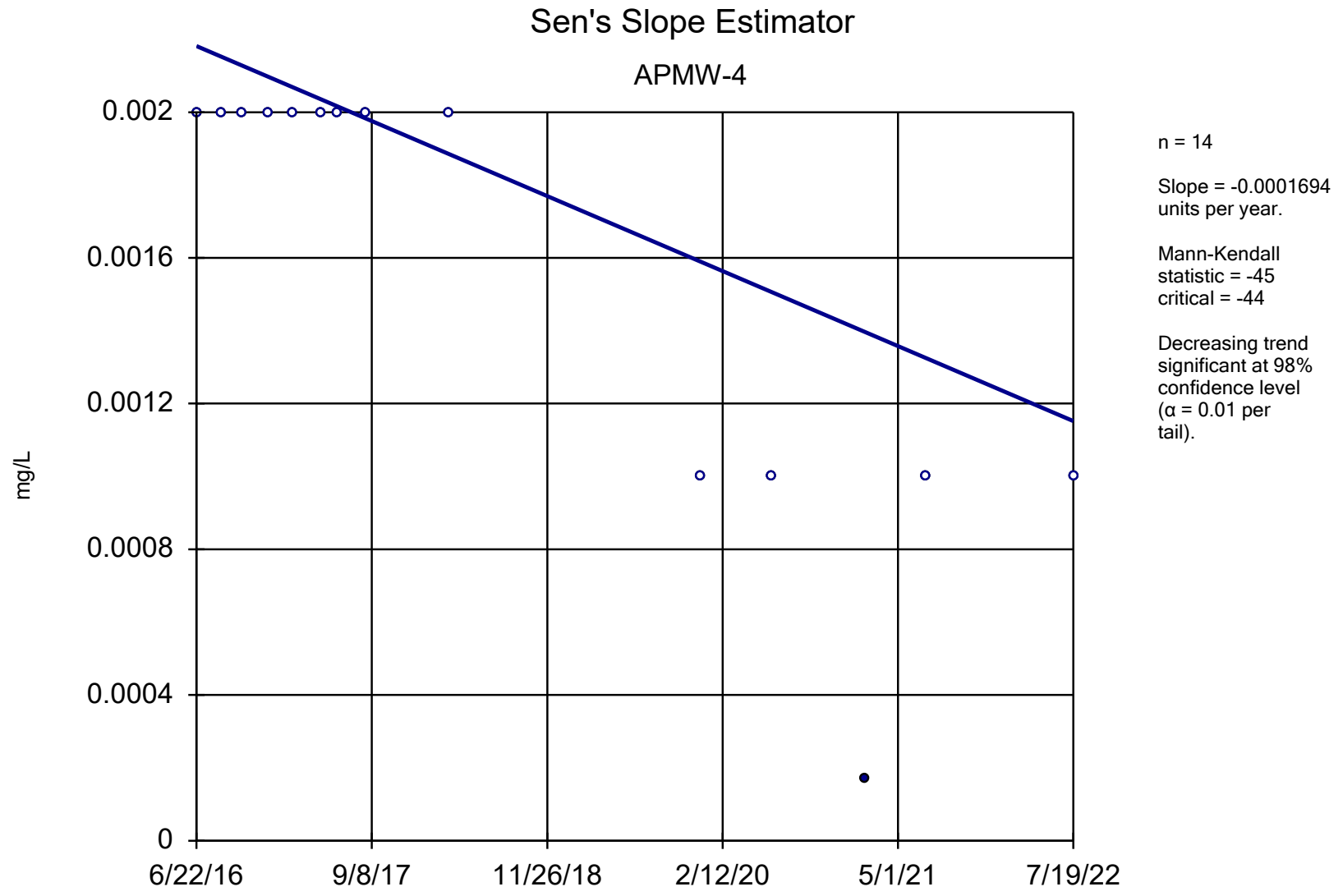
Hollow symbols indicate censored values.



Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

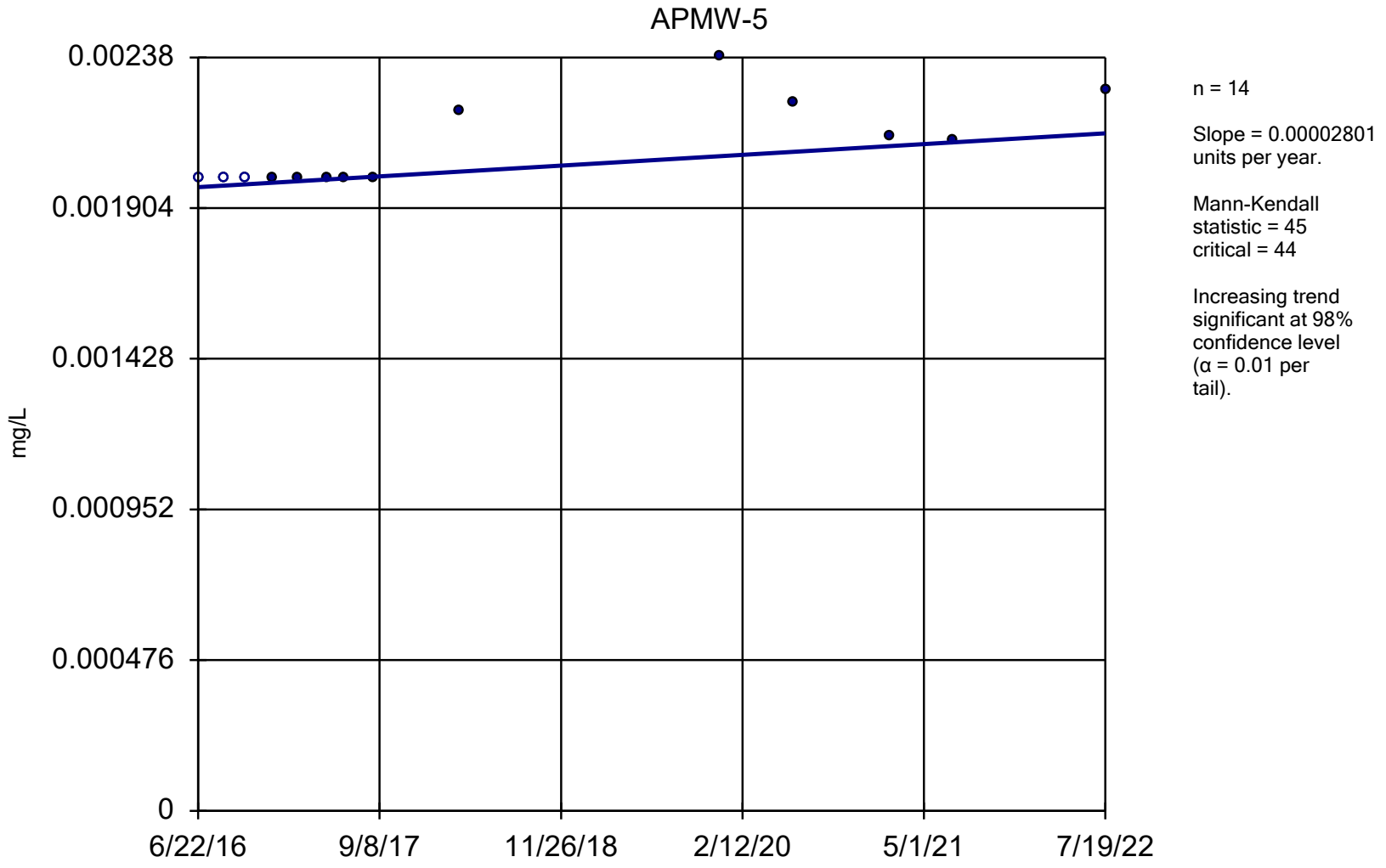


Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

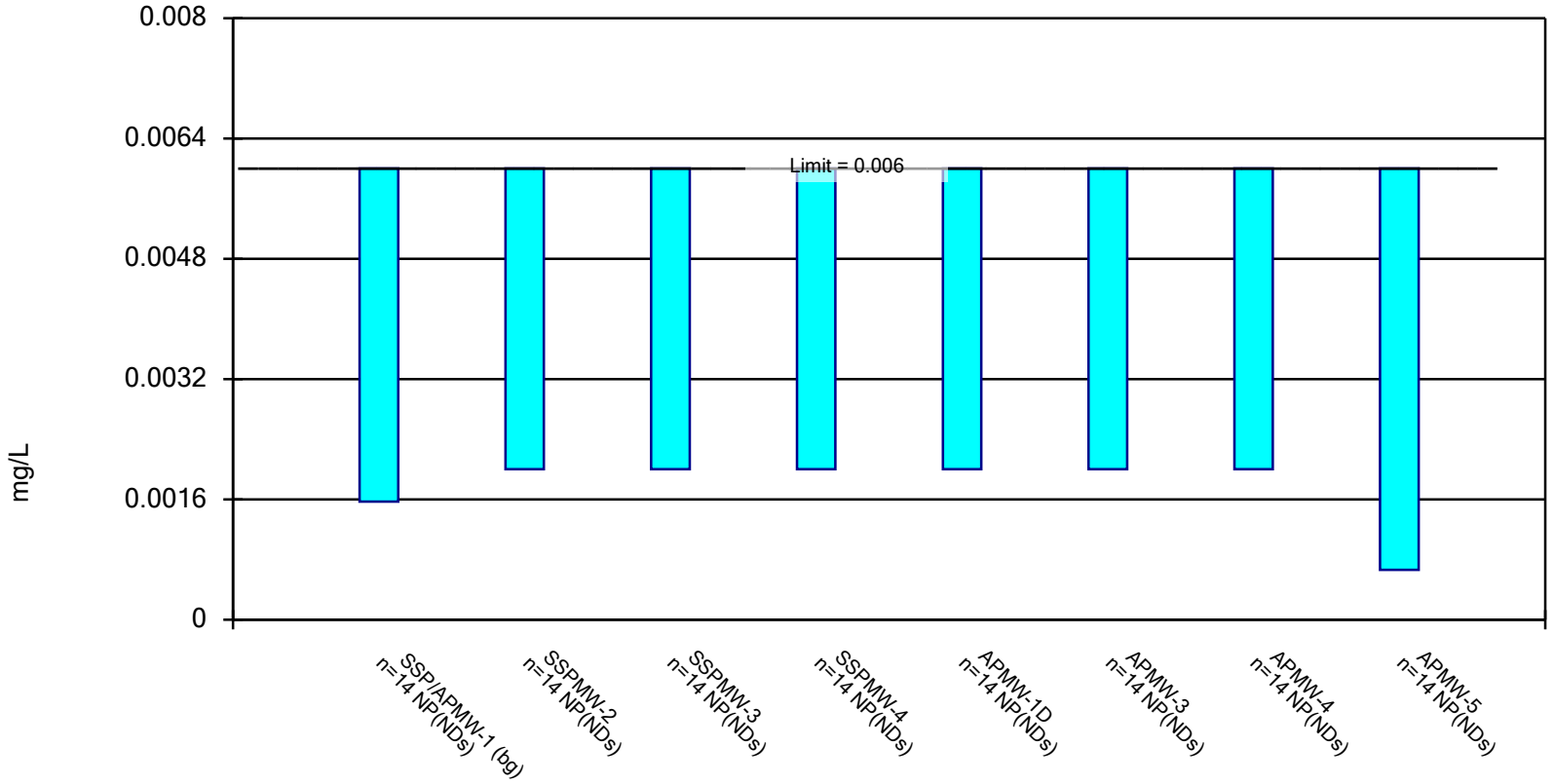


Constituent: Thallium Analysis Run 10/19/2022 3:36 PM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

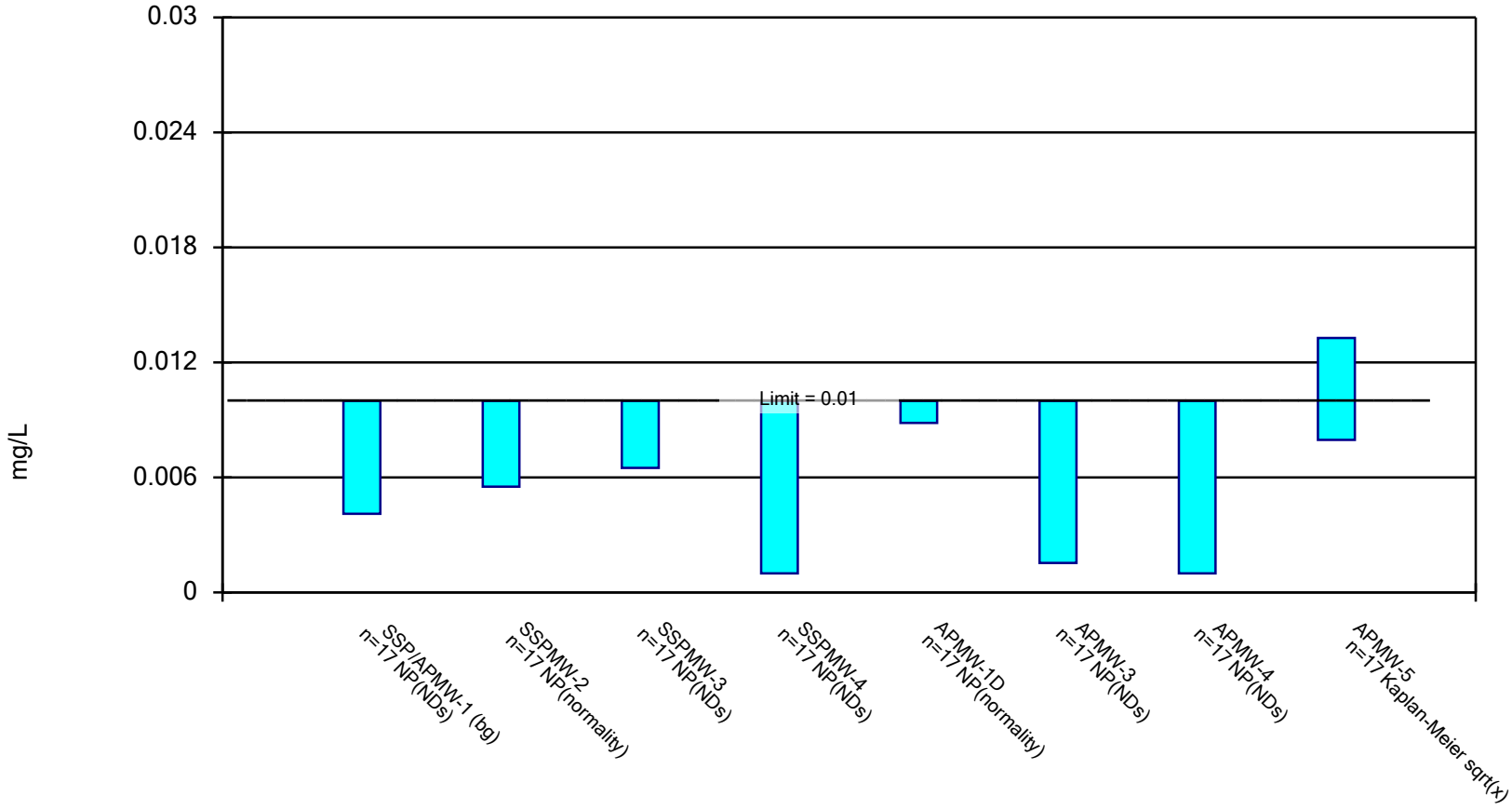


Constituent: Antimony Analysis Run 10/20/2022 11:01 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

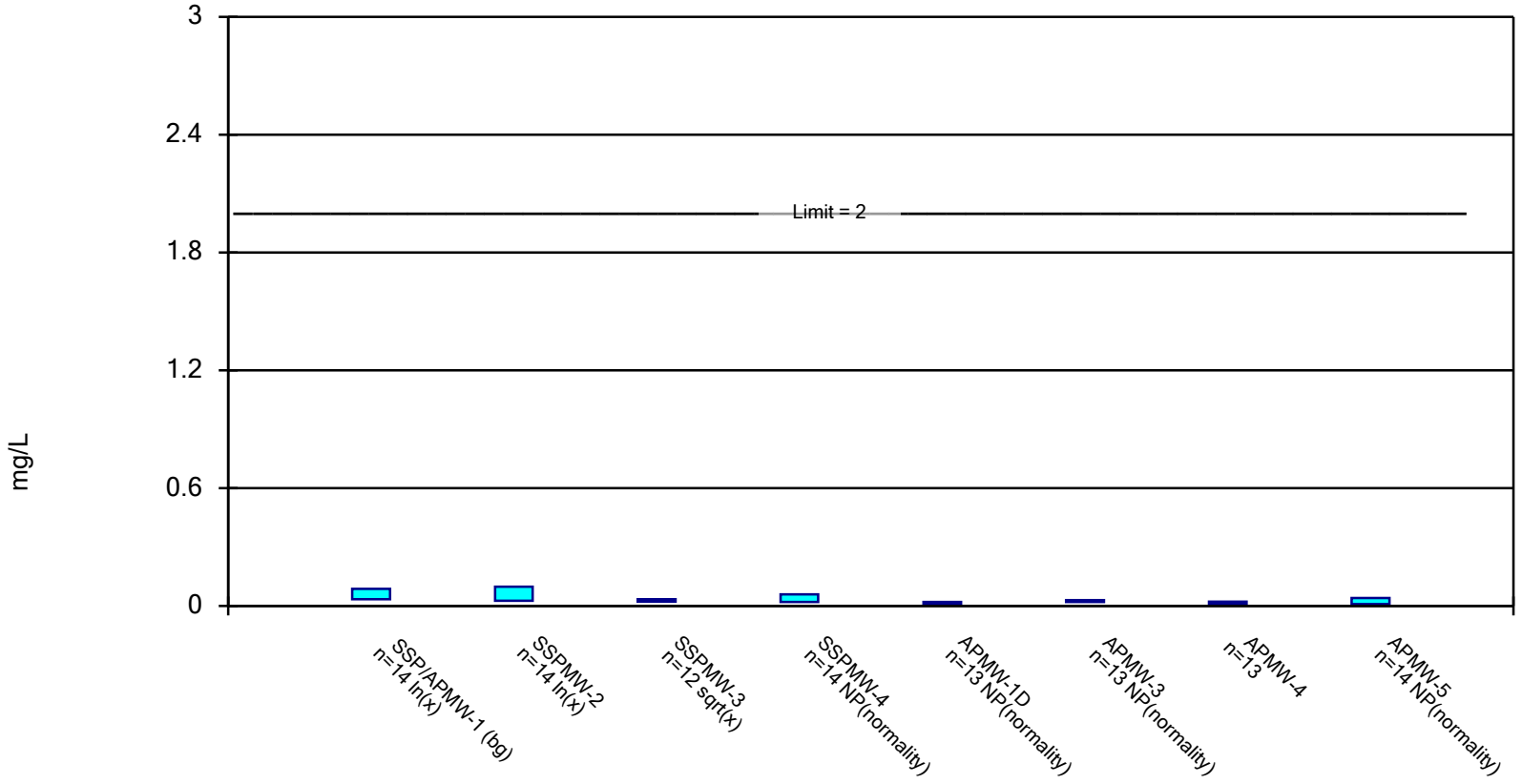


Constituent: Arsenic Analysis Run 10/20/2022 11:01 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

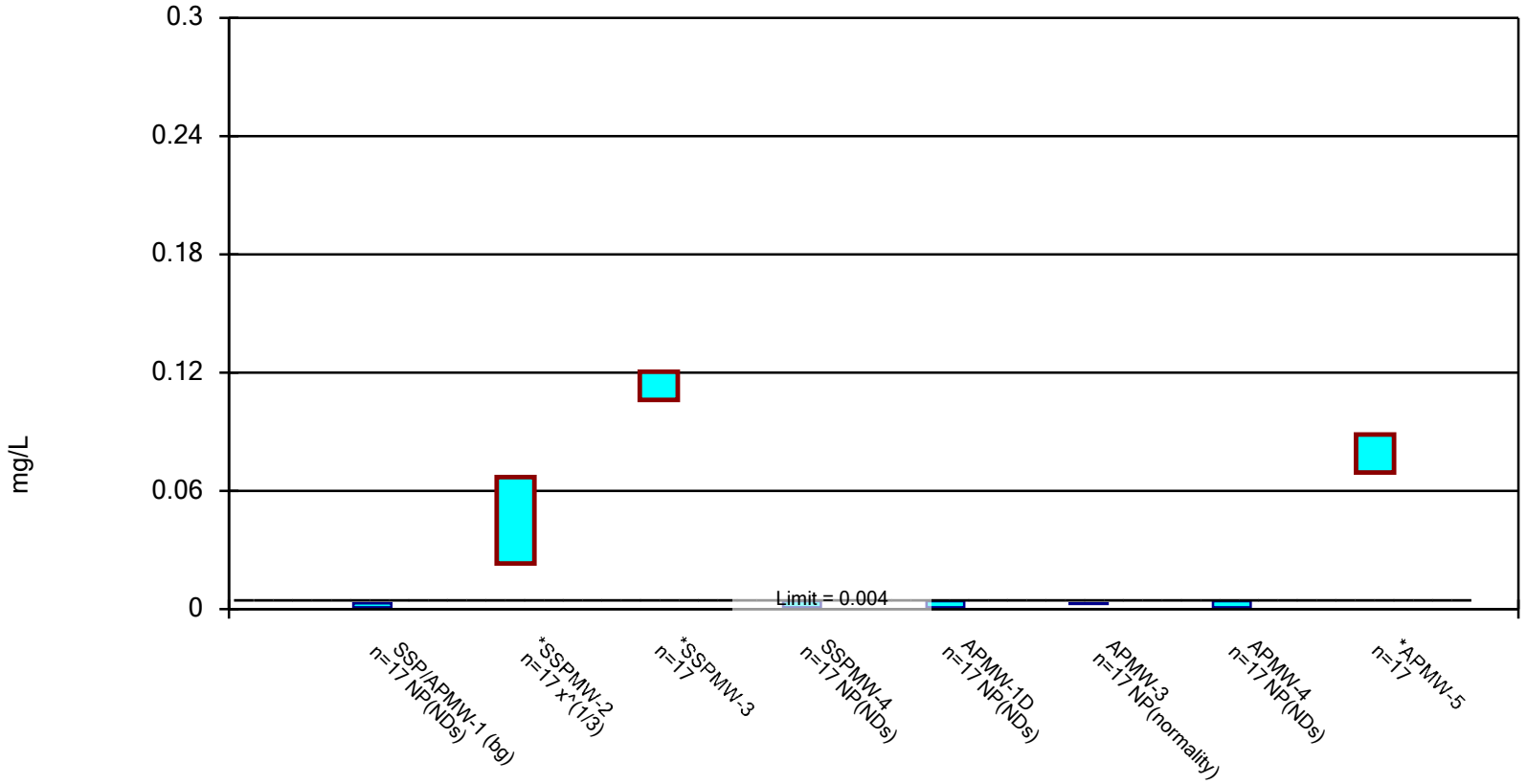


Constituent: Barium Analysis Run 10/20/2022 11:01 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

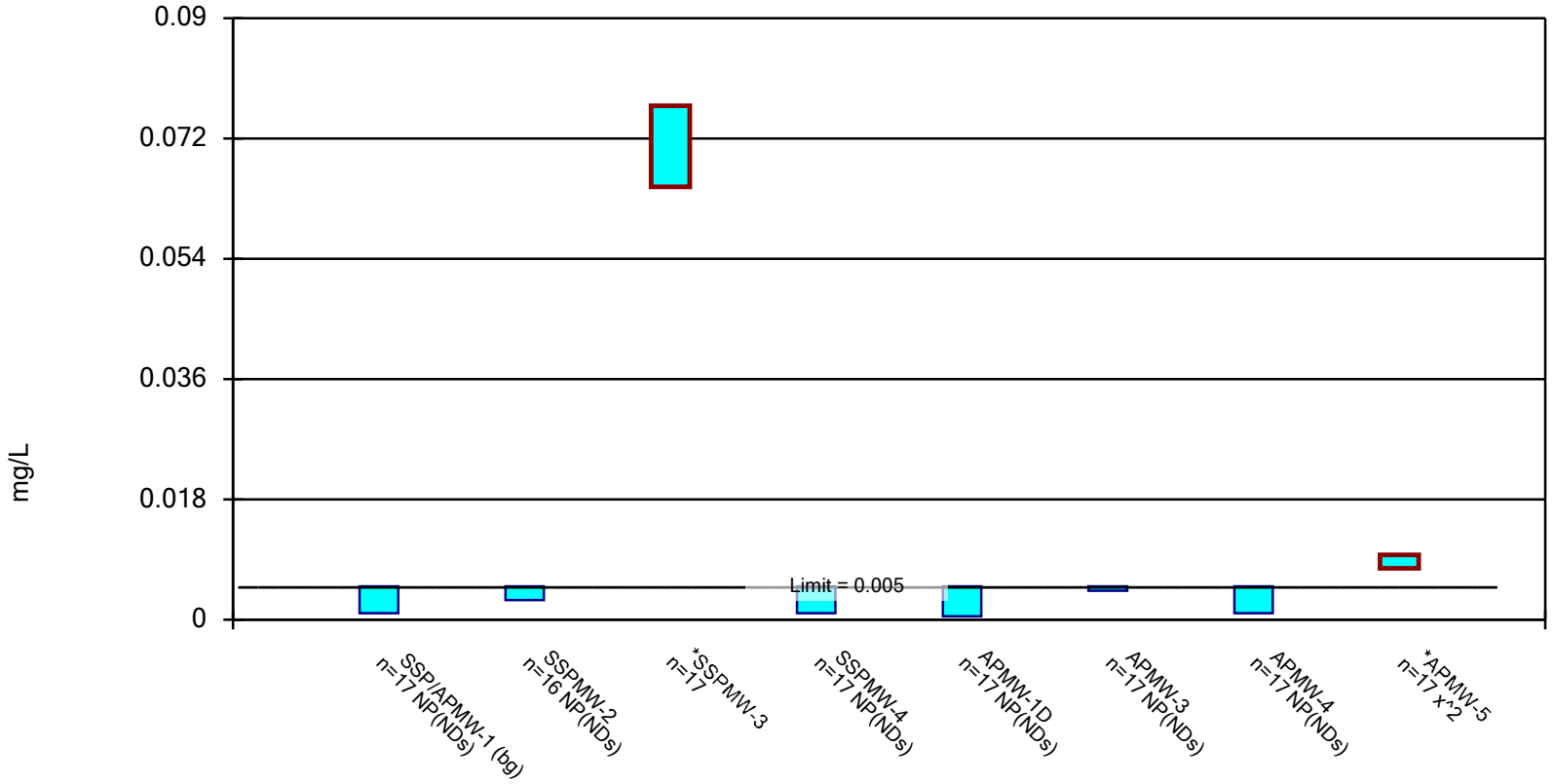


Constituent: Beryllium Analysis Run 10/20/2022 11:01 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

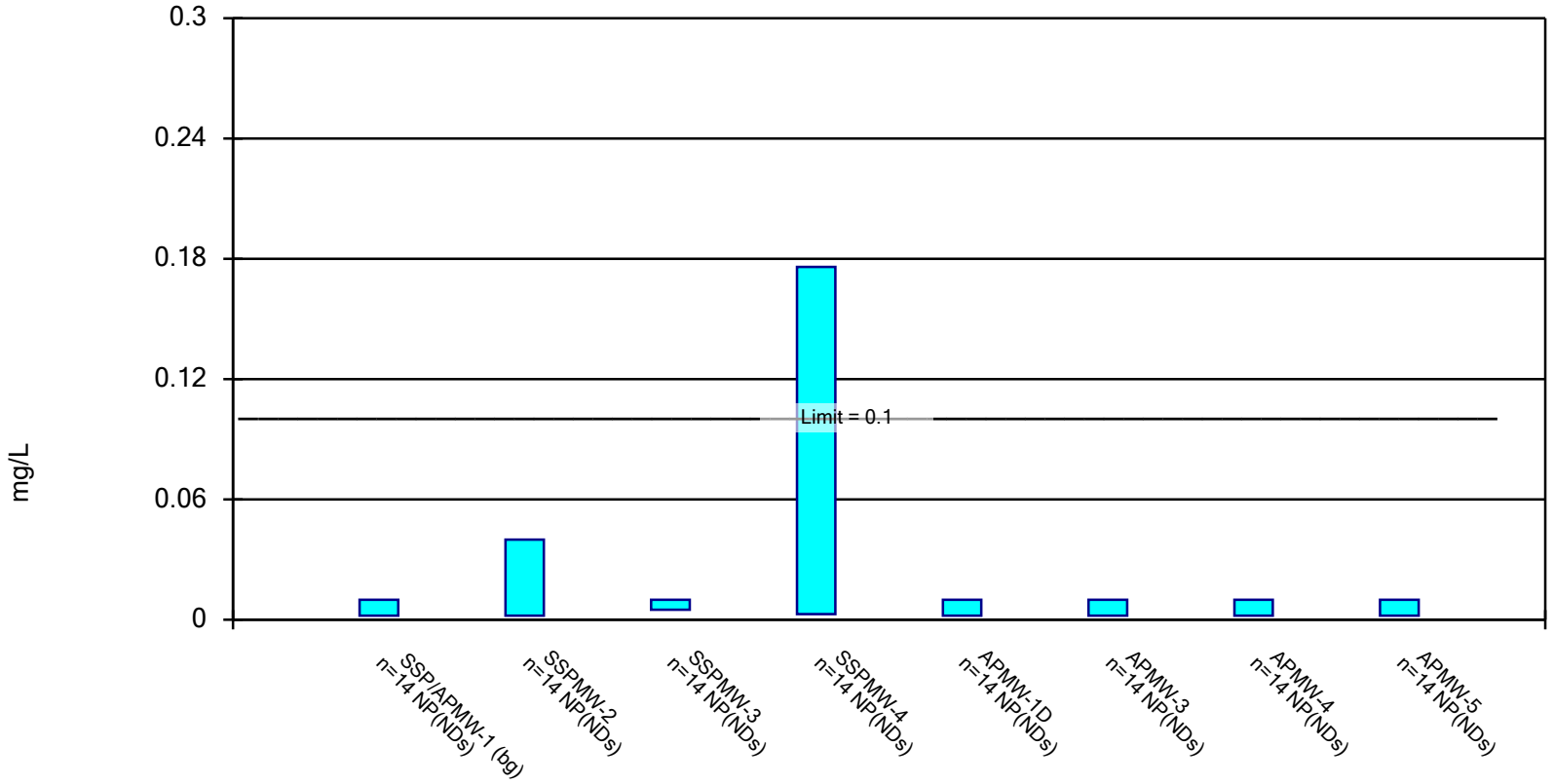


Constituent: Cadmium Analysis Run 10/20/2022 11:01 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

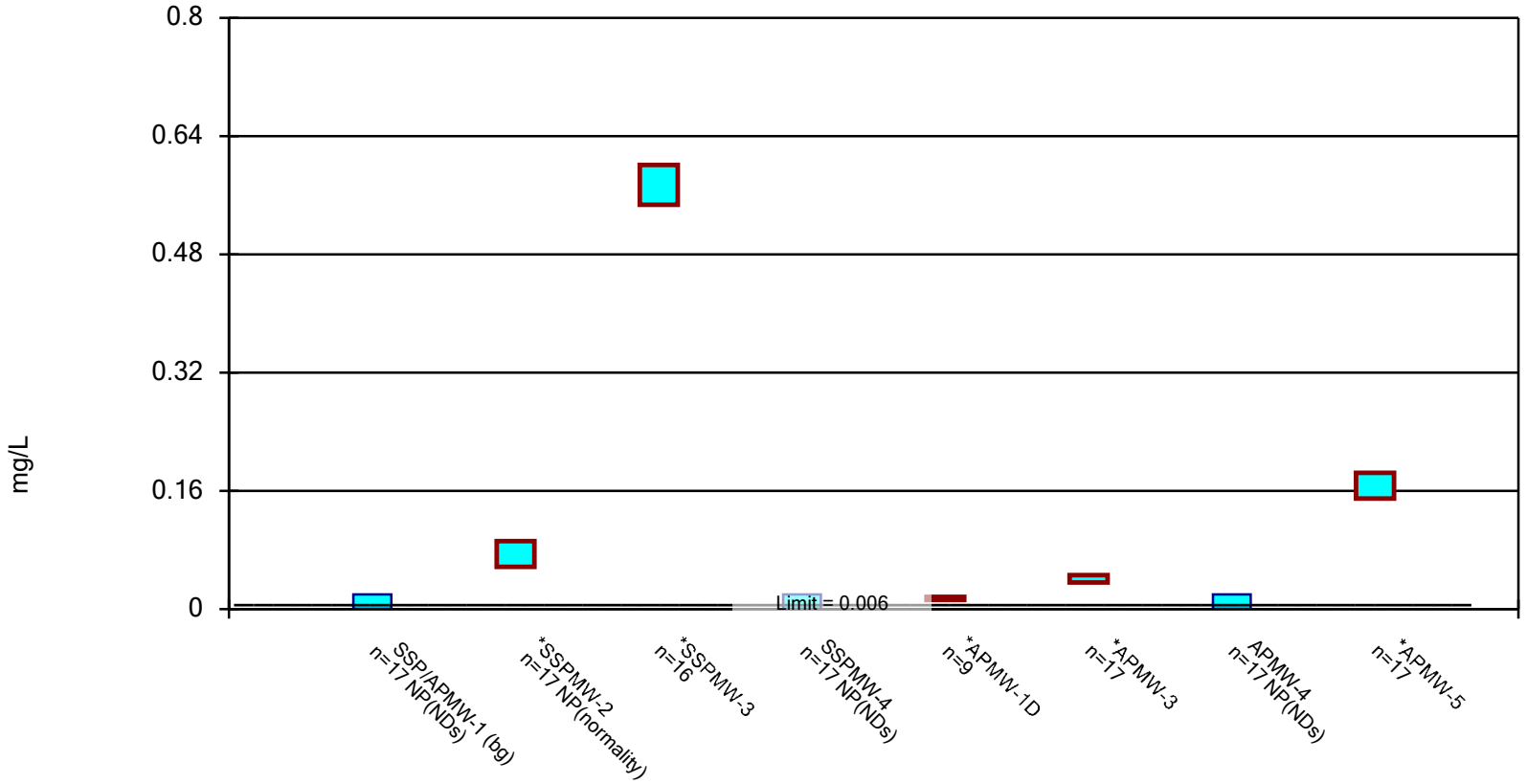


Constituent: Chromium Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

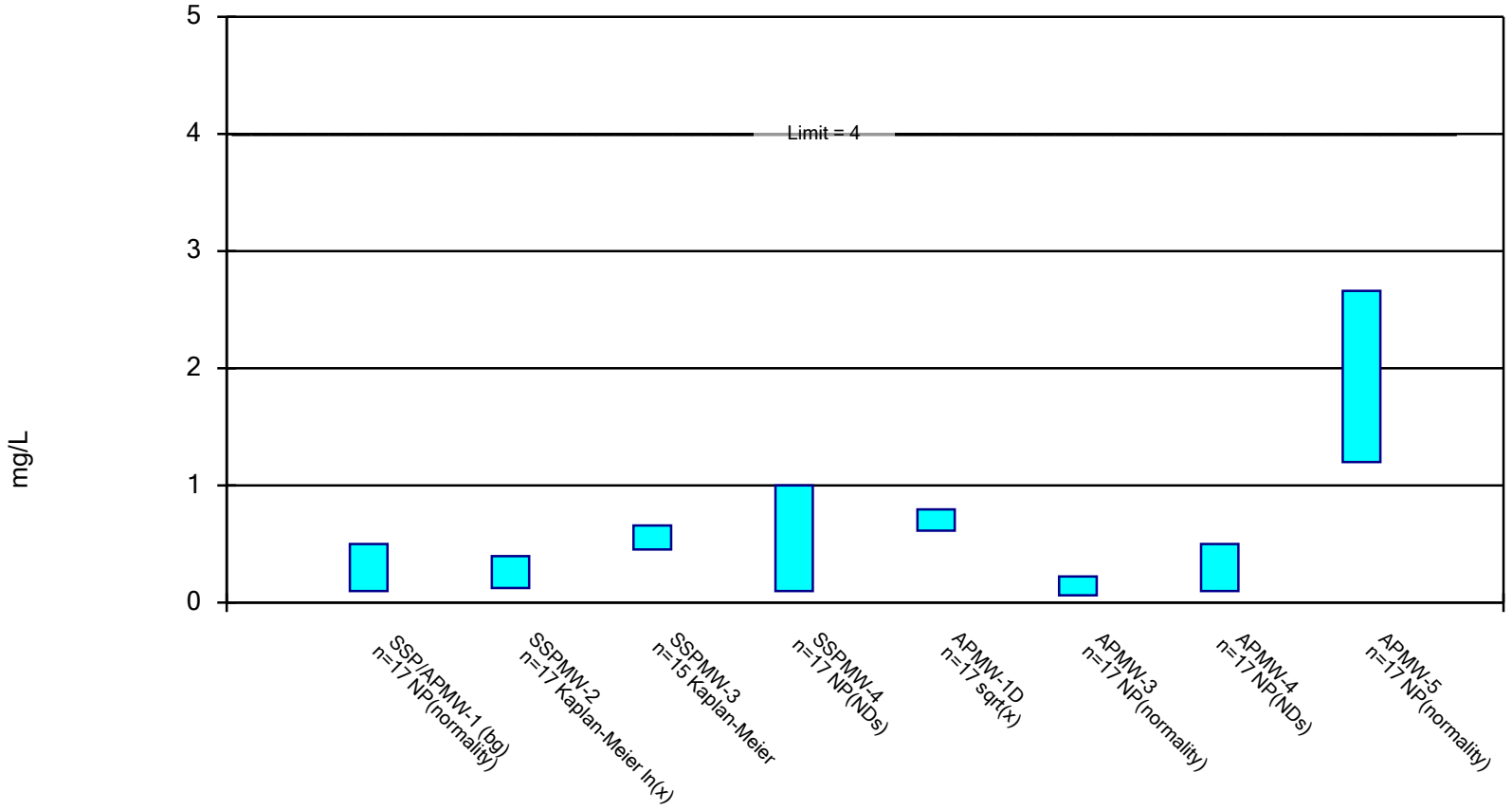


Constituent: Cobalt Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

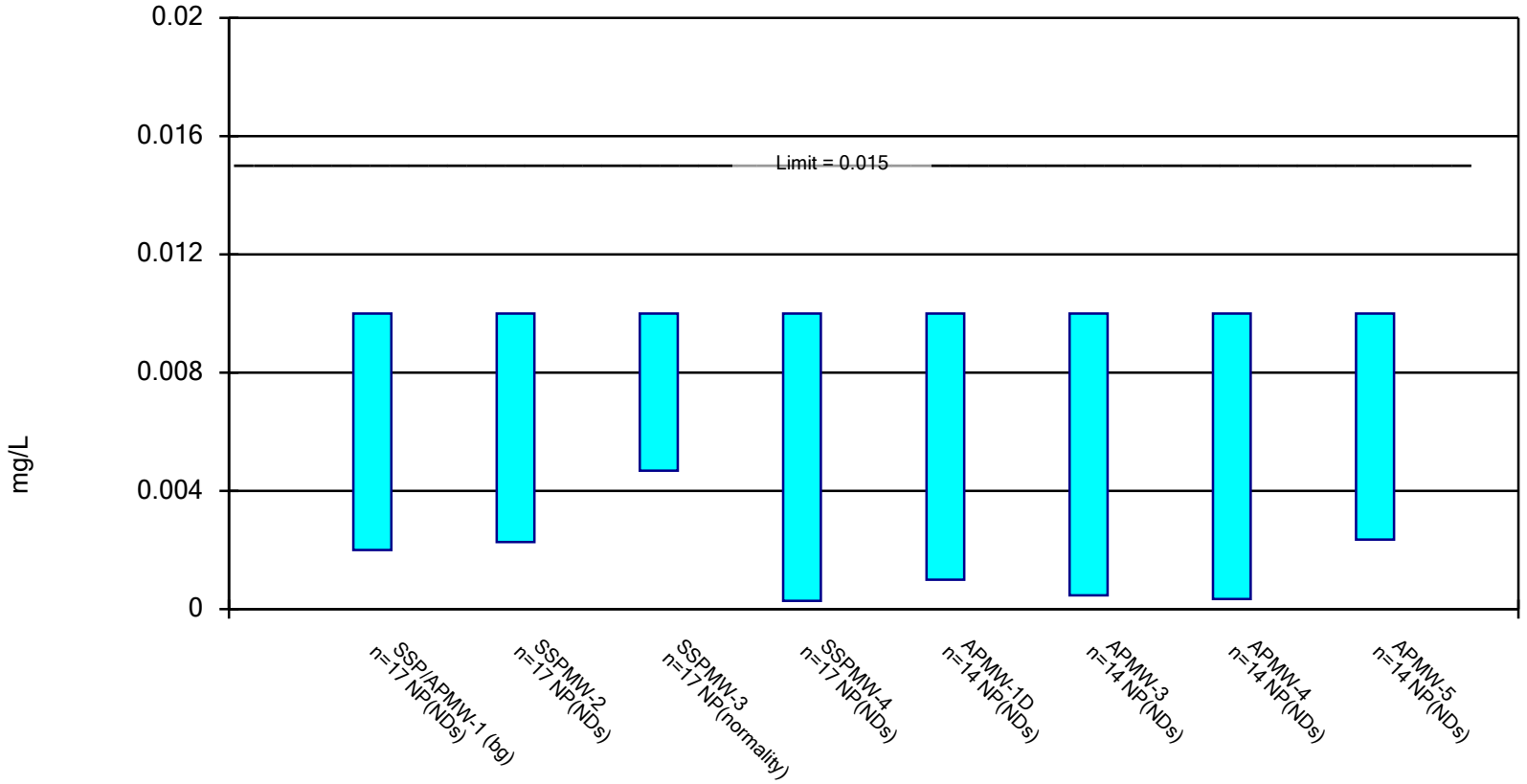


Constituent: Fluoride Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

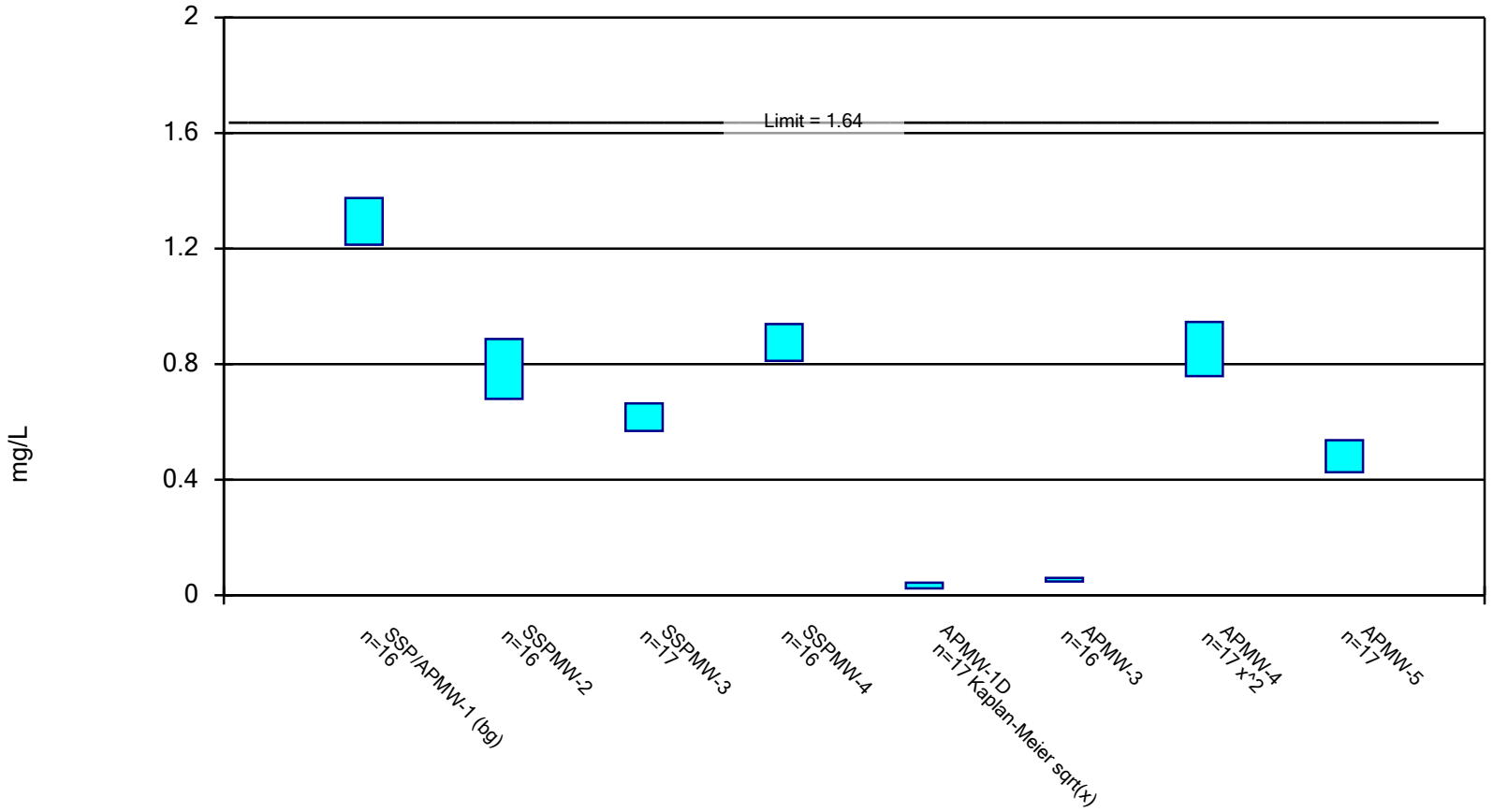


Constituent: Lead Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

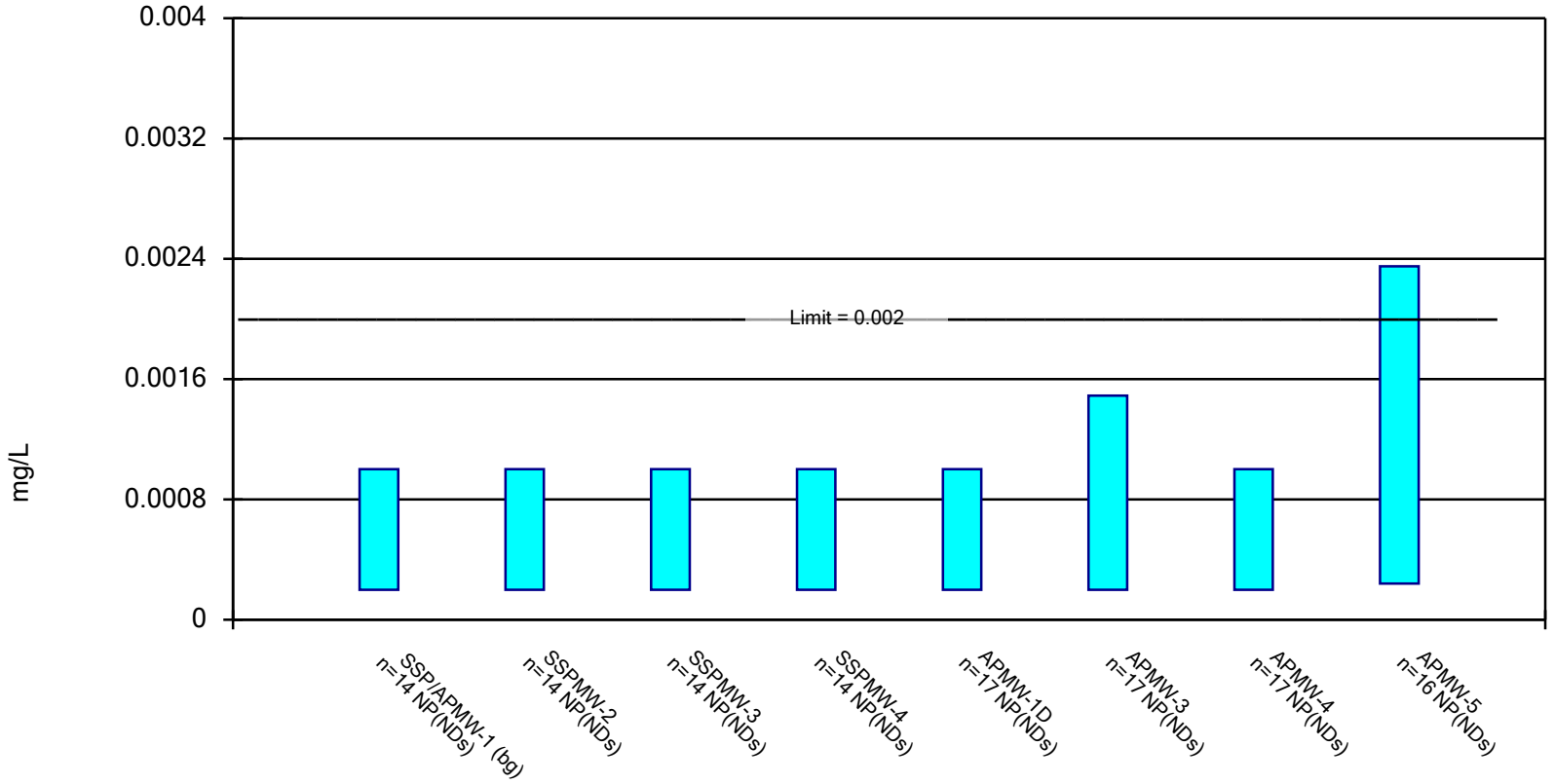


Constituent: Lithium Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

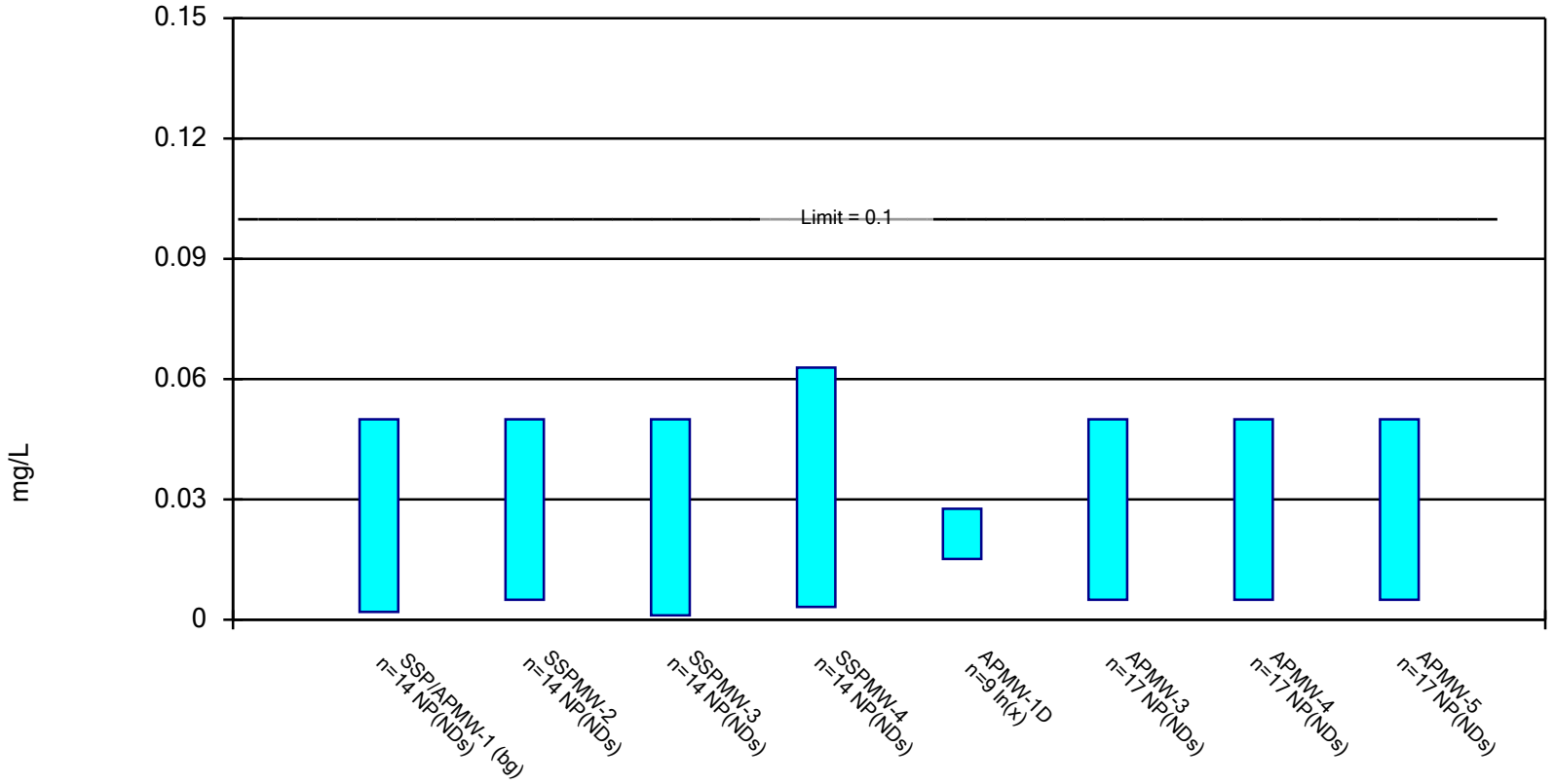


Constituent: Mercury Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

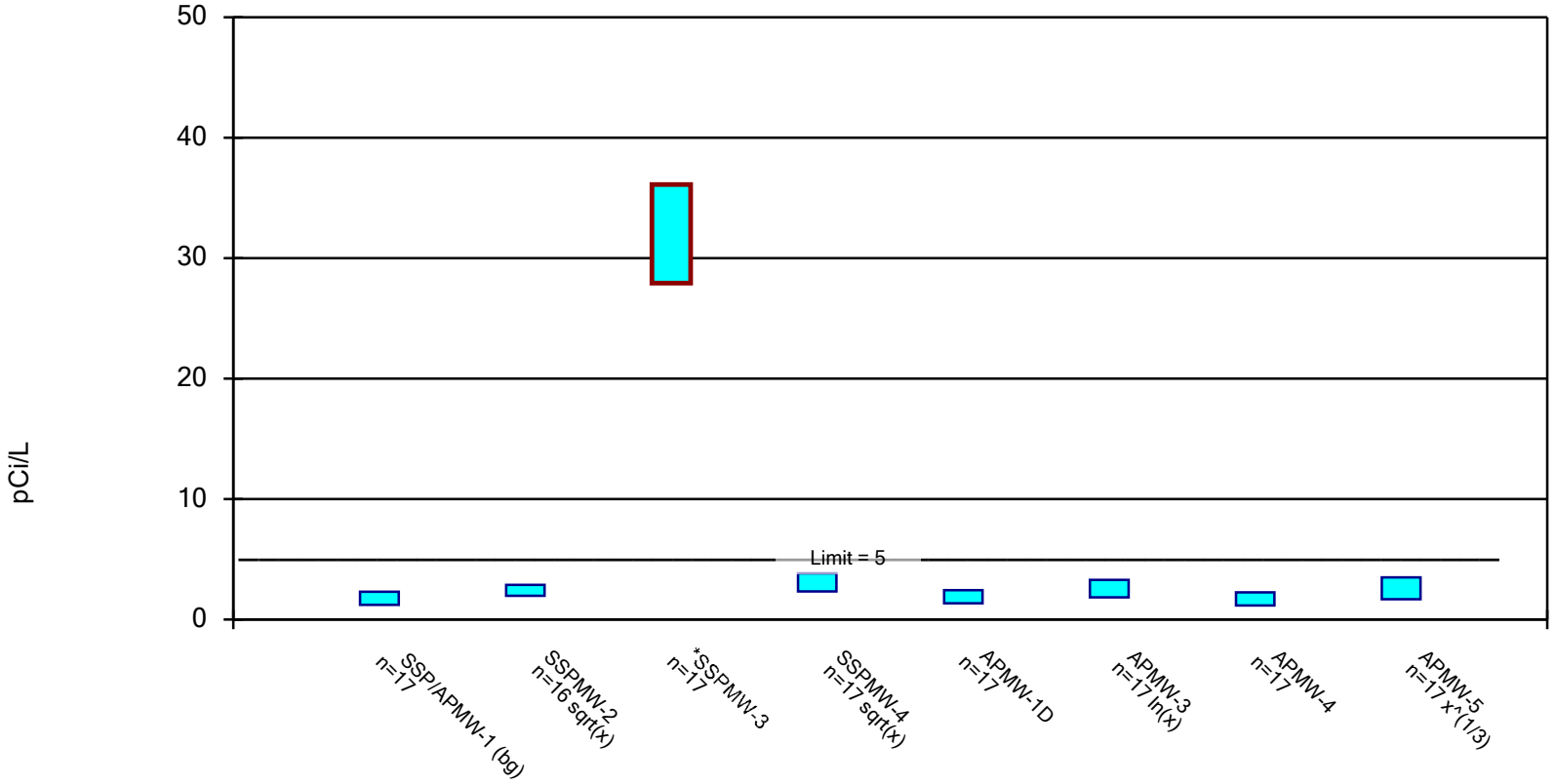


Constituent: Molybdenum Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

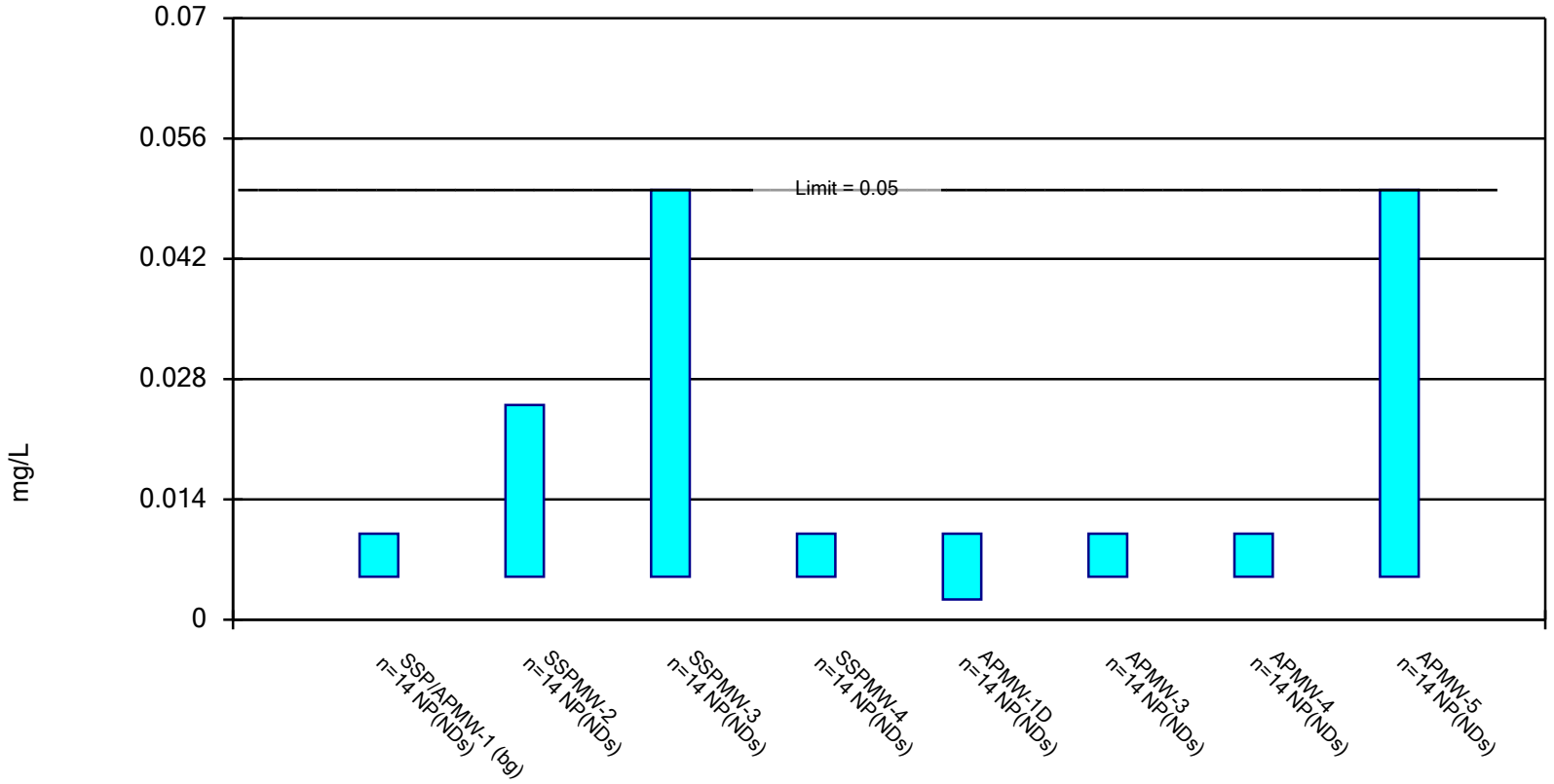


Constituent: Radium 226 + 228 Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

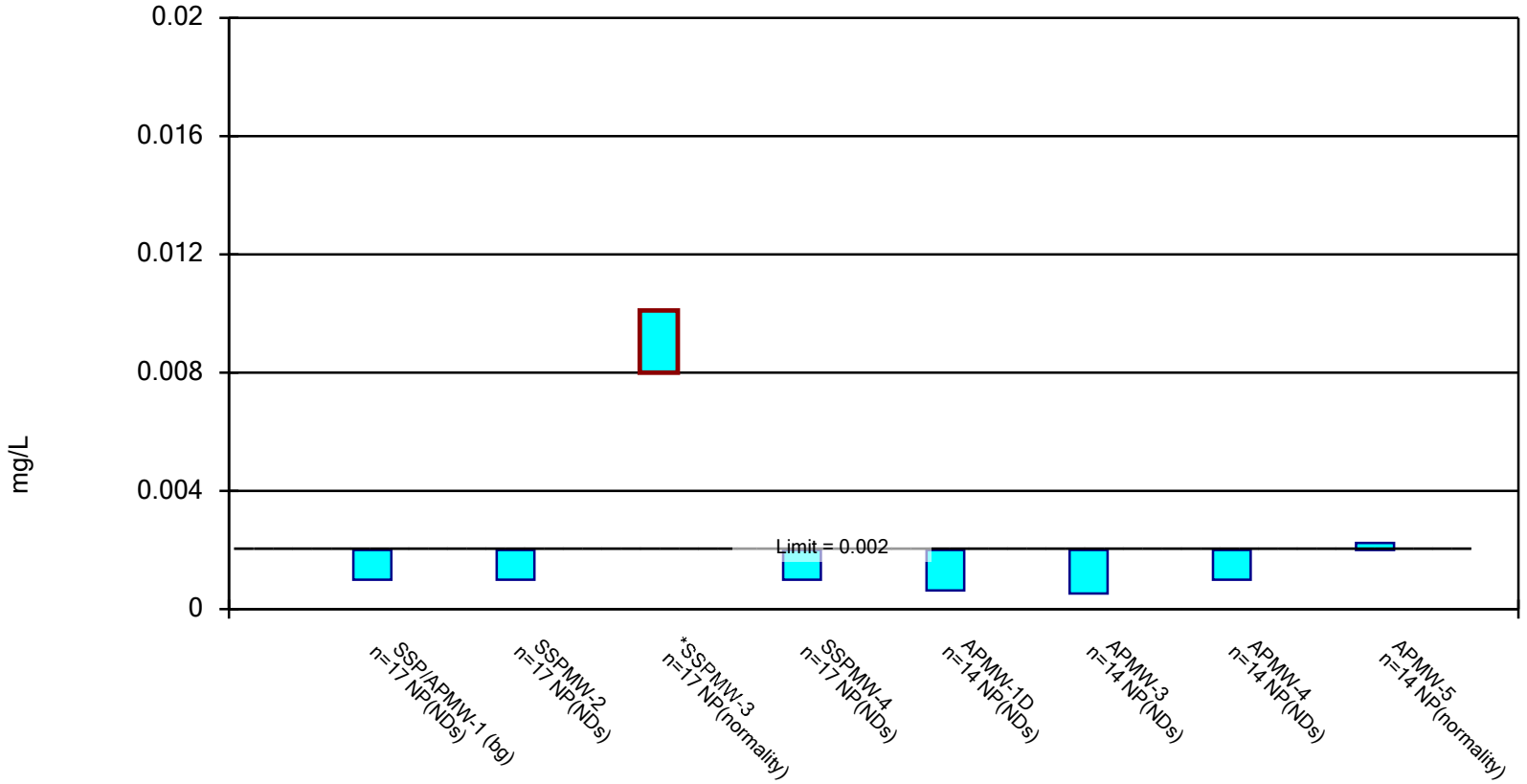


Constituent: Selenium Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 10/20/2022 11:02 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/20/2022, 11:02 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SSP/APMW-1 (bg)	0.006	0.00157	0.006	No	14	78.57	No	0.01	NP (NDs)
Antimony (mg/L)	SSPMW-2	0.006	0.002	0.006	No	14	100	No	0.01	NP (NDs)
Antimony (mg/L)	SSPMW-3	0.006	0.002	0.006	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	SSPMW-4	0.006	0.002	0.006	No	14	92.86	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-1D	0.006	0.002	0.006	No	14	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-3	0.006	0.002	0.006	No	14	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-4	0.006	0.002	0.006	No	14	100	No	0.01	NP (NDs)
Antimony (mg/L)	APMW-5	0.006	0.000664	0.006	No	14	85.71	No	0.01	NP (NDs)
Arsenic (mg/L)	SSP/APMW-1 (bg)	0.01	0.0041	0.01	No	17	52.94	No	0.01	NP (NDs)
Arsenic (mg/L)	SSPMW-2	0.01	0.00552	0.01	No	17	47.06	No	0.01	NP (normality)
Arsenic (mg/L)	SSPMW-3	0.01	0.0065	0.01	No	17	58.82	No	0.01	NP (NDs)
Arsenic (mg/L)	SSPMW-4	0.01	0.001	0.01	No	17	70.59	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-1D	0.01	0.00884	0.01	No	17	17.65	No	0.01	NP (normality)
Arsenic (mg/L)	APMW-3	0.01	0.00154	0.01	No	17	76.47	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-4	0.01	0.001	0.01	No	17	88.24	No	0.01	NP (NDs)
Arsenic (mg/L)	APMW-5	0.01327	0.007962	0.01	No	17	17.65	sqrt(x)	0.01	Param.
Barium (mg/L)	SSP/APMW-1 (bg)	0.08727	0.03483	2	No	14	14.29	ln(x)	0.01	Param.
Barium (mg/L)	SSPMW-2	0.09854	0.02735	2	No	14	7.143	ln(x)	0.01	Param.
Barium (mg/L)	SSPMW-3	0.03468	0.02138	2	No	12	0	sqrt(x)	0.01	Param.
Barium (mg/L)	SSPMW-4	0.06	0.0203	2	No	14	7.143	No	0.01	NP (normality)
Barium (mg/L)	APMW-1D	0.02	0.01	2	No	13	0	No	0.01	NP (normality)
Barium (mg/L)	APMW-3	0.03	0.02	2	No	13	0	No	0.01	NP (normality)
Barium (mg/L)	APMW-4	0.02254	0.01243	2	No	13	0	No	0.01	Param.
Barium (mg/L)	APMW-5	0.04	0.01	2	No	14	21.43	No	0.01	NP (normality)
Beryllium (mg/L)	SSP/APMW-1 (bg)	0.003	0.001	0.004	No	17	70.59	No	0.01	NP (NDs)
Beryllium (mg/L)	**SSPMW-2**	**0.06695**	**0.02318**	**0.004**	**Yes**	**17**	**0**	**x^(1/3)**	**0.01**	**Param.**
Beryllium (mg/L)	**SSPMW-3**	**0.1205**	**0.1062**	**0.004**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SSPMW-4	0.004	0.001	0.004	No	17	94.12	No	0.01	NP (NDs)
Beryllium (mg/L)	APMW-1D	0.004	0.001	0.004	No	17	100	No	0.01	NP (NDs)
Beryllium (mg/L)	APMW-3	0.00301	0.00264	0.004	No	17	11.76	No	0.01	NP (normality)
Beryllium (mg/L)	APMW-4	0.004	0.001	0.004	No	17	88.24	No	0.01	NP (NDs)
Beryllium (mg/L)	**APMW-5**	**0.08858**	**0.06936**	**0.004**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSP/APMW-1 (bg)	0.005	0.001	0.005	No	17	100	No	0.01	NP (NDs)
Cadmium (mg/L)	SSPMW-2	0.005	0.00294	0.005	No	16	68.75	No	0.01	NP (NDs)
Cadmium (mg/L)	**SSPMW-3**	**0.07687**	**0.06478**	**0.005**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-4	0.005	0.001	0.005	No	17	100	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-1D	0.005	0.000498	0.005	No	17	82.35	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-3	0.005	0.00432	0.005	No	17	58.82	No	0.01	NP (NDs)
Cadmium (mg/L)	APMW-4	0.005	0.001	0.005	No	17	100	No	0.01	NP (NDs)
Cadmium (mg/L)	**APMW-5**	**0.009708**	**0.007687**	**0.005**	**Yes**	**17**	**0**	**x^2**	**0.01**	**Param.**
Chromium (mg/L)	SSP/APMW-1 (bg)	0.01	0.002	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	SSPMW-2	0.04	0.002	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	SSPMW-3	0.01	0.005	0.1	No	14	57.14	No	0.01	NP (NDs)
Chromium (mg/L)	SSPMW-4	0.176	0.00284	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-1D	0.01	0.002	0.1	No	14	100	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-3	0.01	0.002	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-4	0.01	0.002	0.1	No	14	100	No	0.01	NP (NDs)
Chromium (mg/L)	APMW-5	0.01	0.002	0.1	No	14	92.86	No	0.01	NP (NDs)
Cobalt (mg/L)	SSP/APMW-1 (bg)	0.02	0.000649	0.006	No	17	82.35	No	0.01	NP (NDs)
Cobalt (mg/L)	**SSPMW-2**	**0.0922**	**0.0571**	**0.006**	**Yes**	**17**	**0**	**No**	**0.01**	**NP (normality)**

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/20/2022, 11:02 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	**SSPMW-3**	**0.6007**	**0.5473**	**0.006**	**Yes**	**16**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SSPMW-4	0.02	0.0005	0.006	No	17	88.24	No	0.01	NP (NDs)
Cobalt (mg/L)	**APMW-1D**	**0.01672**	**0.01264**	**0.006**	**Yes**	**9**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**APMW-3**	**0.04595**	**0.03611**	**0.006**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	APMW-4	0.02	0.0005	0.006	No	17	88.24	No	0.01	NP (NDs)
Cobalt (mg/L)	**APMW-5**	**0.1845**	**0.1496**	**0.006**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SSP/APMW-1 (bg)	0.5	0.1	4	No	17	41.18	No	0.01	NP (normality)
Fluoride (mg/L)	SSPMW-2	0.3969	0.124	4	No	17	23.53	ln(x)	0.01	Param.
Fluoride (mg/L)	SSPMW-3	0.6585	0.4535	4	No	15	20	No	0.01	Param.
Fluoride (mg/L)	SSPMW-4	1	0.1	4	No	17	70.59	No	0.01	NP (NDs)
Fluoride (mg/L)	APMW-1D	0.796	0.6149	4	No	17	11.76	sqrt(x)	0.01	Param.
Fluoride (mg/L)	APMW-3	0.223	0.0634	4	No	17	35.29	No	0.01	NP (normality)
Fluoride (mg/L)	APMW-4	0.5	0.1	4	No	17	76.47	No	0.01	NP (NDs)
Fluoride (mg/L)	APMW-5	2.66	1.2	4	No	17	5.882	No	0.01	NP (normality)
Lead (mg/L)	SSP/APMW-1 (bg)	0.01	0.002	0.015	No	17	76.47	No	0.01	NP (NDs)
Lead (mg/L)	SSPMW-2	0.01	0.00227	0.015	No	17	52.94	No	0.01	NP (NDs)
Lead (mg/L)	SSPMW-3	0.01	0.00468	0.015	No	17	47.06	No	0.01	NP (normality)
Lead (mg/L)	SSPMW-4	0.01	0.000276	0.015	No	17	82.35	No	0.01	NP (NDs)
Lead (mg/L)	APMW-1D	0.01	0.001	0.015	No	14	92.86	No	0.01	NP (NDs)
Lead (mg/L)	APMW-3	0.01	0.00047	0.015	No	14	71.43	No	0.01	NP (NDs)
Lead (mg/L)	APMW-4	0.01	0.000338	0.015	No	14	85.71	No	0.01	NP (NDs)
Lead (mg/L)	APMW-5	0.01	0.00235	0.015	No	14	64.29	No	0.01	NP (NDs)
Lithium (mg/L)	SSP/APMW-1 (bg)	1.374	1.213	1.64	No	16	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-2	0.8868	0.68	1.64	No	16	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-3	0.6647	0.5688	1.64	No	17	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-4	0.9392	0.8118	1.64	No	16	0	No	0.01	Param.
Lithium (mg/L)	APMW-1D	0.04353	0.02357	1.64	No	17	17.65	sqrt(x)	0.01	Param.
Lithium (mg/L)	APMW-3	0.0597	0.04758	1.64	No	16	6.25	No	0.01	Param.
Lithium (mg/L)	APMW-4	0.9455	0.7589	1.64	No	17	0	x^2	0.01	Param.
Lithium (mg/L)	APMW-5	0.5363	0.4255	1.64	No	17	0	No	0.01	Param.
Mercury (mg/L)	SSP/APMW-1 (bg)	0.001	0.0002	0.002	No	14	100	No	0.01	NP (NDs)
Mercury (mg/L)	SSPMW-2	0.001	0.0002	0.002	No	14	100	No	0.01	NP (NDs)
Mercury (mg/L)	SSPMW-3	0.001	0.0002	0.002	No	14	85.71	No	0.01	NP (NDs)
Mercury (mg/L)	SSPMW-4	0.001	0.0002	0.002	No	14	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-1D	0.001	0.0002	0.002	No	17	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-3	0.00149	0.0002	0.002	No	17	70.59	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-4	0.001	0.0002	0.002	No	17	100	No	0.01	NP (NDs)
Mercury (mg/L)	APMW-5	0.00235	0.000241	0.002	No	16	56.25	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSP/APMW-1 (bg)	0.05	0.00199	0.1	No	14	78.57	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-2	0.05	0.005	0.1	No	14	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-3	0.05	0.0011	0.1	No	14	85.71	No	0.01	NP (NDs)
Molybdenum (mg/L)	SSPMW-4	0.0629	0.00321	0.1	No	14	78.57	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-1D	0.02769	0.01513	0.1	No	9	0	ln(x)	0.01	Param.
Molybdenum (mg/L)	APMW-3	0.05	0.005	0.1	No	17	94.12	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-4	0.05	0.005	0.1	No	17	94.12	No	0.01	NP (NDs)
Molybdenum (mg/L)	APMW-5	0.05	0.005	0.1	No	17	100	No	0.01	NP (NDs)
Radium 226 + 228 (pCi/L)	SSP/APMW-1 (bg)	2.306	1.216	5	No	17	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	SSPMW-2	2.873	1.981	5	No	16	0	sqrt(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	**SSPMW-3**	**36.11**	**27.93**	**5**	**Yes**	**17**	**0**	**No**	**0.01**	**Param.**
Radium 226 + 228 (pCi/L)	SSPMW-4	3.843	2.321	5	No	17	0	sqrt(x)	0.01	Param.

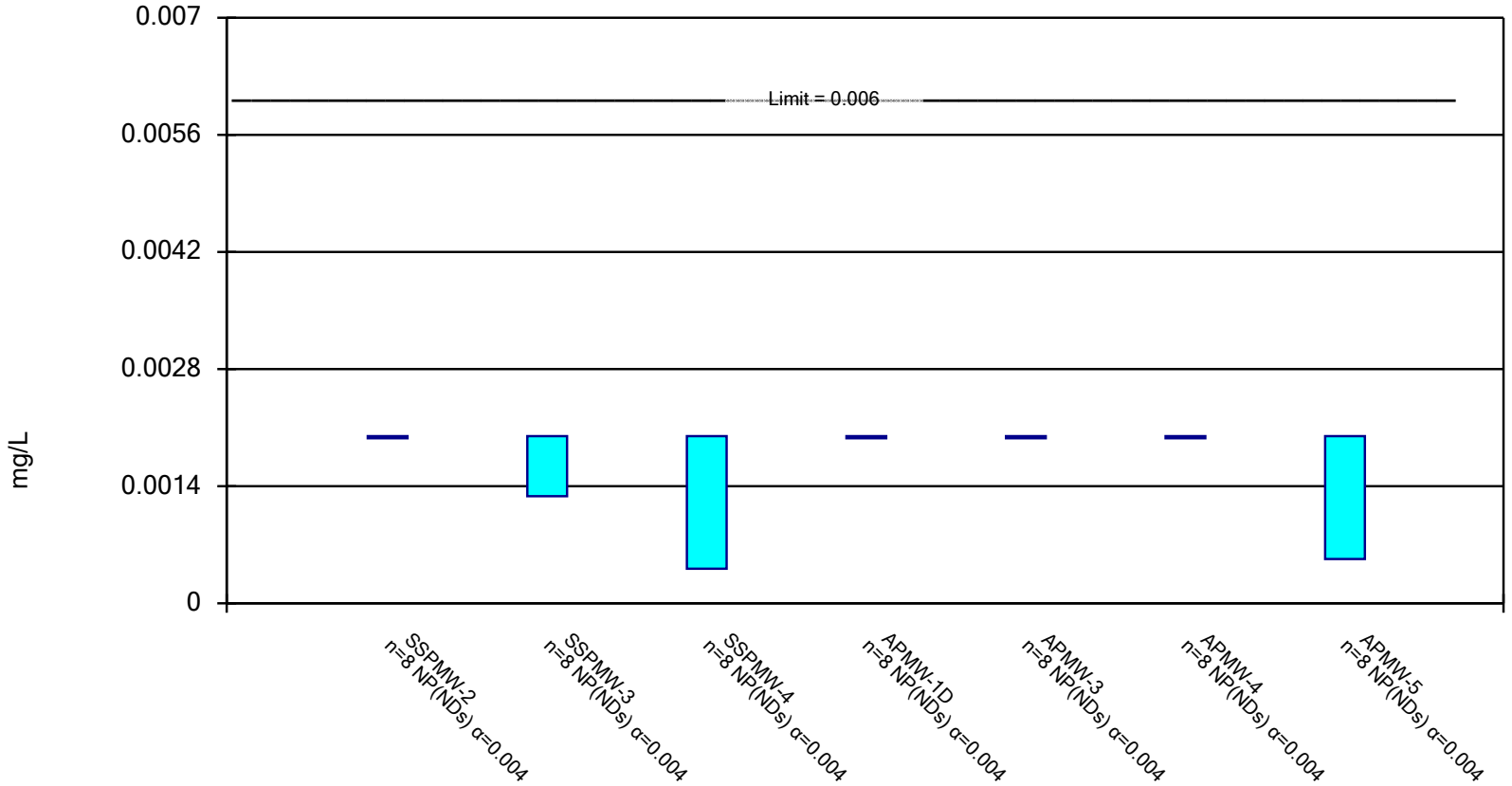
Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 10/20/2022, 11:02 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Radium 226 + 228 (pCi/L)	APMW-1D	2.426	1.36	5	No	17	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-3	3.305	1.834	5	No	17	5.882	ln(x)	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-4	2.257	1.171	5	No	17	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-5	3.492	1.685	5	No	17	0	x^(1/3)	0.01	Param.
Selenium (mg/L)	SSP/APMW-1 (bg)	0.01	0.005	0.05	No	14	100	No	0.01	NP (NDs)
Selenium (mg/L)	SSPMW-2	0.025	0.005	0.05	No	14	92.86	No	0.01	NP (NDs)
Selenium (mg/L)	SSPMW-3	0.05	0.005	0.05	No	14	85.71	No	0.01	NP (NDs)
Selenium (mg/L)	SSPMW-4	0.01	0.005	0.05	No	14	92.86	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-1D	0.01	0.00236	0.05	No	14	78.57	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-3	0.01	0.005	0.05	No	14	92.86	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-4	0.01	0.005	0.05	No	14	100	No	0.01	NP (NDs)
Selenium (mg/L)	APMW-5	0.05	0.005	0.05	No	14	64.29	No	0.01	NP (NDs)
Thallium (mg/L)	SSP/APMW-1 (bg)	0.002	0.001	0.002	No	17	88.24	No	0.01	NP (NDs)
Thallium (mg/L)	SSPMW-2	0.002	0.001	0.002	No	17	82.35	No	0.01	NP (NDs)
Thallium (mg/L)	**SSPMW-3**	**0.0101**	**0.008**	**0.002**	**Yes**	**17**	**0**	**No**	**0.01**	**NP (normality)**
Thallium (mg/L)	SSPMW-4	0.002	0.001	0.002	No	17	100	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-1D	0.002	0.000636	0.002	No	14	85.71	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-3	0.002	0.000529	0.002	No	14	78.57	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-4	0.002	0.001	0.002	No	14	92.86	No	0.01	NP (NDs)
Thallium (mg/L)	APMW-5	0.00224	0.002	0.002	No	14	21.43	No	0.01	NP (normality)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

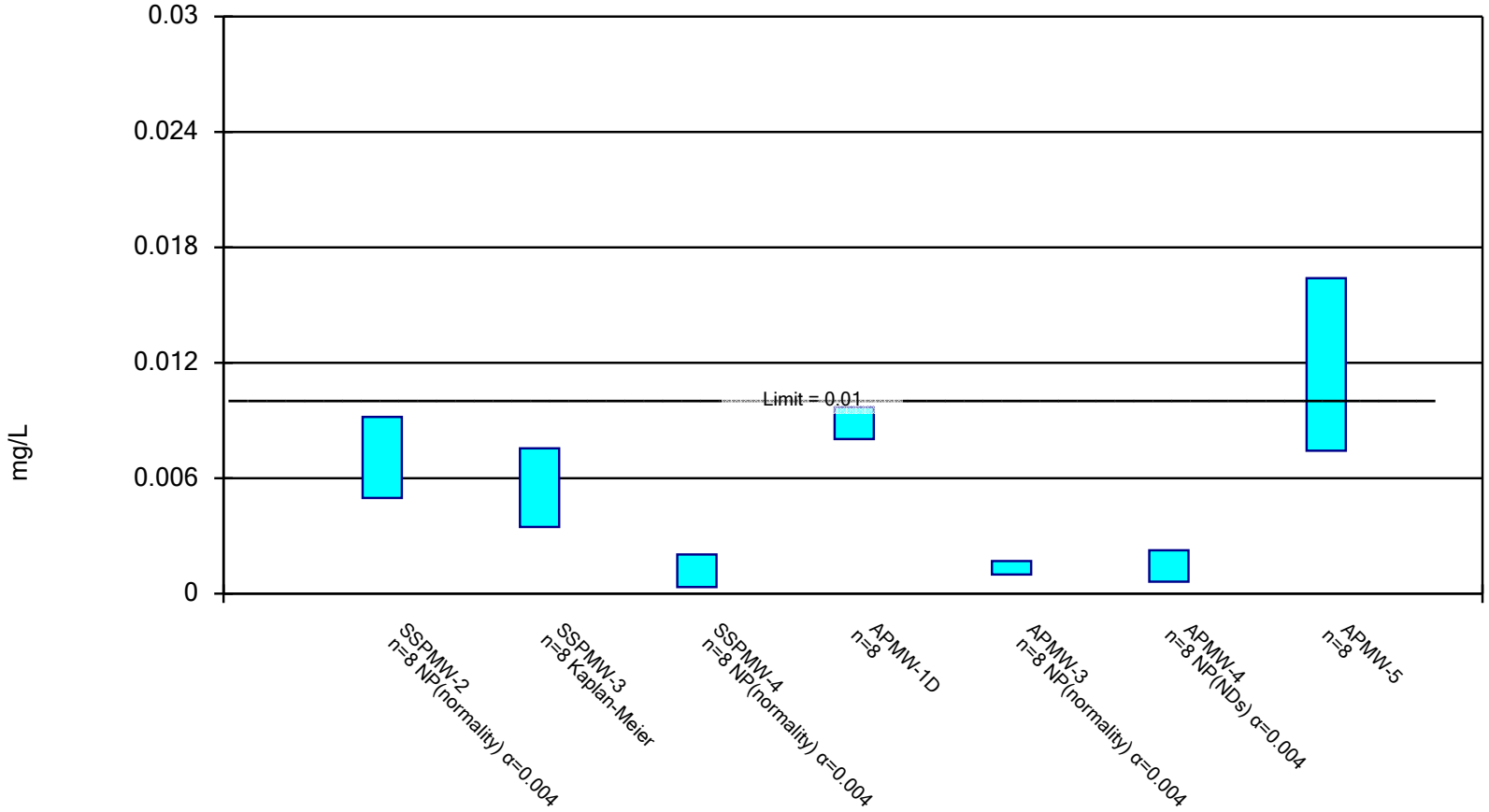


Constituent: Antimony Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

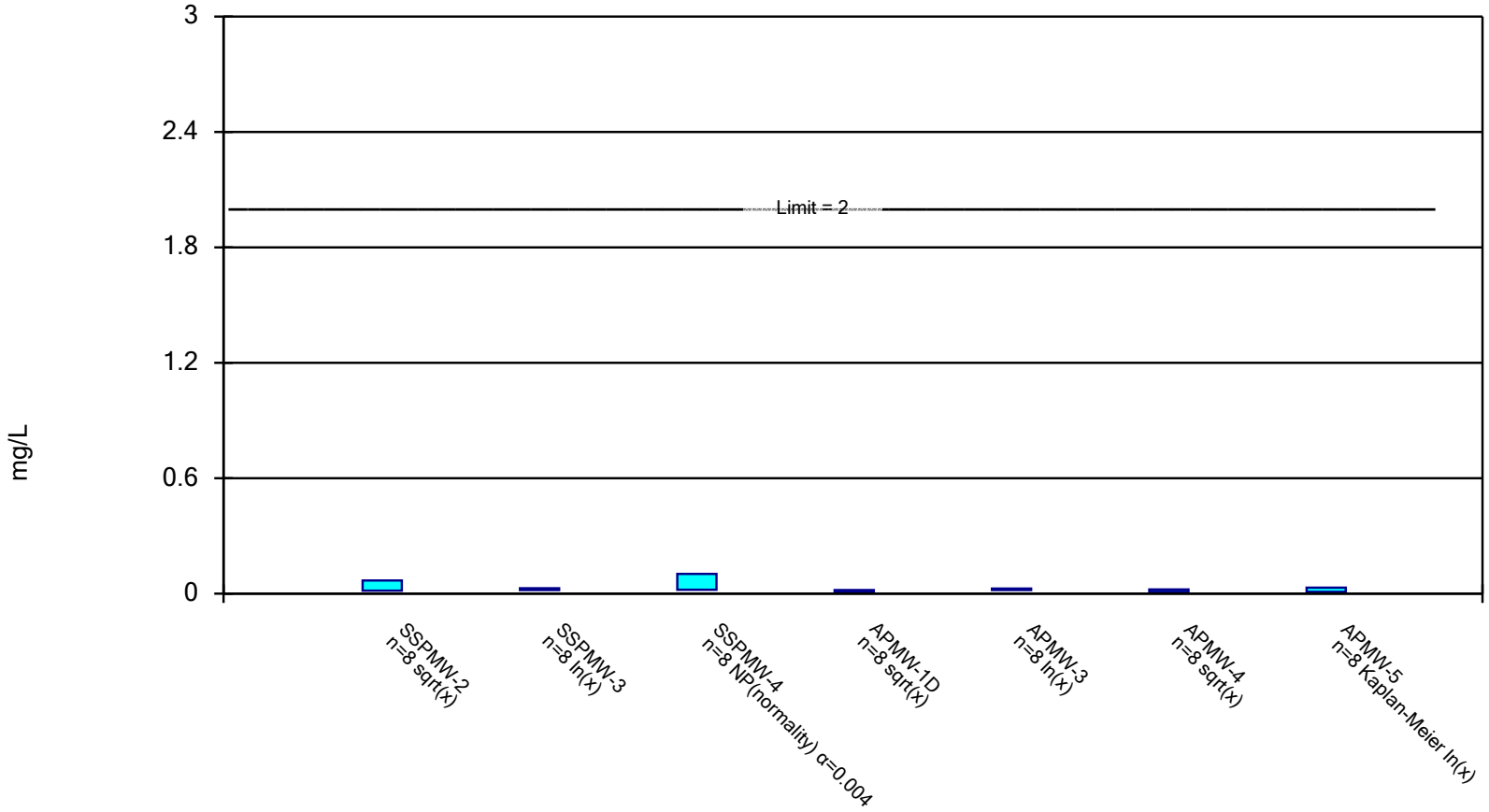


Constituent: Arsenic Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

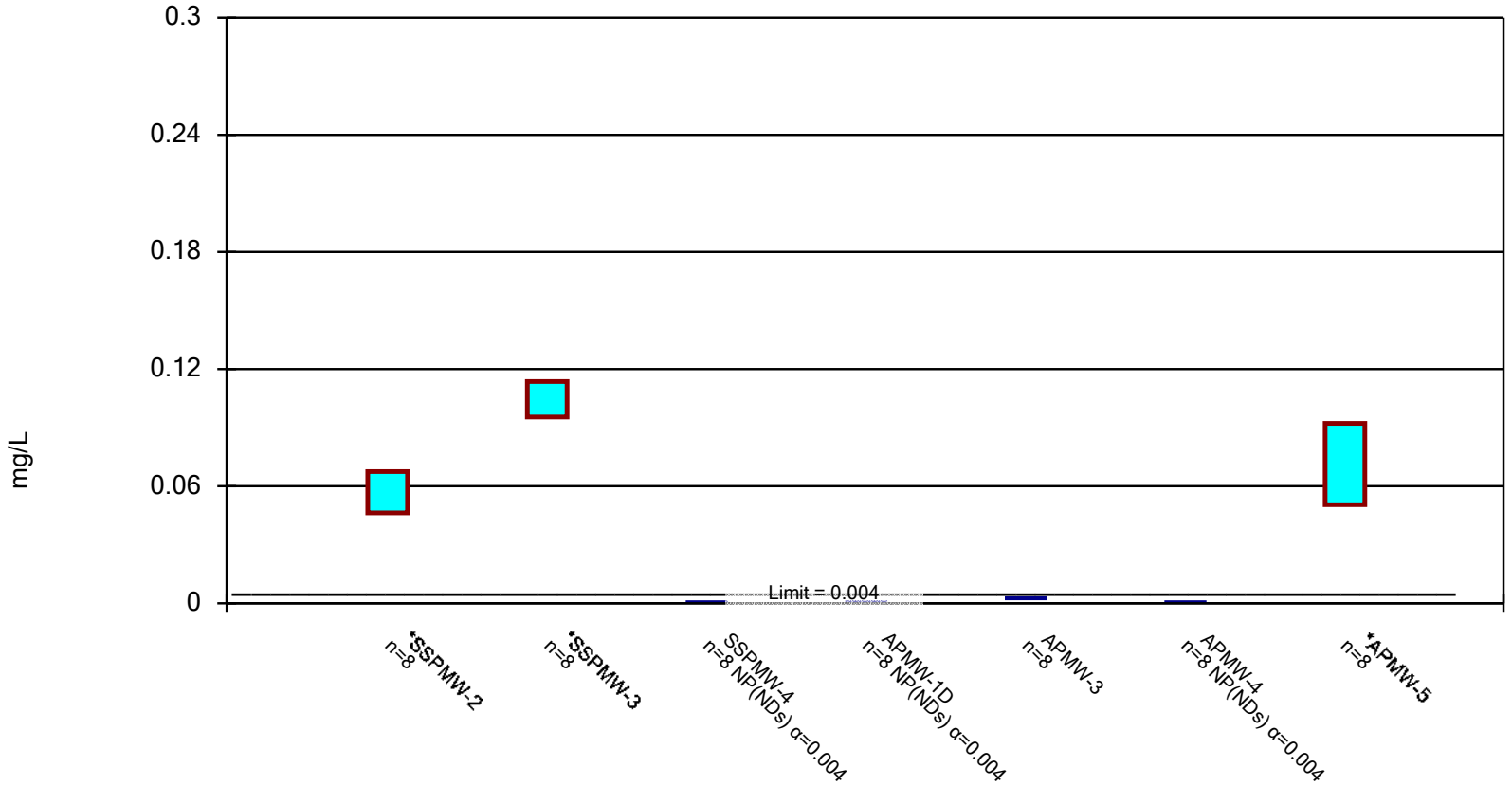


Constituent: Barium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

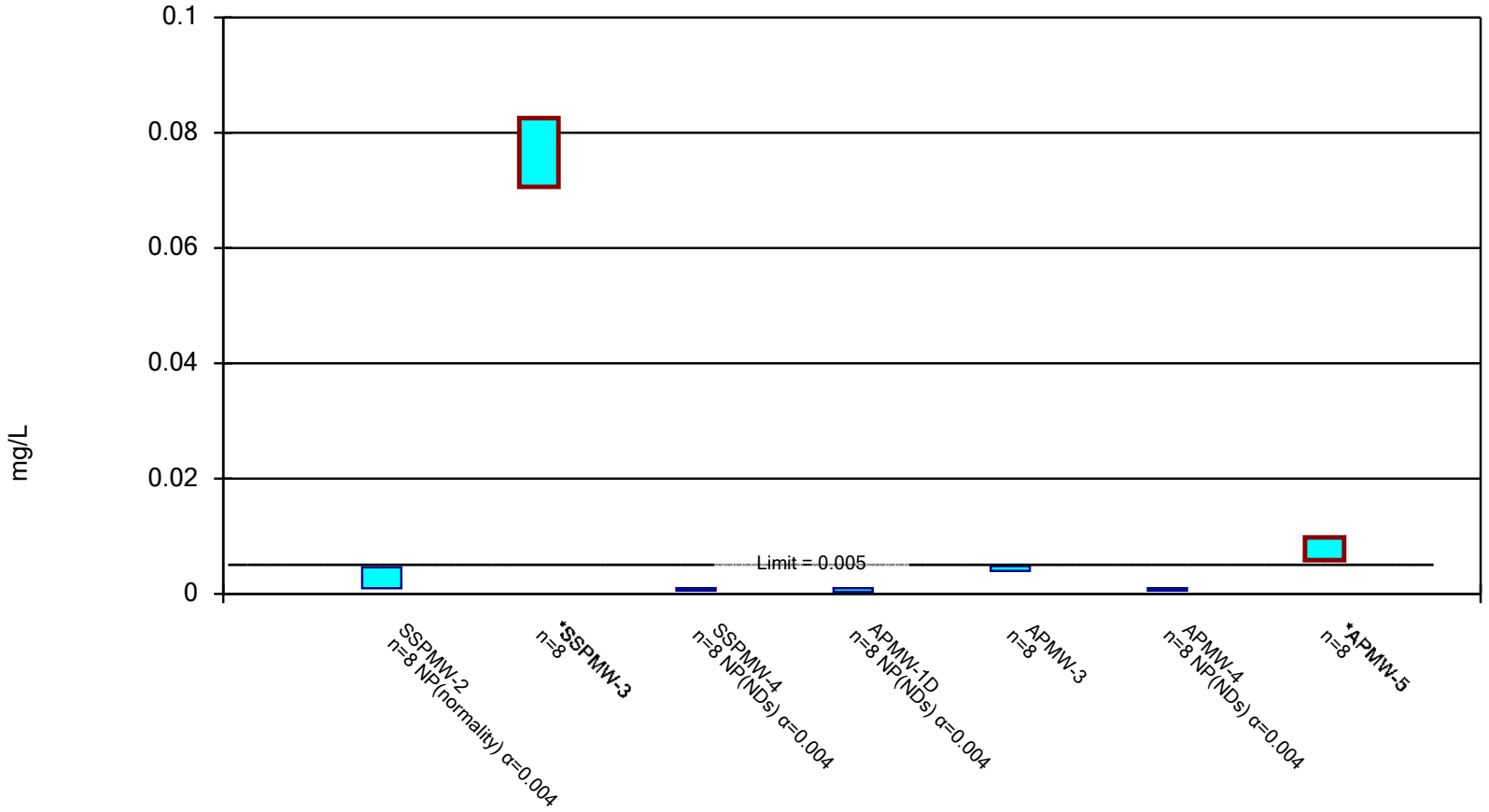


Constituent: Beryllium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

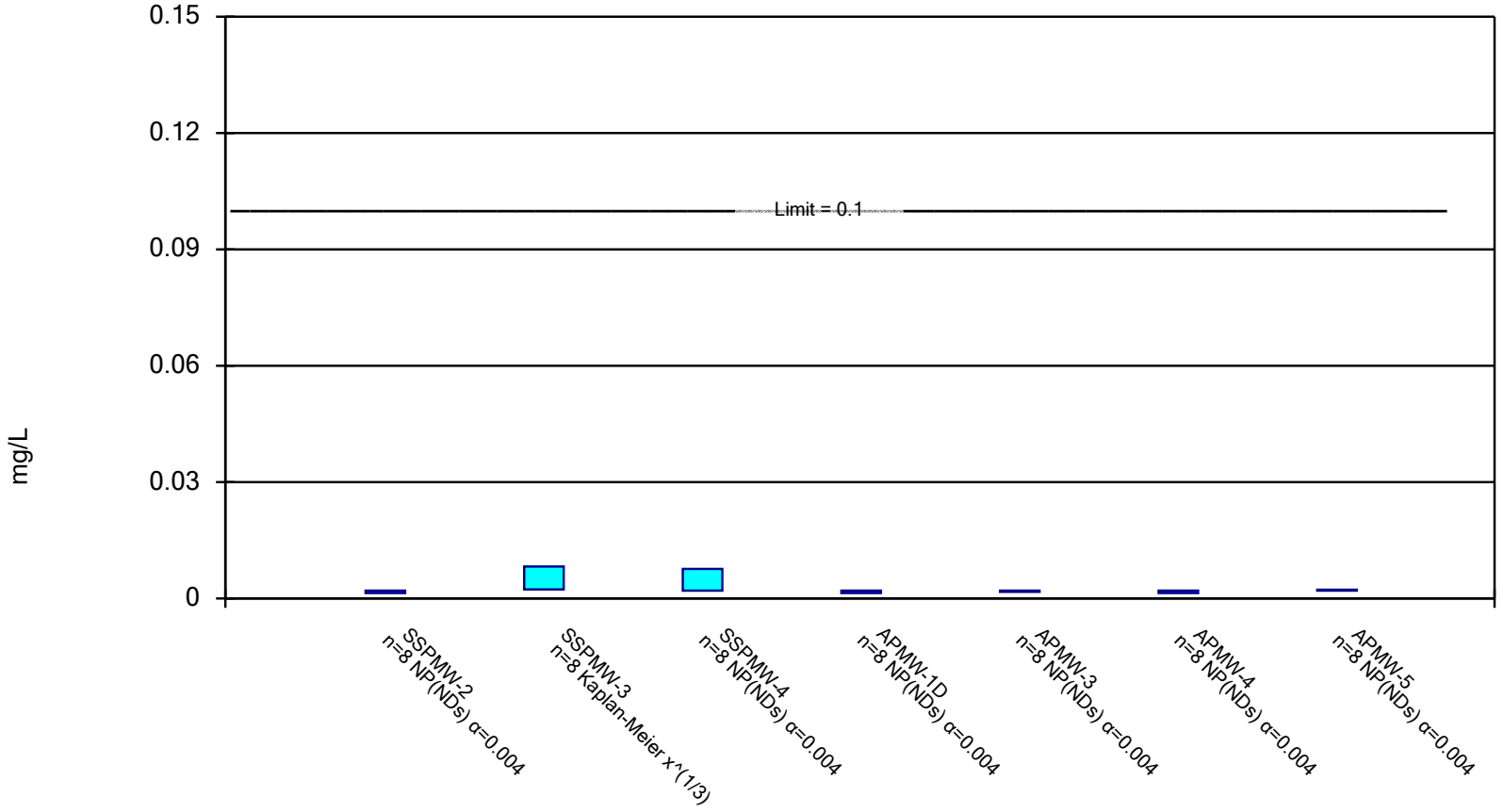


Constituent: Cadmium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

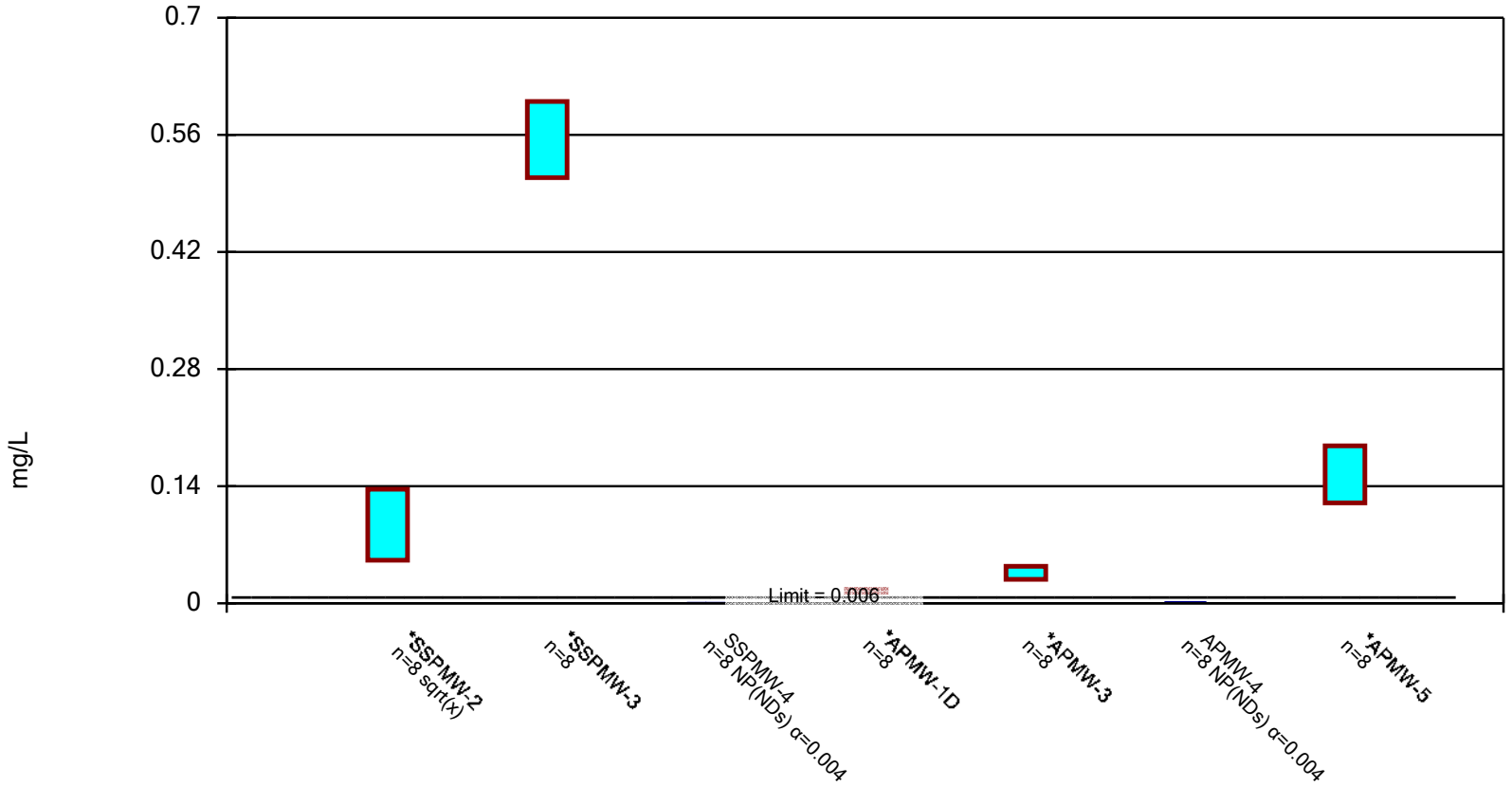


Constituent: Chromium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

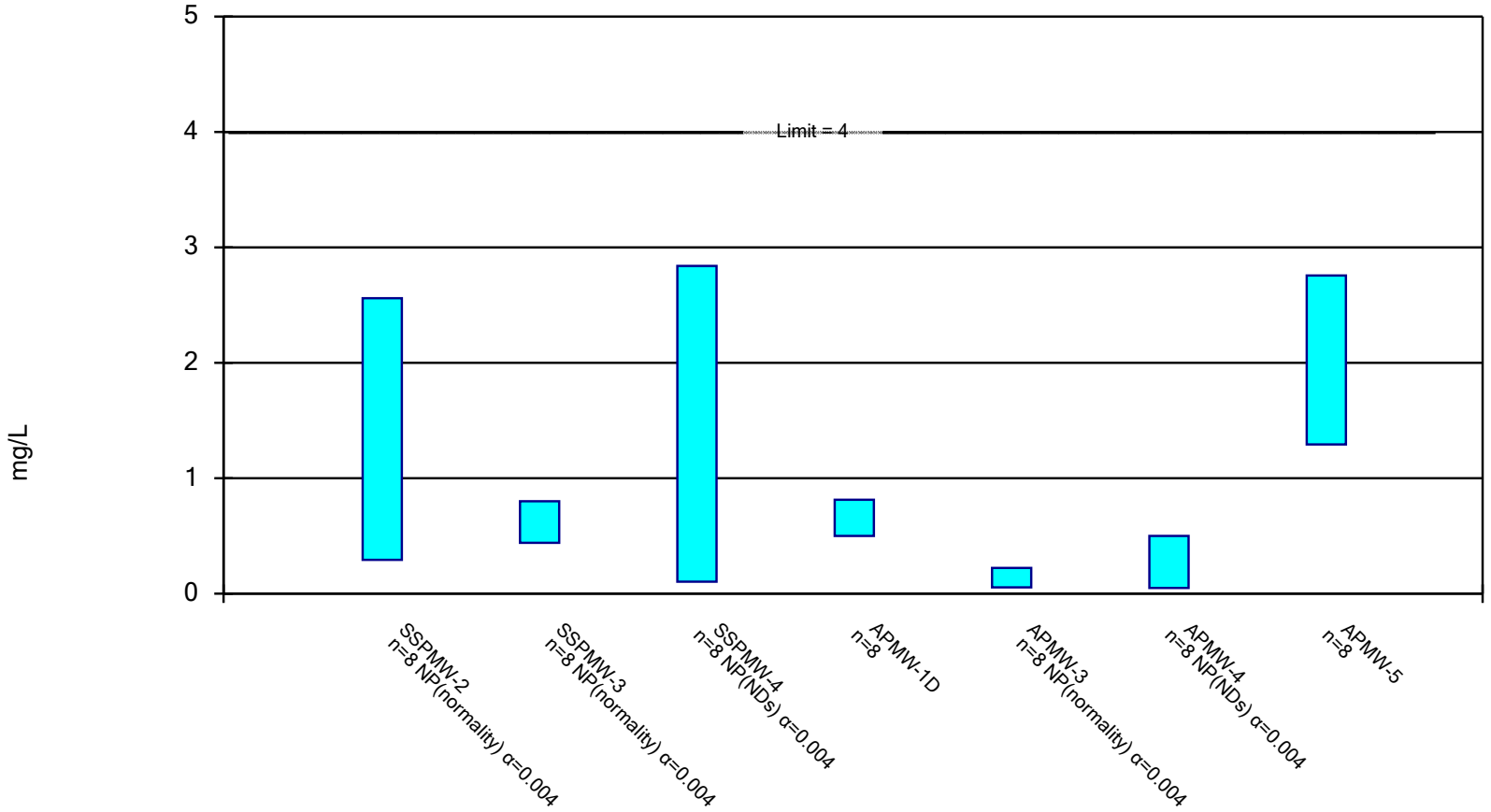


Constituent: Cobalt Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

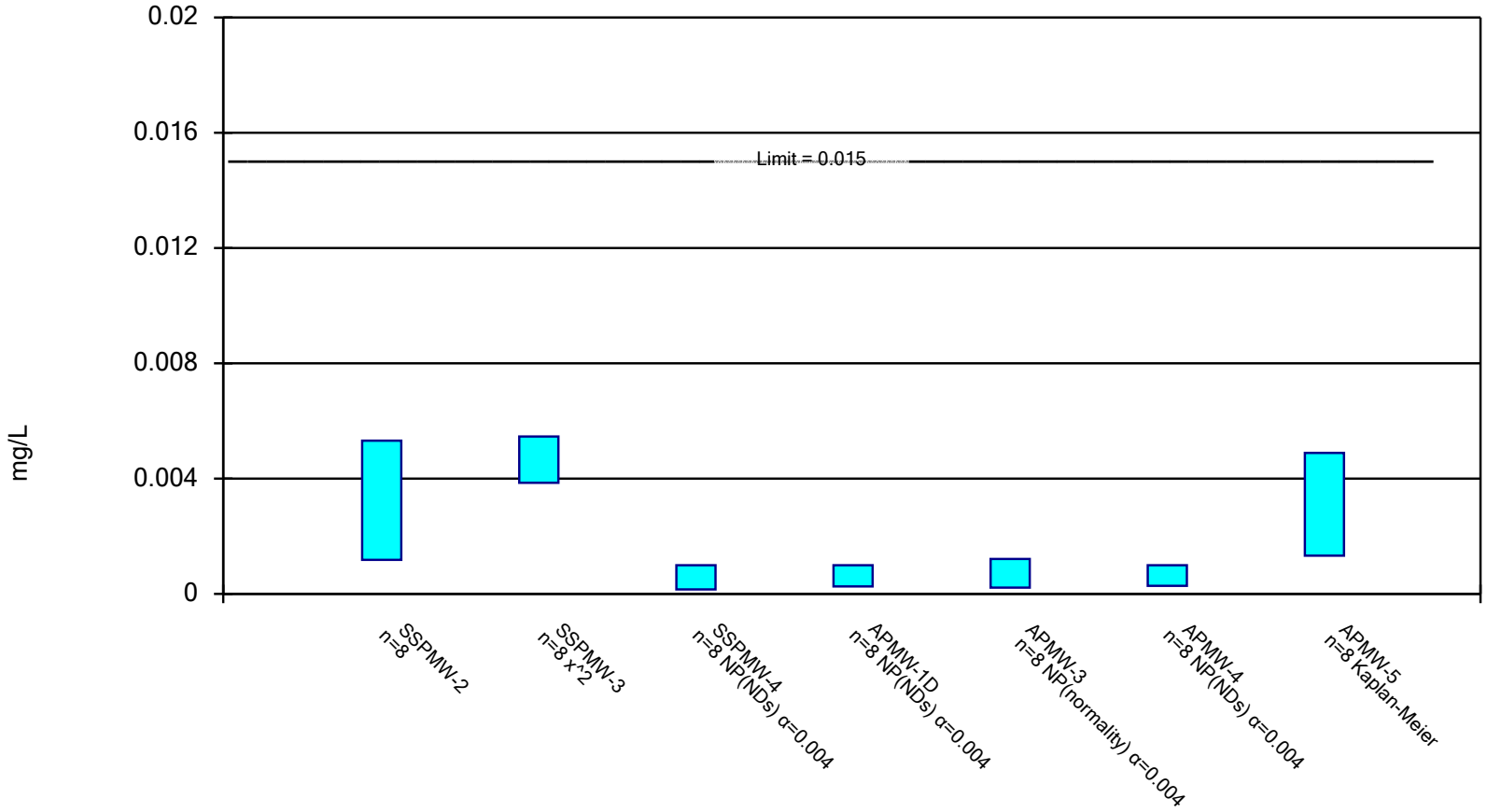


Constituent: Fluoride Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

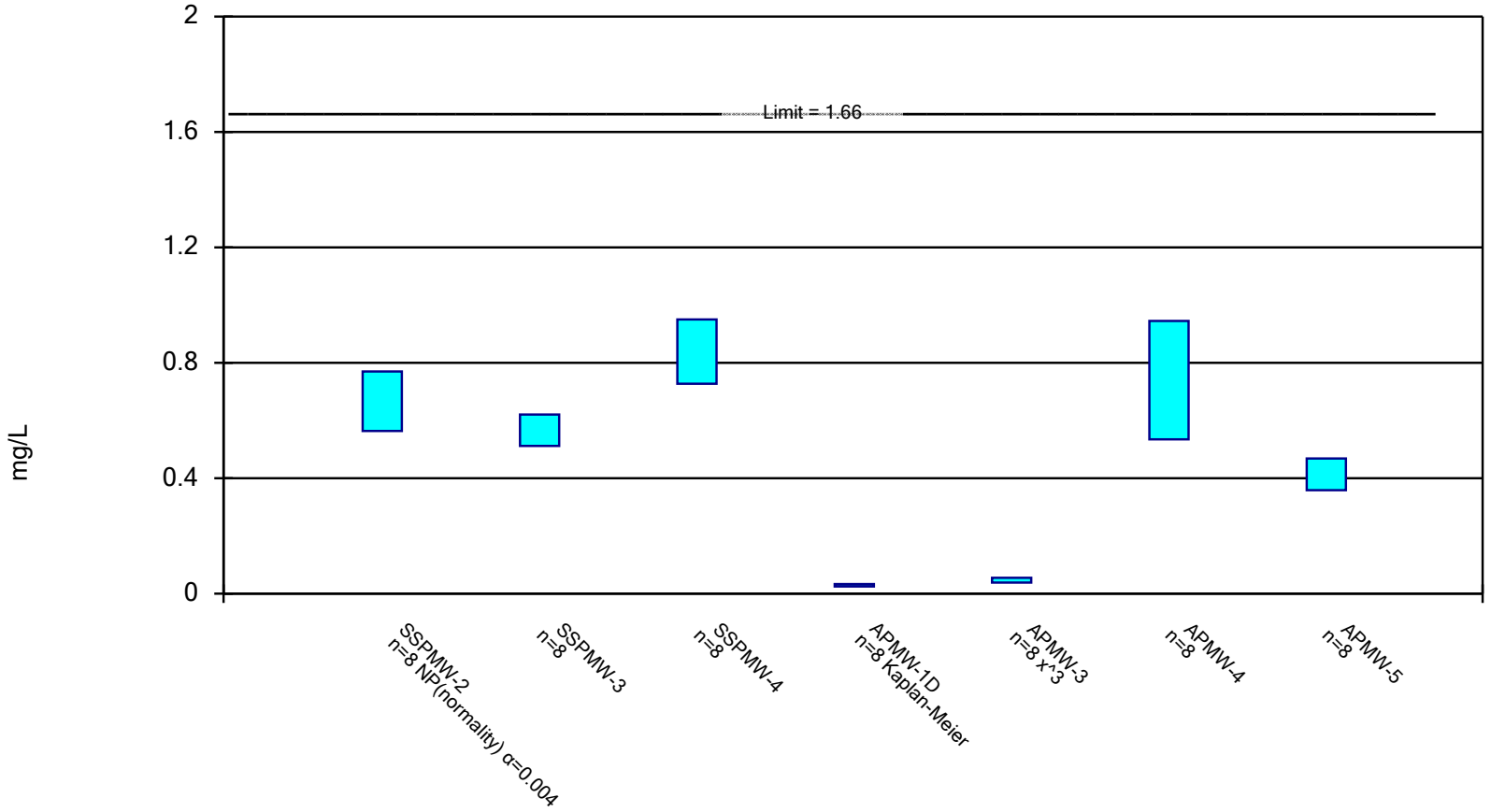


Constituent: Lead Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

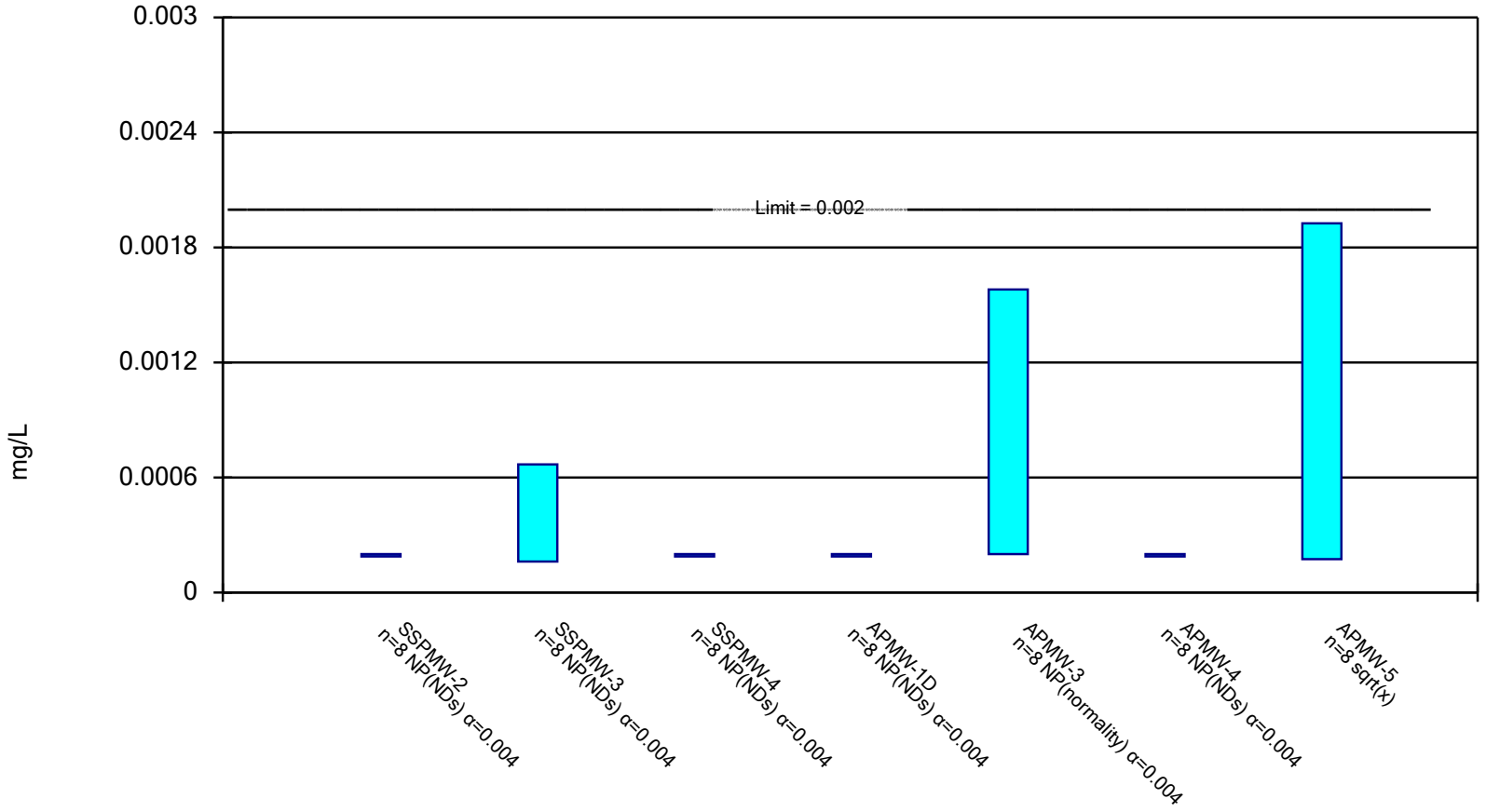


Constituent: Lithium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

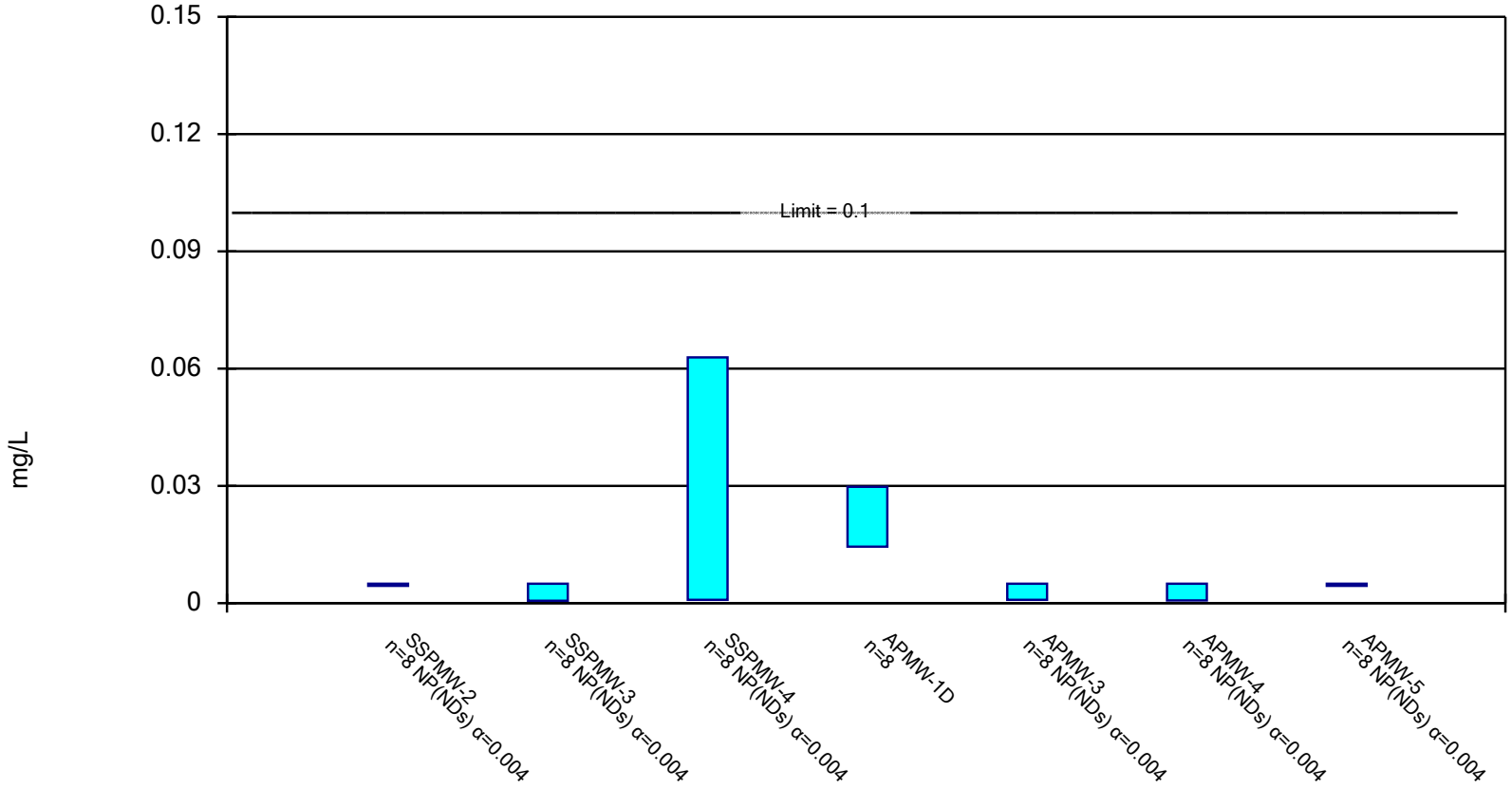


Constituent: Mercury Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

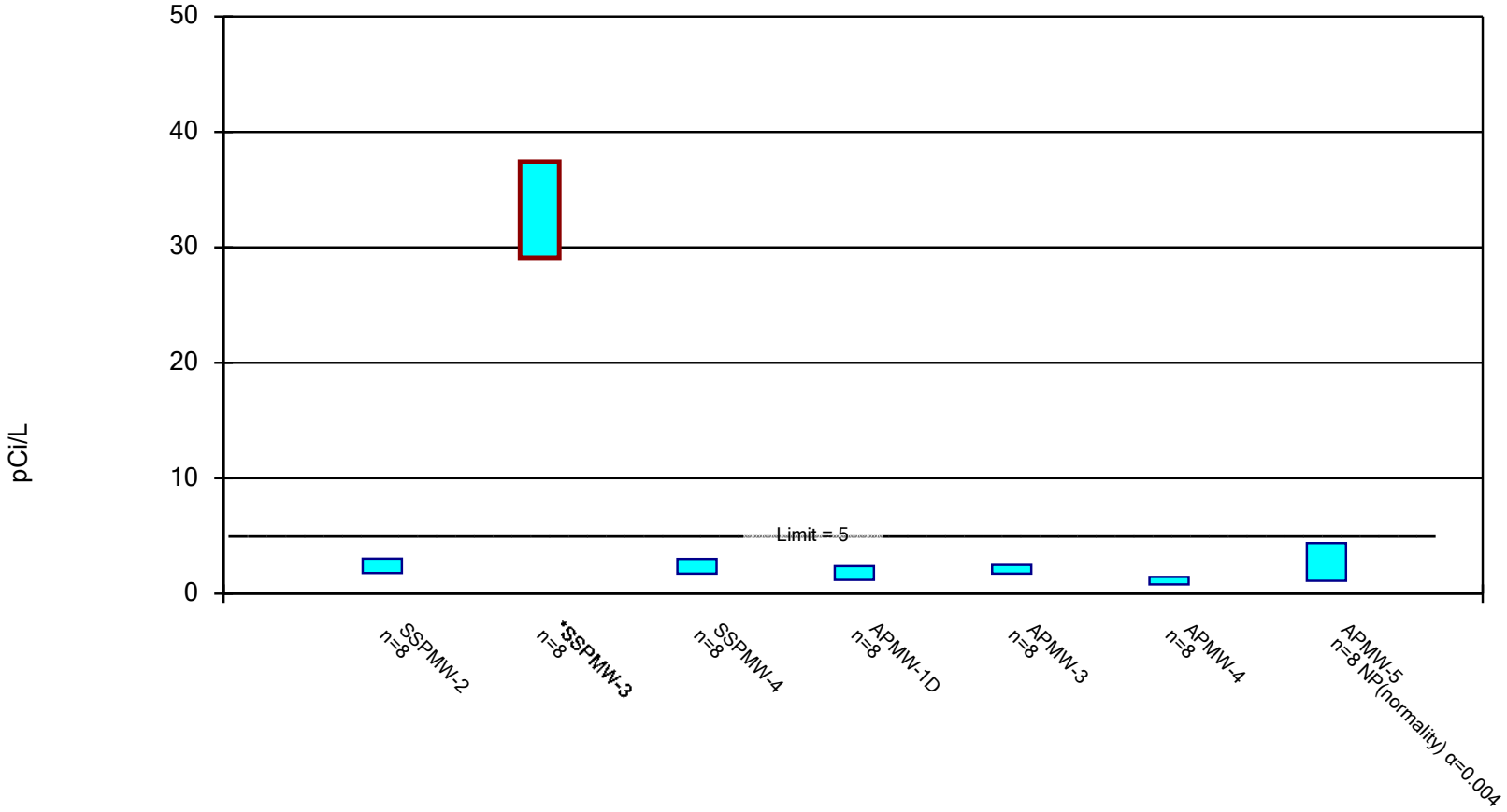


Constituent: Molybdenum Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

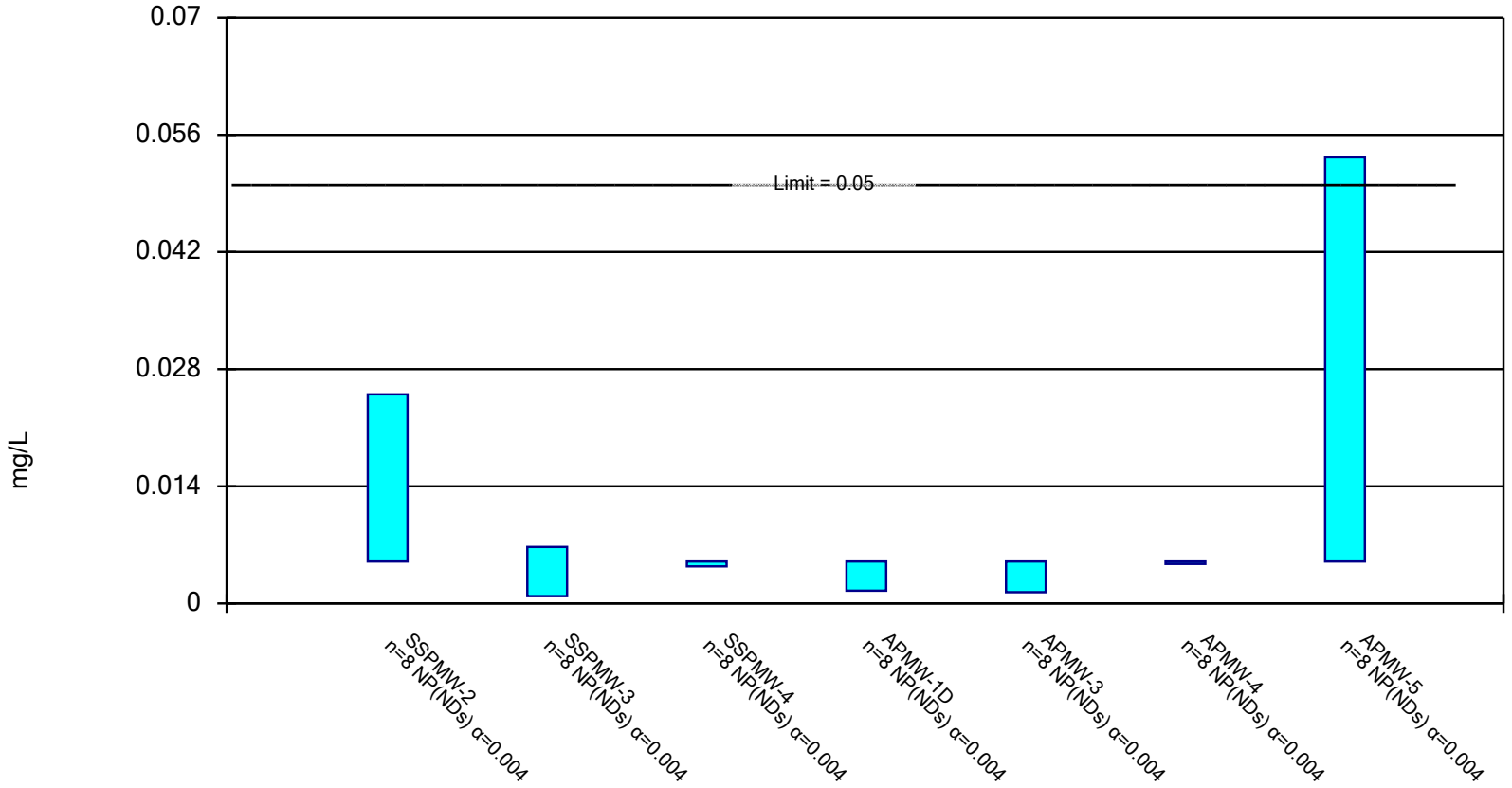


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

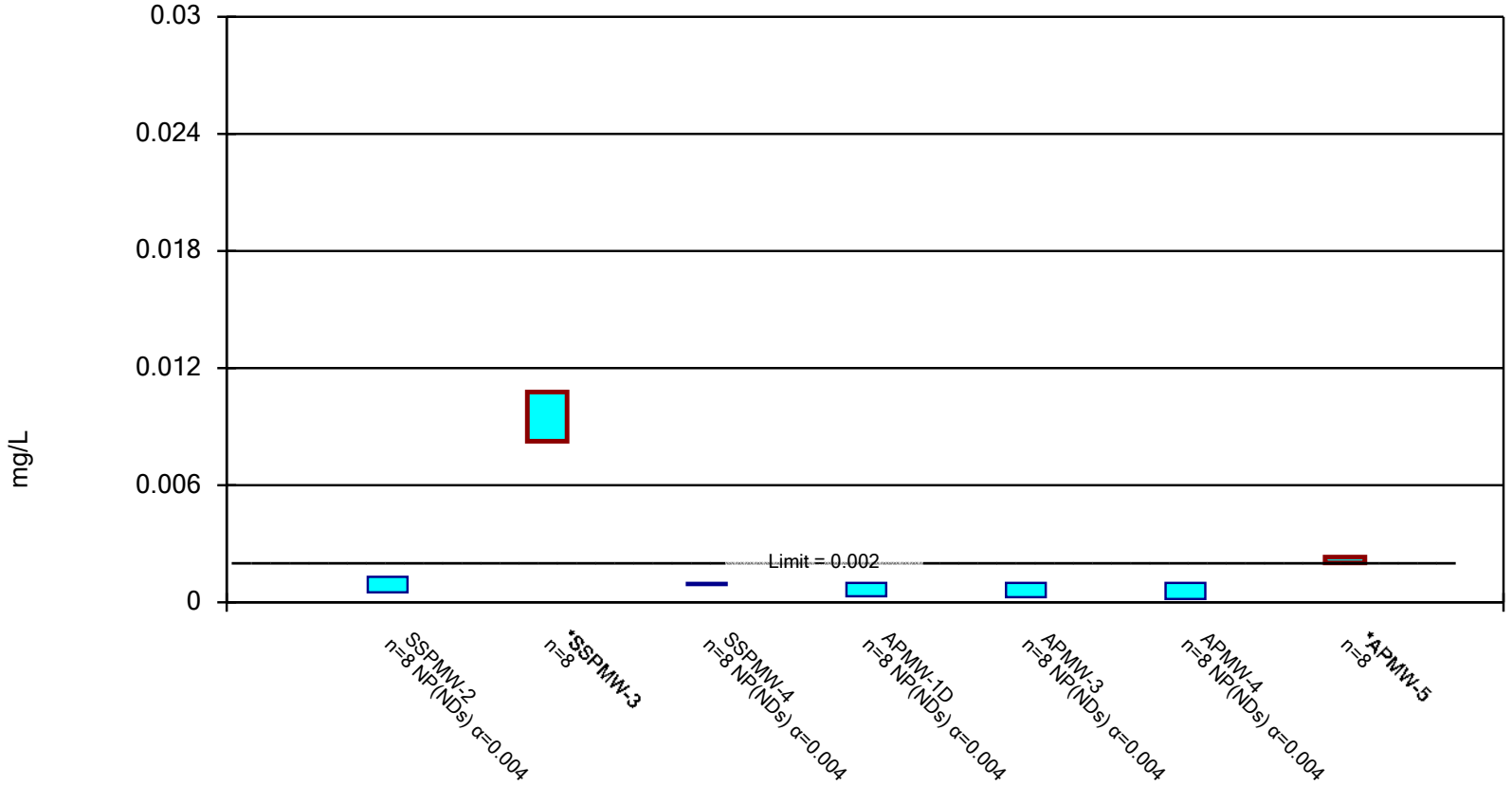


Constituent: Selenium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Thallium Analysis Run 1/23/2023 11:51 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SSPMW-2	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SSPMW-3	0.002	0.00128	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	SSPMW-4	0.002	0.000415	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-1D	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-3	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-4	0.002	0.002	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-5	0.002	0.000529	0.006	No	8	75	No	0.004	NP (NDs)
Arsenic (mg/L)	SSPMW-2	0.00918	0.00498	0.01	No	8	25	No	0.004	NP (normality)
Arsenic (mg/L)	SSPMW-3	0.007548	0.003474	0.01	No	8	25	No	0.01	Param.
Arsenic (mg/L)	SSPMW-4	0.00203	0.000344	0.01	No	8	37.5	No	0.004	NP (normality)
Arsenic (mg/L)	APMW-1D	0.009694	0.008036	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	APMW-3	0.00169	0.001	0.01	No	8	50	No	0.004	NP (normality)
Arsenic (mg/L)	APMW-4	0.00226	0.000628	0.01	No	8	75	No	0.004	NP (NDs)
Arsenic (mg/L)	APMW-5	0.01639	0.007433	0.01	No	8	12.5	No	0.01	Param.
Barium (mg/L)	SSPMW-2	0.06814	0.01643	2	No	8	12.5	sqrt(x)	0.01	Param.
Barium (mg/L)	SSPMW-3	0.02787	0.01945	2	No	8	0	ln(x)	0.01	Param.
Barium (mg/L)	SSPMW-4	0.103	0.02	2	No	8	12.5	No	0.004	NP (normality)
Barium (mg/L)	APMW-1D	0.01854	0.009502	2	No	8	0	sqrt(x)	0.01	Param.
Barium (mg/L)	APMW-3	0.02608	0.01956	2	No	8	0	ln(x)	0.01	Param.
Barium (mg/L)	APMW-4	0.02239	0.009721	2	No	8	0	sqrt(x)	0.01	Param.
Barium (mg/L)	APMW-5	0.03173	0.009489	2	No	8	25	ln(x)	0.01	Param.
Beryllium (mg/L)	**SSPMW-2**	**0.06743**	**0.04632**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	**SSPMW-3**	**0.1137**	**0.09547**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SSPMW-4	0.001	0.001	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	APMW-1D	0.001	0.001	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	APMW-3	0.002967	0.002253	0.004	No	8	12.5	No	0.01	Param.
Beryllium (mg/L)	APMW-4	0.001	0.000204	0.004	No	8	75	No	0.004	NP (NDs)
Beryllium (mg/L)	**APMW-5**	**0.09222**	**0.05053**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-2	0.0046	0.001	0.005	No	8	37.5	No	0.004	NP (normality)
Cadmium (mg/L)	**SSPMW-3**	**0.0825**	**0.0706**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-4	0.001	0.001	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	APMW-1D	0.001	0.000343	0.005	No	8	62.5	No	0.004	NP (NDs)
Cadmium (mg/L)	APMW-3	0.004836	0.004014	0.005	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	APMW-4	0.001	0.001	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	**APMW-5**	**0.009789**	**0.005849**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Chromium (mg/L)	SSPMW-2	0.002	0.002	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	SSPMW-3	0.008207	0.002348	0.1	No	8	37.5	x^(1/3)	0.01	Param.
Chromium (mg/L)	SSPMW-4	0.00762	0.002	0.1	No	8	62.5	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-1D	0.002	0.002	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-3	0.002	0.00173	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-4	0.002	0.002	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-5	0.00228	0.002	0.1	No	8	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	**SSPMW-2**	**0.1366**	**0.05135**	**0.006**	**Yes**	**8**	**0**	**sqrt(x)**	**0.01**	**Param.**
Cobalt (mg/L)	**SSPMW-3**	**0.5998**	**0.5087**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SSPMW-4	0.0005	0.000336	0.006	No	8	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	**APMW-1D**	**0.01684**	**0.01353**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**APMW-3**	**0.04441**	**0.02869**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	APMW-4	0.00109	0.0005	0.006	No	8	75	No	0.004	NP (NDs)
Cobalt (mg/L)	**APMW-5**	**0.1881**	**0.1199**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SSPMW-2	2.56	0.293	4	No	8	37.5	No	0.004	NP (normality)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SSPMW-3	0.8	0.441	4	No	8	37.5	No	0.004	NP (normality)
Fluoride (mg/L)	SSPMW-4	2.84	0.103	4	No	8	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	APMW-1D	0.8147	0.5008	4	No	8	12.5	No	0.01	Param.
Fluoride (mg/L)	APMW-3	0.223	0.0558	4	No	8	50	No	0.004	NP (normality)
Fluoride (mg/L)	APMW-4	0.5	0.0488	4	No	8	75	No	0.004	NP (NDs)
Fluoride (mg/L)	APMW-5	2.756	1.294	4	No	8	12.5	No	0.01	Param.
Lead (mg/L)	SSPMW-2	0.005319	0.001184	0.015	No	8	12.5	No	0.01	Param.
Lead (mg/L)	SSPMW-3	0.005458	0.003855	0.015	No	8	12.5	x^2	0.01	Param.
Lead (mg/L)	SSPMW-4	0.001	0.000161	0.015	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	APMW-1D	0.001	0.000256	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	APMW-3	0.00121	0.000219	0.015	No	8	50	No	0.004	NP (normality)
Lead (mg/L)	APMW-4	0.001	0.000276	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	APMW-5	0.004888	0.00133	0.015	No	8	37.5	No	0.01	Param.
Lithium (mg/L)	SSPMW-2	0.77	0.564	1.66	No	8	0	No	0.004	NP (normality)
Lithium (mg/L)	SSPMW-3	0.6209	0.5118	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-4	0.95	0.727	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	APMW-1D	0.03377	0.02477	1.66	No	8	25	No	0.01	Param.
Lithium (mg/L)	APMW-3	0.05481	0.03851	1.66	No	8	12.5	x^3	0.01	Param.
Lithium (mg/L)	APMW-4	0.9451	0.5352	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	APMW-5	0.4681	0.3587	1.66	No	8	0	No	0.01	Param.
Mercury (mg/L)	SSPMW-2	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SSPMW-3	0.000669	0.000162	0.002	No	8	75	No	0.004	NP (NDs)
Mercury (mg/L)	SSPMW-4	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-1D	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-3	0.00158	0.0002	0.002	No	8	37.5	No	0.004	NP (normality)
Mercury (mg/L)	APMW-4	0.0002	0.0002	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-5	0.001926	0.0001741	0.002	No	8	12.5	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	SSPMW-2	0.005	0.005	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SSPMW-3	0.005	0.000667	0.1	No	8	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	SSPMW-4	0.0629	0.000864	0.1	No	8	62.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	APMW-1D	0.02975	0.01443	0.1	No	8	0	No	0.01	Param.
Molybdenum (mg/L)	APMW-3	0.005	0.000848	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	APMW-4	0.005	0.000686	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	APMW-5	0.005	0.005	0.1	No	8	100	No	0.004	NP (NDs)
Radium 226 + 228 (pCi/L)	SSPMW-2	3.033	1.799	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	**SSPMW-3**	**37.42**	**29.08**	**5**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Radium 226 + 228 (pCi/L)	SSPMW-4	3.015	1.745	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-1D	2.396	1.206	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-3	2.485	1.737	5	No	8	12.5	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-4	1.459	0.8181	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-5	4.38	1.12	5	No	8	0	No	0.004	NP (normality)
Selenium (mg/L)	SSPMW-2	0.025	0.005	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	SSPMW-3	0.00676	0.000859	0.05	No	8	75	No	0.004	NP (NDs)
Selenium (mg/L)	SSPMW-4	0.005	0.00441	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-1D	0.005	0.00154	0.05	No	8	62.5	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-3	0.005	0.00135	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-4	0.005	0.005	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-5	0.0533	0.005	0.05	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	SSPMW-2	0.0013	0.000516	0.002	No	8	62.5	No	0.004	NP (NDs)
Thallium (mg/L)	**SSPMW-3**	**0.01077**	**0.008252**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:52 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	SSPMW-4	0.001	0.001	0.002	No	8	100	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-1D	0.001	0.00031	0.002	No	8	75	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-3	0.001	0.000267	0.002	No	8	62.5	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-4	0.001	0.000172	0.002	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	**APMW-5**	**0.002311**	**0.002029**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**

Attachment A-6

Statistical Analysis

-December 2022

-SSP/AP

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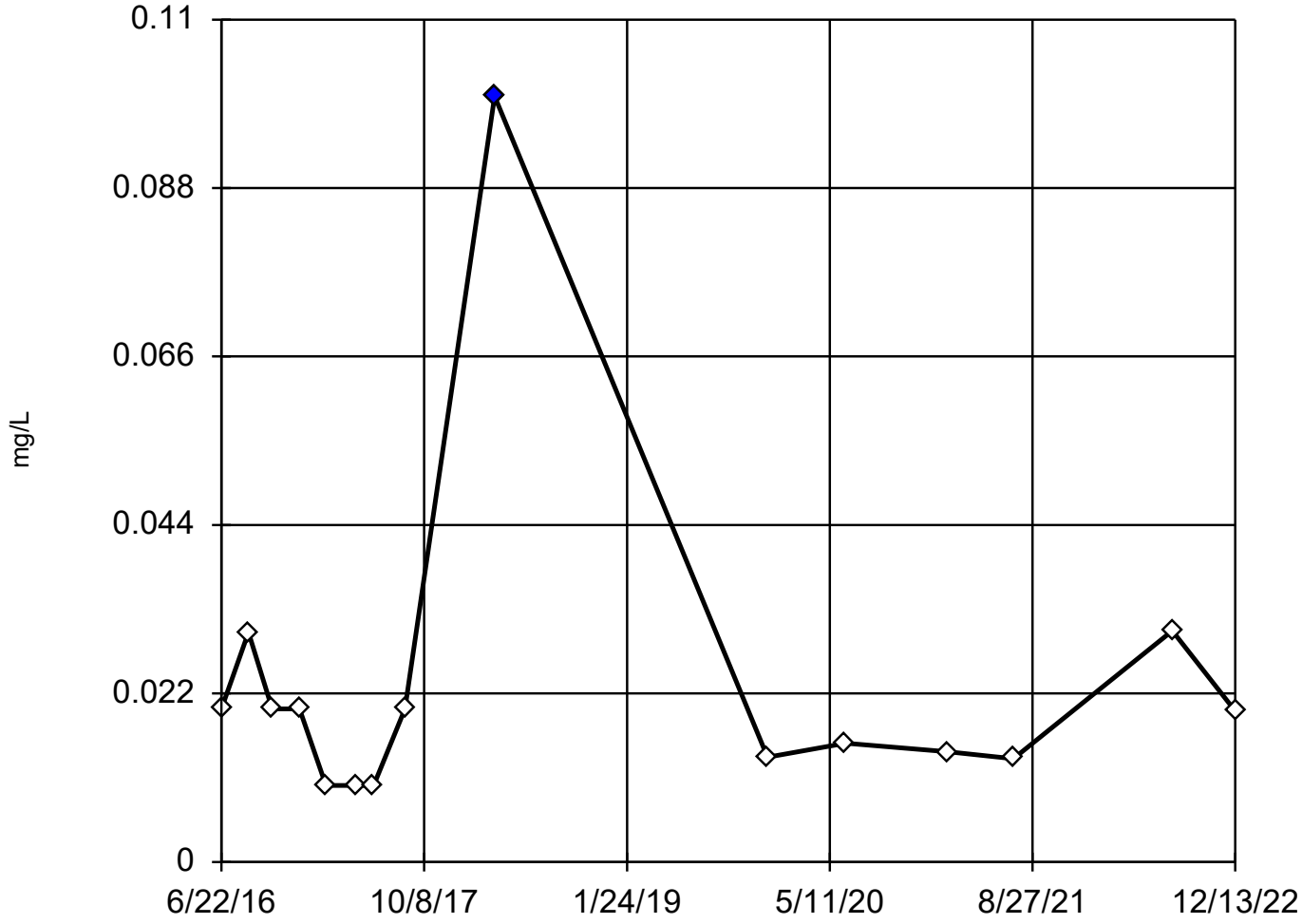
Dixon's Outlier Test

APMW-4



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.02313.
Std. Dev. = 0.02218.
<0.2 (o): c = 0.7778
tabl = 0.525.
Alpha = 0.05.

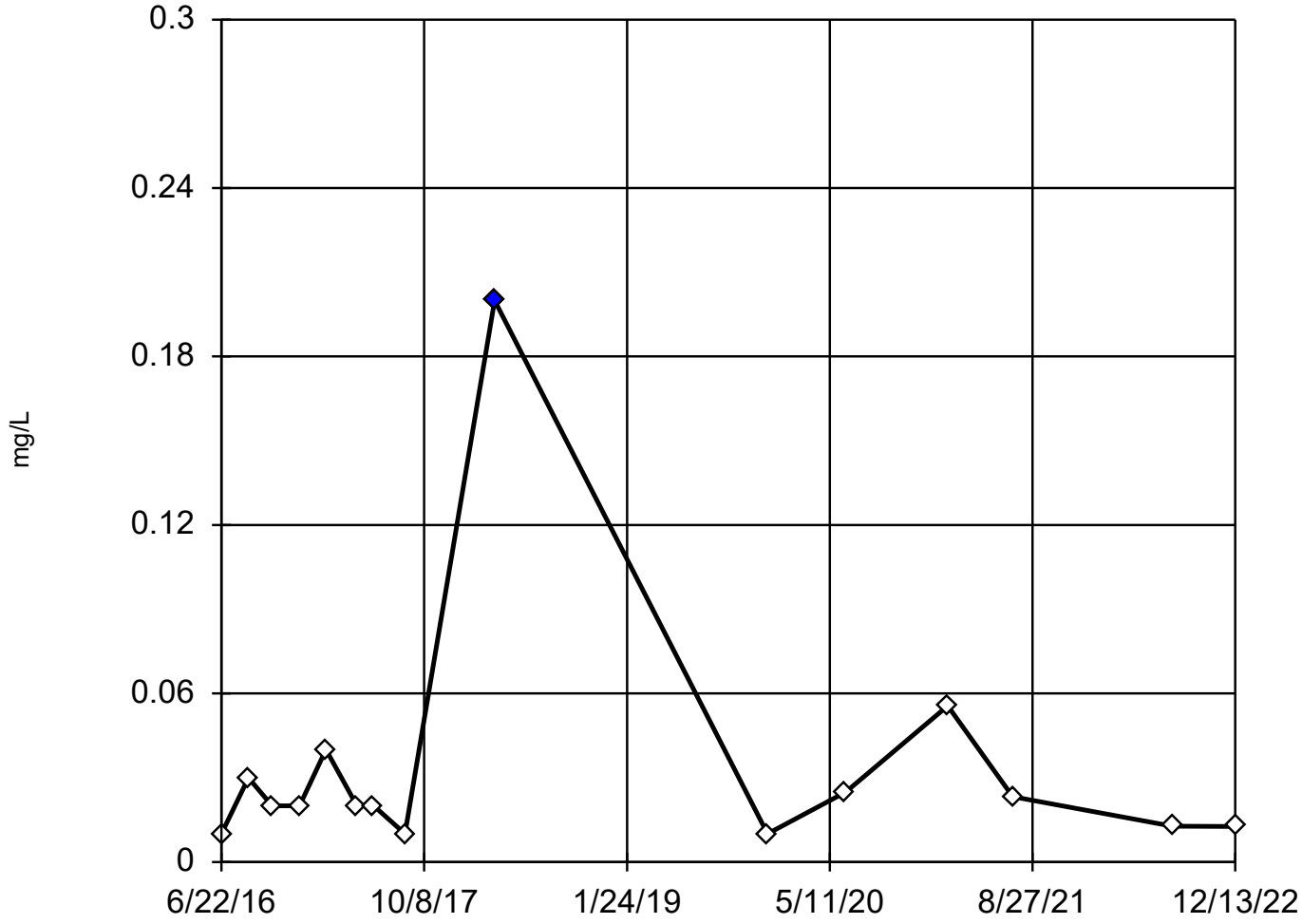
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8773
Critical = 0.874
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 1/23/2023 10:52 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 15

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.03394.
Std. Dev. = 0.04758.
<0.2: c = 0.5372
tabl = 0.525.
Alpha = 0.05.

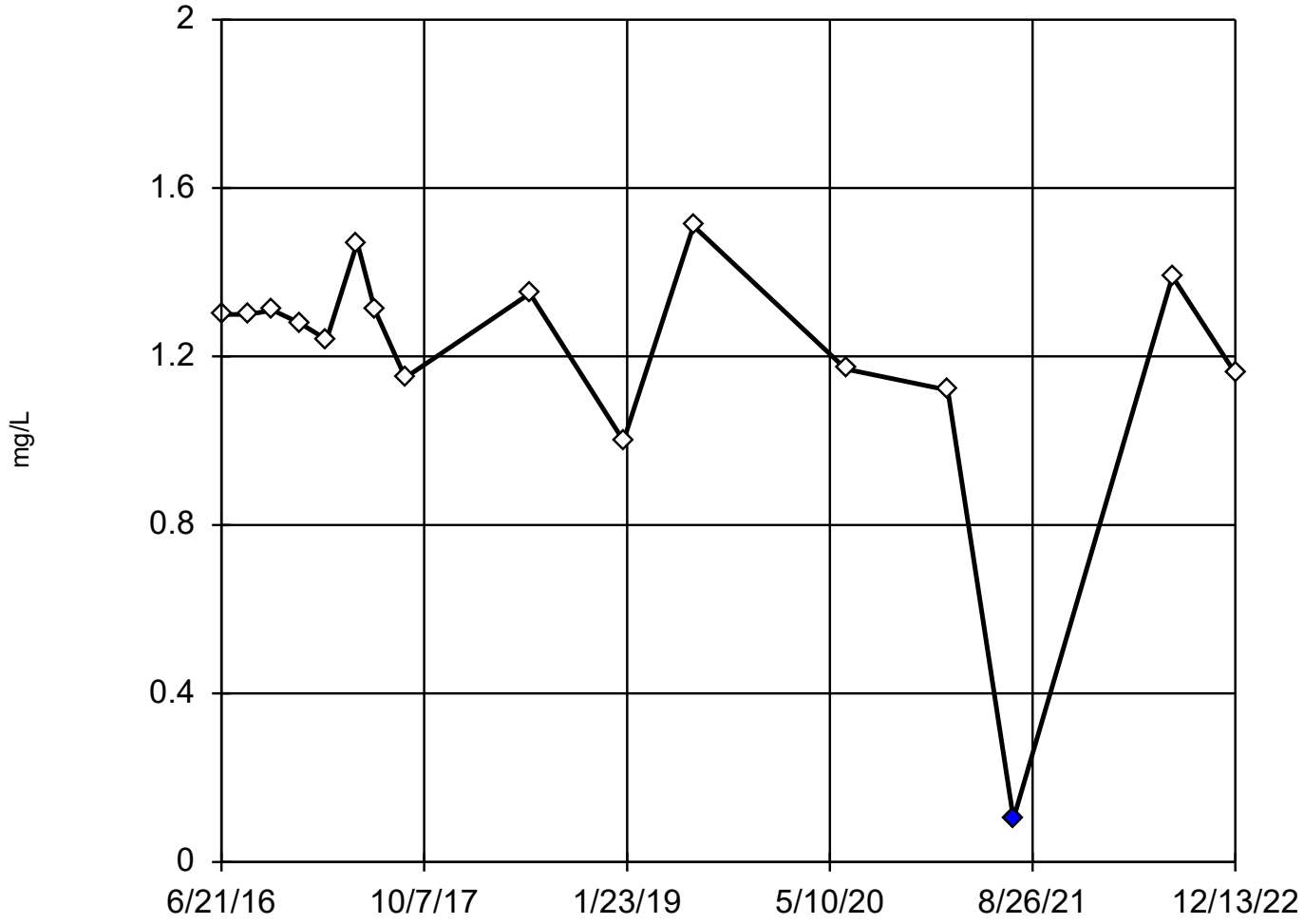
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9287
Critical = 0.874 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Barium Analysis Run 1/23/2023 10:52 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1.198.
Std. Dev. = 0.3201.
0.102: c = 0.7904
tabl = 0.507.
Alpha = 0.05.

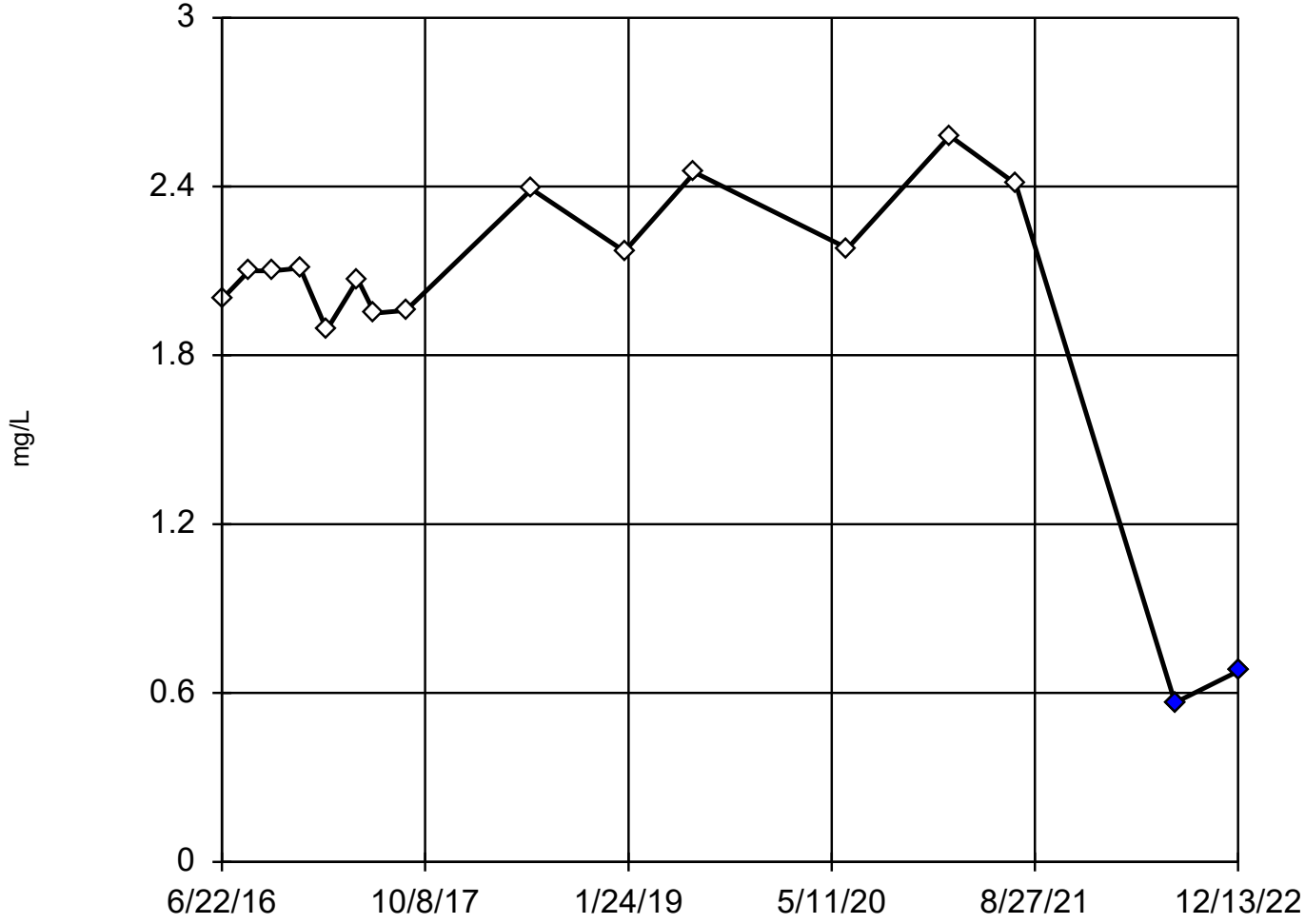
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.975
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 1.975.
Std. Dev. = 0.5639.
0.677: c = 0.7346
tabl = 0.507.
Alpha = 0.05.

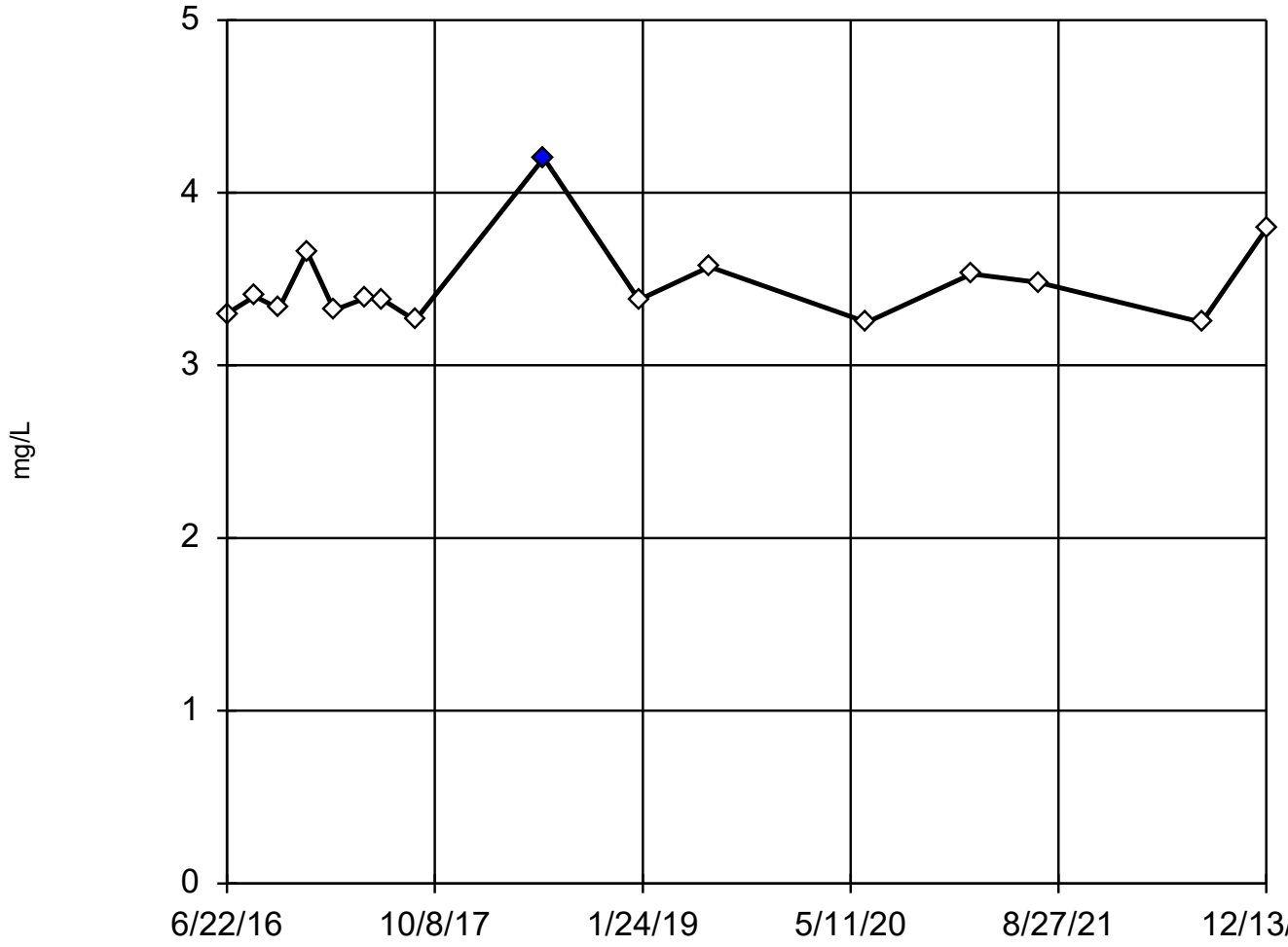
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9209
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.468.
Std. Dev. = 0.2483.
4.2 (o): c = 0.5745
tabl = 0.507.
Alpha = 0.05.

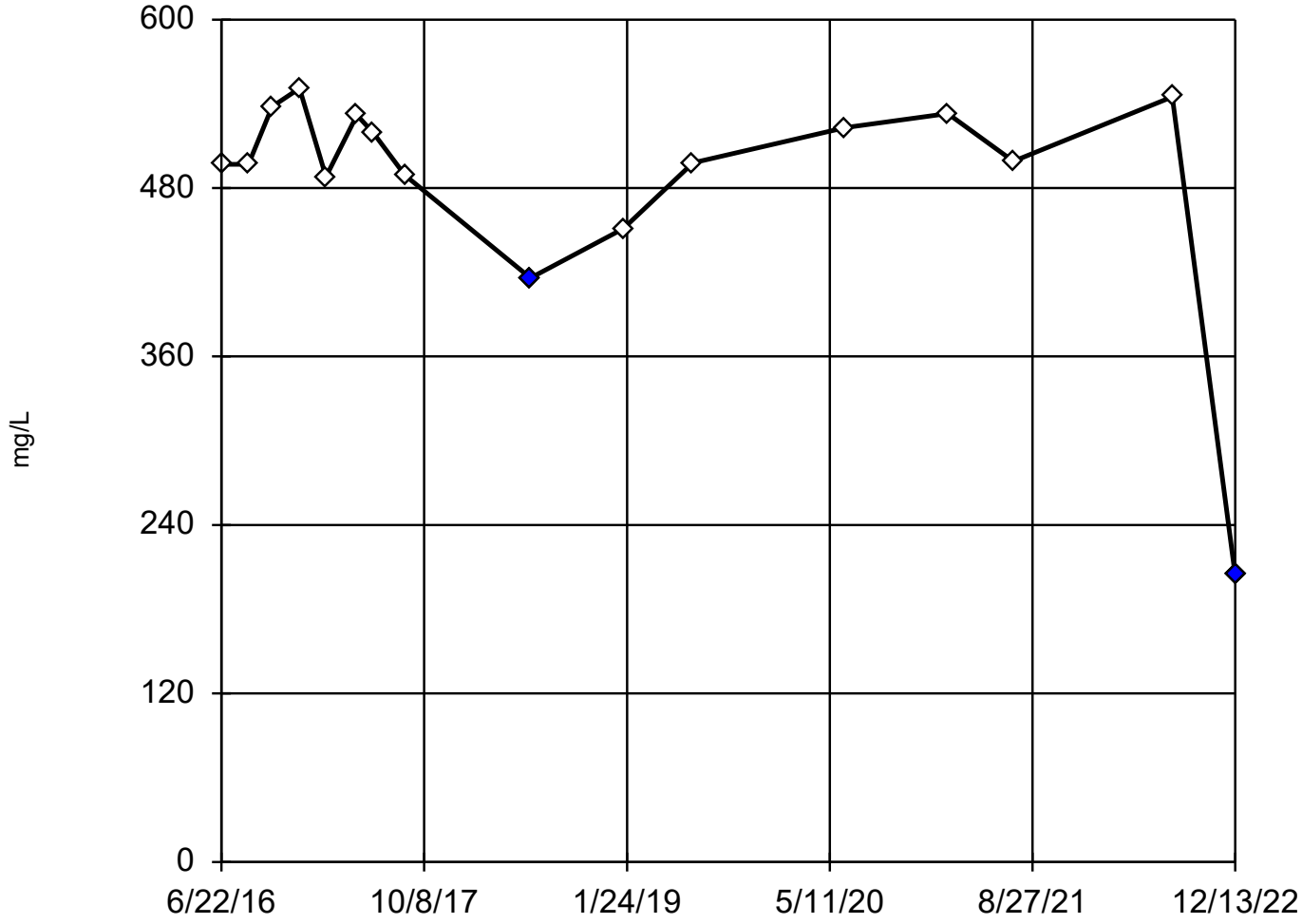
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8959
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Boron Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 16

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 2 low outliers.
Mean = 486.3.
Std. Dev. = 83.03.
416 (o): c = 0.5902
tabl = 0.507.
Alpha = 0.05.

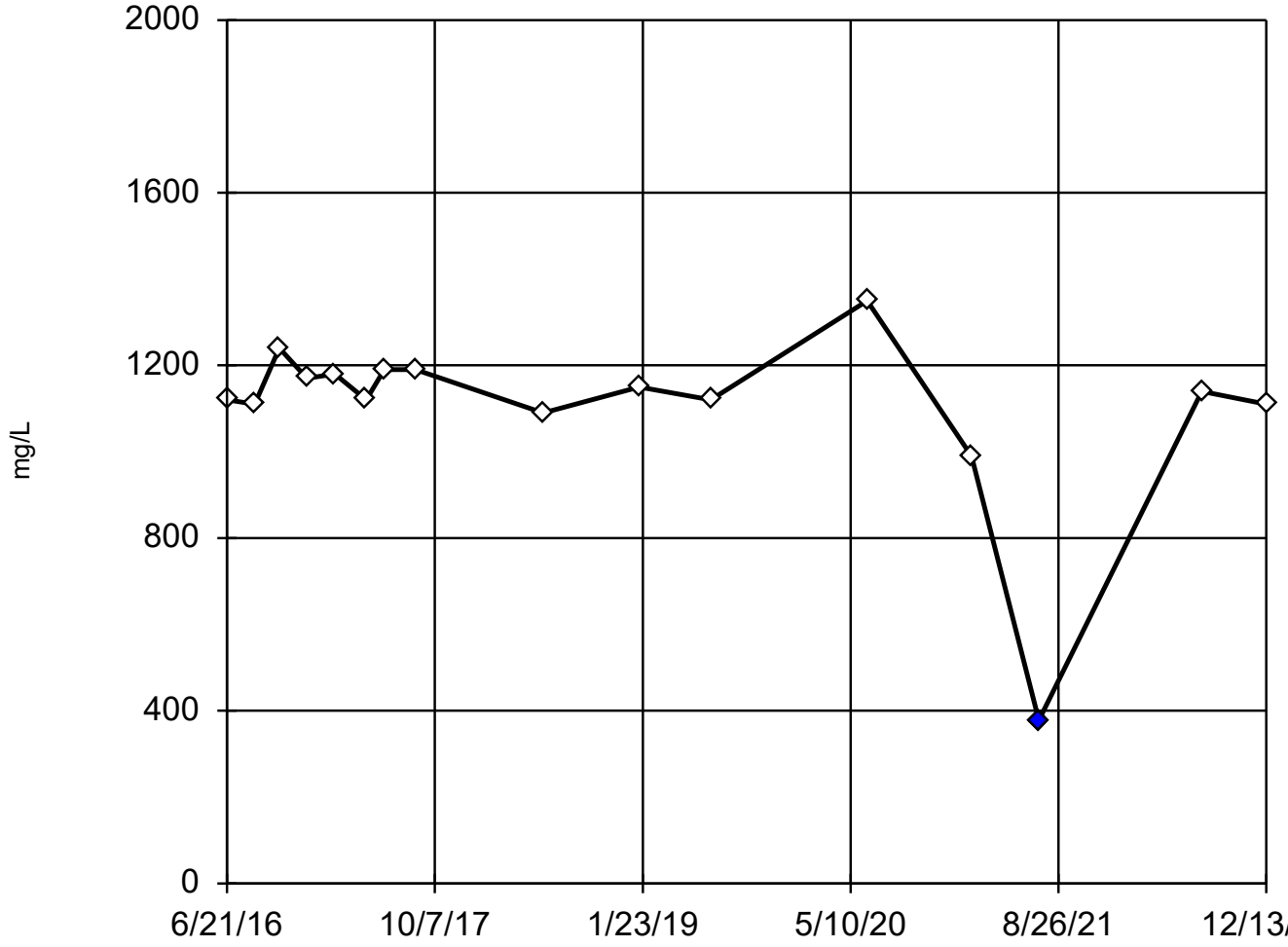
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9394
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1103.
Std. Dev. = 207.9.
378: c = 0.8768
tabl = 0.507.
Alpha = 0.05.

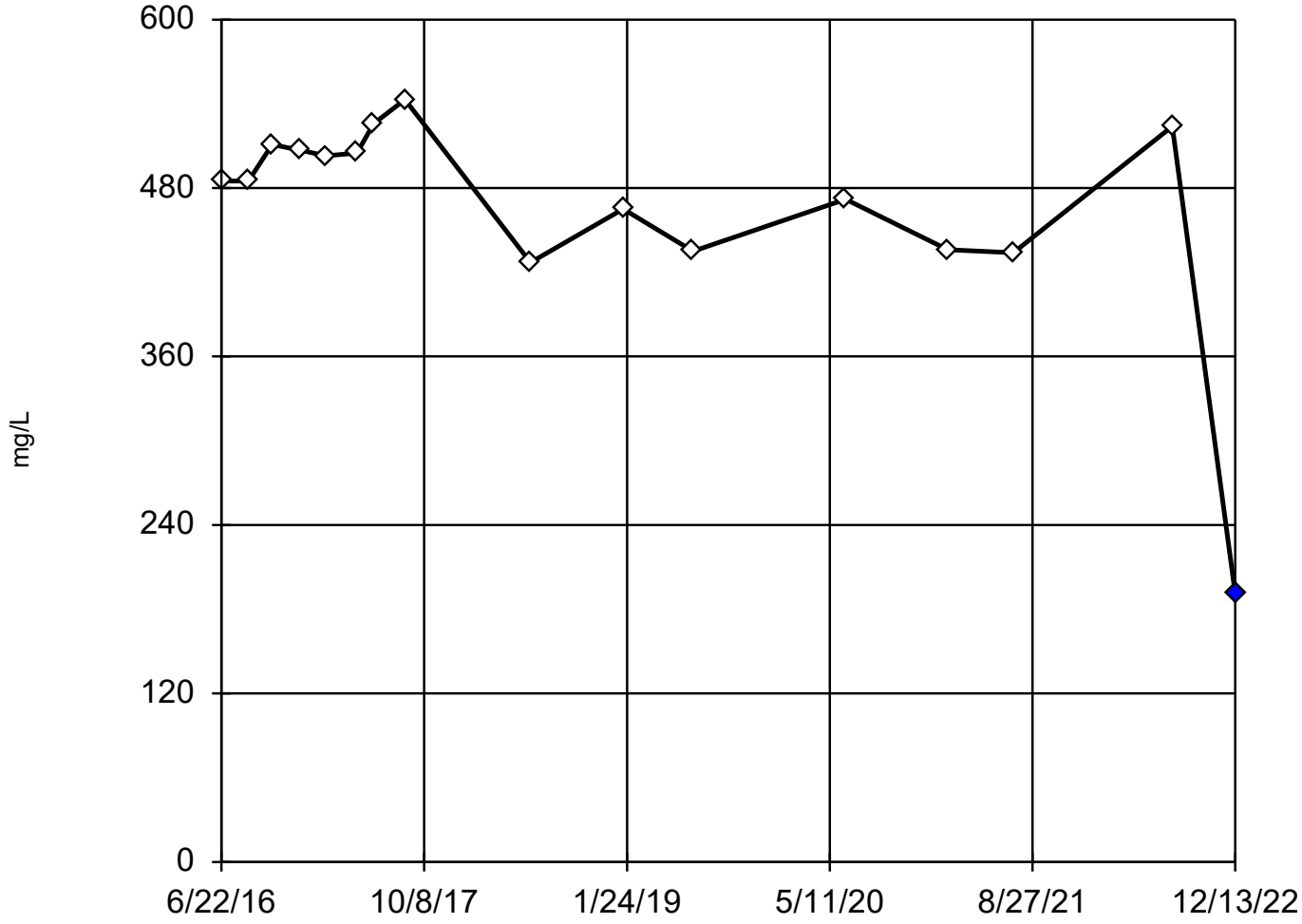
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9176
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 465.6.
Std. Dev. = 81.76.
191: c = 0.7297
tabl = 0.507.
Alpha = 0.05.

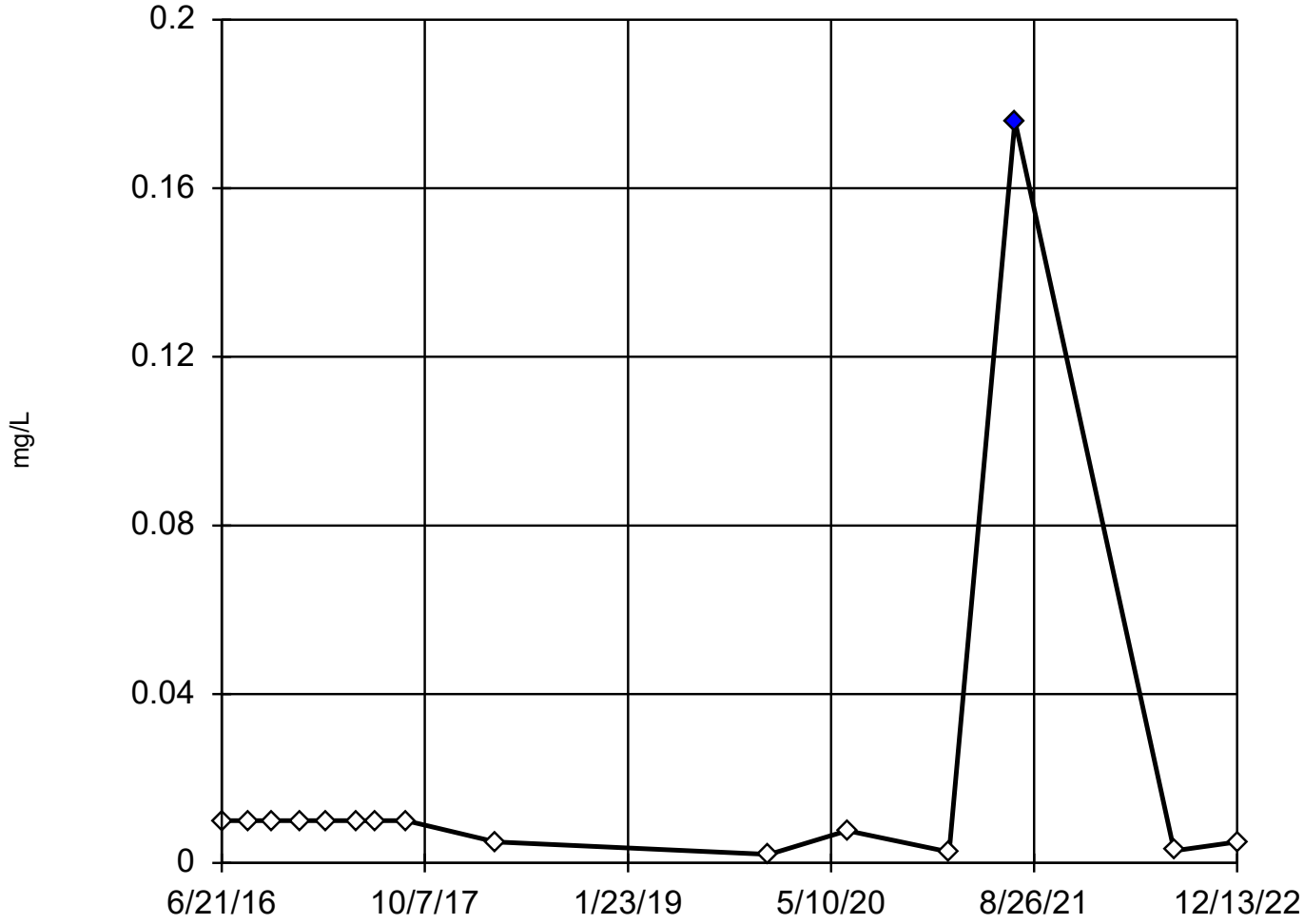
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9285
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

SSPMW-4



n = 15

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

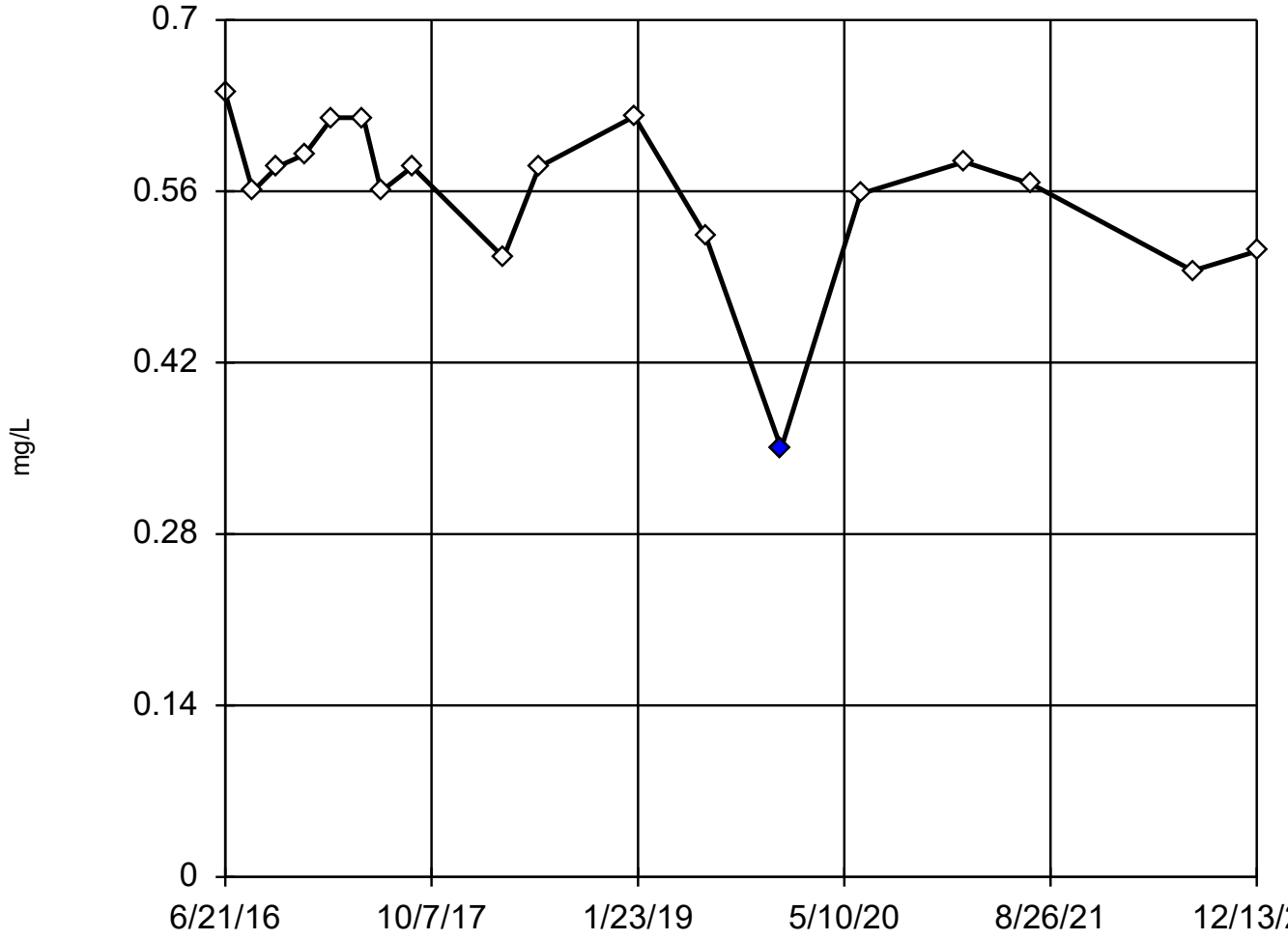
High cutoff = 0.08346, low cutoff = 0.0005907, based on IQR multiplier of 3.

Constituent: Chromium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.5581.
Std. Dev. = 0.06638.
0.35 (o): c = 0.5778
tabl = 0.475.
Alpha = 0.05.

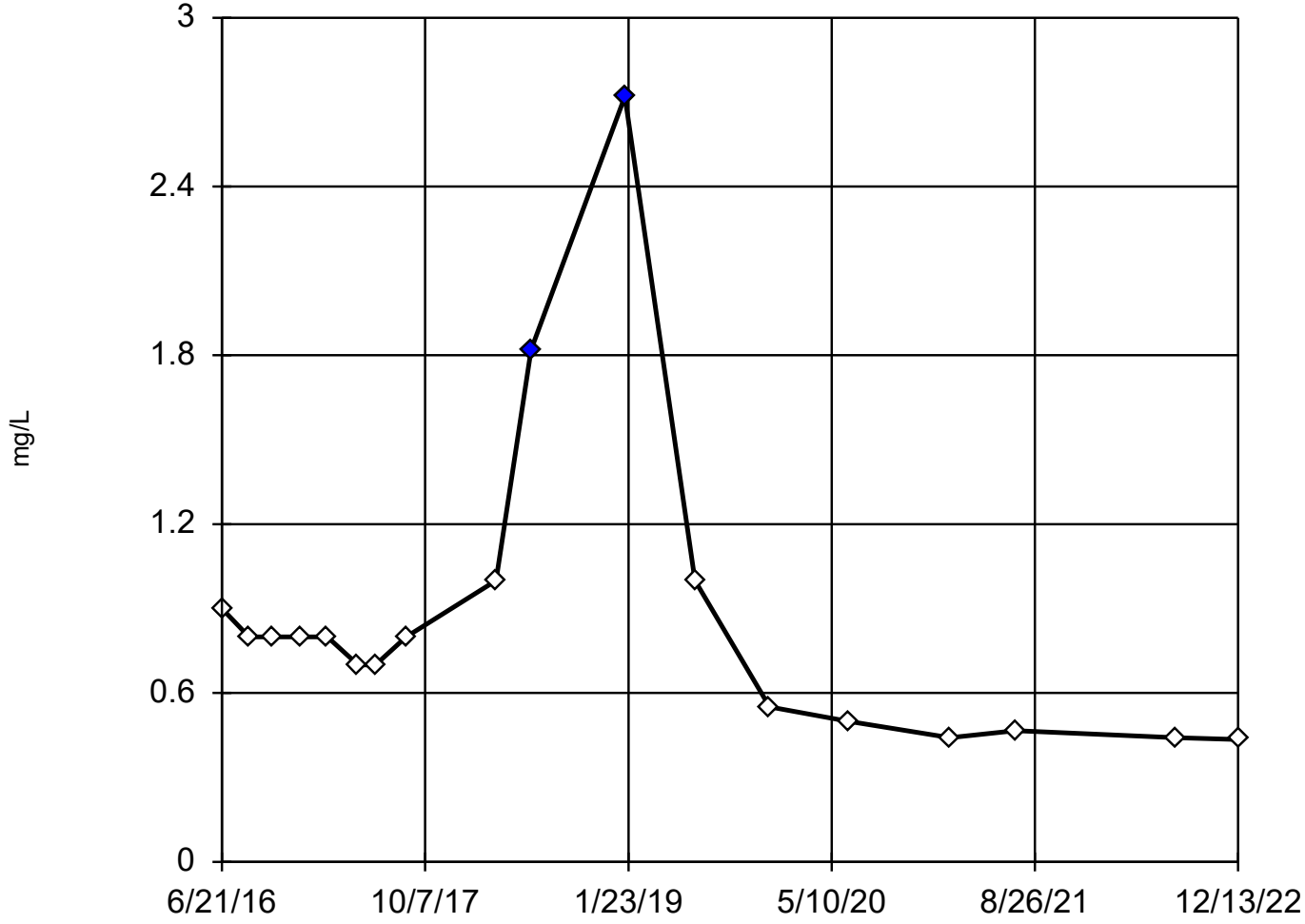
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9471
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Cobalt Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 18

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 high outliers.
Mean = 0.8708.
Std. Dev. = 0.5637.
1.82 (o): c = 0.5946
tabl = 0.475.
Alpha = 0.05.

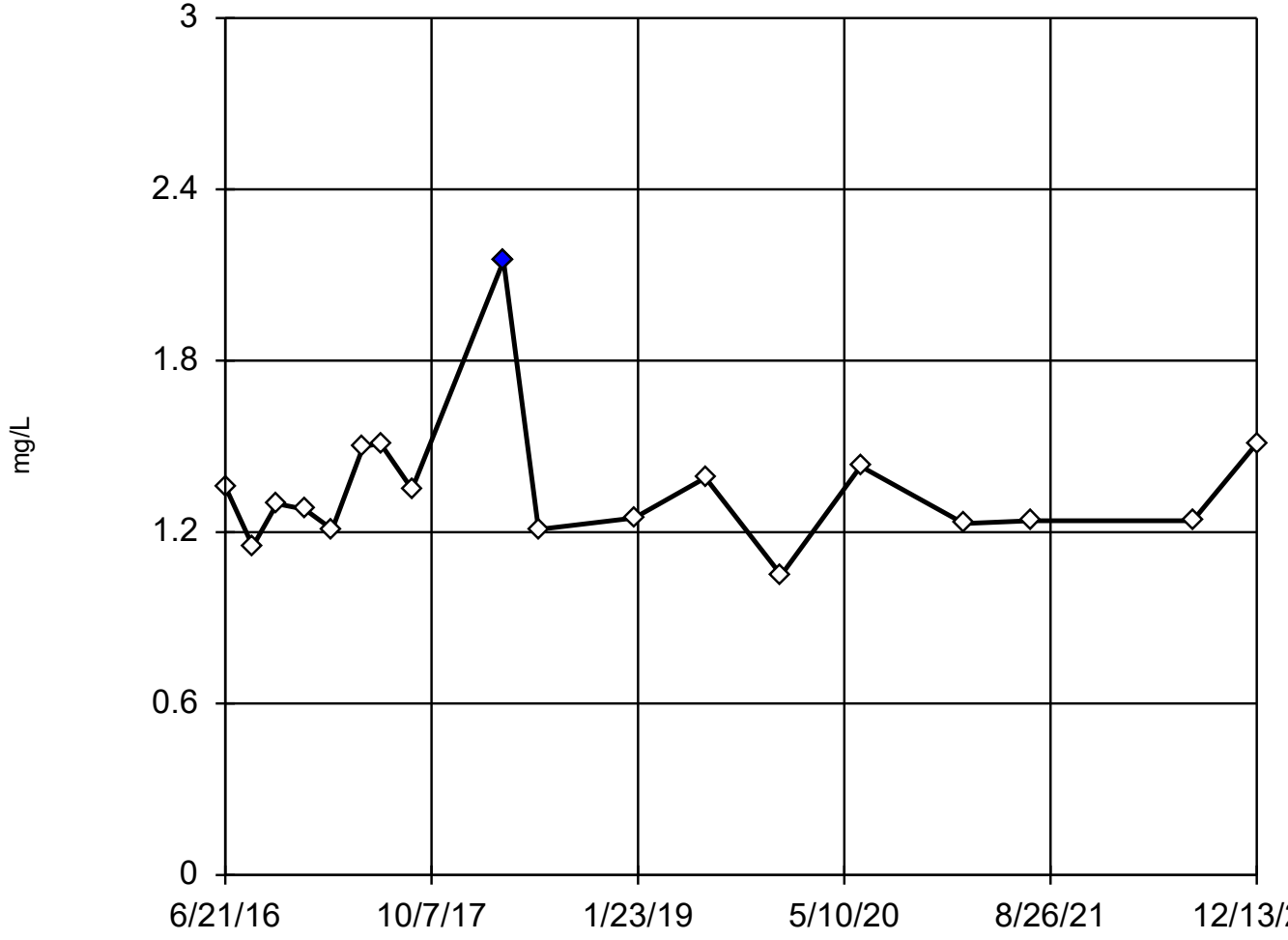
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8927
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSP/APMW-1 (bg)



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.353.
Std. Dev. = 0.236.
2.15 (o): c = 0.6809
tabl = 0.475.
Alpha = 0.05.

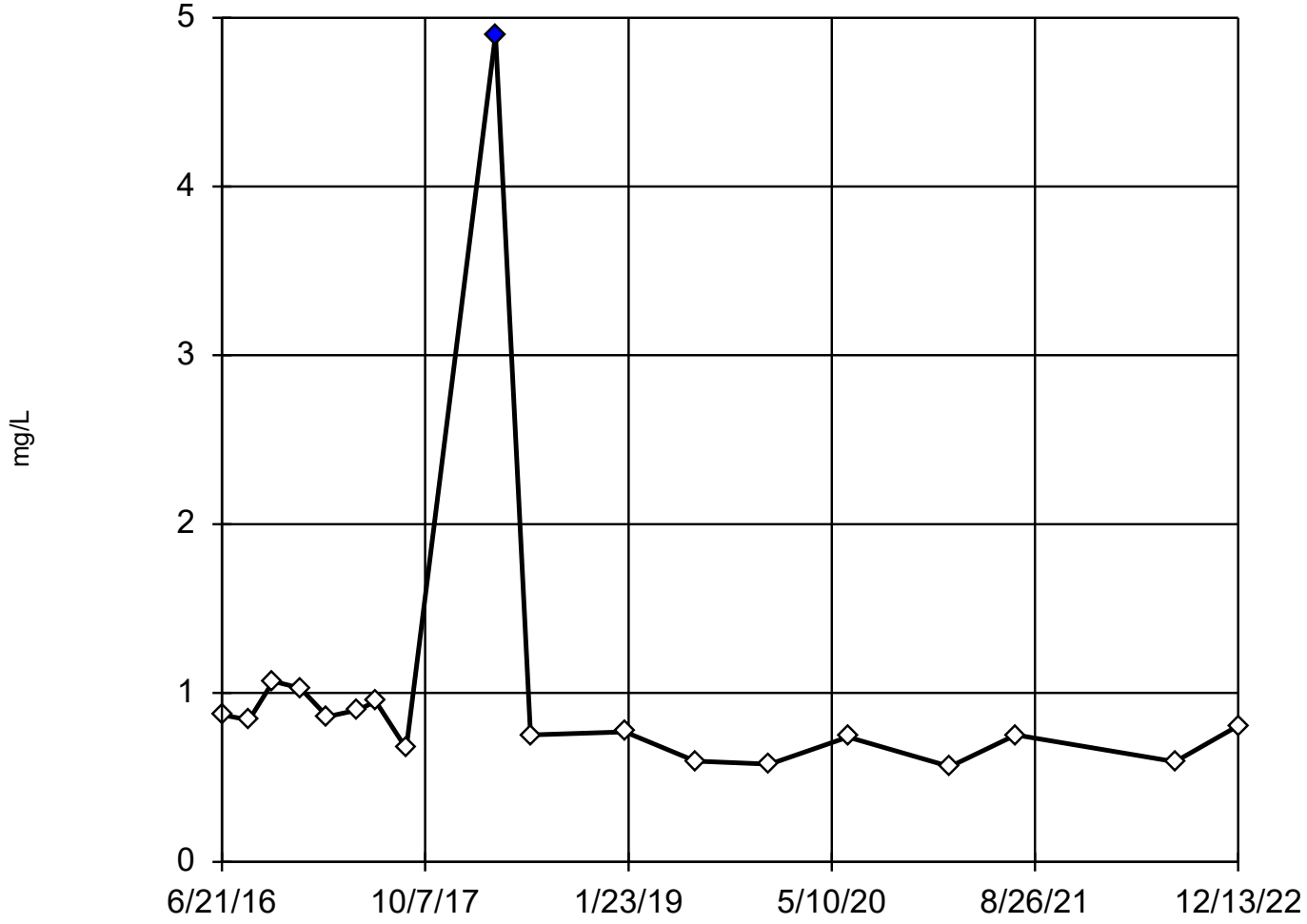
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9511
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.013.
Std. Dev. = 0.9814.
4.9 (o): c = 0.8985
tabl = 0.475.
Alpha = 0.05.

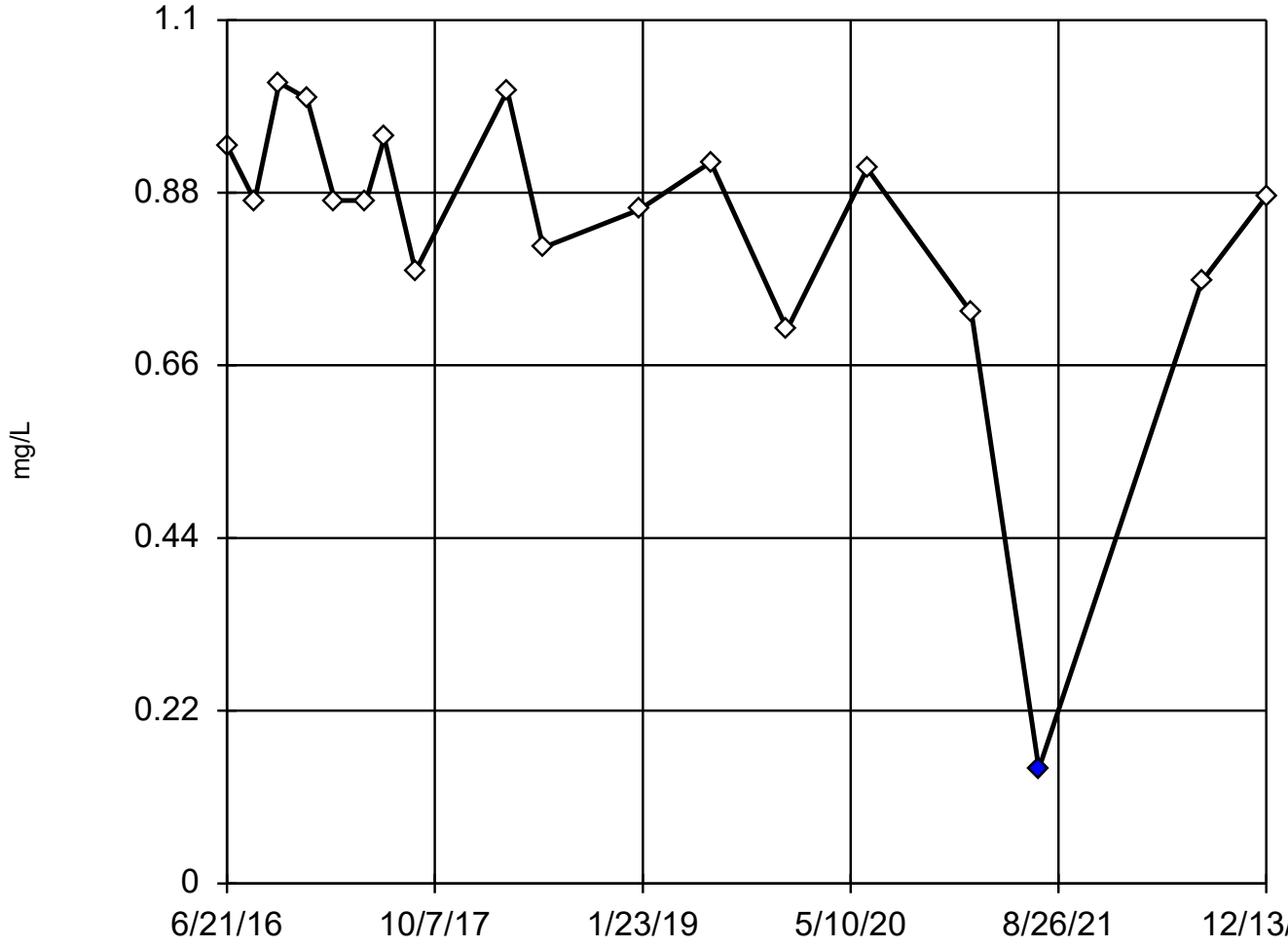
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.956
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.8349.
Std. Dev. = 0.195.
0.146 (o): c = 0.6803
tabl = 0.475.
Alpha = 0.05.

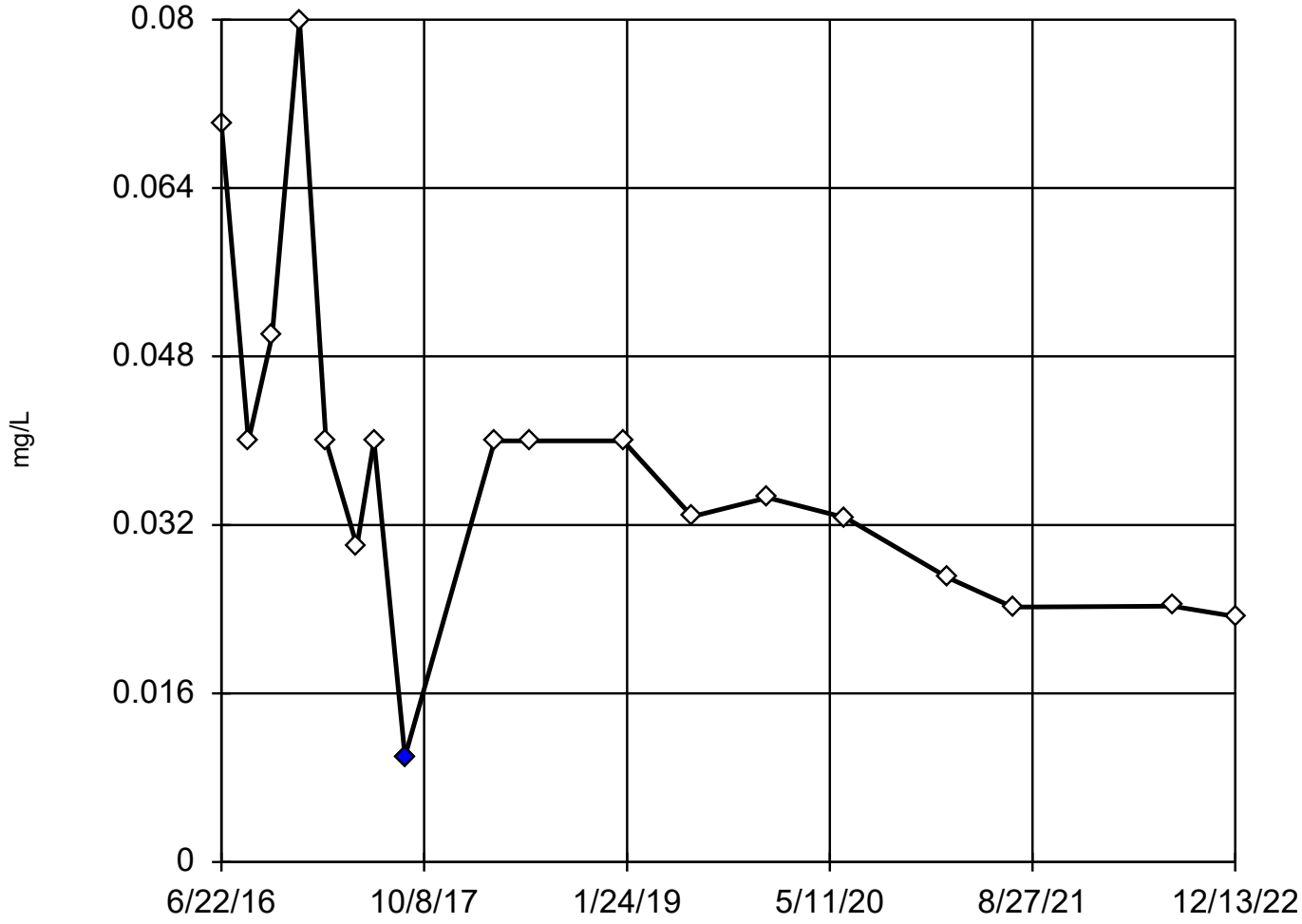
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9596
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-1D



n = 18

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.03772.
Std. Dev. = 0.01642.
-4.605: c = 0.5491
tabl = 0.475.
Alpha = 0.05.

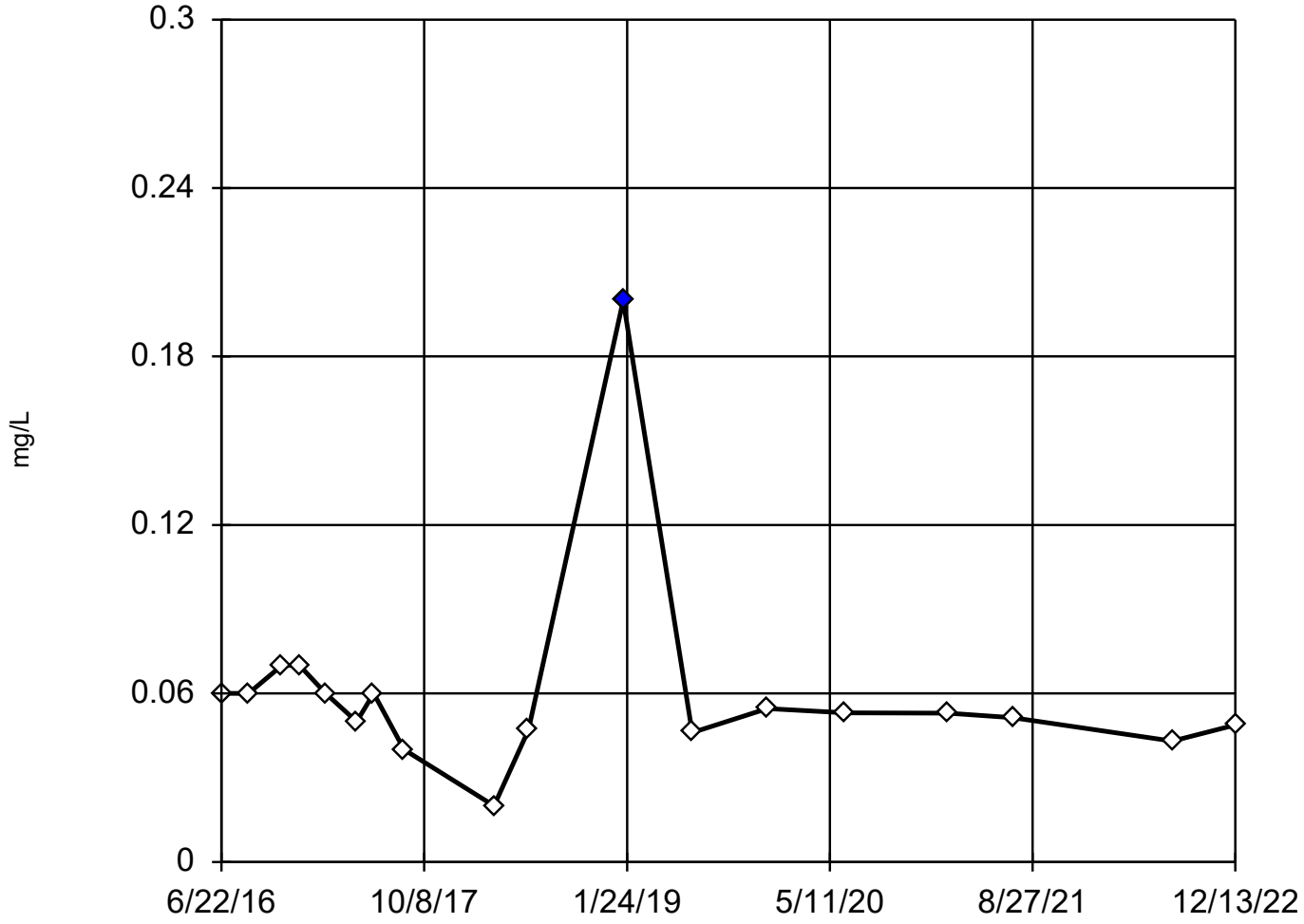
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9112
Critical = 0.892 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 0.06039.
Std. Dev. = 0.03668.
<0.4 (o): c = 0.8286
tabl = 0.475.
<0.04: c = 0.462
tabl = 0.475.
Alpha = 0.05.

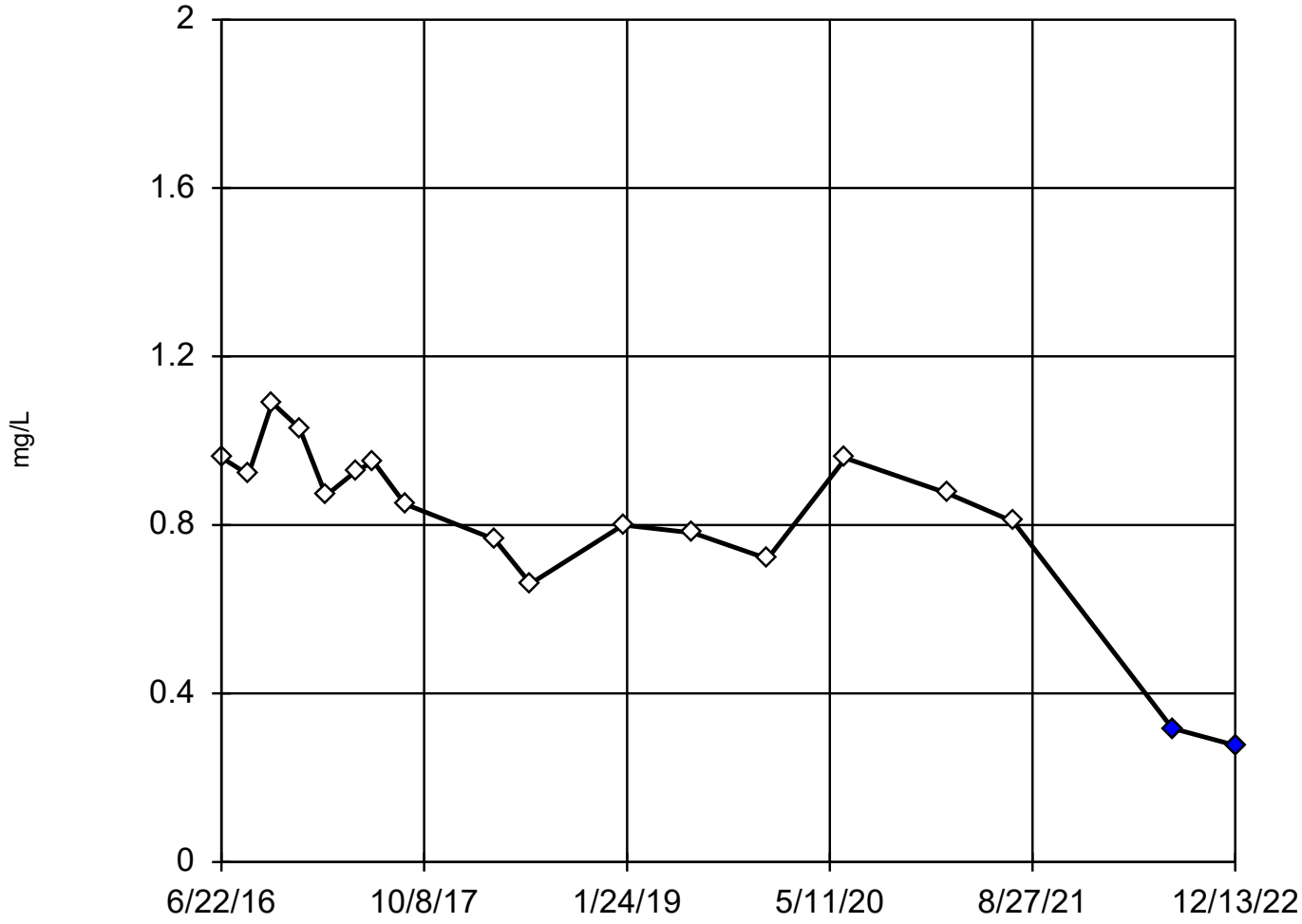
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9526
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 18

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 0.8091.
Std. Dev. = 0.2152.
0.317: c = 0.6267
tabl = 0.475.
Alpha = 0.05.

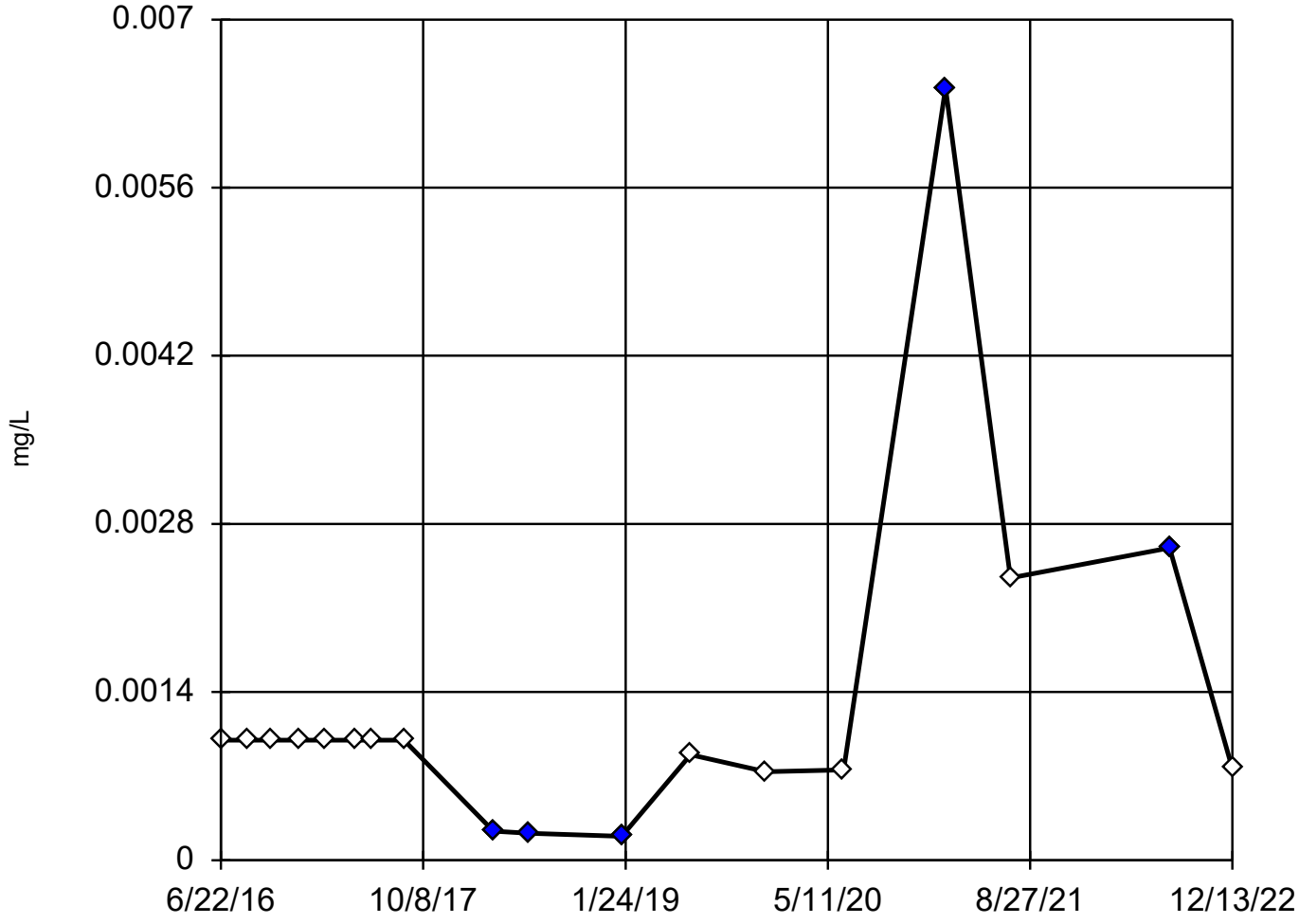
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9879
Critical = 0.887
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Lithium Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Tukey's Outlier Screening

APMW-5



n = 18

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.05 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

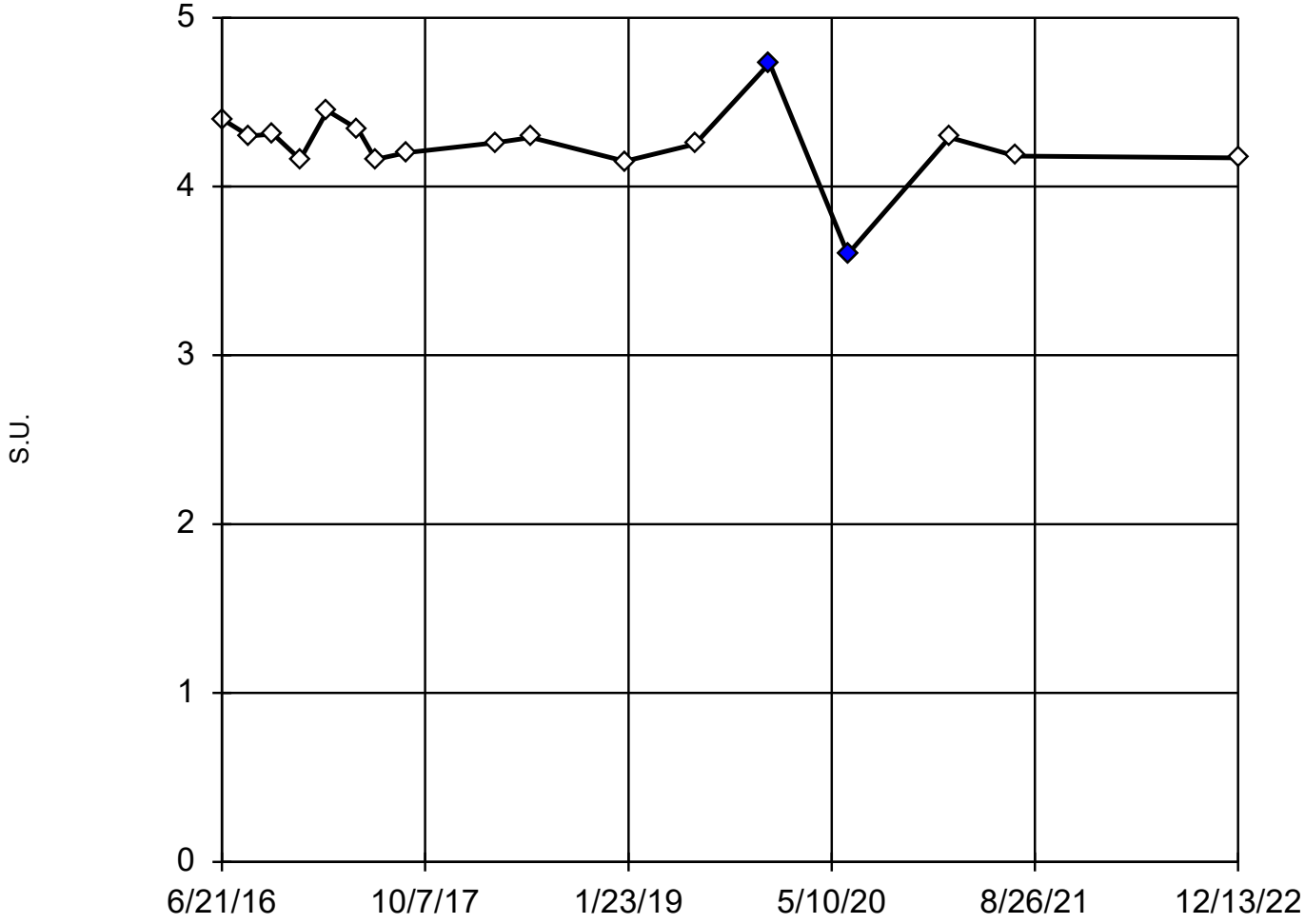
High cutoff = 0.002424, low cutoff = 0.0003071, based on IQR multiplier of 3.

Constituent: Mercury Analysis Run 1/23/2023 10:53 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 17

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 1 high and 1 low outliers.
Mean = 4.249.
Std. Dev. = 0.2198.
4.73 (o): c = 0.5789
tabl = 0.49.
3.6 (o): c = 0.7
tabl = 0.49.
Alpha = 0.05.

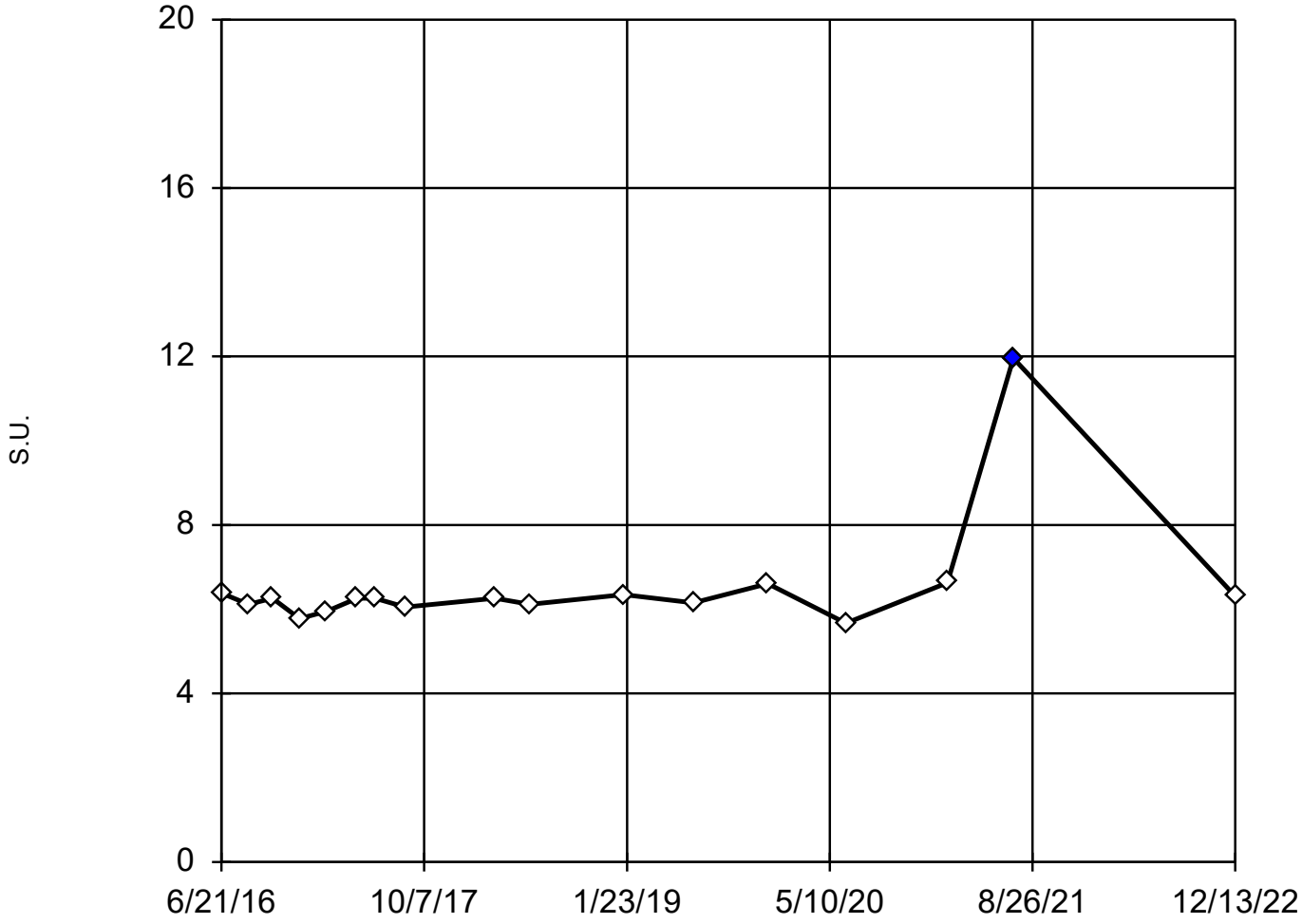
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9258
Critical = 0.881
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 17

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 6.536.
Std. Dev. = 1.42.
11.96: c = 0.8902
tabl = 0.49.
Alpha = 0.05.

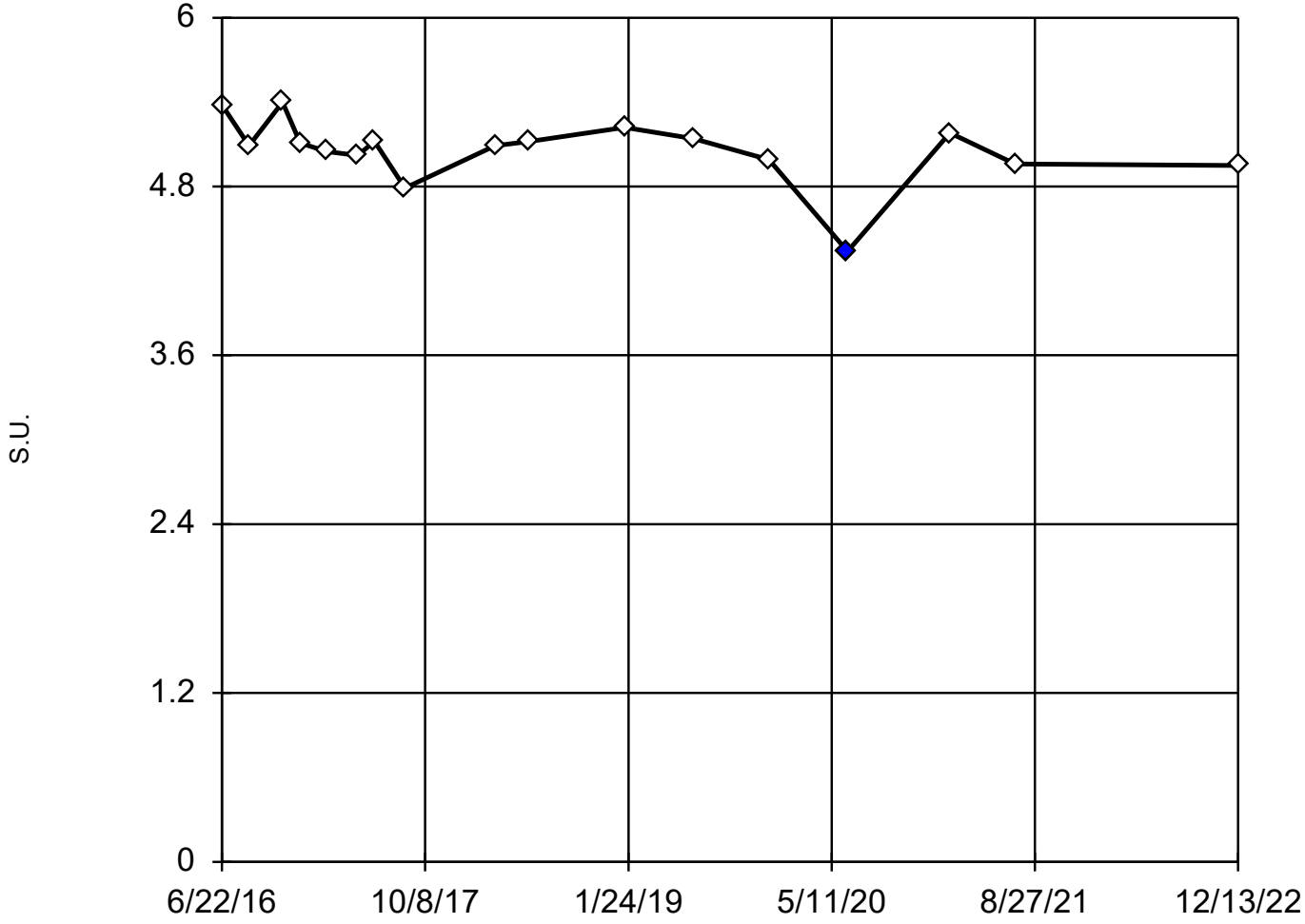
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9547
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 5.056.
Std. Dev. = 0.2366.
4.34 (o): c = 0.6932
tabl = 0.49.
Alpha = 0.05.

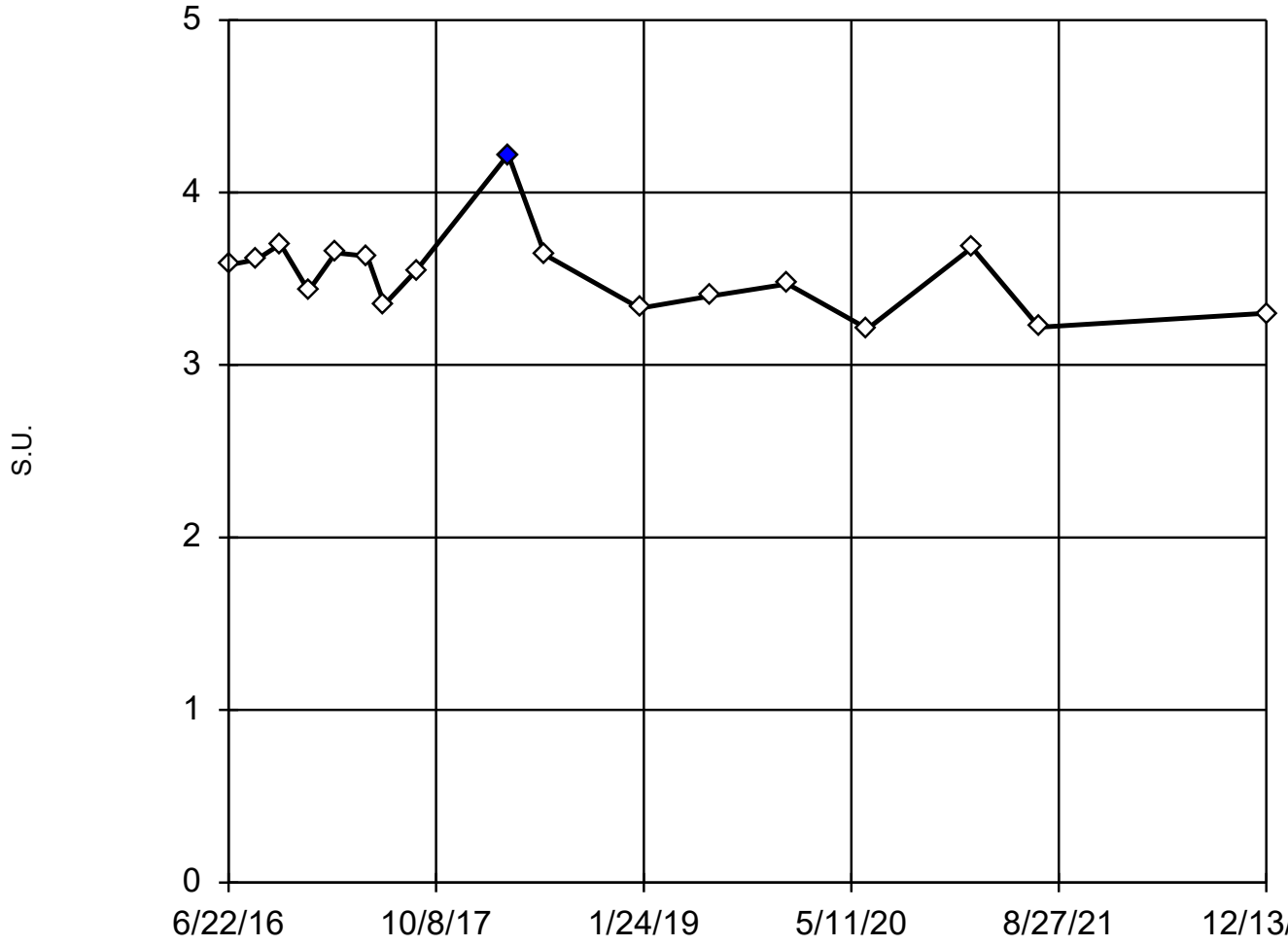
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9543
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.528.
Std. Dev. = 0.2408.
4.22 (o): c = 0.587
tabl = 0.49.
Alpha = 0.05.

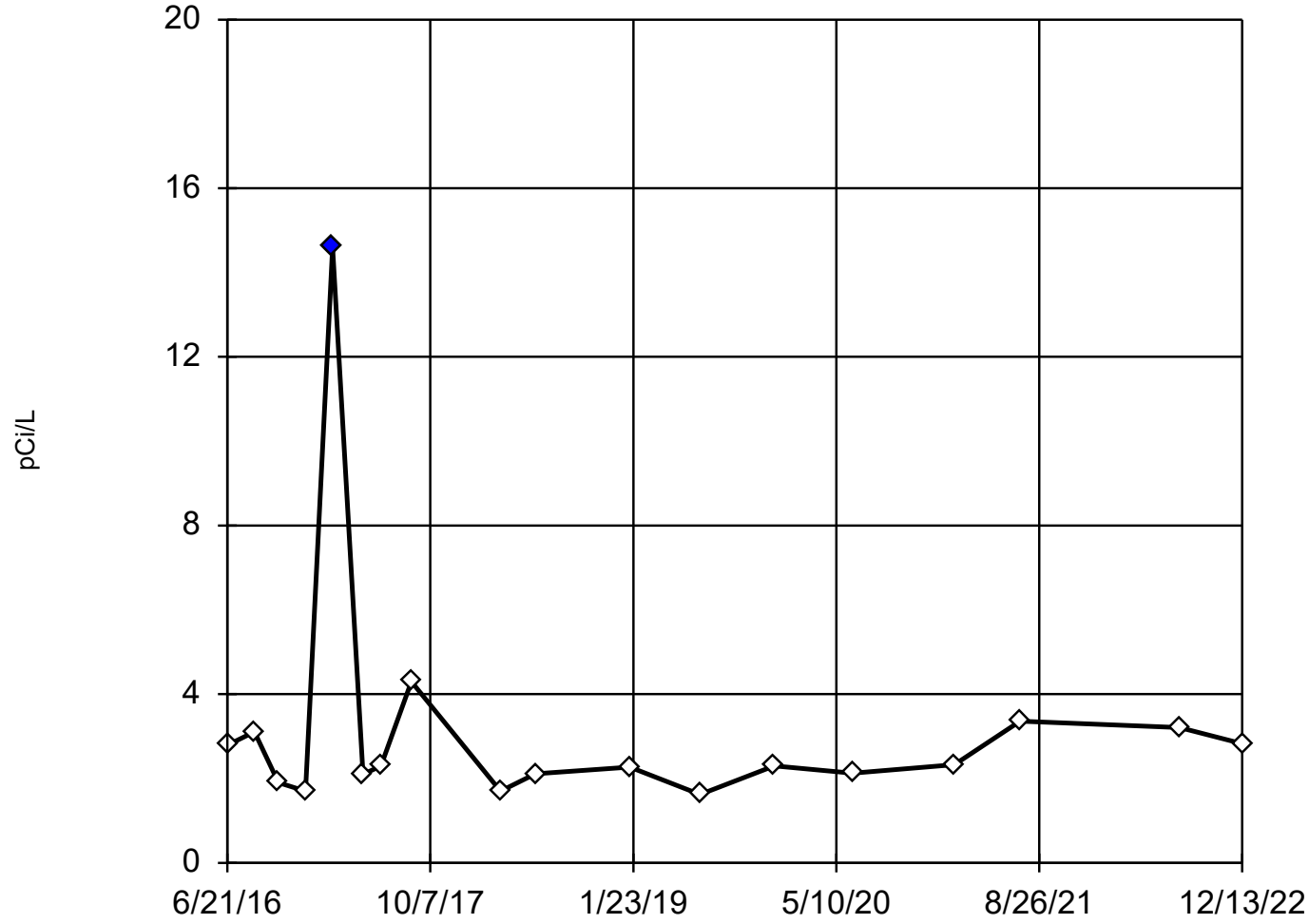
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9177
Critical = 0.887
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 18

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 3.148.
Std. Dev. = 2.94.
14.6 (o): c = 0.8713
tabl = 0.475.
Alpha = 0.05.

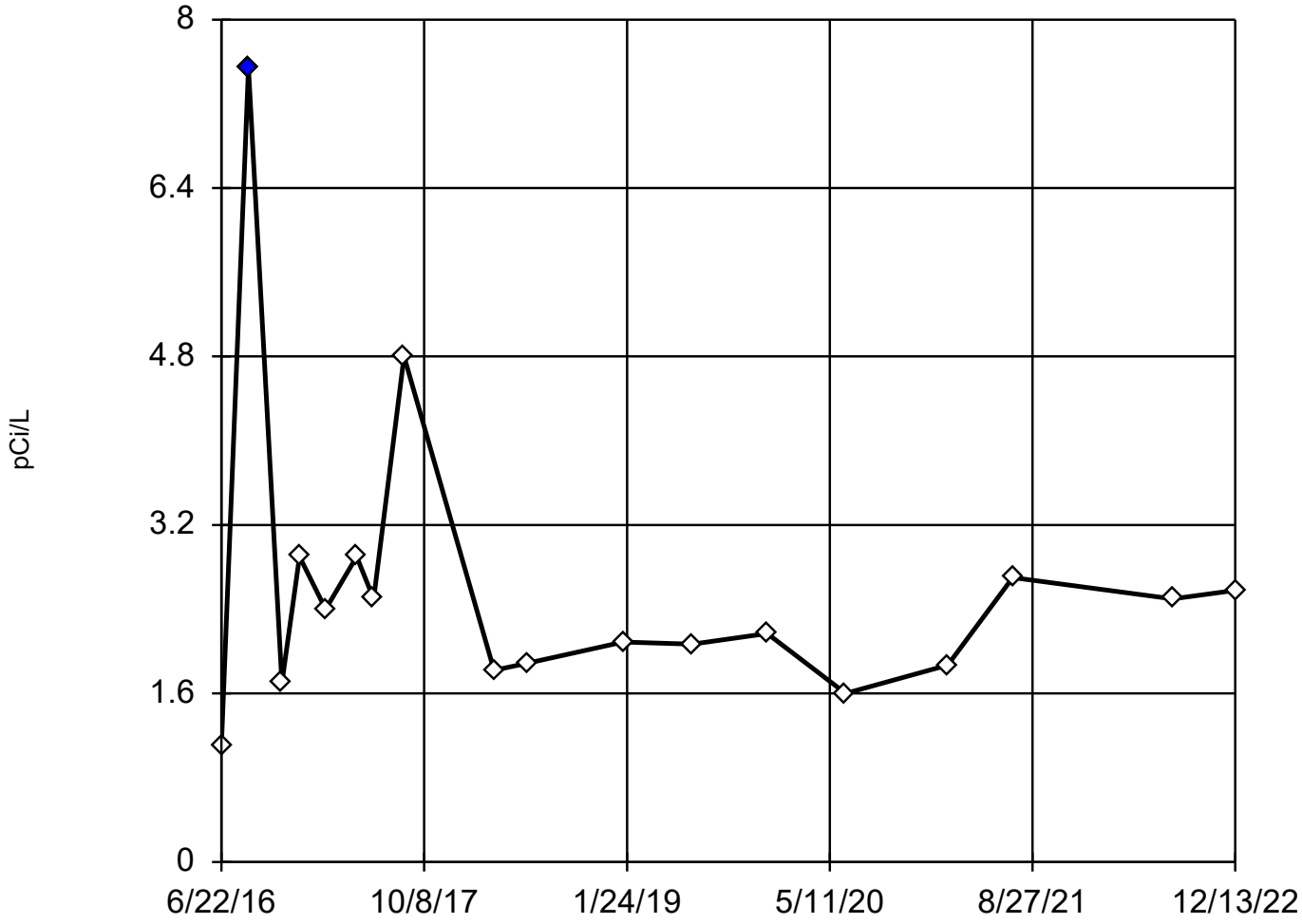
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9049
Critical = 0.892
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 18

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2.619.
Std. Dev. = 1.453.
7.54: c = 0.6415
tabl = 0.475.
Alpha = 0.05.

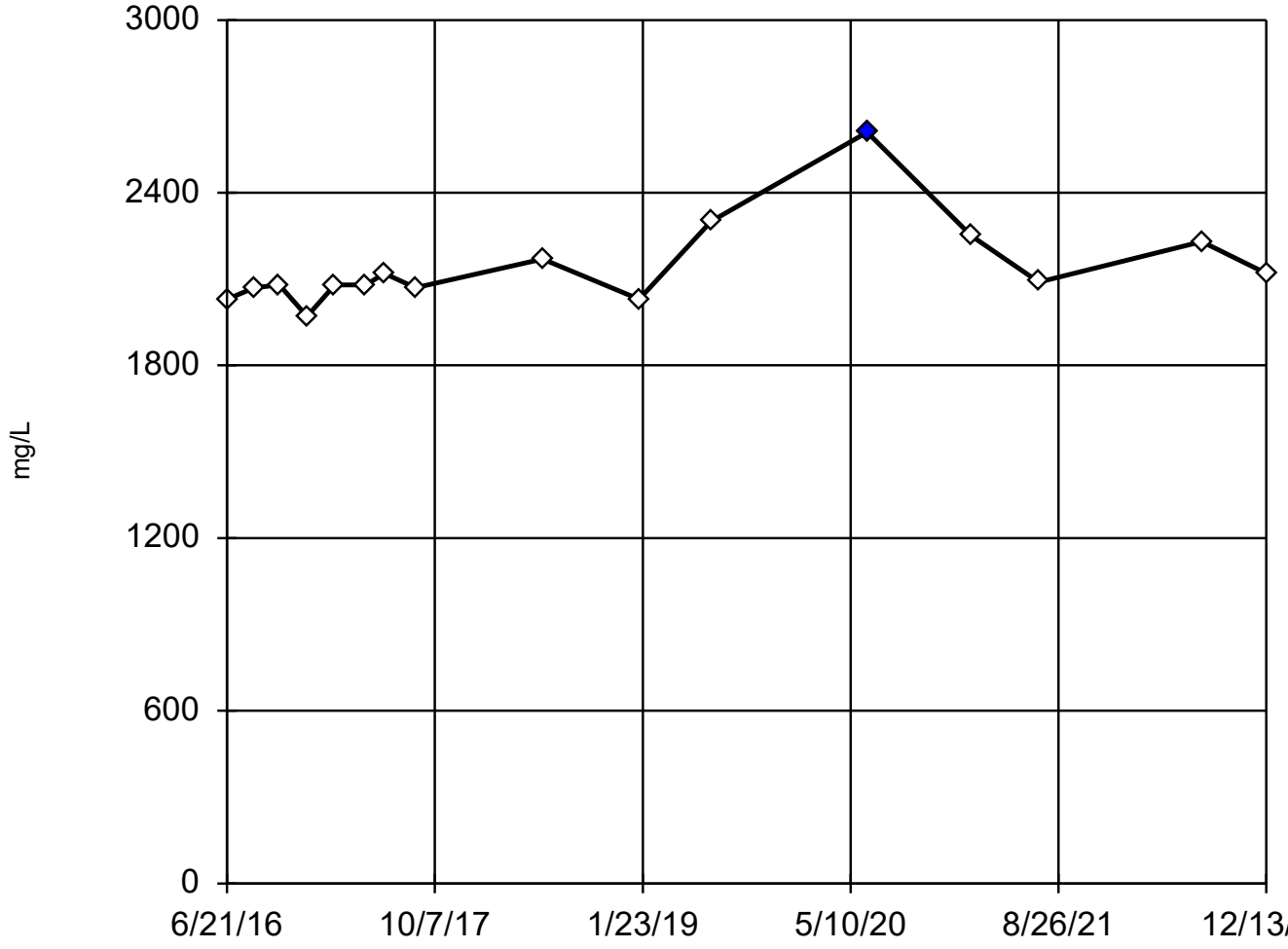
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9558
Critical = 0.892 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-2



n = 16

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 2144.
Std. Dev. = 151.5.
2610: c = 0.6207
tabl = 0.507.
Alpha = 0.05.

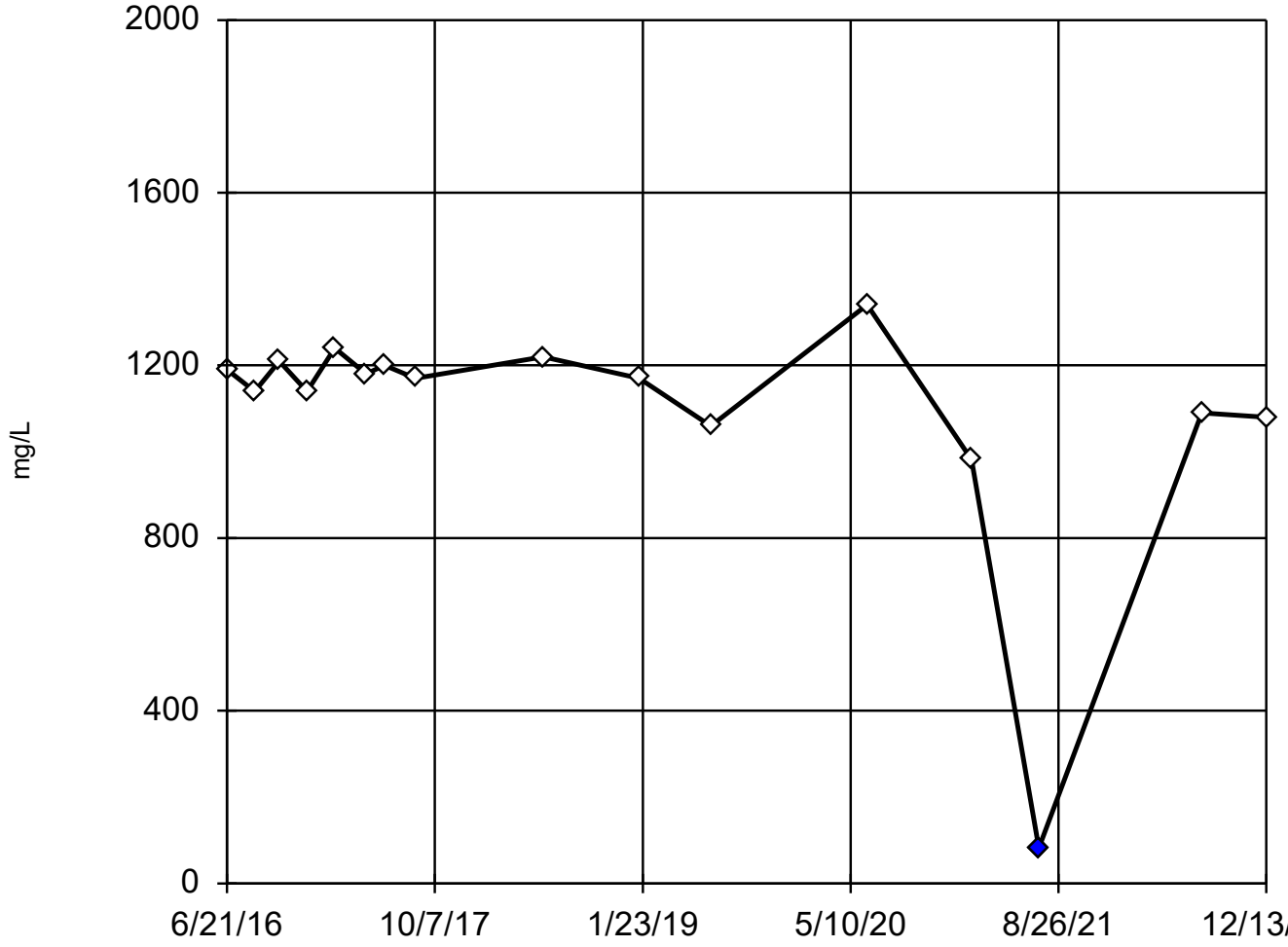
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9221
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 1093.
Std. Dev. = 282.
82.2: c = 0.8594
tabl = 0.507.
Alpha = 0.05.

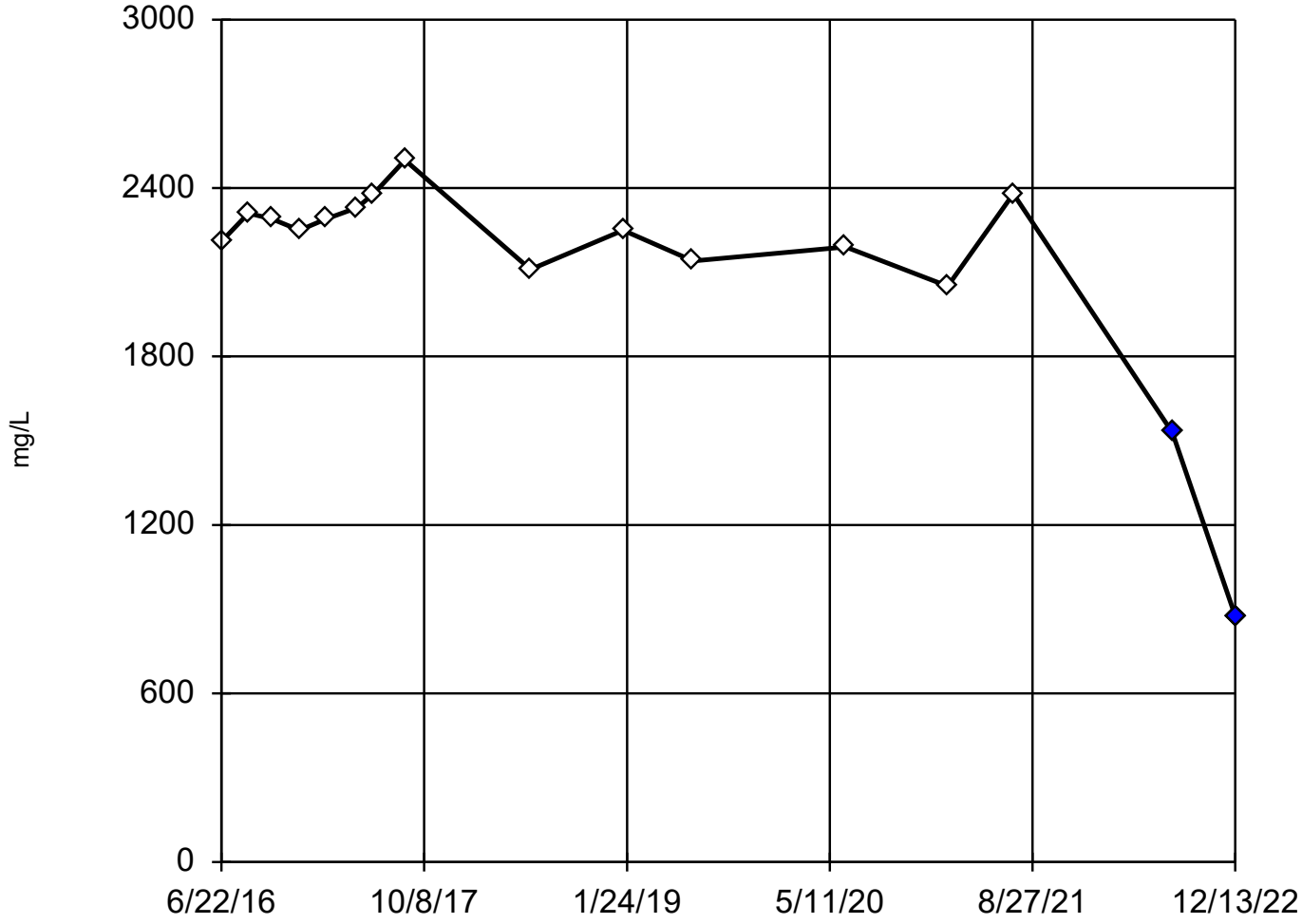
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9706
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 2130.
Std. Dev. = 397.
1530: c = 0.6824
tabl = 0.507.
Alpha = 0.05.

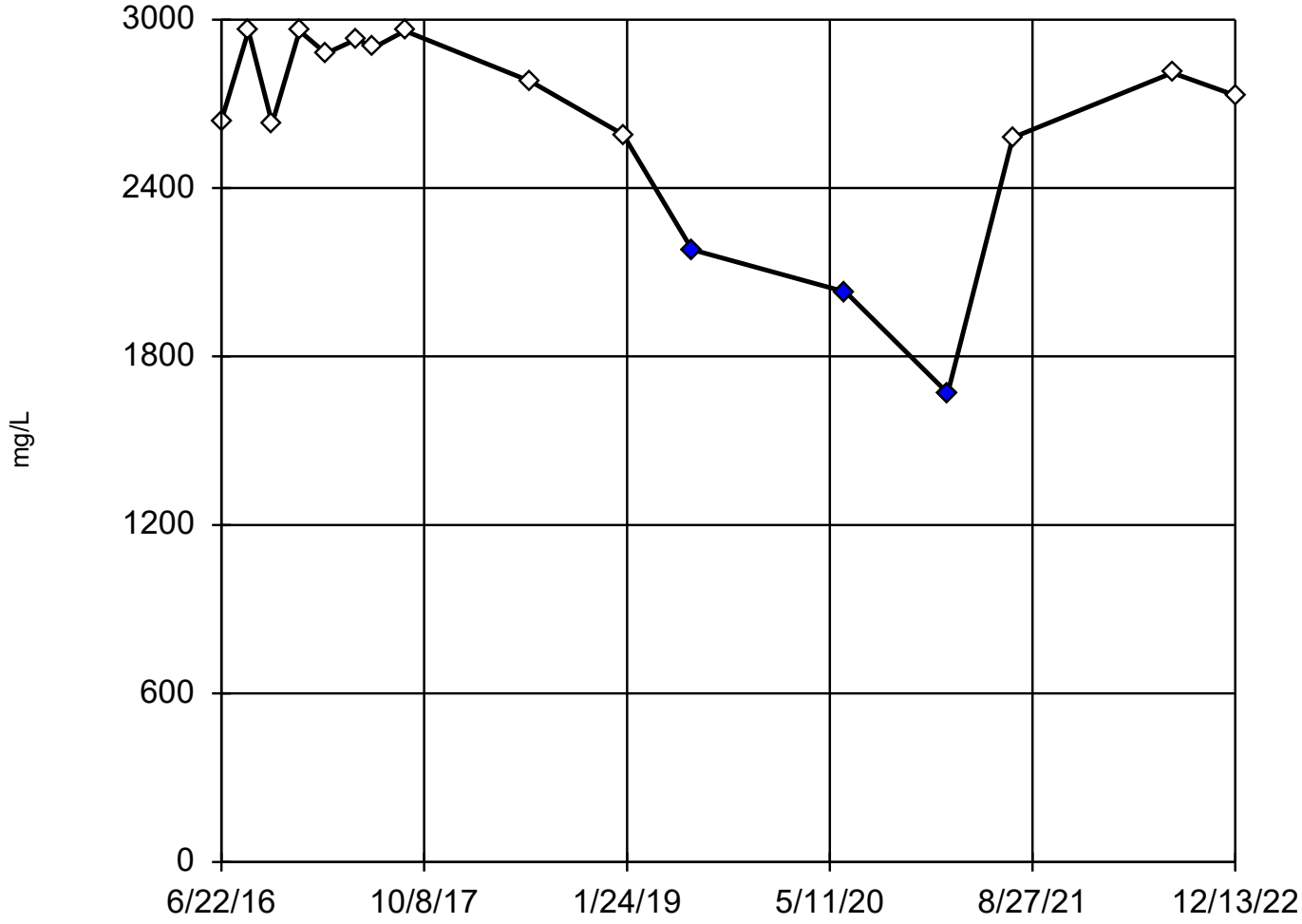
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9878
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-5



n = 16

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 2639.
Std. Dev. = 374.5.
2180: c = 0.5256
tabl = 0.507.
Alpha = 0.05.

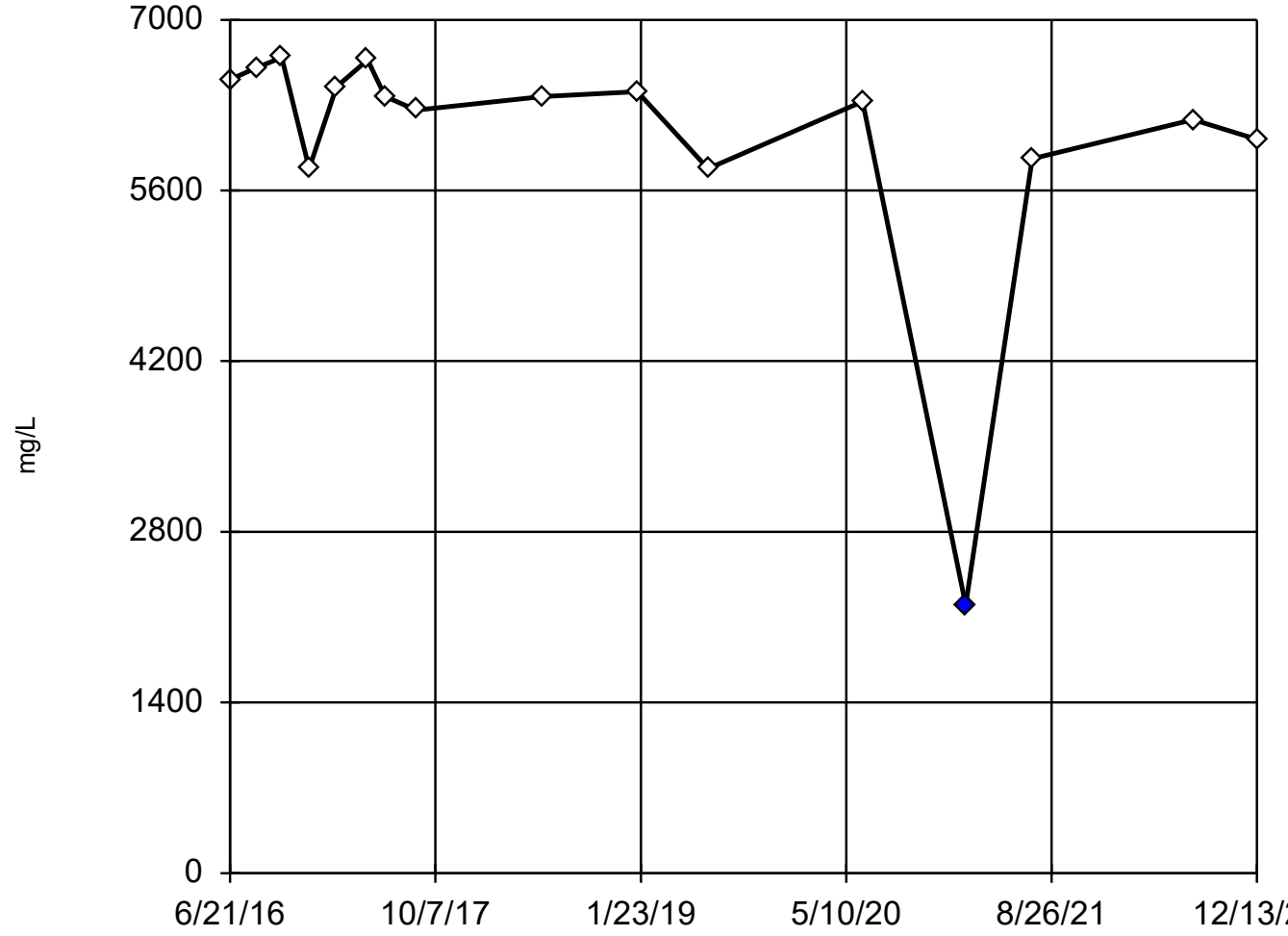
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8778
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-3



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 6031.
Std. Dev. = 1063.
2200 (o): c = 0.8118
tabl = 0.507.
Alpha = 0.05.

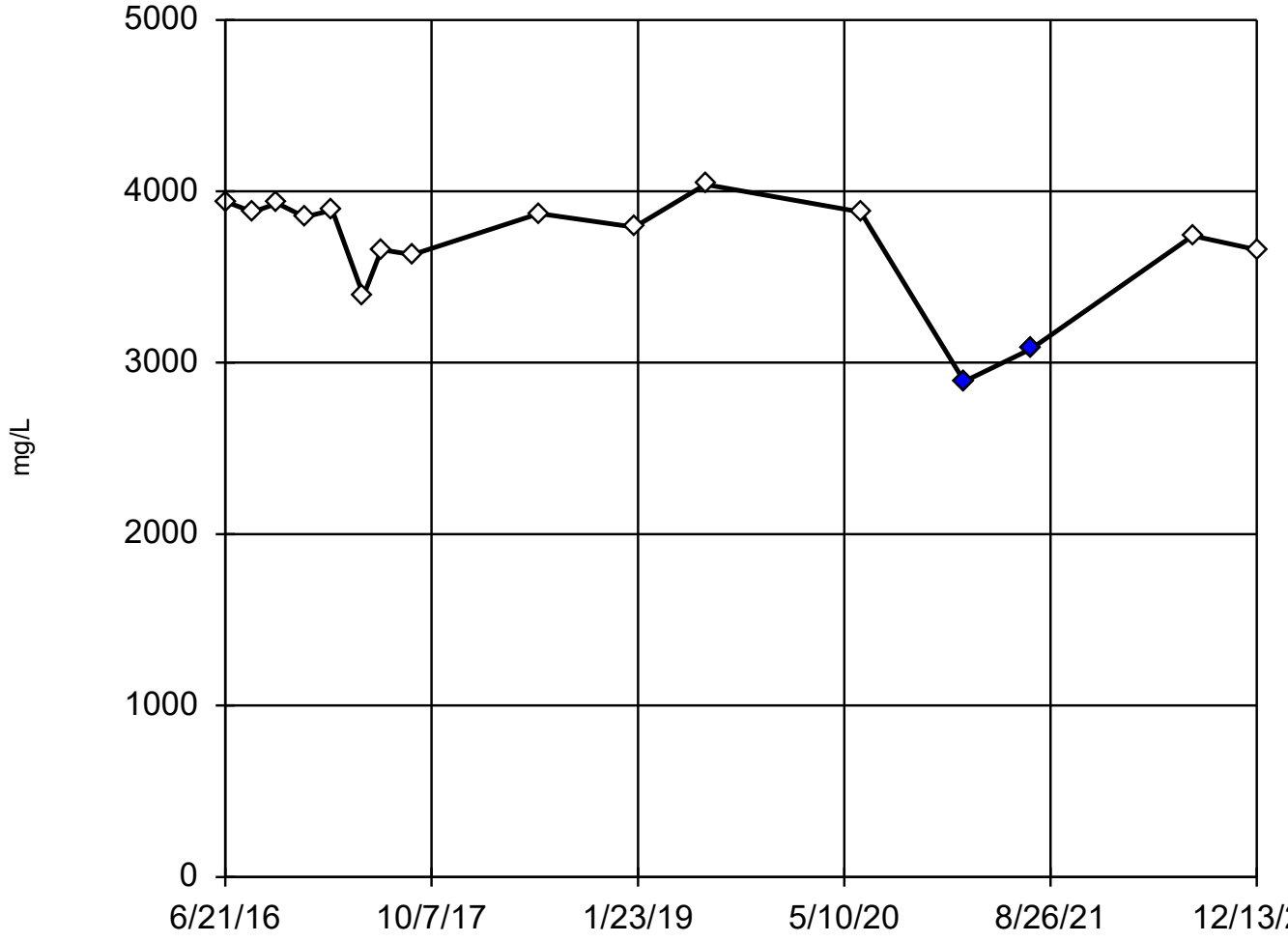
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9195
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

SSPMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 3695.
Std. Dev. = 319.6.
3390: c = 0.5
tabl = 0.507.
Alpha = 0.05.
3080 (H): c = 0.6471
tabl = 0.507.
Alpha = 0.05.

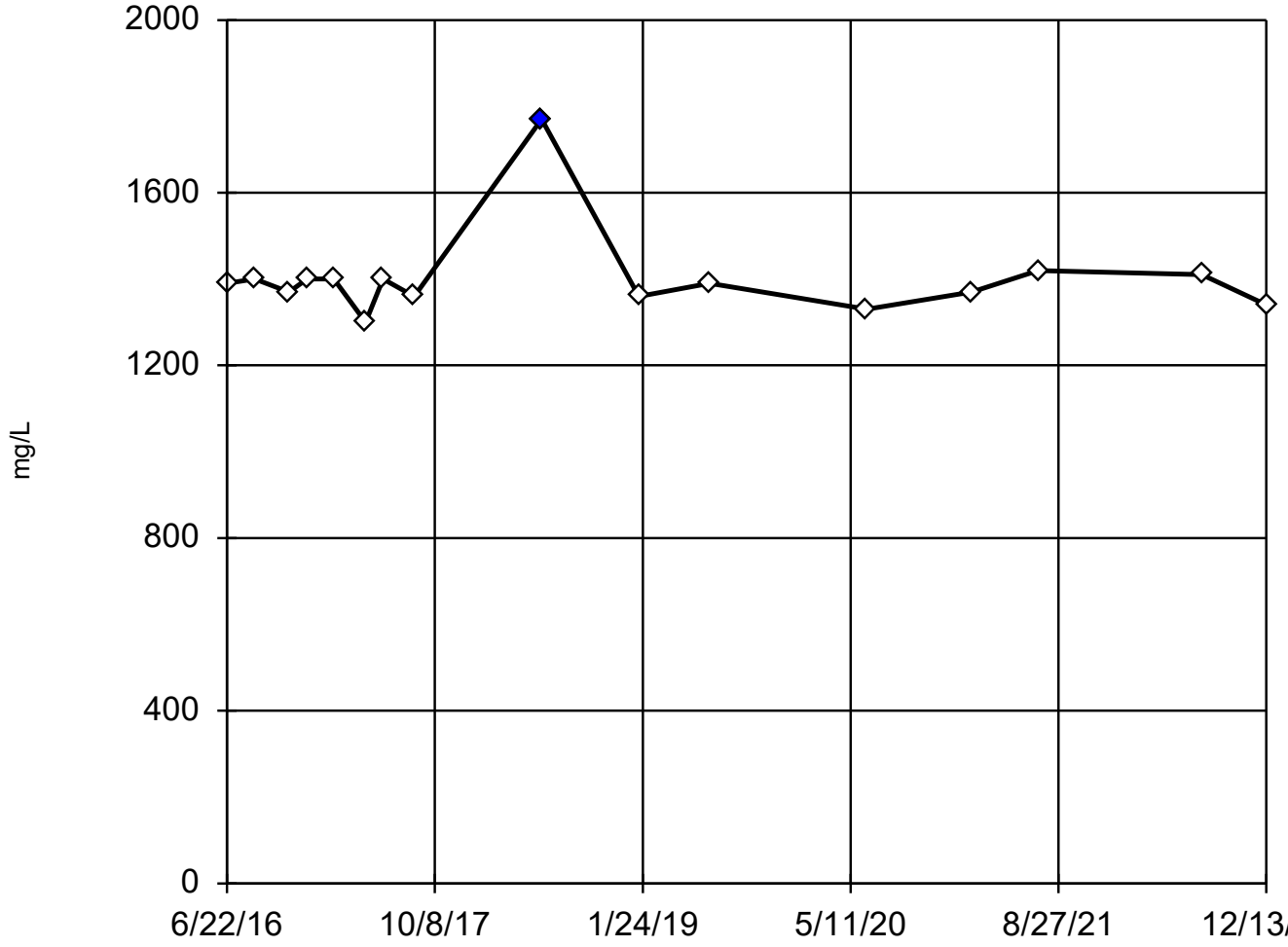
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9175
Critical = 0.874
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-3



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1401.
Std. Dev. = 103.6.
1770 (o): c = 0.8372
tabl = 0.507.
Alpha = 0.05.

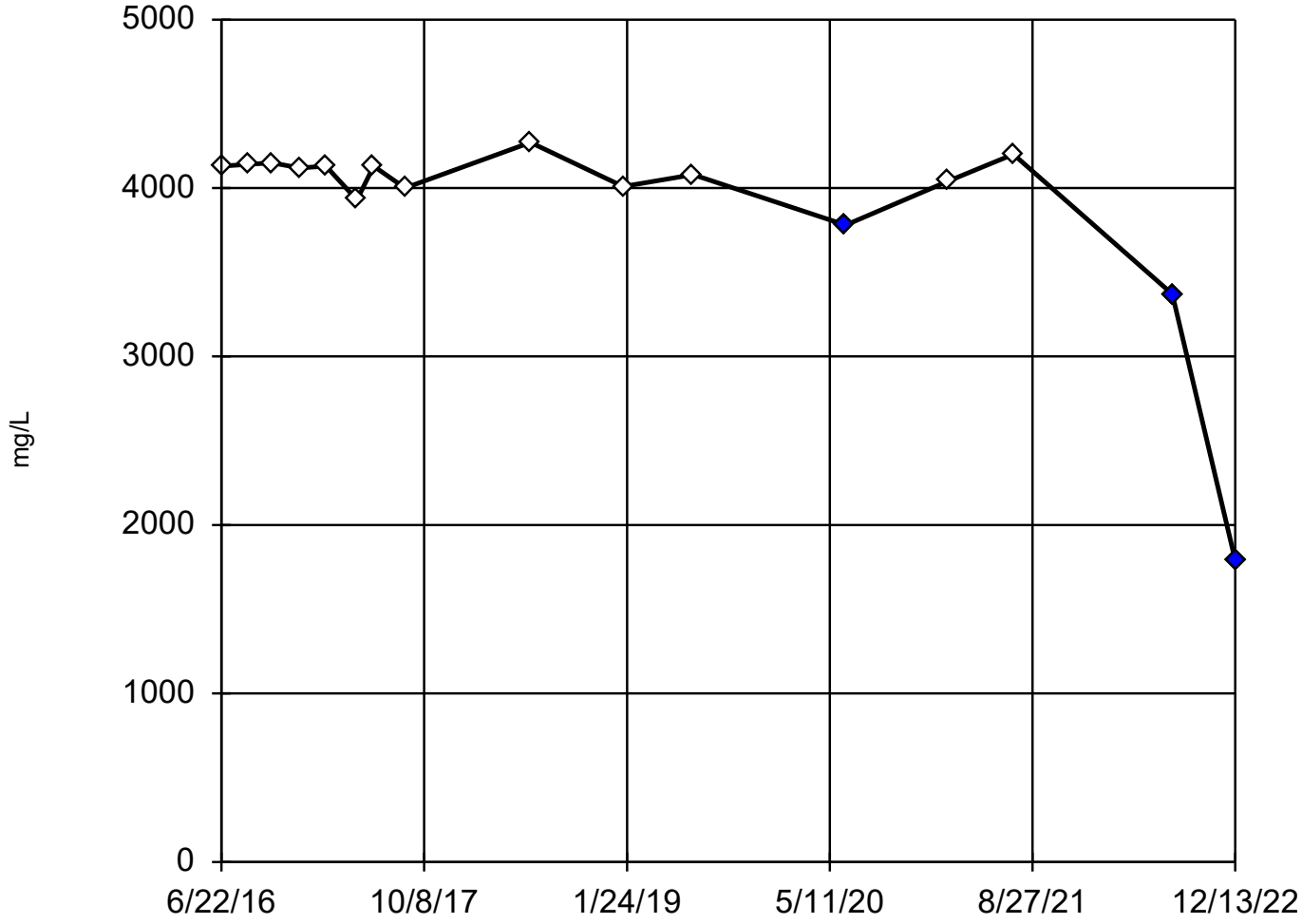
Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.92
Critical = 0.881
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: TDS Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Dixon's Outlier Test

APMW-4



n = 16

Statistical outliers are drawn as solid.
Testing for 3 low outliers.
Mean = 3892.
Std. Dev. = 598.6.
3780: c = 0.5946
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.9624
Critical = 0.866
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 1/23/2023 10:54 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:55 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	15	0.003907	0.002389	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.0041	0.002156	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.004052	0.002213	unknown	ShapiroWilk
Antimony (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.003995	0.0023	unknown	ShapiroWilk
Antimony (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	15	0.0041	0.002156	unknown	ShapiroWilk
Antimony (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.0041	0.002156	unknown	ShapiroWilk
Antimony (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.0041	0.002156	unknown	ShapiroWilk
Antimony (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.003913	0.002395	unknown	ShapiroWilk
Arsenic (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	18	0.00651	0.003363	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.009363	0.005658	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.009228	0.004464	unknown	ShapiroWilk
Arsenic (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.005649	0.004262	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	18	0.009431	0.0007454	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.006123	0.004135	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.005803	0.004086	unknown	ShapiroWilk
Arsenic (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	18	0.01338	0.005344	normal	ShapiroWilk
Barium (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	15	0.05839	0.04119	ln(x)	ShapiroWilk
Barium (mg/L)	SSPMW-2	No	n/a	n/a	Dixon`s	0.05	15	0.07137	0.0943	ln(x)	ShapiroWilk
Barium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	15	0.03701	0.02497	unknown	ShapiroWilk
Barium (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	15	0.03995	0.02755	unknown	ShapiroWilk
Barium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	15	0.02029	0.0225	unknown	ShapiroWilk
Barium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	15	0.02969	0.02024	unknown	ShapiroWilk
Barium (mg/L)	**APMW-4**	**Yes**	**0.1**	**3/21/2018**	**Dixon`s**	**0.05**	**15**	**0.02313**	**0.02218**	**normal**	**ShapiroWilk**
Barium (mg/L)	**APMW-5**	**Yes**	**0.2**	**3/21/2018**	**Dixon`s**	**0.05**	**15**	**0.03394**	**0.04758**	**ln(x)**	**ShapiroWilk**
Beryllium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002104	0.001154	unknown	ShapiroWilk
Beryllium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	18	0.05114	0.04892	ln(x)	ShapiroWilk
Beryllium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.1135	0.01113	normal	ShapiroWilk
Beryllium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002237	0.001187	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002237	0.001187	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002716	0.0003881	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.002162	0.001287	unknown	ShapiroWilk
Beryllium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	18	0.08119	0.01762	normal	ShapiroWilk
Boron (mg/L)	SSP/APMW-...	No	n/a	n/a	Dixon`s	0.05	16	0.8379	0.2075	ln(x)	ShapiroWilk
Boron (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	0.6637	0.2007	normal	ShapiroWilk
Boron (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	2.727	0.2667	normal	ShapiroWilk
Boron (mg/L)	**SSPMW-4**	**Yes**	**0.102**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**1.198**	**0.3201**	**normal**	**ShapiroWilk**
Boron (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	4.948	0.5306	normal	ShapiroWilk
Boron (mg/L)	APMW-3	No	n/a	n/a	Dixon`s	0.05	16	3.803	0.385	normal	ShapiroWilk
Boron (mg/L)	**APMW-4**	**Yes**	**0.677,0.566**	**12/13/202...**	**Dixon`s**	**0.05**	**16**	**1.975**	**0.5639**	**normal**	**ShapiroWilk**
Boron (mg/L)	**APMW-5**	**Yes**	**4.2**	**6/13/2018**	**Dixon`s**	**0.05**	**16**	**3.468**	**0.2483**	**normal**	**ShapiroWilk**
Cadmium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	18	0.003179	0.002103	unknown	ShapiroWilk
Cadmium (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.004271	0.001555	unknown	ShapiroWilk
Cadmium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.07053	0.009444	normal	ShapiroWilk
Cadmium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.003179	0.002103	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	18	0.003088	0.002209	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.00471	0.0003887	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.003179	0.002103	unknown	ShapiroWilk
Cadmium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	18	0.008677	0.001753	unknown	ShapiroWilk
Calcium (mg/L)	SSP/APMW-...	No	n/a	n/a	Dixon`s	0.05	16	654.7	35.75	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	825.4	74.74	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:55 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Calcium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	682.7	28.28	normal	ShapiroWilk
Calcium (mg/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	16	405.1	22.01	normal	ShapiroWilk
Calcium (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	82.63	10.54	normal	ShapiroWilk
Calcium (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	16	135.3	8.252	normal	ShapiroWilk
Calcium (mg/L)	**APMW-4**	**Yes**	**416,204**	**6/13/2018...**	**Dixon`s**	**0.05**	**16**	**486.3**	**83.03**	**normal**	**ShapiroWilk**
Calcium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	16	487.8	83.83	normal	ShapiroWilk
Chloride (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	16	1537	80.14	normal	ShapiroWilk
Chloride (mg/L)	SSPMW-2	No	n/a	n/a	Dixon`s	0.05	16	2382	319.2	normal	ShapiroWilk
Chloride (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	1761	135.6	normal	ShapiroWilk
Chloride (mg/L)	**SSPMW-4**	**Yes**	**378**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**1103**	**207.9**	**normal**	**ShapiroWilk**
Chloride (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	16	195.6	39.8	unknown	ShapiroWilk
Chloride (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	16	145.9	8.453	normal	ShapiroWilk
Chloride (mg/L)	**APMW-4**	**Yes**	**191**	**12/13/2022**	**Dixon`s**	**0.05**	**16**	**465.6**	**81.76**	**normal**	**ShapiroWilk**
Chloride (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	16	436.7	55.12	unknown	ShapiroWilk
Chromium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	15	0.006467	0.003983	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.008435	0.009562	unknown	ShapiroWilk
Chromium (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.008015	0.003259	unknown	ShapiroWilk
Chromium (mg/L)	**SSPMW-4**	**Yes**	**0.176**	**7/13/2021**	**NP (nrm)**	**NaN**	**15**	**0.01873**	**0.04362**	**unknown**	**ShapiroWilk**
Chromium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	15	0.006435	0.004019	unknown	ShapiroWilk
Chromium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.006417	0.004041	unknown	ShapiroWilk
Chromium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.006435	0.004019	unknown	ShapiroWilk
Chromium (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.006457	0.003994	unknown	ShapiroWilk
Cobalt (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	18	0.009843	0.009442	unknown	ShapiroWilk
Cobalt (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.07481	0.03343	unknown	ShapiroWilk
Cobalt (mg/L)	**SSPMW-3**	**Yes**	**0.35**	**12/18/2019**	**Dixon`s**	**0.05**	**18**	**0.5581**	**0.06638**	**normal**	**ShapiroWilk**
Cobalt (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.01087	0.01171	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	18	0.01678	0.003473	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.04059	0.007843	normal	ShapiroWilk
Cobalt (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.009946	0.009346	unknown	ShapiroWilk
Cobalt (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	18	0.168	0.02733	normal	ShapiroWilk
Fluoride (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	18	0.3555	0.3326	unknown	ShapiroWilk
Fluoride (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	18	0.5523	0.5835	ln(x)	ShapiroWilk
Fluoride (mg/L)	**SSPMW-3**	**Yes**	**1.82,2.72**	**6/11/2018...**	**Dixon`s**	**0.05**	**18**	**0.8708**	**0.5637**	**normal**	**ShapiroWilk**
Fluoride (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.4738	0.6826	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	18	0.6628	0.124	normal	ShapiroWilk
Fluoride (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.2169	0.2909	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.2567	0.3016	unknown	ShapiroWilk
Fluoride (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	18	1.756	0.6665	unknown	ShapiroWilk
Lead (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	18	0.006306	0.004059	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-2	No	n/a	n/a	NP (nrm)	NaN	18	0.006769	0.004923	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.008311	0.005998	unknown	ShapiroWilk
Lead (mg/L)	SSPMW-4	No	n/a	n/a	NP (nrm)	NaN	18	0.005324	0.004517	unknown	ShapiroWilk
Lead (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	15	0.005962	0.004598	unknown	ShapiroWilk
Lead (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	15	0.005901	0.004672	unknown	ShapiroWilk
Lead (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.005919	0.00465	unknown	ShapiroWilk
Lead (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	15	0.006954	0.003581	unknown	ShapiroWilk
Lithium (mg/L)	**SSP/APMW-...**	**Yes**	**2.15**	**3/21/2018**	**Dixon`s**	**0.05**	**18**	**1.353**	**0.236**	**normal**	**ShapiroWilk**
Lithium (mg/L)	**SSPMW-2**	**Yes**	**4.9**	**3/20/2018**	**Dixon`s**	**0.05**	**18**	**1.013**	**0.9814**	**normal**	**ShapiroWilk**
Lithium (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	18	0.6171	0.07423	normal	ShapiroWilk
Lithium (mg/L)	**SSPMW-4**	**Yes**	**0.146**	**7/13/2021**	**Dixon`s**	**0.05**	**18**	**0.8349**	**0.195**	**normal**	**ShapiroWilk**

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:55 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Lithium (mg/L)	**APMW-1D**	**Yes**	**0.01**	**8/24/2017**	**Dixon`s**	**0.05**	**18**	**0.03772**	**0.01642**	**ln(x)**	**ShapiroWilk**
Lithium (mg/L)	**APMW-3**	**Yes**	**0.2**	**1/15/2019**	**Dixon`s**	**0.05**	**18**	**0.06039**	**0.03668**	**normal**	**ShapiroWilk**
Lithium (mg/L)	**APMW-4**	**Yes**	**0.317,0.277**	**7/19/2022...**	**Dixon`s**	**0.05**	**18**	**0.8091**	**0.2152**	**normal**	**ShapiroWilk**
Lithium (mg/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	18	0.4867	0.08921	normal	ShapiroWilk
Mercury (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000622	0.0004186	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000622	0.0004186	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000...	0.0003833	unknown	ShapiroWilk
Mercury (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.000622	0.0004186	unknown	ShapiroWilk
Mercury (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0004129	unknown	ShapiroWilk
Mercury (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0004768	unknown	ShapiroWilk
Mercury (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.000...	0.0004129	unknown	ShapiroWilk
Mercury (mg/L)	**APMW-5**	**Yes**	**0.000241,...**	**3/21/2018...**	**NP (nrm)**	**NaN**	**18**	**0.001287**	**0.001423**	**unknown**	**ShapiroWilk**
Molybdenum (mg/L)	SSP/APMW-...	No	n/a	n/a	NP (nrm)	NaN	15	0.02831	0.0241	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.02904	0.02326	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.02849	0.02391	unknown	ShapiroWilk
Molybdenum (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.03286	0.02384	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	18	0.03461	0.01511	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	18	0.02491	0.02321	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.02492	0.0232	unknown	ShapiroWilk
Molybdenum (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	18	0.02515	0.02298	unknown	ShapiroWilk
pH (S.U.)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	17	5.792	0.1815	normal	ShapiroWilk
pH (S.U.)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	17	4.682	0.5115	normal	ShapiroWilk
pH (S.U.)	**SSPMW-3**	**Yes**	**4.73,3.6**	**12/18/201...**	**Dixon`s**	**0.05**	**17**	**4.249**	**0.2198**	**normal**	**ShapiroWilk**
pH (S.U.)	**SSPMW-4**	**Yes**	**11.96**	**7/13/2021**	**Dixon`s**	**0.05**	**17**	**6.536**	**1.42**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	17	5.835	0.2197	normal	ShapiroWilk
pH (S.U.)	**APMW-3**	**Yes**	**4.34**	**6/17/2020**	**Dixon`s**	**0.05**	**17**	**5.056**	**0.2366**	**normal**	**ShapiroWilk**
pH (S.U.)	APMW-4	No	n/a	n/a	EPA 1989	0.05	17	5.612	0.1511	normal	ShapiroWilk
pH (S.U.)	**APMW-5**	**Yes**	**4.22**	**3/21/2018**	**Dixon`s**	**0.05**	**17**	**3.528**	**0.2408**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	18	1.751	0.8452	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**SSPMW-2**	**Yes**	**14.6**	**2/21/2017**	**Dixon`s**	**0.05**	**18**	**3.148**	**2.94**	**normal**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	18	32.28	6.424	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	SSPMW-4	No	n/a	n/a	EPA 1989	0.05	18	3.145	1.291	ln(x)	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	18	1.839	0.8564	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	**APMW-3**	**Yes**	**7.54**	**8/24/2016**	**Dixon`s**	**0.05**	**18**	**2.619**	**1.453**	**ln(x)**	**ShapiroWilk**
Radium 226 + 228 (pCi/L)	APMW-4	No	n/a	n/a	EPA 1989	0.05	18	1.66	0.8712	normal	ShapiroWilk
Radium 226 + 228 (pCi/L)	APMW-5	No	n/a	n/a	EPA 1989	0.05	18	2.679	1.571	ln(x)	ShapiroWilk
Selenium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	15	0.007716	0.003077	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	15	0.01172	0.01185	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.01022	0.01151	unknown	ShapiroWilk
Selenium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.007677	0.003117	unknown	ShapiroWilk
Selenium (mg/L)	APMW-1D	No	n/a	n/a	NP (nrm)	NaN	15	0.007141	0.003762	unknown	ShapiroWilk
Selenium (mg/L)	APMW-3	n/a	n/a	n/a	NP (nrm)	NaN	15	0.007473	0.003431	unknown	ShapiroWilk
Selenium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.007716	0.003077	unknown	ShapiroWilk
Selenium (mg/L)	APMW-5	n/a	n/a	n/a	NP (nrm)	NaN	15	0.0136	0.01573	unknown	ShapiroWilk
Sulfate (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	16	3011	111.6	normal	ShapiroWilk
Sulfate (mg/L)	**SSPMW-2**	**Yes**	**2610**	**6/17/2020**	**Dixon`s**	**0.05**	**16**	**2144**	**151.5**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	SSPMW-3	No	n/a	n/a	EPA 1989	0.05	16	2446	132.8	normal	ShapiroWilk
Sulfate (mg/L)	**SSPMW-4**	**Yes**	**82.2**	**7/13/2021**	**Dixon`s**	**0.05**	**16**	**1093**	**282**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	524.4	67.23	normal	ShapiroWilk
Sulfate (mg/L)	APMW-3	No	n/a	n/a	EPA 1989	0.05	16	697.4	60.71	normal	ShapiroWilk

Outlier Analysis

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 10:55 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Sulfate (mg/L)	**APMW-4**	**Yes**	**1530,876**	**7/19/2022...**	**Dixon`s**	**0.05**	**16**	**2130**	**397**	**normal**	**ShapiroWilk**
Sulfate (mg/L)	**APMW-5**	**Yes**	**2180,1670...**	**6/25/2019...**	**Dixon`s**	**0.05**	**16**	**2639**	**374.5**	**normal**	**ShapiroWilk**
TDS (mg/L)	SSP/APMW-...	No	n/a	n/a	EPA 1989	0.05	16	6763	544.2	normal	ShapiroWilk
TDS (mg/L)	SSPMW-2	No	n/a	n/a	EPA 1989	0.05	16	6639	436.6	normal	ShapiroWilk
TDS (mg/L)	**SSPMW-3**	**Yes**	**2200**	**2/10/2021**	**Dixon`s**	**0.05**	**16**	**6031**	**1063**	**normal**	**ShapiroWilk**
TDS (mg/L)	**SSPMW-4**	**Yes**	**3080,2890**	**7/13/2021...**	**Dixon`s**	**0.05**	**16**	**3695**	**319.6**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-1D	No	n/a	n/a	EPA 1989	0.05	16	1313	112.1	normal	ShapiroWilk
TDS (mg/L)	**APMW-3**	**Yes**	**1770**	**6/8/2018**	**Dixon`s**	**0.05**	**16**	**1401**	**103.6**	**normal**	**ShapiroWilk**
TDS (mg/L)	**APMW-4**	**Yes**	**3780,1790...**	**6/17/2020...**	**Dixon`s**	**0.05**	**16**	**3892**	**598.6**	**normal**	**ShapiroWilk**
TDS (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	16	4534	517.3	unknown	ShapiroWilk
Thallium (mg/L)	SSP/APMW-...	n/a	n/a	n/a	NP (nrm)	NaN	18	0.001504	0.0006738	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-2	n/a	n/a	n/a	NP (nrm)	NaN	18	0.001578	0.0005739	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-3	No	n/a	n/a	NP (nrm)	NaN	18	0.009461	0.0009681	unknown	ShapiroWilk
Thallium (mg/L)	SSPMW-4	n/a	n/a	n/a	NP (nrm)	NaN	18	0.001582	0.0005523	unknown	ShapiroWilk
Thallium (mg/L)	APMW-1D	n/a	n/a	n/a	NP (nrm)	NaN	15	0.001495	0.0006665	unknown	ShapiroWilk
Thallium (mg/L)	APMW-3	No	n/a	n/a	NP (nrm)	NaN	15	0.001436	0.0007425	unknown	ShapiroWilk
Thallium (mg/L)	APMW-4	n/a	n/a	n/a	NP (nrm)	NaN	15	0.00151	0.0006584	unknown	ShapiroWilk
Thallium (mg/L)	APMW-5	No	n/a	n/a	NP (nrm)	NaN	15	0.002123	0.0001605	unknown	ShapiroWilk

AP/SSP Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:06 AM

	SSPMW-3 Barium (mg/L)	APMW-1D Barium (mg/L)	APMW-3 Barium (mg/L)	APMW-4 Barium (mg/L)	SSPMW-2 Boron (mg/L)	SSPMW-4 Boron (mg/L)	APMW-5 Boron (mg/L)	SSPMW-2 Cadmium (mg/L)	APMW-4 Calcium (mg/L)	SSPMW-4 Chloride (mg/L)
6/22/2016										
8/24/2016										
10/18/2016										
12/20/2016	0.09 (o)									
12/21/2016										
2/21/2017										
5/4/2017										
6/13/2017										
8/24/2017										
3/20/2018			<0.2 (o)							
3/21/2018	<0.2 (o)	<0.2 (o)		<0.2 (o)						
6/8/2018										
6/11/2018										
6/13/2018							4.2 (o)		416 (o)	
1/15/2019					<2 (o)					
6/28/2019								0.00689 (o)		
12/18/2019										
6/17/2020										
2/10/2021										
7/13/2021						0.102 (o)				378 (o)

AP/SSP Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:06 AM

	SSPMW-4 Chromium (mg/L)	SSPMW-3 Cobalt (mg/L)	APMW-1D Cobalt (mg/L)	SSPMW-3 Fluoride (mg/L)	SSP/APMW-1 Lithium (mg/L)	SSPMW-2 Lithium (mg/L)	SSPMW-4 Lithium (mg/L)	APMW-3 Lithium (mg/L)	APMW-5 Mercury (mg/L)	APMW-1D Molybdenum (mg/L)
6/22/2016			<0.02 (o)							<0.05 (o)
8/24/2016			<0.02 (o)							<0.05 (o)
10/18/2016			<0.02 (o)							<0.05 (o)
12/20/2016										
12/21/2016			<0.02 (o)							<0.05 (o)
2/21/2017			<0.02 (o)							<0.05 (o)
5/4/2017			<0.02 (o)							<0.05 (o)
6/13/2017			<0.02 (o)							<0.05 (o)
8/24/2017			<0.02 (o)							<0.05 (o)
3/20/2018						4.9 (o)				
3/21/2018					2.15 (o)					
6/8/2018										
6/11/2018				1.82 (o)						
6/13/2018										
1/15/2019				2.72 (o)				<0.4 (o)		
6/28/2019										
12/18/2019		0.35 (o)								
6/17/2020										
2/10/2021									0.00643 (o)	
7/13/2021	0.176 (o)						0.146 (o)			

AP/SSP Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:06 AM

	SSPMW-3 pH (S.U.)	SSPMW-4 pH (S.U.)	APMW-3 pH (S.U.)	APMW-5 pH (S.U.)	SSPMW-2 Radium 226 + 228 (pCi/L)	APMW-3 Radium 226 + 228 (pCi/L)	SSPMW-2 Sulfate (mg/L)	SSPMW-4 Sulfate (mg/L)	APMW-5 Sulfate (mg/L)	SSPMW-3 TDS (mg/L)
6/22/2016										
8/24/2016						7.54 (o)				
10/18/2016										
12/20/2016										
12/21/2016										
2/21/2017					14.6 (o)					
5/4/2017										
6/13/2017										
8/24/2017										
3/20/2018										
3/21/2018				4.22 (o)						
6/8/2018										
6/11/2018										
6/13/2018										
1/15/2019										
6/28/2019										
12/18/2019	4.73 (o)									
6/17/2020	3.6 (o)		4.34 (o)				2610 (o)			
2/10/2021									1670 (o)	2200 (o)
7/13/2021		11.96 (o)						82.2 (o)		

AP/SSP Outlier Summary

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:06 AM

	APMW-3 TDS (mg/L)
6/22/2016	
8/24/2016	
10/18/2016	
12/20/2016	
12/21/2016	
2/21/2017	
5/4/2017	
6/13/2017	
8/24/2017	
3/20/2018	
3/21/2018	
6/8/2018	1770 (o)
6/11/2018	
6/13/2018	
1/15/2019	
6/28/2019	
12/18/2019	
6/17/2020	
2/10/2021	
7/13/2021	

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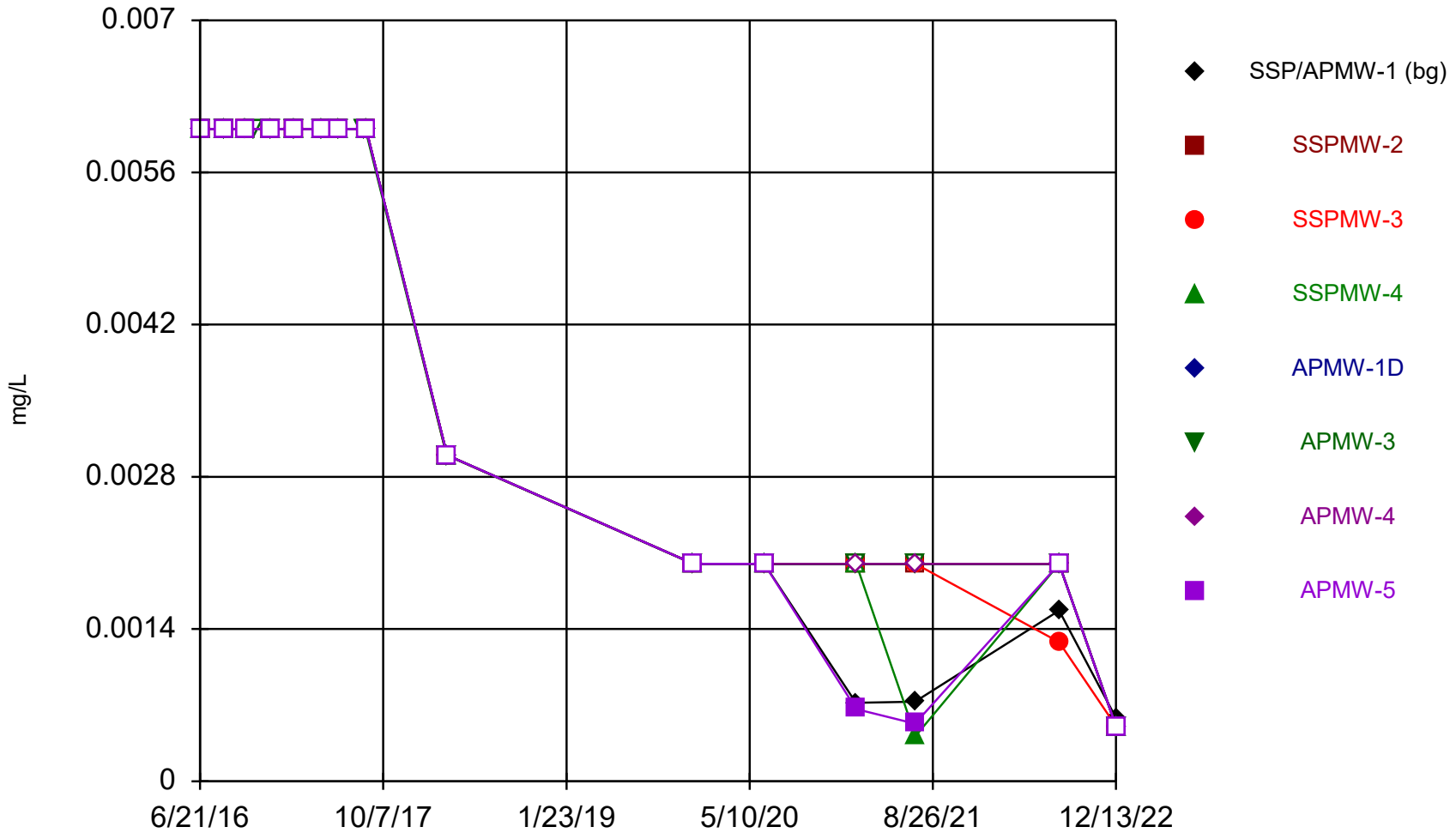
Time Series



Constituent: Antimony Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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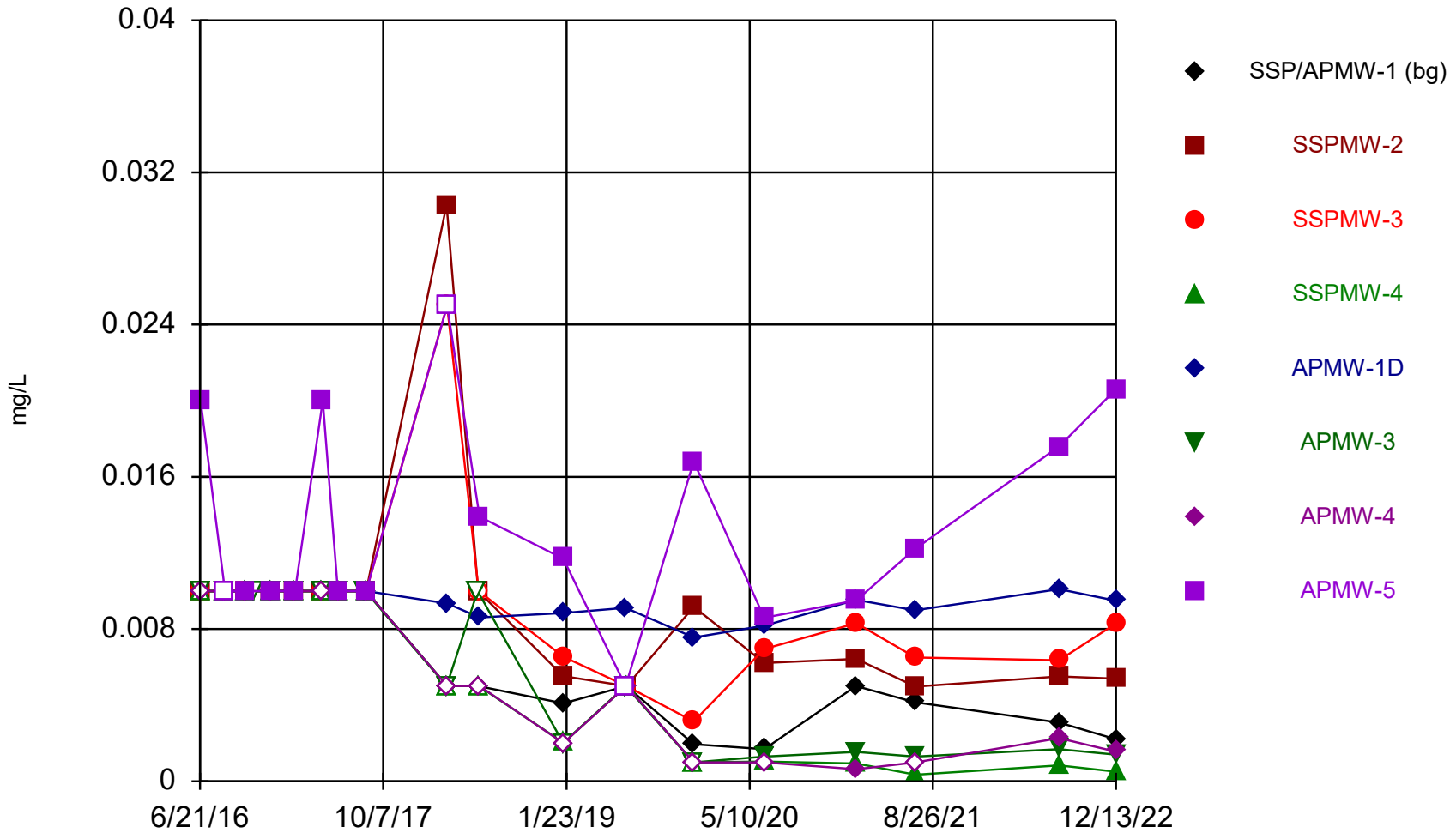
Time Series



Constituent: Arsenic Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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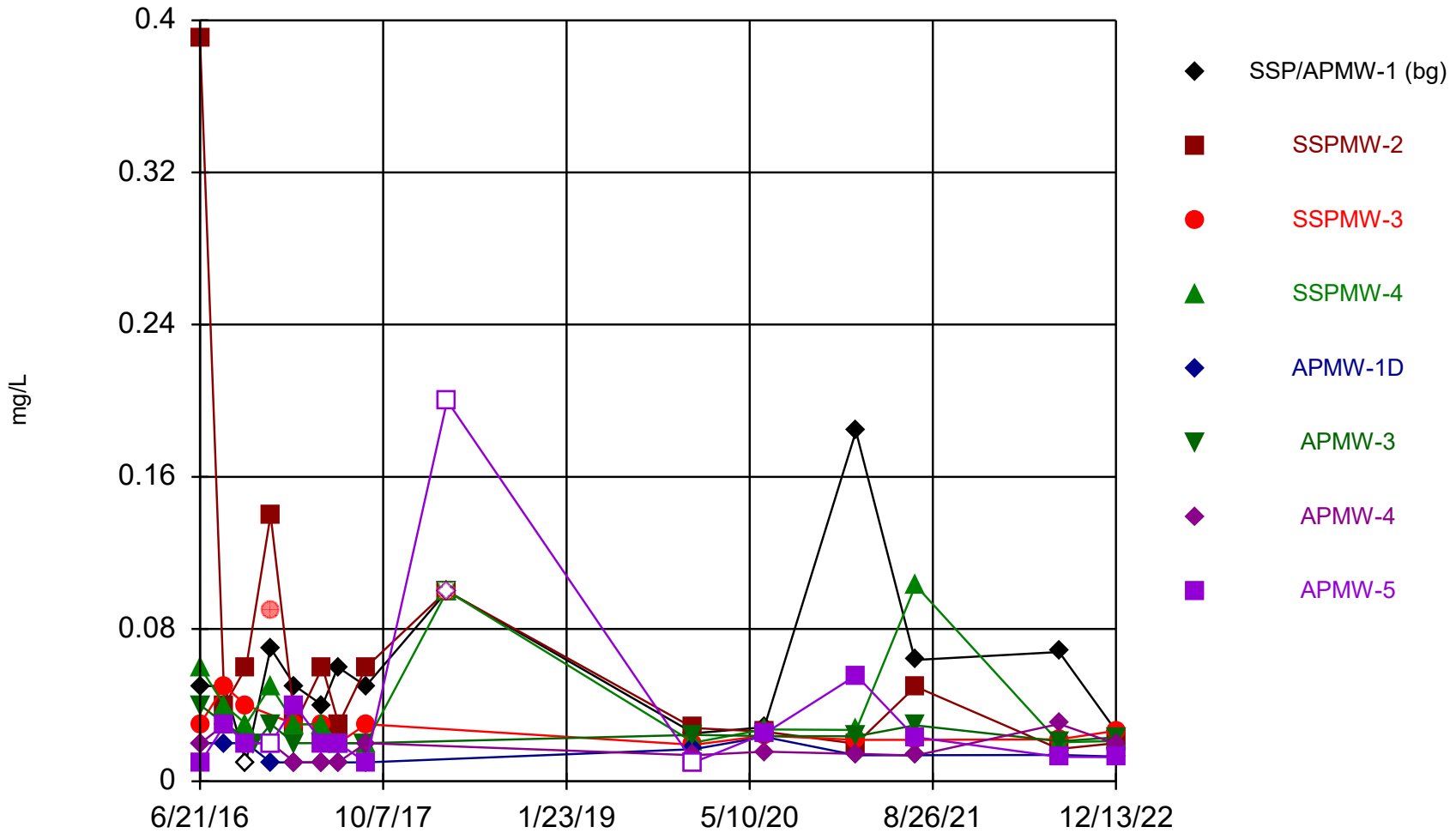
Time Series



Constituent: Barium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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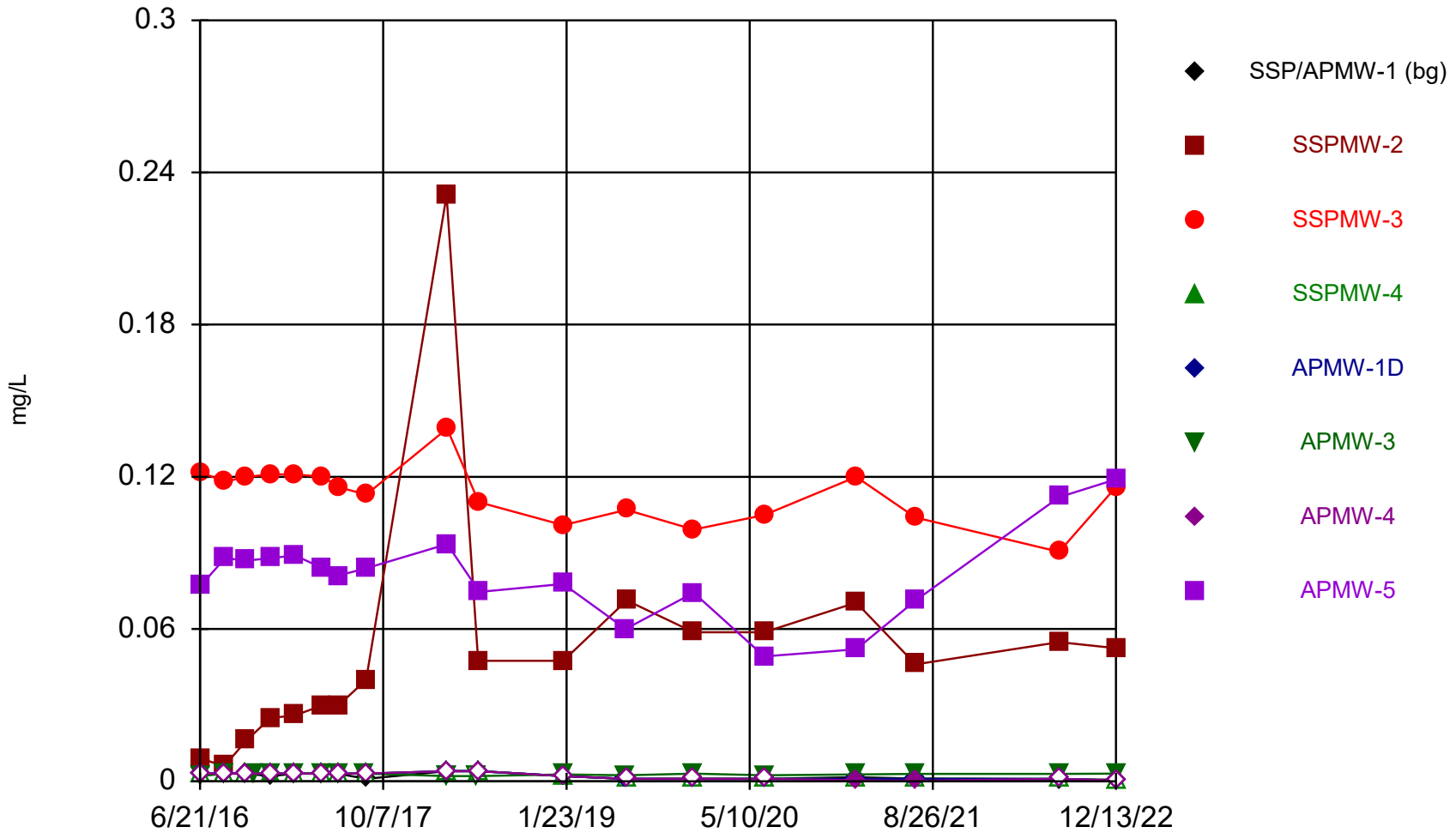
Time Series



Constituent: Beryllium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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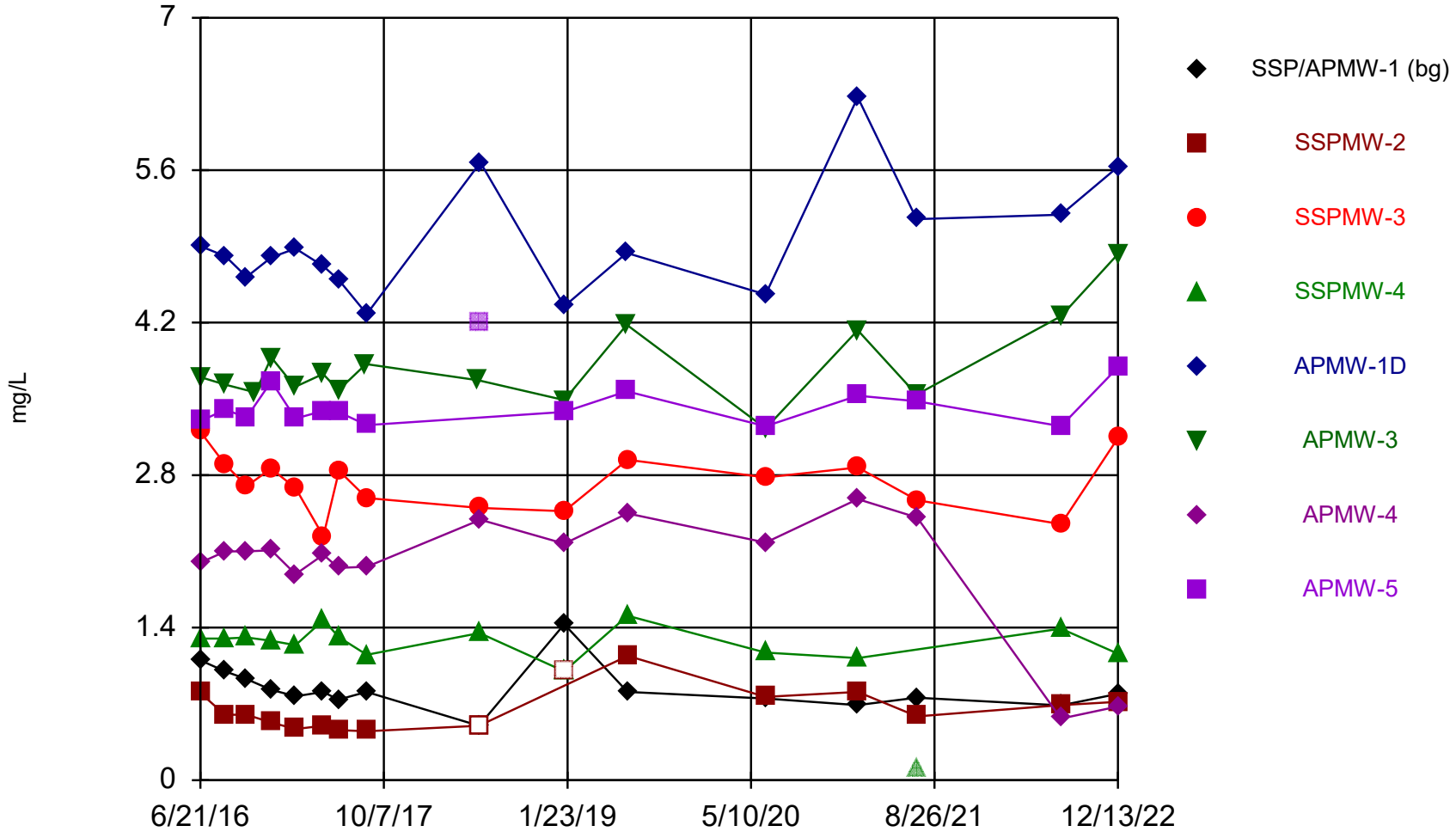
Time Series

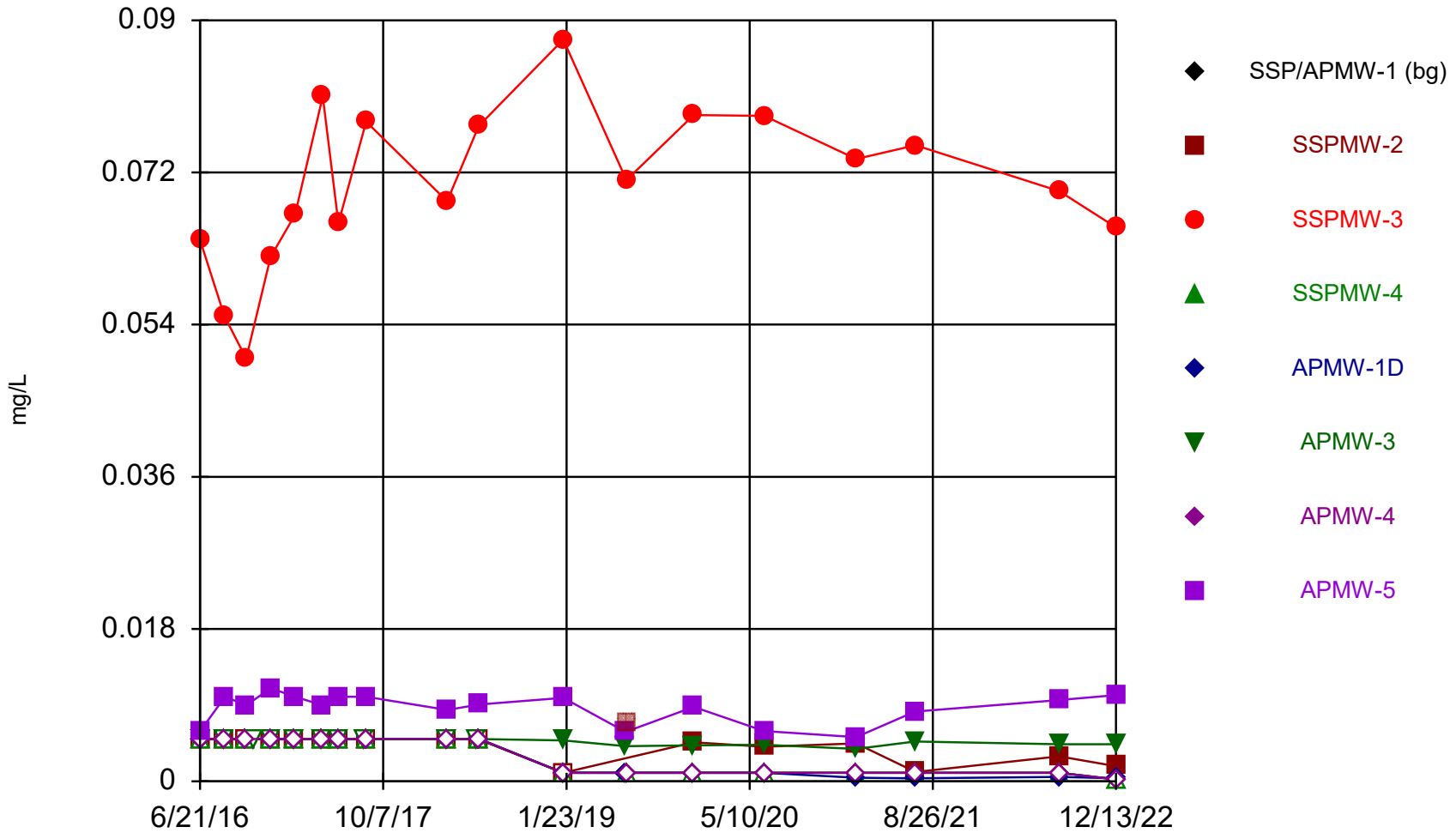


Constituent: Boron Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

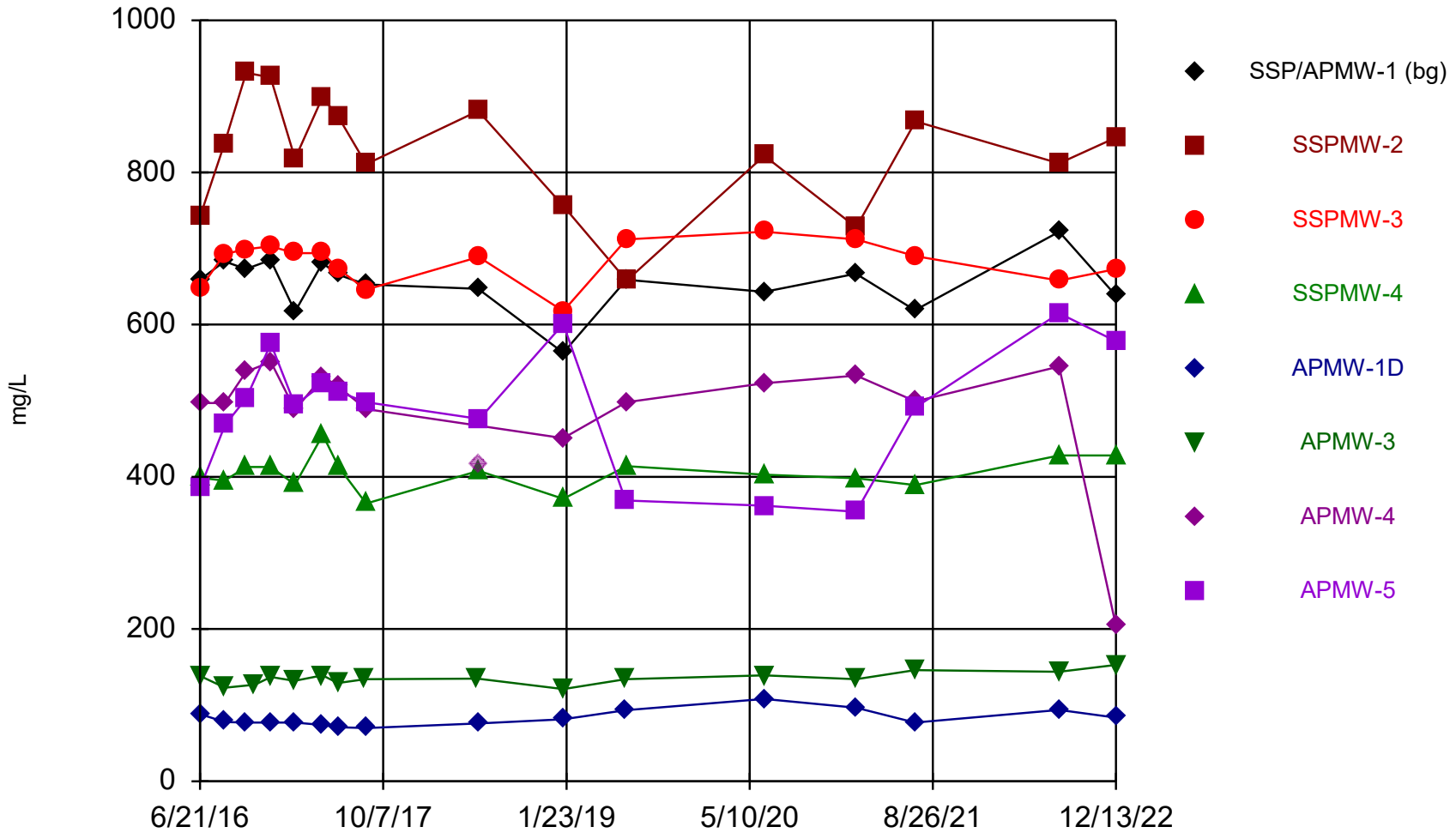
Time Series



Constituent: Cadmium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

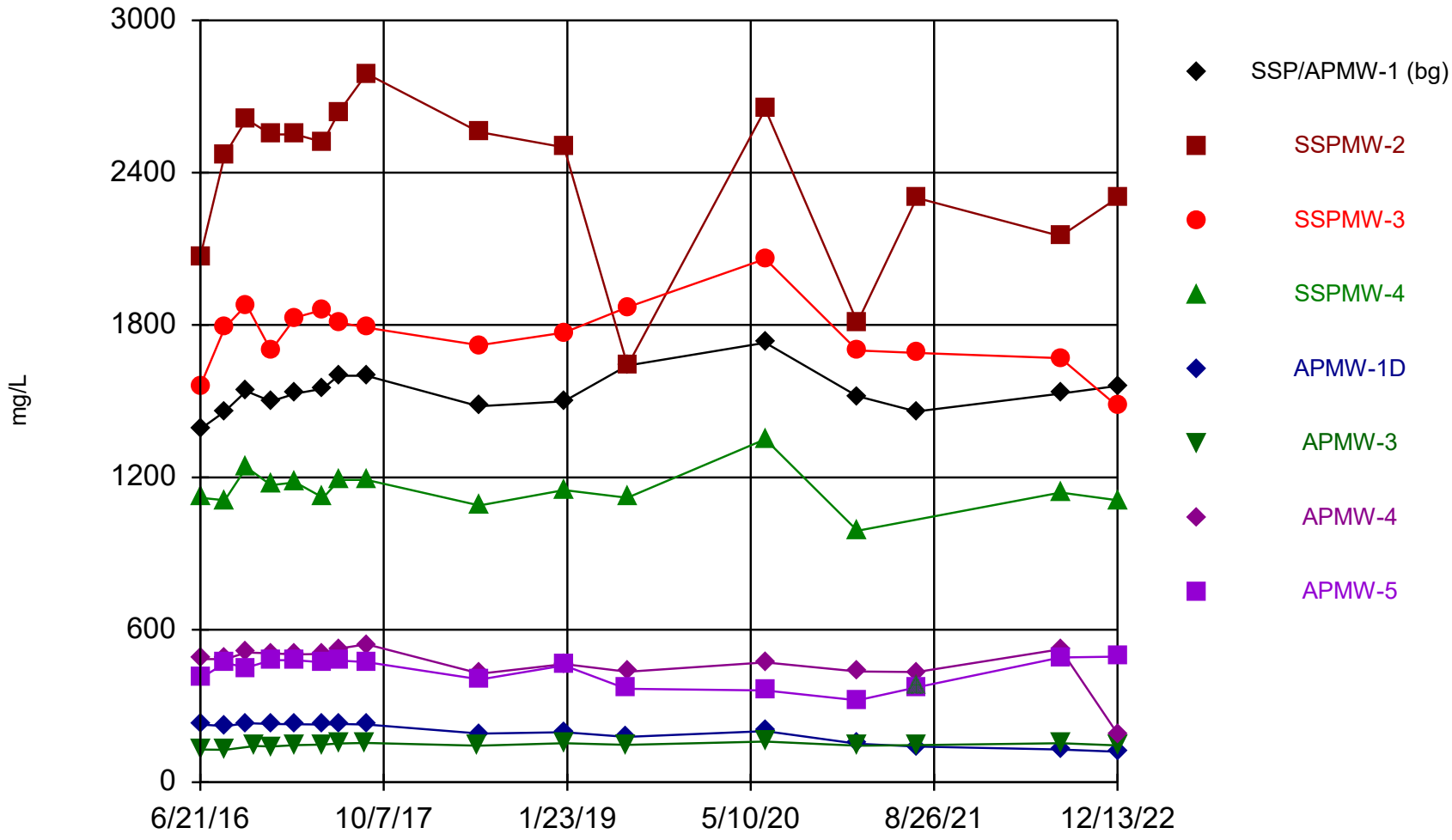
Time Series



Constituent: Calcium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

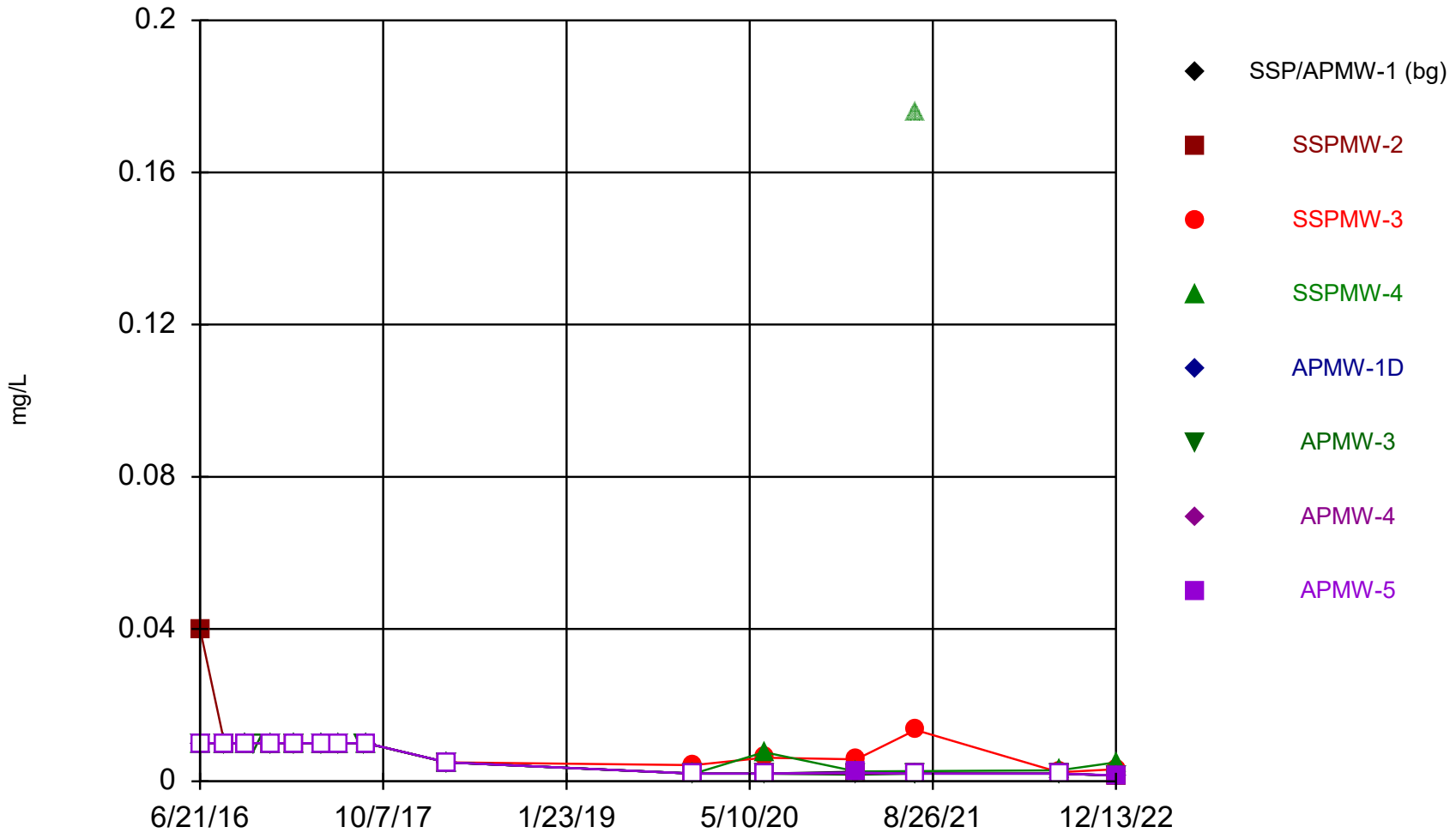


Constituent: Chloride Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series



Constituent: Chromium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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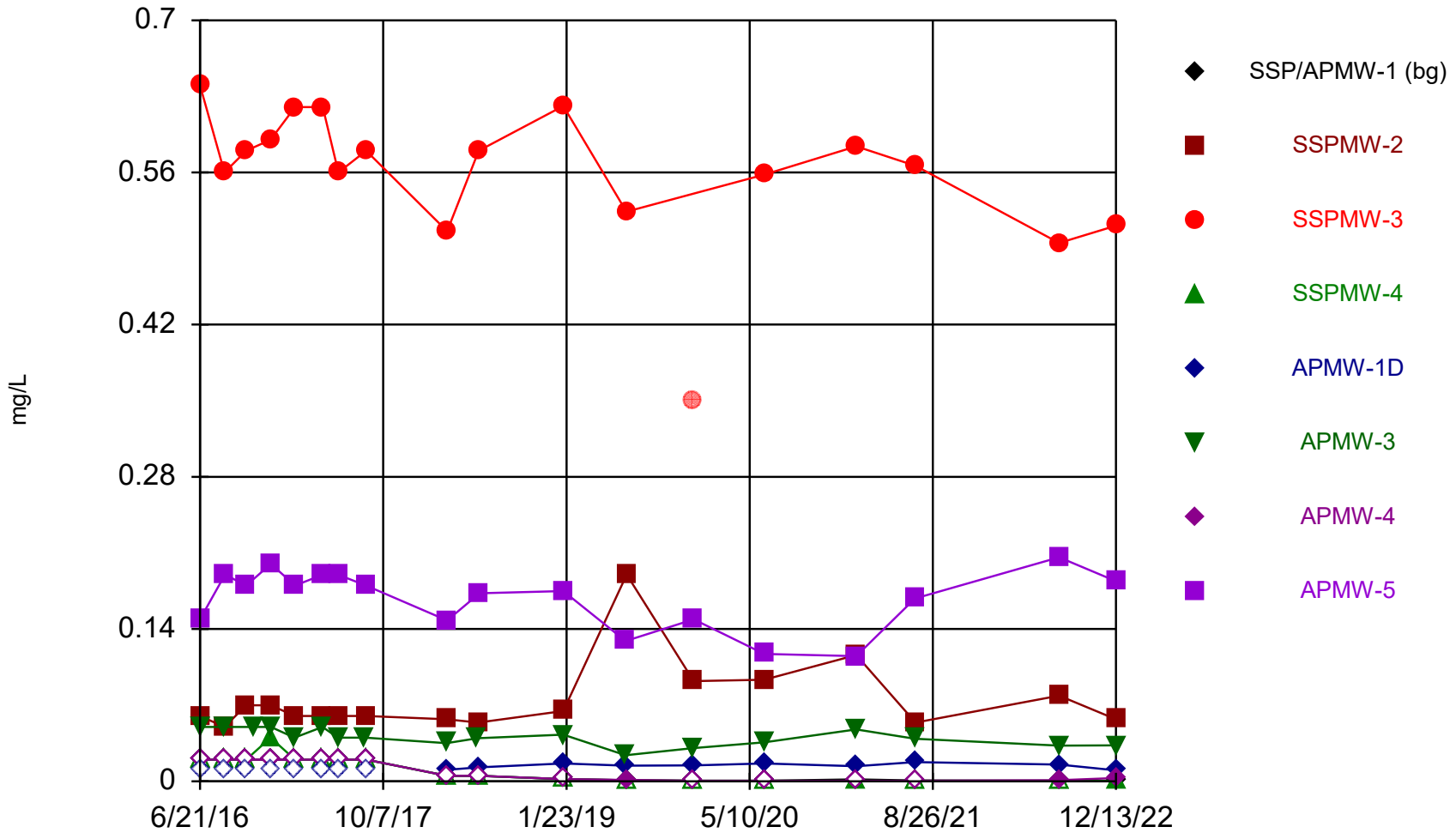
Time Series



Constituent: Cobalt Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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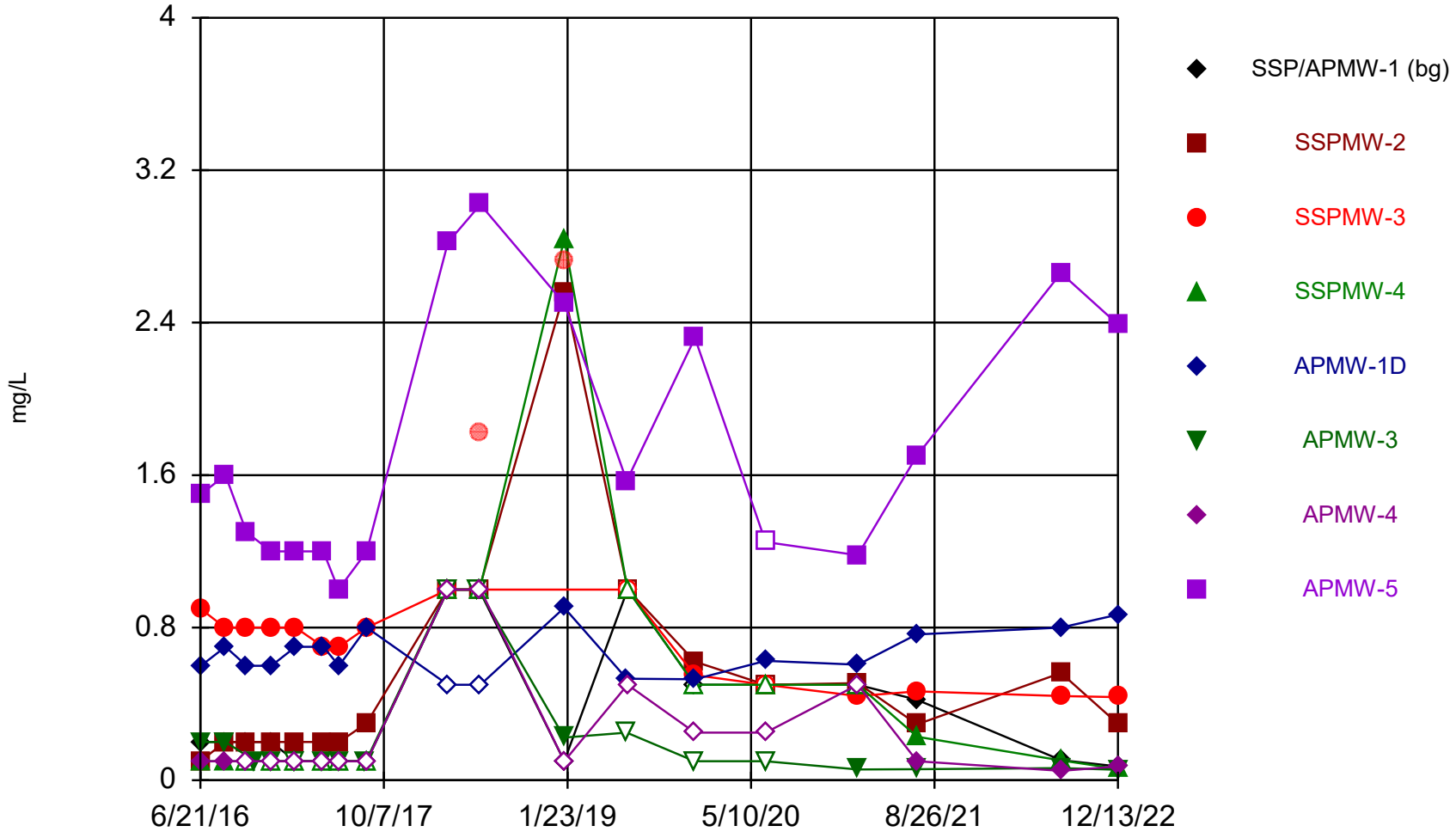
Time Series



Constituent: Fluoride Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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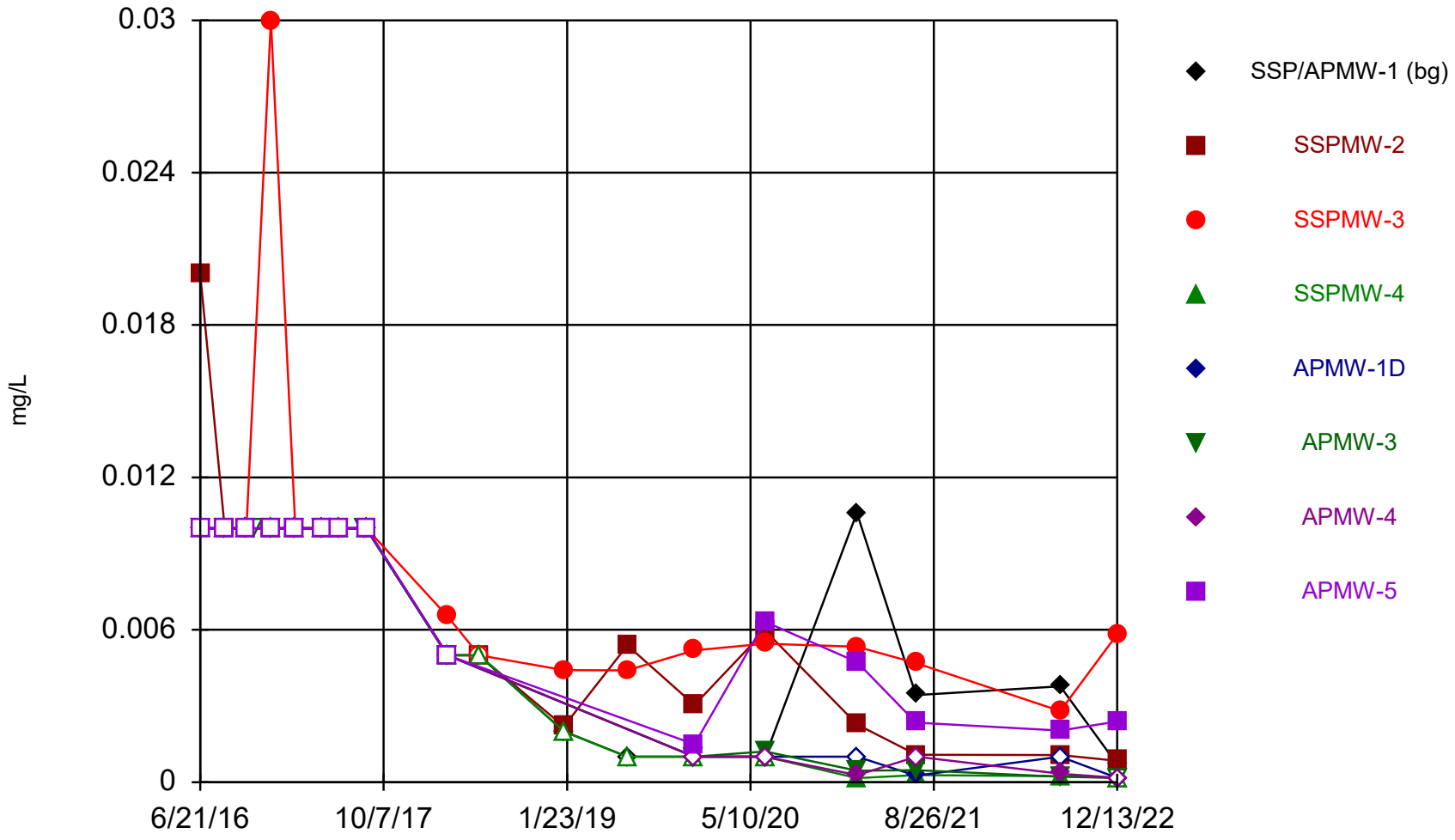
Time Series



Constituent: Lead Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

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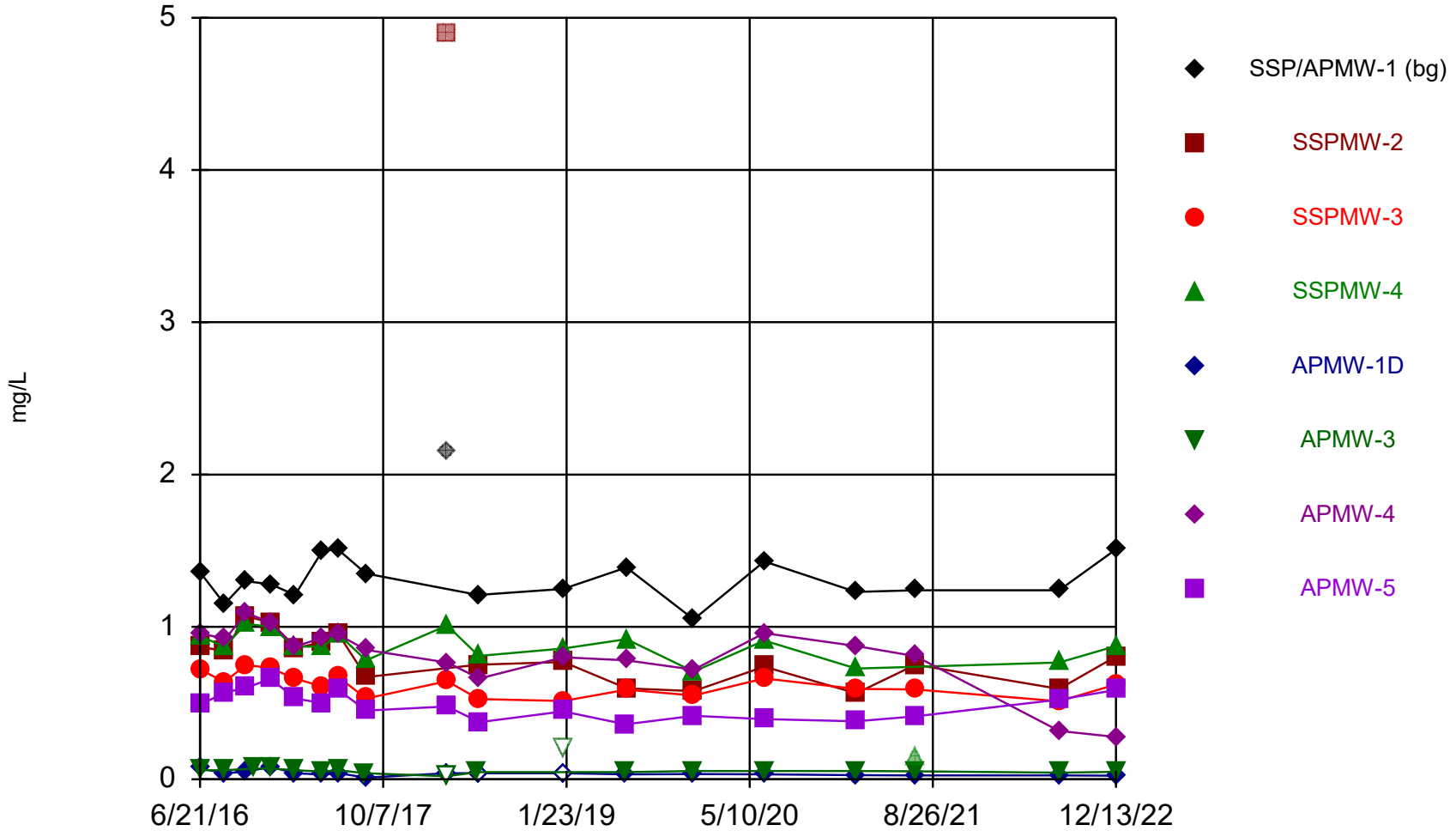
Hollow symbols indicate censored values.

Time Series

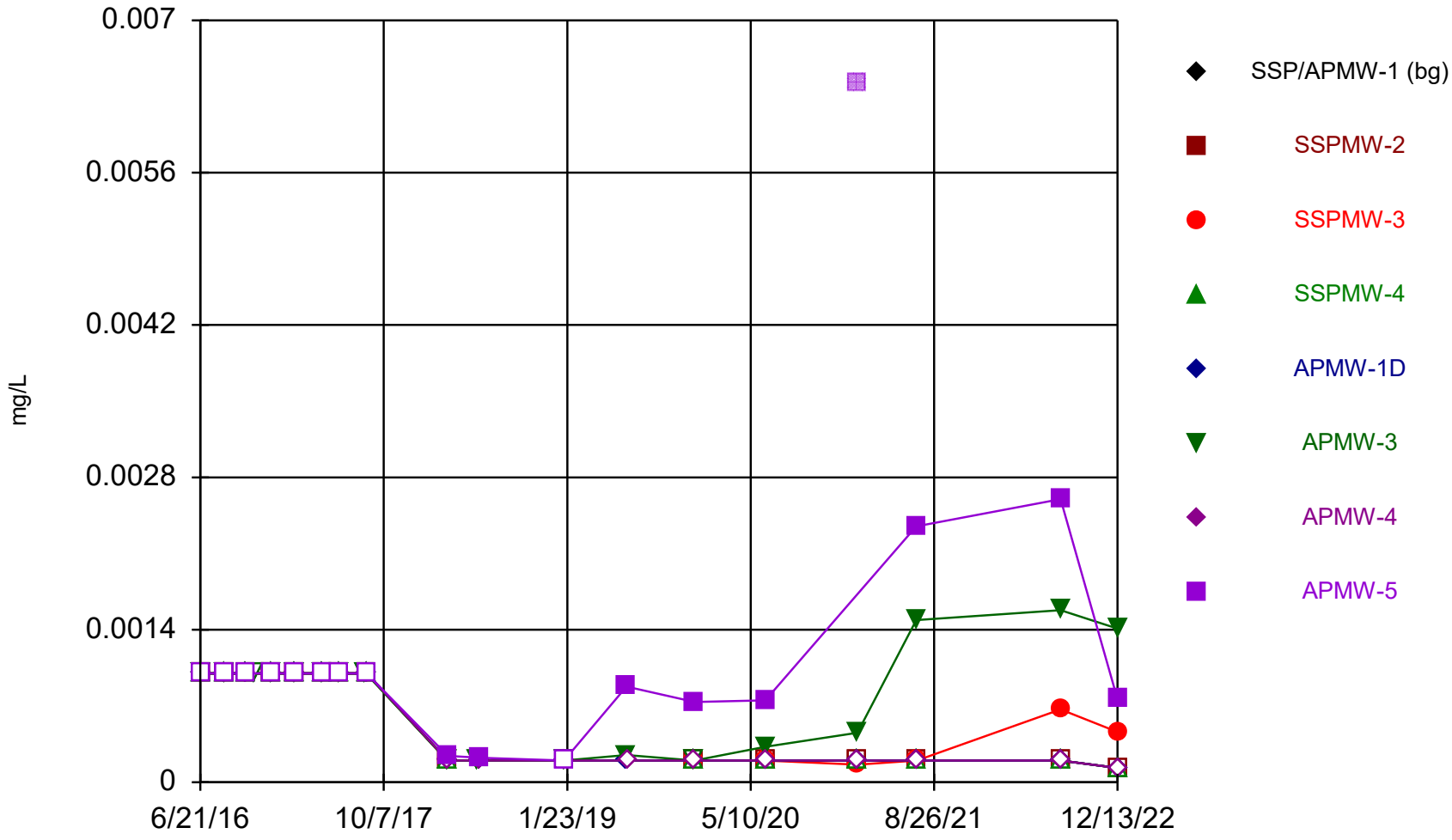


Constituent: Lithium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Time Series

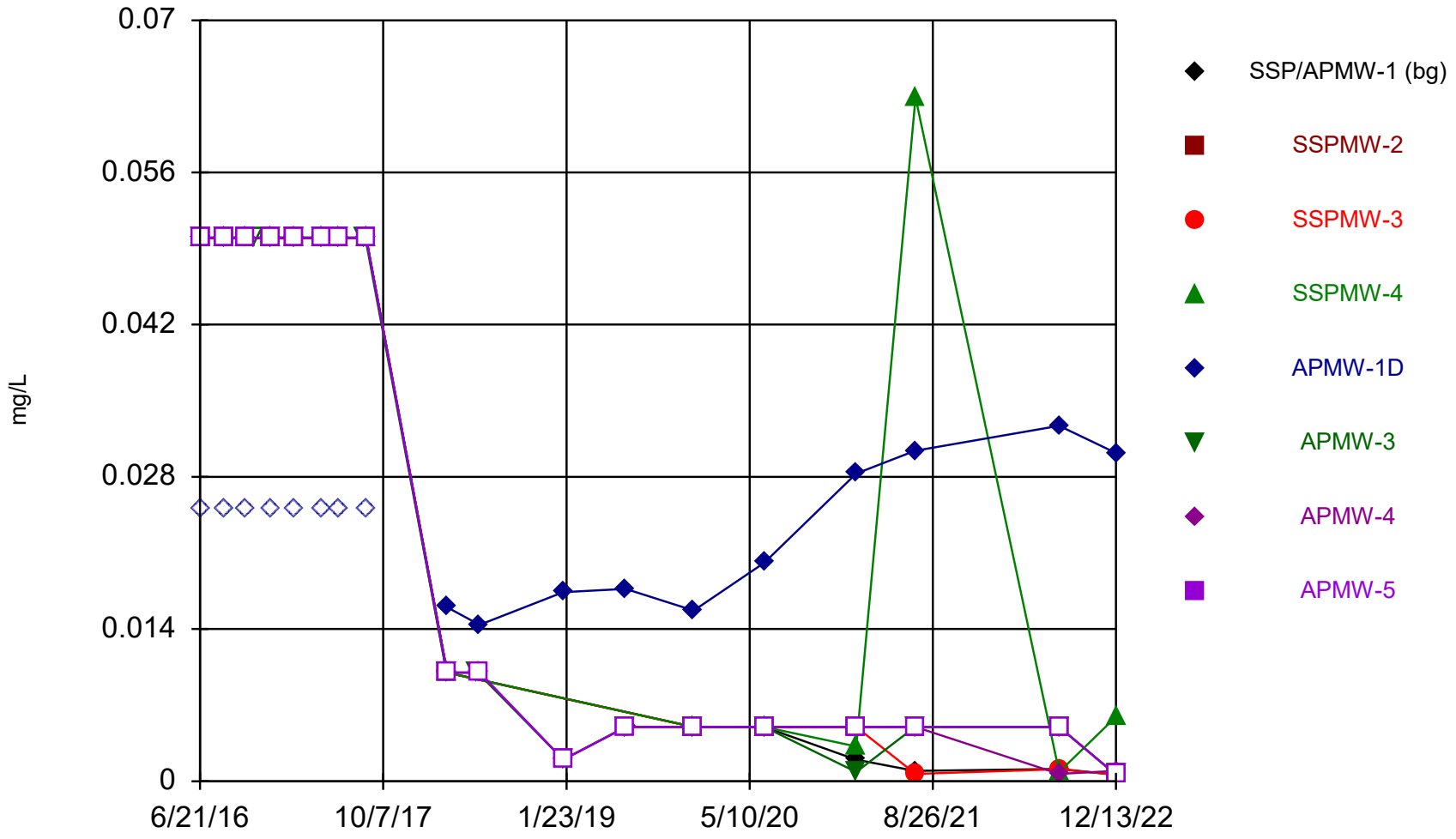


Constituent: Mercury Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

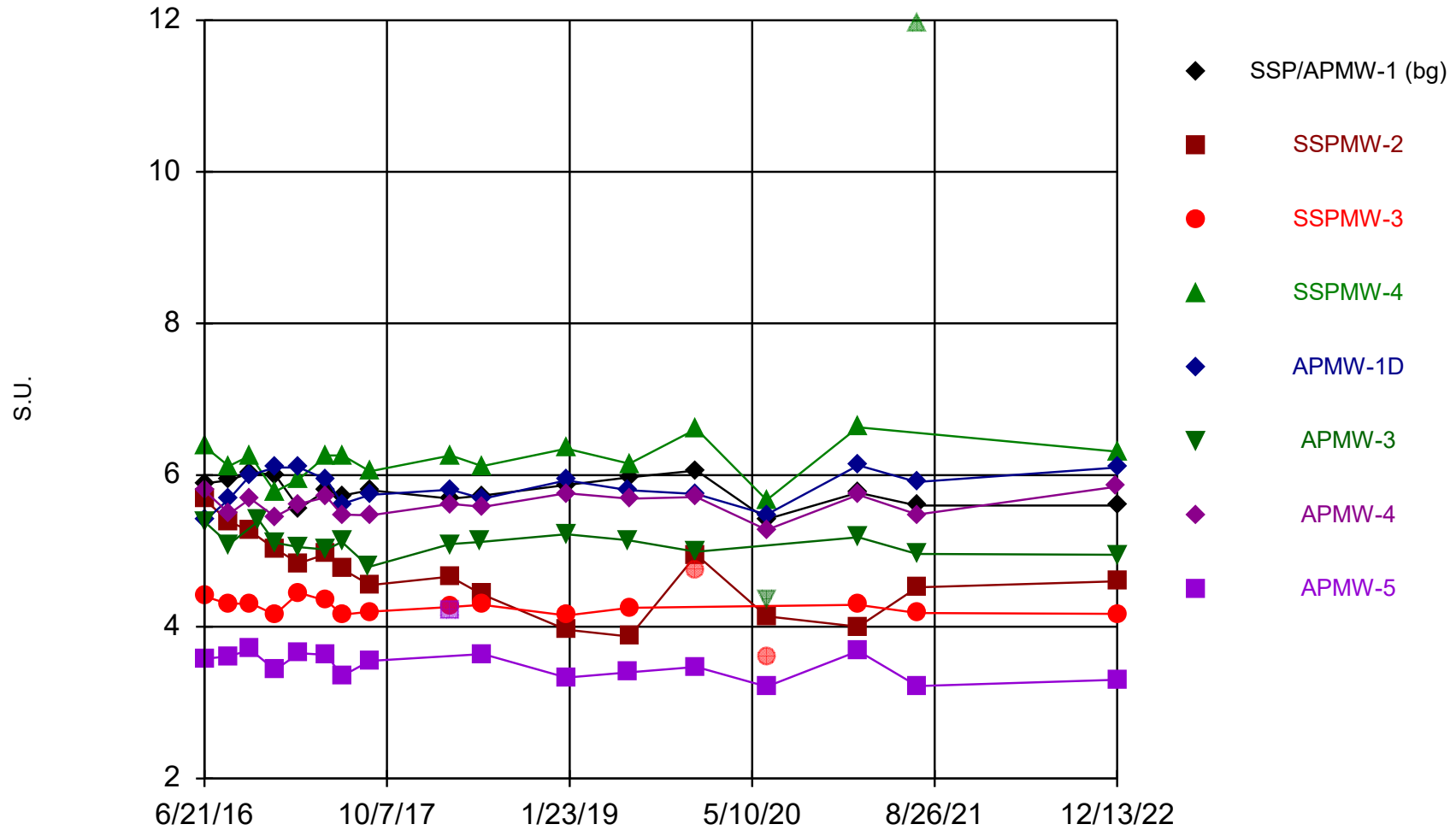
Time Series



Constituent: Molybdenum Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

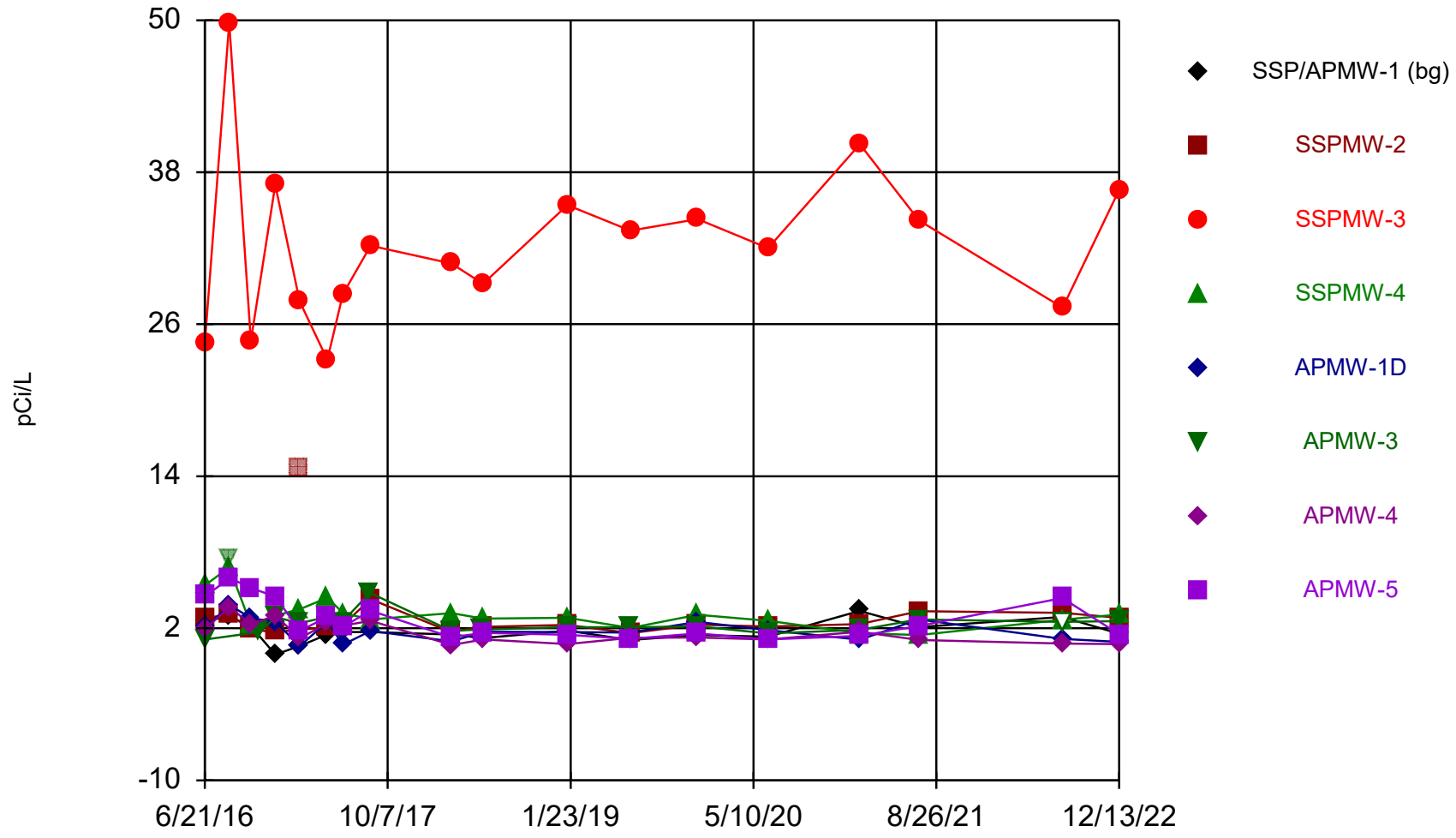


Constituent: pH Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

Time Series

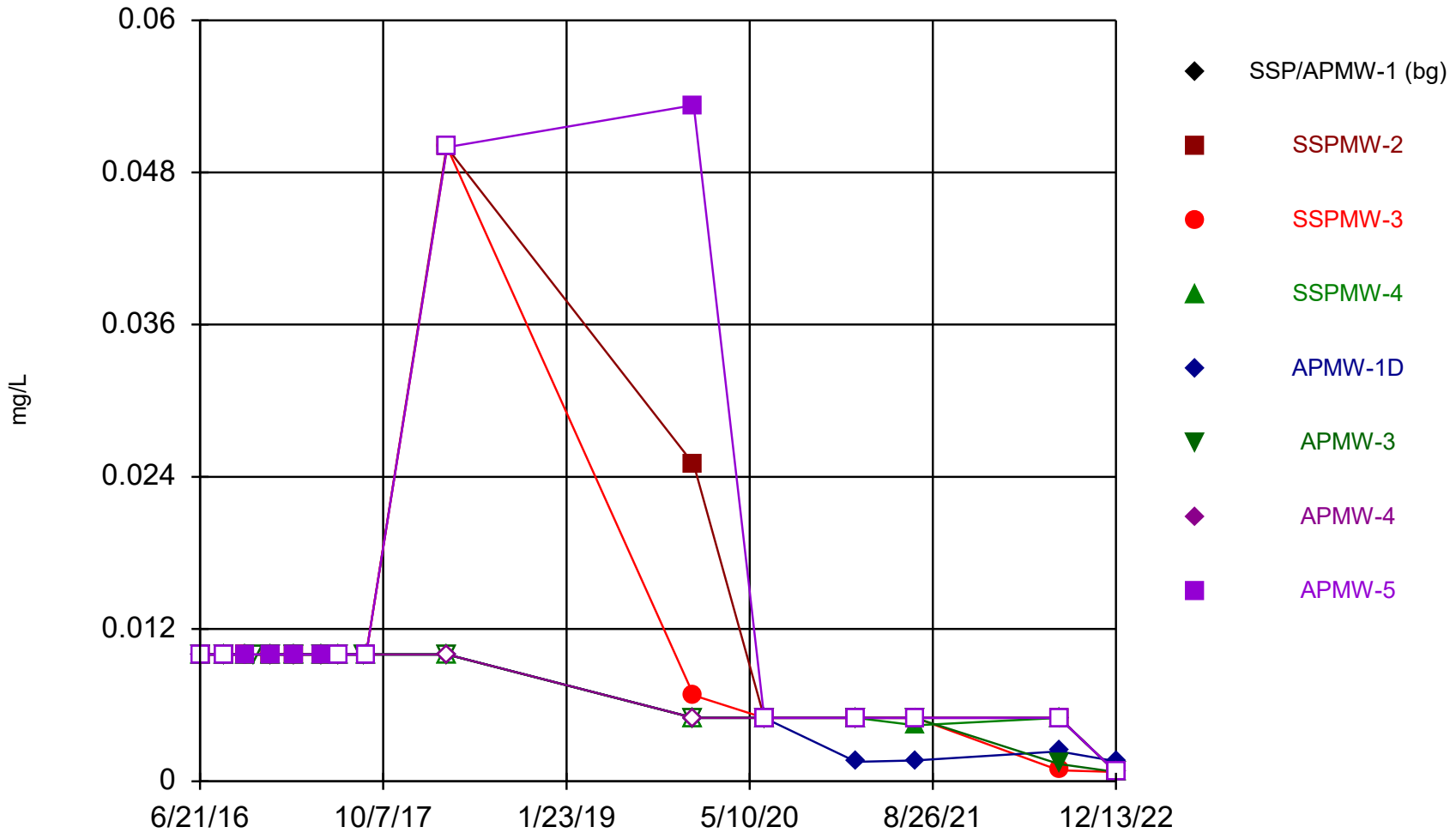


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sanitas™ v.9.6.36 Software licensed to HDR. EPA
Hollow symbols indicate censored values.

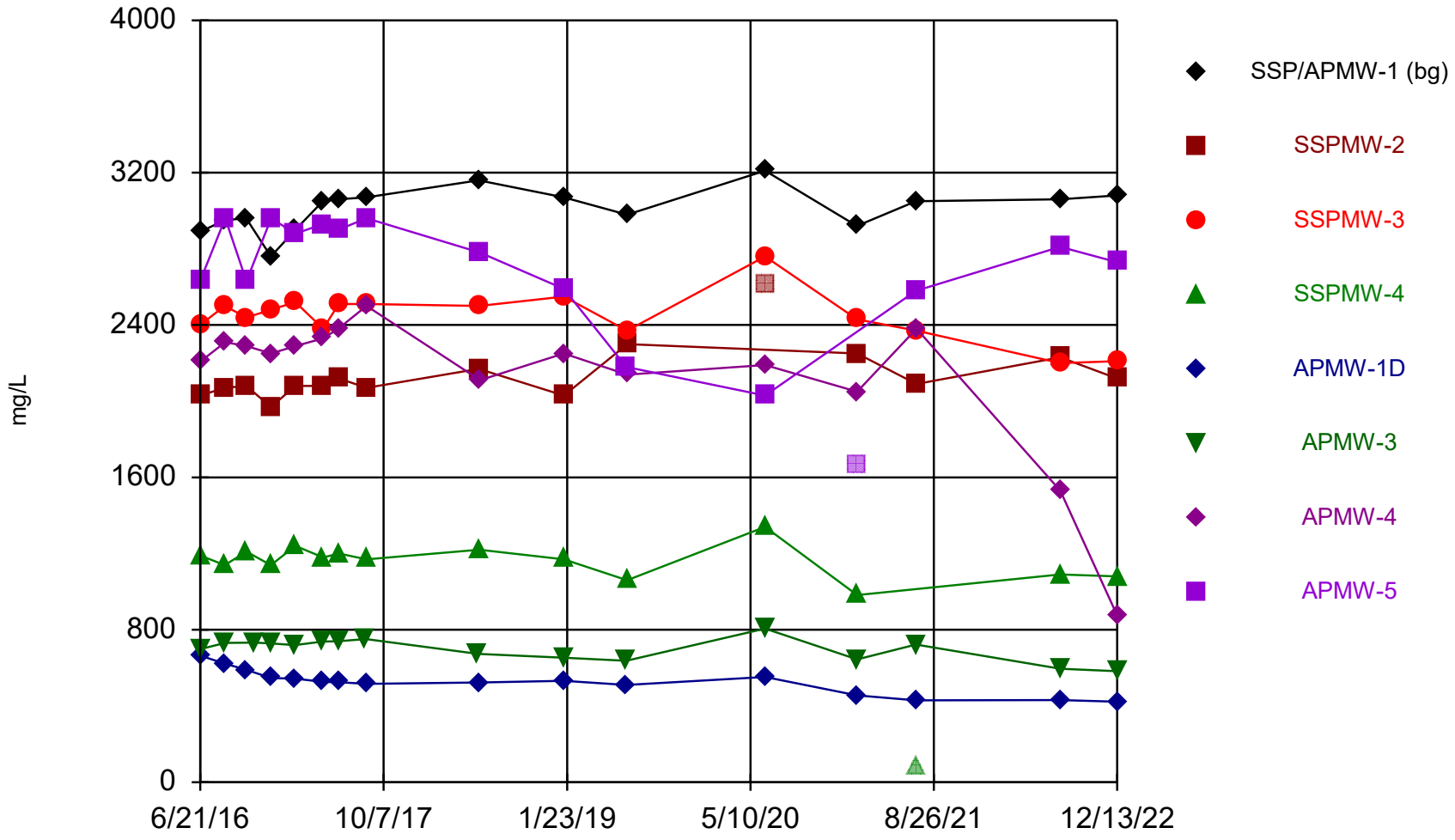
Time Series



Constituent: Selenium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

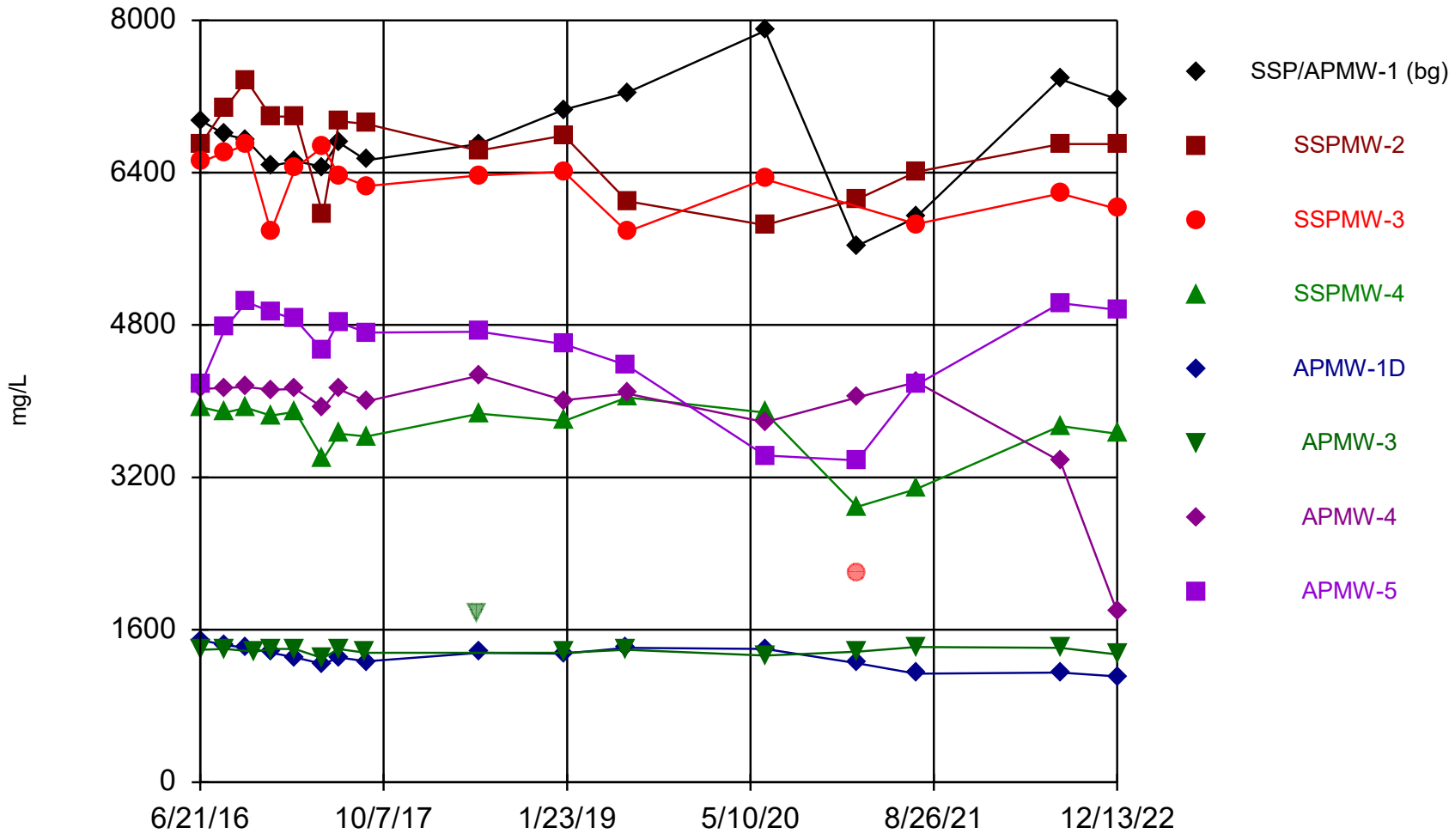
Time Series



Constituent: Sulfate Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Time Series

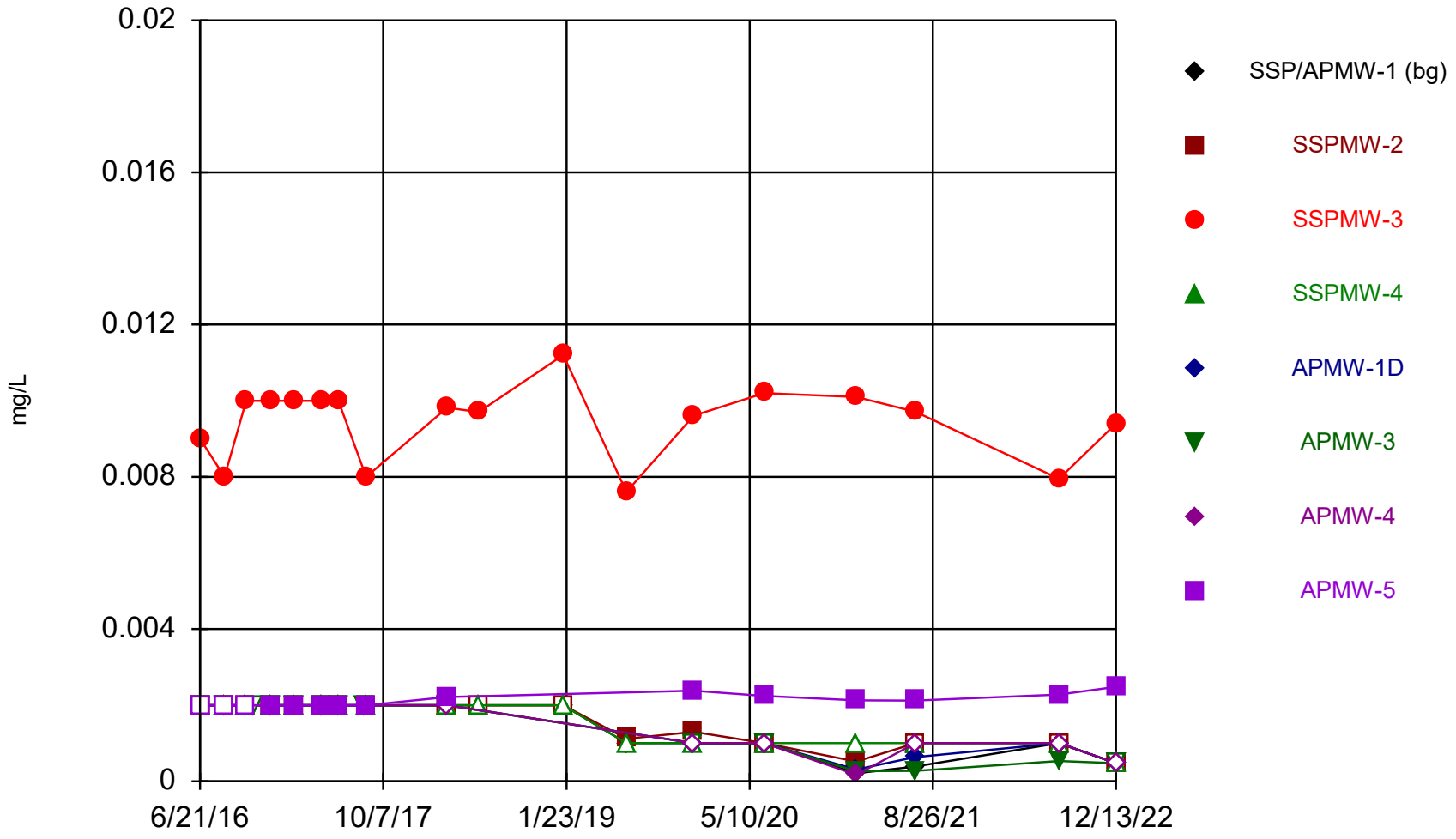


Constituent: TDS Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

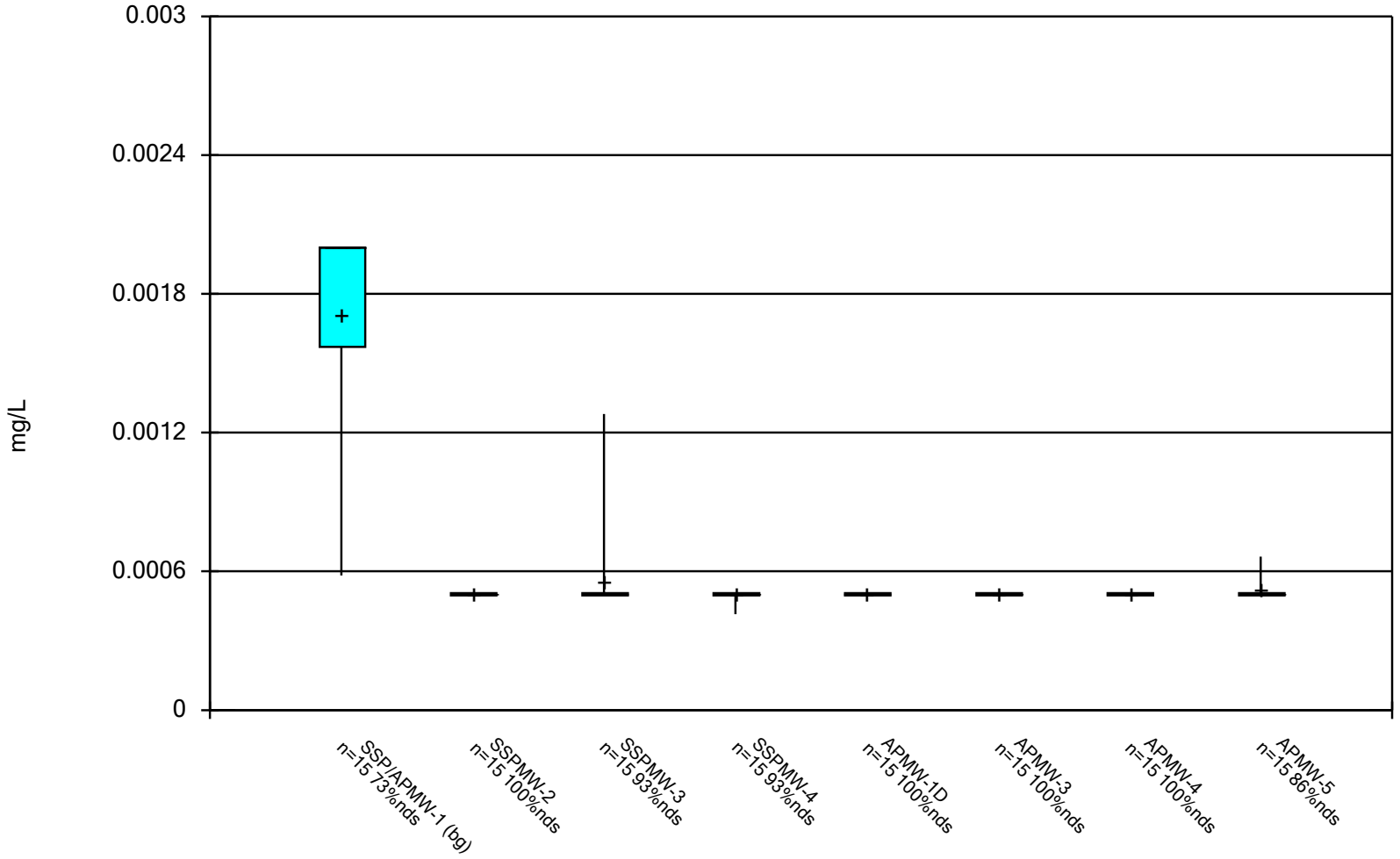
Time Series



Constituent: Thallium Analysis Run 1/23/2023 11:07 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

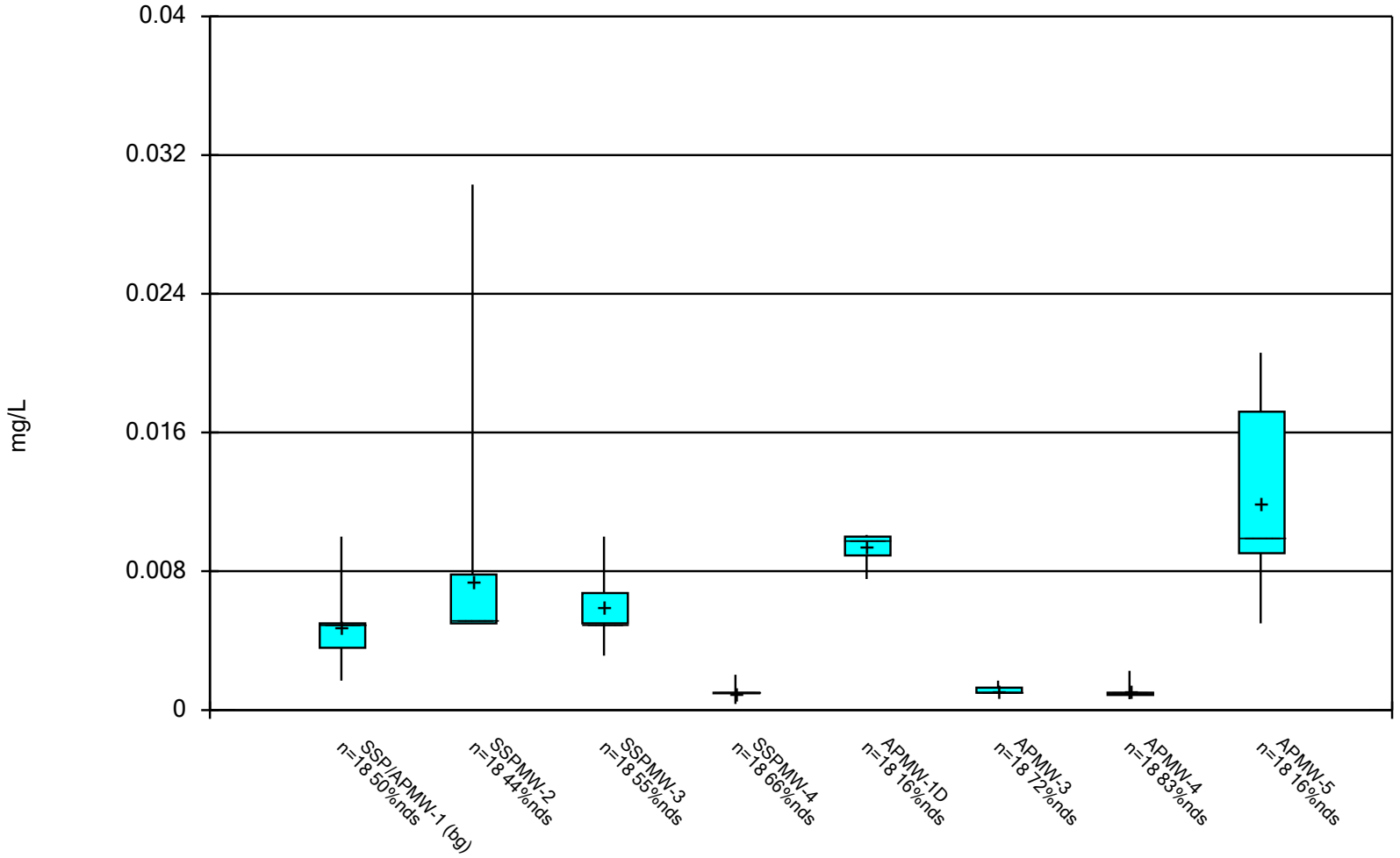
Box & Whiskers Plot



Constituent: Antimony Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

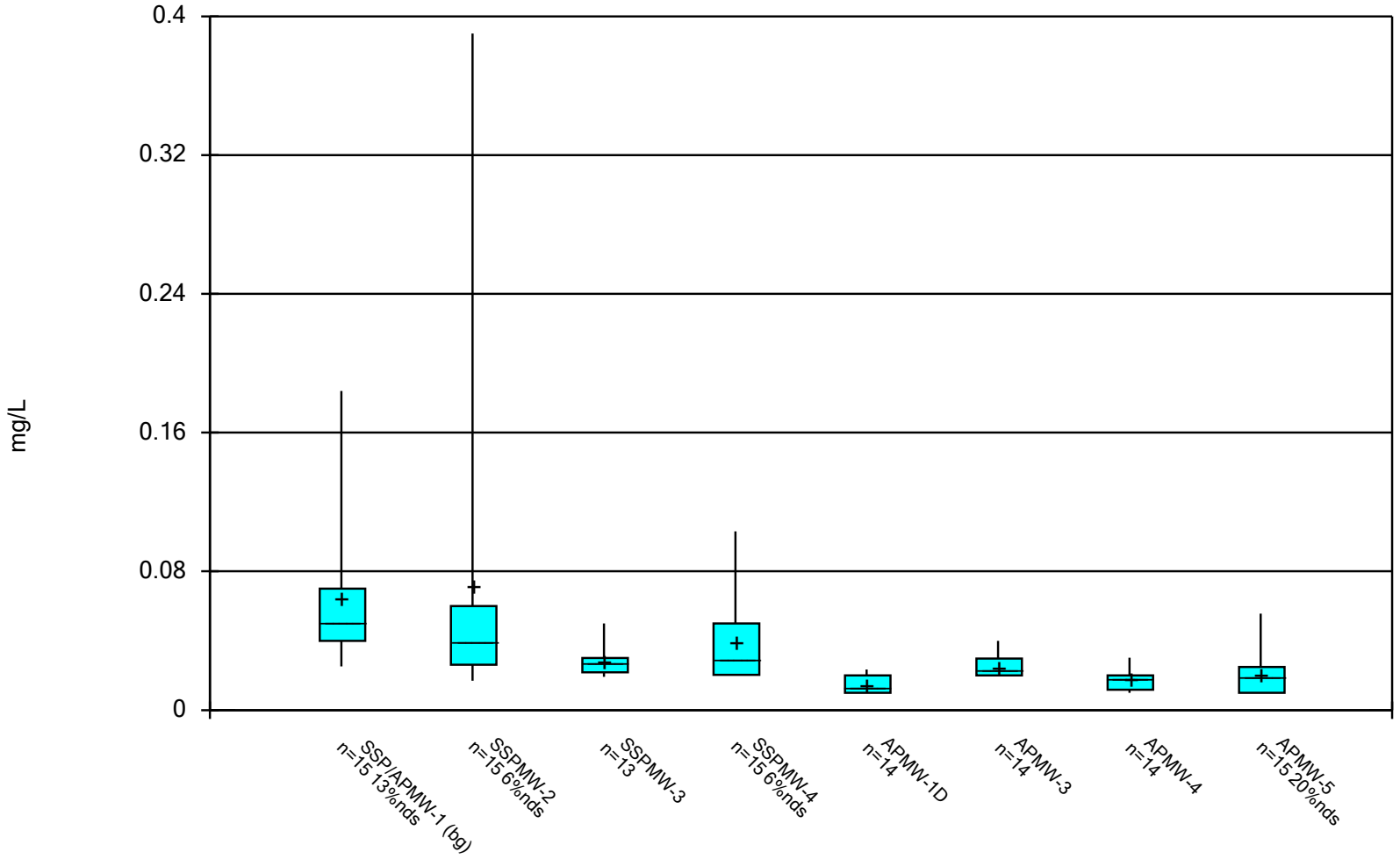
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

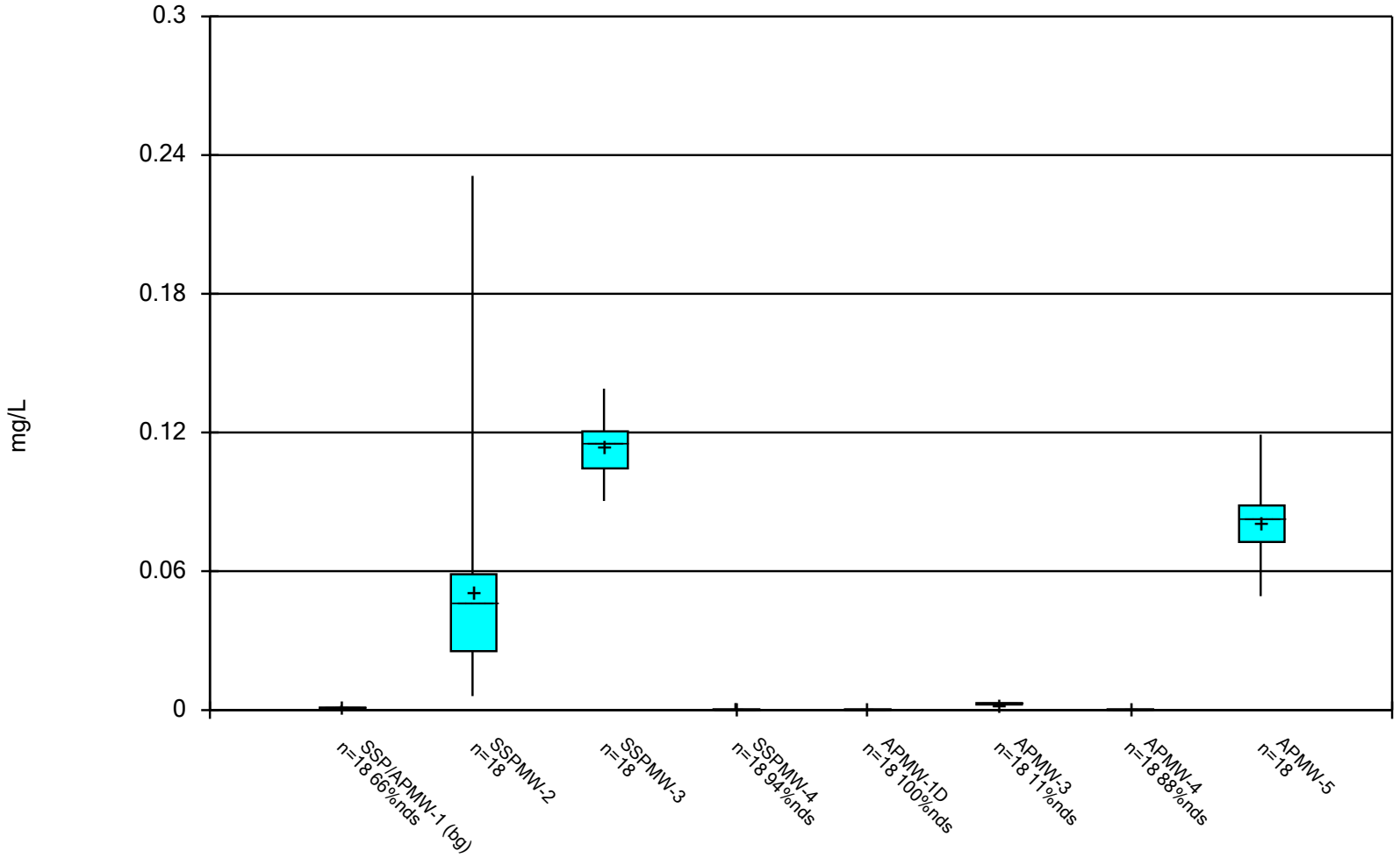
Box & Whiskers Plot



Constituent: Barium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

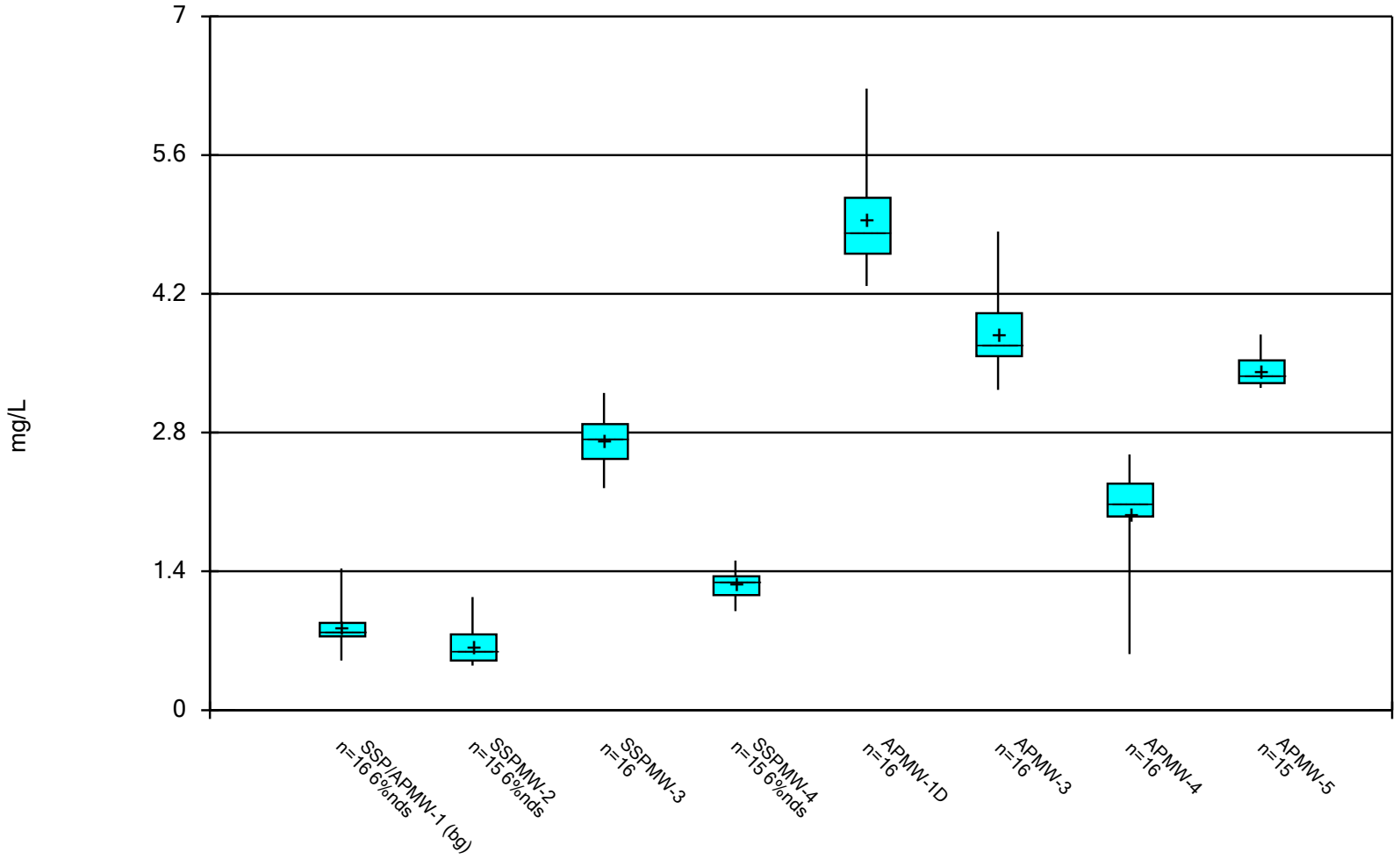
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

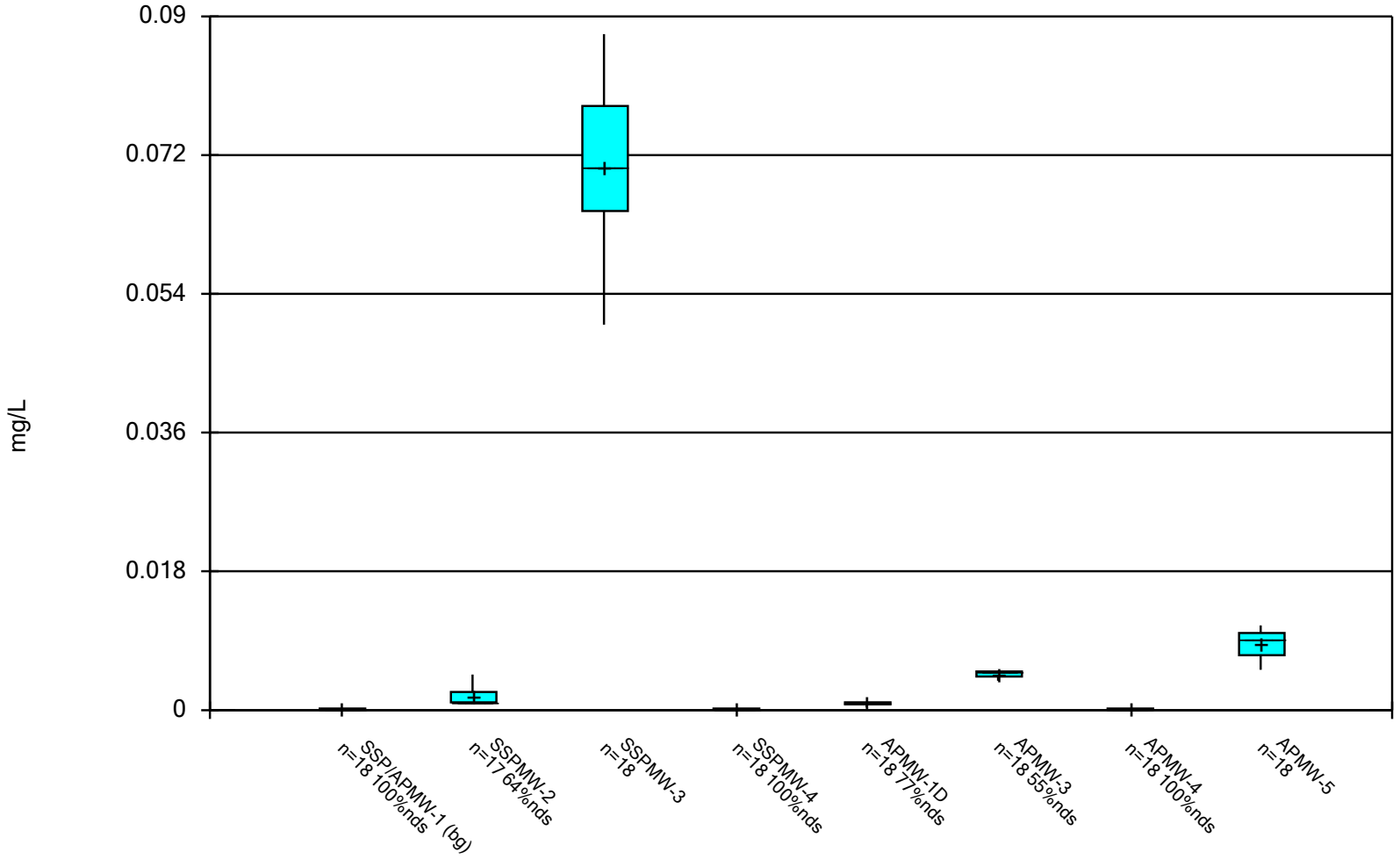
Box & Whiskers Plot



Constituent: Boron Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

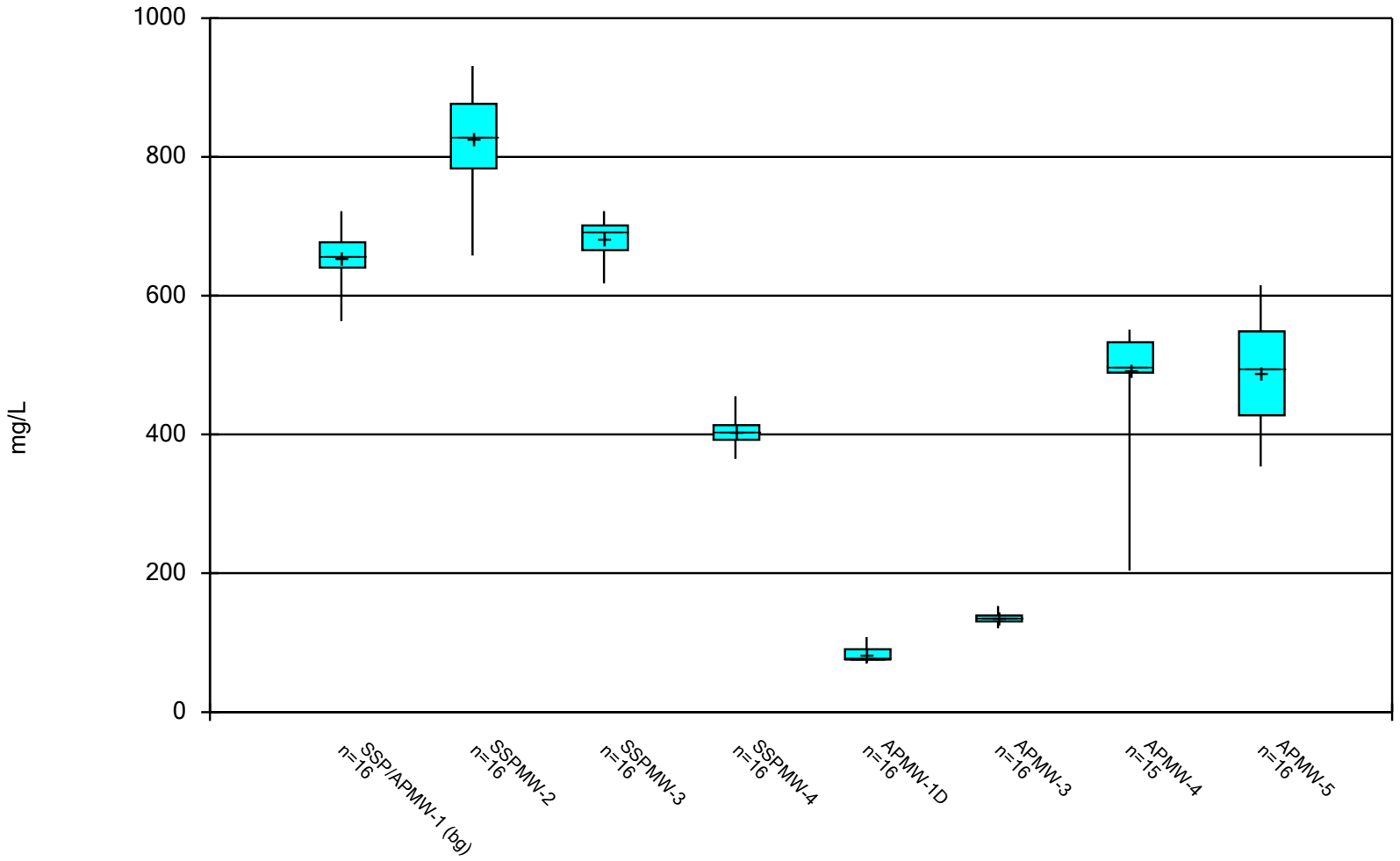
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

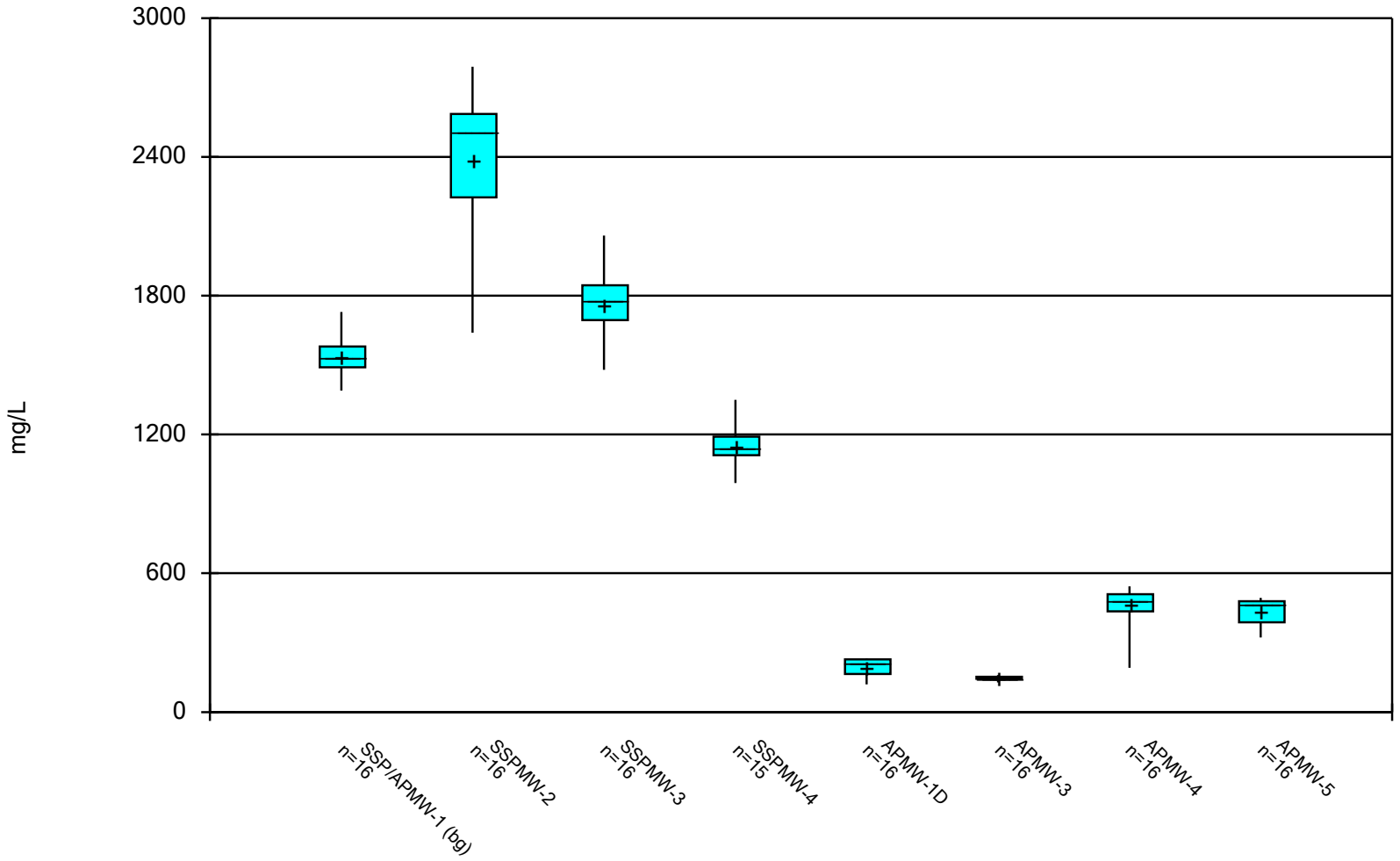
Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

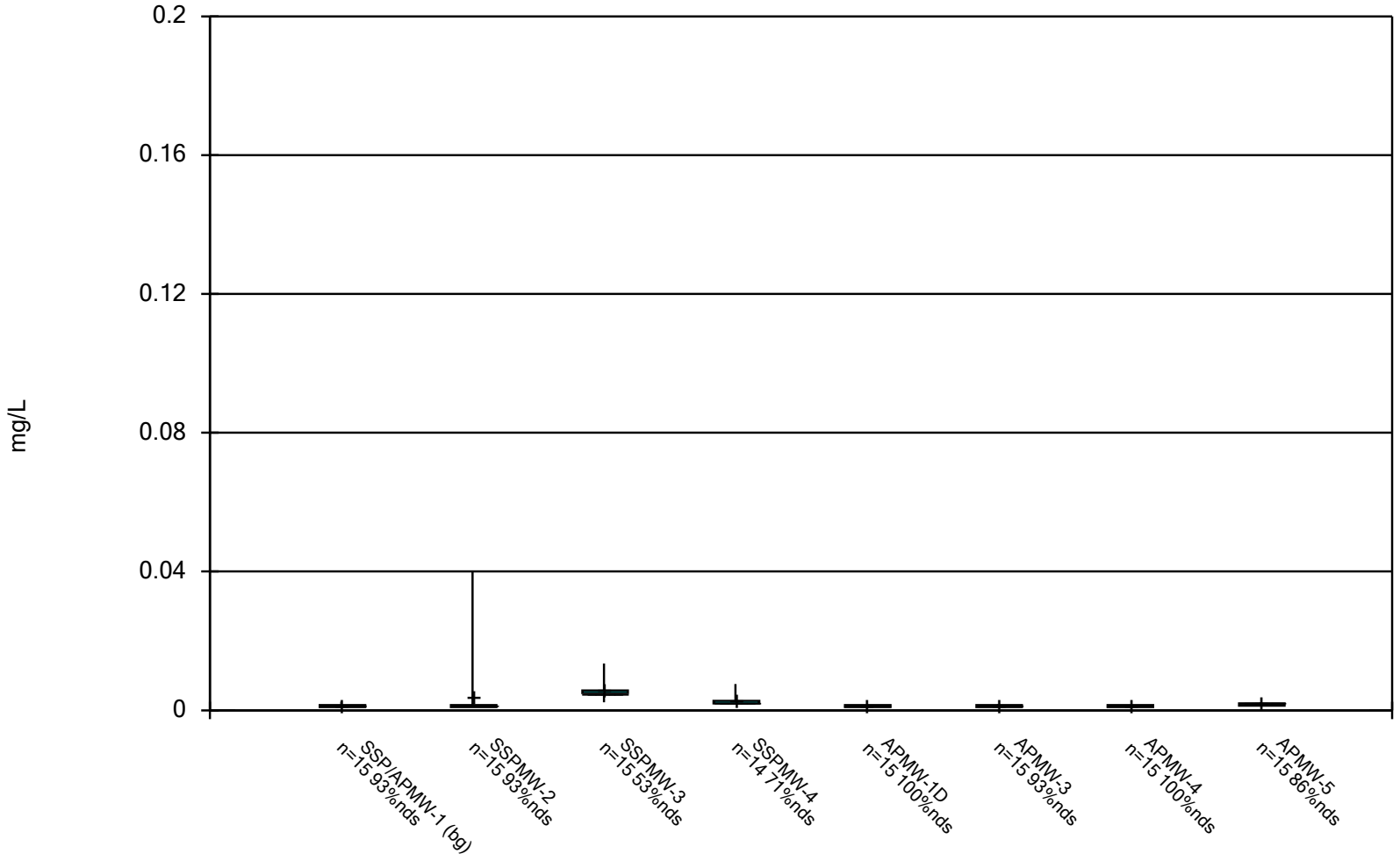
Box & Whiskers Plot



Constituent: Chloride Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

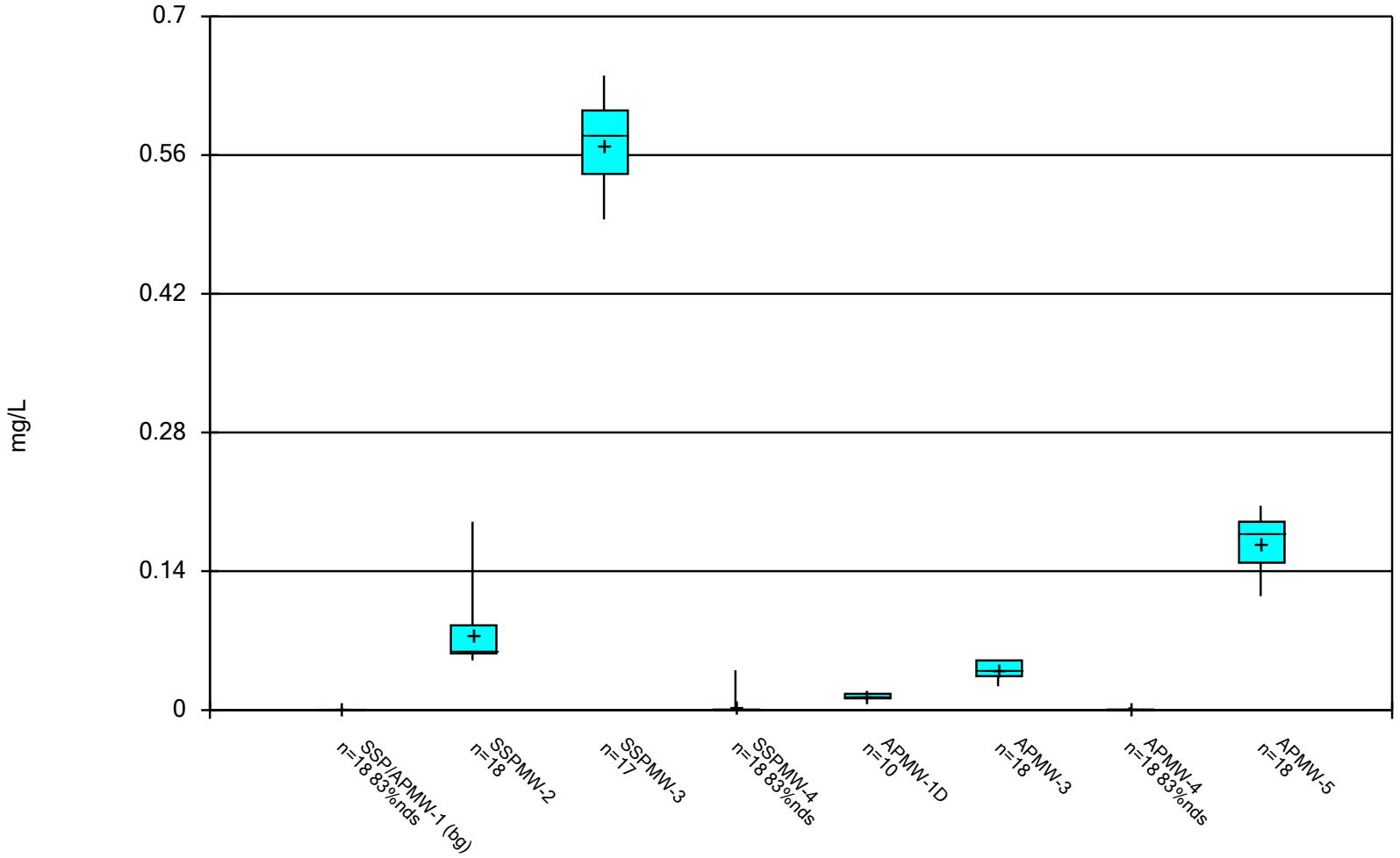
Box & Whiskers Plot



Constituent: Chromium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

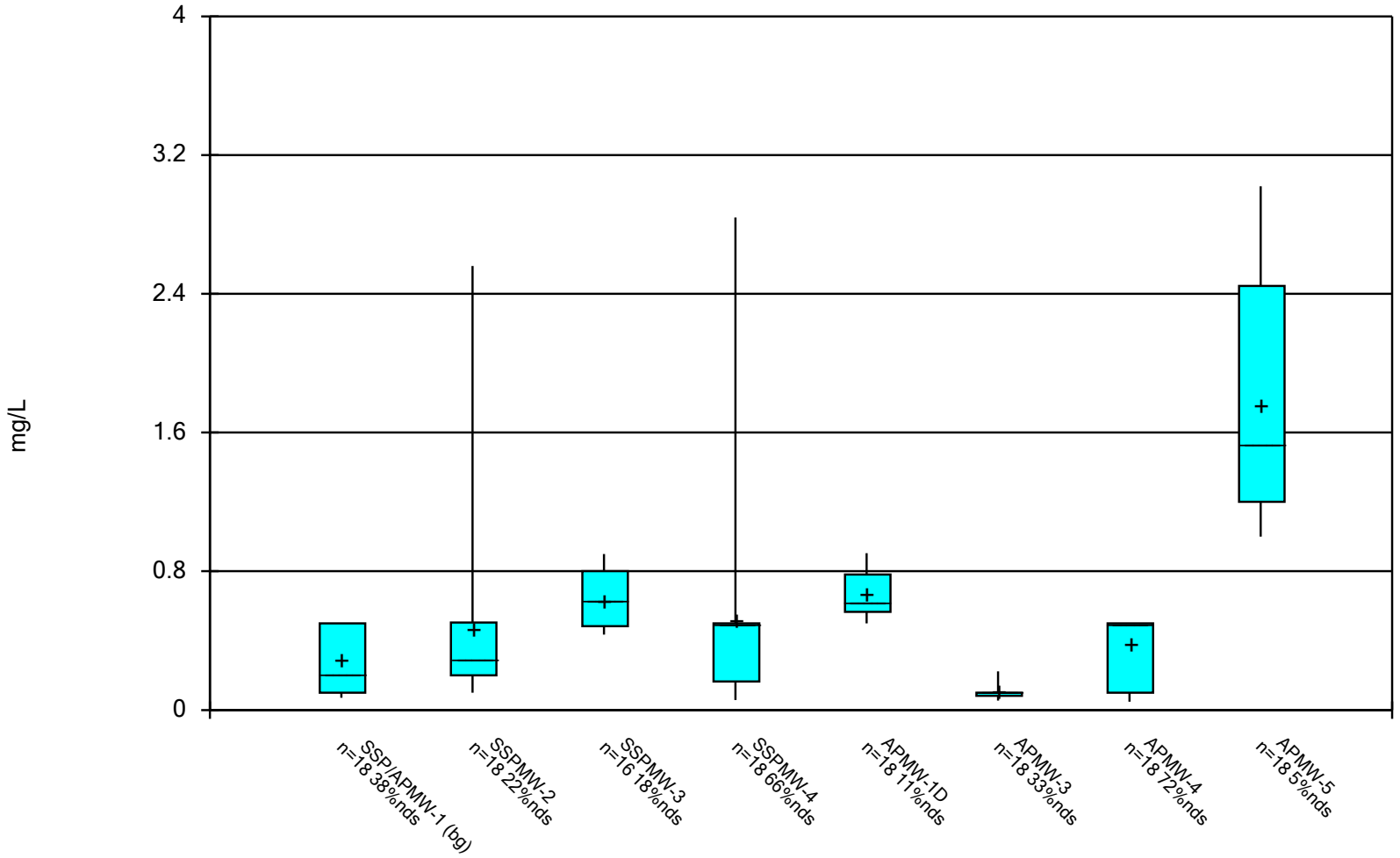
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

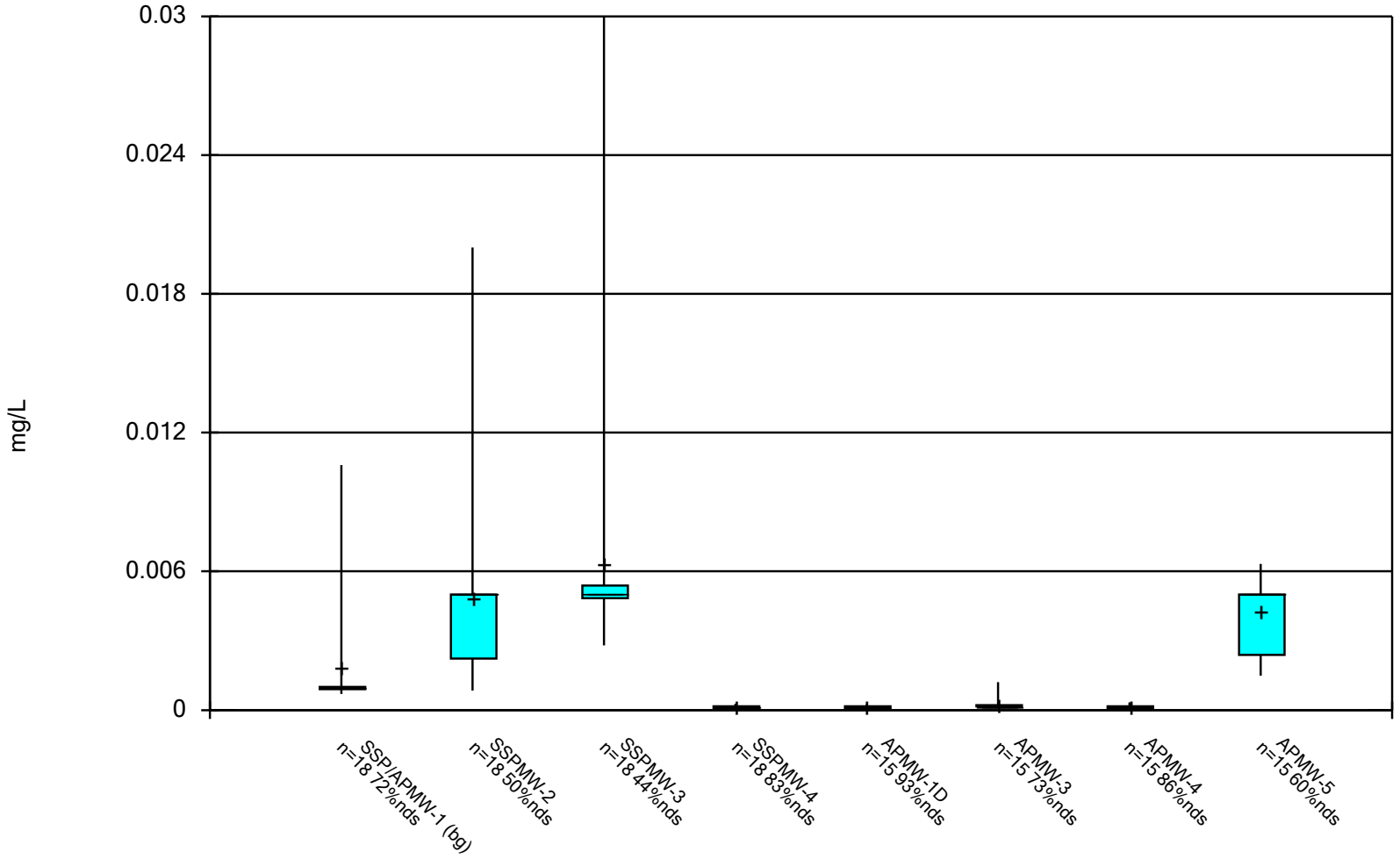
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

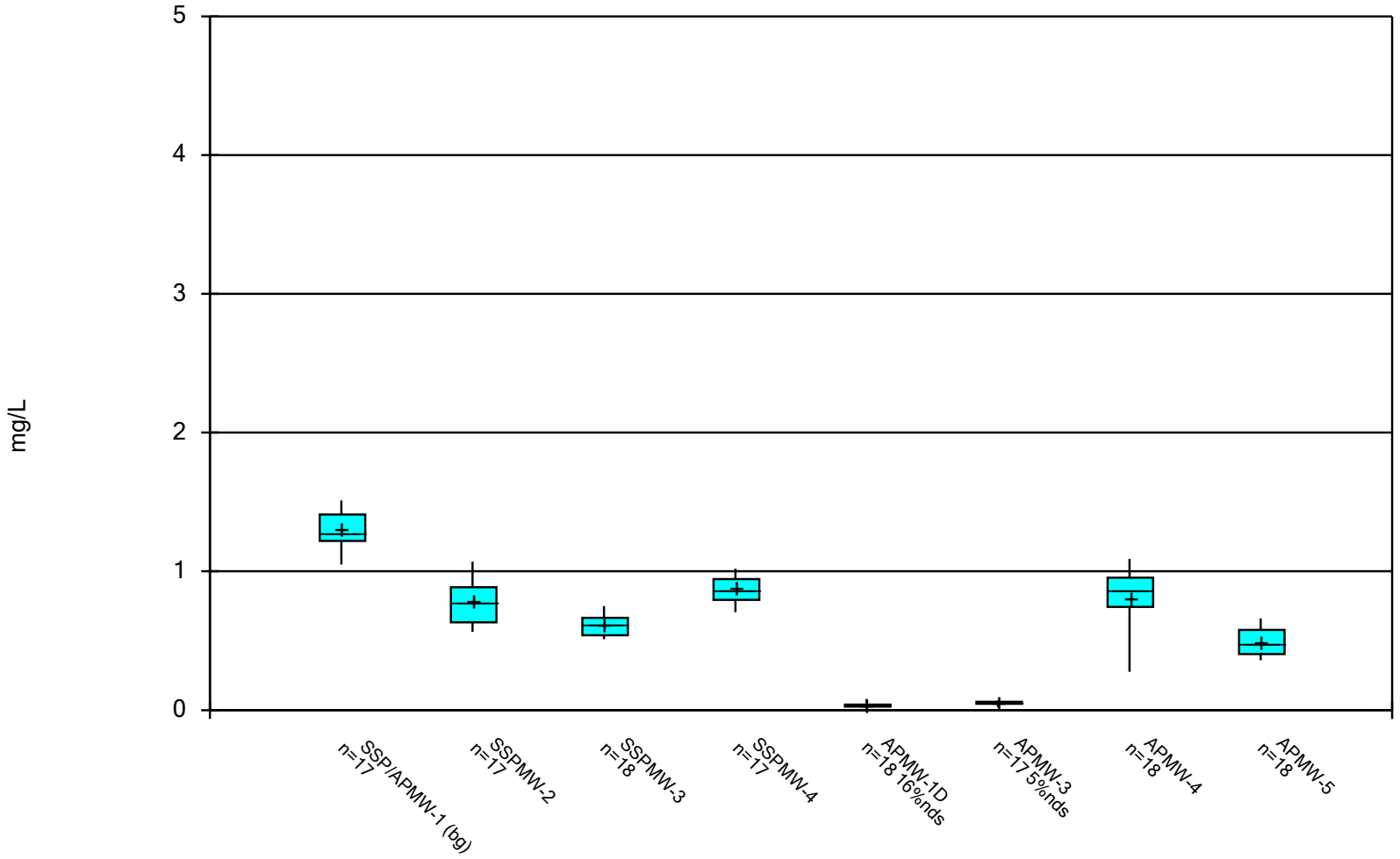
Box & Whiskers Plot



Constituent: Lead Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

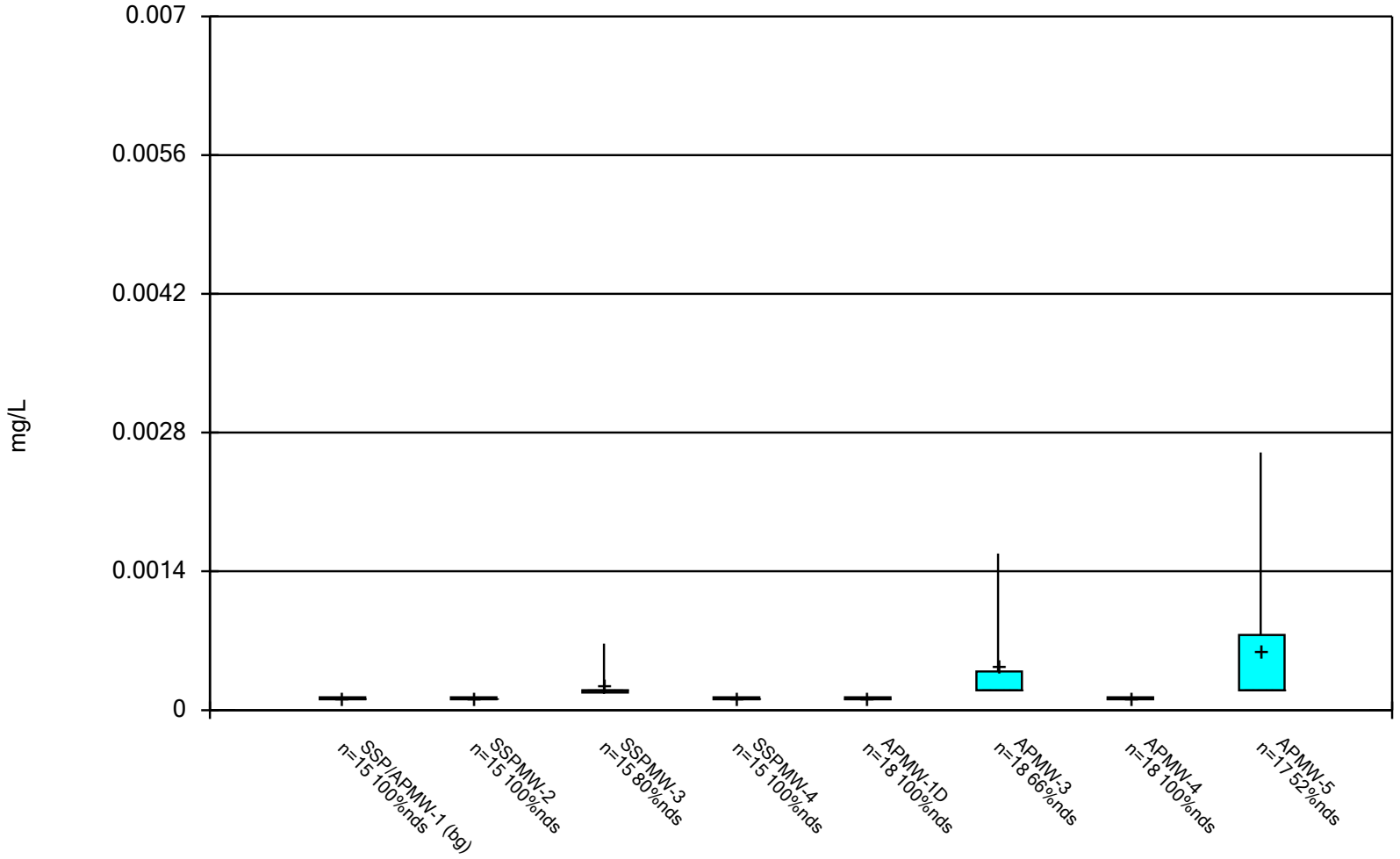
Box & Whiskers Plot



Constituent: Lithium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

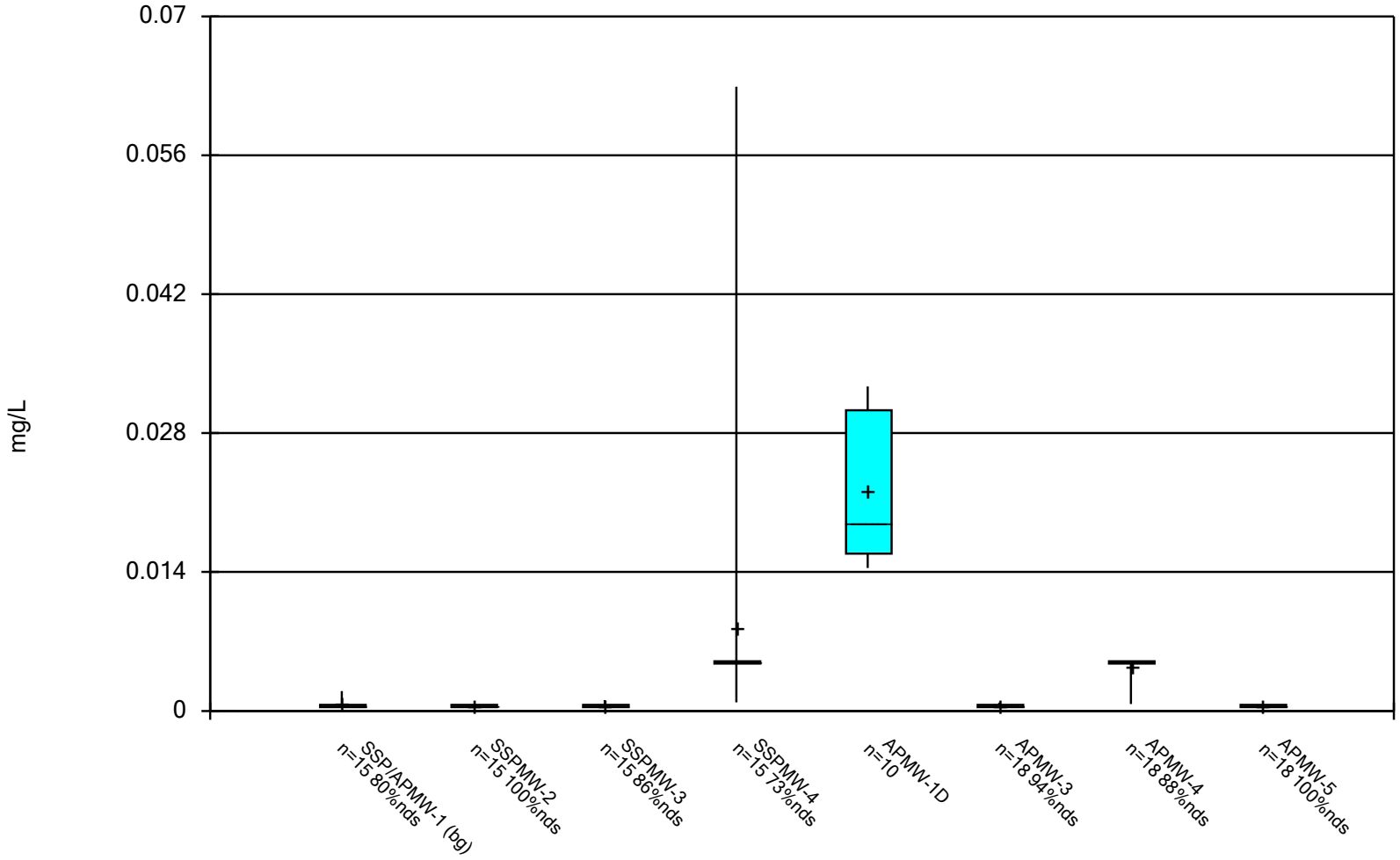
Box & Whiskers Plot



Constituent: Mercury Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

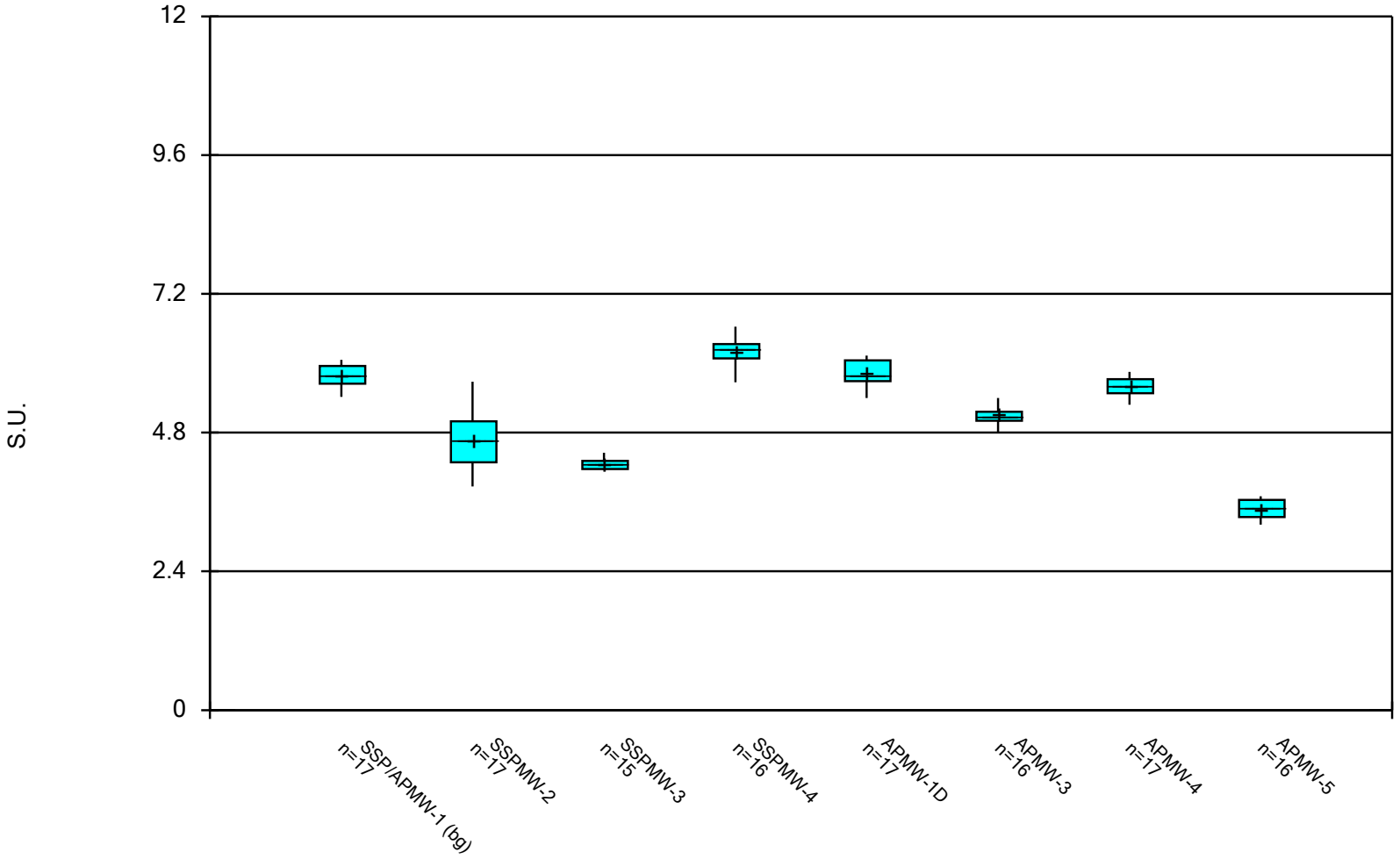
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

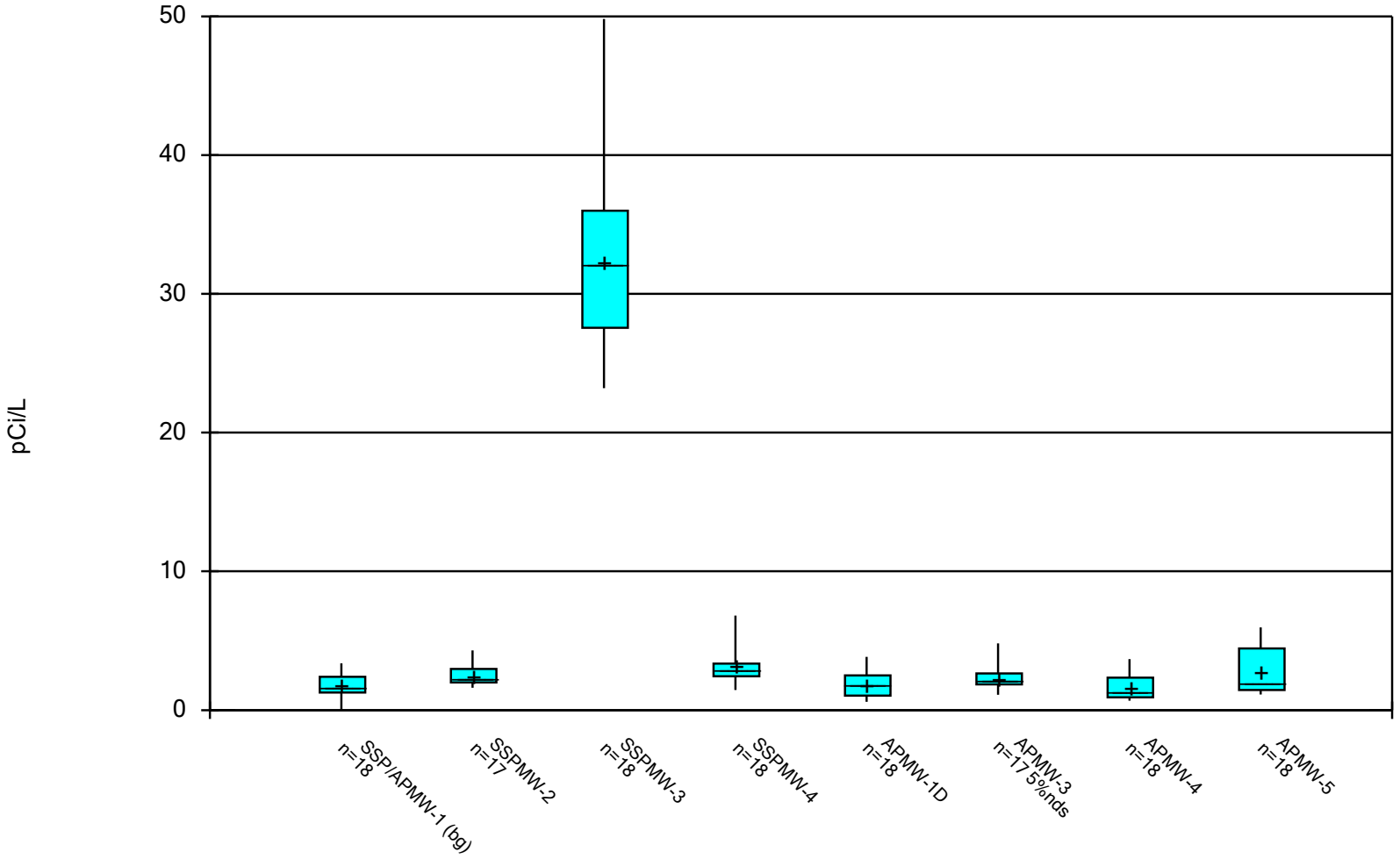
Box & Whiskers Plot



Constituent: pH Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

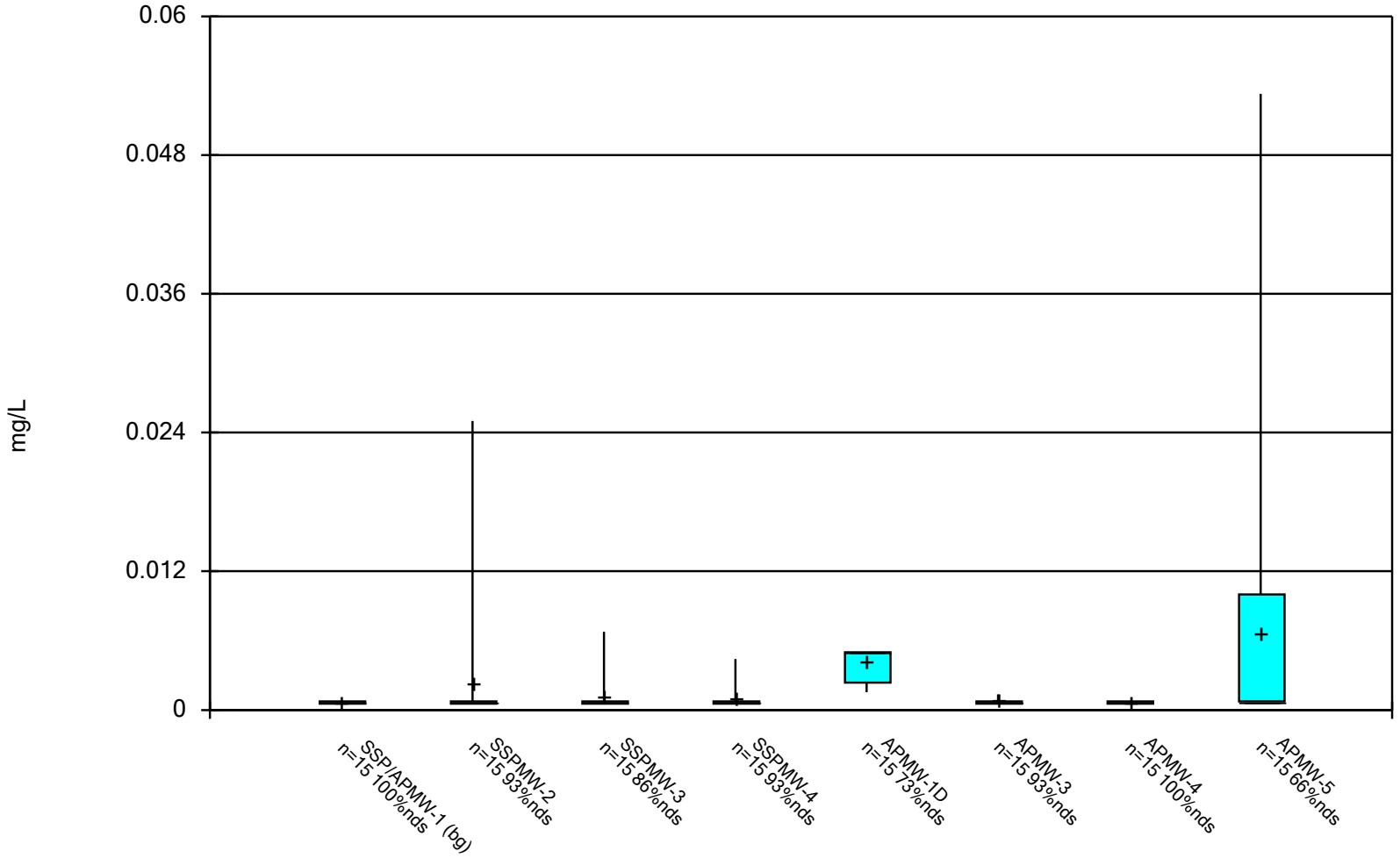
Box & Whiskers Plot



Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

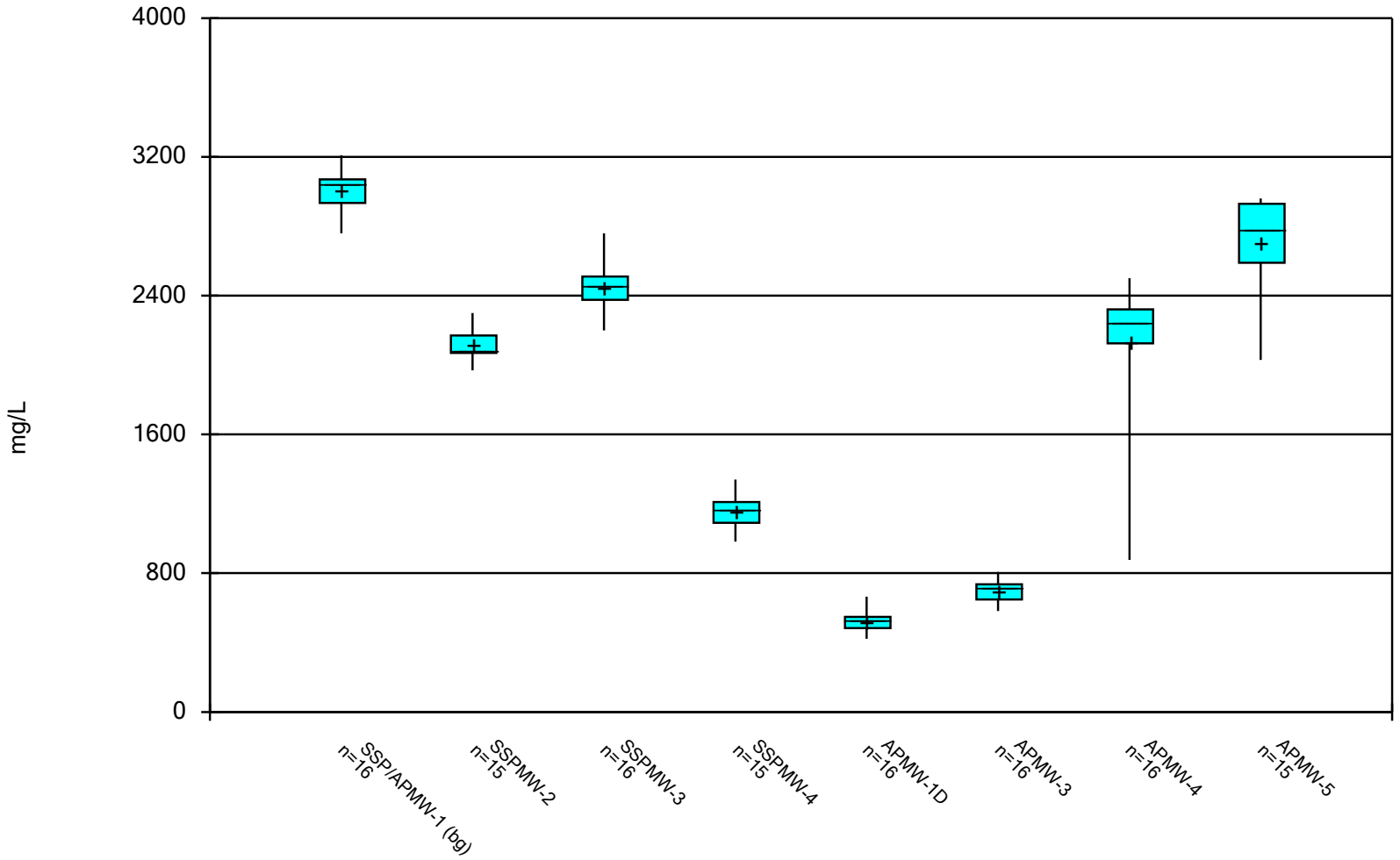
Box & Whiskers Plot



Constituent: Selenium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

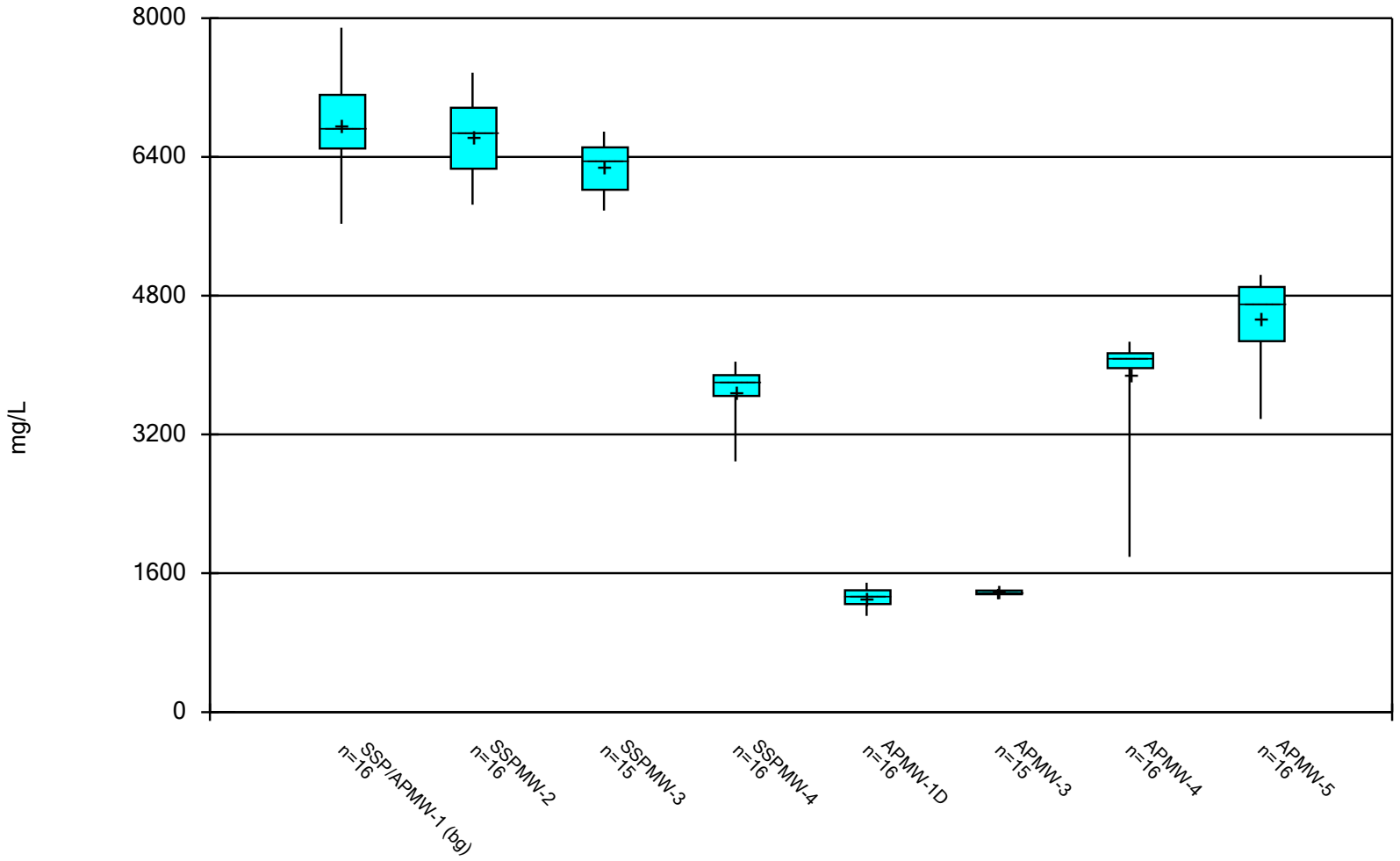
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

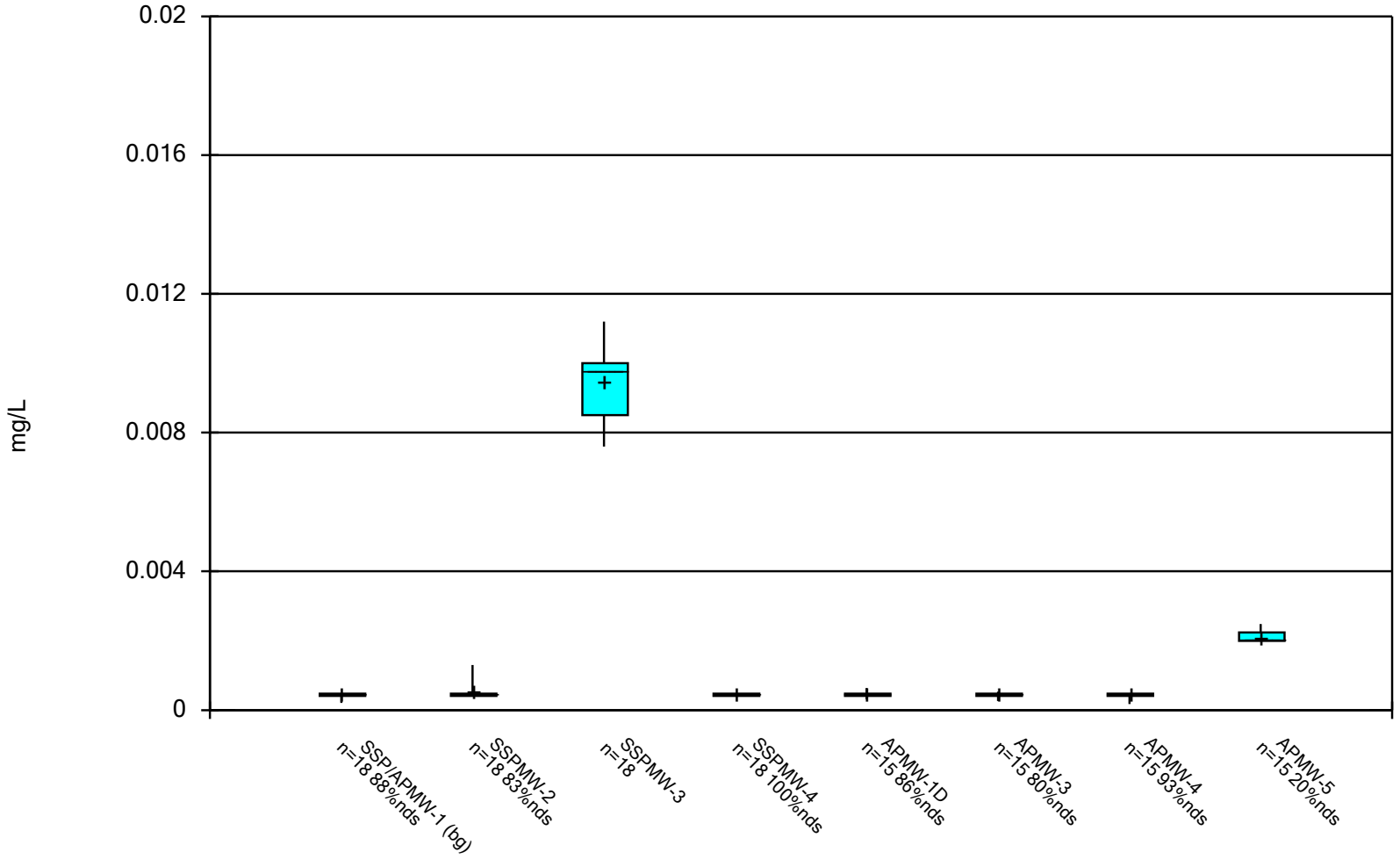
Box & Whiskers Plot



Constituent: TDS Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot



Constituent: Thallium Analysis Run 1/23/2023 11:09 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:11 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Antimony (mg/L)	SSP/APMW-...	15	0.001707	0.0005446	0.0001406	0.002	0.000582	0.002	73.33
Antimony (mg/L)	SSPMW-2	15	0.000506	0	0	0.000506	0.000506	0.000506	100
Antimony (mg/L)	SSPMW-3	15	0.000...	0.0001998	0.0000516	0.000506	0.000506	0.00128	93.33
Antimony (mg/L)	SSPMW-4	15	0.000...	0.0000235	0.0000...	0.000506	0.000415	0.000506	93.33
Antimony (mg/L)	APMW-1D	15	0.000506	0	0	0.000506	0.000506	0.000506	100
Antimony (mg/L)	APMW-3	15	0.000506	0	0	0.000506	0.000506	0.000506	100
Antimony (mg/L)	APMW-4	15	0.000506	0	0	0.000506	0.000506	0.000506	100
Antimony (mg/L)	APMW-5	15	0.000...	0.0000408	0.0000...	0.000506	0.000506	0.000664	86.67
Arsenic (mg/L)	SSP/APMW-...	18	0.004843	0.002208	0.0005205	0.005	0.00169	0.01	50
Arsenic (mg/L)	SSPMW-2	18	0.007418	0.005973	0.001408	0.005195	0.00498	0.0303	44.44
Arsenic (mg/L)	SSPMW-3	18	0.005894	0.001648	0.0003883	0.005	0.00314	0.01	55.56
Arsenic (mg/L)	SSPMW-4	18	0.000...	0.0003225	0.0000...	0.001	0.000344	0.00203	66.67
Arsenic (mg/L)	APMW-1D	18	0.009431	0.0007454	0.0001757	0.009765	0.00756	0.0101	16.67
Arsenic (mg/L)	APMW-3	18	0.001123	0.0002202	0.0000...	0.001	0.001	0.00169	72.22
Arsenic (mg/L)	APMW-4	18	0.00108	0.0003363	0.0000...	0.001	0.000628	0.00226	83.33
Arsenic (mg/L)	APMW-5	18	0.01199	0.005116	0.001206	0.01	0.005	0.0206	16.67
Barium (mg/L)	SSP/APMW-...	15	0.06439	0.04018	0.01037	0.05	0.0252	0.184	13.33
Barium (mg/L)	SSPMW-2	15	0.07137	0.0943	0.02435	0.04	0.017	0.39	6.667
Barium (mg/L)	SSPMW-3	13	0.02809	0.008743	0.002425	0.0265	0.0192	0.05	0
Barium (mg/L)	SSPMW-4	15	0.03995	0.02755	0.007113	0.03	0.02	0.103	6.667
Barium (mg/L)	APMW-1D	14	0.0146	0.004651	0.001243	0.0137	0.01	0.0234	0
Barium (mg/L)	APMW-3	14	0.02466	0.005821	0.001556	0.02335	0.02	0.04	0
Barium (mg/L)	APMW-4	14	0.01764	0.006563	0.001754	0.0176	0.01	0.0302	0
Barium (mg/L)	APMW-5	15	0.02061	0.0131	0.003383	0.02	0.01	0.0556	20
Beryllium (mg/L)	SSP/APMW-...	18	0.001048	0.0003012	0.000071	0.001	0.000584	0.002	66.67
Beryllium (mg/L)	SSPMW-2	18	0.05114	0.04892	0.01153	0.0468	0.006	0.231	0
Beryllium (mg/L)	SSPMW-3	18	0.1135	0.01113	0.002623	0.116	0.0904	0.139	0
Beryllium (mg/L)	SSPMW-4	18	0.000...	0.0006425	0.0001514	0.000274	0.000274	0.003	94.44
Beryllium (mg/L)	APMW-1D	18	0.000274	0	0	0.000274	0.000274	0.000274	100
Beryllium (mg/L)	APMW-3	18	0.002716	0.0003881	0.0000...	0.002955	0.002	0.00301	11.11
Beryllium (mg/L)	APMW-4	18	0.000...	0.0000...	0.0000...	0.000274	0.000204	0.000436	88.89
Beryllium (mg/L)	APMW-5	18	0.08119	0.01762	0.004154	0.0825	0.0492	0.119	0
Boron (mg/L)	SSP/APMW-...	16	0.8379	0.2075	0.05188	0.8015	0.5	1.43	6.25
Boron (mg/L)	SSPMW-2	15	0.6413	0.1859	0.048	0.6	0.45	1.14	6.667
Boron (mg/L)	SSPMW-3	16	2.727	0.2667	0.06666	2.74	2.24	3.2	0
Boron (mg/L)	SSPMW-4	15	1.271	0.1353	0.03493	1.3	1	1.51	6.667
Boron (mg/L)	APMW-1D	16	4.948	0.5306	0.1326	4.825	4.28	6.27	0
Boron (mg/L)	APMW-3	16	3.803	0.385	0.09626	3.685	3.23	4.83	0
Boron (mg/L)	APMW-4	16	1.975	0.5639	0.141	2.1	0.566	2.58	0
Boron (mg/L)	APMW-5	15	3.419	0.1588	0.041	3.38	3.25	3.79	0
Cadmium (mg/L)	SSP/APMW-...	18	0.000217	0	0	0.000217	0.000217	0.000217	100
Cadmium (mg/L)	SSPMW-2	17	0.001764	0.001347	0.0003267	0.001	0.001	0.0046	64.71
Cadmium (mg/L)	SSPMW-3	18	0.07053	0.009444	0.002226	0.07045	0.05	0.0877	0
Cadmium (mg/L)	SSPMW-4	18	0.000217	0	0	0.000217	0.000217	0.000217	100
Cadmium (mg/L)	APMW-1D	18	0.000...	0.0002597	0.0000...	0.001	0.00034	0.001	77.78
Cadmium (mg/L)	APMW-3	18	0.00471	0.0003887	0.0000...	0.005	0.00382	0.005	55.56
Cadmium (mg/L)	APMW-4	18	0.000217	0	0	0.000217	0.000217	0.000217	100
Cadmium (mg/L)	APMW-5	18	0.008677	0.001753	0.0004131	0.009045	0.00523	0.011	0
Calcium (mg/L)	SSP/APMW-...	16	654.7	35.75	8.938	659	563	722	0
Calcium (mg/L)	SSPMW-2	16	825.4	74.74	18.69	830	658	931	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:11 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Calcium (mg/L)	SSPMW-3	16	682.7	28.28	7.071	691.5	618	722	0
Calcium (mg/L)	SSPMW-4	16	405.1	22.01	5.502	405.5	365	455	0
Calcium (mg/L)	APMW-1D	16	82.63	10.54	2.636	77.55	70	108	0
Calcium (mg/L)	APMW-3	16	135.3	8.252	2.063	134.5	121	153	0
Calcium (mg/L)	APMW-4	15	490.9	83.73	21.62	499	204	551	0
Calcium (mg/L)	APMW-5	16	487.8	83.83	20.96	496	354	615	0
Chloride (mg/L)	SSP/APMW-...	16	1537	80.14	20.04	1530	1390	1730	0
Chloride (mg/L)	SSPMW-2	16	2382	319.2	79.79	2510	1640	2790	0
Chloride (mg/L)	SSPMW-3	16	1761	135.6	33.91	1780	1480	2060	0
Chloride (mg/L)	SSPMW-4	15	1151	79.18	20.44	1140	990	1350	0
Chloride (mg/L)	APMW-1D	16	195.6	39.8	9.951	211	120	233	0
Chloride (mg/L)	APMW-3	16	145.9	8.453	2.113	146	128	160	0
Chloride (mg/L)	APMW-4	16	465.6	81.76	20.44	485	191	543	0
Chloride (mg/L)	APMW-5	16	436.7	55.12	13.78	464.5	322	494	0
Chromium (mg/L)	SSP/APMW-...	15	0.001593	0.0002453	0.0000...	0.00153	0.00153	0.00248	93.33
Chromium (mg/L)	SSPMW-2	15	0.004095	0.009933	0.002565	0.00153	0.00153	0.04	93.33
Chromium (mg/L)	SSPMW-3	15	0.005681	0.002713	0.0007004	0.005	0.00235	0.0135	53.33
Chromium (mg/L)	SSPMW-4	14	0.002713	0.00162	0.0004329	0.002	0.002	0.00762	71.43
Chromium (mg/L)	APMW-1D	15	0.00153	0	0	0.00153	0.00153	0.00153	100
Chromium (mg/L)	APMW-3	15	0.001543	0.0000...	0.0000...	0.00153	0.00153	0.00173	93.33
Chromium (mg/L)	APMW-4	15	0.00153	0	0	0.00153	0.00153	0.00153	100
Chromium (mg/L)	APMW-5	15	0.00199	0.0001367	0.0000...	0.002	0.00157	0.00228	86.67
Cobalt (mg/L)	SSP/APMW-...	18	0.000...	0.000356	0.0000839	0.000261	0.000261	0.00174	83.33
Cobalt (mg/L)	SSPMW-2	18	0.07481	0.03343	0.00788	0.06	0.05	0.19	0
Cobalt (mg/L)	SSPMW-3	17	0.5703	0.04263	0.01034	0.58	0.495	0.64	0
Cobalt (mg/L)	SSPMW-4	18	0.002674	0.009316	0.002196	0.0005	0.000289	0.04	83.33
Cobalt (mg/L)	APMW-1D	10	0.01421	0.002491	0.0007876	0.01445	0.00996	0.0177	0
Cobalt (mg/L)	APMW-3	18	0.04059	0.007843	0.001849	0.04	0.024	0.05	0
Cobalt (mg/L)	APMW-4	18	0.000...	0.0005716	0.0001347	0.0005	0.0005	0.00286	83.33
Cobalt (mg/L)	APMW-5	18	0.168	0.02733	0.006442	0.1775	0.115	0.206	0
Fluoride (mg/L)	SSP/APMW-...	18	0.2944	0.1855	0.04372	0.2	0.0712	0.5	38.89
Fluoride (mg/L)	SSPMW-2	18	0.469	0.5461	0.1287	0.2975	0.1	2.56	22.22
Fluoride (mg/L)	SSPMW-3	16	0.6334	0.1674	0.04185	0.6255	0.435	0.9	18.75
Fluoride (mg/L)	SSPMW-4	18	0.5238	0.6045	0.1425	0.5	0.0585	2.84	66.67
Fluoride (mg/L)	APMW-1D	18	0.6628	0.124	0.02923	0.616	0.5	0.904	11.11
Fluoride (mg/L)	APMW-3	18	0.1086	0.04912	0.01158	0.1	0.054	0.223	33.33
Fluoride (mg/L)	APMW-4	18	0.3845	0.192	0.04526	0.5	0.0488	0.5	72.22
Fluoride (mg/L)	APMW-5	18	1.756	0.6665	0.1571	1.535	1	3.02	5.556
Lead (mg/L)	SSP/APMW-...	18	0.001806	0.002354	0.0005548	0.001	0.000702	0.0106	72.22
Lead (mg/L)	SSPMW-2	18	0.004825	0.00415	0.0009783	0.005	0.000841	0.02	50
Lead (mg/L)	SSPMW-3	18	0.006367	0.005943	0.001401	0.005	0.0028	0.03	44.44
Lead (mg/L)	SSPMW-4	18	0.000...	0.0000...	0.0000...	0.000167	0.000161	0.000276	83.33
Lead (mg/L)	APMW-1D	15	0.000...	0.0000...	0.0000...	0.000167	0.000167	0.000256	93.33
Lead (mg/L)	APMW-3	15	0.000...	0.0002773	0.0000...	0.000167	0.000167	0.00121	73.33
Lead (mg/L)	APMW-4	15	0.000...	0.0000...	0.0000...	0.000167	0.000167	0.000338	86.67
Lead (mg/L)	APMW-5	15	0.004287	0.001444	0.0003727	0.005	0.00149	0.00632	60
Lithium (mg/L)	SSP/APMW-...	17	1.306	0.1311	0.03178	1.28	1.05	1.51	0
Lithium (mg/L)	SSPMW-2	17	0.7847	0.154	0.03734	0.77	0.564	1.07	0
Lithium (mg/L)	SSPMW-3	18	0.6171	0.07423	0.0175	0.616	0.511	0.75	0
Lithium (mg/L)	SSPMW-4	17	0.8755	0.09477	0.02298	0.87	0.706	1.02	0

Box & Whiskers Plot

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:11 AM

Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Lithium (mg/L)	APMW-1D	18	0.03772	0.01642	0.003871	0.0373	0.01	0.08	16.67
Lithium (mg/L)	APMW-3	17	0.05218	0.01182	0.002866	0.053	0.02	0.07	5.882
Lithium (mg/L)	APMW-4	18	0.8091	0.2152	0.05072	0.86	0.277	1.09	0
Lithium (mg/L)	APMW-5	18	0.4867	0.08921	0.02103	0.484	0.36	0.66	0
Mercury (mg/L)	SSP/APMW-...	15	0.00013	0	0	0.00013	0.00013	0.00013	100
Mercury (mg/L)	SSPMW-2	15	0.00013	0	0	0.00013	0.00013	0.00013	100
Mercury (mg/L)	SSPMW-3	15	0.000...	0.0001356	0.0000...	0.0002	0.000162	0.000669	80
Mercury (mg/L)	SSPMW-4	15	0.00013	0	0	0.00013	0.00013	0.00013	100
Mercury (mg/L)	APMW-1D	18	0.00013	0	0	0.00013	0.00013	0.00013	100
Mercury (mg/L)	APMW-3	18	0.000...	0.0004901	0.0001155	0.0002	0.0002	0.00158	66.67
Mercury (mg/L)	APMW-4	18	0.00013	0	0	0.00013	0.00013	0.00013	100
Mercury (mg/L)	APMW-5	17	0.000...	0.0007465	0.0001811	0.0002	0.0002	0.0026	52.94
Molybdenum (mg/L)	SSP/APMW-...	15	0.000...	0.0003735	0.0000...	0.00061	0.00061	0.00199	80
Molybdenum (mg/L)	SSPMW-2	15	0.00061	0	0	0.00061	0.00061	0.00061	100
Molybdenum (mg/L)	SSPMW-3	15	0.000...	0.0001263	0.0000...	0.00061	0.00061	0.0011	86.67
Molybdenum (mg/L)	SSPMW-4	15	0.008528	0.01509	0.003896	0.005	0.000864	0.0629	73.33
Molybdenum (mg/L)	APMW-1D	10	0.02229	0.00721	0.00228	0.0189	0.0144	0.0327	0
Molybdenum (mg/L)	APMW-3	18	0.000...	0.0000561	0.0000...	0.00061	0.00061	0.000848	94.44
Molybdenum (mg/L)	APMW-4	18	0.004535	0.001354	0.0003192	0.005	0.000686	0.005	88.89
Molybdenum (mg/L)	APMW-5	18	0.00061	0	0	0.00061	0.00061	0.00061	100
pH (S.U.)	SSP/APMW-...	17	5.792	0.1815	0.04402	5.8	5.42	6.06	0
pH (S.U.)	SSPMW-2	17	4.682	0.5115	0.1241	4.66	3.87	5.68	0
pH (S.U.)	SSPMW-3	15	4.261	0.09192	0.02373	4.26	4.15	4.45	0
pH (S.U.)	SSPMW-4	16	6.198	0.2572	0.06429	6.26	5.67	6.63	0
pH (S.U.)	APMW-1D	17	5.835	0.2197	0.05328	5.81	5.4	6.13	0
pH (S.U.)	APMW-3	16	5.101	0.153	0.03825	5.1	4.79	5.4	0
pH (S.U.)	APMW-4	17	5.612	0.1511	0.03666	5.62	5.28	5.85	0
pH (S.U.)	APMW-5	16	3.484	0.167	0.04174	3.51	3.21	3.7	0
Radium 226 + 228 (pCi/L)	SSP/APMW-...	18	1.751	0.8452	0.1992	1.64	-0.06	3.38	0
Radium 226 + 228 (pCi/L)	SSPMW-2	17	2.474	0.7099	0.1722	2.3	1.62	4.3	0
Radium 226 + 228 (pCi/L)	SSPMW-3	18	32.28	6.424	1.514	32.1	23.2	49.8	0
Radium 226 + 228 (pCi/L)	SSPMW-4	18	3.145	1.291	0.3043	2.91	1.46	6.82	0
Radium 226 + 228 (pCi/L)	APMW-1D	18	1.839	0.8564	0.2019	1.76	0.6	3.83	0
Radium 226 + 228 (pCi/L)	APMW-3	17	2.329	0.8003	0.1941	2.17	1.11	4.8	5.882
Radium 226 + 228 (pCi/L)	APMW-4	18	1.66	0.8712	0.2053	1.265	0.678	3.67	0
Radium 226 + 228 (pCi/L)	APMW-5	18	2.679	1.571	0.3703	1.95	1.12	5.96	0
Selenium (mg/L)	SSP/APMW-...	15	0.000739	0	0	0.000739	0.000739	0.000739	100
Selenium (mg/L)	SSPMW-2	15	0.002356	0.006264	0.001617	0.000739	0.000739	0.025	93.33
Selenium (mg/L)	SSPMW-3	15	0.001148	0.001553	0.0004009	0.000739	0.000739	0.00676	86.67
Selenium (mg/L)	SSPMW-4	15	0.000...	0.0009478	0.0002447	0.000739	0.000739	0.00441	93.33
Selenium (mg/L)	APMW-1D	15	0.004141	0.001485	0.0003834	0.005	0.00154	0.005	73.33
Selenium (mg/L)	APMW-3	15	0.000...	0.0001578	0.0000...	0.000739	0.000739	0.00135	93.33
Selenium (mg/L)	APMW-4	15	0.000739	0	0	0.000739	0.000739	0.000739	100
Selenium (mg/L)	APMW-5	15	0.006713	0.01355	0.003499	0.000739	0.000739	0.0533	66.67
Sulfate (mg/L)	SSP/APMW-...	16	3011	111.6	27.91	3050	2760	3210	0
Sulfate (mg/L)	SSPMW-2	15	2113	89.64	23.14	2080	1970	2300	0
Sulfate (mg/L)	SSPMW-3	16	2446	132.8	33.2	2460	2200	2760	0
Sulfate (mg/L)	SSPMW-4	15	1161	85.26	22.01	1170	982	1340	0
Sulfate (mg/L)	APMW-1D	16	524.4	67.23	16.81	526	422	664	0
Sulfate (mg/L)	APMW-3	16	697.4	60.71	15.18	721	583	807	0

Box & Whiskers Plot

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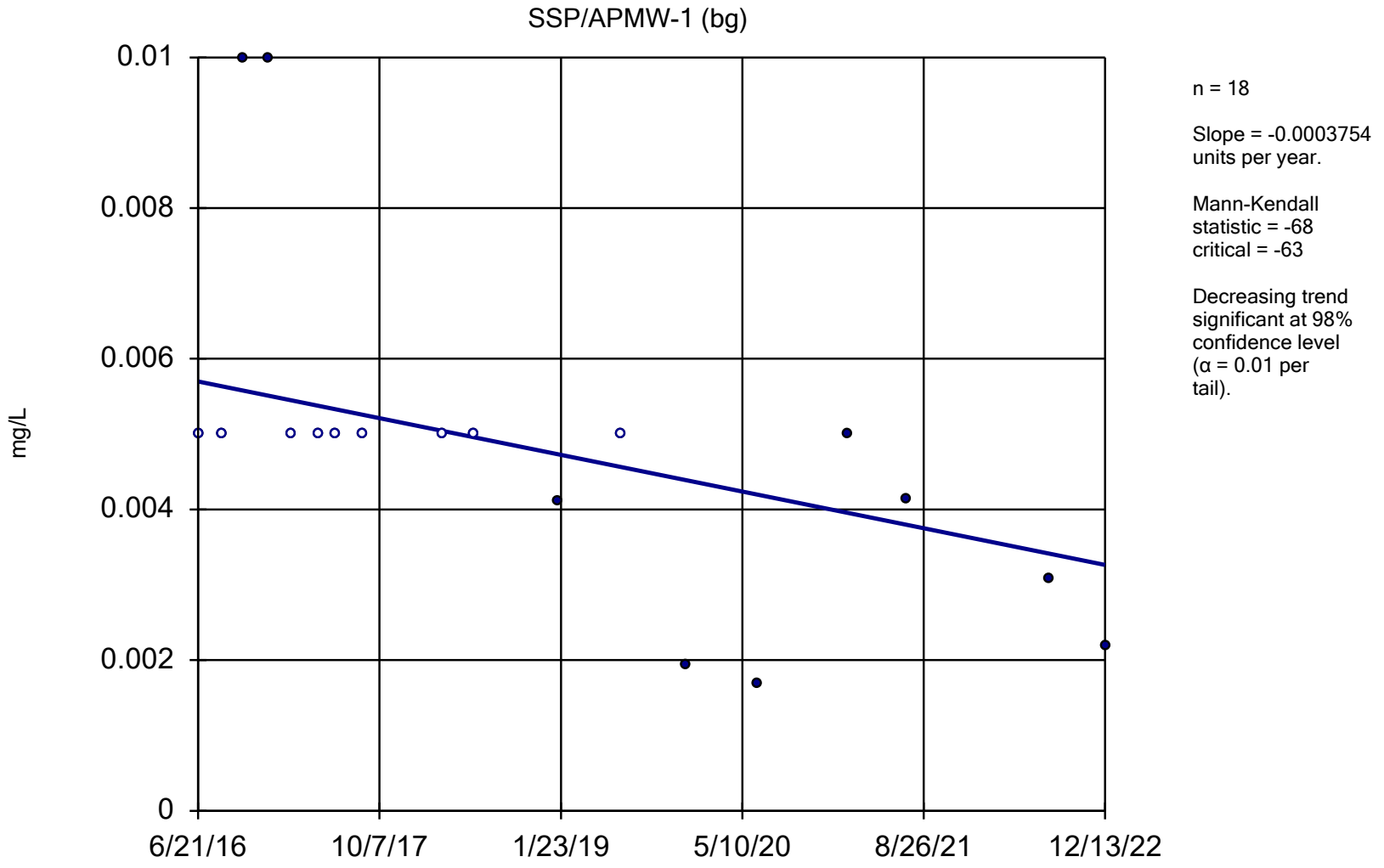
Constituent	Well	N	Mean	Std. Dev.	Std. Err.	Median	Min.	Max.	%NDs
Sulfate (mg/L)	APMW-4	16	2130	397	99.24	2250	876	2500	0
Sulfate (mg/L)	APMW-5	15	2704	280.5	72.43	2780	2030	2960	0
TDS (mg/L)	SSP/APMW-...	16	6763	544.2	136.1	6735	5630	7890	0
TDS (mg/L)	SSPMW-2	16	6639	436.6	109.2	6700	5850	7370	0
TDS (mg/L)	SSPMW-3	15	6286	304.8	78.69	6370	5780	6690	0
TDS (mg/L)	SSPMW-4	16	3695	319.6	79.91	3820	2890	4040	0
TDS (mg/L)	APMW-1D	16	1313	112.1	28.03	1330	1110	1490	0
TDS (mg/L)	APMW-3	15	1376	33.34	8.608	1390	1300	1420	0
TDS (mg/L)	APMW-4	16	3892	598.6	149.7	4100	1790	4270	0
TDS (mg/L)	APMW-5	16	4534	517.3	129.3	4725	3380	5040	0
Thallium (mg/L)	SSP/APMW-...	18	0.000...	0.0000...	0.0000...	0.000472	0.000206	0.000472	88.89
Thallium (mg/L)	SSPMW-2	18	0.000...	0.00024	0.0000...	0.000472	0.000472	0.0013	83.33
Thallium (mg/L)	SSPMW-3	18	0.009461	0.0009681	0.0002282	0.009765	0.0076	0.0112	0
Thallium (mg/L)	SSPMW-4	18	0.000472	0	0	0.000472	0.000472	0.000472	100
Thallium (mg/L)	APMW-1D	15	0.000...	0.0000...	0.0000...	0.000472	0.00031	0.000636	86.67
Thallium (mg/L)	APMW-3	15	0.000...	0.0000...	0.0000...	0.000472	0.000267	0.000529	80
Thallium (mg/L)	APMW-4	15	0.000452	0.0000...	0.00002	0.000472	0.000172	0.000472	93.33
Thallium (mg/L)	APMW-5	15	0.002123	0.0001605	0.0000...	0.002	0.002	0.00248	20

Hollow symbols indicate censored values.

Sen's Slope Estimator



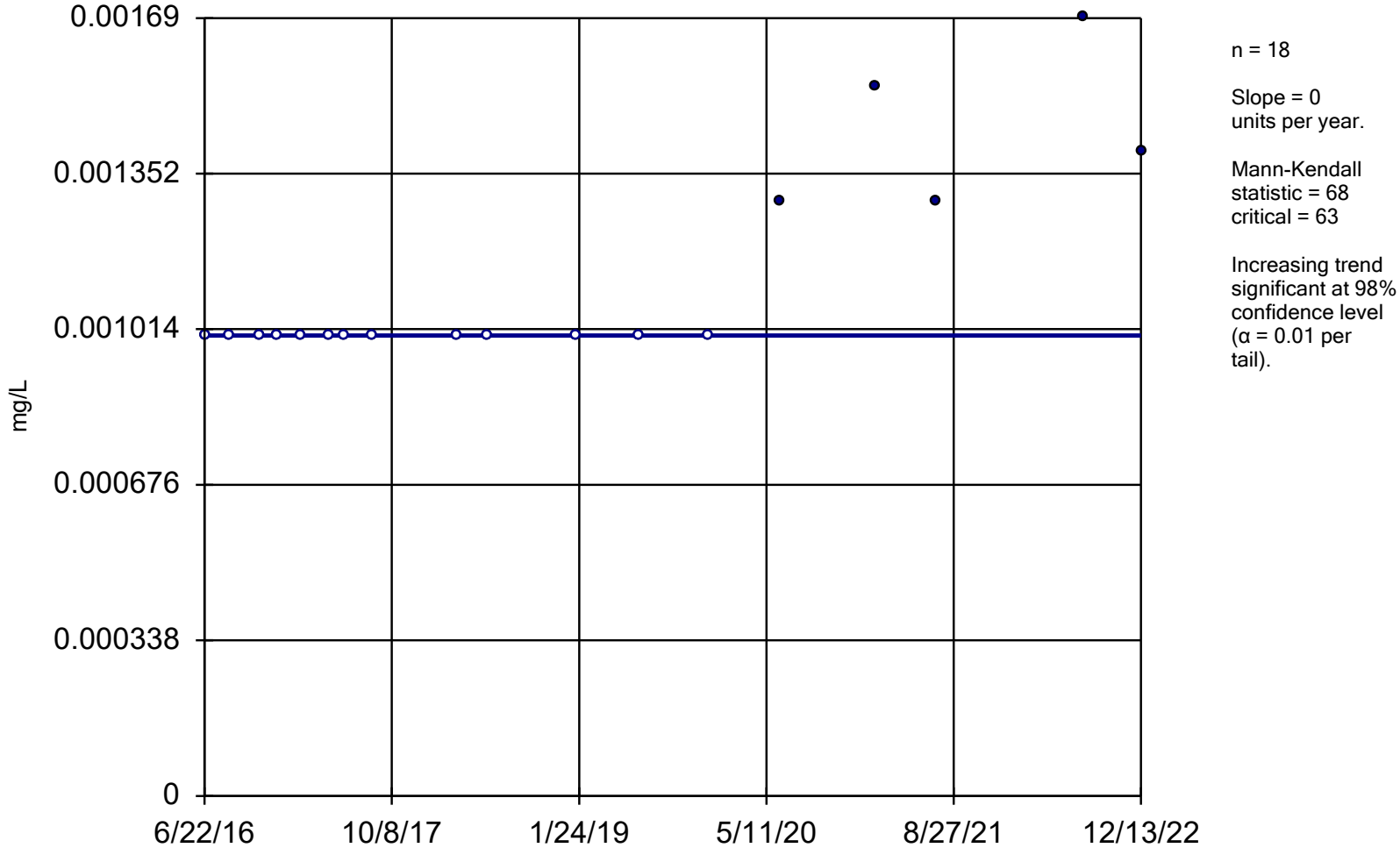
Constituent: Arsenic Analysis Run 1/23/2023 11:12 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 18

Slope = 0
units per year.

Mann-Kendall
statistic = 68
critical = 63

Increasing trend
significant at 98%
confidence level
(α = 0.01 per
tail).

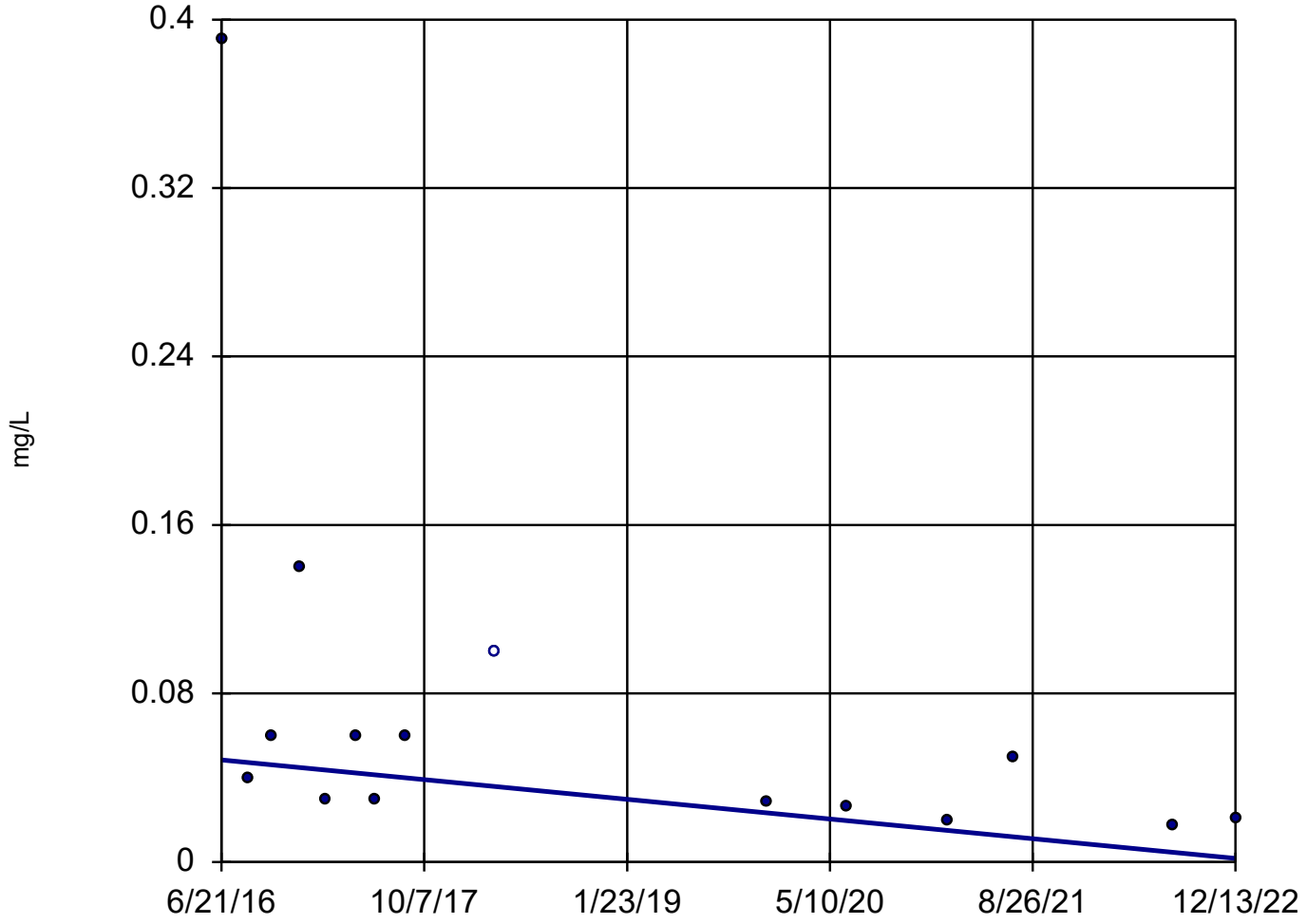
Constituent: Arsenic Analysis Run 1/23/2023 11:12 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 15

Slope = -0.007213 units per year.

Mann-Kendall statistic = -57
critical = -48

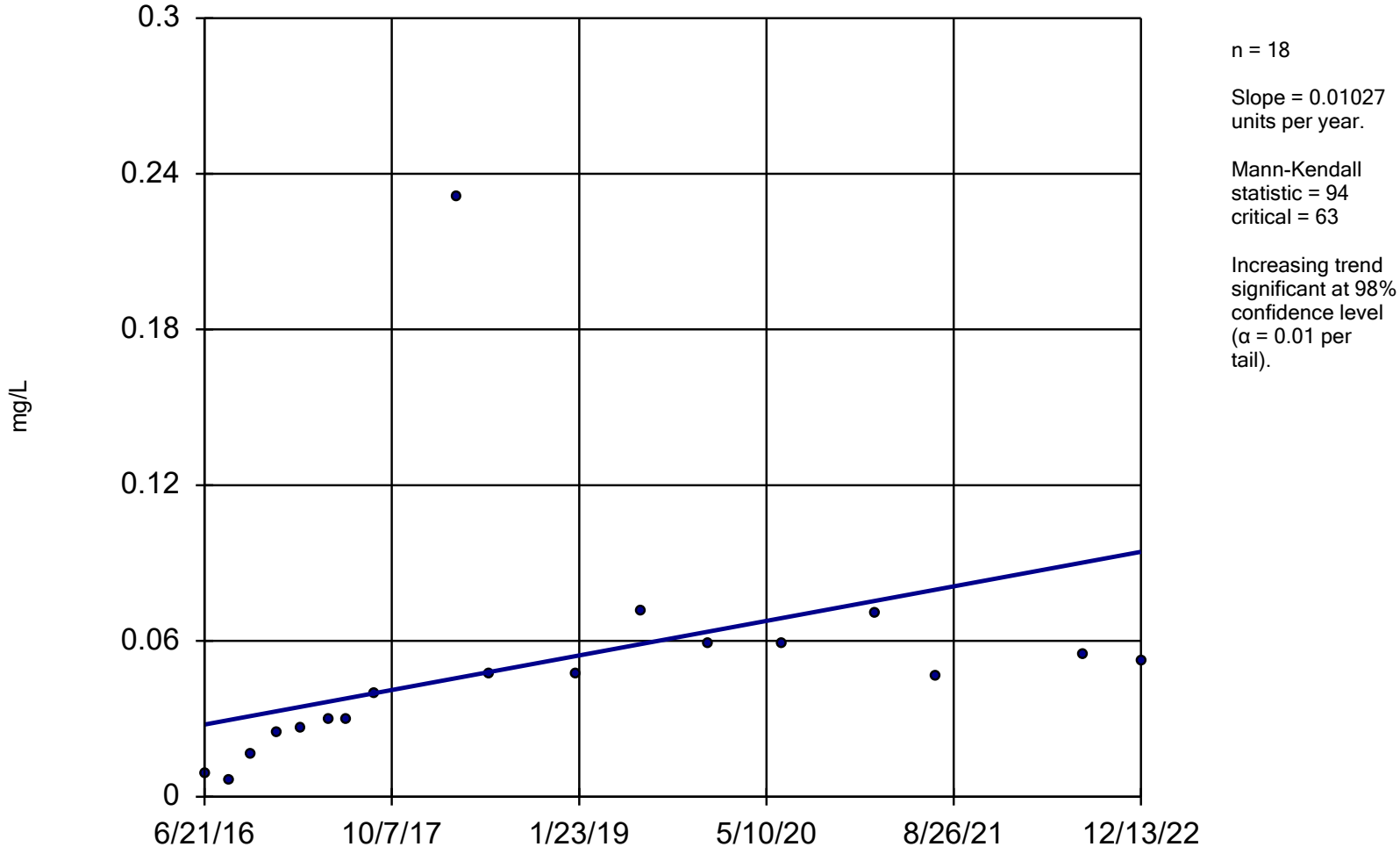
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 1/23/2023 11:12 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 18

Slope = 0.01027 units per year.

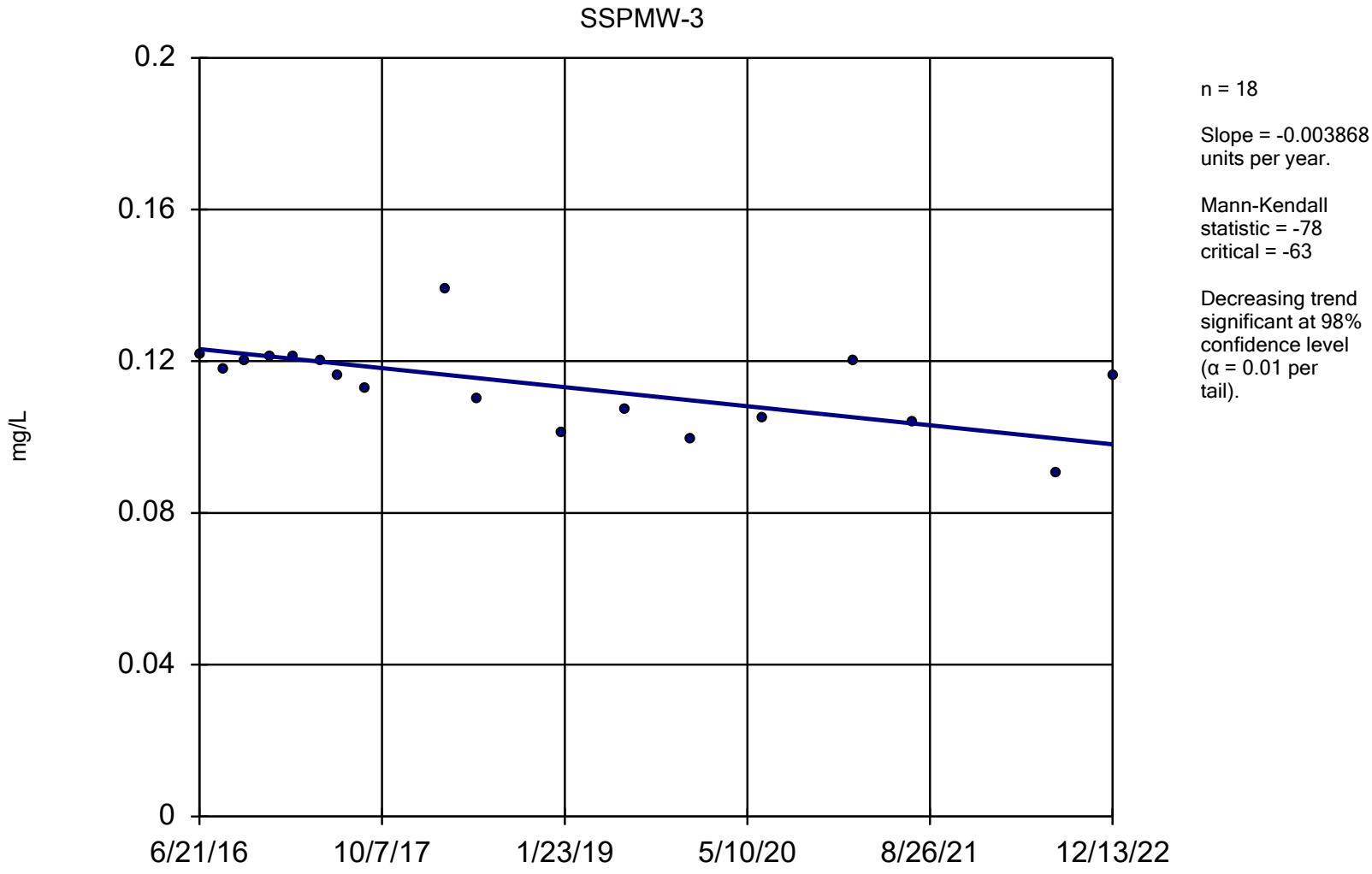
Mann-Kendall statistic = 94
critical = 63

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Beryllium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

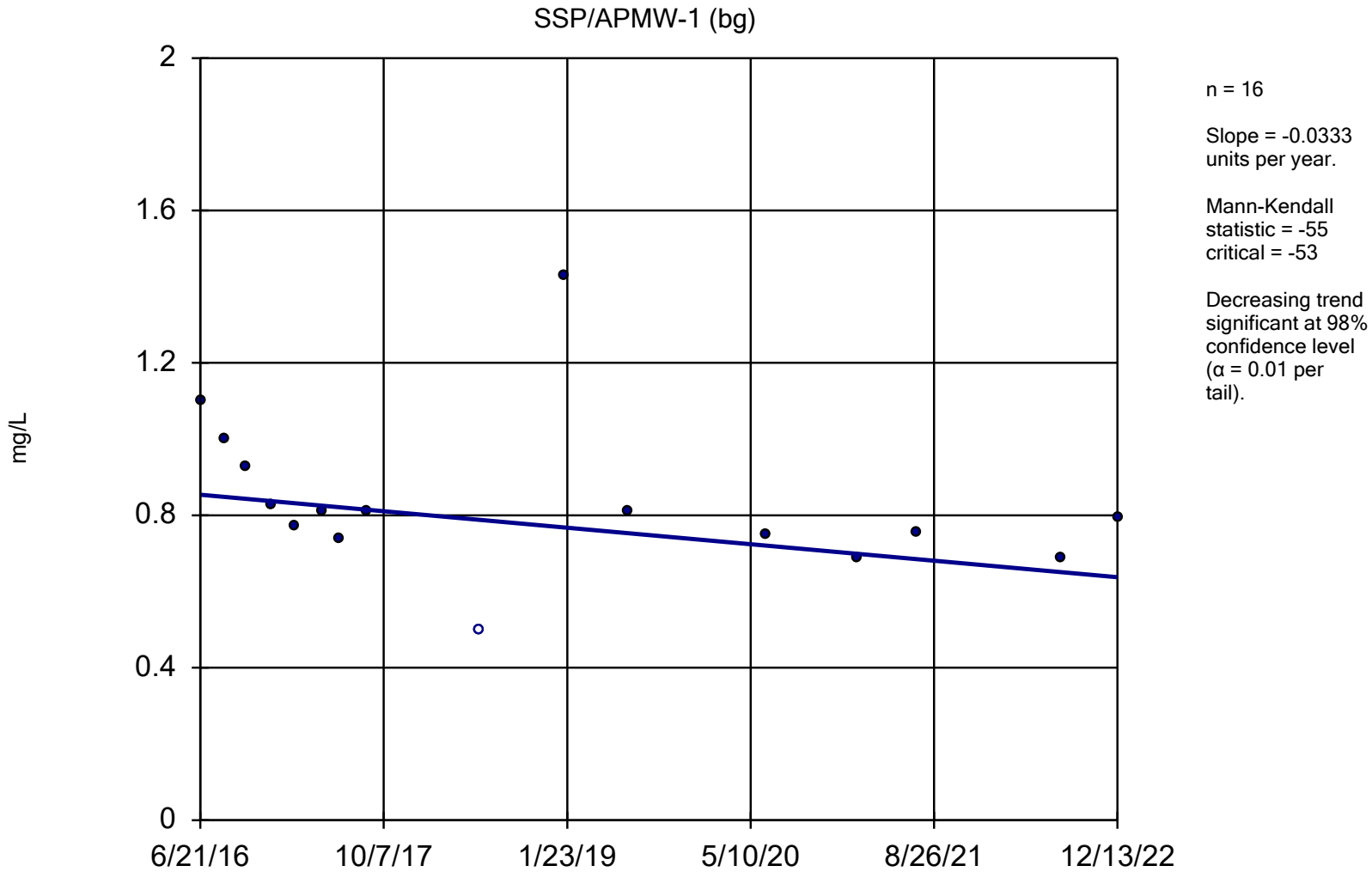


Constituent: Beryllium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

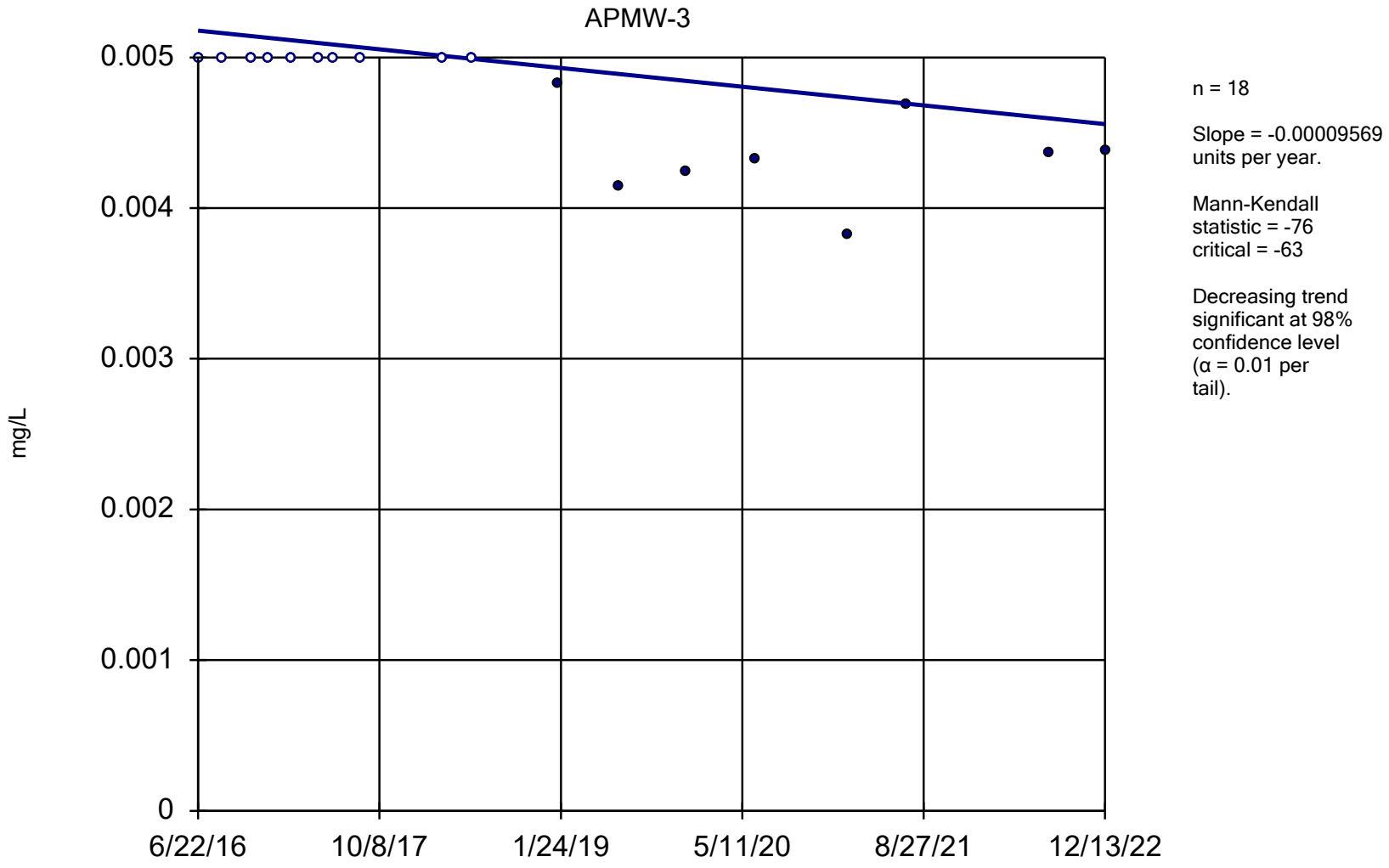


Constituent: Boron Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

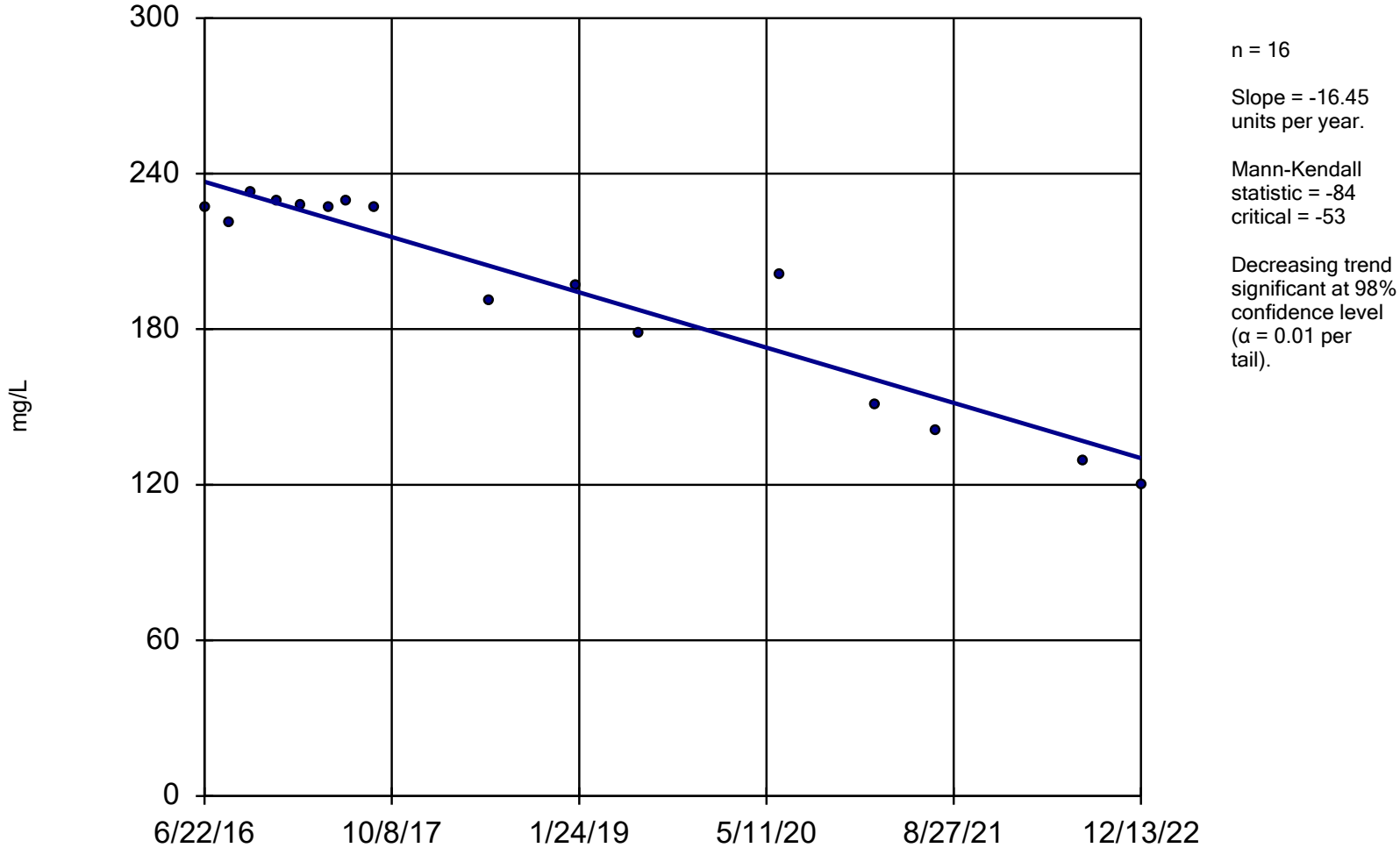


Constituent: Cadmium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 16

Slope = -16.45 units per year.

Mann-Kendall statistic = -84
critical = -53

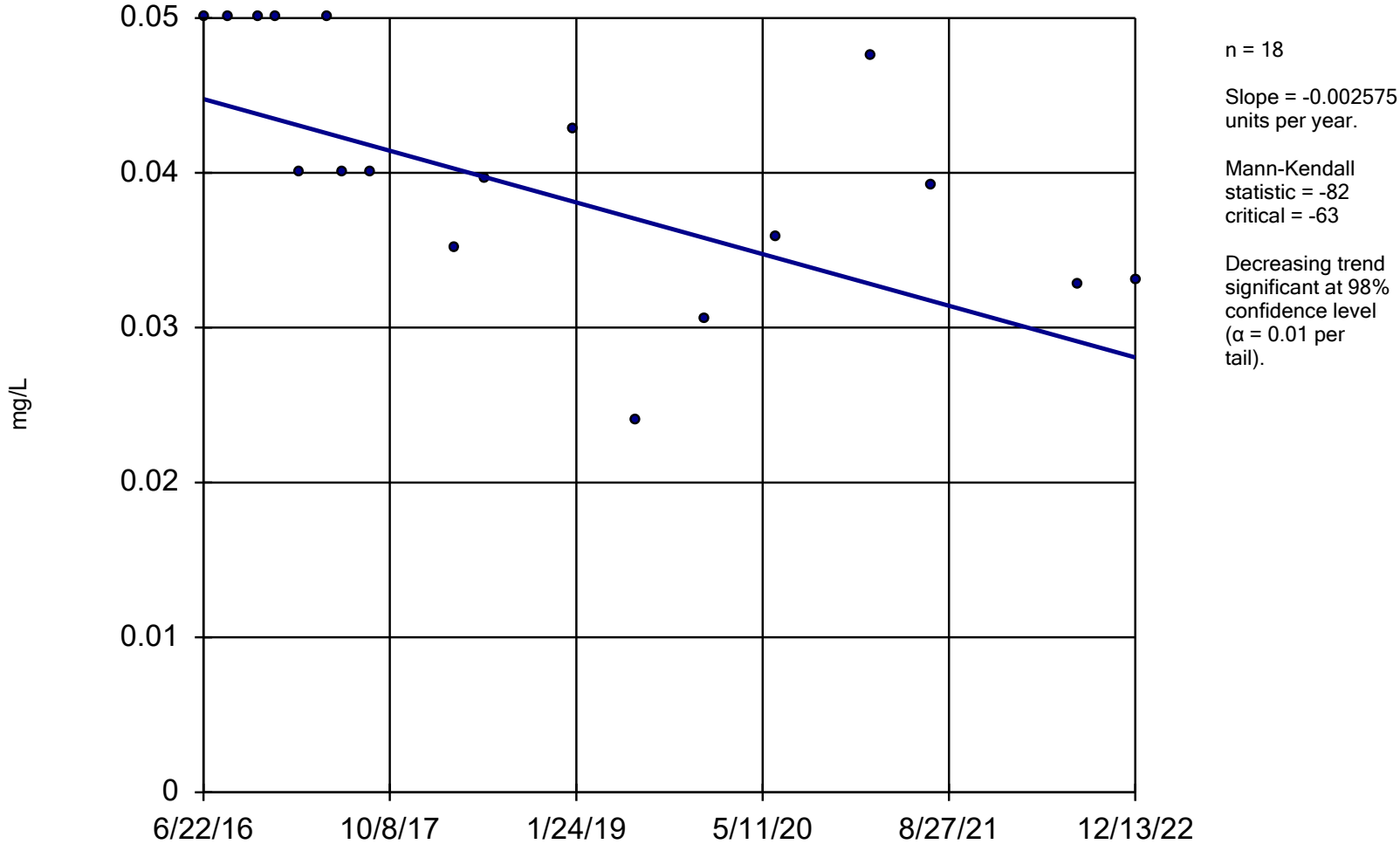
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Chloride Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-3



n = 18

Slope = -0.002575 units per year.

Mann-Kendall statistic = -82
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

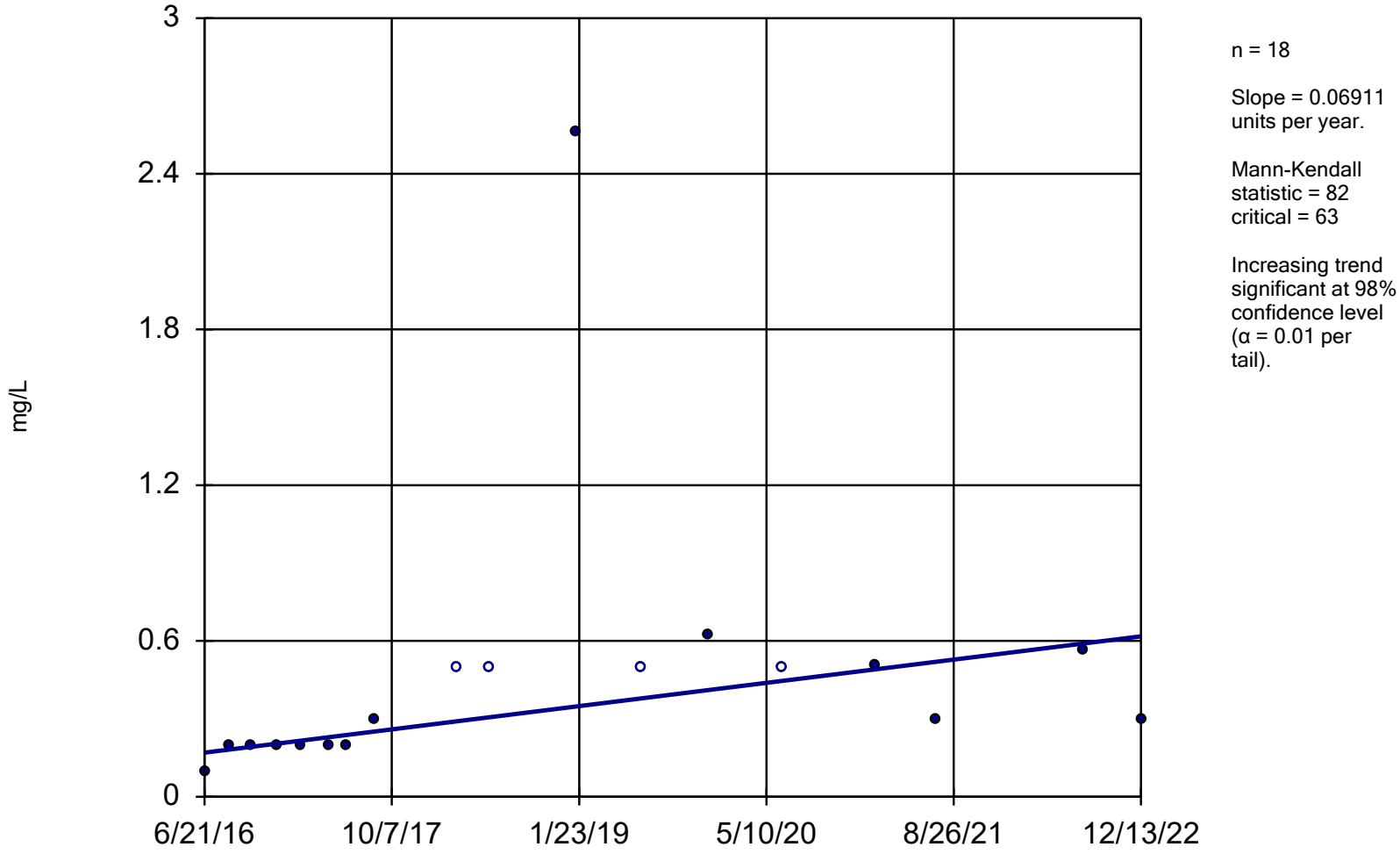
Constituent: Cobalt Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 18

Slope = 0.06911 units per year.

Mann-Kendall statistic = 82
critical = 63

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

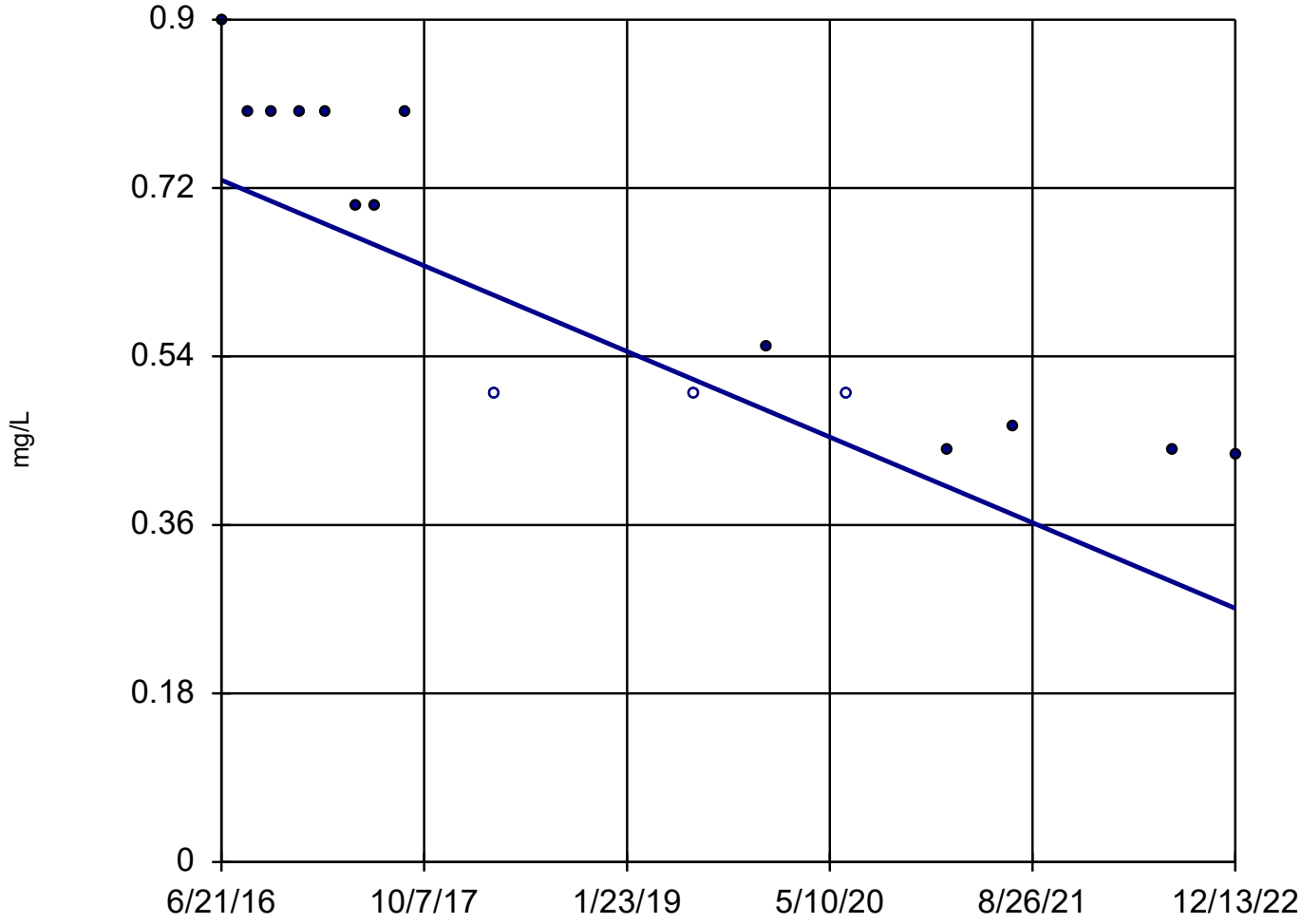
Constituent: Fluoride Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-3



n = 16

Slope = -0.07058 units per year.

Mann-Kendall statistic = -95
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

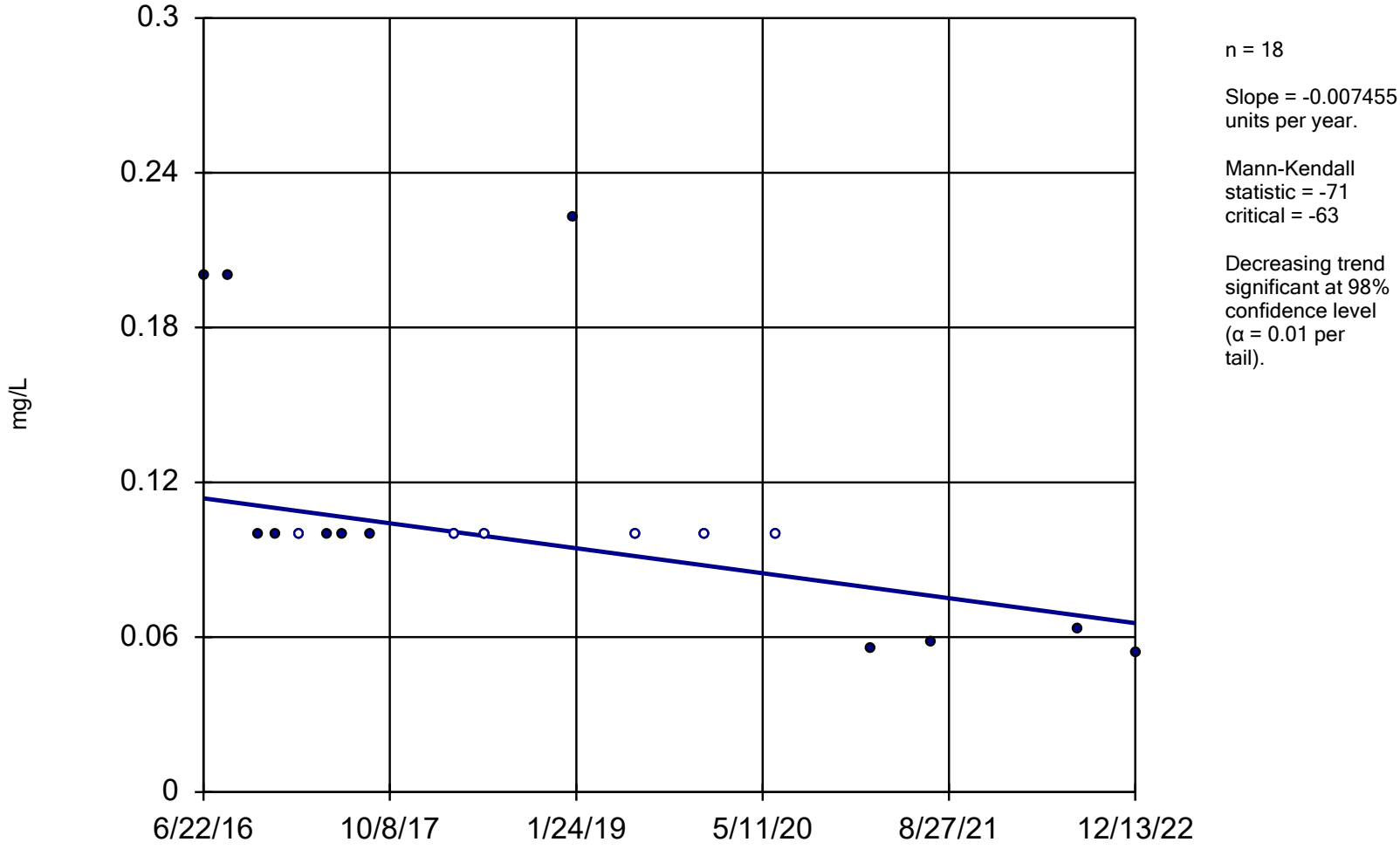
Constituent: Fluoride Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-3



n = 18

Slope = -0.007455 units per year.

Mann-Kendall statistic = -71
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

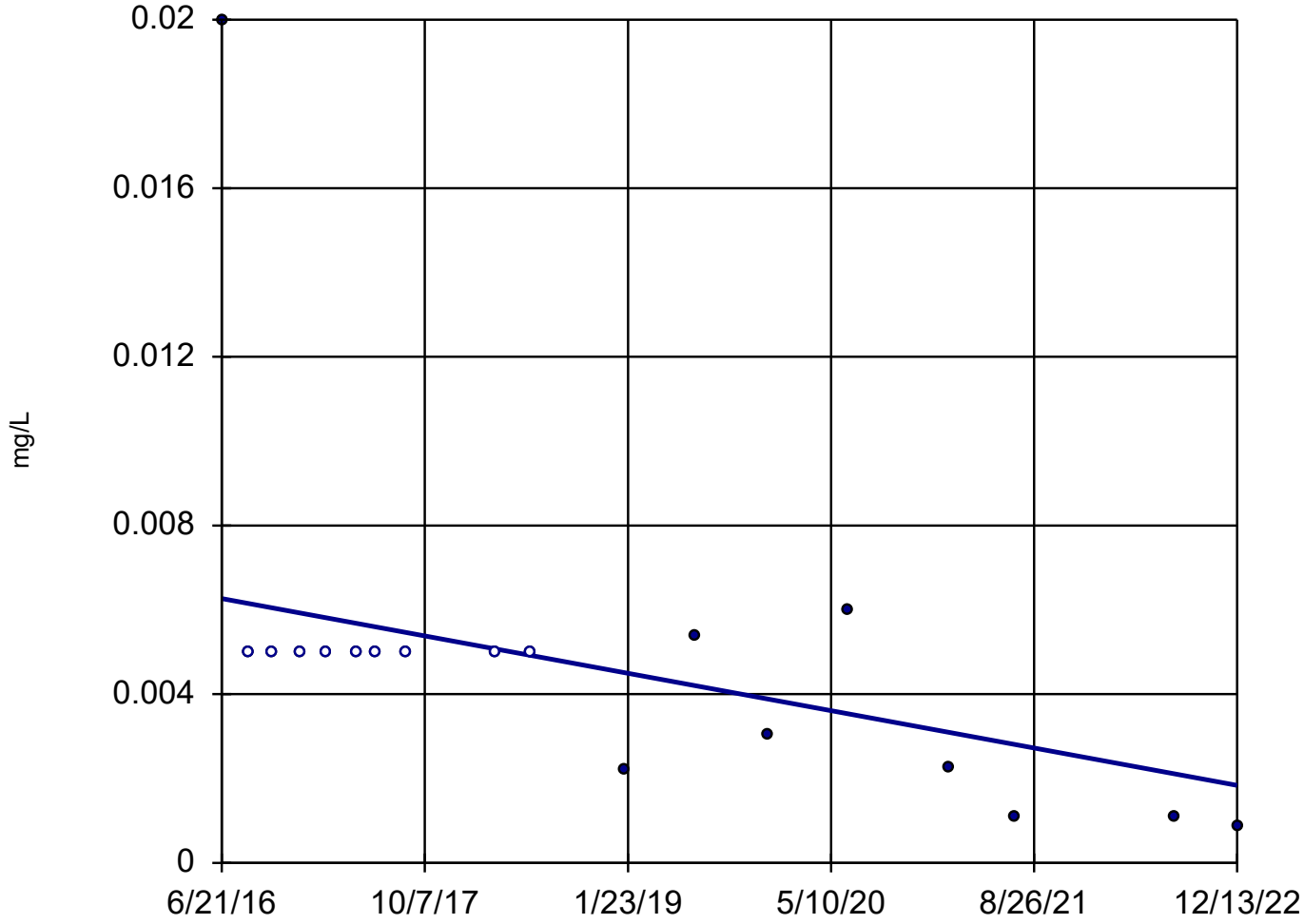
Constituent: Fluoride Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

SSPMW-2



n = 18

Slope = -0.0006831 units per year.

Mann-Kendall statistic = -69
critical = -63

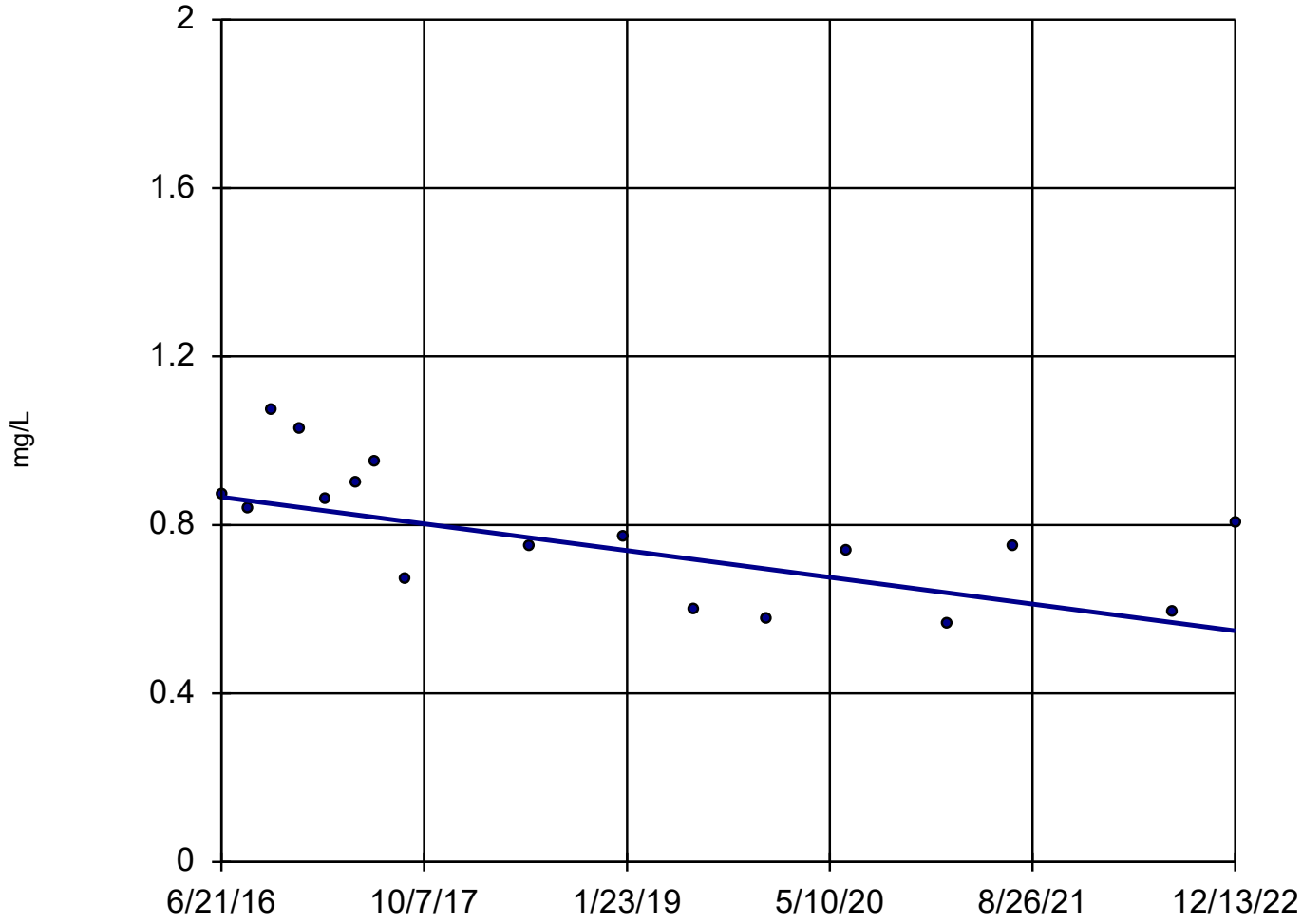
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lead Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = -0.04894 units per year.

Mann-Kendall statistic = -66
critical = -58

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

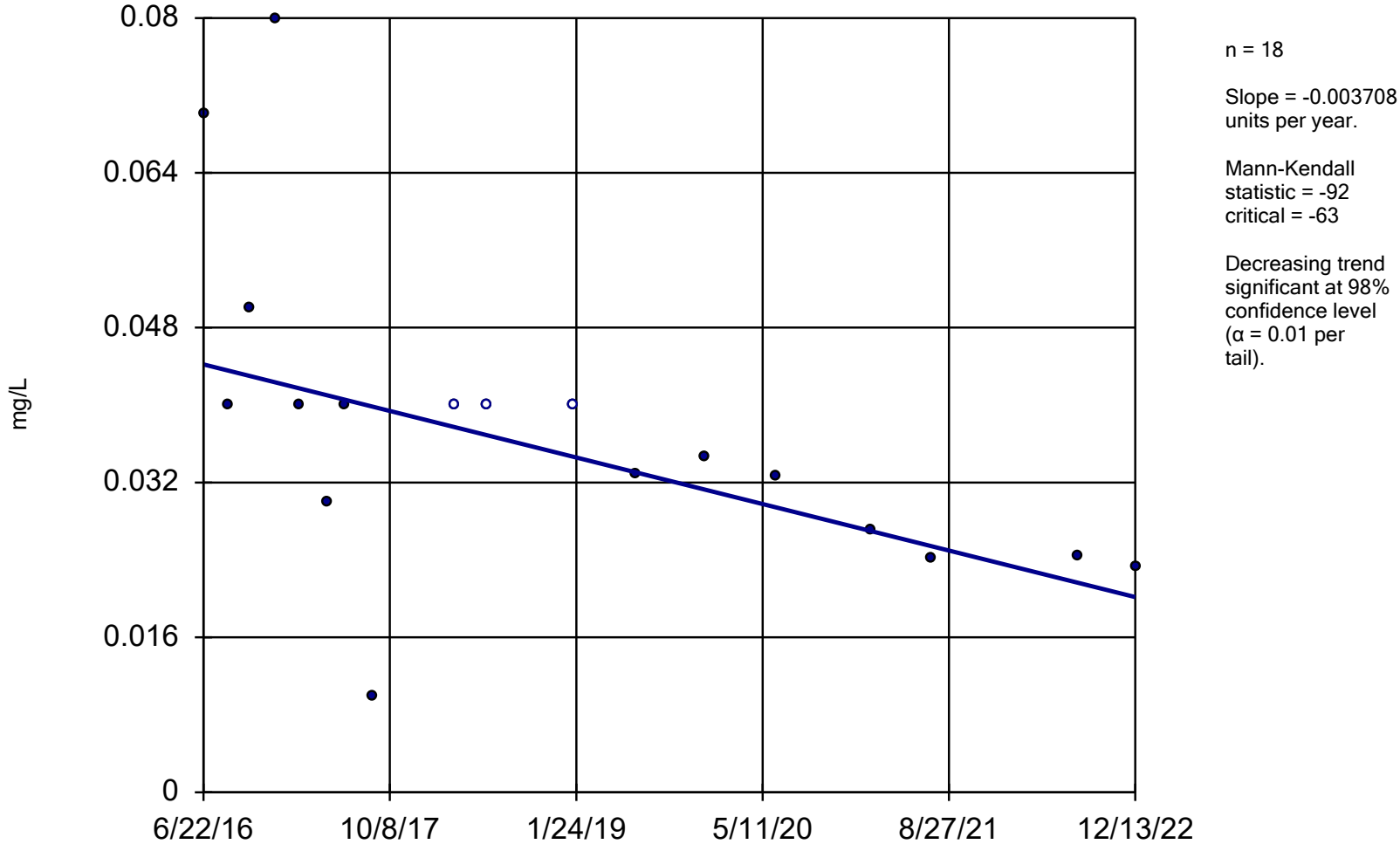
Constituent: Lithium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-1D



n = 18

Slope = -0.003708 units per year.

Mann-Kendall statistic = -92
critical = -63

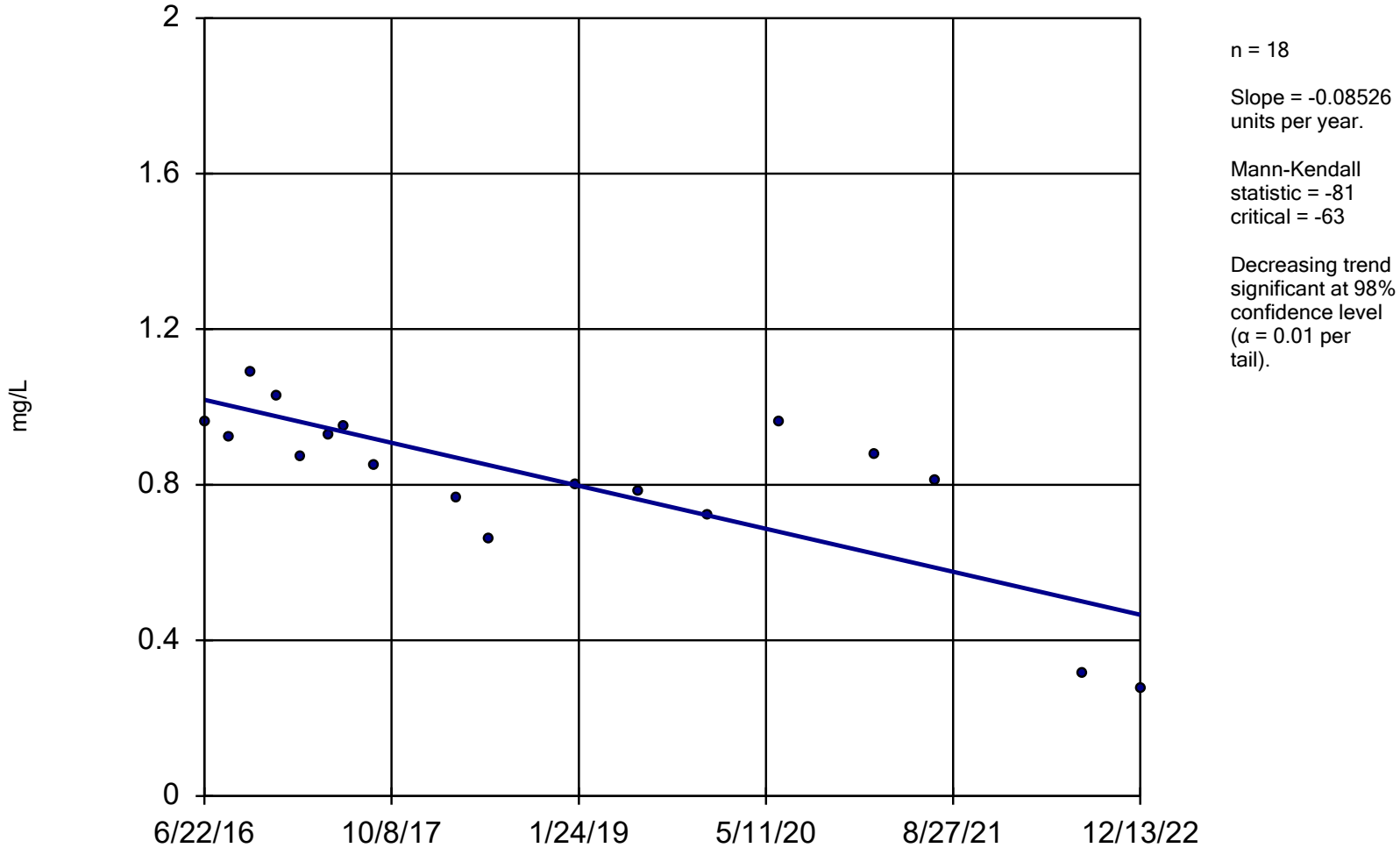
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-4



n = 18

Slope = -0.08526 units per year.

Mann-Kendall statistic = -81
critical = -63

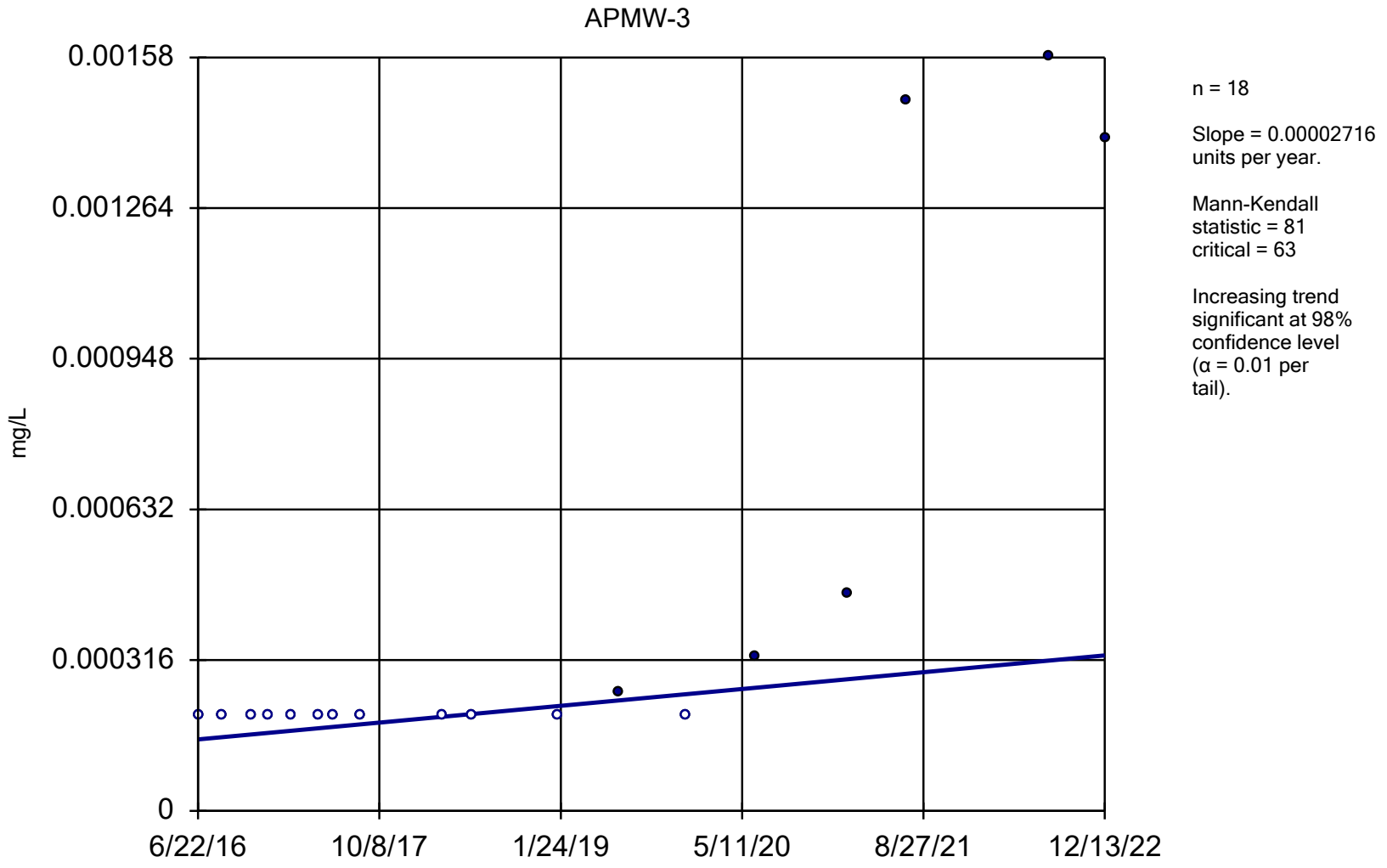
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Lithium Analysis Run 1/23/2023 11:13 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator



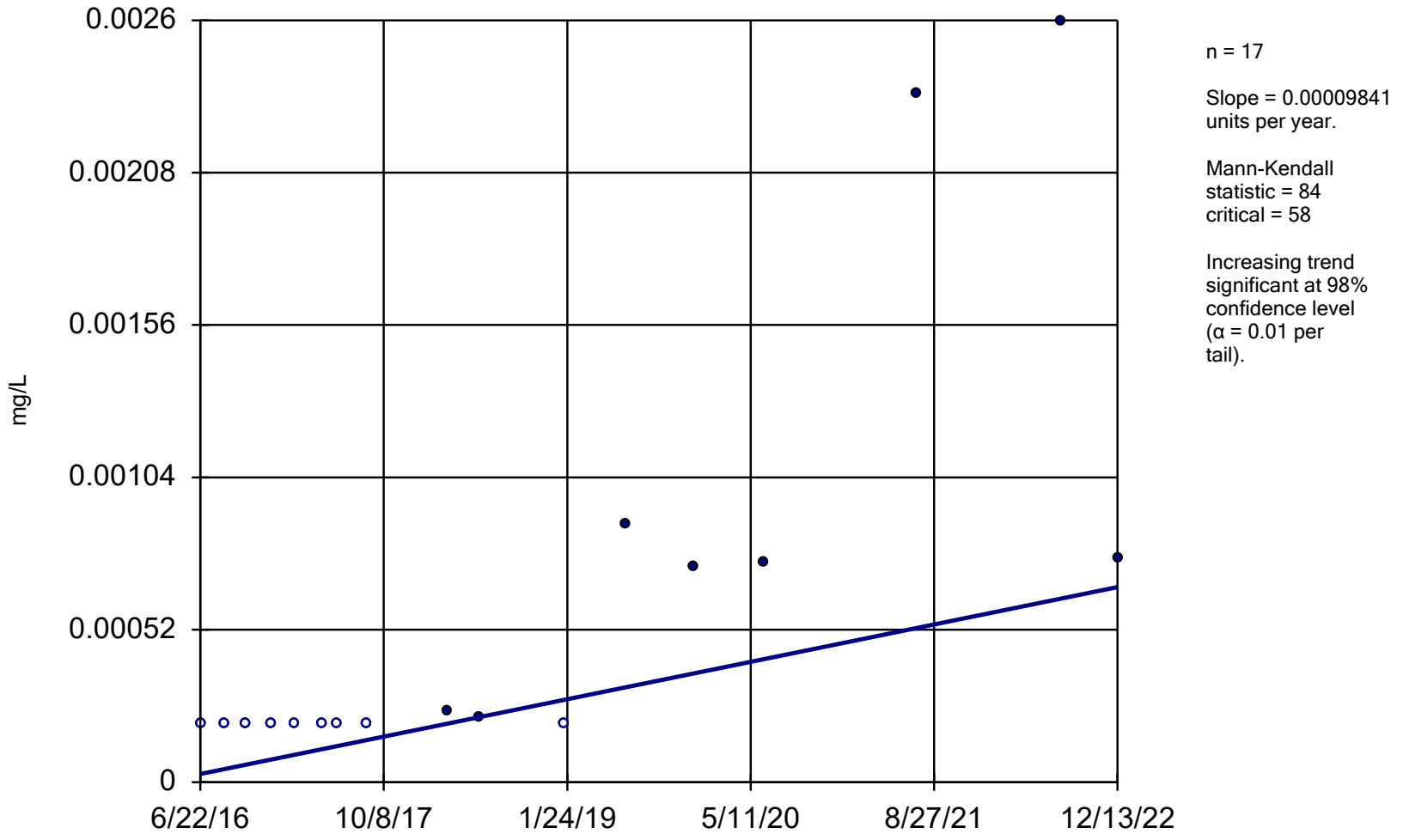
Constituent: Mercury Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 17

Slope = 0.00009841 units per year.

Mann-Kendall statistic = 84
critical = 58

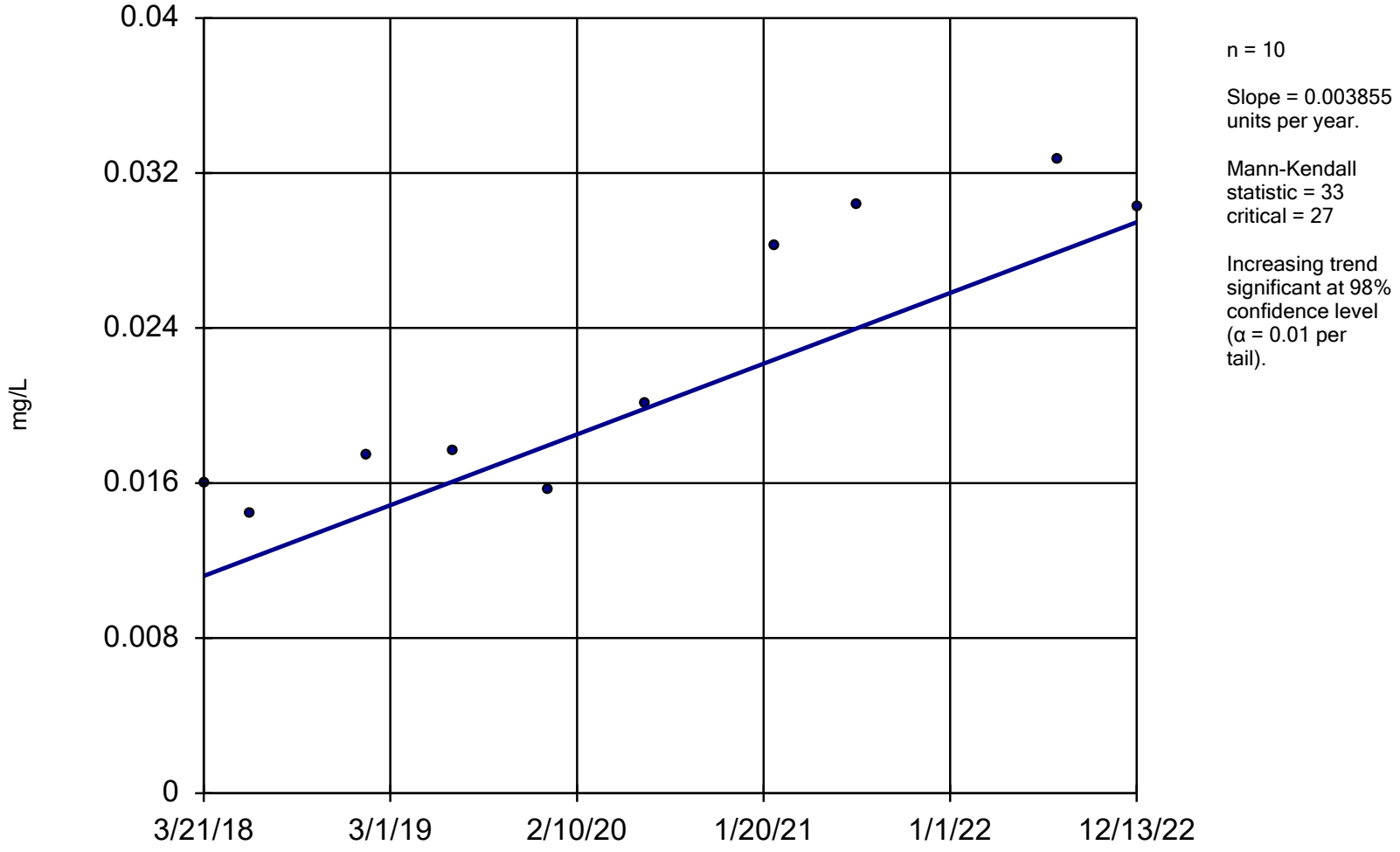
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Mercury Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 10

Slope = 0.003855 units per year.

Mann-Kendall statistic = 33
critical = 27

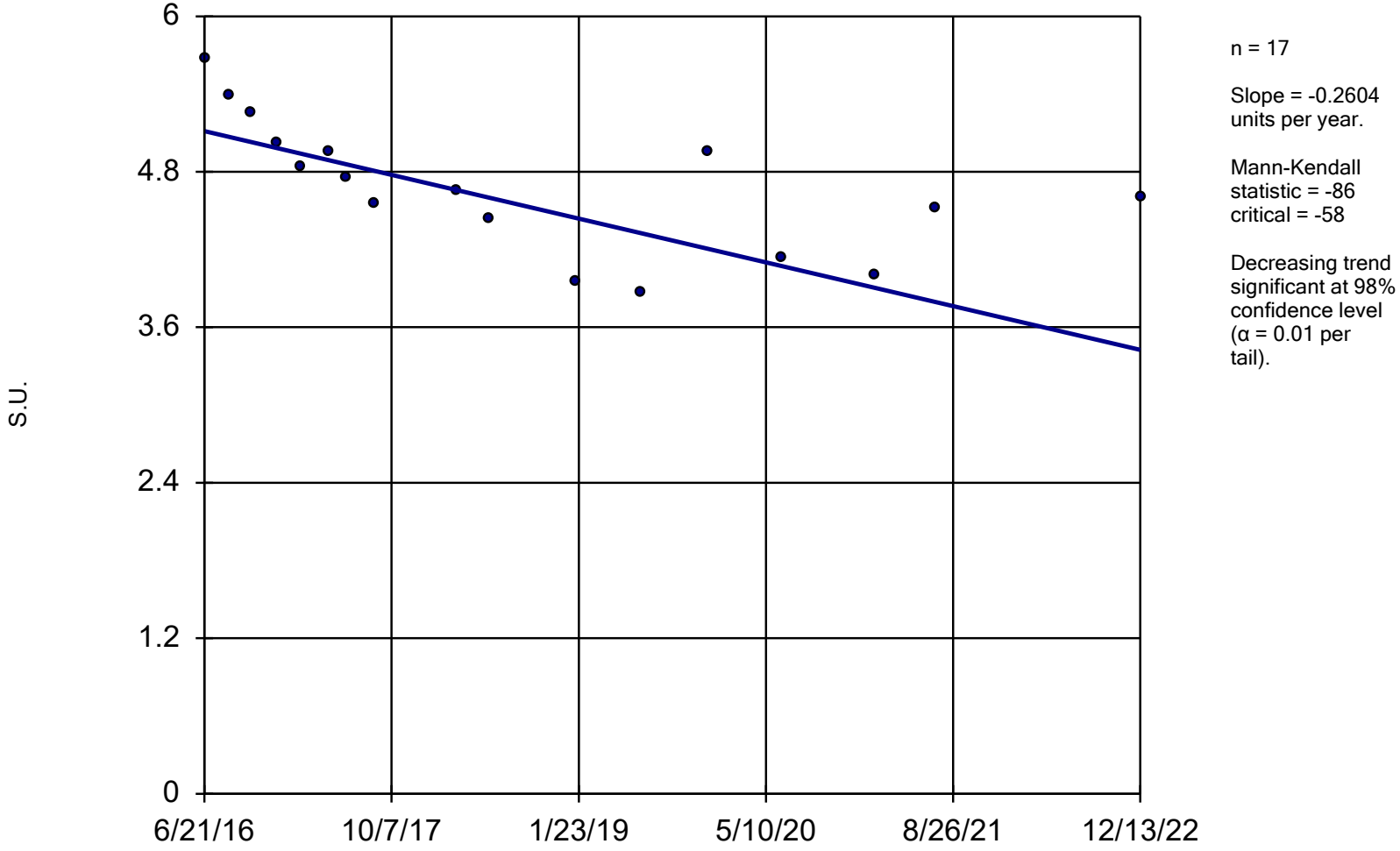
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-2



n = 17

Slope = -0.2604 units per year.

Mann-Kendall statistic = -86
critical = -58

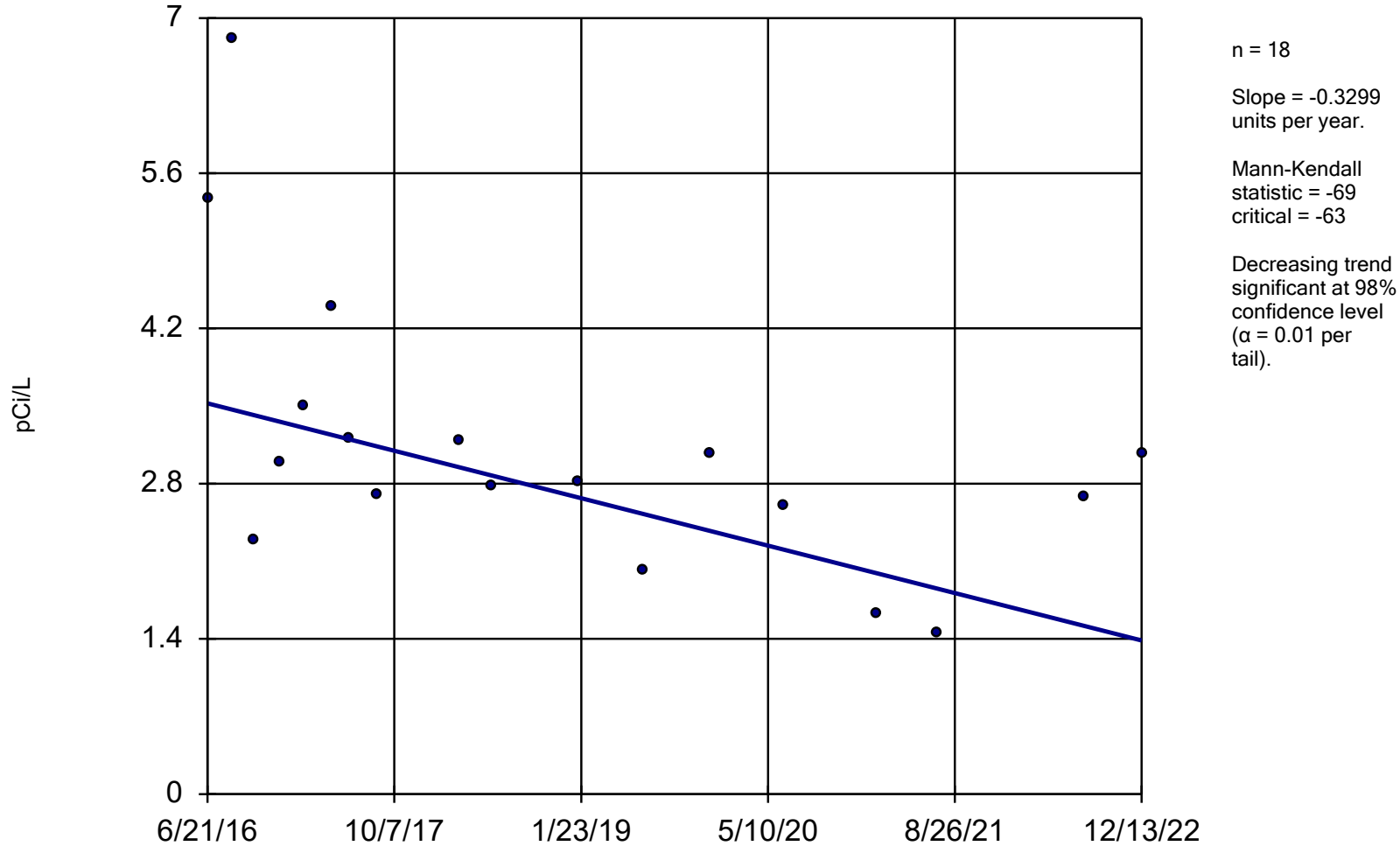
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-4



n = 18

Slope = -0.3299 units per year.

Mann-Kendall statistic = -69
critical = -63

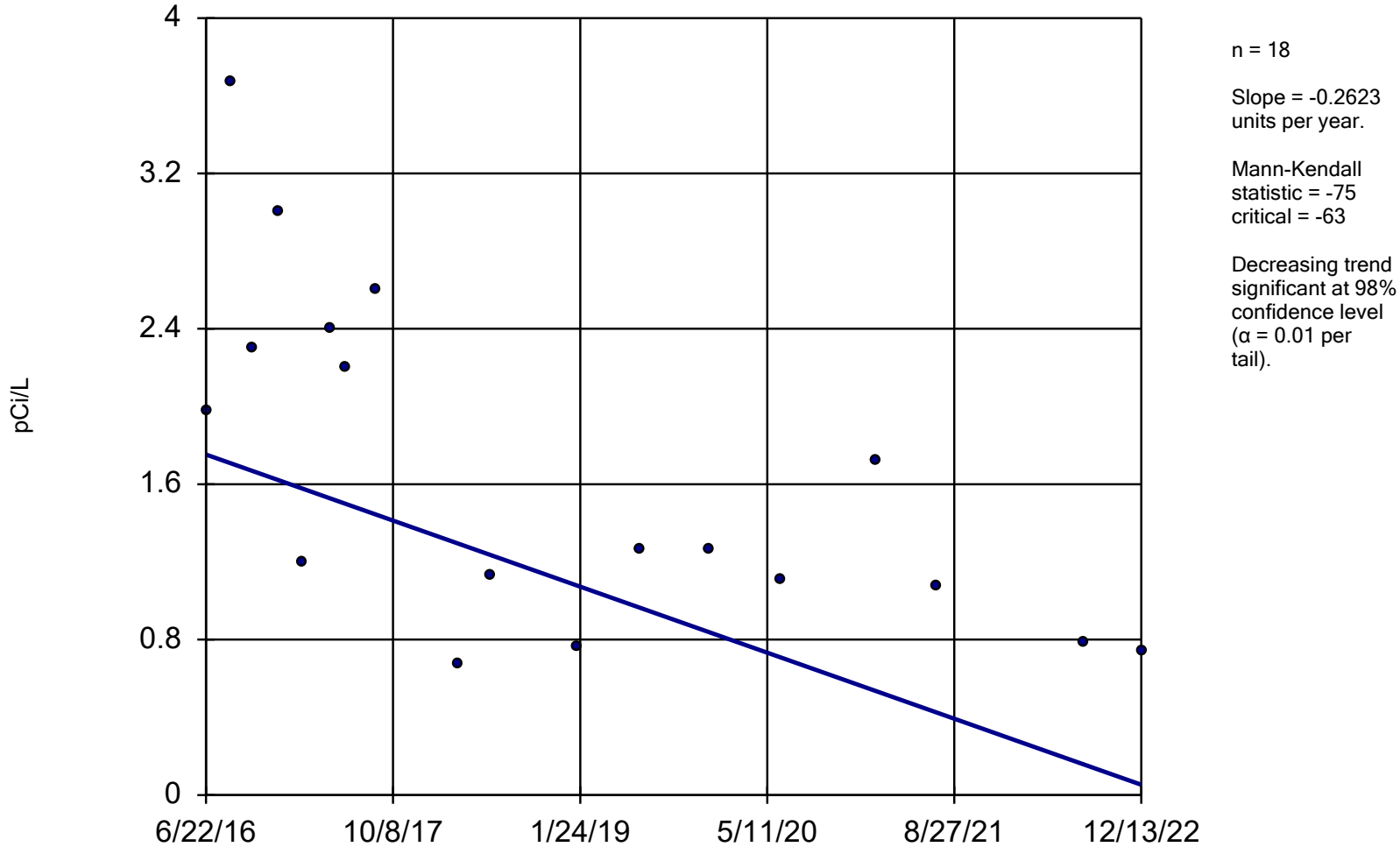
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-4



n = 18

Slope = -0.2623 units per year.

Mann-Kendall statistic = -75
critical = -63

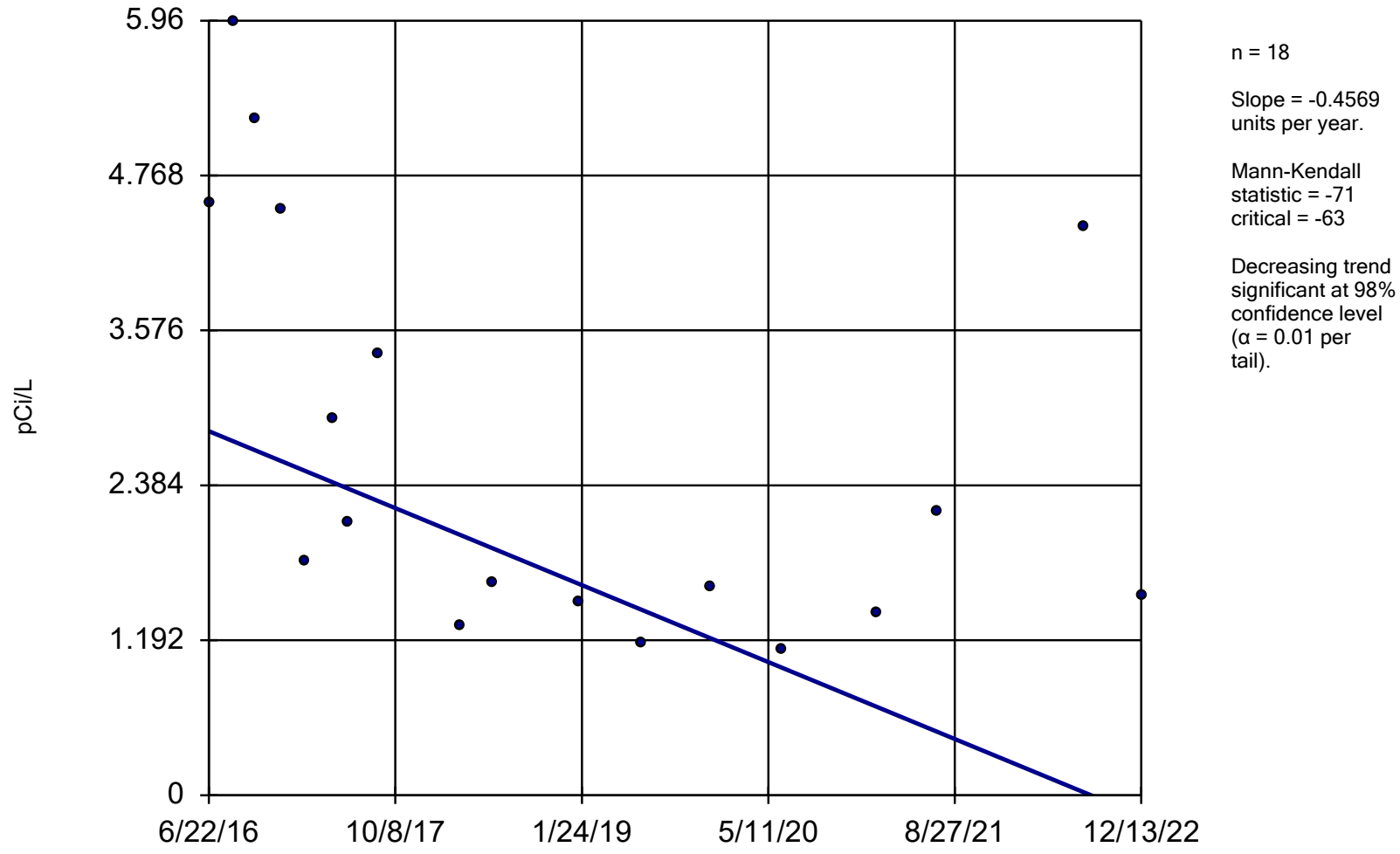
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-5



n = 18

Slope = -0.4569 units per year.

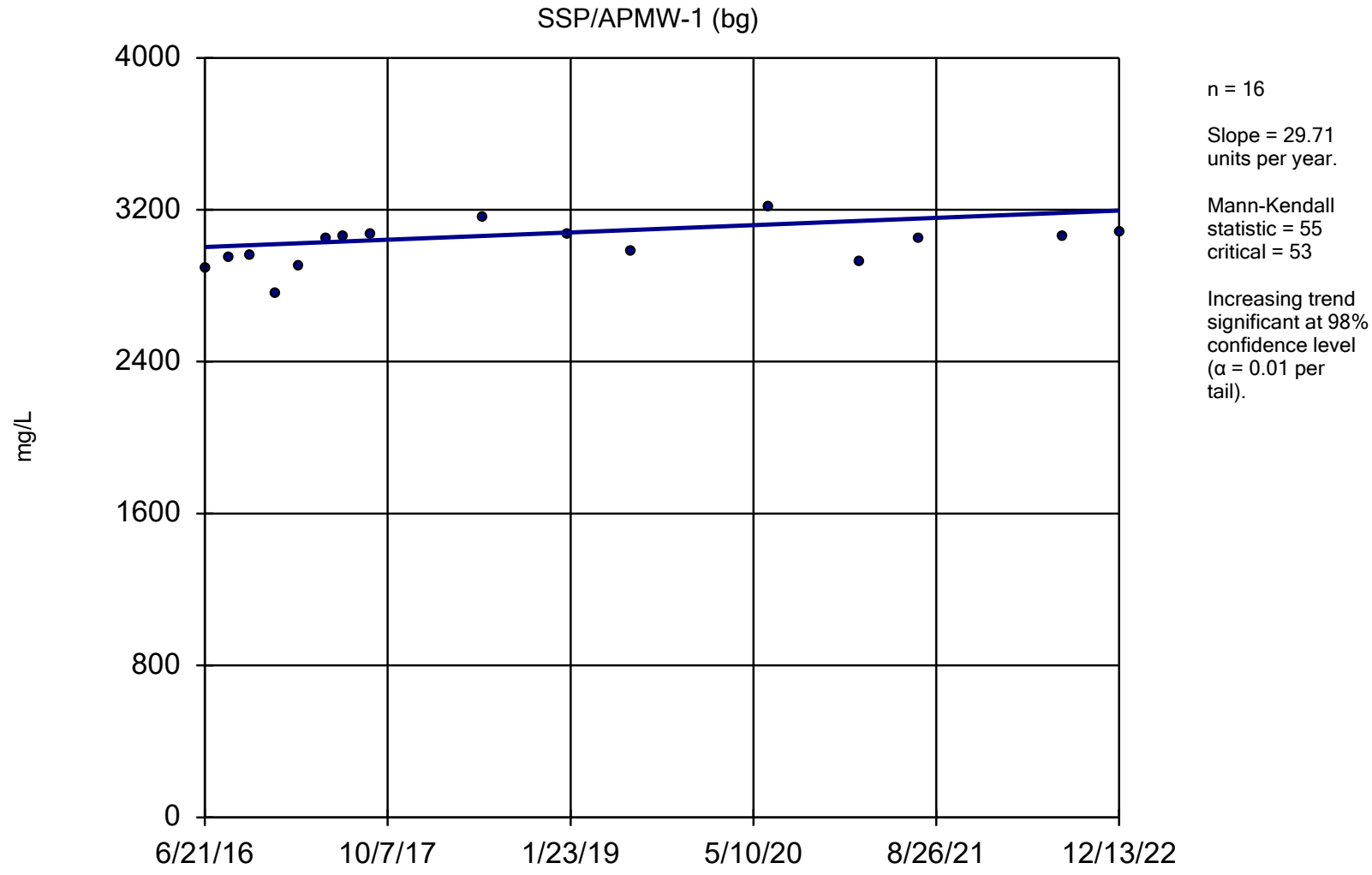
Mann-Kendall statistic = -71
critical = -63

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

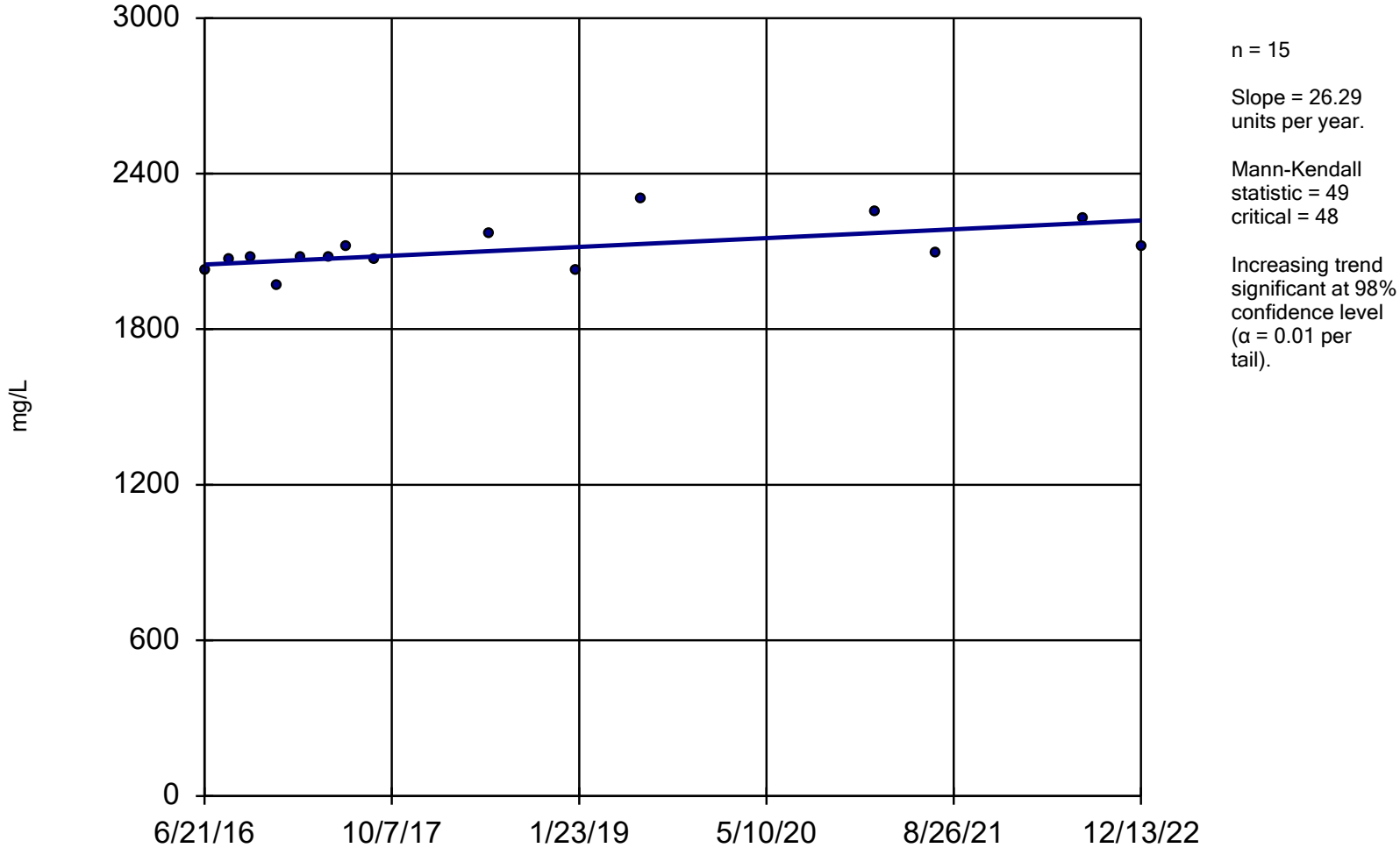


Constituent: Sulfate Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

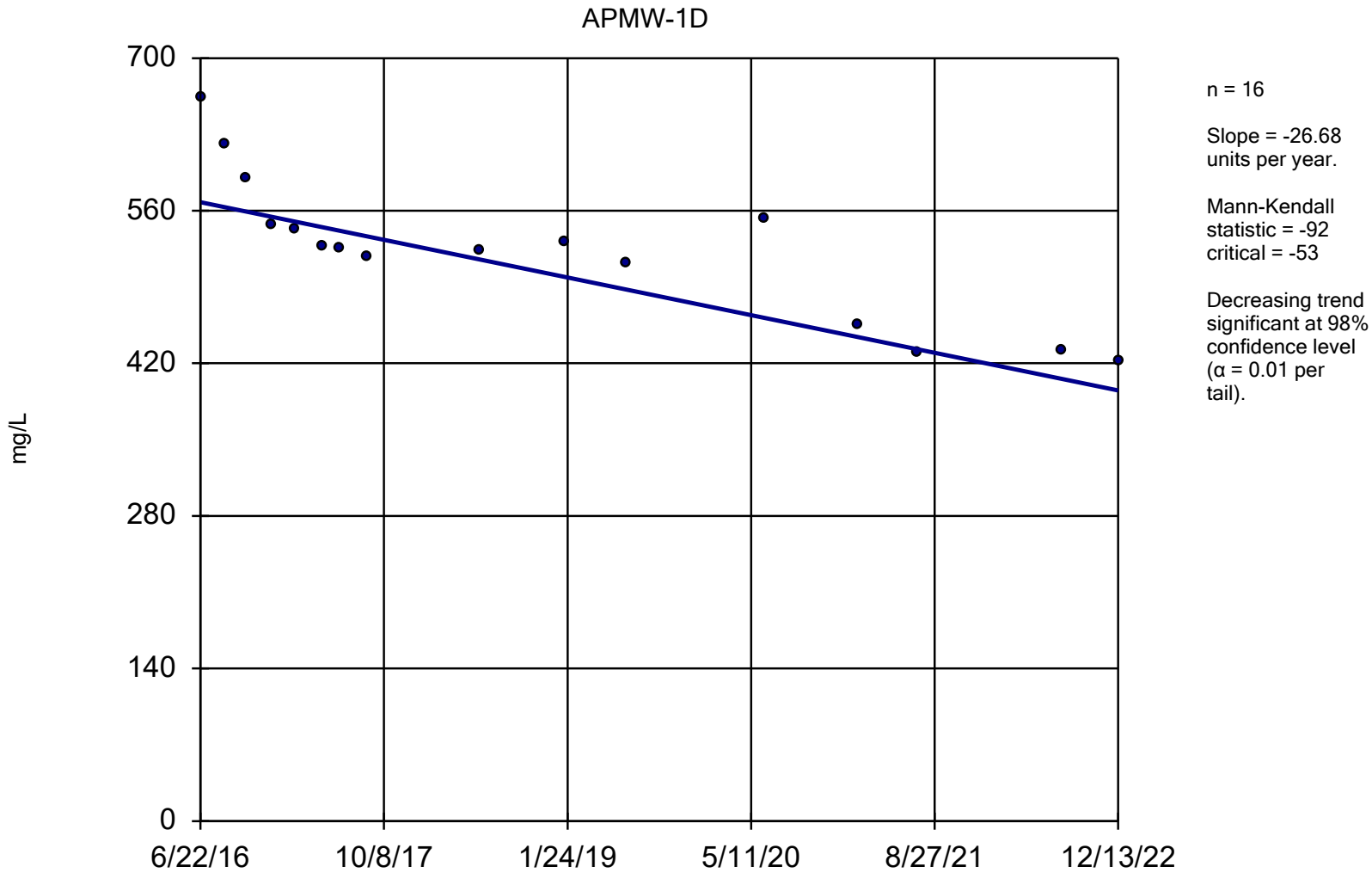
SSPMW-2



Constituent: Sulfate Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

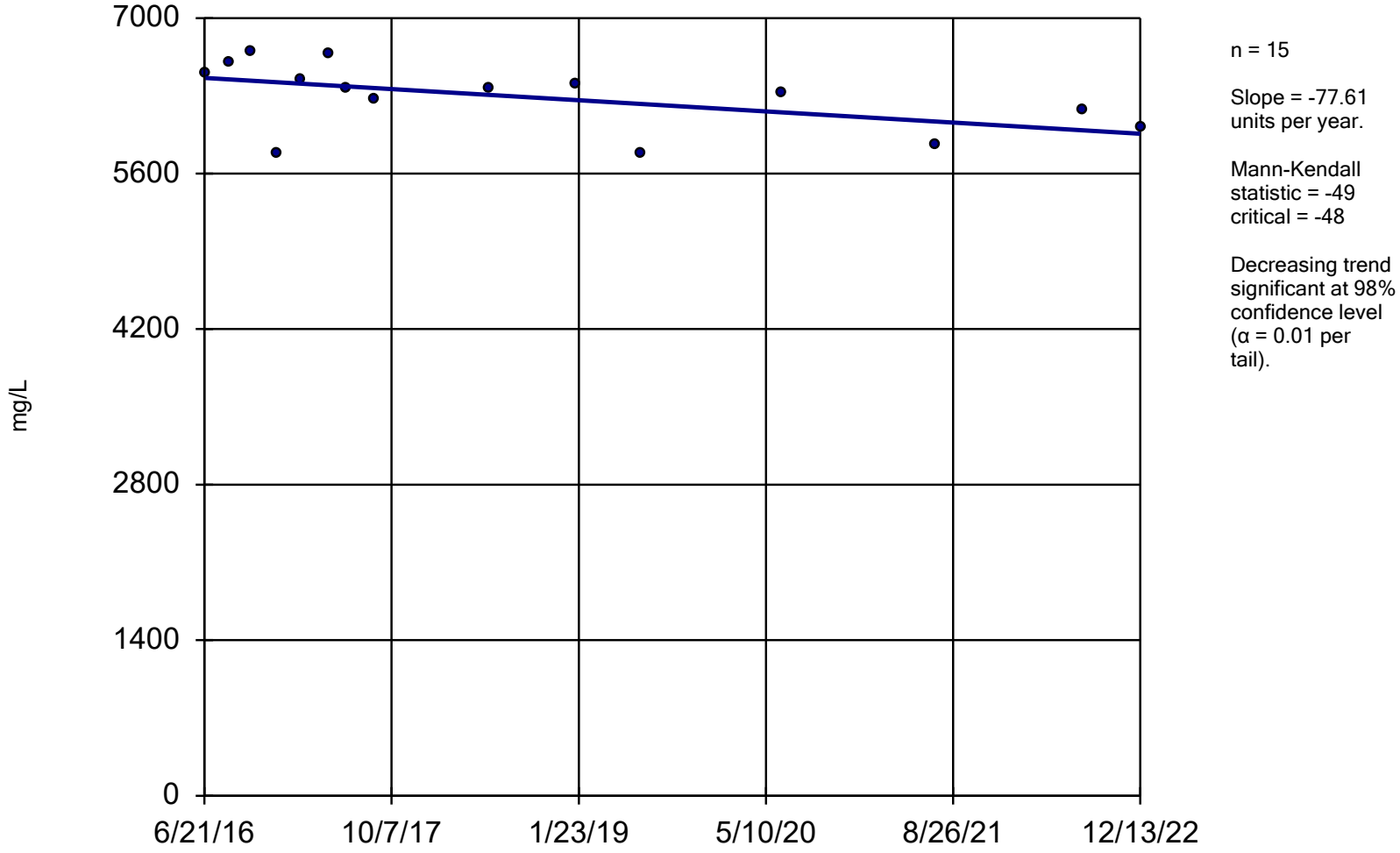


Constituent: Sulfate Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

SSPMW-3

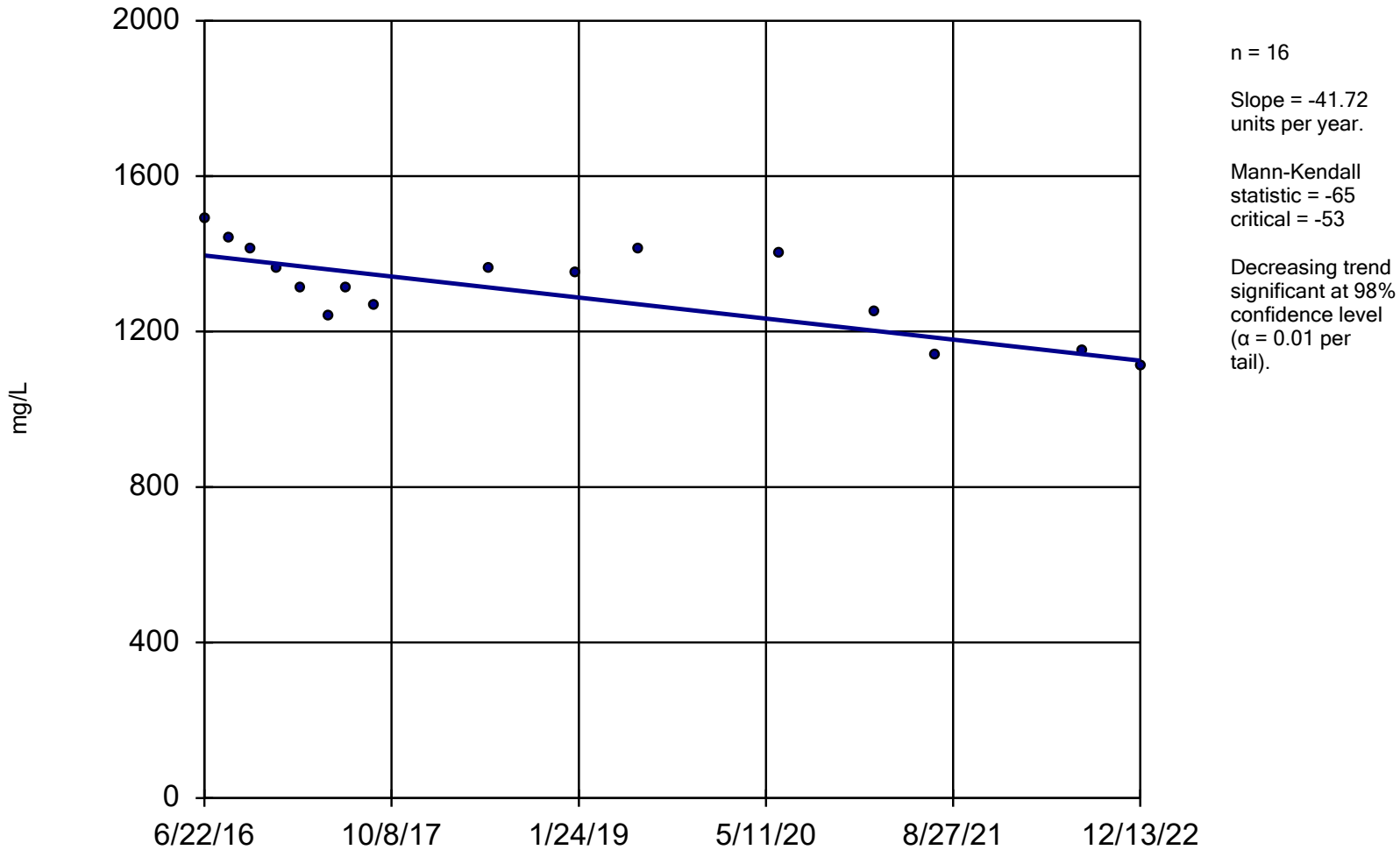


Constituent: TDS Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Sen's Slope Estimator

APMW-1D



n = 16

Slope = -41.72 units per year.

Mann-Kendall statistic = -65
critical = -53

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

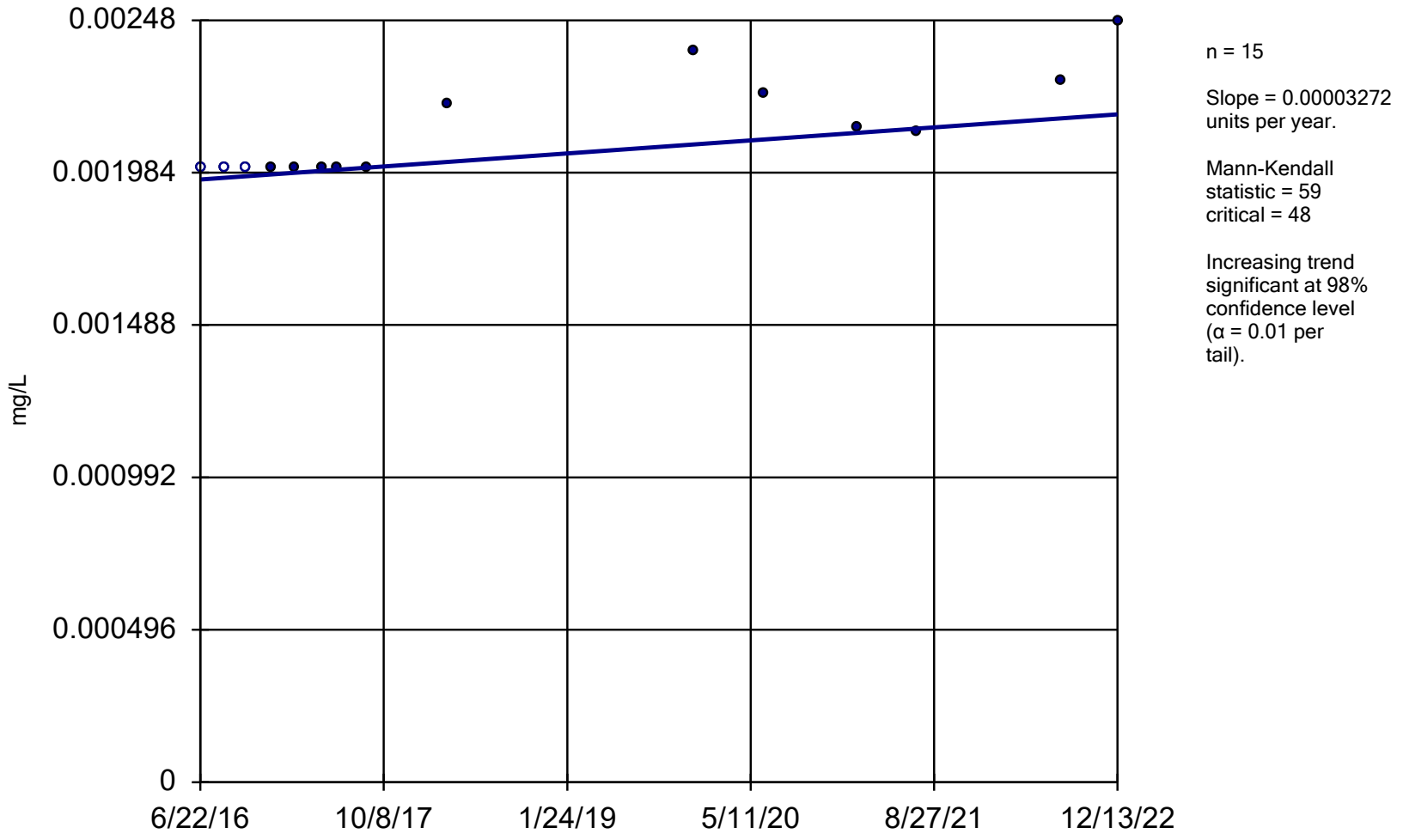
Constituent: TDS Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

APMW-5



n = 15

Slope = 0.00003272 units per year.

Mann-Kendall statistic = 59
critical = 48

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Thallium Analysis Run 1/23/2023 11:14 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Antimony (mg/L)	SSP/APMW-...	0	-44	-48	No	15	73.33	n/a	n/a	0.02	NP
Antimony (mg/L)	SSPMW-2	0	0	48	No	15	100	n/a	n/a	0.02	NP
Antimony (mg/L)	SSPMW-3	0	12	48	No	15	93.33	n/a	n/a	0.02	NP
Antimony (mg/L)	SSPMW-4	0	-10	-48	No	15	93.33	n/a	n/a	0.02	NP
Antimony (mg/L)	APMW-1D	0	0	48	No	15	100	n/a	n/a	0.02	NP
Antimony (mg/L)	APMW-3	0	0	48	No	15	100	n/a	n/a	0.02	NP
Antimony (mg/L)	APMW-4	0	0	48	No	15	100	n/a	n/a	0.02	NP
Antimony (mg/L)	APMW-5	0	17	48	No	15	86.67	n/a	n/a	0.02	NP
Arsenic (mg/L)	**SSP/APMW-...**	**-0.00...**	**-68**	**-63**	**Yes**	**18**	**50**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	SSPMW-2	0	6	63	No	18	44.44	n/a	n/a	0.02	NP
Arsenic (mg/L)	SSPMW-3	0	40	63	No	18	55.56	n/a	n/a	0.02	NP
Arsenic (mg/L)	SSPMW-4	0	-39	-63	No	18	66.67	n/a	n/a	0.02	NP
Arsenic (mg/L)	APMW-1D	-0.00...	-51	-63	No	18	16.67	n/a	n/a	0.02	NP
Arsenic (mg/L)	**APMW-3**	**0**	**68**	**63**	**Yes**	**18**	**72.22**	**n/a**	**n/a**	**0.02**	**NP**
Arsenic (mg/L)	APMW-4	0	18	63	No	18	83.33	n/a	n/a	0.02	NP
Arsenic (mg/L)	APMW-5	0.000...	25	63	No	18	16.67	n/a	n/a	0.02	NP
Barium (mg/L)	SSP/APMW-...	0	-6	-48	No	15	13.33	n/a	n/a	0.02	NP
Barium (mg/L)	**SSPMW-2**	**-0.00...**	**-57**	**-48**	**Yes**	**15**	**6.667**	**n/a**	**n/a**	**0.02**	**NP**
Barium (mg/L)	SSPMW-3	-0.00...	-34	-39	No	13	0	n/a	n/a	0.02	NP
Barium (mg/L)	SSPMW-4	-0.00...	-27	-48	No	15	6.667	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-1D	0	-5	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-3	0	-10	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-4	0	-8	-44	No	14	0	n/a	n/a	0.02	NP
Barium (mg/L)	APMW-5	0	2	48	No	15	20	n/a	n/a	0.02	NP
Beryllium (mg/L)	SSP/APMW-...	0	-17	-63	No	18	66.67	n/a	n/a	0.02	NP
Beryllium (mg/L)	**SSPMW-2**	**0.01027**	**94**	**63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	**SSPMW-3**	**-0.00...**	**-78**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Beryllium (mg/L)	SSPMW-4	0	-11	-63	No	18	94.44	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-1D	0	0	63	No	18	100	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-3	0	0	63	No	18	11.11	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-4	0	-1	-63	No	18	88.89	n/a	n/a	0.02	NP
Beryllium (mg/L)	APMW-5	-0.00...	-31	-63	No	18	0	n/a	n/a	0.02	NP
Boron (mg/L)	**SSP/APMW-...**	**-0.0333**	**-55**	**-53**	**Yes**	**16**	**6.25**	**n/a**	**n/a**	**0.02**	**NP**
Boron (mg/L)	SSPMW-2	0.01547	9	48	No	15	6.667	n/a	n/a	0.02	NP
Boron (mg/L)	SSPMW-3	-0.04236	-22	-53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	SSPMW-4	-0.02108	-13	-48	No	15	6.667	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-1D	0.06698	22	53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-3	0.09009	22	53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-4	0.03321	19	53	No	16	0	n/a	n/a	0.02	NP
Boron (mg/L)	APMW-5	0.02228	9	48	No	15	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	SSP/APMW-...	0	0	63	No	18	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	SSPMW-2	0.000...	57	58	No	17	64.71	n/a	n/a	0.02	NP
Cadmium (mg/L)	SSPMW-3	0.002067	45	63	No	18	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	SSPMW-4	0	0	63	No	18	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	APMW-1D	0	-58	-63	No	18	77.78	n/a	n/a	0.02	NP
Cadmium (mg/L)	**APMW-3**	**-0.00...**	**-76**	**-63**	**Yes**	**18**	**55.56**	**n/a**	**n/a**	**0.02**	**NP**
Cadmium (mg/L)	APMW-4	0	0	63	No	18	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	APMW-5	-0.00...	-30	-63	No	18	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSP/APMW-...	-5.101	-29	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSPMW-2	-12.95	-26	-53	No	16	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	SSPMW-3	-0.3067	-3	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	SSPMW-4	0.5811	10	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-1D	1.286	27	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-3	2.355	48	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-4	-1.076	-2	-48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/L)	APMW-5	4.573	6	53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSP/APMW-...	15.15	34	53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-2	-42.4	-18	-53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-3	-22.38	-30	-53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	SSPMW-4	-5.376	-14	-48	No	15	0	n/a	n/a	0.02	NP
Chloride (mg/L)	**APMW-1D**	**-16.45**	**-84**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Chloride (mg/L)	APMW-3	2.289	47	53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	APMW-4	-11.01	-35	-53	No	16	0	n/a	n/a	0.02	NP
Chloride (mg/L)	APMW-5	-7.095	-11	-53	No	16	0	n/a	n/a	0.02	NP
Chromium (mg/L)	SSP/APMW-...	0	8	48	No	15	93.33	n/a	n/a	0.02	NP
Chromium (mg/L)	SSPMW-2	0	-14	-48	No	15	93.33	n/a	n/a	0.02	NP
Chromium (mg/L)	SSPMW-3	0	-9	-48	No	15	53.33	n/a	n/a	0.02	NP
Chromium (mg/L)	SSPMW-4	0	40	44	No	14	71.43	n/a	n/a	0.02	NP
Chromium (mg/L)	APMW-1D	0	0	48	No	15	100	n/a	n/a	0.02	NP
Chromium (mg/L)	APMW-3	0	8	48	No	15	93.33	n/a	n/a	0.02	NP
Chromium (mg/L)	APMW-4	0	0	48	No	15	100	n/a	n/a	0.02	NP
Chromium (mg/L)	APMW-5	0	-5	-48	No	15	86.67	n/a	n/a	0.02	NP
Cobalt (mg/L)	SSP/APMW-...	0	36	63	No	18	83.33	n/a	n/a	0.02	NP
Cobalt (mg/L)	SSPMW-2	0.001577	21	63	No	18	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	SSPMW-3	-0.01163	-49	-58	No	17	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	SSPMW-4	0	-38	-63	No	18	83.33	n/a	n/a	0.02	NP
Cobalt (mg/L)	APMW-1D	0.000522	7	27	No	10	0	n/a	n/a	0.02	NP
Cobalt (mg/L)	**APMW-3**	**-0.00...**	**-82**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Cobalt (mg/L)	APMW-4	0	38	63	No	18	83.33	n/a	n/a	0.02	NP
Cobalt (mg/L)	APMW-5	-0.00...	-39	-63	No	18	0	n/a	n/a	0.02	NP
Fluoride (mg/L)	SSP/APMW-...	0	16	63	No	18	38.89	n/a	n/a	0.02	NP
Fluoride (mg/L)	**SSPMW-2**	**0.06911**	**82**	**63**	**Yes**	**18**	**22.22**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	**SSPMW-3**	**-0.07058**	**-95**	**-53**	**Yes**	**16**	**18.75**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	SSPMW-4	0	-10	-63	No	18	66.67	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-1D	0.01458	33	63	No	18	11.11	n/a	n/a	0.02	NP
Fluoride (mg/L)	**APMW-3**	**-0.00...**	**-71**	**-63**	**Yes**	**18**	**33.33**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride (mg/L)	APMW-4	0	-20	-63	No	18	72.22	n/a	n/a	0.02	NP
Fluoride (mg/L)	APMW-5	0.06344	27	63	No	18	5.556	n/a	n/a	0.02	NP
Lead (mg/L)	SSP/APMW-...	0	24	63	No	18	72.22	n/a	n/a	0.02	NP
Lead (mg/L)	**SSPMW-2**	**-0.00...**	**-69**	**-63**	**Yes**	**18**	**50**	**n/a**	**n/a**	**0.02**	**NP**
Lead (mg/L)	SSPMW-3	0	-7	-63	No	18	44.44	n/a	n/a	0.02	NP
Lead (mg/L)	SSPMW-4	0	14	63	No	18	83.33	n/a	n/a	0.02	NP
Lead (mg/L)	APMW-1D	0	10	48	No	15	93.33	n/a	n/a	0.02	NP
Lead (mg/L)	APMW-3	0	32	48	No	15	73.33	n/a	n/a	0.02	NP
Lead (mg/L)	APMW-4	0	21	48	No	15	86.67	n/a	n/a	0.02	NP
Lead (mg/L)	APMW-5	-0.00...	-37	-48	No	15	60	n/a	n/a	0.02	NP
Lithium (mg/L)	SSP/APMW-...	0.003409	5	58	No	17	0	n/a	n/a	0.02	NP
Lithium (mg/L)	**SSPMW-2**	**-0.04894**	**-66**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	SSPMW-3	-0.02079	-63	-63	No	18	0	n/a	n/a	0.02	NP
Lithium (mg/L)	SSPMW-4	-0.0257	-47	-58	No	17	0	n/a	n/a	0.02	NP

Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	**APMW-1D**	**-0.00...**	**-92**	**-63**	**Yes**	**18**	**16.67**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	APMW-3	-0.00...	-57	-58	No	17	5.882	n/a	n/a	0.02	NP
Lithium (mg/L)	**APMW-4**	**-0.08526**	**-81**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Lithium (mg/L)	APMW-5	-0.02666	-55	-63	No	18	0	n/a	n/a	0.02	NP
Mercury (mg/L)	SSP/APMW-...	0	0	48	No	15	100	n/a	n/a	0.02	NP
Mercury (mg/L)	SSPMW-2	0	0	48	No	15	100	n/a	n/a	0.02	NP
Mercury (mg/L)	SSPMW-3	0	15	48	No	15	80	n/a	n/a	0.02	NP
Mercury (mg/L)	SSPMW-4	0	0	48	No	15	100	n/a	n/a	0.02	NP
Mercury (mg/L)	APMW-1D	0	0	63	No	18	100	n/a	n/a	0.02	NP
Mercury (mg/L)	**APMW-3**	**0.000...**	**81**	**63**	**Yes**	**18**	**66.67**	**n/a**	**n/a**	**0.02**	**NP**
Mercury (mg/L)	APMW-4	0	0	63	No	18	100	n/a	n/a	0.02	NP
Mercury (mg/L)	**APMW-5**	**0.000...**	**84**	**58**	**Yes**	**17**	**52.94**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	SSP/APMW-...	0	29	48	No	15	80	n/a	n/a	0.02	NP
Molybdenum (mg/L)	SSPMW-2	0	0	48	No	15	100	n/a	n/a	0.02	NP
Molybdenum (mg/L)	SSPMW-3	0	23	48	No	15	86.67	n/a	n/a	0.02	NP
Molybdenum (mg/L)	SSPMW-4	0	0	48	No	15	73.33	n/a	n/a	0.02	NP
Molybdenum (mg/L)	**APMW-1D**	**0.003855**	**33**	**27**	**Yes**	**10**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Molybdenum (mg/L)	APMW-3	0	11	63	No	18	94.44	n/a	n/a	0.02	NP
Molybdenum (mg/L)	APMW-4	0	-31	-63	No	18	88.89	n/a	n/a	0.02	NP
Molybdenum (mg/L)	APMW-5	0	0	63	No	18	100	n/a	n/a	0.02	NP
pH (S.U.)	SSP/APMW-...	-0.04345	-37	-58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	**SSPMW-2**	**-0.2604**	**-86**	**-58**	**Yes**	**17**	**0**	**n/a**	**n/a**	**0.02**	**NP**
pH (S.U.)	SSPMW-3	-0.0237	-37	-48	No	15	0	n/a	n/a	0.02	NP
pH (S.U.)	SSPMW-4	0.03511	23	53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-1D	0.02428	16	58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-3	-0.02668	-28	-53	No	16	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-4	0.01042	14	58	No	17	0	n/a	n/a	0.02	NP
pH (S.U.)	APMW-5	-0.05783	-44	-53	No	16	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SSP/APMW-...	0.01479	6	63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SSPMW-2	0.07916	30	58	No	17	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	SSPMW-3	1.387	41	63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	**SSPMW-4**	**-0.3299**	**-69**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 (pCi/L)	APMW-1D	-0.1597	-38	-63	No	18	0	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	APMW-3	0.05863	14	58	No	17	5.882	n/a	n/a	0.02	NP
Radium 226 + 228 (pCi/L)	**APMW-4**	**-0.2623**	**-75**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Radium 226 + 228 (pCi/L)	**APMW-5**	**-0.4569**	**-71**	**-63**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Selenium (mg/L)	SSP/APMW-...	0	0	48	No	15	100	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-2	0	4	48	No	15	93.33	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-3	0	15	48	No	15	86.67	n/a	n/a	0.02	NP
Selenium (mg/L)	SSPMW-4	0	10	48	No	15	93.33	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-1D	0	-42	-48	No	15	73.33	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-3	0	12	48	No	15	93.33	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-4	0	0	48	No	15	100	n/a	n/a	0.02	NP
Selenium (mg/L)	APMW-5	0	-20	-48	No	15	66.67	n/a	n/a	0.02	NP
Sulfate (mg/L)	**SSP/APMW-...**	**29.71**	**55**	**53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	**SSPMW-2**	**26.29**	**49**	**48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	SSPMW-3	-17.75	-25	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	SSPMW-4	-16.97	-27	-48	No	15	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	**APMW-1D**	**-26.68**	**-92**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Sulfate (mg/L)	APMW-3	-18.79	-38	-53	No	16	0	n/a	n/a	0.02	NP

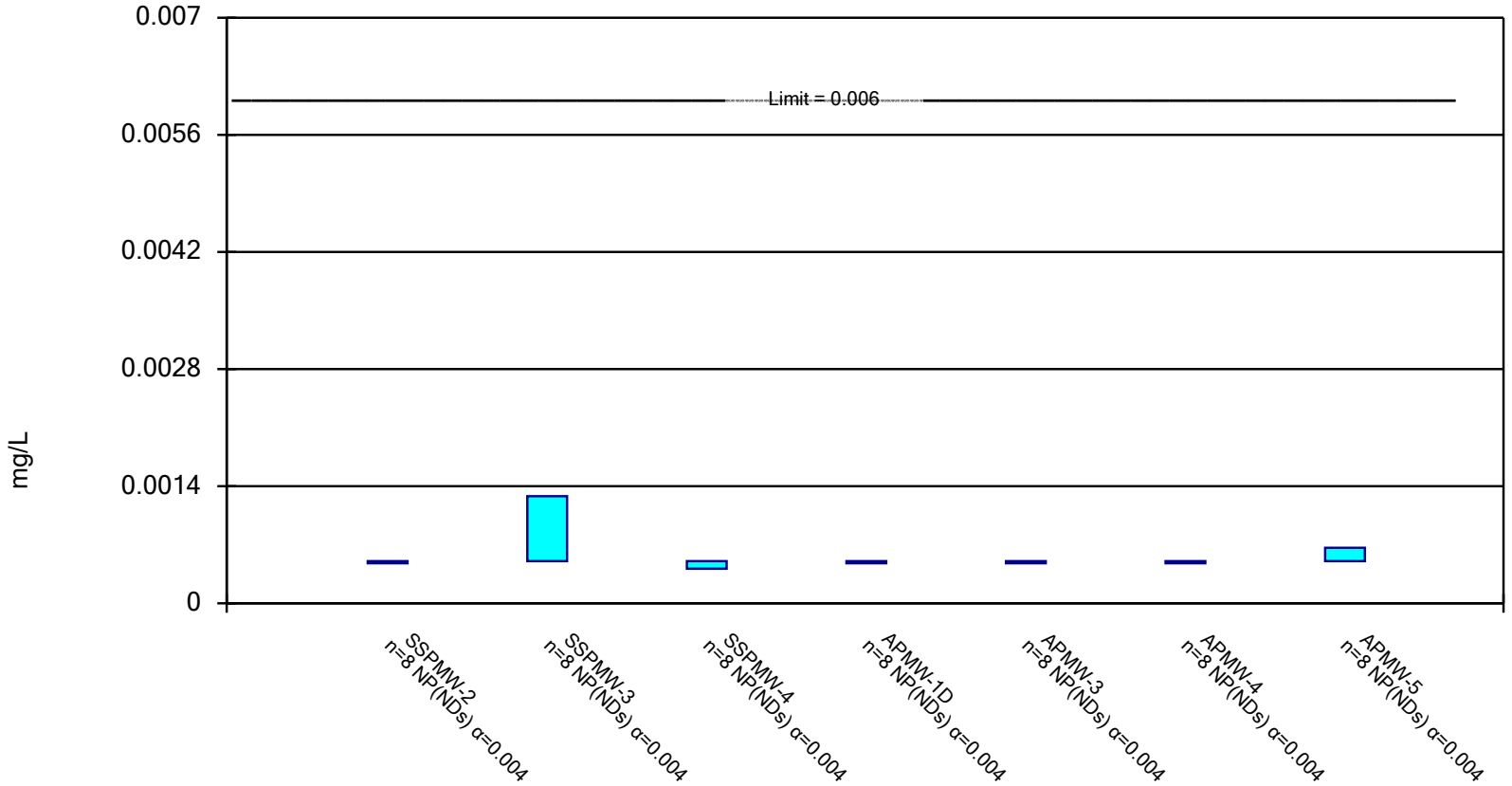
Trend Test

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Sulfate (mg/L)	APMW-4	-49.45	-39	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate (mg/L)	APMW-5	-36.47	-36	-48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	SSP/APMW-...	69.46	14	53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	SSPMW-2	-116.6	-48	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	**SSPMW-3**	**-77.61**	**-49**	**-48**	**Yes**	**15**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	SSPMW-4	-38.56	-42	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	**APMW-1D**	**-41.72**	**-65**	**-53**	**Yes**	**16**	**0**	**n/a**	**n/a**	**0.02**	**NP**
TDS (mg/L)	APMW-3	0	-6	-48	No	15	0	n/a	n/a	0.02	NP
TDS (mg/L)	APMW-4	-53.73	-45	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/L)	APMW-5	-101.1	-25	-53	No	16	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SSP/APMW-...	0	-23	-63	No	18	88.89	n/a	n/a	0.02	NP
Thallium (mg/L)	SSPMW-2	0	22	63	No	18	83.33	n/a	n/a	0.02	NP
Thallium (mg/L)	SSPMW-3	0	-10	-63	No	18	0	n/a	n/a	0.02	NP
Thallium (mg/L)	SSPMW-4	0	0	63	No	18	100	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-1D	0	1	48	No	15	86.67	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-3	0	-7	-48	No	15	80	n/a	n/a	0.02	NP
Thallium (mg/L)	APMW-4	0	-8	-48	No	15	93.33	n/a	n/a	0.02	NP
Thallium (mg/L)	**APMW-5**	**0.000...**	**59**	**48**	**Yes**	**15**	**20**	**n/a**	**n/a**	**0.02**	**NP**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

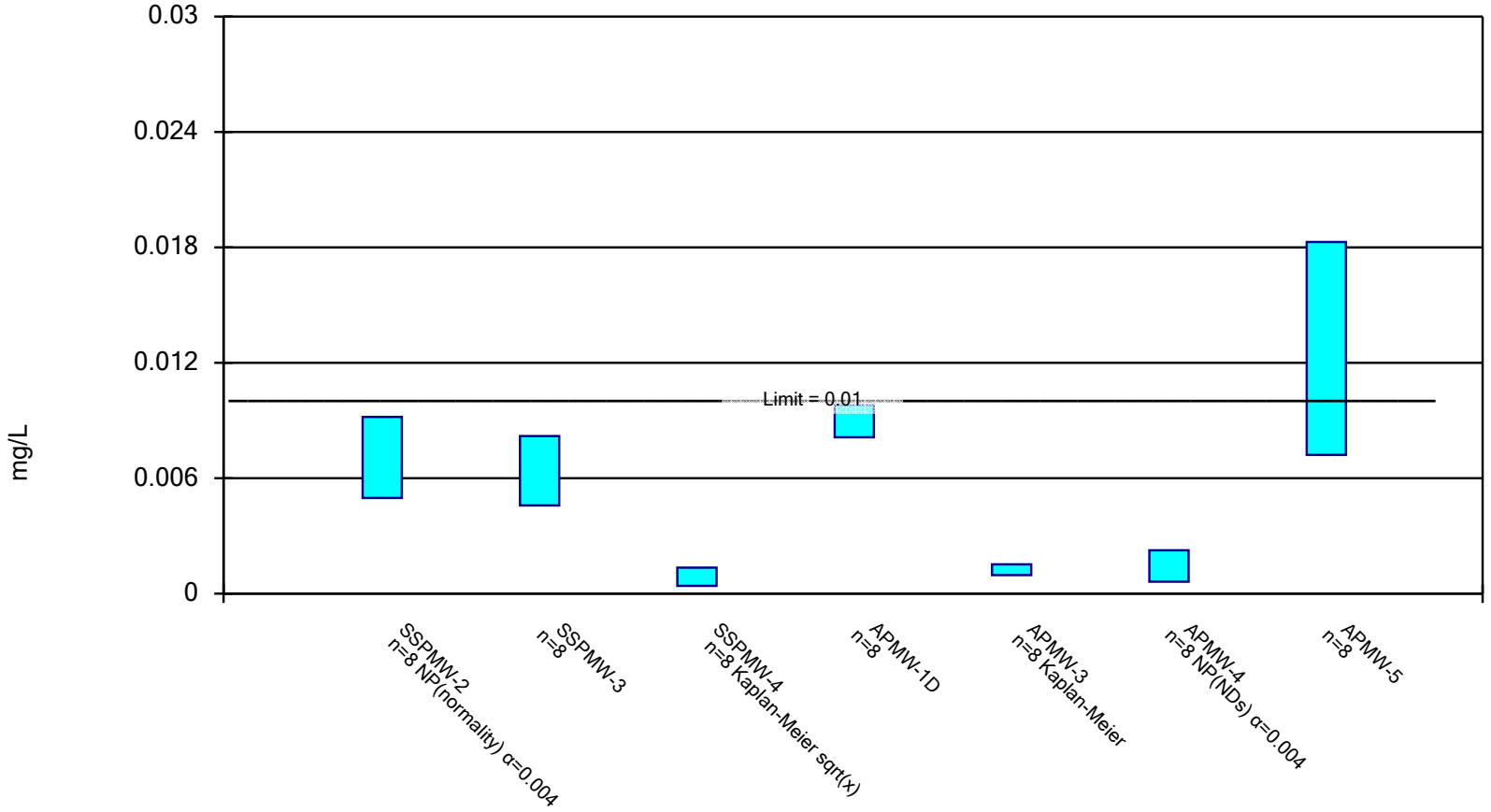


Constituent: Antimony Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

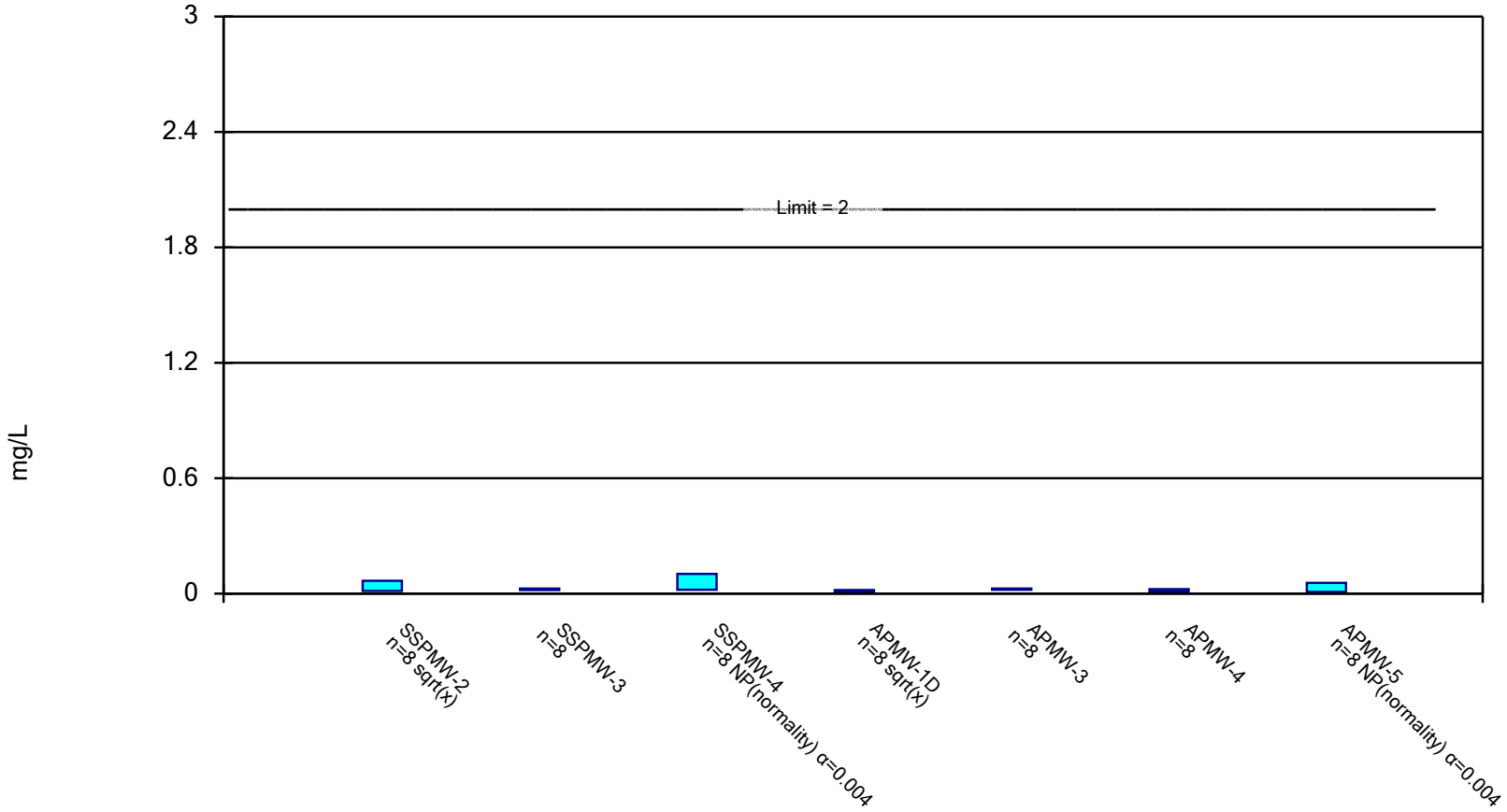


Constituent: Arsenic Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

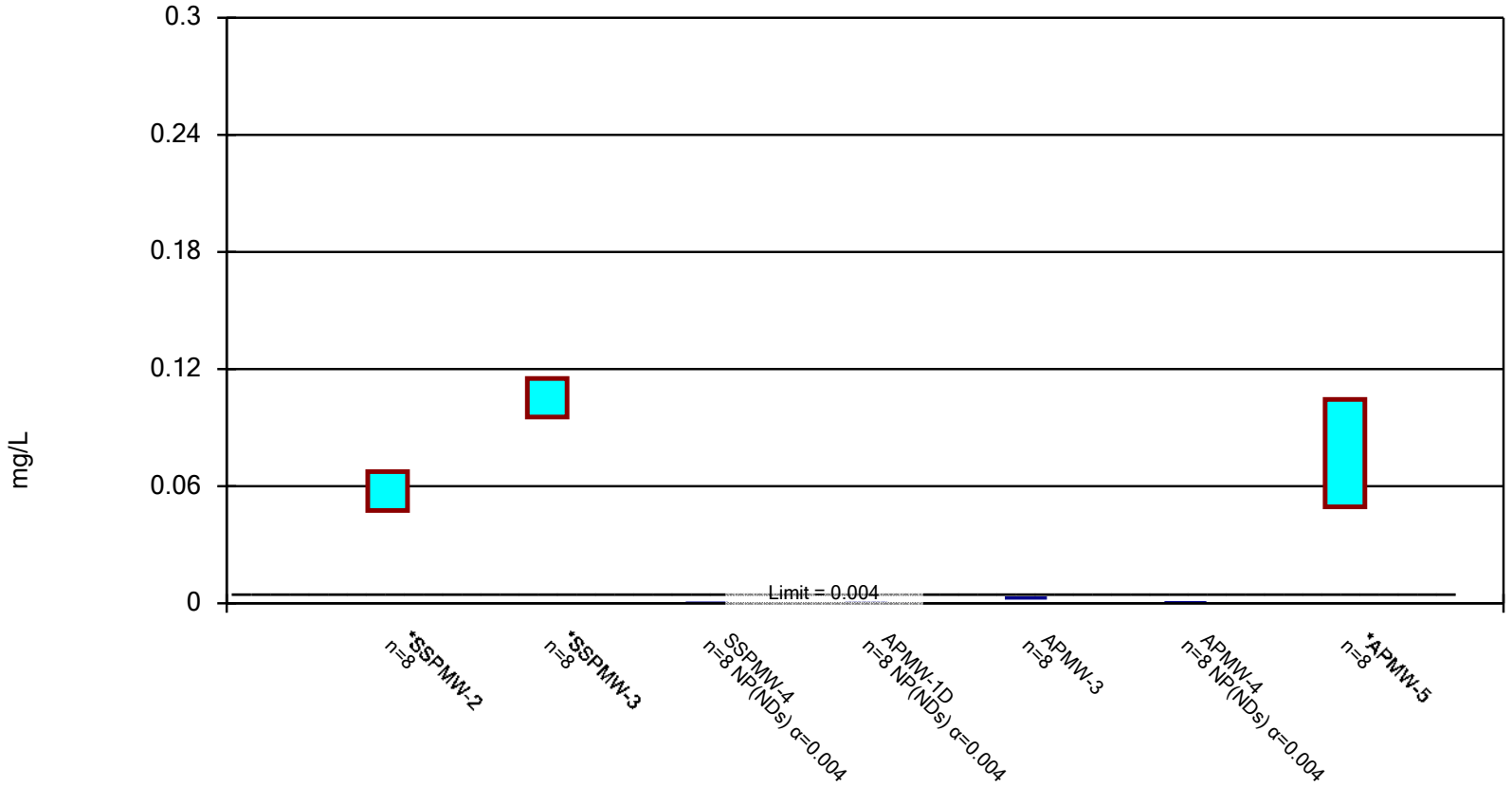


Constituent: Barium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

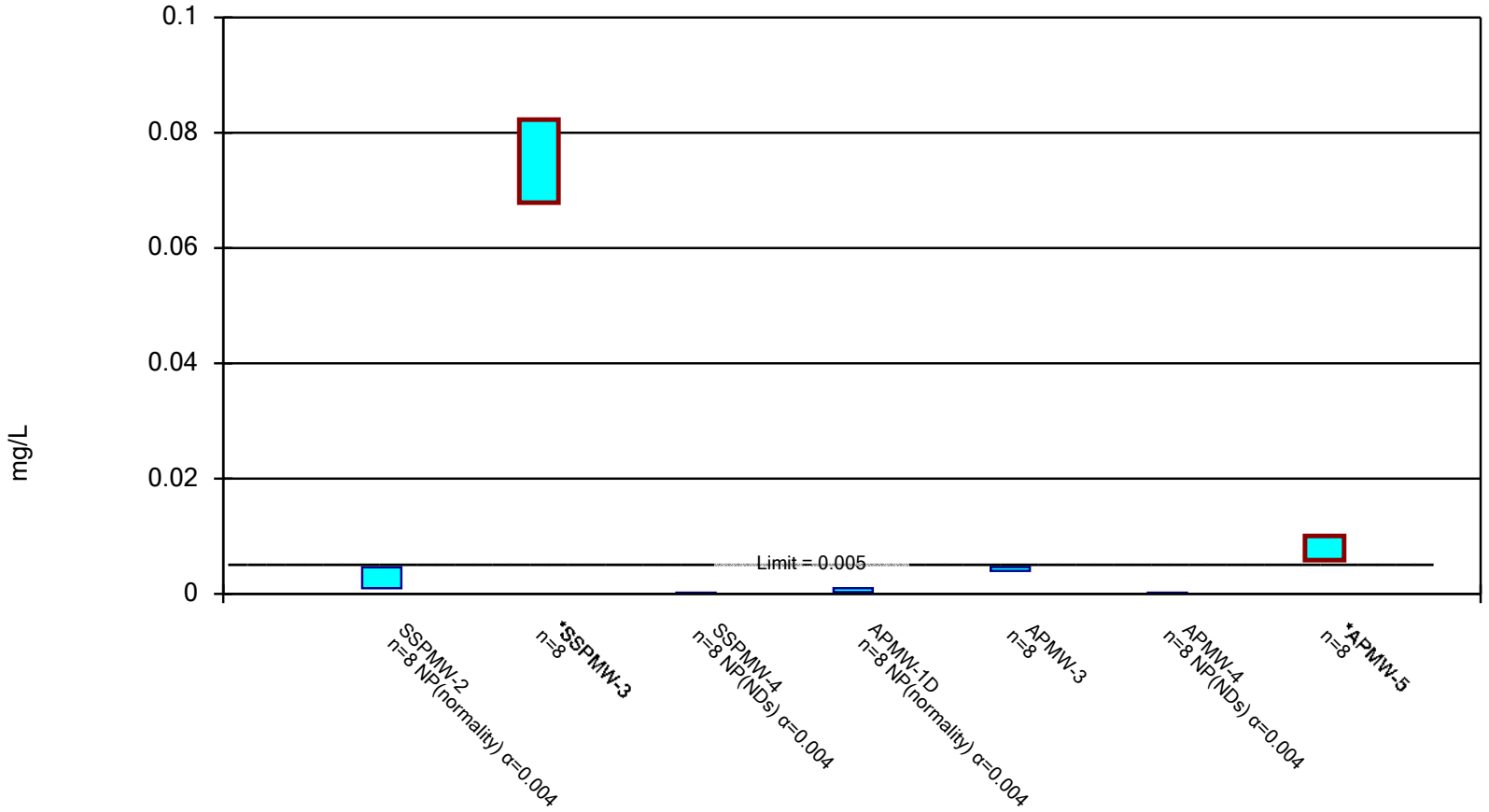


Constituent: Beryllium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

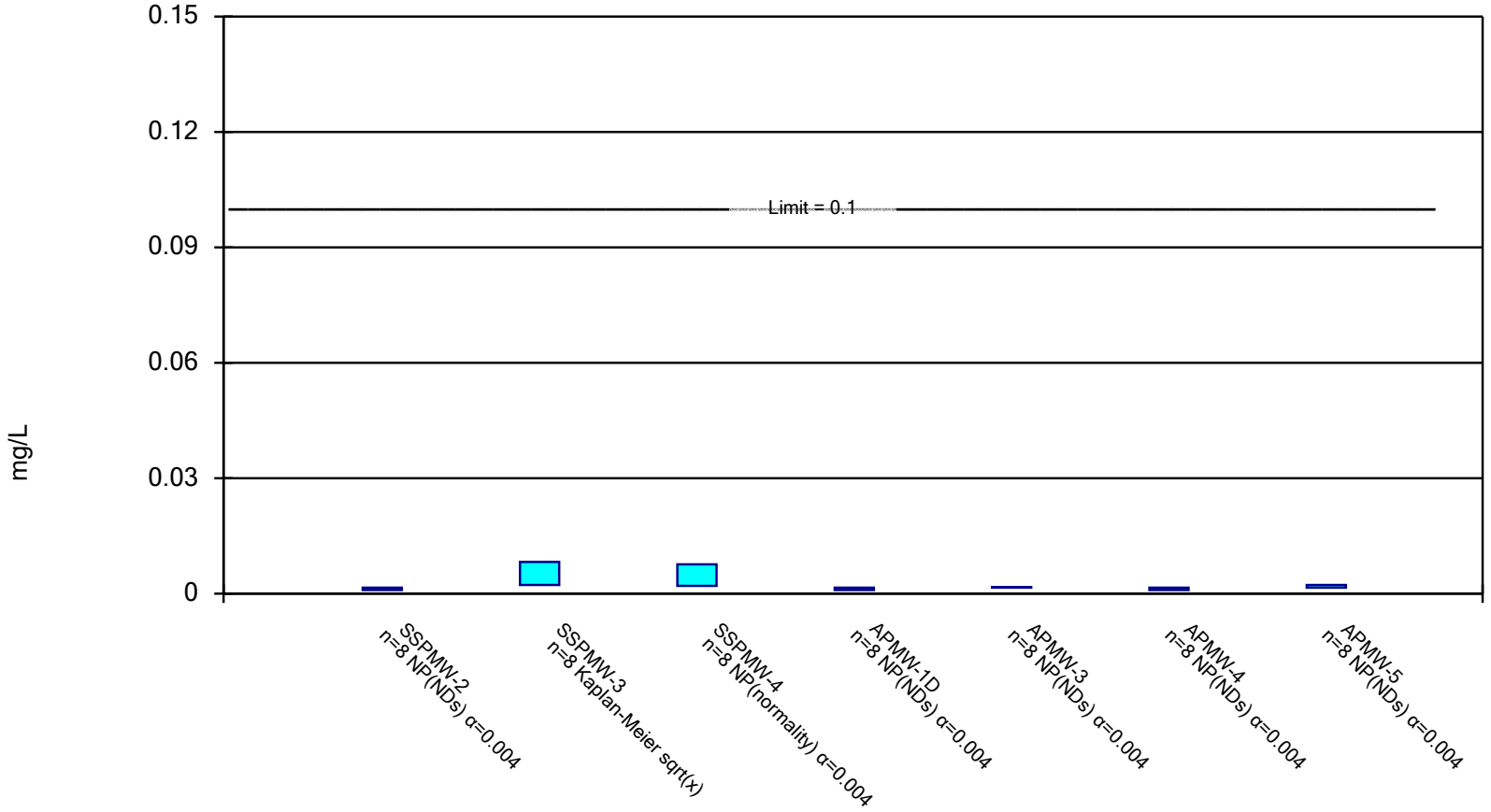


Constituent: Cadmium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

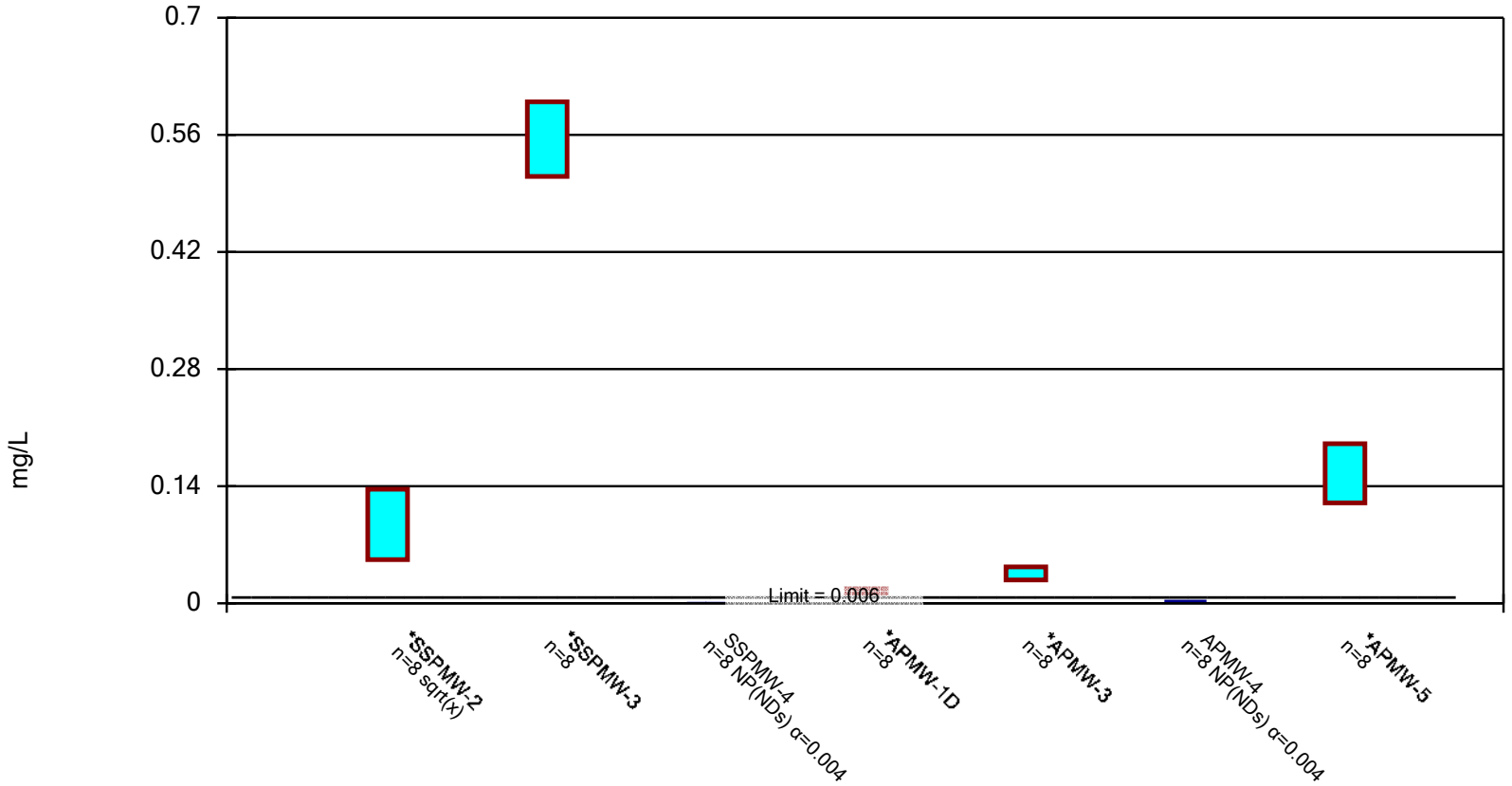


Constituent: Chromium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

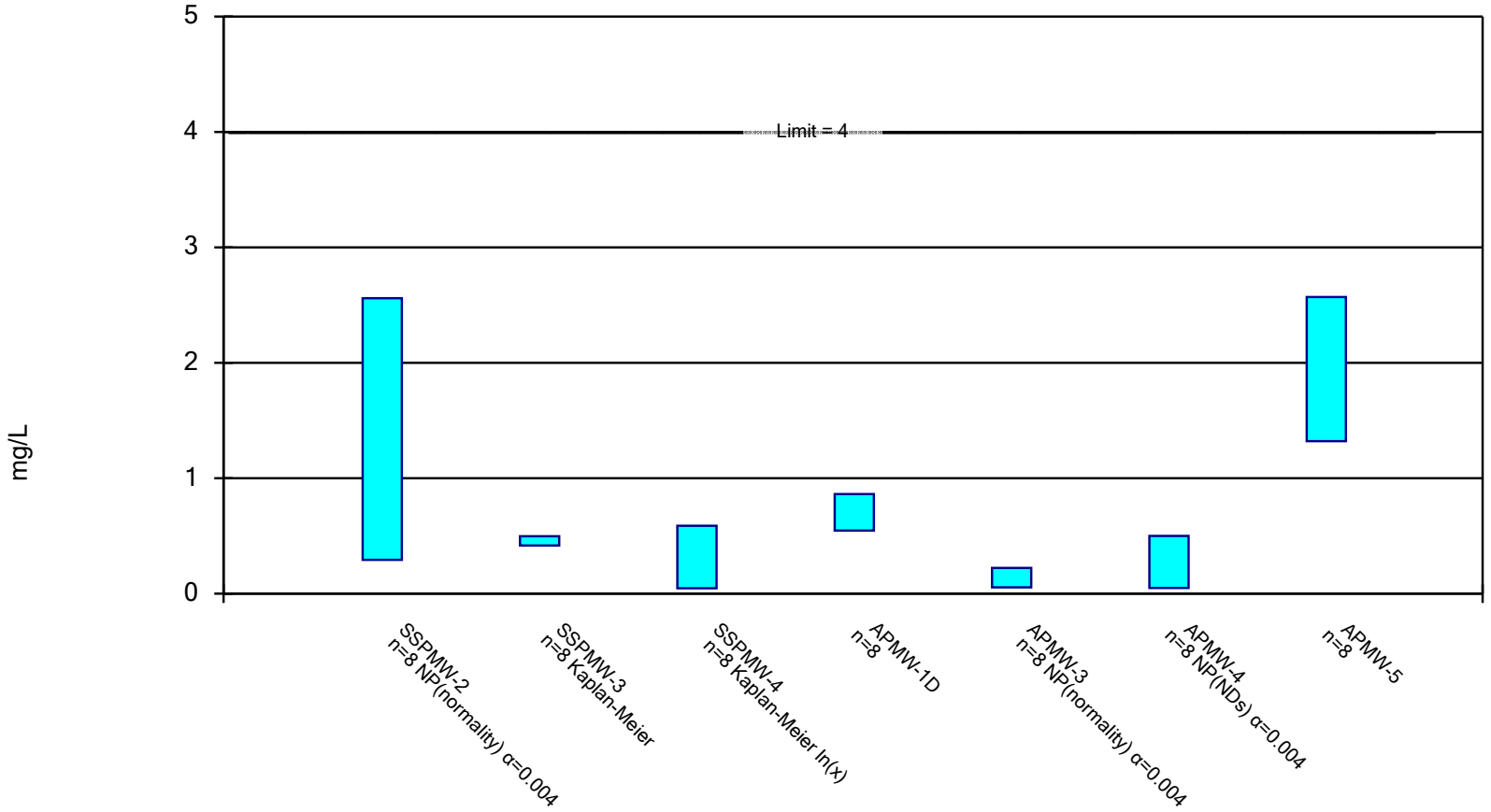


Constituent: Cobalt Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

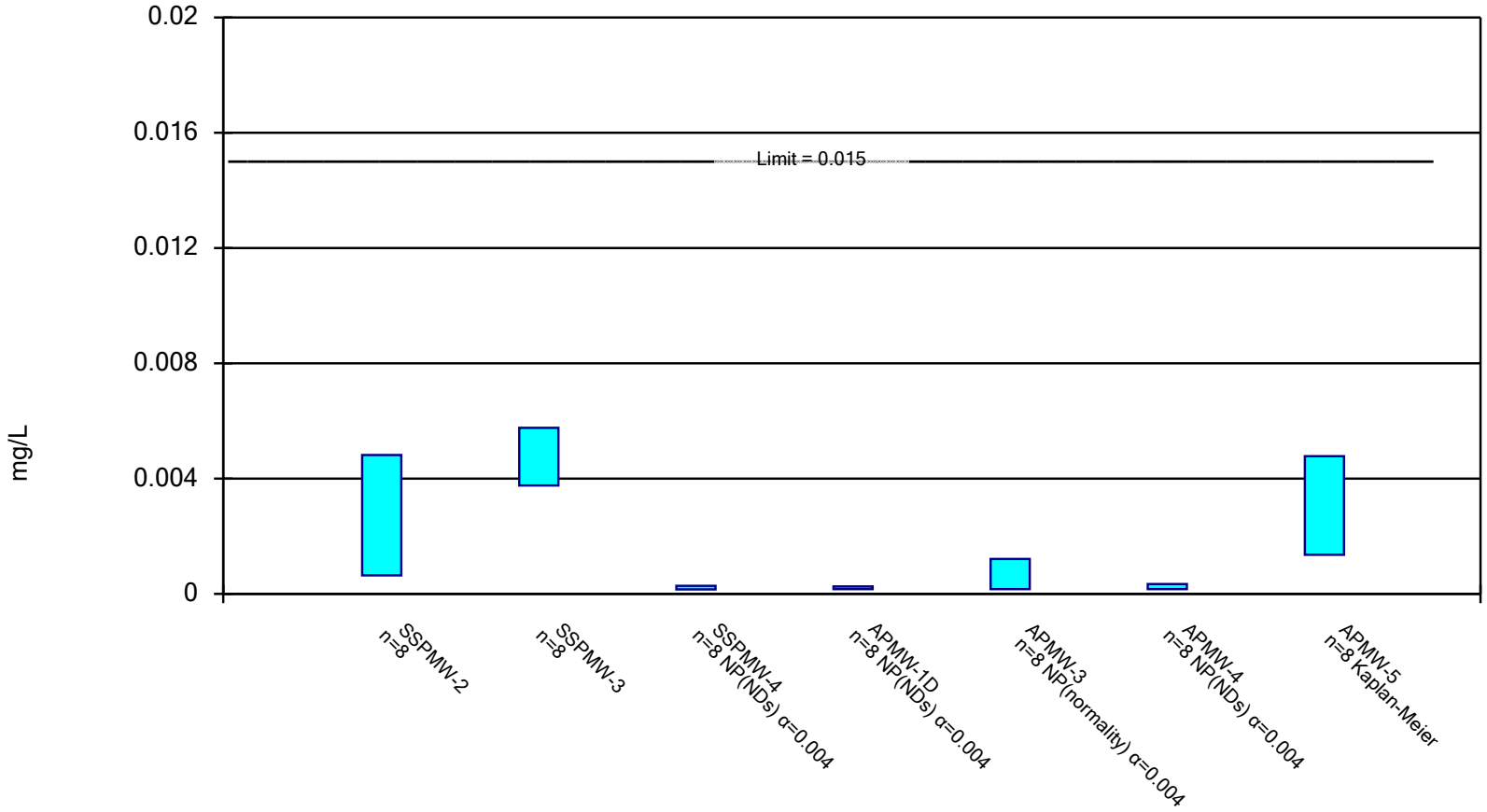


Constituent: Fluoride Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

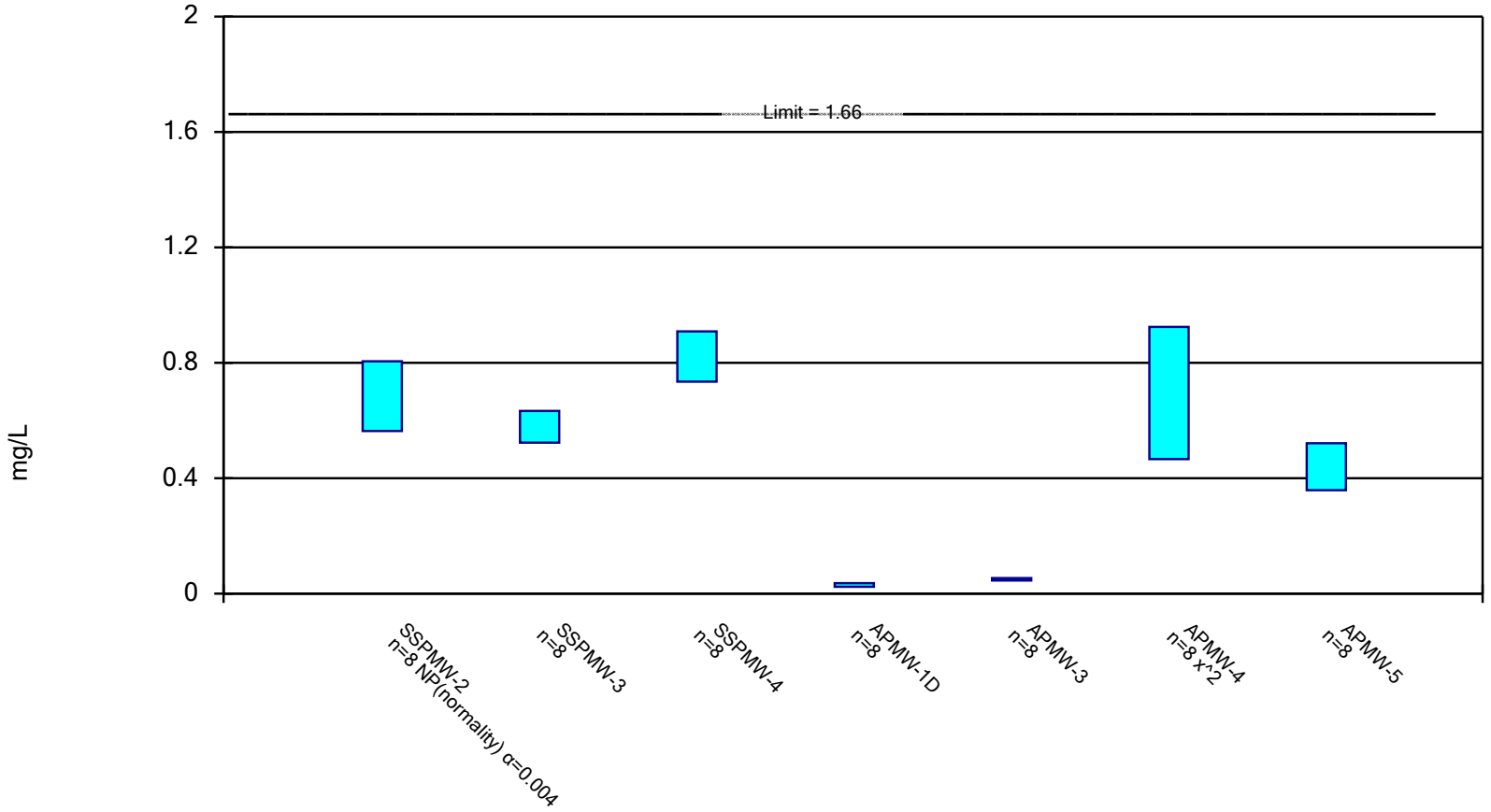


Constituent: Lead Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

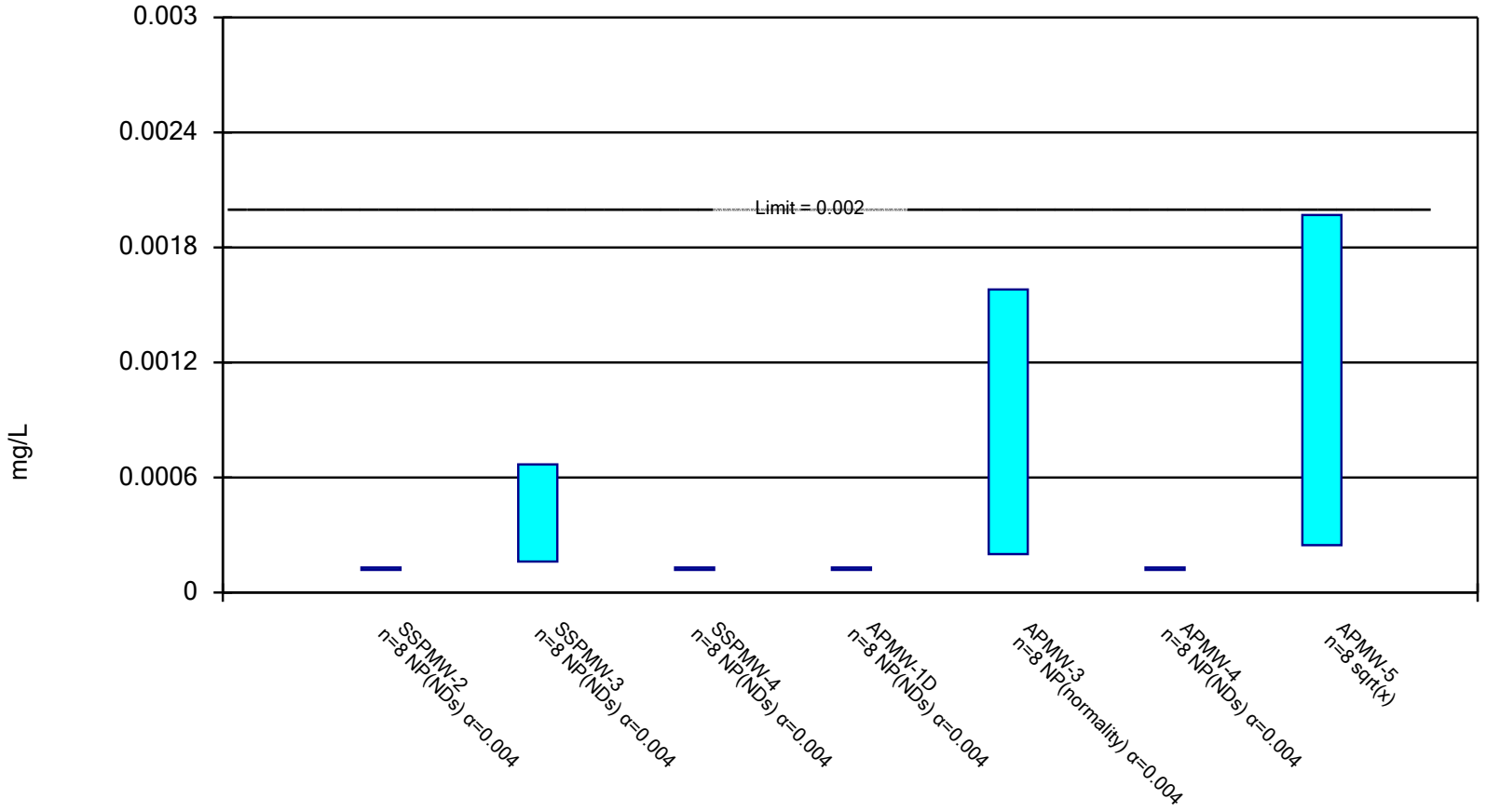


Constituent: Lithium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

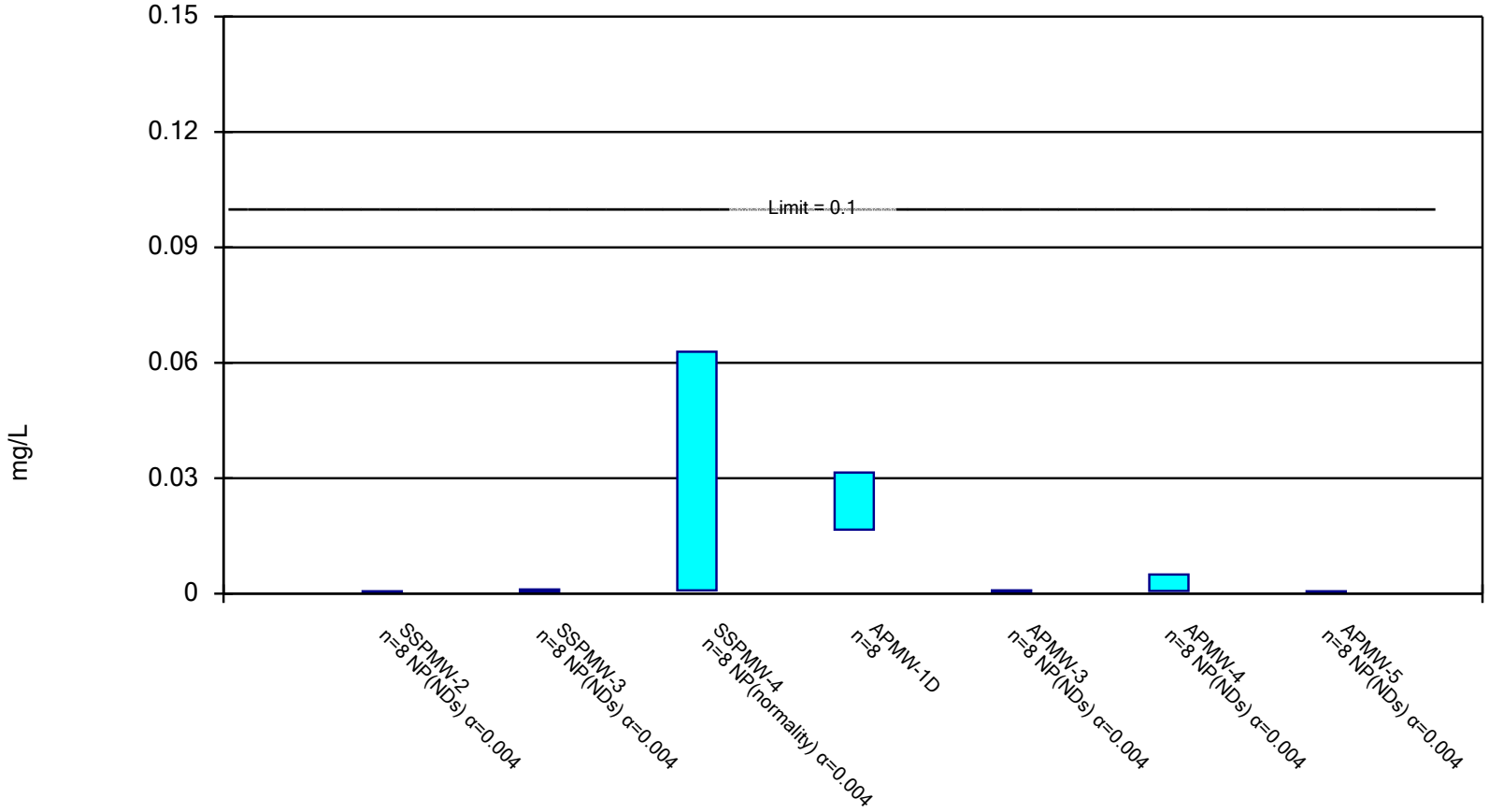


Constituent: Mercury Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based

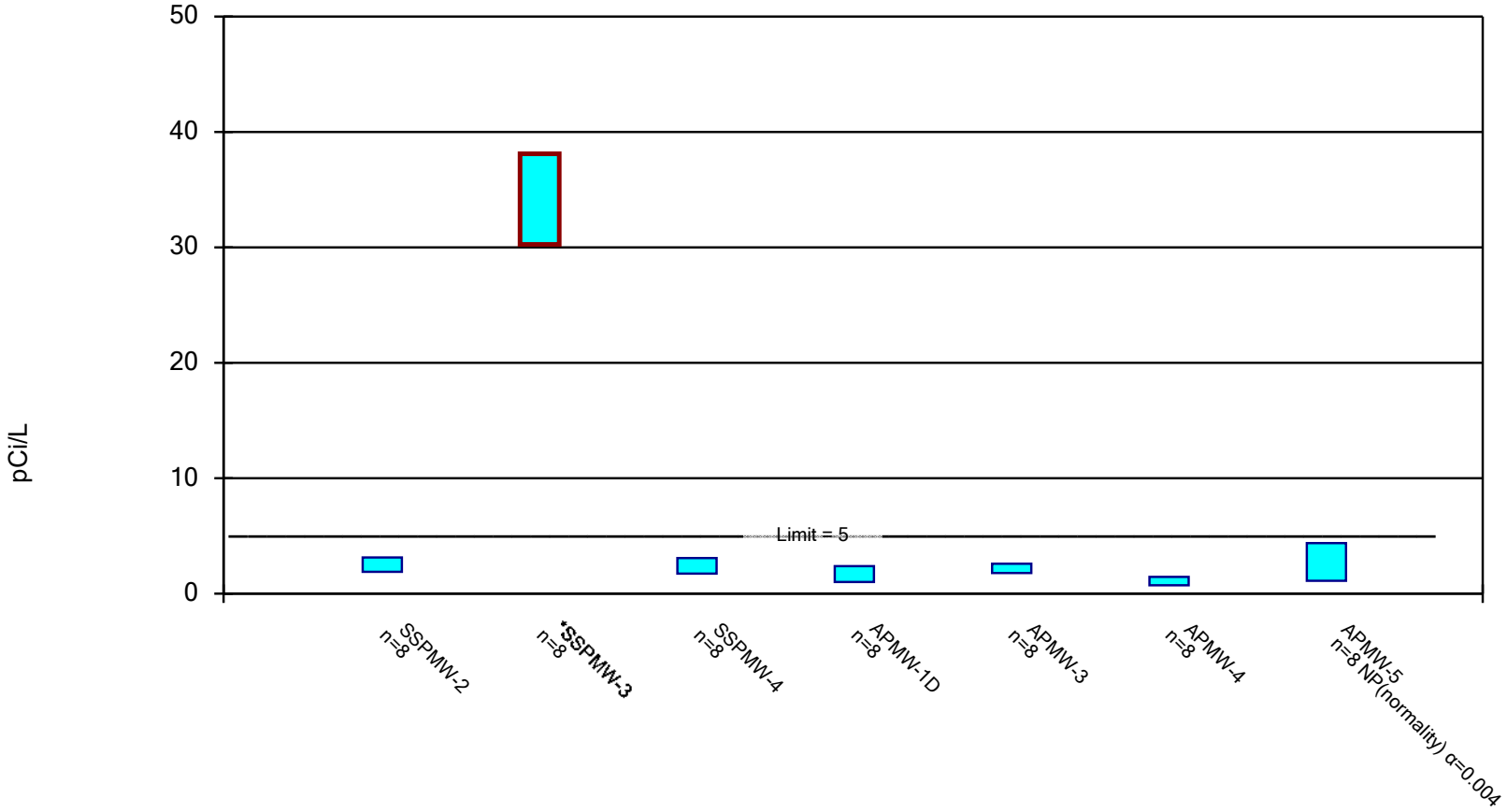


Constituent: Molybdenum Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on

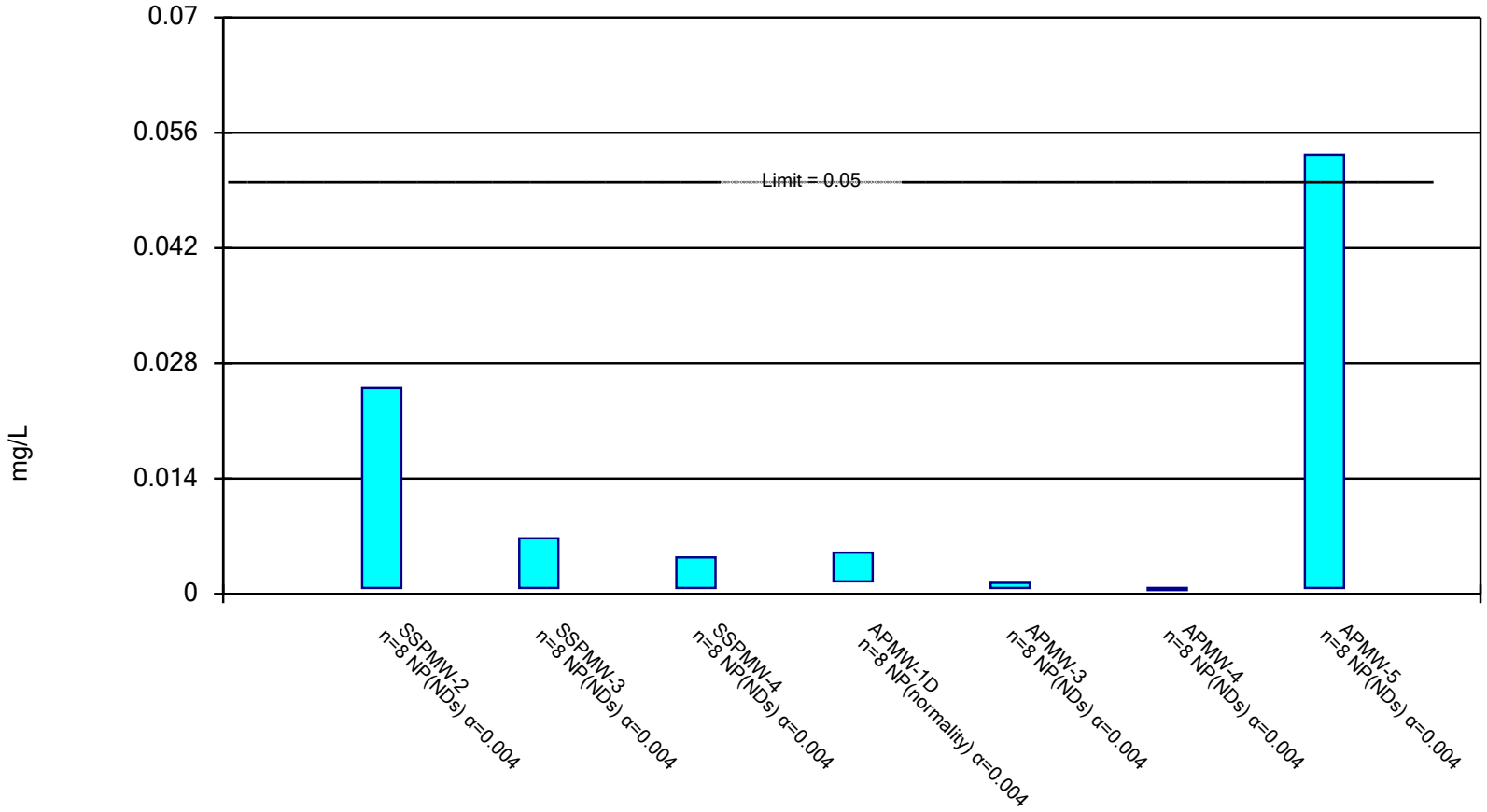


Constituent: Radium 226 + 228 Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

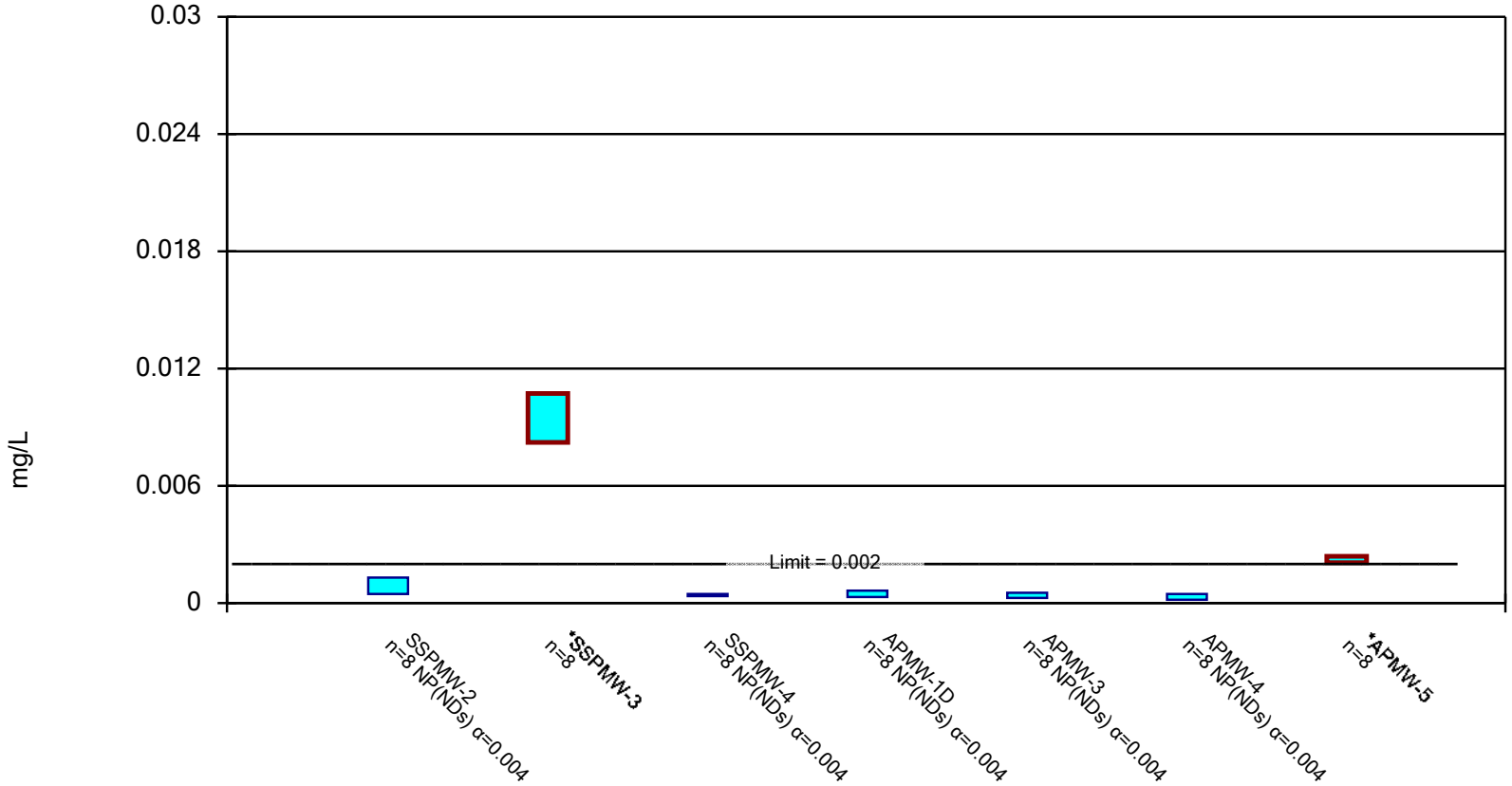


Constituent: Selenium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Thallium Analysis Run 1/23/2023 11:31 AM View: SSP & AP

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:32 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	SSPMW-2	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	SSPMW-3	0.00128	0.000506	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	SSPMW-4	0.000506	0.000415	0.006	No	8	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-1D	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-3	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-4	0.000506	0.000506	0.006	No	8	100	No	0.004	NP (NDs)
Antimony (mg/L)	APMW-5	0.000664	0.000506	0.006	No	8	75	No	0.004	NP (NDs)
Arsenic (mg/L)	SSPMW-2	0.00918	0.00498	0.01	No	8	12.5	No	0.004	NP (normality)
Arsenic (mg/L)	SSPMW-3	0.008186	0.004589	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	SSPMW-4	0.00136	0.000404	0.01	No	8	25	sqrt(x)	0.01	Param.
Arsenic (mg/L)	APMW-1D	0.009826	0.008124	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	APMW-3	0.001518	0.0009618	0.01	No	8	37.5	No	0.01	Param.
Arsenic (mg/L)	APMW-4	0.00226	0.000628	0.01	No	8	62.5	No	0.004	NP (NDs)
Arsenic (mg/L)	APMW-5	0.01828	0.007214	0.01	No	8	12.5	No	0.01	Param.
Barium (mg/L)	SSPMW-2	0.06746	0.0148	2	No	8	12.5	sqrt(x)	0.01	Param.
Barium (mg/L)	SSPMW-3	0.02693	0.01937	2	No	8	0	No	0.01	Param.
Barium (mg/L)	SSPMW-4	0.103	0.02	2	No	8	12.5	No	0.004	NP (normality)
Barium (mg/L)	APMW-1D	0.01866	0.01009	2	No	8	0	sqrt(x)	0.01	Param.
Barium (mg/L)	APMW-3	0.02639	0.01993	2	No	8	0	No	0.01	Param.
Barium (mg/L)	APMW-4	0.02373	0.01052	2	No	8	0	No	0.01	Param.
Barium (mg/L)	APMW-5	0.0556	0.01	2	No	8	25	No	0.004	NP (normality)
Beryllium (mg/L)	**SSPMW-2**	**0.06749**	**0.04751**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	**SSPMW-3**	**0.1152**	**0.09541**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Beryllium (mg/L)	SSPMW-4	0.000274	0.000274	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	APMW-1D	0.000274	0.000274	0.004	No	8	100	No	0.004	NP (NDs)
Beryllium (mg/L)	APMW-3	0.003006	0.002466	0.004	No	8	0	No	0.01	Param.
Beryllium (mg/L)	APMW-4	0.000436	0.000204	0.004	No	8	75	No	0.004	NP (NDs)
Beryllium (mg/L)	**APMW-5**	**0.1044**	**0.04941**	**0.004**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-2	0.0046	0.001	0.005	No	8	25	No	0.004	NP (normality)
Cadmium (mg/L)	**SSPMW-3**	**0.08226**	**0.06784**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cadmium (mg/L)	SSPMW-4	0.000217	0.000217	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	APMW-1D	0.001	0.00034	0.005	No	8	50	No	0.004	NP (normality)
Cadmium (mg/L)	APMW-3	0.004677	0.004018	0.005	No	8	0	No	0.01	Param.
Cadmium (mg/L)	APMW-4	0.000217	0.000217	0.005	No	8	100	No	0.004	NP (NDs)
Cadmium (mg/L)	**APMW-5**	**0.01008**	**0.005835**	**0.005**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Chromium (mg/L)	SSPMW-2	0.00153	0.00153	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	SSPMW-3	0.008277	0.002267	0.1	No	8	25	sqrt(x)	0.01	Param.
Chromium (mg/L)	SSPMW-4	0.00762	0.002	0.1	No	8	50	No	0.004	NP (normality)
Chromium (mg/L)	APMW-1D	0.00153	0.00153	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-3	0.00173	0.00153	0.1	No	8	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-4	0.00153	0.00153	0.1	No	8	100	No	0.004	NP (NDs)
Chromium (mg/L)	APMW-5	0.00228	0.00157	0.1	No	8	75	No	0.004	NP (NDs)
Cobalt (mg/L)	**SSPMW-2**	**0.1365**	**0.05213**	**0.006**	**Yes**	**8**	**0**	**sqrt(x)**	**0.01**	**Param.**
Cobalt (mg/L)	**SSPMW-3**	**0.5996**	**0.5102**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	SSPMW-4	0.0005	0.000289	0.006	No	8	75	No	0.004	NP (NDs)
Cobalt (mg/L)	**APMW-1D**	**0.01729**	**0.01235**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**APMW-3**	**0.04357**	**0.0279**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	APMW-4	0.00286	0.0005	0.006	No	8	62.5	No	0.004	NP (NDs)
Cobalt (mg/L)	**APMW-5**	**0.1907**	**0.1201**	**0.006**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	SSPMW-2	2.56	0.293	4	No	8	25	No	0.004	NP (normality)

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:32 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Fluoride (mg/L)	SSPMW-3	0.4971	0.4181	4	No	8	37.5	No	0.01	Param.
Fluoride (mg/L)	SSPMW-4	0.5887	0.04707	4	No	8	50	ln(x)	0.01	Param.
Fluoride (mg/L)	APMW-1D	0.8622	0.5456	4	No	8	0	No	0.01	Param.
Fluoride (mg/L)	APMW-3	0.223	0.054	4	No	8	37.5	No	0.004	NP (normality)
Fluoride (mg/L)	APMW-4	0.5	0.0488	4	No	8	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	APMW-5	2.57	1.322	4	No	8	12.5	No	0.01	Param.
Lead (mg/L)	SSPMW-2	0.004821	0.0006413	0.015	No	8	0	No	0.01	Param.
Lead (mg/L)	SSPMW-3	0.005758	0.003762	0.015	No	8	0	No	0.01	Param.
Lead (mg/L)	SSPMW-4	0.000276	0.000161	0.015	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	APMW-1D	0.000256	0.000167	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	APMW-3	0.00121	0.000167	0.015	No	8	50	No	0.004	NP (normality)
Lead (mg/L)	APMW-4	0.000338	0.000167	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	APMW-5	0.004772	0.001354	0.015	No	8	25	No	0.01	Param.
Lithium (mg/L)	SSPMW-2	0.805	0.564	1.66	No	8	0	No	0.004	NP (normality)
Lithium (mg/L)	SSPMW-3	0.6334	0.5234	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	SSPMW-4	0.9086	0.7347	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	APMW-1D	0.03627	0.02345	1.66	No	8	12.5	No	0.01	Param.
Lithium (mg/L)	APMW-3	0.05391	0.04536	1.66	No	8	0	No	0.01	Param.
Lithium (mg/L)	APMW-4	0.9239	0.4661	1.66	No	8	0	x^2	0.01	Param.
Lithium (mg/L)	APMW-5	0.5209	0.3586	1.66	No	8	0	No	0.01	Param.
Mercury (mg/L)	SSPMW-2	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	SSPMW-3	0.000669	0.000162	0.002	No	8	62.5	No	0.004	NP (NDs)
Mercury (mg/L)	SSPMW-4	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-1D	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-3	0.00158	0.0002	0.002	No	8	25	No	0.004	NP (normality)
Mercury (mg/L)	APMW-4	0.00013	0.00013	0.002	No	8	100	No	0.004	NP (NDs)
Mercury (mg/L)	APMW-5	0.00197	0.0002469	0.002	No	8	12.5	sqrt(x)	0.01	Param.
Molybdenum (mg/L)	SSPMW-2	0.00061	0.00061	0.1	No	8	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	SSPMW-3	0.0011	0.00061	0.1	No	8	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	SSPMW-4	0.0629	0.000864	0.1	No	8	50	No	0.004	NP (normality)
Molybdenum (mg/L)	APMW-1D	0.03146	0.01667	0.1	No	8	0	No	0.01	Param.
Molybdenum (mg/L)	APMW-3	0.000848	0.00061	0.1	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	APMW-4	0.005	0.000686	0.1	No	8	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	APMW-5	0.00061	0.00061	0.1	No	8	100	No	0.004	NP (NDs)
Radium 226 + 228 (pCi/L)	SSPMW-2	3.125	1.888	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	**SSPMW-3**	**38.11**	**30.24**	**5**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Radium 226 + 228 (pCi/L)	SSPMW-4	3.094	1.744	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-1D	2.383	1.019	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-3	2.595	1.8	5	No	8	12.5	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-4	1.444	0.7369	5	No	8	0	No	0.01	Param.
Radium 226 + 228 (pCi/L)	APMW-5	4.38	1.12	5	No	8	0	No	0.004	NP (normality)
Selenium (mg/L)	SSPMW-2	0.025	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	SSPMW-3	0.00676	0.000739	0.05	No	8	75	No	0.004	NP (NDs)
Selenium (mg/L)	SSPMW-4	0.00441	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-1D	0.005	0.00154	0.05	No	8	50	No	0.004	NP (normality)
Selenium (mg/L)	APMW-3	0.00135	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-4	0.000739	0.000739	0.05	No	8	100	No	0.004	NP (NDs)
Selenium (mg/L)	APMW-5	0.0533	0.000739	0.05	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	SSPMW-2	0.0013	0.000472	0.002	No	8	62.5	No	0.004	NP (NDs)
Thallium (mg/L)	**SSPMW-3**	**0.01073**	**0.008216**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**

Confidence Interval

Gibbons Creek Steam Electric Station Client: HDR Data: Gibbons Creek_Groundwater Database Printed 1/23/2023, 11:32 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Thallium (mg/L)	SSPMW-4	0.000472	0.000472	0.002	No	8	100	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-1D	0.000636	0.00031	0.002	No	8	75	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-3	0.000529	0.000267	0.002	No	8	62.5	No	0.004	NP (NDs)
Thallium (mg/L)	APMW-4	0.000472	0.000172	0.002	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	**APMW-5**	**0.002392**	**0.002068**	**0.002**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**

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RESPONSE ITEM 31

ATTACHMENT

ALTERNATIVE SOURCE DEMONSRATION

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Alternative Source Demonstration

Gibbons Creek Steam Electric Station

Gibbons Creek Environmental Redevelopment Group, LLC

October 6, 2023

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Alternative Source Demonstration

Gibbons Creek Steam Electric Station

October 2023

Paula Jo Lemonds

October 6,2023

Paula Jo Lemonds, P.E., P.G.

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Table of Abbreviations and Acronyms

Abbreviation	Definition
AMSL	Above Mean Sea Level
AP	Ash Ponds
ASD	Alternative Source Demonstration
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
ERCOT	Electric Reliability Council of Texas
GCERG	Gibbons Creek Environmental Redevelopment Group, LLC.
GCSES	Gibbons Creek Steam Electric Station
GWPS	Groundwater Protection Standard
HDR	HDR Engineering, Inc.
RL	Reporting Limit
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
SSP	Scrubber Sludge Pond
TAC	Texas Administrative Code
TCEQ	Texas Commission of Environmental Quality
TMPA	Texas Municipal Power Agency

1.0 Introduction

This report has been prepared by HDR Engineering Inc. (HDR) on behalf of Gibbons Creek Environmental Redevelopment Group, LLC (GCERG) for the former Gibbons Creek Steam Electric Station (GCSES or Site). The GCSES is a former coal-fired power generation facility located in Anderson, Texas. The location of GCSES is depicted on **Figure 1**. The Texas Municipal Power Agency (TMPA) operated GCSES between 1982 and 2019. GCERG acquired the Site in 2021. The GCSES contains one coal combustion residual (CCR) landfill identified as Site F Landfill, and two former CCR surface impoundments identified as the Scrubber Sludge Pond (SSP) and Ash Ponds (APs). The Site F Landfill, SSP, and APs locations are depicted on **Figure 2**. These locations are subject to the U.S. Environmental Protection Agency's (EPA's) Coal Combustion Residuals (CCR) Rule [40 CFR §257] and Texas Commission of Environmental Quality's (TCEQ) Title 30, Texas Administrative Code (30 TAC), Chapter 352.

The APs were clean closed in 2022. The APs were an unlined, interconnected, three-cell impoundment area which was separated by earthen dikes, constructed in 1977 to 1978 as part of the original GCSES construction. These ponds were approximately 260 ft wide, 1,800 ft long and 20 ft deep. The top of the perimeter berms/dikes were at an elevation of approximately 270 feet above mean sea level (AMSL).

The SSP was clean closed in 2022. The former SSP is located to the west of the APs and was a single impoundment constructed in 1977 to 1978. A liner was added to the bottom of the pond in 1983. The pond measurements were approximately 260 feet and 350 feet wide and 615 feet and 635 feet long (measured at the bottom of the impoundment).

The Site F Landfill, located northeast of the decommissioned power generating plant and constructed in 1990, is approximately 114 acres and received solid CCR generated by the GCSES. The Site F Landfill CCR unit is currently being closed with the following capping system:

- 6-inches of erosion layer;
- Underlain by 18-inches of infiltration layer;
- Underlain by a geocomposite;
- Underlain by a 40-mil low-linear density polyethylene (LLDPE) geomembrane layer;
- Underlain by 2-feet of recompacted clay liner (RCL) with a hydraulic conductivity of $1x10^{-5}$ centimeters per second (cm/sec) or slower;
- Underlain by 1-foot of intermediate cover.

Closure activities associated with the Site F Landfill stormwater pond cleanout and Site F Landfill CCR unit is anticipated to be completed by end of year 2023.

An alternative source demonstration (ASD) dated April 2019 was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood) on behalf of TMPA to account for select constituents of concern exceeding the groundwater protection standard (GWPS) at a statistically significant level (SSL). The Appendix IV [40 CFR §257] constituents noted to be exceeding the specific GWPS at a SSL by Wood in the April 2019 ASD are summarized in **Table 1**.

Table 1: 2019 ASD Appendix IV Constituent Exceedances

CCR Unit	Downgradient Well	Appendix IV Constituents
Ash Ponds	AP MW-3	Cobalt
	AP MW-5	Beryllium, Cobalt
Scrubber Sludge Pond	SSP MW-2	Beryllium, Cobalt
	SSP MW-3	Beryllium, Cadmium, Cobalt, $Radium_{226+228}$
Site F Landfill	SFL MW-3	Beryllium, Cadmium, Cobalt, Lead
	SFL MW-5	Beryllium, Cobalt, Lithium, $Radium_{226+228}$
	SFL MW-6	Beryllium, Cadmium, Cobalt, Lithium, $Radium_{226+228}$
	MNW-15	Beryllium, Cadmium, Cobalt

Notes:

1. Information noted in Wood's Alternative Source Demonstration report dated April 2019.

The 2019 ASD indicated each constituent noted in **Table 1,** with the exception of lithium, was influenced by the presence of lignite deposits and the groundwater's naturally low pH. The oxidation (weathering) of pyrite in lignite coal releases hydrogen ions which lowers the groundwater pH. The coupling of this lowered pH, redox state of the aquifer, and geology of the site is causing naturally present constituents of concern to be released and is not considered to be a result of the CCR units on the property. For lithium, the 2019 ASD indicates lithium is naturally present in the region and that GWPS exceedances are due to natural variability.

In subsequent monitoring events following the 2019 ASD, additional Appendix IV constituents were detected at a SSL above the GWPS. These additional constituents include cadmium (AP MW-5), cobalt (SFL MW-2; AP MW-1D), and thallium (SFL MW-3; SFL MW-6; SSP MW-3; AP MW-5) as noted in the Site's 2022 Annual Groundwater Monitoring and Corrective Action Report (AGWMCAR) [HDR, 2023]. In the Site's 2021 AGWMCAR [HDR, 2022], an expansion of the 2019 ASD was included to address these additional constituent exceedances. It was noted in the 2021 AGWMCAR that these additional constituents were present as a result of the lower pH, redox state of the aquifer, and geology noted in the 2019 ASD and not due to a release from the CCR units. Additional information related to compliance is provided in the AGWMCAR's which includes but is not limited to constituent concentrations for each monitoring event at each monitoring well for the CCR units and the background threshold values (BTVs) at the time of reporting.

On June 1, 2021, the EPA signed a Federal Register notice approving the state permit program for the management of CCR in the State of Texas. This provided TCEQ authority to administer their partial permit program in lieu of the federal CCR program, except for five provisions. Under TCEQ's program, the Site is required to be registered with TCEQ. EPA conducted a high-level review of the CCR registration (Registration No. CCR113) for the Site F Landfill, SSP, and APs. EPA provided comments to TCEQ in a letter dated March 23, 2023. EPA stated in the letter that the 2019 ASD prepared by Wood was insufficient in demonstrating the GWPS exceedances originate from a source other than Site F Landfill, SSP, and APs CCR units. EPA indicated no evidence was presented to support the claims that pyrite and lignite are present at

the Site which could lower pH and cause mobilization of constituents of concern. In addition, EPA indicated other geological and soil analytical data was not provided to indicate certain constituents of concern are naturally present at the Site and is not the result of a release from CCR material.

HDR has reviewed the 2019 ASD in conjunction with the comments provided by EPA. HDR concurs with the mechanisms noted in the 2019 ASD which indicates an alternative source is contributing to the release of constituents of concern. However, background and supporting data was lacking in the original ASD which could have provided additional context. This ASD report provides additional supporting data to address EPA's comments as well as additional information related to the hydrogeochemistry of the Site.

1.1 GCSES Area Hydrogeology

Geologically, the GCSES is located on an outcrop of the middle member of the Wellborn Formation of the Jackson-Yegua Group of the Tertiary-aged System. The Wellborn Formation is described as fine to very fine quartz sand interbedded with brown, lignitic clay and lignite, with abundant fossil wood and imprints of marine megafossils. Moving south of the GCSES Site, the Manning Formation overlies the Wellborn Formation. The Manning Formation is a lignite-bearing formation which is described as a fine to medium-grained, lignitic, quartz sand, interbedded with sandy, lignitic clay, and lignite, with abundant fossil wood. The Manning Formation has well developed lignite seams. The Gibbons Creek Lignite Mine was located in the Manning Formation located approximately two miles south of GCSES. Quaternary-aged alluvium and terrace deposits are present in the Brazos River, Navasota River, and Gibbons Creek valleys [Horbaczewski, 2011].

The geological formation of the GCSES area is based on the cyclothem model in which the sea transgressed over land and then regressed. Sedimentary rock was stacked over time in a pattern that was indicative of the presence and absence of the sea. This depositional process is described in more detail in the Field Guidebook Minesoil and Acid Seep Workshop document for the Gibbons Creek Lignite Mine [Horbaczewski, 2011]. The GCSES area is located in the Texas Coastal Plain region which was developed by this depositional process.

Lignite mining has been conducted in eastern and east-central Texas along the lignite belt depositional area. This lignite belt follows the Tertiary-aged coastal region. The lignite belt region is depicted on **Exhibit 1, Appendix A** (Graphic originally drafted by the Railroad Commission of Texas dated February 2023). GCSES is located in the lignite belt region.

Borings conducted at the site indicate a subsurface stratigraphy consisting of stratified, heterogeneous layers of clays, silts, and sands. The clay and silt intervals consisted of high plasticity material. Silty sand intervals generally consisted of fine, poorly graded sands with occasional high plasticity clay and silt lenses. Occasional sandstone layers were detected in select borings across the Site. Lignite and lignitic clay seams have been identified in soil borings at the Site. Bedrock material is sandstone [ERM, 2005]. Boring logs for monitoring wells included in the Site's groundwater monitoring network are provided in **Appendix B**. Geologic

cross-sections are drafted for the site based on the boring logs. The cross-section transects are depicted on **Figure 2**. Transects A-A` (**Figure 3**), B-B' (**Figure 4**) and C-C` (**Figure 5**) depict the general geology of the GCSES.

The topography of the GCSES and locations of the CCR units are generally flat with surface elevation decreasing from north to south and southwest. Surface water drainage is generally to the south and southwest. Gibbons Creek Reservoir is located immediately adjacent to the GCSES and CCR units on the east and south sides. The reservoir was established as a cooling pond for the GCSES. Impoundment of Gibbons Creek Reservoir began in spring 1981. Discharge from the reservoir feeds into Gibbons Creek which is a tributary of the Navasota River which is a tributary of the Brazos River.

The uppermost groundwater at GCSES CCR units ranges from approximately 220 to 250 feet AMSL. The uppermost groundwater aquifer at the Site is considered confined to semi-confined due to the stratified nature of the sedimentary sediments and influences of weathering and erosion. General groundwater flow direction at the Site is from the northwest to southeast. The groundwater flow generally follows topography with the flow towards the Gibbons Creek Reservoir and the Gibbons Creek valley.

1.2 GCSES Area Geochemistry – Pyrite and pH

As noted in the 2019 ASD [Wood, 2019], the elevated concentrations of constituents of concern were primarily related to the low pH measured in the groundwater samples. The low pH was attributed to the weathering of naturally present pyrite in sediments at the site. The presence of pyrite at and in the general area of GCSES is attributed to the geological formation of the region as described in **Section 1.1**. Marine environments promote the formation of pyrite. Anoxic conditions can develop in marine sediments as organic material (i.e., buried coastal vegetation due to sea transgression) is broken down by bacteria. For this process to occur, electron acceptors are used by the bacteria. The consumption of electron acceptors generally follows the following order:

1. Aerobic processes
2. Nitrate reduction processes
3. Manganese reduction processes
4. Iron reduction processes
5. Sulfate reduction processes
6. Methane generation processes

Iron and sulfate are relatively high in seawater and the solubility product of iron sulfides is extremely low [Horbaczewski, 2011]. Thus, if ferrous iron and sulfide ions, which are products of iron reduction and sulfate reduction processes, respectively, are in close proximity, iron sulfide will precipitate. This process eventually forms pyrite (iron disulfide). Framboidal pyrite is commonly found in coastal sediments or sedimentary sediments formed from marine sediments. Framboidal pyrite is present in Texas lignite formations. Pyrite was noted on select boring logs from site monitoring wells [AFWEI, 2017].

When the process is reversed and pyrite is exposed to an aerobic state, it is oxidized. This oxidation forms ferrous iron and sulfuric acid in aqueous solutions. This release of sulfuric acid can cause acidification of natural waters. The pyrite that is present in the Jackson-Yegua Formation located at the Site provides sulfide constituents that can be oxidized. Natural acid seeps have been observed in the general area of the Site as a result of dissolution of pyrite in lignite [Horbaczewski, 2007]. Based on data obtained from the United States Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS's) Web Soil Survey database, shallow soil sediments at the Site generally are acidic with pH measurements in the range from 3.5 to 6.5. The Web Soil Survey pH reports for the Site F Landfill, SSP, and APs CCR units are included as **Exhibit 2, Appendix A**. Shallow groundwater in unconfined or semiconfined aquifers that is in contact with lignite and has a positive oxidation-reduction potential (ORP) generally exhibit a low pH. This has been observed in shallow screened monitoring wells at the Site. The average pH and ORP values as well as the screened depth intervals of monitoring wells for Site F Landfill, SSP, and APs CCR units are summarized in **Table 2**. Generally, groundwater from deeper screen interval elevations, which are confined to semi-confined (approximately 209.8 to 249.7 feet AMSL), had relatively higher pH and lower ORP, while groundwater from shallow screen interval elevations which are semi-confined to unconfined (approximately 230.3 to 269.0 feet AMSL) had relatively lower pH and higher ORP. This relationship is depicted on **Graph 1**.

Table 2: Site Water Quality and Monitored Unit Summary

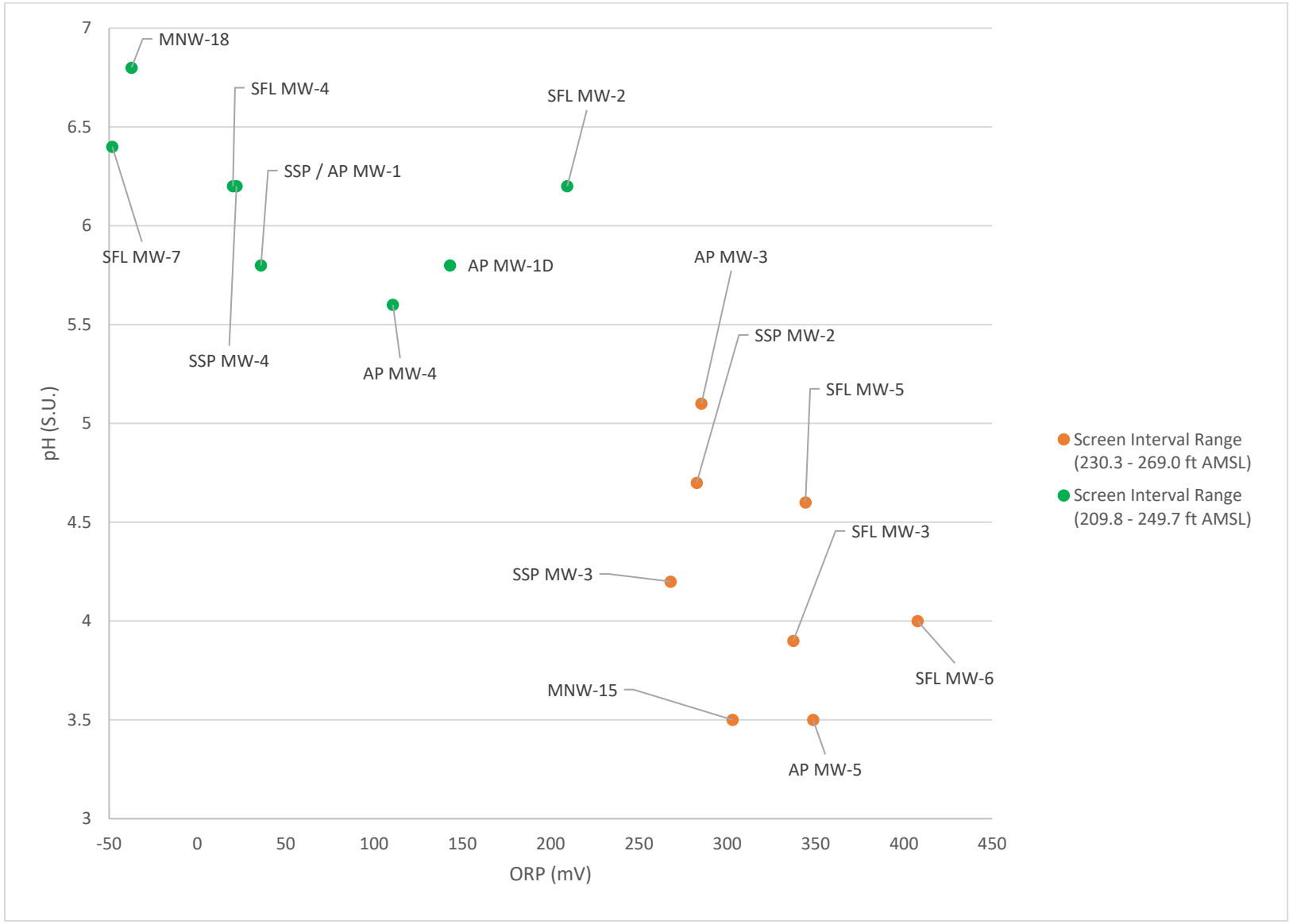
Monitoring Well ID	Average pH[1] (S.U.)	Average ORP[1] (mV)	Screen Interval (feet AMSL)	Screen Interval Sediments[2]
AP MW-1D	5.8	143.0	229.5 – 234.5	Confined – Silty Sand and Sandstone
AP MW-3	5.1	285.4	232.0 – 237.0	Semi-Confined – Silty Sand
AP MW-4	5.6	110.7	221.4 – 226.4	Semi-Confined – Silty Sand
AP MW-5	3.5	348.6	235.7 – 240.7	Unconfined – Sandy Clay
AP MW-6	6.8	NA	228.7 – 233.7	Semi-Confined – Clayey Sand
SSP / AP MW-1	5.8	36.0	229.8 – 239.8	Semi-Confined – Silty Sand
SSP MW-2	4.7	282.7	237.1 – 242.1	Unconfined – Sandy Clay
SSP MW-3	4.2	268.0	236.5 – 241.5	Unconfined – Silty Sand with Lignite Seams
SSP MW-4	6.2	22.1	232.9 – 237.9	Confined – Sandy Clay
SFL MW-2	6.2	209.4	244.7 – 249.7	Unconfined – Silty Sand
SFL MW-3	3.9	268.0	247.2 – 252.2	Unconfined – Silty Sand
SFL MW-4	6.2	22.1	227.0 – 232.0	Confined – Silty Sand
SFL MW-5	4.6	344.3	252.3 – 257.3	Unconfined – Silty Sand and Sandstone
SFL MW-6	4.0	407.8	264.0 – 269.0	Unconfined – Silty Sand
SFL MW-7	6.4	-48.2	209.8 – 214.8	Confined – Silty Sand with Lignite Seams
MNW-11	7.2	NA	220.7 – 225.7	Confined – Silty Clay, trace Lignite Seams
MNW-15	3.5	303.1	230.3 – 235.3	Unconfined – Clayey Sand with Lignite Seams
MNW-16	7.0	NA	222.8 – 227.8	Confined – Clayey Sand with Lignite Seams
MNW-17	6.9	NA	243.5 – 248.5	Semi-Confined – Clay with Lignite Seams
MNW-18	6.8	-37.3	219.7 – 224.7	Confined – Clay

Notes:

AMSL = above mean sea level
mV = milliVolts
NA = Not Available
ORP = oxidation-reduction potential
S.U. = standard units

1. Average pH and ORP are calculated from available monitoring data collected during the period from June 2016 through December 2022.
2. Interpretation of aquifer status (confined, semi-confined, and unconfined) and screen interval sediments is based on information included on monitoring well boring logs.

Graph 1: Average pH and ORP Distribution



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This process has also been observed in other regional monitoring and water supply wells screened in the Wellborn and Manning Formations. The Twin Oaks Landfill (2690 State Highway 30, Anderson, Texas) is located approximately four miles west-southwest of the GCSES. The Twin Oaks Landfill location relative to GCSES is depicted on **Exhibit 3, Appendix A**. The Twin Oaks Landfill has a monitoring network that consists of an upper (shallow) groundwater monitoring network and a lower (deeper) groundwater monitoring network. Based on information provided in the publicly available monitoring report dated May 29, 2017 [JBS], the upper groundwater monitoring network had groundwater with relatively lower pH while the deeper monitoring network had groundwater with higher pH. Up-gradient monitoring well data from the Twin Oaks Landfill site is summarized in **Table 3**.

Based on the GCSES well data and the Twin Oaks Landfill data, shallow groundwater monitored in the 230 to 270 feet AMSL zone of the sediments appears to have generally lower pH which ranges from approximately 3.5 to 5.0. This lower pH groundwater is not generally used as a consumptive water supply source in the region. Most water supply wells in the region are in deeper formations which have different geological development. A few water supply wells in the general area of GCSES are screened in or near the 230 to 270 feet AMSL zone of sediments. Water supply wells with the state well numbers 5932502, 5932601, and 6017403 are located within the general area of GCSES. Data for these water supply wells were obtained from the Texas Water Development Board online database [2023] and is summarized in **Table 3**. The locations of these wells relative to the GCSES are depicted on **Exhibit 3, Appendix A**. Water supply well 5932601 had a pH value of 4.3 which was measured in a groundwater sample collected in January 1971. This low pH was measured in groundwater prior to operations beginning at GCSES as well as mining operations at the Gibbons Creek Lignite Mine which began in 1982.

Table 3: Regional Water Quality and Monitored Unit Summary

Well ID	pH[1] (S.U.)	Approximate Screen Interval (feet AMSL)	Screen Interval Sediments[2]
MW-BU	3.87	217 - 227	Semi-Confined – Clay
MW-BL	7.16	185 - 200	Confined – Clayey Sand
MW-CU	5.11	242 - 252	Unconfined – Clayey Sand
MW-CL	8.58	204 - 219	Confined – Clay
MW-DU	4.87	236 - 246	Unconfined – Sand
MW-DL	7.03	206 - 221	Confined – Clay
WSW-5932502	5.1	200 - 218	Semi-Confined – Clay and Sand
WSW-5932601	4.3	275 - NA	NA
WSW-6017403	5.9	225 - 235	NA

Notes:

AMSL = above mean sea level
NA = Not Available
S.U. = standard units

1. The pH values were obtained from either the May 29, 2017, report for groundwater monitoring at the Twin Oaks Landfill or well registration information provided via the Texas Water Development Board's online database.
2. Interpretation of aquifer status (confined, semi-confined, and unconfined) and screen interval sediments is based on information included on well boring logs, if available.

2.0 Site's CCR Analytical Data

The Site F Landfill, SSP, and APs contained CCR material that consisted of flue gas desulfurization (FGD) sludge, bottom ash, economizer ash pyrites, and/or fly ash. The fuel source for these CCR materials included locally mined lignite from the Gibbons Creek Lignite Mine during the period from approximately 1982 through 1996. During the period from approximately 1996 through closure of GCSES in 2019, bituminous coal from Wyoming's Powder River Basin (PRB) was used at the site. The lignite from the Gibbons Creek Lignite Mine is generally higher in sulfur content and occasionally resulted in higher ash contents when compared to other coal sources (i.e., PRB coal) [Black & Veatch, 1986]. These downsides eventually led to PRB coal being utilized at the site.

A general characteristic of CCR at the GCSES is its alkaline nature. Ash generated from lignite material has relatively large quantities of lime which made it a viable option for incorporation into the FGD scrubbing process. FGD sludge is the result of treatment via lime, limestone, and alkaline ash. A potential recommendation for handling fly ash at the GCSES prior to startup in 1982 was to possibly dispose of the material with acidic mine spoils from the lignite mine. The addition of the alkaline ash material would reduce the acidity of the mine spoils in an effort to reduce contamination from mining operations [TERA, 1976]. Ash samples collected from the Site A Landfill, which is located to the north of GCSES and contained ash from lignite combustion, generally had pH values higher than neutral with a mean value of 7.1 and maximum value of 8.0 [MKC, 1990]. Soil used to cap the Site A Landfill had eight of the 29 soil samples with pH values below 5.0 with a mean of the soil samples having a pH of approximately 5.6. The soils used in the cap were a composite of native soil horizons that were present at the GCSES facility and potentially had pyrite deposits that could contribute to the lower pH of the cap material when compared to the CCR.

Leachate and water in contact with CCR sediments at GCSES have pH that is basic. Leachate seeps observed in the Site A Landfill cap were sampled to evaluate constituents, and the pH of the leachate was 8.4 [MKC, 1990]. Sampling conducted on discharge from the former APs outfall had pH values ranging from 7.5 to 8.5. Sampling conducted on fluid from the SSP during a 1983 study had a pH value of 7.8. Leachate collected from piezometers at the Site F Landfill during a 2003 sampling event had pH values ranging from 8.6 to 9.7 [Wood, 2019].

3.0 Alternative Sources

The Appendix IV constituents identified that exceed their respective GWPS at a SSL in the 2019 ASD [Wood, 2019] and the 2022 AGWMCAR [HDR, 2023] are summarized on **Table 4**. As discussed in **Section 1.0**, the geological formation and oxidation of naturally deposited sediments is contributing to lower pH in the shallow groundwater. This lower pH is considered to be the precursor or activation that is contributing to other constituents becoming soluble in groundwater with the exception of lithium. Lithium is considered a naturally present dissolved constituent in groundwater in the region and is not influenced by pH or oxidation state. The following subsections summarizes the natural processes and evidence that is contributing to the

Appendix IV constituents noted on **Table 4** being detected at elevated concentrations in groundwater and is not a result of a release from the CCR units contributing to these values.

Table 4: Appendix IV Constituent Exceedances

CCR Unit	Downgradient Well	Appendix IV Constituents
Ash Ponds	AP MW-1D	Cobalt
	AP MW-3	Cobalt
	AP MW-5	Beryllium, Cadmium, Cobalt, Thallium
Scrubber Sludge Pond	SSP MW-2	Beryllium, Cobalt
	SSP MW-3	Beryllium, Cadmium, Cobalt, $Radium_{226+228}$, Thallium
Site F Landfill	SFL MW-2	Cobalt
	SFL MW-3	Beryllium, Cadmium, Cobalt, Lead, Thallium
	SFL MW-5	Beryllium, Cobalt, Lithium, $Radium_{226+228}$
	SFL MW-6	Beryllium, Cadmium, Cobalt, Lithium, $Radium_{226+228}$, Thallium
	MNW-15	Beryllium, Cadmium, Cobalt

Notes:

1. Information noted in Wood's Alternative Source Demonstration report dated April 2019 and the 2022 AGWMCAR for GWPS exceedances.

3.1 Beryllium, Cadmium, Cobalt, Lead, and Thallium

As was discussed in the 2019 ASD [Wood, 2019] and 2021 AGWMCAR [HDR, 2022], solubility of metal constituents at the Site's CCR units are influenced by the positive redox potential and acidic nature of the uppermost groundwater. Solubility of metals beryllium (Be), cadmium (Cd), cobalt (Co), lead (Pb), and thallium (Tl) have a relationship with redox potential and pH of the groundwater. The availability of these metals can also be influenced by minerals present, cation exchange capacity (CEC) of the soil, types of metal oxides/hydroxides present, and the availability of sulfur constituents. At low pH values, clay minerals and metal oxide/hydroxide sediment coatings can be dissolved which can release metal constituents into groundwater [Sparks, 2003]. Desorption of cations (i.e., metals) from soil and oxide/hydroxide coatings can increase with pH decreasing below 5 [SRNL, 2011]. Metals can become more soluble at lower pH values. This relationship is depicted on **Graph 2** which summarizes the average pH and ORP distribution and the monitoring wells circled that had Be, Cd, Co, Pb, and Tl GWPS exceedances at a SSL.

As noted in the 2019 ASD [Wood, 2019], Be and Co solubilities are heavily influenced by a positive ORP and lower pH. This is evident by the Eh-pH stability diagrams for Be and Co provided in the document which showed Be^{2+} and Co^{2+} would be the dominant forms of beryllium and cobalt, respectively, in the groundwater of samples collected from wells with identified GWPS exceedances. Be^{2+} and Co^{2+} would be dissolved in an aqueous solution.

As noted in the 2019 ASD [Wood, 2019], Cd and Pb are primarily controlled by adsorption onto iron (Fe) and aluminum (Al) oxide/hydroxide mineral phases. As pH in groundwater decreases into the acidic range, desorption of Cd and Pb occurs. This occurs due to the Fe and Al oxide/hydroxides dissolving as a result of the lowered pH. Adsorption sites available for Cd and Pb are removed and causing the constituents to be in solution. Thallium has a similar nature and is generally bound to oxide/hydroxide compounds which can release the constituent at low

pH values. Available groundwater analytical data for Al and Fe at the Site's CCR units is summarized on **Table 5**. The highest concentrations of Al and Fe generally correlates with lower pH values. Cd, Pb, and Tl were also detected above laboratory reporting limits at monitoring wells that had lower pH values as indicated by the December 2022 groundwater analytical data.

Available regional, off-site groundwater analytical data for Al, Fe, Cd, Pb, and Tl is summarized on **Table 6**. Cd and Tl concentrations were detected above laboratory reporting limits in up-gradient monitoring wells MW-BU and MW-DU at the Twin Oaks Landfill, which are shallow monitoring wells with low pH values. These concentrations are similar to the values observed in groundwater samples collected at GCSES with low pH values. Elevated Fe concentrations were also measured in water supply wells with relatively low pH values. Based on the available data, Cd, Fe, and Tl appear to be dissolved in regional groundwater where low pH is naturally present. There was insufficient regional data proximal to the site for Al and Pb to make a comparison to the GCSES analytical data.

An additional mechanism that can influence Tl dissolved in groundwater at the Site is Tl can also be a component of the pyrite mineral structure [Karbowska, 2016]. With the oxidation of pyrite at the Site, thallium is made available to groundwater due to the breakdown of the mineral structure.

Graph 2: Average pH and ORP Distribution – Wells with Be, Cd, Co, Pb, and Tl GWPS Exceedances

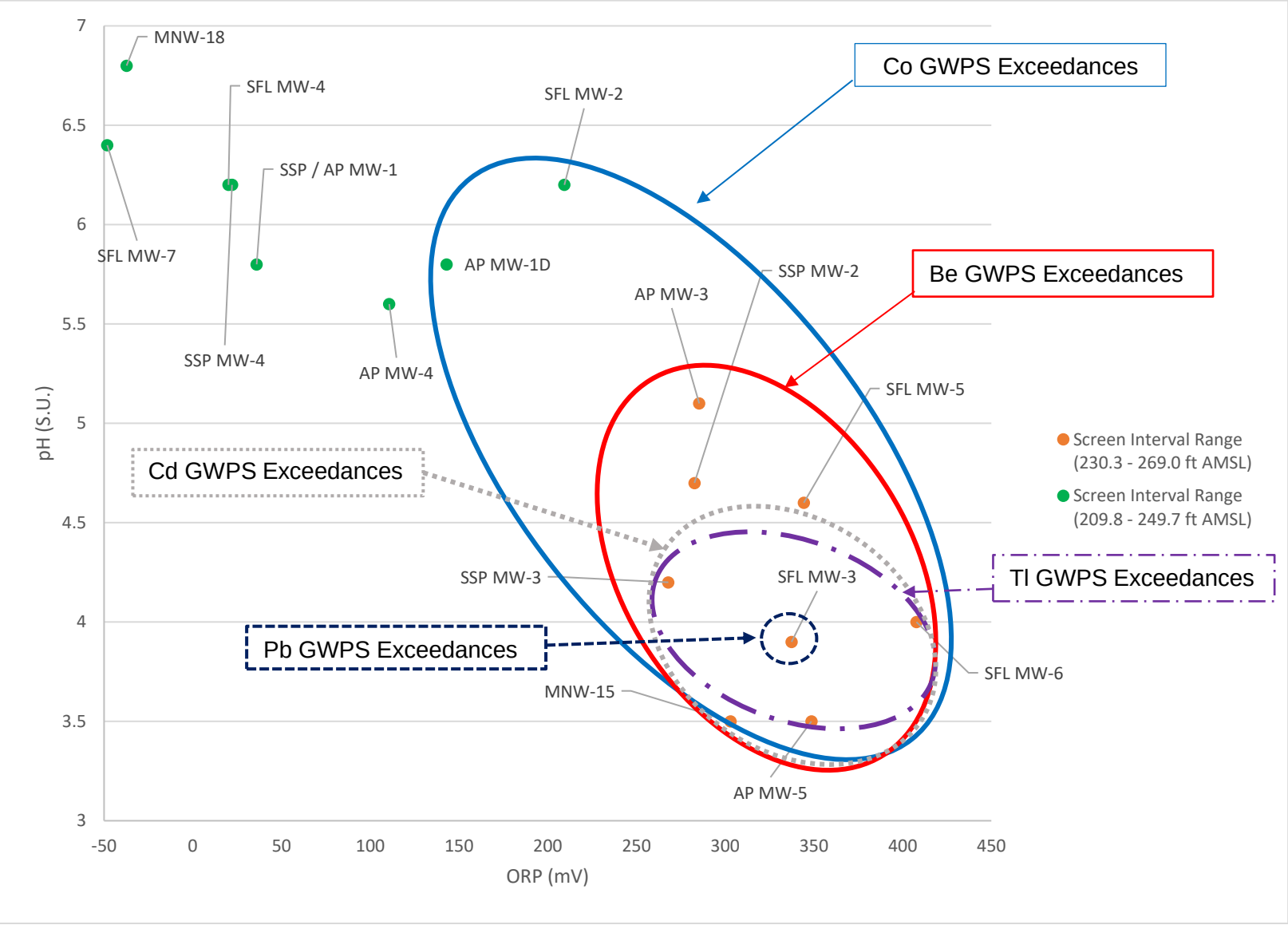

Table 5: Groundwater Aluminum and Iron Concentrations

Monitoring Well ID	Average pH[1] (S.U.)	Aluminum Conc Range[2] (mg/L)	Iron Conc. Range[2] (mg/L)	Cadmium Conc.[3,4] (mg/L)	Lead Conc.[3,4] (mg/L)	Thallium Conc.[3,4] (mg/L)
AP MW-5	3.5	25.7 – 44.6	3.20 – 17.9	**0.0102**	**0.00239**	**0.00248**
MNW-15	3.5	26.6 – 30.7	21.4 – 24.5	**0.0414**	0.000561J	0.000976J
SFL MW-3	3.9	7.93 – 8.25	1.51 – 1.76	**0.00552**	**0.0186**	**0.00568**
SFL MW-6	4.0	7.56 – 12.4	0.868 – 25.9	**0.00497**	**0.0109**	**0.00489**
SSP MW-3	4.2	1.57 – 2.37	1.02 – 1.61	**0.0655**	**0.00582**	**0.00940**
SFL MW-5	4.6	0.467 – 0.668	0.311 – 1.10	**0.00388**	0.000606J	**0.00125**
SSP MW-2	4.7	2.16 – 4.13	0.895 – 4.49	**0.00179**	0.000841J	<0.000472
AP MW-3	5.1	0.0359 – 0.470	<0.0277 – 0.301	**0.00438**	<0.000167	<0.000472
AP MW-4	5.6	<0.0155 – 0.0775	1.24 – 6.70	<0.000217	<0.000167	<0.000472
AP MW-1D	5.8	<0.0155 – 0.0733	<0.0277 – 0.0713	0.000340J	<0.000167	<0.000472
SSP / AP MW-1	5.8	0.0436 – 3.33	3.88 – 7.71	<0.000217	0.000702J	<0.000472
SFL MW-4	6.2	<0.0125 – 0.0204	0.0466 – 1.69	<0.000217	<0.000167	<0.000472
SSP MW-4	6.2	0.0372 – 0.425	0.0258 – 0.265	<0.000217	<0.000167	<0.000472
SFL MW-2	6.2	0.0531 – 0.789	<0.0227 – 0.313	0.000649J	0.000199J	0.000634J
SFL MW-7	6.4	<0.0125 – 0.650	0.117 – 0.275	<0.000217	<0.000167	<0.000472
MNW-18	6.8	<0.0125 – <0.0155	<0.0195 – 4.25	<0.000217	<0.000167	<0.000472
AP MW-6	6.8	NA	NA	NA	NA	NA
MNW-17	6.9	NA	NA	NA	NA	NA
MNW-16	7.0	NA	NA	NA	NA	NA
MNW-11	7.2	NA	NA	NA	NA	NA

Notes:

J = Laboratory flag indicating result is less than the reporting limit (RL) but greater than or equal to the laboratory method detection limit (MDL) and the concentration is an approximate value.

mg/L = milligrams per liter

NA = Not Available

ORP = oxidation-reduction potential

S.U. = standard units

< = Indicates concentration is less than the MDL.

1. Average pH is calculated from monitoring data collected during the period from June 2016 through December 2022.
2. Available aluminum and iron data is for groundwater samples collected during the period from February 2021 through December 2022.
3. Concentrations were measured in samples collected during the December 2022 sampling event.
4. **Bold/Underlined** values indicate concentrations above laboratory's RL.

Table 6: Regional Aluminum, Iron, Cadmium, Lead, and Thallium Data

Well ID	pH[1] (S.U.)	Aluminum Conc. (mg/L)	Iron Conc. (mg/L)	Cadmium Conc. (mg/L)	Lead Conc. (mg/L)	Thallium Conc. (mg/L)
MW-BU	3.87	NA	NA	**0.00770**	<0.015	**0.00180**
MW-BL	7.16	NA	NA	<0.002	<0.015	<0.001
MW-CU	5.11	NA	NA	<0.002	<0.015	<0.001
MW-CL	8.58	NA	NA	<0.002	<0.015	<0.001
MW-DU	4.87	NA	NA	**0.00720**	<0.015	**0.00110**
MW-DL	7.03	NA	NA	<0.002	<0.015	<0.001
WSW-5932502	5.1	NA	**17.0**	NA	NA	NA
WSW-5932601	4.3	NA	NA	NA	NA	NA
WSW-6017403	5.9	NA	**14.0**	NA	NA	NA

Notes:

mg/L = milligrams per liter
NA = Not Available
ORP = oxidation-reduction potential
S.U. = standard units
< = Indicates concentration is less than the RL.

1. The values were obtained from either the May 29, 2017, report for groundwater monitoring at the Twin Oaks Landfill or well registration information provided via the Texas Water Development Board's online database.
2. **Bold/Underlined** values indicate concentrations above laboratory's RL.

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3.2 Radium$_{226+228}$

As was discussed in the 2019 ASD [Wood, 2019], Radium$_{226+228}$ GWPS exceedances were also attributed to naturally acidic groundwater conditions. The GCSES is built on the Jackson-Yegua Group which includes Tertiary-aged volcanic tuffs that were deposited by volcanism in Texas and New Mexico. Natural sources of uranium and radionuclides are related to volcanic ash material. Volcanic ash was sourced from eruptions west of the Site and deposited in the coastal area of the Tertiary age when sedimentary deposits were being established in the region as described in **Section 1.1**. Volcanic ash deposits have been observed in the Wellborn and Manning Formations with radiometric dating of ash occurring from samples collected at the Gibbons Creek Lignite Mine [USGS, 1995]. The Whitsett and Catahoula Formations were deposited above the Wellborn and Manning Formations. The Whitsett and Catahoula Formations contained more volcanic tuff beds and thicker ash deposits [USGS, 1979; USGS, 1995; USGS, 2015]. The Whitsett and Catahoula Formations have eroded away at the Site with the closest outcrops of these formations located approximately six miles to the south and southwest from the Site.

Based on a USGS study, it was estimated approximately 220 million pounds of recoverable uranium oxide is present in the Tertiary-aged sediments of the Texas Coastal Plain [USGS, 2015]. The area where GCSES is located has naturally concentrated uranium deposits that were leached from volcanic ash. The region would have a higher potential for elevated radium concentrations in sediments and groundwater since radium is a radionuclide formed from decay of uranium. Radionuclide maximum contaminant level (MCL) exceedances are widespread in aquifers in Texas due to uranium deposits in the state [Reedy et al., 2010]. As a part of a study evaluating naturally present constituents of concern in Texas aquifers, the Gulf Coast major aquifer and Yegua-Jackson minor aquifer, which are in the region of the GCSES, had max concentrations of 26.6 picocuries per liter (pCi/L) and 21 pCi/L for radium$_{226+228}$ measured in samples with approximately 11% and 32%, respectively, of all samples being above the MCL (5 pCi/L) [Reedy et al., 2010].

The radium$_{226+228}$ concentration range for each monitoring well at the Site is summarized in **Table 7**. Geochemical processes influence if Radium$_{226+228}$ is dissolved in groundwater. Radium is an alkaline earth metal that can be adsorbed onto clay minerals and Fe and Manganese (Mn) oxides [Lindsey et al., 2021]. Mobilization of radium in groundwater can be influenced by solution pH. This mobilization process is similar to the mobilization of metals noted in **Section 3.1**. Radium$_{226+228}$ concentrations were measured in groundwater samples collected from each Site monitoring well. The highest radium$_{226+228}$ concentrations were measured in groundwater samples that generally have the lowest pH.

Table 7: Groundwater Radium$_{226+228}$ Concentrations Summary

Monitoring Well ID	Average pH[1] (S.U.)	Radium$_{226+228}$ Concentration Range[2] (pCi/L)
MNW-15	3.5	0.167 – 2.1
AP MW-5	3.5	1.12 – 5.96
SFL MW-3	3.9	3.04 – 16.6
SFL MW-6	4.0	3.9 – 28.8
SSP MW-3	4.2	23.2 – 49.8
SFL MW-5	4.6	8.7 – 25.6
SSP MW-2	4.7	1.62 – 14.6
AP MW-3	5.1	1.11 – 7.54
AP MW-4	5.6	0.678 – 3.67
AP MW-1D	5.8	0.6 – 3.83
SSP / AP MW-1	5.8	0.6 – 3.38
SFL MW-4	6.2	0.4 – 6.85
SSP MW-4	6.2	1.46 – 6.82
SFL MW-2	6.2	6.53 – 20.6
SFL MW-7	6.4	1.4 – 4.4
AP MW-6	6.8	0.725 – 3.8
MNW-18	6.8	0.47 – 7.6
MNW-17	6.9	1.7 – 5.7
MNW-16	7.0	1.3 – 8.0
MNW-11	7.2	1.6 – 3.2

Notes:

pCi/L = picocurie per liter

S.U. = standard units

1. Average pH is calculated from monitoring data collected during the period from June 2016 through December 2022.
2. Radium$_{226+228}$ concentration range is based on sample analytical results during the period during the period from June 2016 through December 2022.

3.3 Lithium

As was discussed in the 2019 ASD [Wood, 2019], lithium GWPS exceedances calculated for monitoring wells SFL MW-5 and SFL MW-6 are not supported by natural variations in pH and redox potential conditions that were discussed for other metals noted in **Section 3.1**. Lithium was detected in samples collected from each monitoring well on the Site F Landfill, SSP, and APs CCR units. The lithium concentration range for each monitoring well at the Site is summarized on **Table 8**. Lithium exceedances of the GWPS at a SSL occurred at the Site F Landfill at monitoring wells SFL MW-5 and SFL MW-6. The GWPS for the Site F Landfill is a BTV utilizing groundwater analytical data from monitoring well MNW-18. Lithium groundwater concentrations at monitoring well MNW-18 are greater than the EPA's risk-based GWPS established as 0.040 mg/L. The current GWPS for lithium at the Site F Landfill is 0.521 mg/L. The current GWPS for lithium at the SSP and APs CCR units is 1.64 mg/L. The higher GWPS for lithium at the SSP and APs CCR units is due to the elevated concentrations in up-gradient/background monitoring well SSP / AP MW-1.

Though they are not part of the compliance monitoring network, monitoring wells MNW-11, MNW-16, and MNW-17, which are up-gradient to cross-gradient to the Site F Landfill, had lithium concentrations similar to the range as well as the values triggering GWPS exceedances at monitoring wells SFL MW-5 and SFL MW-6. The average lithium concentration for

groundwater samples collected from monitoring wells MNW-11, MNW-16, MNW-17, MNW-18, and SSP / AP MW-1 during the June 2016 through December 2022 monitoring period is approximately 0.83 mg/L. The lower confidence limits (LCLs) for lithium at monitoring wells SFL MW-5 and SFL MW-6 were 0.6154 mg/L and 0.597 mg/L, respectively.

There is natural variability in lithium concentrations at the Site based on variable concentrations measured in samples collected from monitoring wells up-gradient and cross-gradient to the Site's CCR units. Due to this variability, a revised BTV for lithium, which incorporates data from all available background wells (Site F Landfill and SSP / APs monitoring networks), would be a more appropriate mechanism for assessing groundwater contamination associated with the CCR units. It is inferred that a revised BTV based on composite background data would be above the current LCLs for SFL MW-5 and SFL MW-6. This would result in no lithium GWPS exceedances at a SSL, and corrective measures would not be required for lithium at monitoring wells SFL MW-5 and SFL MW-6.

Table 8: Groundwater Lithium Concentrations Summary

Monitoring Well ID	Lithium Concentration Range[1] (mg/L)
AP MW-1D	0.01 – 0.08
AP MW-3	0.04 – 0.07
AP MW-4	0.28 – 1.09
AP MW-5	0.36 – 0.66
AP MW-6	0.45 – 0.65
SSP / AP MW-1	1.05 – 2.15
SSP MW-2	0.56 – 1.07
SSP MW-3	0.51 – 0.75
SSP MW-4	0.71 – 1.02
SFL MW-2	0.33 – 0.60
SFL MW-3	0.25 – 0.47
SFL MW-4	0.02 – 0.58
SFL MW-5	0.58 – 0.99
SFL MW-6	0.55 – 1.34
SFL MW-7	0.37 – 0.50
MNW-11	0.08 – 0.59
MNW-15	0.05 – 0.113
MNW-16	1.06 – 1.40
MNW-17	0.68 – 0.90
MNW-18	<0.00339 – 0.48

Notes:

mg/L = milligrams per liter

1. Lithium concentration range is based on sample analytical results during the period during the period from June 2016 through December 2022.

4.0 Site F Landfill Monitoring Well Network Evaluation

Based on a review of boring logs at the Site and interpretation of the data as depicted on the cross-sections included as **Figures 3 through 5**, there does appear that multiple groundwater units are being monitored at the Site. Compound this with differences in pH and ORP of the

shallow groundwater versus deeper monitored groundwater; background and compliance monitoring wells may not be monitoring the same groundwater unit.

For the Site F Landfill, monitoring well MNW-18 is currently considered the up-gradient / background monitoring well used for the CCR unit. The screen interval for monitoring well MNW-18 is across a confined portion of the aquifer. Screen interval elevations and sediments for the Site F Landfill monitoring well network are summarized in **Table 9**. Compliance and water level only monitoring wells that are in the same aquifer unit as MNW-18 are MNW-11, MNW-16, MNW-17, SFL MW-4, and SFL MW-7. Based on the December 2022 groundwater elevation measurements, the water column above the top of screen (TOS) for these wells was approximately 15 feet or greater (**Table 9**). These monitoring wells had pH measurements that averaged greater than or equal to 6.2 and ORP, if data was available, averaged less than or equal to 22.1 millivolts (mV). The monitored groundwater at these wells was less oxidized and pH was less likely to be impacted by weathered pyrite.

Monitoring wells SFL MW-2, SFL MW-3, SFL MW-5, SFL MW-6, and MNW-15 monitor the shallower groundwater at the Site F Landfill. Based on the December 2022 groundwater elevation measurements, the water column relative to the TOS ranged from approximately -0.7 to 16.2 (**Table 9**). These monitoring wells had pH measurements that averaged less than or equal to 6.2 and ORP averaged greater than or equal to 209.4 mV. The oxidized groundwater at these monitoring wells has lower pH due to the weathering of pyrite at the Site.

Table 9: Site F Landfill Monitored Unit Summary

Monitoring Well ID	Screen Interval (feet AMSL)	Screen Interval Sediments[1]	December 2022 Groundwater Elevation (feet AMSL)	Groundwater and TOS Elevation Δ (feet)
SFL MW-2	244.7 – 249.7	Unconfined – Silty Sand	257.27	7.6
SFL MW-3	247.2 – 252.2	Unconfined – Silty Sand	257.81	5.6
SFL MW-4	227.0 – 232.0	Confined – Silty Sand	254.18	22.2
SFL MW-5	252.3 – 257.3	Unconfined – Silty Sand and Sandstone	260.11	2.8
SFL MW-6	264.0 – 269.0	Unconfined – Silty Sand	268.29	-0.7
SFL MW-7	209.8 – 214.8	Confined – Silty Sand with Lignite Seams	250.22	35.4
MNW-11[2]	220.7 – 225.7	Confined – Silty Clay, trace Lignite Seams	247.79	22.1
MNW-15	230.3 – 235.3	Unconfined – Clayey Sand with Lignite Seams	251.47	16.2
MNW-16[2]	222.8 – 227.8	Confined – Clayey Sand with Lignite Seams	248.31	20.5
MNW-17[2]	243.5 – 248.5	Semi-Confined – Clay with Lignite Seams	264.17	15.7
MNW-18	219.7 – 224.7	Confined – Clay	261.19	36.5

Notes:

AMSL = above mean sea level

TOS = top of screen

1. Interpretation of aquifer status (confined, semi-confined, and unconfined) and screen interval sediments is based on information included on monitoring well boring logs.
2. Wells are water level only and are not sampled as part of the CCR monitoring network.

Based on the differences in chemistry measured at the Site F Landfill monitoring wells that monitor deeper groundwater versus shallower groundwater, the monitoring network will need refinement to accurately monitor down-gradient groundwater relative to the CCR unit. Using December 2022 groundwater elevation data, groundwater flow maps which are included as **Figure 6** and **Figure 7** were drafted for the deeper monitoring well network (MNW-11, MNW-16, MNW-17, MNW-18, SFL MW-4, and SFL MW-7) and shallower monitoring well network (SFL MW-2, SFL MW-3, SFL MW-5, SFL MW-6, and MNW-15), respectively. For the deeper monitoring network, groundwater generally flows south to southwest, and MNW-18 is still an up-gradient monitoring point relative to the CCR unit. For the shallow monitoring network, groundwater generally flows south to southeast and monitoring well SFL MW-6 is generally up-gradient to the CCR unit.

Statistical analysis was conducted on the revised monitoring well networks for the deeper and shallower networks. Background data from monitoring well MNW-18 was used for the deeper monitoring network while the background data from monitoring well SFL MW-6 was used for the shallow monitoring network. **Table 10** summarizes the BTV and GWPS for the deeper monitoring network and shallow monitoring network.

Table 10: Modified Monitoring Well Network Statistical Summary

	Deep Monitoring Network (MNW-18 Background)		Shallow Monitoring Network (SFL MW-6 Background)	
Constituent	**BTV**	**GWPS[1]**	**BTV**	**GWPS[1]**
Boron	0.593	-	0.631	-
Calcium	542	-	1,510	-
Chloride	649	-	6,800	-
Fluoride	0.5	-	1.17	-
pH	**6.00-7.60***	-	**3.51-4.48***	-
Sulfate	2,630	-	2,880	-
TDS	4,690	-	14,700	-
Antimony	0.002	0.006	0.002	0.006
Arsenic	0.00255	0.01	0.0329	0.0329[2]
Barium	0.06	2.00	0.0848	2.00
Beryllium	0.001	0.004	0.0933	0.0933[2]
Cadmium	0.001	0.005	0.0152	0.0152[2]
Chromium	0.00617	0.1	0.011	0.1
Cobalt	0.00226	0.006	0.242	0.242[2]
Fluoride	0.5	4	1.17	4
Lead	0.01	0.015	0.06	0.06[2]
Lithium	0.552	0.552[2]	1.34	1.34[2]
Mercury	0.0002	0.002	0.00013	0.002
Molybdenum	0.005	0.1	0.00061	0.1
$Radium_{226+228}$	10.1	10.1[2]	33.4	33.4[2]
Selenium	0.005	0.05	0.0525	0.0525[2]
Thallium	0.001	0.002	0.00538	0.00538[2]

Notes:

** = Indicates the lower bound of the range is the lower prediction limit.

*** = Indicates the upper bound of the range is the upper prediction limit

1. GWPS is established as the U.S. EPA MCL or the GWPS specified in §257.95(h)(2); unless otherwise specified.
2. GWPS is established as the BTV when the background level is higher than the U.S. EPA MCL or the GWPS specified in §257.95(h)(2)

Based on the modified monitoring well network and statistical analysis for the Site F Landfill, the constituents that would be detected at a SSL above the GWPS would be Cd and Co at MNW-15. This reduction in constituents of concern being detected at a SSL above the GWPS is

due to the incorporation of background data at monitoring well SFL MW-6 which is evaluating the shallow groundwater at the site versus using monitoring well MNW-18 which is monitoring different geochemistry in deeper groundwater.

5.0 ASD Conclusions

Based on the geological development of the region and due to geochemical differences observed in the confined, semi-confined, and unconfined groundwater units where GCSES is located, Appendix IV constituents that are exceeding a GWPS at a SSL are a result of natural variability and geochemical processes in the region and is not the result of a release from the Site's CCR units. Groundwater pH is acidic in the shallow groundwater for unconfined and semi-confined units due to the oxidation of pyrite naturally present in sediments at the Site. Deeper groundwater in more confined units had generally neutral pH since redox conditions were relatively more reducing conditions and pyrite oxidation was not occurring. This shallow acidic groundwater and sediments are observed at other sites in the same general region as the GCSES which could not be impacted by CCR.

Based on available pH data and historical knowledge of CCR material generated at the site, CCR was considered to be alkaline and water in contact with CCR was generally basic (higher pH). It does not appear the CCR material was contributing to acidic conditions in the shallow groundwater. The CCR material, surface water in the SSP and APs, and leachate at Site F Landfill would have been more of a buffer on the naturally acidic groundwater.

Appendix IV constituents exceeding GWPS at a SSL were measured in groundwater samples from shallow groundwater units that were unconfined to semi-confined. The solubility of metals in aqueous environments is heavily influenced by pH of the solution and environment. More acidic groundwater conditions promote higher concentrations of cations (i.e., metals) in solution. This was the case for Be, Cd, Co, Pb, and Tl where either the constituent is in a dissolved state based on the redox potential and pH of the groundwater or the metal had desorbed due to the breakdown of clay and oxide/hydroxide adsorption sites because of the acidic conditions.

Radium$_{226+228}$ GWPS exceedances in the region are also influenced by acidic groundwater. Volcanic ash deposited in the region during the Tertiary age is a source of uranium. Leached uranium from the volcanic ash started to decay. Radium is a decay product of uranium and can be adsorbed to clay minerals and Fe and Mn oxide sites. Acidic groundwater dissolves clay and oxides which releases radium into groundwater. Lower groundwater pH generally exhibited higher radium$_{226+228}$ concentrations.

Lithium is naturally present in groundwater in the region over a wide range of pH and redox potentials. The GWPS exceedances reported for the Site F Landfill was the result of utilizing background data from one monitoring well (MNW-18) even though other GCSES wells that are up-gradient to CCR units had higher levels of lithium. To account for natural variability of lithium in the region, a revised BTV should be calculated from a composite of up-gradient / background wells that are not influenced by a release from a CCR unit. It is assumed a revised BTV would result in a higher GWPS for lithium and exceedances of a SSL would not occur at the Site F Landfill CCR unit.

Due to the observed differences of groundwater chemistry in shallow and deep groundwater units at the Site F Landfill, the groundwater monitoring network was evaluated to determine if background monitoring well MNW-18 was appropriate for monitoring both the shallow and deep groundwater. It was determined that MNW-18 was not an appropriate background well for evaluating the shallow groundwater at the landfill. Two monitoring networks were established where the shallow groundwater background monitoring well was SFL MW-6. Conducting statistical analysis utilizing SFL MW-6 as a background monitoring well for the shallow groundwater at the Site F Landfill resulted in a reduction of Appendix IV constituents exceeding a GWPS at a SSL.

Based on this ASD, Appendix IV constituents that have been detected at a SSL above a GWPS are the result of natural variability in groundwater quality at the site. These exceedances do not appear to be the result of a release from the Site's CCR units.

6.0 Response to EPA Comments

In their letter dated March 23, 2023, EPA provided a summary of what they interpreted as deficiencies in the 2019 ASD [Wood, 2019]. This ASD was drafted to address these noted deficiencies. A direct response (*italicized comments*) to each bullet point (**bold comments**) noted in the March 2023 letter is provided under this section.

- **EPA Comment #1 – The pH of pond surface water or collected leachate are not a good basis to determine whether an SSLs has resulted from a release from the CCR unit. Surface water is open to the atmosphere and tends to be chemically different than groundwater.**
    - *HDR does not concur with this comment. The pH of the surface water in the former impoundments and leachate is indicative of the influence of compounds in a solid or waste. The pH indicates constituents in the CCR material is causing the fluid to become basic. This would indicate the CCR material is more alkaline. Since the concern is a release of contaminants from a CCR unit, having a general idea of what the source material exhibits is important to the assessment of contamination at the property and differentiating between naturally occurring and industrially influenced. The alkaline fluids measured in the former impoundments and leachate are not contributing to the acidity that is observed in shallow groundwater at the Site. In theory, if the impoundments and landfill were leaking, the alkaline surface water and leachate would act more as a buffer on the naturally acidic groundwater. Thus, a release from the CCR units would more likely increase groundwater pH at downgradient monitoring wells instead of lowering it.*
- **EPA Comment #2 – The assertion that pH is lowered by another subsurface source independent of the CCR unit is not supported by data. Groundwater flow directions are generally consistent over time as noted from the annual GWMCA reports. Lower pH measurements tend to occur in monitoring wells downgradient or side-gradient wells closer to the Ash Ponds, Scrubber Sludge Pond, and the**

Site F Landfill. Monitoring wells farther away from these units, including upgradient monitoring wells, have higher pH measurements.

- *As was evaluated and noted in this ASD, there is a difference in geochemistry between shallow groundwater and deeper groundwater at the Site. Shallow groundwater tended to have lower pH due to the oxidation of pyrite in the region. Shallow groundwater was generally monitored on the downgradient side of the CCR units, but there wasn't an upgradient monitoring well primarily focused on the shallow groundwater unit. As noted in **Section 4.0**, the Site F Landfill monitoring network was evaluated, and it was determined monitoring well MNW-18 was more reflective of deeper groundwater than what was being monitored at shallow downgradient monitoring wells. Based on the general groundwater flow in the shallow groundwater unit, SLF MW-6 was upgradient to the landfill. When running a statistical scenario utilizing SLF MW-6 as a background monitoring point, most of the GWPS exceedances did not occur in the downgradient monitoring wells. The monitoring well network needs to be revised to account for the differences between shallow and deeper groundwater.*

- **EPA Comment #3 – Gibbons Creek mine, which previously provided fuel for the power plant from 1982 to 1996, produced lignite coal that contains high sulfur content. This means its coal ash leachate can be acidic, with pH as low as 2.0. This acidity was found at two steam plants even through one generated an alkaline ash. A study of Gibbons Creek mine seeps (October 2007) shows low pH of 2.6. Although GCSES began using different coal in 1996, the units still contain ash produced from lignite coals for more than a decade. This historic use of lignite means that both the low pH and the detected SSLs are more likely from the monitored unit(s) than an unidentified source below the units in a different geologic formation.**

  - *HDR does not concur with this comment. The pH measurements from the former surface impoundments and leachate indicate fluids are basic. The CCR ash from the lignite was considered to be alkaline and was proposed for use as a remediation option for acidic mine tailings. The detection of acidic mine seeps was due to the oxidation of pyrite in the region and is further evidence for a natural source for acidity. However, natural acidity associated with the lignite coal beds does not directly mean CCR will be acidic. The process of combusting coal as well as post-treatment of by-products of that combustion can significantly alter the chemistry of the CCR material. Thus, there can't be a direct correlation between acidic mine seeps and the CCR material deposited in the former impoundments and landfill.*

- **EPA Comment #4 – No evidence is provided to demonstrate the presence of lignite, weathering of the lignite or natural variation in geochemistry in the areas beneath, near and adjacent to the CCR units.**
    - *Boring logs for site monitoring wells are included in **Appendix B**. Cross-sections were drafted from Site boring logs. Lignite, lignitic clay, and pyrite have been observed in borings at the Site. The presence of these materials provides for the possibility of natural variation in geochemistry at the Site.*
- **EPA Comment #5 – The lack of data about the presence of iron and aluminum in the soil at the Ash Ponds and Scrubber Sludge Pond represent a fatal flaw in the ASDs for cadmium and lead.**
    - *Available iron and aluminum groundwater data was obtained and summarized in **Section 3.1**. Though soil data with iron and aluminum concentrations was not available, the groundwater data does indicate that iron and aluminum is present. The details summarized in **Section 3.1** provides additional information indicating the natural acidity at the Site is contributing to these GWPS exceedances.*
- **EPA Comment #6 – There is no site-specific evidence of radium in the subsurface at any of the CCR units. A specific source, which would impact only the wells with SSLs and no others, has not been identified. If the regional geology were the radium source, one would expect radium concentrations to be fairly consistent across all monitoring wells; all wells are located within the same geologic units and within a 1.5-mile radius. However, the monitoring data show higher results at specific, downgradient wells, which is evidence of a release from the unit.**
    - ***Section 3.2** of this ASD lays out the geological development of the region and source material for radium to be naturally present. Radium$_{226+228}$ has been detected above laboratory reporting limits in each site monitoring well which indicates a naturally present constituent. Similar to how metals react to acidity at the Site, higher concentrations of radium$_{226+228}$ is present in wells with lower pH. Naturally caused acidity is causing naturally deposited sediments to release radium$_{226+228}$.*
- **EPA Comment #7 – While all SSLs are attributed to naturally occurring sources in the ASDs, monitored values of Appendix IV constituents are generally higher downgradient of the CCR units than they are upgradient of the units (e.g., at SSP/AP MW-1D, SSP/AP MW-1, and SFL MNW-18.) It is unlikely that any naturally occurring source would be located within the boundaries of the CCR units.**
    - *The 2019 ASD did not take into account the differences in shallow groundwater geochemistry and deeper groundwater geochemistry. When accounting for these differences, it becomes apparent that shallow groundwater that is oxidized and has lower pH has higher concentrations of Appendix IV constituents. When evaluating the monitoring network at the Site F Landfill as noted in **Section 4.0**,*

monitoring well SLF MW-6 would be an upgradient monitoring well relative to the CCR unit. Monitoring well SLF MW-6 had similar concentrations of Appendix IV constituents when compared to downgradient wells that had historical GWPS exceedances. The monitoring network needs to be adjusted to make sure the correct groundwater units are being monitored with appropriate upgradient and downgradient monitoring wells.

- **EPA Comment #8 – The lithium ASD is deficient. First, the presence of lithium at many downgradient wells is indicative of a release. Second, the regulations provide that an SSL of only one constituent is evidence of a release and corrective action is required. The lack of other SSLs is not an acceptable line of evidence to support an ASD. Third, if background levels are in fact higher than downgradient levels of lithium, the regulations provide the opportunity to establish a groundwater protection stand which considers background. This would need to be done using acceptable statistical methods in accordance with 40 CFR §257.93.**
    - *This ASD details that lithium is naturally present at the site since groundwater concentrations at upgradient, downgradient, shallow, and deep monitoring wells each have detections of lithium above laboratory reporting limits. Since there appears to be natural variability of lithium in background and other upgradient wells to the CCR units, a revised BTV is recommended to account for this natural variability. Adjusting the BTV to account for this variability will likely remove lithium exceeding a GWPS at a SSL at the Site F Landfill.*

7.0 Recommendations

Based on information obtained during the development of this ASD and interpretation of data, the following recommendations are noted for the GCSES CCR units. If TCEQ concurs with these recommendations, they should be implemented into the groundwater monitoring program for the Site.

- Adjust the monitoring well network for the Site F Landfill to monitor the shallow groundwater unit and deeper groundwater unit separately. The shallow groundwater unit should consist of the following monitoring wells: SFL MW-2, SFL MW-3, SFL MW-5, SFL MW-6, and MNW-15. Monitoring well SFL MW-6 should be established as the background monitoring well for the shallow monitoring network. The deeper groundwater unit should consist of the following monitoring wells: MNW-18, SFL MW-4, and SFL MW-7. Monitoring well MNW-18 would remain as the background monitoring well for the deeper monitoring network. Monitoring wells MNW-11, MNW-16, and MNW-17 would continue to be water level gauging only wells.
- Establish a site-specific lithium BTV utilizing background data from monitoring wells MNW-11, MNW-16, MNW-17, MNW-18, and SSP / AP MW-1.

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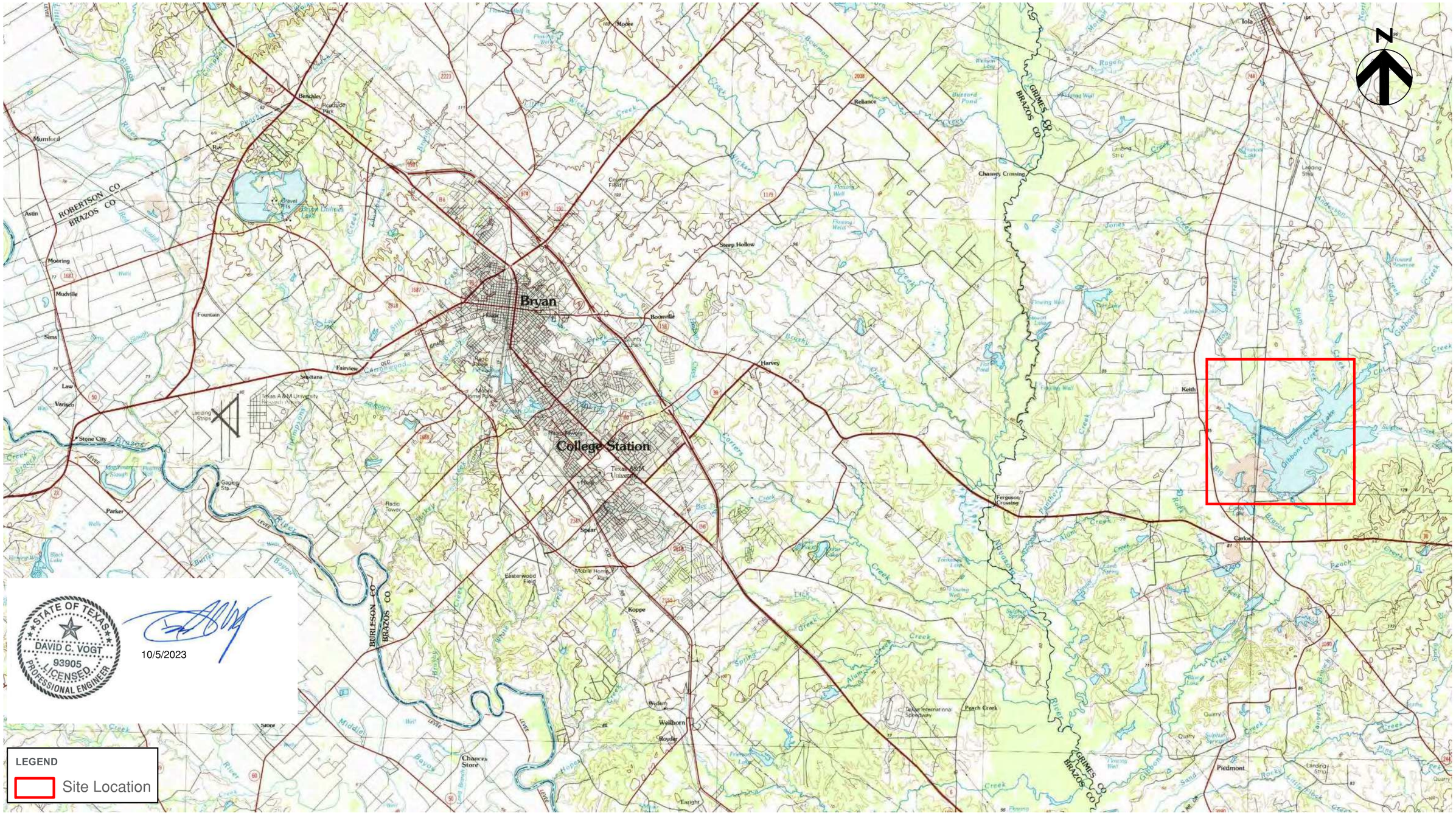
Figures



STATE OF TEXAS
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10/5/2023

LEGEND

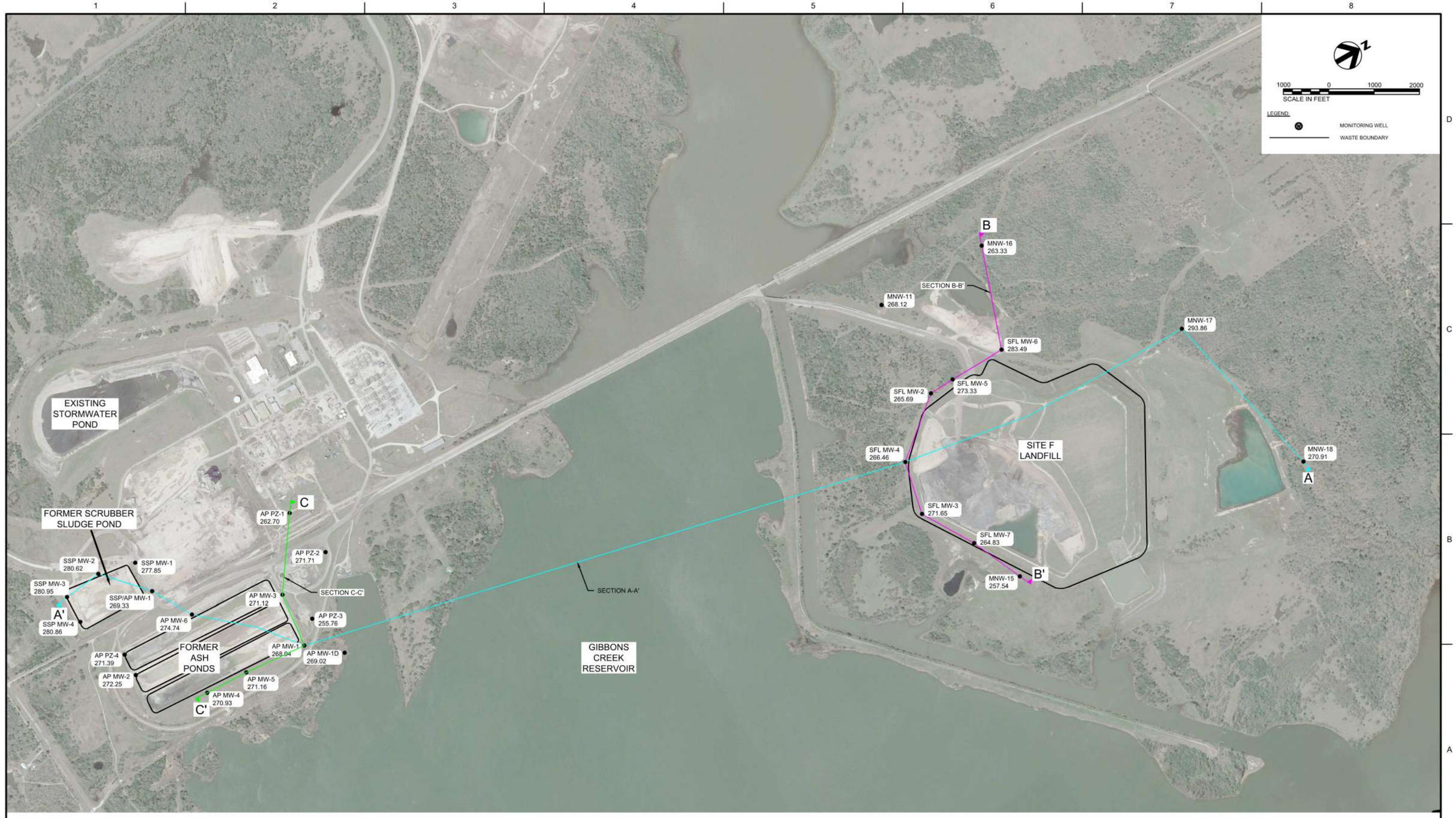
Site Location

GIBBONS CREEK STEAM ELECTRIC STATION
GC ENVIRONMENTAL REDEVELOPMENT GROUP
SITE LOCATION MAP

ALTERNATIVE SOURCE DEMONSTRATION

DATE
JANUARY 2023

FIGURE
FIGURE 1



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PROJECT NUMBER 10290148

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10/5/2023

Gibbons Creek Steam Electric Plant
GCSES Environmental Redevelopment Group

HYDROGEOLOGICAL SECTION PLAN
Anderson, Texas

SITE PLAN

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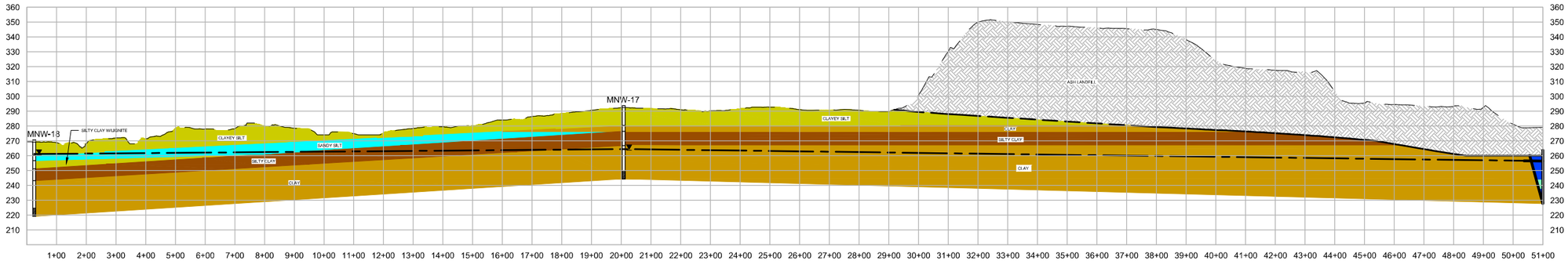
SHEET
Figure 2



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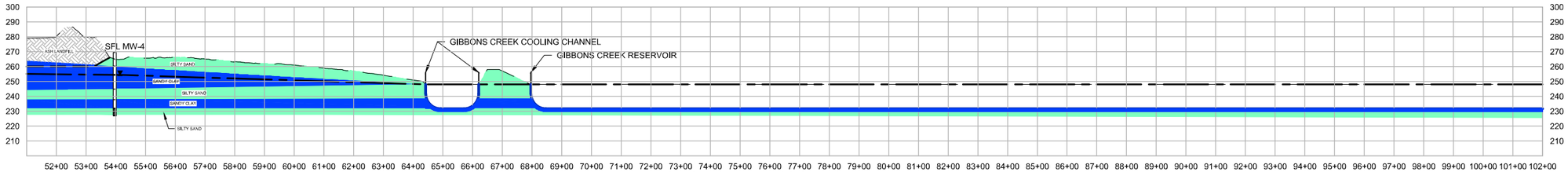

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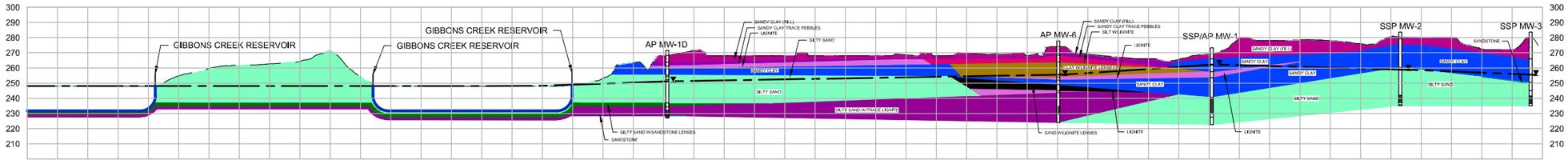

SECTION A-A' (CONT.)

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NOTES:

1. SOIL AND GEOLOGIC DESCRIPTIONS ARE BASED ON VISUAL OBSERVATIONS MADE BY FIELD PERSONNEL. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE TRANSITION BETWEEN DIFFERING SOIL TYPES AND/OR ROCK TYPES. IN-SITU TRANSITIONS MAY BE GRADUAL.
2. GROUNDWATER ELEVATIONS CALCULATED FROM MEASUREMENTS CONDUCTED ON DECEMBER 12 AND 13, 2022.

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10/5/2023

Gibbons Creek Steam Electric Plant
GCSES Environmental Redevelopment Group

HYDROGEOLOGICAL SECTION PLAN
Anderson, Texas

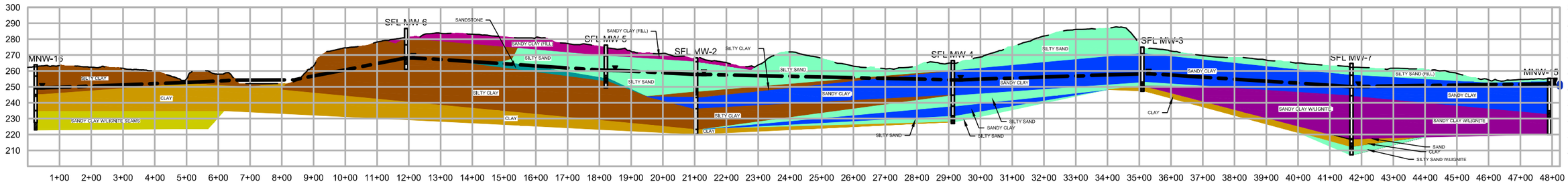
HYDROGEOLOGICAL CROSS SECTION A-A'

0 1" 2"

FILENAME 00G-03.dwg

SCALE 1"=200'

SHEET
Figure 3



SECTION B-B'

NOTES:

1. SOIL AND GEOLOGIC DESCRIPTIONS ARE BASED ON VISUAL OBSERVATIONS MADE BY FIELD PERSONNEL. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE TRANSITION BETWEEN DIFFERING SOIL TYPES AND/OR ROCK TYPES. IN-SITU TRANSITIONS MAY BE GRADUAL.
2. GROUNDWATER ELEVATIONS CALCULATED FROM MEASUREMENTS CONDUCTED ON DECEMBER 12 AND 13, 2022.

HDR
Firm Registration No. F-754

17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER D. VOGT, P.E.

PROJECT NUMBER 10290148

STATE OF TEXAS · DAVID C. VOGT · 93905 · LICENSED · PROFESSIONAL ENGINEER

10/5/2023

Gibbons Creek Steam Electric Plant
GCSES Environmental Redevelopment Group

HYDROGEOLOGICAL SECTION PLAN
Anderson, Texas

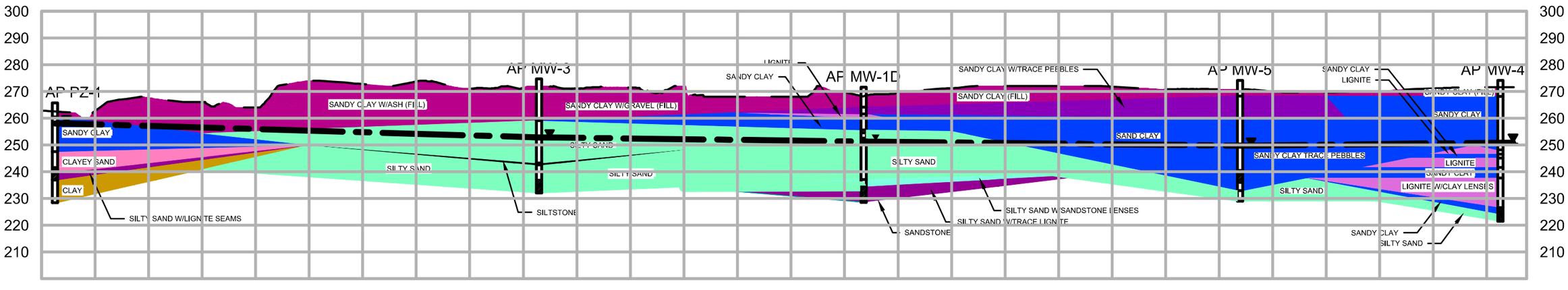
HYDROGEOLOGICAL CROSS SECTION B-B'

0 1" 2"

FILENAME 00G-04.dwg

SCALE 1"=200'

SHEET **Figure 4**



SECTION C-C'

NOTES:

1. SOIL AND GEOLOGIC DESCRIPTIONS ARE BASED ON VISUAL OBSERVATIONS MADE BY FIELD PERSONNEL. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE TRANSITION BETWEEN DIFFERING SOIL TYPES AND/OR ROCK TYPES. IN-SITU TRANSITIONS MAY BE GRADUAL.
2. GROUNDWATER ELEVATIONS CALCULATED FROM MEASUREMENTS CONDUCTED ON DECEMBER 12 AND 13, 2022.

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Gibbons Creek Steam Electric Plant
GCSES Environmental Redevelopment Group

HYDROGEOLOGICAL SECTION PLAN
Anderson, Texas

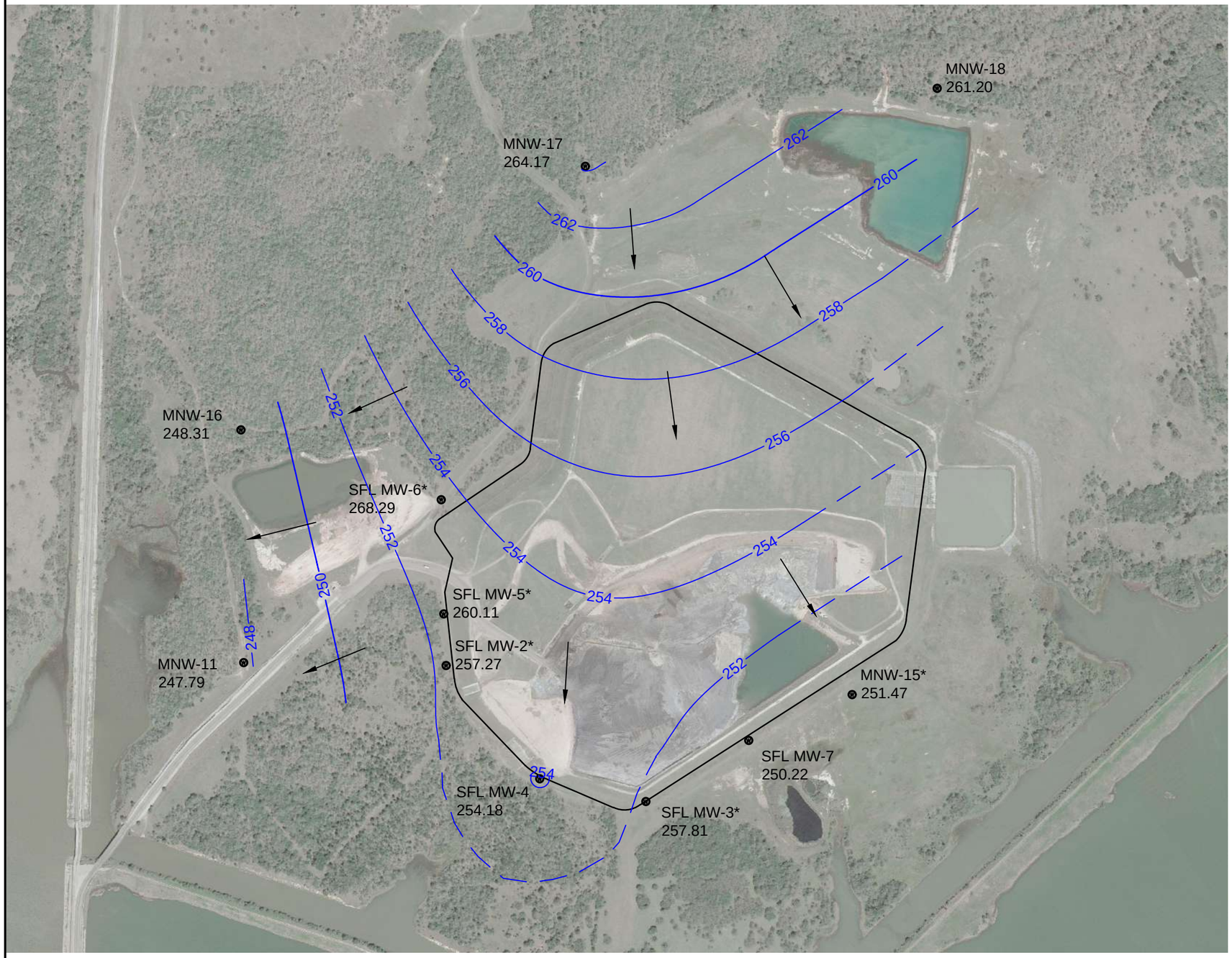
HYDROGEOLOGICAL CROSS SECTION C-C'

0 1" 2"

FILENAME 00G-05.dwg

SCALE 1"=200'

SHEET
Figure 5



N

600 0 600 1200

SCALE IN FEET

LEGEND:

- MONITORING WELL
- WASTE BOUNDARY
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- FLOW DIRECTION

NOTES:

1. " * " DENOTES STATIC WATER LEVEL WAS NOT UTILIZED IN GENERATION OF GROUNDWATER CONTOUR MAP DUE TO WELLS SCREENED ABOVE CONFINING LAYER.
2. WELLS USED FOR GENERATION OF CONTOURS ARE SCREENED BELOW THE CONFINING LAYER. WELLS UTILIZED ARE:
   - SFL MW-4
   - SFL MW-7
   - MNW-11
   - MNW-16
   - MNW-17
   - MWN-18

STATE OF TEXAS
DAVID C. VOGT
93905
LICENSED
PROFESSIONAL ENGINEER

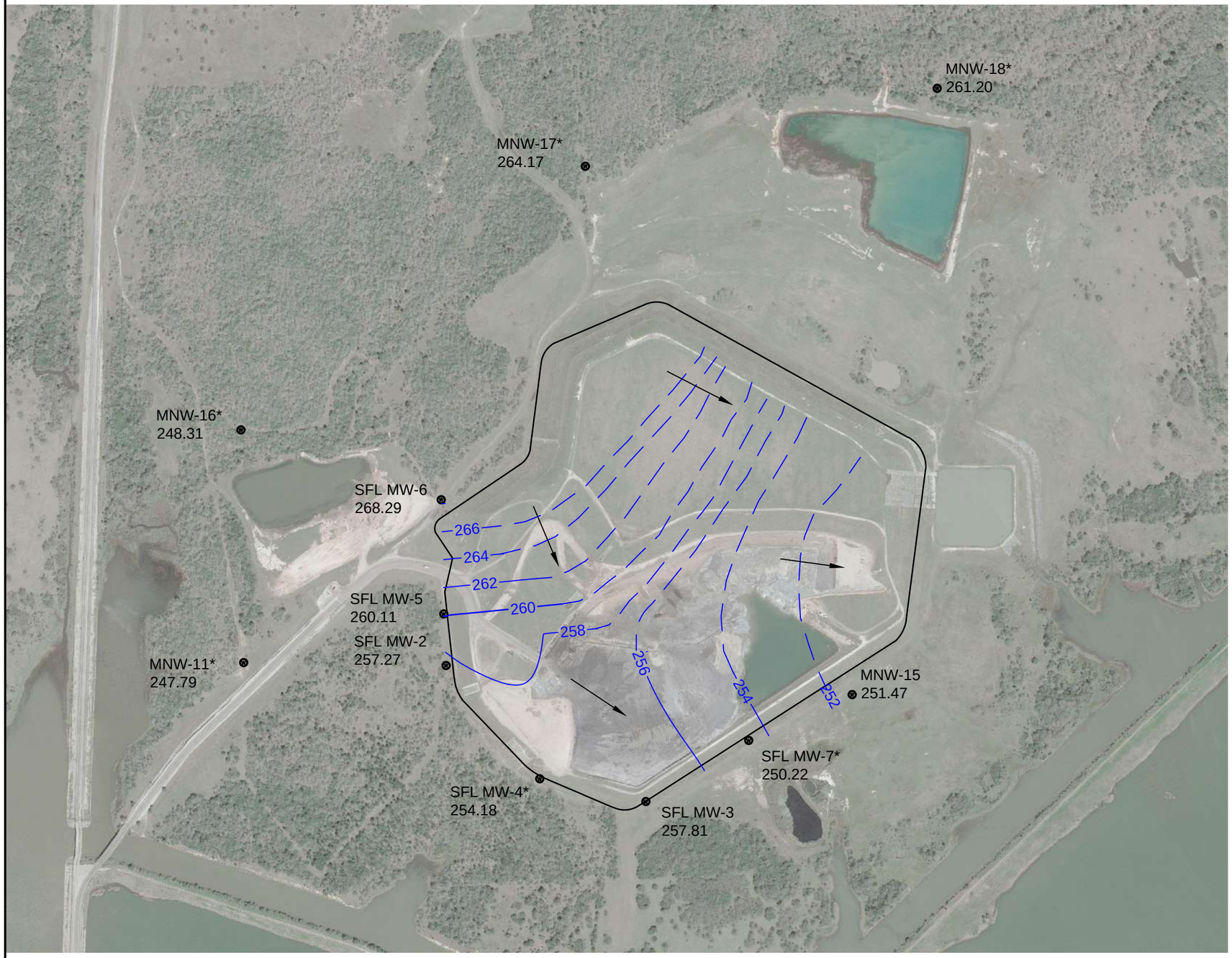
10/5/2023

GIBBONS CREEK STEAM ELECTRIC STATION
GCSES ENVIRONMENTAL REDEVELOPMENT GROUP
SITE F LANDFILL - DECEMBER 2022 CONTOUR MAP - DEEP

ALTERNATIVE SOURCE DEMONSTRATION

DATE
SEPTEMBER 2023

FIGURE
FIGURE 6



N

600 0 600 1200

SCALE IN FEET

LEGEND:

- MONITORING WELL
- WASTE BOUNDARY
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- FLOW DIRECTION

NOTES:

1. " * " DENOTES STATIC WATER LEVEL WAS NOT UTILIZED IN GENERATION OF GROUNDWATER CONTOUR MAP DUE TO WELLS SCREENED BELOW CONFINING LAYER.
2. WELLS USED FOR GENERATION OF CONTOURS ARE SCREENED ABOVE THE CONFINING LAYER. WELLS UTILIZED ARE:
   - SFL MW-2
   - SFL MW-3
   - SFL MW-5
   - SFL MW-6
   - MNW-15

STATE OF TEXAS
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PROFESSIONAL ENGINEER

10/5/2023

GIBBONS CREEK STEAM ELECTRIC STATION
GCSES ENVIRONMENTAL REDEVELOPMENT GROUP
SITE F LANDFILL - DECEMBER 2022 CONTOUR MAP - SHALLOW

ALTERNATIVE SOURCE DEMONSTRATION

DATE
SEPTEMBER 2023

FIGURE
FIGURE 7

Appendix A

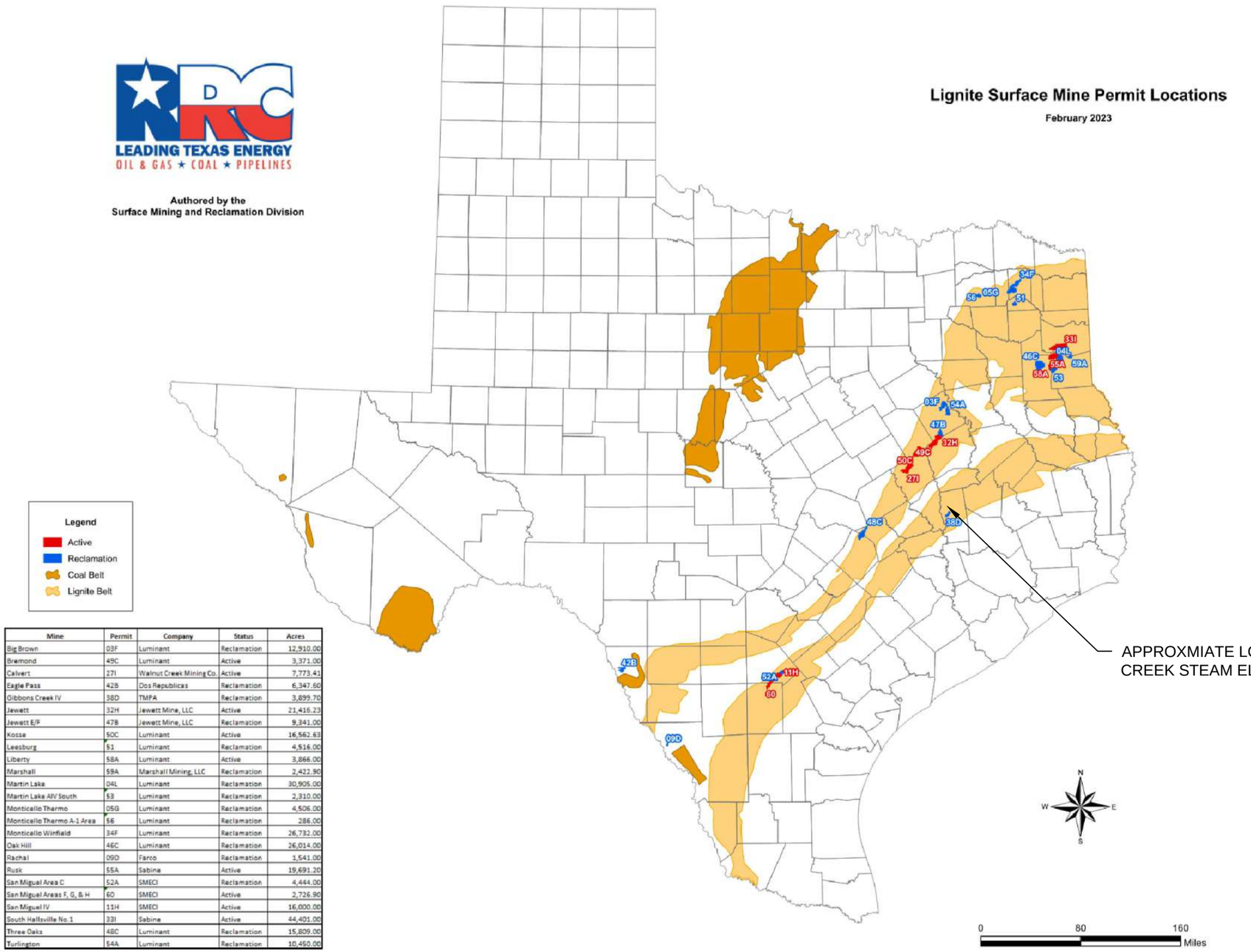
Supporting Data

Lignite Surface Mine Permit Locations

February 2023

LEADING TEXAS ENERGY
OIL & GAS ★ COAL ★ PIPELINES

Authored by the
Surface Mining and Reclamation Division



Mine	Permit	Company	Status	Acres
Big Brown	03F	Luminant	Reclamation	12,910.00
Bremond	49C	Luminant	Active	3,371.00
Calvert	27I	Walnut Creek Mining Co.	Active	7,773.41
Eagle Pass	42B	Dos Republicas	Reclamation	6,347.60
Gibbons Creek IV	38D	TMPA	Reclamation	3,899.70
Jewett	32H	Jewett Mine, LLC	Active	21,416.23
Jewett E/F	47B	Jewett Mine, LLC	Reclamation	9,341.00
Kosse	50C	Luminant	Active	16,562.63
Leesburg	51	Luminant	Reclamation	4,516.00
Liberty	58A	Luminant	Active	3,866.00
Marshall	59A	Marshall Mining, LLC	Reclamation	2,422.90
Martin Lake	04L	Luminant	Reclamation	30,905.00
Martin Lake AIV South	53	Luminant	Reclamation	2,310.00
Monticello Thermo	05G	Luminant	Reclamation	4,506.00
Monticello Thermo A-1 Area	56	Luminant	Reclamation	286.00
Monticello Winfield	34F	Luminant	Reclamation	26,732.00
Oak Hill	46C	Luminant	Reclamation	26,014.00
Rachal	09D	Farco	Reclamation	1,541.00
Rusk	55A	Sabine	Active	19,691.20
San Miguel Area C	52A	SMECI	Reclamation	4,444.00
San Miguel Areas F, G, & H	60	SMECI	Active	2,726.90
San Miguel IV	11H	SMECI	Active	16,000.00
South Hallsville No.1	33I	Sabine	Active	44,401.00
Three Oaks	48C	Luminant	Reclamation	15,809.00
Turlington	54A	Luminant	Reclamation	10,450.00

GIBBONS CREEK STEAM ELECTRIC STATION
GCSES ENVIRONMENTAL REDEVELOPMENT GROUP
LIGNITE SURFACE MINE PERMIT LOCATIONS

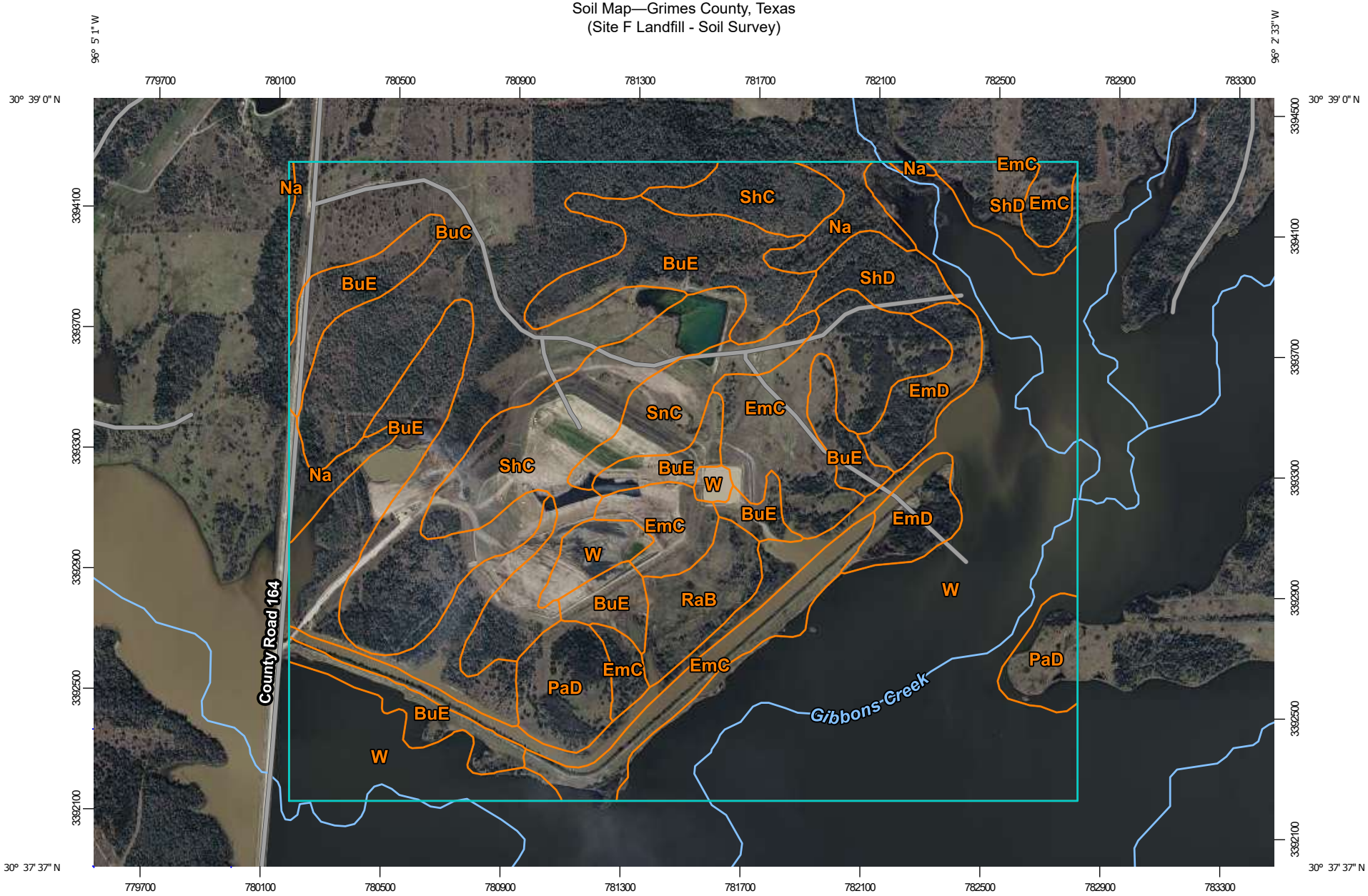
ALTERNATE SOURCE DEMONSTRATION

DATE
SEPTEMBER 2023

FIGURE
EXHIBIT 1

Exhibit 2 - Web Soil Survey

Soil Map—Grimes County, Texas
(Site F Landfill - Soil Survey)



Map Scale: 1:18,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 250 500 1000 1500

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Grimes County, Texas
Survey Area Data: Version 18, Aug 24, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 26, 2023—Mar 3, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuC	Burlewash fine sandy loam, 1 to 5 percent slopes	240.1	17.4%
BuE	Burlewash fine sandy loam, 5 to 12 percent slopes	223.0	16.1%
EmC	Elmina loamy fine sand, 1 to 5 percent slopes	143.7	10.4%
EmD	Elmina loamy fine sand, 5 to 8 percent slopes	44.0	3.2%
Na	Nahatche clay loam, frequently flooded	30.6	2.2%
PaD	Padina loamy fine sand, 1 to 8 percent slopes	46.1	3.3%
RaB	Rader fine sandy loam, 1 to 3 percent slopes	28.3	2.0%
ShC	Shiro loamy fine sand, 1 to 5 percent slopes	115.1	8.3%
ShD	Shiro loamy fine sand, 5 to 8 percent slopes	41.7	3.0%
SnC	Singleton fine sandy loam, 1 to 5 percent slopes	32.4	2.3%
W	Water	436.6	31.6%
Totals for Area of Interest		**1,381.8**	**100.0%**

Chemical Soil Properties

This table shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. It is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity and aeration, and a general degradation of soil structure.

Report—Chemical Soil Properties

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
BuC—Burlewash fine sandy loam, 1 to 5 percent slopes								
Burlewash	0-8	—	4.5-14	4.5-6.0	0	0	0.0-2.0	0-1
	8-28	—	36-50	3.6-5.5	0	0	0.0-2.0	1-3
	28-34	—	27-41	4.5-5.5	0	0	0.0-2.0	1-3
	34-45	—	—	—	—	—	—	—
BuE—Burlewash fine sandy loam, 5 to 12 percent slopes								
Burlewash	0-6	—	5.0-15	4.5-6.0	0	0	0.0-2.0	0
	6-21	—	30-45	3.5-5.5	0	0	0.0-2.0	0
	21-25	—	30-40	4.5-5.5	0	0	0.0-2.0	0
	25-60	—	—	—	—	—	—	—
EmC—Elmina loamy fine sand, 1 to 5 percent slopes								
Elmina	0-5	1.0-5.0	—	4.5-6.5	0	0	0	0
	5-22	1.0-5.0	—	4.5-6.5	0	0	0	0
	22-55	—	25-45	3.5-6.0	0	0	0	0
	55-72	—	—	—	—	—	—	—

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
EmD—Elmina loamy fine sand, 5 to 8 percent slopes								
Elmina	0-5	1.0-5.0	—	4.5-6.5	0	0	0	0
	5-24	1.0-5.0	—	4.5-6.5	0	0	0	0
	24-47	—	25-45	3.5-6.0	0	0	0	0
	47-60	—	—	—	—	—	—	—
Na—Nahatche clay loam, frequently flooded								
Nahatche	0-6	10-20	—	5.6-7.8	0	0	0.0-2.0	0
	6-60	3.0-15	—	5.6-7.8	0-5	0-2	0.0-2.0	0-10
PaD—Padina loamy fine sand, 1 to 8 percent slopes								
Padina	0-6	2.0-5.0	—	5.6-7.3	0	0	0.0-2.0	0
	6-65	5.0-15	—	5.6-7.3	0	0	0.0-2.0	0
	65-75	10-20	—	5.1-6.5	0	0	0.0-2.0	0
RaB—Rader fine sandy loam, 1 to 3 percent slopes								
Rader	0-11	—	1.0-6.0	4.5-6.5	0	0	0.0-2.0	0-2
	11-22	—	1.0-5.0	4.5-6.5	0	0	0.0-2.0	0-2
	22-29	—	4.0-6.0	4.5-6.0	0	0	0.0-2.0	2-5
	29-55	12-17	—	4.5-7.8	0	0	0.0-2.0	2-10
	55-80	10-16	—	5.1-8.4	0-5	0-2	0.0-4.0	2-10

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
ShC—Shiro loamy fine sand, 1 to 5 percent slopes								
Shiro	0-12	2.0-7.0	—	5.1-6.5	0	0	0.0-2.0	0-2
	12-24	—	15-30	4.5-5.5	0	0	0.0-2.0	0-2
	24-31	15-30	—	4.5-7.3	0	0	0.0-2.0	0-2
	31-40	—	—	—	—	—	—	—
ShD—Shiro loamy fine sand, 5 to 8 percent slopes								
Shiro	0-10	2.0-7.0	—	5.1-6.5	0	0	0.0-2.0	0-2
	10-35	—	15-30	4.5-5.5	0	0	0.0-2.0	0-2
	35-45	—	—	—	—	—	—	—
SnC—Singleton fine sandy loam, 1 to 5 percent slopes								
Singleton, variant	0-9	2.0-10	—	5.1-6.5	0	0	0.0-2.0	0-2
	9-20	—	30-40	4.5-6.0	0	0	0.0-2.0	1-4
	20-32	—	25-40	4.5-6.0	0-5	0	0.0-4.0	2-5
	32-38	25-35	—	4.5-7.8	0-10	0-10	0.0-4.0	2-5
	38-60	—	—	—	—	—	—	—
W—Water								
Water	—	—	—	—	—	—	—	—

Data Source Information

Soil Survey Area: Grimes County, Texas
Survey Area Data: Version 18, Aug 24, 2022

Soil Map—Grimes County, Texas
(SSP and AP - Soil Survey)

Map Scale: 1:24,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 350 700 1400 2100

Feet
0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
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- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ap	Arents	424.3	16.2%
ArA	Arol fine sandy loam, 0 to 1 percent slopes	16.2	0.6%
BuC	Burlewash fine sandy loam, 1 to 5 percent slopes	675.2	25.7%
BuE	Burlewash fine sandy loam, 5 to 12 percent slopes	260.4	9.9%
DAM	Dams	0.6	0.0%
EmC	Elmina loamy fine sand, 1 to 5 percent slopes	241.4	9.2%
FaC	Falba fine sandy loam, 1 to 5 percent slopes	9.9	0.4%
Ha	Hatliff fine sandy loam, frequently flooded	89.1	3.4%
LxB	Lufkin-Rader complex, gently undulating	20.6	0.8%
Na	Nahatche clay loam, frequently flooded	58.8	2.2%
PaD	Padina loamy fine sand, 1 to 8 percent slopes	17.9	0.7%
ShC	Shiro loamy fine sand, 1 to 5 percent slopes	362.0	13.8%
ShD	Shiro loamy fine sand, 5 to 8 percent slopes	19.2	0.7%
SnC	Singleton fine sandy loam, 1 to 5 percent slopes	138.7	5.3%
W	Water	291.6	11.1%
Totals for Area of Interest		**2,625.9**	**100.0%**

Chemical Soil Properties

This table shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

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Soil reaction is a measure of acidity or alkalinity. It is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity and aeration, and a general degradation of soil structure.

Report—Chemical Soil Properties

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
Ap—Arents								
Arents	0-6	4.0-14	—	4.5-6.5	0	0	0.0-2.0	0-2
	6-60	10-20	—	4.5-6.5	0	0	0.0-2.0	0-2
ArA—Arol fine sandy loam, 0 to 1 percent slopes								
Arol	0-6	5.7-13	—	5.1-6.5	0	0	0.0-2.0	0-2
	6-30	26-36	—	5.1-7.8	0-3	0-5	2.0-8.0	2-10
	30-45	—	—	—	—	—	—	—
BuC—Burlewash fine sandy loam, 1 to 5 percent slopes								
Burlewash	0-8	—	4.5-14	4.5-6.0	0	0	0.0-2.0	0-1
	8-28	—	36-50	3.6-5.5	0	0	0.0-2.0	1-3
	28-34	—	27-41	4.5-5.5	0	0	0.0-2.0	1-3
	34-45	—	—	—	—	—	—	—
BuE—Burlewash fine sandy loam, 5 to 12 percent slopes								
Burlewash	0-6	—	5.0-15	4.5-6.0	0	0	0.0-2.0	0
	6-21	—	30-45	3.5-5.5	0	0	0.0-2.0	0
	21-25	—	30-40	4.5-5.5	0	0	0.0-2.0	0
	25-60	—	—	—	—	—	—	—
DAM—Dams								
Dams	—	—	—	—	—	—	—	—

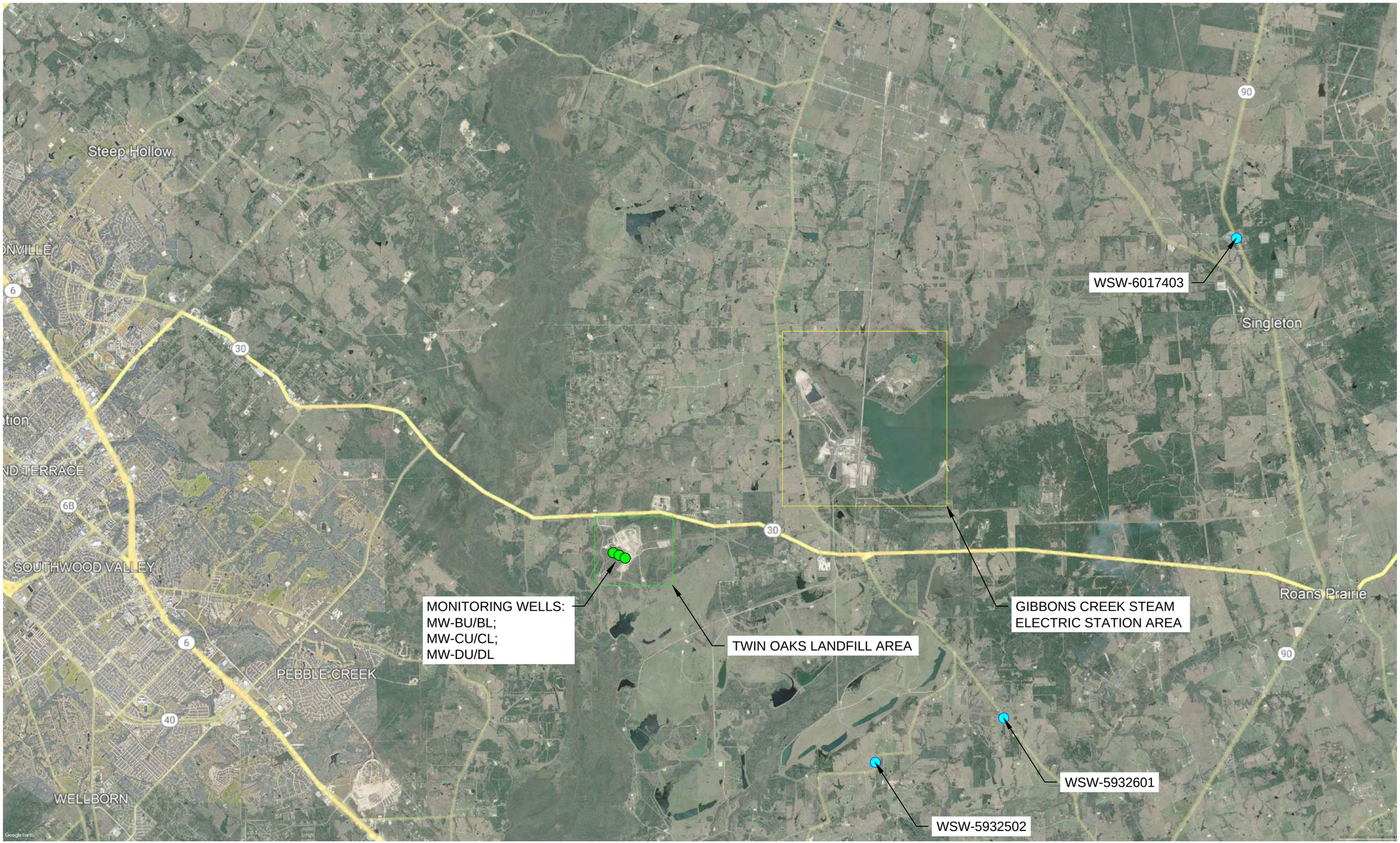
Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
EmC—Elmina loamy fine sand, 1 to 5 percent slopes								
Elmina	0-5	1.0-5.0	—	4.5-6.5	0	0	0	0
	5-22	1.0-5.0	—	4.5-6.5	0	0	0	0
	22-55	—	25-45	3.5-6.0	0	0	0	0
	55-72	—	—	—	—	—	—	—
FaC—Falba fine sandy loam, 1 to 5 percent slopes								
Falba	0-6	—	3.0-12	4.5-5.5	0	0	0.0-2.0	0-1
	6-24	—	18-33	4.5-5.5	0	0	0.0-8.0	0-4
	24-33	15-30	—	4.5-7.3	0-1	0	2.0-16.0	0-8
	33-55	—	—	—	—	—	—	—
Ha—Hatliff fine sandy loam, frequently flooded								
Hatliff	0-6	1.0-5.0	—	5.1-7.3	0	0	0	0
	6-26	3.0-7.0	—	5.1-7.3	0	0	0	0
	26-70	3.0-7.0	—	5.1-7.3	0	0	0	0
	70-80	3.0-7.0	—	5.1-7.3	0	0	0	0

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
LxB—Lufkin-Rader complex, gently undulating								
Lufkin	0-10	4.0-10	—	5.1-6.5	0	0	0.0-2.0	0
	10-45	20-30	—	4.5-7.8	0	0	0.0-4.0	0-7
	45-60	20-30	—	6.1-7.8	0	0	0.0-4.0	5-10
Rader	0-10	2.0-5.0	—	4.5-6.5	0	0	0.0-2.0	0-2
	10-25	2.0-5.0	—	4.5-6.5	0	0	0.0-2.0	0-2
	25-35	—	10-20	4.5-6.0	0	0	0.0-2.0	2-5
	35-80	15-25	—	4.5-6.5	0	0	0.0-2.0	2-10
Na—Nahatche clay loam, frequently flooded								
Nahatche	0-6	10-20	—	5.6-7.8	0	0	0.0-2.0	0
	6-60	3.0-15	—	5.6-7.8	0-5	0-2	0.0-2.0	0-10
PaD—Padina loamy fine sand, 1 to 8 percent slopes								
Padina	0-6	2.0-5.0	—	5.6-7.3	0	0	0.0-2.0	0
	6-65	5.0-15	—	5.6-7.3	0	0	0.0-2.0	0
	65-75	10-20	—	5.1-6.5	0	0	0.0-2.0	0
ShC—Shiro loamy fine sand, 1 to 5 percent slopes								
Shiro	0-12	2.0-7.0	—	5.1-6.5	0	0	0.0-2.0	0-2
	12-24	—	15-30	4.5-5.5	0	0	0.0-2.0	0-2
	24-31	15-30	—	4.5-7.3	0	0	0.0-2.0	0-2
	31-40	—	—	—	—	—	—	—

Chemical Soil Properties–Grimes County, Texas								
Map symbol and soil name	**Depth**	**Cation-exchange capacity**	**Effective cation-exchange capacity**	**Soil reaction**	**Calcium carbonate**	**Gypsum**	**Salinity**	**Sodium adsorption ratio**
	In	*meq/100g*	*meq/100g*	*pH*	*Pct*	*Pct*	*mmhos/cm*	
ShD—Shiro loamy fine sand, 5 to 8 percent slopes								
Shiro	0-10	2.0-7.0	—	5.1-6.5	0	0	0.0-2.0	0-2
	10-35	—	15-30	4.5-5.5	0	0	0.0-2.0	0-2
	35-45	—	—	—	—	—	—	—
SnC—Singleton fine sandy loam, 1 to 5 percent slopes								
Singleton, variant	0-9	2.0-10	—	5.1-6.5	0	0	0.0-2.0	0-2
	9-20	—	30-40	4.5-6.0	0	0	0.0-2.0	1-4
	20-32	—	25-40	4.5-6.0	0-5	0	0.0-4.0	2-5
	32-38	25-35	—	4.5-7.8	0-10	0-10	0.0-4.0	2-5
	38-60	—	—	—	—	—	—	—
W—Water								
Water	—	—	—	—	—	—	—	—

Data Source Information

Soil Survey Area: Grimes County, Texas
Survey Area Data: Version 18, Aug 24, 2022



STATE OF TEXAS
DAVID C. VOGT
93905
LICENSED
PROFESSIONAL ENGINEER

10/5/2023

GIBBONS CREEK STEAM ELECTRIC STATION
GCSES ENVIRONMENTAL REDEVELOPMENT GROUP
REGIONAL MONITORING & WATER SUPPLY WELLS

ALTERNATE SOURCE DEMONSTRATION

DATE
SEPTEMBER 2023

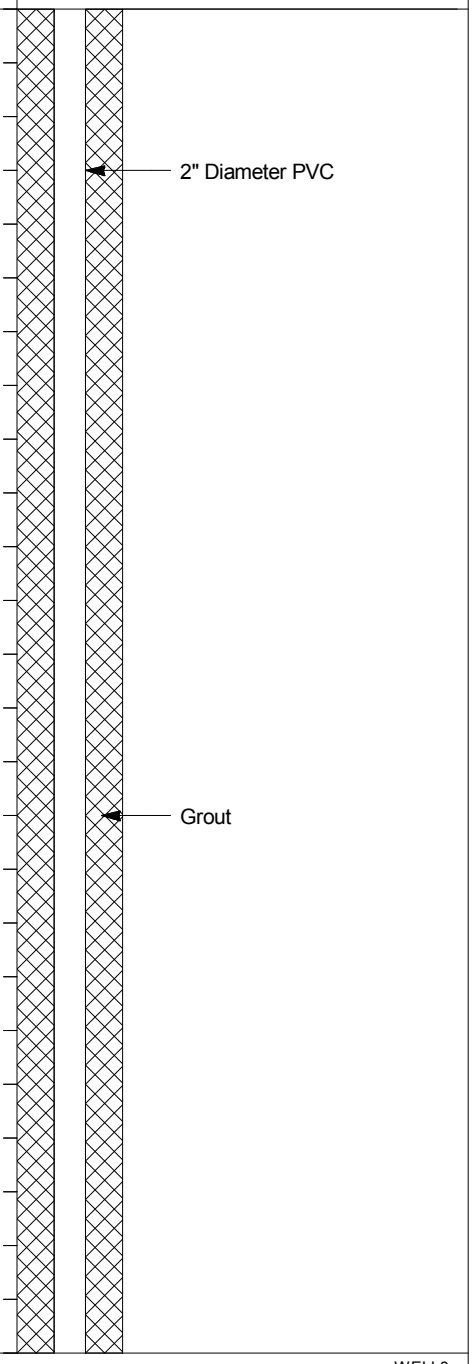
FIGURE
EXHIBIT 3

Appendix B

Boring Logs

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP MW-1D**
BORING LOCATION: Northeast Corner of Ash Ponds	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/24/16 / DATE FINISHED: 5/24/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 40.0 / SCREEN INTERVAL (ft.): 34.5'-39.5
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 35 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

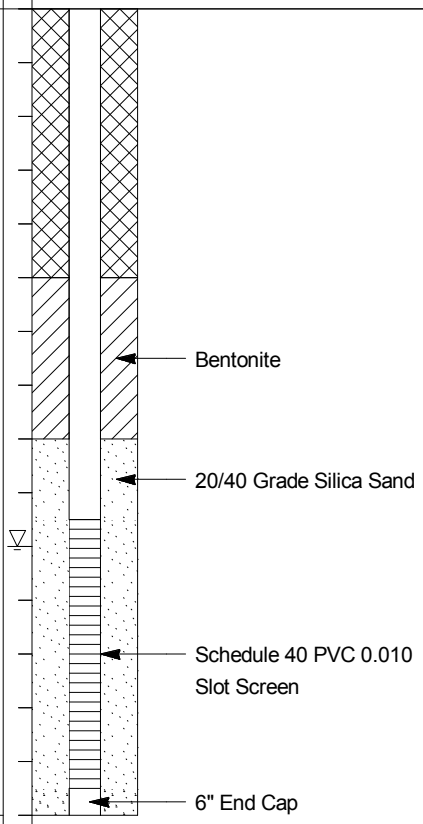
DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Sandy clay fill to 4.5'	
5					Slightly SANDY CLAY (CH): light yellowish-brown, dry, hard, trace calcium carbonate nodules, fine-grained sand to 5' SANDY CLAY (CH): light yellowish-brown, slightly moist, hard, fine-grained sand, trace pebbles	
					Lignite, dark brown, slighly moist, firm 7'-8.5'	
10					SANDY CLAY (CL): light olive brown, moist, very stiff, fine-grained sand, trace of small gravel size nodules, minor ferrous staining SANDY CLAY (CL): light olive brown, brown lenses, dry, fine-grained sand, stiff	
					SILTY SAND (SM): dark gray, very moist	
15					CLAYEY SAND (SC): light olive brown, moist, very stiff, fine-grained sand CLAYEY SAND (SC): light olive brown, moist, firm, fine-grained sand SILTY SAND (SM): light olive brown, wet, loose, fine-grained at 16'	
20					SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand	
25						



WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP MW-1D (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
30					1" hard shaley sand lenses at 25.5' SILTY SAND (SM): light olive brown, wet, loose, fine-grained, one ferrsous stained sand lense at 16' SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand 2" sandstone lense, hard at 31.5'	
35					4" sandstone lense, hard at 33' 3" sandstone lense, ferrous staining, hard, blocky at 34.25' SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand SILTY SAND (SM): light olive brown with very thin lignite lenses 2" hard sandstone layer at 40'	
40					Total Depth = 40'	
45						
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas		**Log of Well No. AP-MW-3**	
BORING LOCATION: Northeast Corner of Ash Ponds		GROUND SURFACE ELEVATION AND DATUM:	
DRILLING CONTRACTOR: Best Drilling		DATE STARTED: 5/25/16	DATE FINISHED: 5/25/16
DRILLING METHOD: HSA		TOTAL DEPTH (ft.): 40.0	SCREEN INTERVAL (ft.): 34.5'-39.5
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig		DEPTH TO WATER ATD: 20	CASING:
SAMPLING METHOD: 5' x 4" Core Barrel		LOGGED BY: Daniel B. Haug, P.G.	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G.	REG. NO. 1773

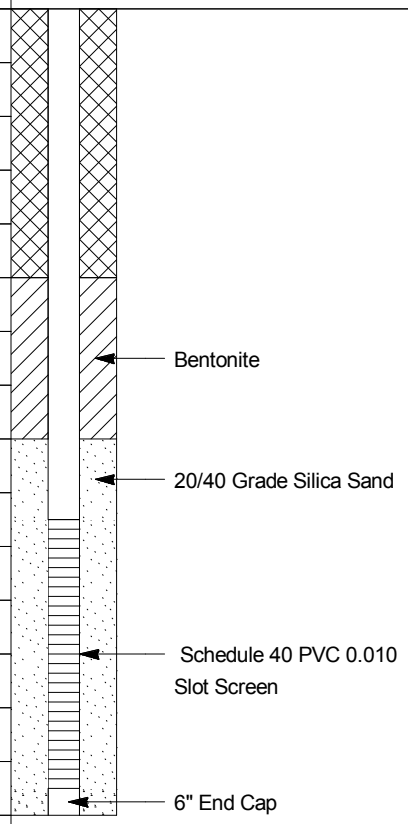
DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					SANDY CLAY with gravel (CH): brown, moist, firm, fine-grained sand, few small gravel, (fill)	2" Diameter PVC
5					SANDY CLAY with gravel (CL): brown and reddish-brown, moist, very stiff, fine-grained sand, few small gravel, few clay clasts, 3-4' layers (fill)	
10					SANDY CLAY with gravel (CL): brown mottled, moist, very stiff, fine-grained sand, trace of small gravel (fill)	
					SILTY SAND (SM): light olive brown, moist, firm, fine-grained sand	
15					SILTY SAND (SM): light olive brown, moist, fine-grained sand	Grout
20					SILTY SAND (SM): light olive brown, wet, fine-grained sand	▽
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP-MW-3 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): light olive brown, wet, fine-grained sand	
					- siltsone interbedded with loose sand 27.5'-28.75'	
					Siltstone, light olive gray, dry, hard at 28.75' and 29.5'	
30					SILTY SAND (SM): light olive brown, moist, fine-grained sand SITLY SAND (SM): light olive brown, wet, fine-grained sand	
35					SILTY SAND (SM): light olive brown, wet, fine-grained sand	
40					Total Depth = 40'	
45						
50						
55						



WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP MW-4**
BORING LOCATION: East of Ash Ponds	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 6/1/16 / DATE FINISHED: 6/1/16
DRILLING METHOD: CME 75 HSA	TOTAL DEPTH (ft.): 50.0 / SCREEN INTERVAL (ft.): 44.5'-49.5'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA	DEPTH TO WATER ATD: 48 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY (CL): dark yellowish-brown, brown, moist, stiff, fine-grained sand, sand fill to 3.5'	
					SANDY CLAY (CH): brown, moist, stiff, fine-grained sand	2" Diameter PVC
5					SANDY CLAY (CH): brown, mottled, moist, firm, clay clasts, fine-grained sand	
10					SANDY CLAY (CL): yellowish-brown, moist, firm, fine-grained sand, few pebbles	
15					SANDY CLAY (CL): olive brown and yellowish-brown, moist, stiff, 3" lignite lense at 14.75' SANDY CLAY (CL): yellowish-brown, moist, stiff, fine-grained sand, bedding planes, yellow and black streaks	Grout
20					SANDY CLAY (CL): yellowish-brown, moist, stiff, fine-grained sand, bedding planes	
					Lignite, black, moist, firm 23.5'-25'	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP MW-4 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY (CH): yellowish-brown, moist, soft, fine-grained sand, discontinous lignite lenses	
					Lignite, black, moist, firm 26.5'-30'	
30					SANDY CLAY (CH): olive-brown, moist, fine-grained sand, stiff	
					Perched water at 32'	
					Lignite, black, dry, stiff 34'-37.5'	
35					Interbedded silty sand and sandy clay, thin bedded (1/4" - 1/2"), olive brown, sandy clay, gray silty sand, dry, stiff, fine-grained sand	
					Lignite, black, dry, hard, 6"	Bentonite
40					CLAY (CL): black, dry, hard, blocky, some interbedded black lignite	
						20/40 Grade Silica Sand
45					SANDY CLAY (CL): black, dry, hard, fine-grained sand, platty	
						Schedule 40 PVC 0.010 Slot Screen
					SILTY SAND (SM): dark olive brown, wet, loose, bedding planes, fine-grained sand	
50					Total Depth =50'	6" End Cap
55						

WELL3

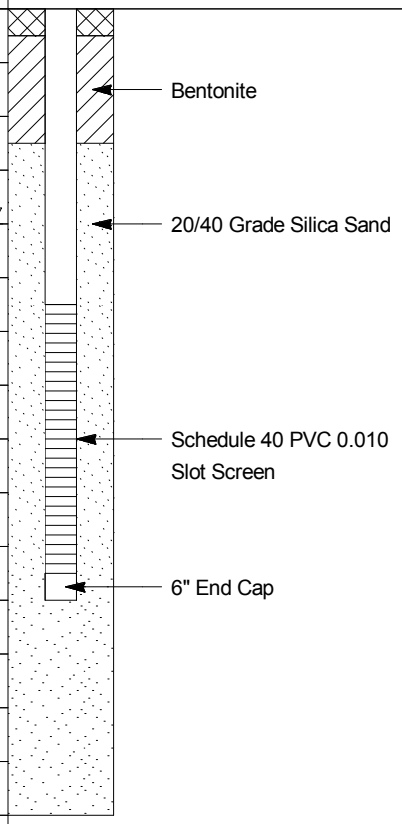
PROJECT: TMPA Gibbons Creek Plant Carlos, Texas		**Log of Well No. AP MW-5**	
BORING LOCATION: East Center of Ash Ponds		GROUND SURFACE ELEVATION AND DATUM: NA	
DRILLING CONTRACTOR: Best Drilling		DATE STARTED: 6/1/16	DATE FINISHED: 6/1/16
DRILLING METHOD: CME 75 HSA		TOTAL DEPTH (ft.): 40.0	SCREEN INTERVAL (ft.): 30.5'-35.5'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA		DEPTH TO WATER ATD: 29	CASING:
SAMPLING METHOD: 5' x 4" Core Barrel		LOGGED BY: Daniel B. Haug, P.G.	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G.	REG. NO. 1773

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: NA	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Sand and clay fill to 2.5'	
					SANDY CLAY (CH): yellowish-brown, moist, firm to hard, fine-grained sand, some mottling	2" Diameter PVC
5					SANDY CLAY (CH): light yellowish-brown, moist, stiff, trace of small gravel, fine-grained sand	
10					SANDY CLAY (CL): reddish-brown then light yellowish-brown, (14'-15'), moist, stiff, sand lense at 14.5', fine-grained sand	Grout
15					SANDY CLAY (CH): yellowish-brown, moist, firm, fine-grained sand CLAYEY SAND (SC): yellowish-brown, wet, firm, fine-grained sand, few gravel	
20					SANDY CLAY (CL): yellowish-brown, moist, firm, fine-grained sand, clay clasts SANDY CLAY (CH): reddish-brown mottled with grayish-brown, moist, firm, fine-grained sand	
25					SANDY CLAY (CH): brown mottled with few reddish-brown streaks, moist, fine-grained sand, few pebbles	

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP MW-5 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY (CH): brown, moist, fine-grained sand to small gravel	
					CLAYEY SAND (SC): brown, wet, firm, fine- to coarse-grained sand	
					SANDY CLAY (CL): light yellowish-brown, moist, stiff, fine-grained sand, ferrous staining	
					SANDY CLAY (CL): light yellowish-brown, very moist to wet, medium-grained sand	
					CLAYEY SILTY SAND (SC-SM): dark greenish gray, slightly moist, fine-grained sand	
					Total Depth = 40'	



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WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP MW-6**
BORING LOCATION: West Side of Ash Ponds	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Tolunay-Wong	DATE STARTED: 5/3/17 / DATE FINISHED: 5/5/17
DRILLING METHOD: HSA with Continous Core Barell	TOTAL DEPTH (ft.): 50.0 / SCREEN INTERVAL (ft.): 41'-46'
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER ATD: / CASING:
SAMPLING METHOD: 5' x 4.25" OD Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				0.3	Grass at the surface, gravel, sand and clay material to 4.25' (probable fill)	2" Schedule 40 PVC Riser
5					SANDY CLAY (CL): yellowish-brown, moist, stiff, ferrous nodules, trace of caliche, fine-grained sand	
				0.1	SILT (ML) with lignite: reddish-brown, dry, firm, very little recovery	
10					CLAY (CL): reddish-brown, slightly moist, firm Lignite with clay, dark red, slightly moist, firm	
				0.1	SANDY CLAY (CL): yellowish-brown, dry, firm, very fine-grained sand	
15				1.8	2" lignite seam, dark reddish-brown, slightly moist, soft CLAY (CH): yellowish-brown, slightly moist to moist, stiff, ferrous staining Interbedded CLAY and LIGNITE (0-CL): black to reddish-brown, dry, frim to hard 1" cemented lenses with gypsum	Bentonite Grout
20				2.1	LIGNITE (0) with hard lenses of cemented clay and silt with organics: dark brown, dry, hard	
					SANDY CLAY (CL): dark brown, dry, stiff, very fine-grained sand, numerous thin very fine-grained sand partings, laminated	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP MW-6 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Interbedded SAND and LIGNITE (SP-0): sand - olive gray, lignite - black, very moist to wet, mostly sand, fine-grained sand	
				2.5	LIGNITE (0): black, dry, hard - Lignite to 30.25'	
30					CLAY (CL): light gray, slighltly moist, hard	Bentonite Grout
				4.3	CLAYEY SAND (SC): very dark grayish-brown, dry, dense, very fine-grained sand, lignite fragments	
35					CLAYEY SAND (SC): olive gray, slightly moist to moist, dense, fine-grained sand, weakly cemented, laminated	Bentonite Chips
				4.9		16/30 Grade Silica Sand
40					Slightly CLAYEY SAND (SC): olive gray, moist to very moist, 42.5'-43' wet, moist below 43' and silty, medium dense, very fine- to fine grained sand	
				4.4		2" Schedule 40 PVC Screen 0.010 Slot
45					Very slightly CLAYEY SILTY SAND (SM): olive gray, moist, dense, fine-grained sand, trace of lignite lenses	5.5" End Cap
				0.6		
					- Sulfur smell	
50					Total Depth = 50"	
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP PZ-1**
BORING LOCATION: West of Limestone Storage Building	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/24/16 / DATE FINISHED: 5/24/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 35.0 / SCREEN INTERVAL (ft.): 21'-26'
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 21 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
					6" ash	
					Sandy clay with few small gravel fill to 2"	
					SANDY CLAY (CH): yellowish-brown, moist, stiff, fine- to coarse-grained sand	2" Diameter PVC
5					CLAYEY SAND (SC): light yellowish-brown, moist, stiff, fine-grained sand	Grout
					0.5" sandstone lense at 9.25'	
10					CLAYEY SAND (SC): light yellowish-brown, slightly moist, stiff, fine-grained sand	
					sandstone nodules and 0.5" sand lense at 12'-12.5'	
					- trace of ferrous staining	
15					- interbedded sand and sandy clay	
					CLAYEY SAND and SAND (SP, SC) olive-gray, dry to moist, loose to firm	
					CLAY (CL): brown, dry, hard, with interbedded sand and clay	Bentonite
					SILTY SAND (SM): brown, dry, loose to firm, fine-grained sand, clay lenses	
20					CLAY (CL): yellowish-brown, dry, hard, thin fine-grained sand lenses, trace of pebbles	20/40 Grade Silica Sand
					CLAYEY SAND with sandstone lenses, brown, wet, dense, fine-grained to small gravels size	
					SANDY CLAY (CL): brown, dry, hard, fine-grained sand lamina	
					SILTY SAND (SM): olive gray, moist, loose to firm, fine-grained sand	Schedule 40 PVC 0.010 Slot Screen
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP PZ-1 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): light olive gray, wet, hard, fine-grained sand, very thin lignite seams	6" End Cap
					CLAY (CH): olive, dry, hard, blocky	
30					CLAY (CH): olive, dry, hard, blocky	20/40 Grade Silica Sand
35					Total Depth = 35'	
40						
45						
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP PZ-2**
BORING LOCATION: North of Fly Ash Silos	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/23/16 / DATE FINISHED: 5/24/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 40.0 / SCREEN INTERVAL (ft.): 34'-39'
DRILLING EQUIPMENT: 8 5/8" OD HSA 2" Rods	DEPTH TO WATER ATD: 39 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					SILTY SAND (SM): dark gray, slightly moist, loose, fine- to coarse-grained sand, roots, fly ash	
					SILTY SANDY CLAY (CH): brown, moist, firm, fine- to coarse-grained sand	
					SILTY SANDY CLAY (CL): brown, moist, firm, fine- to coarse-grained sand, increasing sand content	2" Diameter PVC
5					SANDY CLAY (CH): yellowish-brown, moist, soft, fine- to coarse-grained	
					SILTY SANDY CLAY (CH): yellowish-brown, moist, hard, fine-grained sand, ferrous staining - lignite seam 9'-9.5'	
10					CLAYEY SAND (SC): light olive brown, dry, dense, fine- to medium-grained sand, wood fragments	
					SILTY CLAYEY SAND (SC): light yellowish-brown, moist, firm, fine-grained sand	
					SANDY CLAY (CH): yellowish-brown, dry, hard, fine-grained sand, lignite seam (thin)	
15					CLAYEY SILTY SAND (SM): gray, wet, firm, fine-grained sand	Grout
					SANDY CLAY (CH): light yellowish-brown, dry, hard, layered, fine-grained sand	
20					SILTY SANDY CLAY (CL): light olive brown, dry with few moist intervals, hard to very stiff, fine-grained sand, drier after 22'	
25						

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP PZ-2 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): light olive brown, very moist, fine-grained sand, soft	
					Sligthly SANDY CLAY (CH): brown, dry, hard, fine-grained sand lenses - increased sand content with depth	
30					SILTY SAND (SM): light olive brown, moist, fine-grained sand, firm CLAYEY SILTY SAND (SM): light olive gray, very moist, firm, 1/4" lignite seams, fine-grained sand	Bentonite
					SANDY CLAY (CL): light olive brown, moist to dry, hard, fine-grained sand, very hard lenses, organics (wood) in sandstone	20/40 Grade Silica Sand
35					SILTY SAND (SM): light olive brown, wet to 39', tan lignite lenses (1/4"), fine-grained sand	Schedule 40 PVC 0.010 Slot Screen
					CLAY (CH): brown, moist, hard	6" End Cap
40					Total Depth = 40'	
45						
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. AP PZ-3**
BORING LOCATION: North of Ash Ponds	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/25/16 / DATE FINISHED: 5/25/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 40.0 / SCREEN INTERVAL (ft.): 34.5'-39.5
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 25 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY with Gravel (CH): yellowish-brown, moist, very stiff, fine-grained sand, few small gravel, probably fill	
					SANDY CLAY (CL): olive brown, moist, very stiff, fine-grained sand	2" Diameter PVC
5					SANDY CLAY (CL): light olive brown, slightly moist to moist at 9', firm, layered, fine-grained sand	
10					SANDY CLAY (CL): light olive brown, moist to wet above underlying clay, fine-grained sand, loose CLAY (CH): light olive brown, dry, blocky, hard, layered SILTY SAND (SM): light olive brown, wet, fine-grained sand	
15						Grout
20					SILTY SAND (SM): light olive brown, wet, fine-grained sand, layered	
25					- interbedded sand and siltstone	

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. AP PZ-3 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): light olive brown, wet, fine-grained sand, hard siltstone at 28.75' to 29' and 1" lense at 27.5' ferrous staining around siltstone lenses	
30					SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand Sandstone, light to olive brown, wet, hard, platy 32.5'-33'	Bentonite
					SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand Sandstone, pale yellow, wet, hard, platy 34'-34.5	20/40 Grade Silica Sand
35					SILTY SAND (SM): light olive brown, wet, loose, fine-grained sand	
					Siltstone, olive brown, wet, hard, platy 36.5'-36.75' SILTY SAND (SM): light olive brown, wet, loose to firm, fine-grained sand SILTY SAND (SM): olive gray, wet, firm, fine-grained sand, layered	Schedule 40 PVC 0.010 Slot Screen
40					CLAY (CH): olive gray, dry, hard, blocky Total Depth = 40'	6" End Cap
45						
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas		**Log of Well No. AP PZ-4**	
BORING LOCATION: Southwest Corner of Ash Ponds		GROUND SURFACE ELEVATION AND DATUM:	
DRILLING CONTRACTOR: Best Drilling		DATE STARTED: 6/2/2016	DATE FINISHED: 6/2/2016
DRILLING METHOD: HSA		TOTAL DEPTH (ft.): 45.0	SCREEN INTERVAL (ft.): 38.5'-43.5'
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig		DEPTH TO WATER ATD: 40	CASING:
SAMPLING METHOD: 5' x 4" Core Barrel		LOGGED BY: Daniel B. Haug, P.G.	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G.	REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Clay and gravel fill to 3'	
					SANDY CLAY (CL): light yellowish-brown, moist, stiff, fine-grained sand	2" Diameter PVC
5					Interbedded sandstone and SANDY CLAY (CL): light yellowish-brown, moist, hard, fine-grained sand	
					SANDY CLAY (CL): light yellowish-brown, moist, stiff, fine-grained sand, ferrous partings	
10					SANDY CLAY (CL): light yellowish-brown, moist, stiff to 14.5', hard to 15', fine-grained sand, ferrous staining, reddish-brown with increased clay content at 14.5-15'	
15					SANDY CLAY (CL): olive brown, dry, hard, very fine-grained sand, discontinous silt and sand partings	Grout
20					SANDY CLAY (CL): olive brown, dry, very stiff, fine-grained sand	
					Lignite, black, dry, hard 23.5'-25' - 2" sand and clay lenses	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

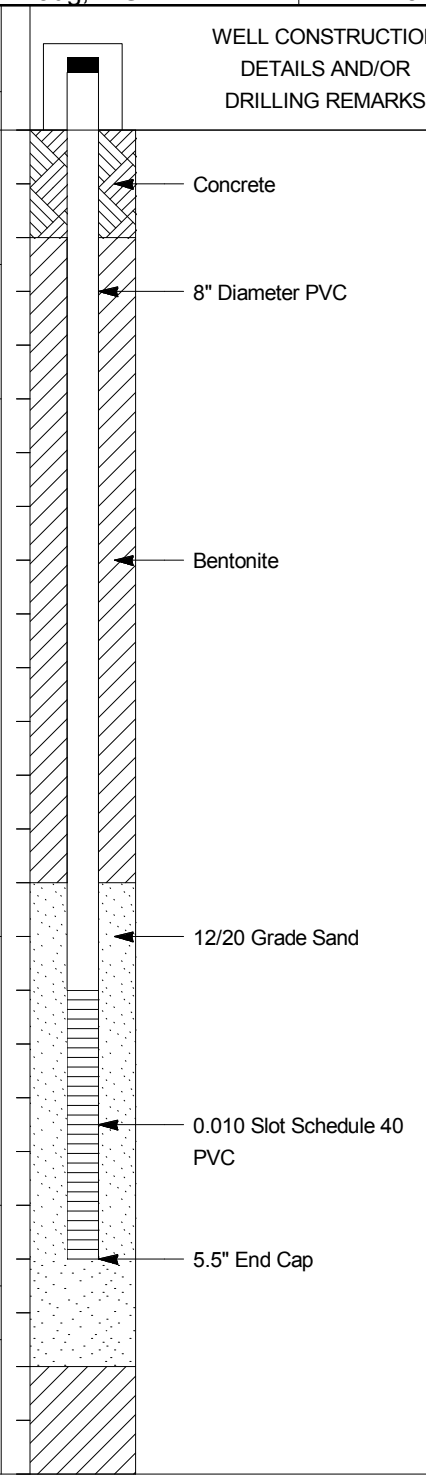
Log of Well No. AP PZ-4 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Lignite, dark brown and black, dry, stiff, few interbedded ironstone, sand, clay (thin beds-large majority lignite 25'-30')	
30					Sandstone: olive brown, moist, hard	
					Lignite, brown to dark brown, dry, stiff 31'-32.75' Interbedded olive brown sand, brown clay and lignite Lignite, brown to dark brown, dry, stiff, platy 33'-35' Lignite, brown to dark brown, dry, stiff, blocky 35'-36'	Bentonite
35					Interbedded sandy clay, lignite (thin beds), medium gray sand, fine-grained sand, dark brown clay and lignite	20/40 Grade Silica Sand
					Lignite, brown to dark brown, dry, stiff, blocky 39'-40'	
40					Sand interbedded with lighnite, black, wet, loose, fine- to medium-grained Lignite, black dry, very stiff 41'-41.75 SANDY SILT (ML): olive gray, slightly moist, stiff, very fine-grained sand	Schedule 40 PVC 0.010 Slot Screen 6" End Cap
45					Total Depth = 45'	
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-2**
BORING LOCATION: South Side of Landfill F, West of Outfall	GROUND SURFACE ELEVATION AND DATUM: 269'
DRILLING CONTRACTOR: Vortex Drilling	DATE STARTED: 3/16/16 / DATE FINISHED: 3/16/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 50.0 / SCREEN INTERVAL (ft.): 16'-21'
DRILLING EQUIPMENT: 4 1/4 ID HSA (8" Borehole)	DEPTH TO WATER ATD: 17.5' / CASING:
SAMPLING METHOD: Split Spoon	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: NA
0			1/1/4	0.0	CLAY CH): dark gray, moist, soft, grading to yellowish-brown at 2'
			3/7		CLAYEY SILTY SAND (SM-SC): light yellowish-brown, dry, hard, platy, fine-grained sand
			50/1"	0.0	
5			50/1"		SANDY SILT (ML): pale yellow, moist, hard, very fine-grained sand
				3.0	SILT (ML): pale yellow, moist, hard, very fine-grained sand
			50/5"	3.0	
10			21/35	0.8	SILT (ML): pale yellow, moist to wet, hard, very fine-grained sand
					SANDY SILT (ML): pale yellow, moist to wet, hard, wet to 13', then very moist, siltier-a trace of clay (unconsolidated)
			11/ 24/ 30	5.0	
15			30/ 50/2"	4.3	SILTY SAND (SM): light yellowish-brown, moist, hard, unconsolidated, very fine- to fine-grained sand, trace iron oxide staining
					SILTY SAND (SM): light yellowish-brown, moist to wet, hard, unconsolidated, very fine- to fine-grained sand, iron oxide staining 19-20'
			19/ 31/ 32	3.8	
20			20/ 50/4"	3.9	SANDY SILTY (SM): light yellowish-brown, wet, unconsolidated, hard, iron oxide staining
					SILTY CLAY (CL): brown, dry, hard at 22.25 SANDY SILTY CLAY (CL): dark gray, dry, hard, bedding planes
			41/ 60/6"	2.3	SANDY SILTY CLAY (CL): dark gray, dry, hard, bedding
25					



WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SFL MW-2 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
			20/ 50/5"	3.7	CLAY (CH): dark gray, dry, hard, lenses of sandy clay, fine-grained sand SANDY CLAY (CL): olive gray, moist (clayey interval, dry), hard, fine-grained sand	
			15/ 21/ 37	3.2	SANDY CLAY (CL): olive gray, dry, hard, fine-grained sand	
30			15/ 21/ 21	2.0	Slightly SANDY CLAY (CL): dark gray, dry, hard, fine-grained sand	
			12/ 29/ 40	2.5	SILTY CLAY (CH): dark gray, dry, hard, thin linear structures in the clay	
35			20/20 60/6"	2.0	SILTY CLAY (CH): olive gray, dry, hard, silt lenses at 35.5', moist	Bentonite
			10/ 17/ 17	1.1	SILTY CLAY (CH): olive gray, dry, hard, silt lenses <1/4, thin, dry	
40			10/ 11/ 15	1.9	SILTY CLAY (CH): olive gray, moist, firm to hard, few silt partings	
			8/ 12/ 15	2.1	SILTY CLAY (CH): olive gray, moist, firm to hard, few silt partings, one pyrite nodule	
45			12/ 12/ 17	2.2	CLAY (CH): olive gray, moist, firm to hard, silt partings	
			10/ 12/ 31	2.2	CLAY (CH): olive gray, moist, firm to hard, few silt partings	
50					Total Depth = 50'	
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-3**
BORING LOCATION: Southeast of Landfill F	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/31/16 / DATE FINISHED: 5/31/16
DRILLING METHOD: CME 75 HSA (Buggy Rig)	TOTAL DEPTH (ft.): 25.0 / SCREEN INTERVAL (ft.): 19.5'-24.5'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA	DEPTH TO WATER ATD: 22 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): light yellowish-brown, moist, loose, fine-grained sand, trace ferrous staining	2" Diameter PVC
5					SANDY CLAY (CH): brown mottled with blackish-brown, moist, firm, fine-grained sand, minor ferrous staining SANDY CLAY (CH): brown, mottled, moist, firm, fine-grained sand	Grout
10					SANDY CLAY (CL): yellowish-brown, slightly moist, fine-grained sand, bedding planes, stiff Slightly SANDY SILTY CLAY (CL): yellowish-brown, slightly moist, very firm, fine-grained sand	
15					SANDY SILTY CLAY (CL): yellowish-brown, slightly moist, stiff, very fine-grained sand, few bedding planes	Bentonite 20/40 Grade Silica Sand
20					Interbedded sandy clay and sandstone, reddish-brown, hard to very stiff, fine-grained sand SILTY SAND (SM): light olive brown, wet, loose to firm, fine-grained sand	Schedule 40 PVC 0.010 Slot Screen
25					CLAY (CL): light to olive green, dry, hard Total Depth = 25'	6" End Cap

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-4**
BORING LOCATION: South of Landfill F	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/31/16 / DATE FINISHED: 5/31/16
DRILLING METHOD: CME 75 HSA	TOTAL DEPTH (ft.): 40.0 / SCREEN INTERVAL (ft.): 34.5'-39.5
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA	DEPTH TO WATER ATD: 36 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					CLAYEY SAND (SC): medium gray, moist, firm, fine-grained sand Interbedded silty sand and sandstone, medium gray, slighly moist, firm to hard, fine-grained CLAYEY SILTY SAND (SC-SM): medium gray, slighty moist, very firm, fine-grained sand	2" Diameter PVC
5					SANDY CLAY (CL): light olive brown, dry, hard, fine-grained sand, ferrous staining SANDY SILTY CLAY (CL): light olive brown, slightly moist, very fine-grained sand	
10					SANDY SILTY CLAY (CL): light olive brown, slightly moist, very fine-grained sand, minor ferrous staining	
15					SANDY SILTY CLAY (CL): brown, dry, very stiff, bedding planes, fine-grained sand	Grout
20					SANDY CLAY (CL): dark olive brown, dry, hard, bedding planes, trace of gypsum, fine-grained sand Lignite lense, dark gray to balck, loose to firm SILTY SAND (SM): light olive gray, slightly moist, fine-grained sand, bedding planes, firm	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SFL MW-4 (cont'd)

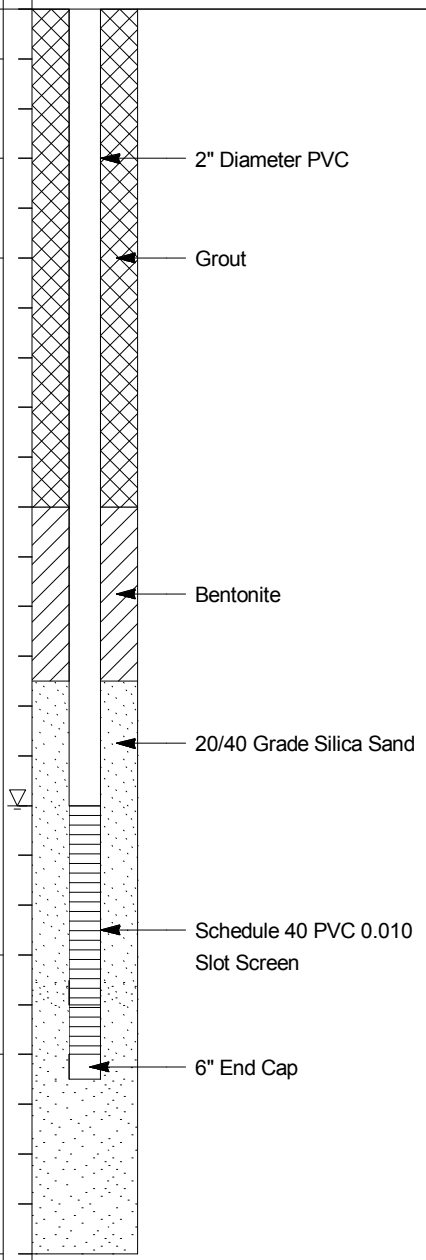
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
30					SILTY SAND (SM): light olive gray, dry, very fine-grained sand, 25'-26' interbedded siltstone CLAYEY SANDY SILT (ML): dark gray, dry, fine-grained sand, discontinous thin sand lenses SANDY SILTY CLAY (CL): dark gray, dry, very fine-grained sand, discontinuous thin silt lenses	Grout Bentonite 20/40 Grade Silica Sand
35					Interbedded clay and sand; clay, black, dry, hard; sand, olive gray, dry, loose, very fine-grained sand SAND (SP): olive gray, wet, loose, very fine-grained sand SILTY SAND (SM): olive gray, dry, firm, fine-grained sand	▽ Schedule 40 PVC 0.010 Slot Screen 6" End Cap
40					Total Depth = 40'	
45						
50						
55						

WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-5**
BORING LOCATION: Landfill F	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/23/16 / DATE FINISHED: 5/23/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 25.0 / SCREEN INTERVAL (ft.): 16'-21'
DRILLING EQUIPMENT: 8 5/8" OD HSA 2" Rods	DEPTH TO WATER ATD: 16 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.
					Surface Elevation:
					SILTY SAND (SM): dark grayish-brown, moist, loose, fine-grained sand, roots
					SANDY CLAY (CH): dark yellowish-brown, moist, soft, fine-grained sand, roots
					SILTY SANDY CLAY (CL): yellowish-brown, dark yellowish-brown lenses, moist, fine-grained sand, firm
5					SILTY SANDY CLAY (CL): yellowish-brown, dry, hard, very fine-grained sand, ferrous staining
					SILTY SAND (SM): light brownish-gray, mottled with brownish-yellow, soft, moist (slightly) increasing clay content to 8.5', fine-grained sand
					Slightly CLAYEY SILTY SAND (SM): light olive brown, loose, moist, fine-grained sand
10					Slightly CLAYEY SILTY SAND (SM): light olive brown, slightly firm, moist, trace of pebbles
15					SILTY SAND (SM): light olive brown, wet to very moist, firm, faint stratification, fine-grained sand
20					SANDSTONE (SS): light yellowish-brown, dry, hard, ferrous staining along fractures, layered
					Shale (SILTY CLAY) (CL): gray, dry, hard, very fine-grained sand, silt partings
25					Total Depth = 25'

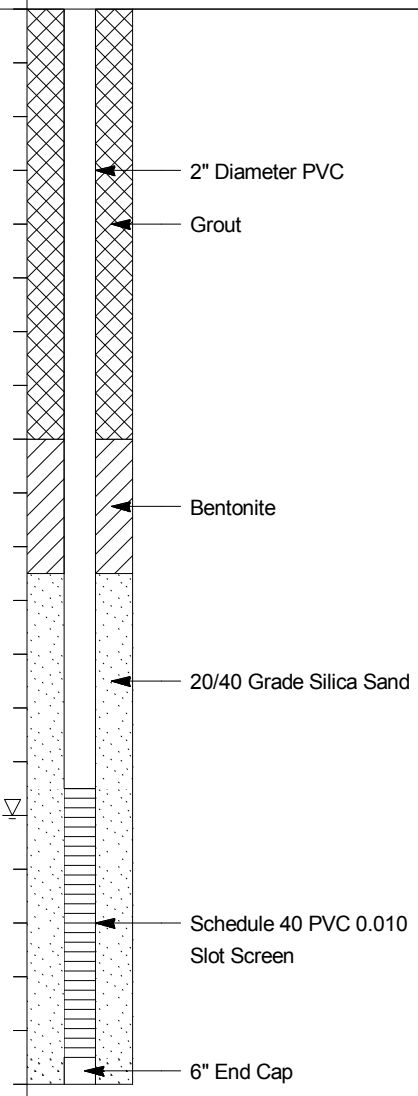
WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-6**
BORING LOCATION: Southwest Corner of Landfill	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/23/16 / DATE FINISHED: 5/23/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 20.0 / SCREEN INTERVAL (ft.): 14.5'-19.5
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 15 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
					Sandy Clay fill, few gravel fill to 4.5'	
5					SANDY SILTY CLAY (CL): pale brown, dry, hard, dark gray partings, very fine-grained sand	
					CLAYEY SAND SILT (ML): pale brown, dry, very stiff to hard, dark gray clay partings, fine-grained sand, increased ferrous staining after 8', few sand partings, wood fragments in a few partings	
10					SILTY SANDY CLAY (CH): pale brown, dry, hard, light brown partings to reddish-brown, fine-grained sand, ferrous staining	
15					Layered SILTY SAND (SM) and SANDY SILTY CLAY (CL): pale brown, some brown layers after 17', very moist to dry, fine-grained sand	
20					SANDY SILTY CLAY (CL): gray silt and sand, dark gray clay, layered, dry, hard, very fine sand	
					Total Depth = 20'	
25						



WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SFL MW-7**
BORING LOCATION: Southeast Side of Landfill F	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Tolunay-Wong	DATE STARTED: 5/2/17 / DATE FINISHED: 5/3/17
DRILLING METHOD: HSA with Continous Core Barell	TOTAL DEPTH (ft.): 55.0 / SCREEN INTERVAL (ft.): 50'-55'
DRILLING EQUIPMENT: CME 75	DEPTH TO WATER ATD: / CASING:
SAMPLING METHOD: 5' x 4.25" OD Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Grass at surface	
				2.6	SILTY SAND (SM): yellowish-brown, dry, firm, very fine-grained sand (fill)	
5						8" Diameter PVC
				1.1	SANDY CLAY (CH): gray, slightly moist, firm, very fine-grained sand	
10					SANDY CLAY (CH): brown, slightly moist to moist, firm, olive gray mottling and some ferrous staining, very fine-grained sand, fill to □ppro□i□ □t□l□12'	
				0.8	SANDY CLAY (CL): brown, slightly moist, very fine-grained sand, some lammination, couple of thin greenish-□r□□sand lenses	
15					CLAY (CL): dark brown, slightly moist, very fine-grained sand intervals (thin)	
				0.4	SANDY CLAY (CL) with lignite fragments: very dark brown, hard, very fine-grained sand, slightly moist to dry	
20					- Layered sand and clay with lignite 19.5'-20', very dark brown to light gray, hard, slightly moist, pyrite nodules	Bentonite Grout
				0.8	CLAY (CH): very dark gray, dry, hard, very thin sand lenses, greenish-gray, lignite fragments along bedding planes, platy	
25						
				0.4	CLAY (CH) with interbedded thin sand lenses: very dark gray, dry, hard, very fine-grained sand, lignite fragments along bedding planes in the clay, clay breaks along horizontal laminae, platy	
30						

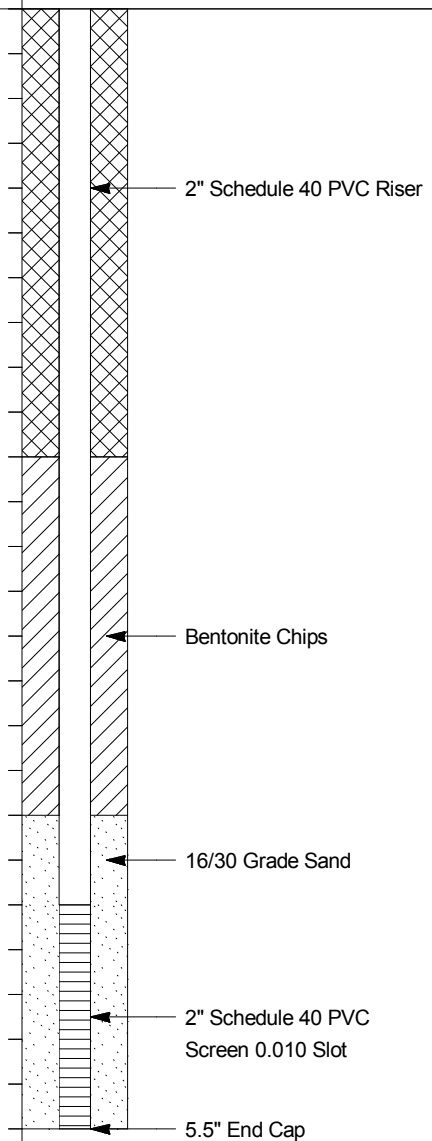
WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SFL MW-7 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.
				0.3	CLAY (CL): with numerous thin sand lenses interbedded with clay: very dark gray clay, greenish-gray sand, dry, hard, lignite fragments along bedding planes in the clay, very fine-grained sand, platy
35				0.3	CLAY (CH): with sand partings: very dark gray, dry, hard, very fine-grained sand, lignite fragments along bedding planes in the clay, platy, sand greenish-gray
40				0.2	CLAY (CH) with SAND partings: very dark gray, dry, hard, very fine-grained sand, lignite fragmenst along bedding planes in the clay, platy, sand greenish-gray
45				0.2	SAND (SP): olive gray, wet, loose, fine- to very fine-grained sand CLAY (CH): dark greenish-gray, dry to hard at 46' CLAY (CH): very dark gray, dry, hard, platy
50				0.2	SILTY SAND (SM): dark gray, wet, loose, very fine- to fine-grained sand Interbedded SAND (SP) and lignite: olive gray, wet, loost to firm 2" lignite seam SAND (SP) with thin lignite lenses, olive gray, wet, loose to firm
55					Total Depth = 55'
60					
65					

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SSP/AP MW-1**
BORING LOCATION: North of Sludge Pond	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 5/25/16 / DATE FINISHED: 5/26/16
DRILLING METHOD: HSA	TOTAL DEPTH (ft.): 40.0 / SCREEN INTERVAL (ft.): 29.5'-39.5'
DRILLING EQUIPMENT: 8 5/8" OD HSA Truck Mounded Rig	DEPTH TO WATER ATD: 30 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Silty sand, fly ash and sandy clay, fill to 3.5'	2" Diameter PVC
					SANDY CLAY (CL): light yellowish-brown, moist, very stiff, fine-grained sand	
5					SILT (ML): yellowish-red, moist, firm to hard, after 3" grading to clay, yellowish-red, moist, hard	
					SANDY CLAY (CL): reddish-brown, moist, very stiff, fine-grained sand	
10					Slightly SANDY CLAY (CH): reddish-brown, moist, very stiff, very fine-grained sand	Grout
					Lignite, black, dry, hard 12'-16'	
15					Slightly SANDY CLAY (CH): dark grayish-brown, dry, hard, very fine-grained sand	
20					SANDY CLAY (CL): dark grayish-brown, moist, hard, fine-grained sand, lithofied sandy lenses from 20.5' to 25', sandier and softer toward 25', platy where hard	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SSP/AP MW-1 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SILTY SAND (SM): dark olive brown, slightly moist, hard, platy when hard, fine-grained sand	Bentonite; 20/40 Grade Silica Sand
30					Slightly SILTY SAND (SM): dark olive brown, wet, loose, fine-grained sand	▽
35					CLAYEY SILTY SAND (SM-SC): dark olive brown, dry to moist, fine-grained sand, firm	Schedule 40 PVC 0.010 Slot Screen
40					Total Depth = 40'	6" End Cap
45						
50						
55						

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas		**Log of Well No. SSP MW-2**	
BORING LOCATION: West of Center of Scrubber Sludge Pone		GROUND SURFACE ELEVATION AND DATUM:	
DRILLING CONTRACTOR: Best Drilling		DATE STARTED: 6/2/06	DATE FINISHED: 6/2/06
DRILLING METHOD: CME 75 HSA		TOTAL DEPTH (ft.): 45.0	SCREEN INTERVAL (ft.): 38.5'-43.5'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA		DEPTH TO WATER ATD: 30	CASING:
SAMPLING METHOD: 5' x 4" Core Barrel		LOGGED BY: Daniel B. Haug, P.G.	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G.	REG. NO. 1773

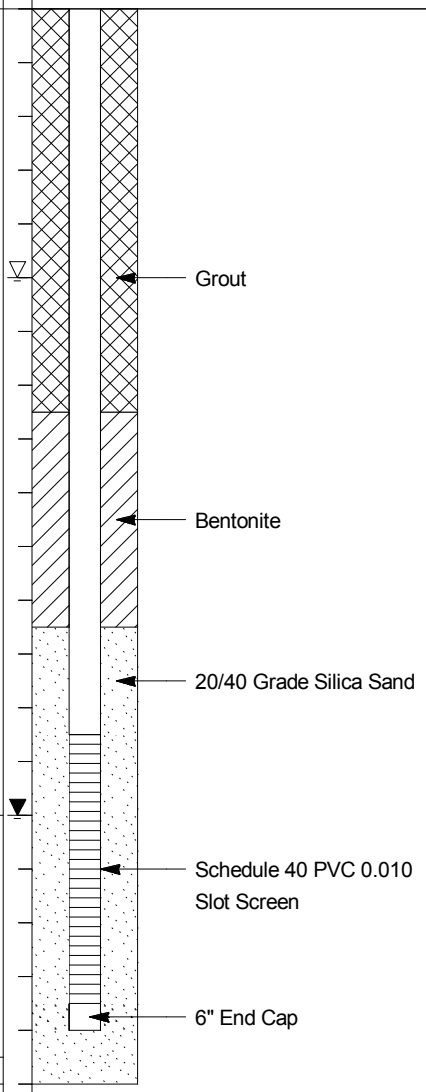
DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					9" ash, black, loose SANDY CLAY (CL): yellowish-brown, moist, firm, fine-grained sand, few pebbles	2" Diameter PVC
5					SANDY CLAY (CL): medium gray, moist, firm, fine-grained sand, few pebbles SANDY CLAY (CL): brown, moist, firm, fine-grained sand, few small gravel	
10					SANDY CLAY (CH) with small gravel: brown, moist, firm to stiff, fine-grained sand with pebbles and small gravel, clay clasts, some red and greenish-gray streaking, trace yellow nodules	
15					SANDY SILTY CLAY (CL): brown, moist, stiff, fine-grained sand, trace roots, few bedding planes	Grout
20					SILTY SAND (SM): light olive brown, moist, firm, fine-grained sand, bedding planes, brown organic lenses, very thin	
25						

WELL3

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SSP MW-2 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
30					CLAYEY SILTY SAND (SC-SM): light olive brown, moist, firm, fine-grained sand SILTY SAND (SM): light olive brown, wet, 30'-33', sandstone at 33', fine-grained sand Slightly SILTY SAND (SM): light olive brown, slightly moist, firm, fine-grained sand	Grout Bentonite 20/40 Grade Silica Sand
40					SANDY CLAY (CH) with few gravel: reddish-brown, wet, firm SANDY CLAY (CH): dark olive brown, moist, stiff, fine-grained sand	Schedule 40 PVC 0.010 Slot Screen 6" End Cap
45					CLAYEY SILTY SAND (SM-SC): dark olive brown, dry, dense, fine-grained sand Total Depth = 45'	
50						
55						



WELL3

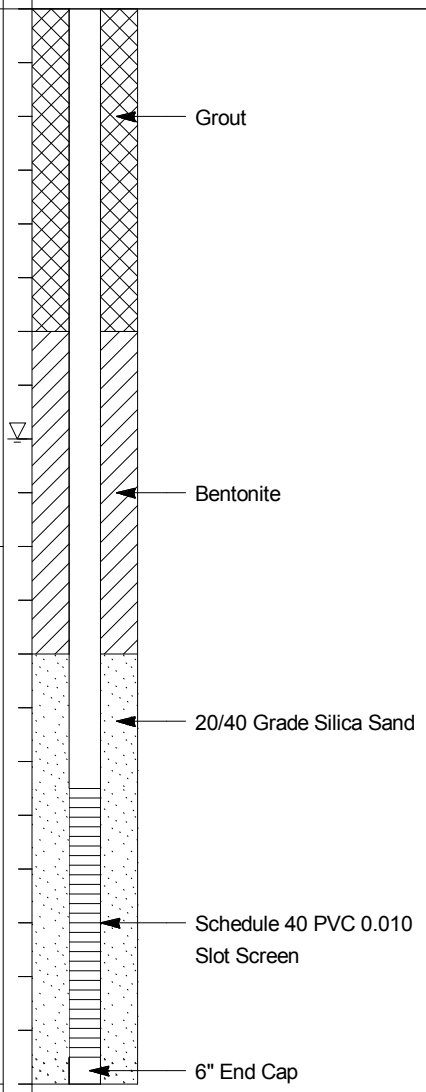
PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SSP MW-3**
BORING LOCATION: Southwest Corner of Scrubber Sludge Pond	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 6/3/16 / DATE FINISHED: 6/3/16
DRILLING METHOD: CME 75 HSA	TOTAL DEPTH (ft.): 45.0 / SCREEN INTERVAL (ft.): 39.5'-44.5'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA	DEPTH TO WATER ATD: 33 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Gravelly sandy clay at surface to 1.5'	
					SANDY CLAY (CL): yellowish-brown, moist, stiff, fine-grained sand	2" Diameter PVC
5					SANDY CLAY (CL) with gravel: yellowish-brown, moist, stiff, fine-grained sand	
10					CLAY and SANDY CLAY (CL-CH): yellowish-brown, reddish-brown, reddish-gray layers (fill), moist, stiff, fine-grained sand	
					Probably fill above 14'	
15					Slightly SANDY CLAY (CH): olive gray to 17.5', moist, stiff, fine-grained sand	Grout
					SANDY CLAY (CL): reddish-yellow, moist, stiff, fine-grained sand	
20					SANDY CLAY (CL): light reddish-brown, dry, stiff, fine-grained sand	
25						

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SSP MW-3 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY (CL): light brown, dry, hard	
					Sandstone, light brown, dry, hard 29.5'-30'	
30					1" of sandstone in core barrel, loose, fine-grained wet sand washed out of core barrel	
35					SILTY SAND (SM): light olive brown, wet, soft, fine-grained sand	
40					SILTY SAND (SM): light olive brown, wet, soft, fine-grained sand 1" lignite seam, brown, wet, soft at 41.75, very thin lignite lenses at 42' and 43.5'	
45					SILTY SAND (SM): light olive brown, wet, stiff, fine-grained sand Total Depth = 45'	
50						
55						



WELL3

PROJECT: TMPA Gibbons Creek Plant Carlos, Texas	**Log of Well No. SSP MW-4**
BORING LOCATION: Southeast Corner of Scrubber Sludge Pond	GROUND SURFACE ELEVATION AND DATUM:
DRILLING CONTRACTOR: Best Drilling	DATE STARTED: 6/3/16 / DATE FINISHED: 6/3/16
DRILLING METHOD: CME 75 HSA	TOTAL DEPTH (ft.): 50.0 / SCREEN INTERVAL (ft.): 43'-48'
DRILLING EQUIPMENT: CME 75 8 5/8" OD HSA	DEPTH TO WATER ATD: 44.75 / CASING:
SAMPLING METHOD: 5' x 4" Core Barrel	LOGGED BY: Daniel B. Haug, P.G.
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: Daniel B. Haug, P.G. / REG. NO. 1773

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					Surface Elevation:	
					Sand, gravel, clay fill	
					SANDY CLAY (CH): layered yellowish-brown, moist, stiff, fine-grained sand, probable fill	2" Diameter PVC
5					SANDY CLAY - CLAYEY SAND (CH-SC): brown, moist, firm, fine-grained sand, probable fill	
10					SANDY CLAY (CH): brown and olive brown layered (fill); moist, stiff, fine-grained sand	
					Probably fill above 14'	
15					SANDY CLAY (CL): yellowish-brown, moist, firm, fine-grained sand, black organic streaks	Grout
20					SANDY CLAY (CH): yellowish-red, very moist, fine-grained sand, soft CLAY (CH): dark reddish-brown, moist, firm	
					Lignite, black, moist, firm 22.5'-23'	
25					SANDY CLAY (CL): light yellowish-brown, moist, stiff, fine-grained sand	

PROJECT: TMPA Gibbons Creek Plant
Carlos, Texas

Log of Well No. SSP MW-4 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					SANDY CLAY (CL): light yellowish-brown, moist, very stiff, fine-grained sand, ferrous streaks	
30					SANDY CLAY (CL): light yellowish-brown, moist, vey stiff, fine-grained sand, ferrous streaks	Grout
35					Lignite, black, moist, firm 34.75'-35.25' SANDY CLAY (CL): dark grayish-brown, dry, hard, fine-grained sand	
					Lignite, dark brown, dry, hard 38.25'-38.75	
40					SANDY CLAY (CL): dark grayish-brown, dry, hard, fine-grained sand, interbedded black clay lenses Interbedded sand and clay to 44.75'; CLAY (CH): black, dry, hard and; SAND (SP): olive gray, dry, dense	Bentonite 20/40 Grade Silica Sand
45					SAND (SP): olive gray, moist, dense, fine-grained sand, wet	▽ Schedule 40 PVC 0.010 Slot Screen
					SANDY CLAY (CL): dark gray, moist, wet at 45'-46' (sandier interval), moist to dry below 46', hard, fine-grained sand	6" End Cap
50					Total Depth = 50'	
55						

WELL3

BLACK & VEATCH
CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

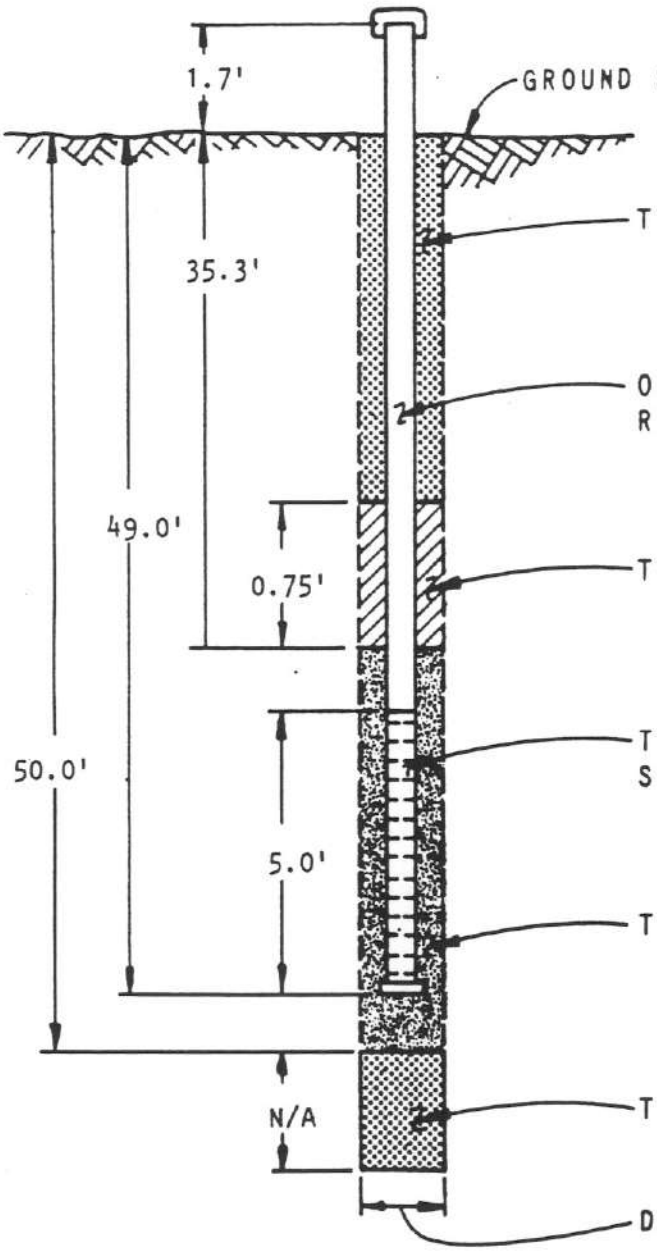
PIEZOMETER NO. B-11

CLIENT	PROJECT	PROJECT NO
Texas Municipal Power Agency	Gibbons Creek	14578

PROJECT LOCATION	COORDINATES	GROUND ELEVATION	DATE
Carlos, Texas	N378330 E3339148	266.8'	2-26-88

STRATUM MONITORED	INSPECTOR
Sandstone and clay	K. M. Blevins-McCosh

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh



TYPE OF SEAL	Volclay Grout and Initiator Cement/Bentonite
O.D. & TYPE OF RISER PIPE	2" PVC glued joints Schedule 40
TYPE OF SEAL	Bentonite Pellets 1/2"
TYPE AND SIZE OF SCREEN OR OPENINGS	.01" Slots
TYPE OF FILTER	Pea gravel
TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	4 1/2"

METHOD OF INSTALLATION: Boring drilled to completion; set riser pipe and screen; placed filter and seal; grouted to surface; poured surface pad

REMARKS: Installed piezometer in fluid-filled hole; added approximately 2 gallons of bentonite pellets for seal but only 9" arrived at 35'- rest hung up- didn't have any more bentonite developed well on 2-27-88 by flushing w/clean water for 3 minutes and blowing it out w/air

P-ST-021

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-11
SHEET 1 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N378329 E3339148	266.7'	50'	2-26-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Clearing in woods	K. M. Blevins-McCosh	2-26-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING						
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV

CORING						
CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD
TW	1					1.6
TW	2					0.8
TW	3					1.1
TW	4					1.2
TW	5					1.4
TW	6					1.2
TW	7					1.5
TW	8					1.3
TW	9					1.5
TW	10					1.5
TW	11					1.8
TW	12					1.9
TW	13					1.9
TW	14					1.7
TW	15					2.0

DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
1		Silty CLAY; reddish-brown; stiff; high plasticity; moist; organics; roots; iron staining (Top soil)	Advanced boring w/4 1/2" rotary wash
2			
3		Grading brown w/some sand; trace gravel below 2'	pp. 2.75
4		Grading w/some sandstone seams and some gravel w/trace roots below 4'	
5			
6			
7		Sandy CLAY; tan to buff; stiff; low plasticity; moist; iron stained; w/trace gravel and some silt	
8			
9		Clayey SILT; tan to buff; hard; high plasticity; moist; some sand; iron staining especially on joints; joints spaced 2-6" horizontal	
10			
1		Interbedded with silty sand below 10'	
2		Grading tan to brown with iron nodules and few cemented sand fragments; platy below 12'	
3			
4		Blocky structure below 14'	
15		Cemented sand grades out below 14';	
6			
7			
8		Cemented sand layer at 18'	
9		CLAY; greenish-grey; hard; high plasticity; moist w/silt filled joints and some silt; trace sand; trace lignite 22'-24'	
20			
1			
2			
3		Grading greenish-grey and dark grey banded below 23'	
4			
25			
6		Slickensided below 26'	
7			
8			
9			
30			

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-11
SHEET 2 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N378329 E3339148	266.7'	50'	2-26-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Clearing in woods	K. M. Blevins-McCosh	2-26-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING							CORING						DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD				
TW	16					1.8							1			
TW	17					1.9							2		Trace pyrite below 32'	pp. 4+
TW	18					1.9							3			
TW	19					2.0							4		Bands grading out below 34'	
TW	20					1.7							35			
TW	21					1.9							6			
TW	22					2.0							7			
TW	23					1.1							8			pp. 4+
TW	24					0							9			
													40			
													1		Trace lignite below 41'	
													2		Grading dark grey below 42'; 1/2" silt seam at 42.3'	
													3			
													4			pp. 4+
													45		Silty CLAY; dark grey; hard; high plasticity; dry; some iron staining	
													6			
													7			TW 24 no sample cored w/2' core barrel
										48'			8			
3"	1	2				17				1.3	0.3	65	9		SANDSTONE; argillaceous; grey; fine grained; slightly weathered; w/trace lignite; horizontal joints	
										50'			50			Bottom of boring 49.8'. Groundwater level unknown. Reamed 0-3' w/6 7/8" bit Reamed 3-50' w/4 1/2" bit. Installed 2-20' sections of 2" PVC pipe; 1-7.2' section of 2" PVC and 1-5' screen.
													1			
													2			
													3			
													4			
													55			
													6			
													7			
													8			
													9			
													60			

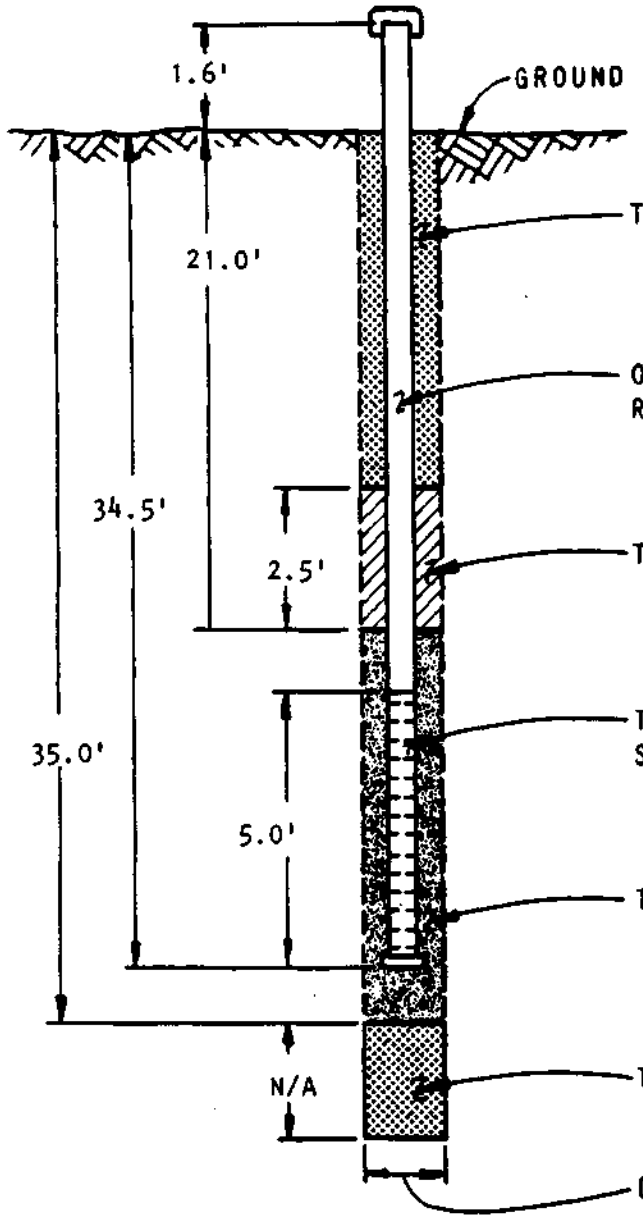
P-ISTI-D

BLACK & VEATCH
CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

PIEZOMETER NO. B-15

CLIENT: Texas Municipal Power Agency	PROJECT: Gibbons Creek		PROJECT NO: 14578
PROJECT LOCATION: Carlos, Texas	COORDINATES: N378200 E3342496	GROUND ELEVATION: 261.5'	DATE: 2-23-88
STRATUM MONITORED: Sandstone		INSPECTOR: K. M. Blevins-McCosh	
CHECKED BY: M. C. Schluter		APPROVED BY: L. J. Almaleh	



TYPE OF SEAL	Volclay grout and Initiator / Cement-Bentonite
O.D. & TYPE OF RISER PIPE	2" PVC-glued joints / Schedule 40
TYPE OF SEAL	Bentonite 1/2" Tablets
TYPE AND SIZE OF SCREEN OR OPENINGS	.01" Slots
TYPE OF FILTER	Pea gravel
TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	4 1/2"

METHOD OF INSTALLATION: Boring drilled to completion; set riser pipe and screen; placed filter and seal; grouted to surface; poured surface pad.

REMARKS: Flushed cuttings from hole; hole remained fluid filled during installation. Developed well on 2-27-88 by flushing well with clean water for 6 min. blew out water from well with air compressor water level recorded at 23'-10" from TOC

P-ST-021B

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-15
SHEET 1 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N378200 E3342496	261.5'	35.0'	2-23-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Open pasture	K. M. Blevins-McCosh	2-23-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING							CORING							DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD				
														1		Undifferentiated overburden	Advanced hole using 4 1/2" rotary wash
TW	1					1.2								2			
														3		Silty CLAY; brown; medium dense; stiff to hard; low plasticity; moist; some sand Grading to more silt at 3'-3.5'	
TW	2					0.8								4			
														5			
TW	3					0.5								6		Sandy CLAY; tan to brown; hard; low plasticity; moist; trace silt	
														7			pp. 4+
TW	4					0.8								8			
														9			Tried to push TW
														10		Clayey SAND; tan to brown; poorly graded; fine grained; some silt; iron staining	Tried SPT - cored at 10' so reamed w/rotary wash looked at cuttings
3"	1	2	10' 0	0	0	0								1			
														2		SANDSTONE; argillaceous; yellowish-tan; fine to medium grained; iron staining; highly weathered	Sample recovery below 12' in 1-3" sections
3"	2	2	12' 1.3	0	65	0								3			
														4		Argillaceous grading out below 14'	
3"	3	2	14' 1.2	0	60	0								15			
														6			
3"	4	2	16' 0	0	0	0								7		Grading grey below 16'	
														8			
3"	5	2	18' 0	0	0	0								9			Missed sample at 18-20' rotary washed. Continued drilling with 3" diameter 5' core barrel below 20'.
														20		Iron staining on joints below 20'	
														1			
														2		Lignite partings starting at 21.7'	
3"	6	5	20' 4.5	0.33	90	7								3			
														4		Grading greenish-grey below 23' and slightly argillaceous	
														25			
														6			
3"	7	5	25' 4	0.83	80	12								7			
														8		Lignite partings grading out below 27.5'	
														9			
			30'											30			

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-15
SHEET 2 of 2

CLIENT		PROJECT		PROJECT NO.
Texas Municipal Power Agency		Gibbons Creek SES		14578
PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N378200 E3342496	261.5'	35.0'	2-23-88
SURFACE CONDITIONS		INSPECTOR		DATE FINISH
Open pasture		K. M. Blevins-McCosh		2-23-88
CHECKED BY		APPROVED BY		
M. C. Schluter		L. J. Almaleh		

SAMPLING							CORING								
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD	DEPTH IN FEET	GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
										30'				1		Horizontal fractures spaced generally from 1-3" apart; numerous lignite partings below 30'	
							3"	8	5	2.2	0	44	0	2			
														3			
														4			
										35'				35			Bottom of boring 35'. Ground water level unknown. Reamed hole using 4 1/2" bit. Flush cuttings out of hole installed 1-20' section and 1-11' section of 2" PVC and 5' section of screen.
														6			
														7			
														8			
														9			
														40			
														1			
														2			
														3			
														4			
														45			
														6			
														7			
														8			
														9			
														50			
														1			
														2			
														3			
														4			
														55			
														6			
														7			
														8			
														9			
														60			

P I S T O D

BLACK & VEATCH
CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

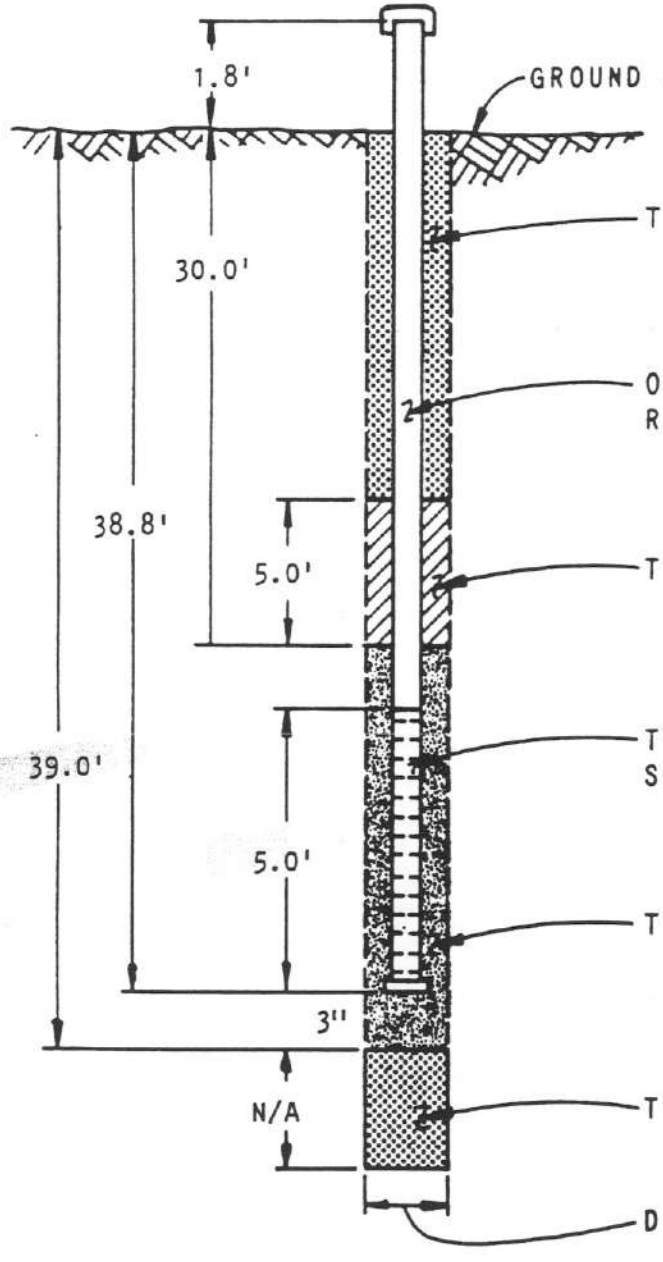
PIEZOMETER NO. B-16

CLIENT	PROJECT	PROJECT NO
Texas Municipal Power Agency	Gibbons Creek	14578

PROJECT LOCATION	COORDINATES	GROUND ELEVATION	DATE
Carlos, Texas	N379581 E3339416	261.7'	2-25-88

STRATUM MONITORED	INSPECTOR
Sandstone	K. M. Blevins-McCosh

CHECKED BY	APPROVED BY
M. C. Schluter	I. J. Almaleh



TYPE OF SEAL	Volclay grout Cement/Bentonite
O.D. & TYPE OF RISER PIPE	4" PVC flush jointed Schedule 40
TYPE OF SEAL	Bentonite Pellets 1/2"
TYPE AND SIZE OF SCREEN OR OPENINGS	.01" Slots
TYPE OF FILTER	Pea Gravel
TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	7"

METHOD OF INSTALLATION: Boring drilled to completion; set riser pipe and screen; placed filter and seal; grouted to surface; poured surface pad

REMARKS: Cuttings washed from hole; piezometer installed in fluid-filled hole; well developed on 2-27-88 by flushing hole w/clean water for 8 min. and pumping until dry. Water level recorded at 38.2' from TOC.

P-ST-02

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-16
SHEET 1 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N379581 E3339416	261.7'	39.0'	2-25-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Clearing in woods	K. M. Blevins-McCosh	2-25-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING							CORING							DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD				
TW	1												0.7	1		Silty CLAY; dark brown; medium dense; high plasticity; moist; organics; roots (Top soil)	Boring advanced using 6 7/8" rotary wash
TW	2												1.5	2		CLAY; dark brown; stiff; high plasticity; moist; some silt	
TW	3												1.1	3		Trace gravel and iron staining below 4'	pp. 1.25
TW	4												1.8	4			pp. 1.5
TW	5												1.7	5			pp. 2.0
TW	6												1.8	6		Silty CLAY; brown; stiff; high plasticity; moist; iron staining; jointed	
TW	7												1.5	7		Gypsum seam at 7.5' and 9'; slickensided below 7'	
TW	8												1.7	8			
TW	9												1.7	9		Horizontal and 45° to vertical joints below 10' filled w/gypsum crystals and iron staining	
TW	10												1.7	10			pp. 2.5
TW	11												1.6	1			pp. 2.75
TW	12												1.3	2			
TW	13												1.3	3		Gypsum filled vertical joint at 14'- joint is 4" long; banded brown and dark brown below 14'. Gypsum filled joint spacing generally 8"-1.5'	
TW	14												1.2	4			
	15												0.4	15			pp. 2.75 pp. 3.5
														6			
														7			pp. 3.0
														8		CLAY; olive grey to dark grey; hard; high plasticity; moist; with silt seams on joints below 20'; trace iron staining; trace sand in joints; occasional silty sand pockets below 16'; thinly bedded	
														9			
														20			pp. 4+
														1			
														2			pp. 4+
														3			
														4			pp. 4+
														25			pp. 4+
														6			
														7			
														8			
														9		Lignitic below 29' - lignite seams up to 1"	
														30			

PIST-03

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-16
SHEET 2 of 2

CLIENT		PROJECT		PROJECT NO.
Texas Municipal Power Agency		Gibbons Creek SES		14578
PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N379581 E3339416	261.7'	39.0'	2-25-88
SURFACE CONDITIONS		INSPECTOR		DATE FINISH
Clearing in woods		K. M. Blevins-McCosh		2-25-88
	CHECKED BY	APPROVED BY		
	M. C. Schluter	L. J. Almaleh		

SAMPLING							CORING							DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD				
3"	1	1	0.2	0	20	0								1		SANDSTONE; argillaceous; greenish-grey; fine grained; weathered	
			31'											2			
TW	16					0.5								3		Clayey SAND; greenish-grey; partially cemented; fine grained; poorly graded; some silt (maybe extremely weathered sandstone)	
			34'											4			
3"	2	5	4	1.3	80	26								35		SANDSTONE; argillaceous; greenish-grey; fine grained; weathered; w/lignite seams; horizontal and vertical joints - weathering on joints	
														6			
														7			
														8			
			39'											9			Bottom of boring at 39'. Groundwater level unknown. Reamed hole w/6 7/8" bit. Installed 3-10' sections 4" PVC and 1-5.8' section 4" PVC; set 1-5' section .01" slot screen.
														40			
														1			
														2			
														3			
														4			
														45			
														6			
														7			
														8			
														9			
														50			
														1			
														2			
														3			
														4			
														55			
														6			
														7			
														8			
														9			
														60			

BLACK & VEATCH
CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

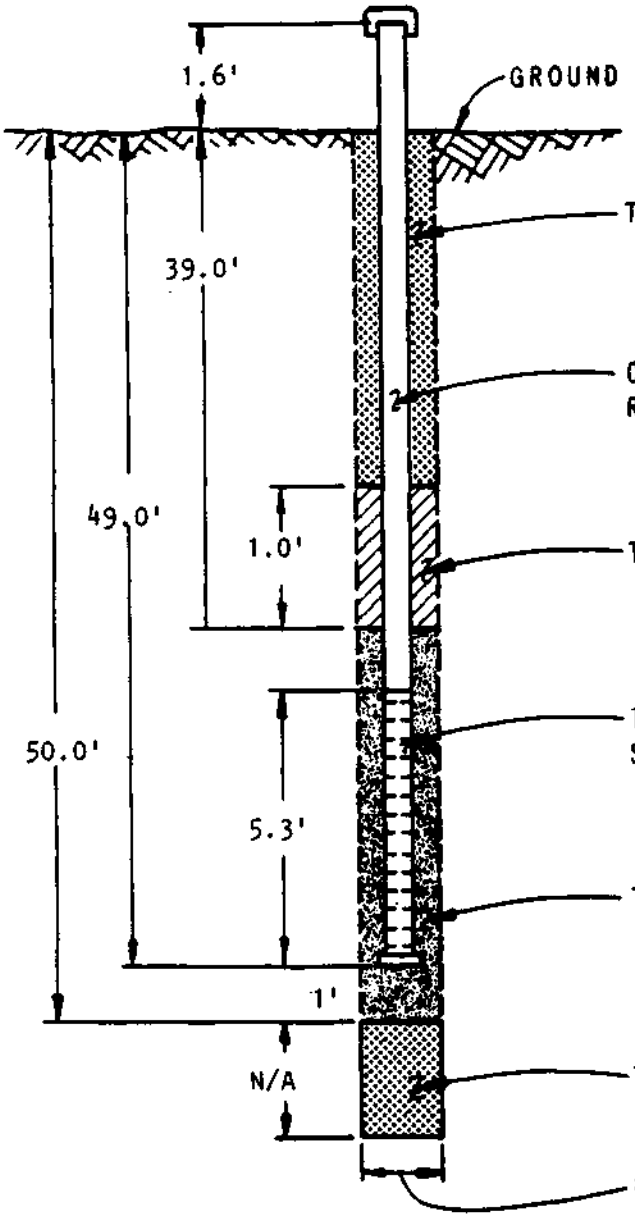
PIEZOMETER NO. B-17

CLIENT	PROJECT	PROJECT NO
Texas Municipal Power Agency	Gibbons Creek	14578

PROJECT LOCATION	COORDINATES	GROUND ELEVATION	DATE
Carlos, Texas	N381087 E3340991	292.3'	2-17-88

STRATUM MONITORED	INSPECTOR
Clay	K. M. Blevins-McCosh

CHECKED BY	APPROVED BY
M. C. Schluter	I. J. Almaleh



TYPE OF SEAL	Volclay grout & Initiator (Cement-Bentonite)
O.D. & TYPE OF RISER PIPE	4" PVC flush-jointed Schedule 40
TYPE OF SEAL	Bentonite Pellets 1/4"
TYPE AND SIZE OF SCREEN OR OPENINGS	.01" Slots
TYPE OF FILTER	Pea Gravel
TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	7"

METHOD OF INSTALLATION: Boring drilled to completion' set riser pipe and screen; placed filter and seal; grouted to within 5' of ground surface filled remaining 5' with dry grout and cuttings

REMARKS: Developed well on 2-27-88 by flushing w/clean water for 7 min.; pumped well dry; water level recorded at 48.5' from TOC.

P-ST-0218

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-17
SHEET 1 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N381083 E3340991	292.3'	50.0'	2-17-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Clearing in pasture	K. M. Blevins-McCosh	2-17-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING							CORING								
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD	DEPTH IN FEET	CLASSIFICATION OF MATERIAL	REMARKS
														1	10" Undifferentiated overburden	Advanced hole by rotary wash
TW	1					1.5								2	Silty CLAY; brown; stiff; med. plasticity; very moist; w/some roots	pp. 1.0
TW	2					1.2								3	Roots grade out below 3'	
														4	Grading grey below 2.5 with trace sand	pp. 4+
TW	3					1.1								5	1" sand layer at 4.25'	pp. 4+
														6		
TW	4					0.9								7	Clayey SILT; brown to tan; hard; poorly graded; moist; with sand; trace lignite below 11'	
TW	5					1.2								8		
														9		
TW	6					0.9								10		
														1		
TW	7					0.7								2	CLAY; tan; hard; high plasticity; moist with cemented sand stringers; platy in areas with iron staining at plate faces	pp. 4+
TW	8					1.3								3		
														4		
TW	9					1.5								15	Grading silty with 2" sandy silt seam at approximately 15.7'	
TW	10					0.9								6	Clayey SILT; tan to buff; hard; low plasticity; moist; with some sand and iron staining on plates	
														7		
TW	11					0.8								8	Sandy SILT; tan to buff; poorly graded; moist with some clay; trace iron staining	
														9		
TW	12					1.2								20	Silty CLAY; brown/tan mottled; hard; high plasticity; moist; with trace sand and iron staining; platy	
														1		
TW	13					1.8								2	3" sandy silt layer at 22.5'; grading brown below 23	
														3		
TW	14					1.2								4	CLAY; brown; hard; high plasticity; moist; iron staining on plates and joints; gypsum crystals at 25.8'	
														25		
TW	15					1.4								6		pp. 4+
														7	Clayey SILT; brown; high plasticity; moist; iron staining	
														8	CLAY; greenish-grey; high plasticity; hard; moist; with trace silt; trace iron	
														9		
														30		

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-17
SHEET 2 of 2

CLIENT: Texas Municipal Power Agency		PROJECT: Gibbons Creek SES	PROJECT NO.: 14578
PROJECT LOCATION: Carlos, Texas	COORDINATES: N381083 E3340991	ELEVATION (DATUM): 292.3' / TOTAL DEPTH: 50.0'	DATE START: 2-17-88
SURFACE CONDITIONS: Clearing in pasture		INSPECTOR: K. M. Blevins-McCosh	DATE FINISH: 2-17-88
		CHECKED BY: M. C. Schluter	APPROVED BY: L. J. Almaleh

SAMPLING: SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORING: CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD	DEPTH IN FEET	SAMPLE TYPE / GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
TW	16						TW	16					2.0	1			
														2			
TW	17						TW	17					1.8	3			
														4			
TW	18						TW	18					1.8	35		Grading to trace silt below 35'	
														6			
TW	19						TW	19					1.7	7			
														8		Grading to laminated banded (greenish-grey and grey) below 38' with trace lignite at 39.8';	
TW	20						TW	20					1.9	9			
														40			
TW	21						TW	21					1.9	1			
														2			
TW	22						TW	22					1.8	3			
														4		Banding grading out below 44'	
TW	23						TW	23					2.0	45			
														6			pp. 4+
TW	24						TW	24					1.8	7		Banded below 47'	
														8			
TW	25						TW	25					1.6	9			
														50			Bottom of boring at 50'. Groundwater level unknown. Hole reamed using 6 1/2" diameter auger bit.
														1			
														2			
														3			
														4			Set 4-10' and 1-4.6' section of 4" diameter schedule 40 threaded flush-jointed PVC pipe, 5' screen.
														55			
														6			
														7			
														8			
														9			
														60			

P I S E 3 6 D

BLACK & VEATCH
CONSULTING ENGINEERS

PIEZOMETER INSTALLATION LOG

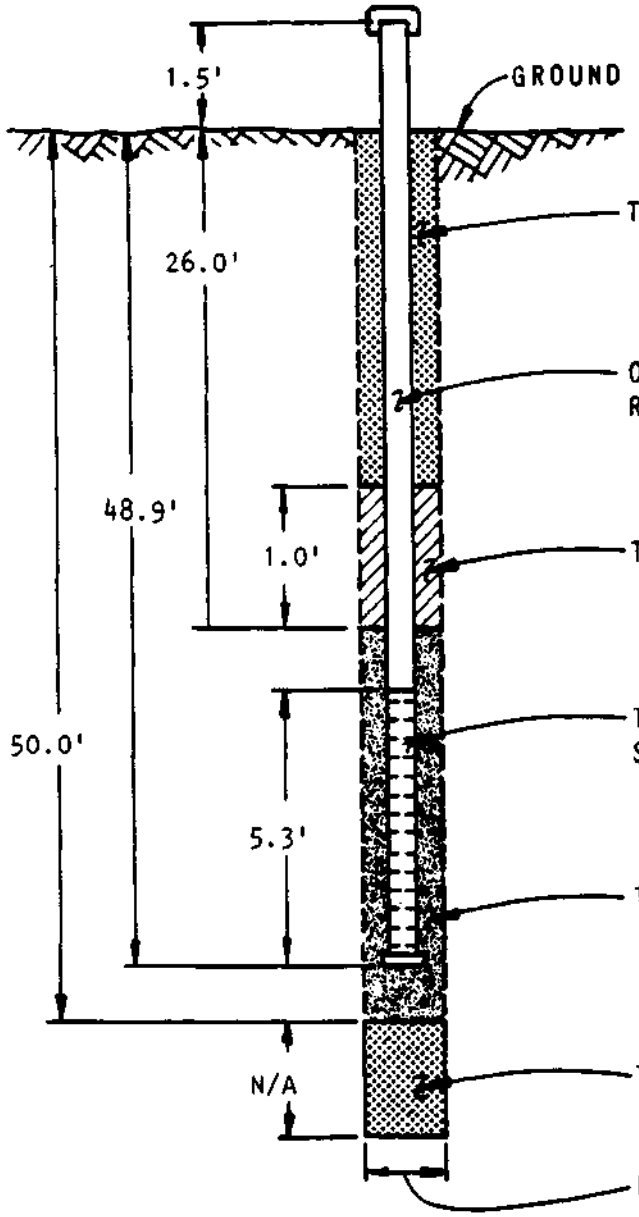
PIEZOMETER NO. B-18

CLIENT	PROJECT	PROJECT NO
Texas Municipal Power Agency	Gibbons Creek	14578

PROJECT LOCATION	COORDINATES	GROUND ELEVATION	DATE
Carlos, Texas	N381539 E3342922	269.1'	2-18-88

STRATUM MONITORED	INSPECTOR
Clay	K. M. Blevins-McCosh

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh



TYPE OF SEAL	Volclay Grout & Initiator (Cement-Bentonite)
O.D. & TYPE OF RISER PIPE	4" PVC flush-jointed Schedule 40
TYPE OF SEAL	Bentonite Pellets
TYPE AND SIZE OF SCREEN OR OPENINGS	.01" Slots
TYPE OF FILTER	Pea Gravel
TYPE OF SEAL	N/A
DIAMETER OF BOREHOLE	7"

METHOD OF INSTALLATION: Boring drilled to completion; set riser pipe and screen; placed filter and seal; grouted to surface; poured surface pad.

REMARKS: Riser pipe started to rise so had to fill with water during installations; well developed on 2-27-88 by flushing w/clean water for 7 min., and then pumping well dry. Water level 50' from TOC.

P-ST-0218

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-18
SHEET 1 of 2

CLIENT	PROJECT	PROJECT NO.
Texas Municipal Power Agency	Gibbons Creek SES	14578

PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N381539 E3342922	269.1	50.0'	2-17-88

SURFACE CONDITIONS	INSPECTOR	DATE FINISH
Clearing in pasture	K. M. Blevins-McCosh	2-17-88

CHECKED BY	APPROVED BY
M. C. Schluter	L. J. Almaleh

SAMPLING							CORING								
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD	DEPTH IN FEET	CLASSIFICATION OF MATERIAL	REMARKS
														1	Undifferentiated overburden	Boring advanced using 4 1/2" rotary wash
														2		
TW	1					0.6								3	Sandy SILT; tan; poorly graded; moist; with cemented sand stringers; some clay; iron staining	
														4		
TW	2					1.5								5	Clayey SILT; reddish-brown; hard; high plasticity; moist; trace sand; iron staining; grading some sand below 7'	
														6		
TW	3					1.3								7		pp. 4+
														8		
TW	4					1.7								9	Sandy SILT; reddish-brown; poorly graded; moist; with clay and iron staining; grading to silty clay; interbedding with lignitic clay below 10'; few gypsum crystals	
														10		
TW	5					1.3								1		
														2		
TW	6					1.5								3	Silty CLAY; dark brown to black; hard; highly plastic; moist; lignitic; iron staining; with trace sand below 16'	
														4		pp. 4+
TW	7					0.9								15		
														6		
TW	8					0.9								7		pp. 4+
														8	Silty SAND; tan; poorly graded; moist; trace clay; iron staining	
TW	9					0.7								9		pp. 4+
														20	Clayey SILT; greenish-grey; highly plastic; moist; with trace thin silty sand laminae; trace iron staining	
TW	10					1.4								1		
														2		
TW	11					1.8								3		
														4	Sandy SILT; greenish-grey; poorly graded; moist; with trace to some clay	
TW	12					0.8								25		
														6	Silty CLAY; greenish-grey; high plasticity; moist; with some sandy silt layers	
TW	13					1.2								7		
														8		
TW	14					1.3								9		
														30		

BLACK & VEATCH
ENGINEERS-ARCHITECTS

LOG OF BORING

BORING NO. B-18
SHEET 2 of 2

CLIENT		PROJECT		PROJECT NO.
Texas Municipal Power Agency		Gibbons Creek SES		14578
PROJECT LOCATION	COORDINATES	ELEVATION (DATUM)	TOTAL DEPTH	DATE START
Carlos, Texas	N381539 E3342922	269.1	50.0'	2-17-88
SURFACE CONDITIONS		INSPECTOR		DATE FINISH
Clearing in pasture		K. M. Blevins-McCosh		2-17-88
CHECKED BY		APPROVED BY		
M. C. Schluter		L. J. Almaleh		

SAMPLING							CORING									
SAMP TYPE	SAMP NO.	SET 6"	2ND 6"	3RD 6"	N VAL	SAMP RECV	CORE SIZE	RUN NO.	RUN LENG	RUN RECV	RQD RECV	% RECV	RQD	DEPTH IN FEET	GRAPHICS LOG	CLASSIFICATION OF MATERIAL	REMARKS
TW	15					1.4											
TW	16					1.4										2" sandy silt seam at 32.5'; grading to low plasticity; sandy silt filled fractures spacing about 4" in sample	
TW	17					1.5										Grading to interbedded green and greenish grey silty clay below 34'; trace cemented sand	
TW	18					0.9										2" sandy silt seam at 37.8'	
TW	19					2.0										Grading greenish-grey below 38'	
TW	20					2.1										Grading to high plasticity below 40'; sandy silt seam grading out; becoming greenish grey and grey banded clay	
TW	21					2.0											
TW	22					1.7										Slickensides at 44.5'	
TW	23					1.9											
TW	24					1.6											Bottom of boring at 50'. Groundwater level unknown. Reamed hole twice using 6 3/4" auger bit. Installed 4-10' and 1-5.5' section of 4" PVC, 1-5' section of screen.

PISTON