



February 4, 2025

#4D24381

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Hazardous Materials and Waste Management Division
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RE: Response to **Comments:** *Groundwater Statistical Limits Update February 2024 and MW-11 Background Milner Landfill*

Ms. McCarter:

Souder, Miller & Associates (SMA) has prepared this letter in response to the Division's January 9, 2025 letter regarding **Comments:** *Groundwater Statistical Limits Update February 2024 and MW-11 Background Milner Landfill* on behalf of Twin Enviro Services, Apex Waste Solutions.

The Division's comments are italicized and included in this response letter for ease of discussion.

Comment 1.

The Division generally agrees with the updated background periods used for the individual wells. However, please use December 2018 as the start of background period for MW-13 or explain why it is excluded. Also, there appears to be an error in Table 14, where the end background date is May-2017 for As, Ba, Cr, Vn, and Zn. Please correct/revise accordingly.

Comment 1 Response:

The limits for MW-13 have been updated to include the December 2018 sampling event as the start of the background data, and the background dataset for MW-13 now includes 9 sampling events.

Attachment 1 includes updated Tables 7 through 14 from the *Groundwater Statistical Limits Update* prepared by SMA in February 2024. Please note, the tables included in Attachment 1 have the same numbering as the 2024 *Groundwater Statistical Limits Update*. Table 14 displays the updated limits for MW-13.

Attachment 2 includes the outlier analysis, trend tests, and prediction limit analysis for MW-13.

Comment 2.

The proposed prediction limits for MW-12 for most of the Appendix IB inorganic constituents as well as other specific well-constituent pairs appear to be unrealistically high to be able to identify a statistically significant increase (SSI) above background, and are significantly higher than the Division's evaluation of the data. The Division requests that the Facility re-run the statistics for the following well-constituent pairs. The Division's evaluation of the data resulted in the following statistical limits:

- a. Lead in MW-1: 0.106 milligrams per liter (mg/L)

- b. Arsenic in MW-8: 0.0114 mg/L
- c. Arsenic in MW-12: 0.0551 mg/L
- d. Barium in MW-12: 1.954 mg/L
- e. Beryllium in MW-12: 0.00715 mg/L
- f. Cadmium in MW-12: 0.00521 mg/L
- g. Chromium in MW-12: 0.0855 mg/L
- h. Cobalt in MW-12: 0.0696 mg/L
- i. Copper in MW-12: 0.12 mg/L
- j. Lead in MW-12: 0.118 mg/L
- k. Nickel in MW-12: 0.144 mg/L
- l. Selenium in MW-12: 0.00595 mg/L
- m. Vanadium in MW-12: 0.298 mg/L
- n. Zinc in MW-12: 0.666 mg/L
- o. Arsenic in MW-13: 0.0487 mg/L

Comment 2 Response:

Prediction limits were re-calculated for the Comment 2 well-constituent pairs, which are included as Attachment 3. These limits were prepared using Sanitas Version v.10.0.24 and the same settings and methods described in the *Groundwater Statistical Limits Update* and produced the same results for all well-constituent pairs except arsenic at MW-13. The proposed prediction limit for arsenic at MW-13 differed as a result of changes described in Comment 1.

Should the Division desire a direct comparison of the limits provided in Comment 2 and the limits provided in Attachment 3, please provide full statistical analysis of the limits included in Comment 2. Or, we welcome a conference call to have a more detailed technical discussion.

Comment 3.

A number of proposed prediction limits are based upon elevated reporting limits even though there are lower detected values. This approach results in a prediction limit that may be inappropriately high and not representative of the data population. The Division requests that the maximum detected value be used as the prediction limit unless all results are non-detect. Where all results are non-detect, the Division requests that the prediction limit be based upon the reporting limit that is most representative of the data set, rather than the maximum reporting limit, which may be elevated for a sampling event.

- a. Zinc in MW-4: The maximum detected value of 0.04 mg/L is preferred
- b. Antimony in MW-8: The maximum detected value of 0.0004 mg/L is preferred.
- c. Thallium in MW-8: The maximum detected value of 0.0006 mg/L is preferred.
- d. Beryllium in MW-9: The maximum detected value of 0.0077 mg/L is preferred.
- e. Copper in MW-11: The reporting limit of 0.01 mg/L is preferred.
- f. Nickel in MW-11: The maximum detected value of 0.013 mg/L is preferred.
- g. Antimony in MW-12: The maximum detected value of 0.0004 mg/L is preferred.

Comment 3 Response:

The prediction limits proposed in Comment 3 are a reasonable diversion from the approved Statistical Analysis Plan and have been incorporated in the Statistical Baseline and Limits for Monitoring Wells Tables included in Attachment 1. These prediction limits have been marked on their respective tables to identify prediction limits

that were adjusted from the calculated limit for ease of comparison with any future statistical analysis. It should be noted that future monitoring events where the laboratory method requires dilution will likely result in reporting limits higher than the prediction limit.

Monitoring Well MW-11 Background and Limits

The analysis for MW-11 that was previously submitted via email has been included in Attachment 4. Additionally, the prediction limits and baseline data are presented on Table 15, which is part of Attachment 1. The changes proposed in Comment 3 have been included on Table 15.

Should you have any questions, please contact me at 303-239-9011 or via email.

Sincerely,

SOUDER, MILLER & ASSOCIATES, INC.

Graham Cottle

Graham Cottle, PE

Senior Engineer

Graham.Cottle@soudermiller.com

Enc: Attachment 1: Tables 7-15: Statistical Baseline and Limits for Monitoring Wells
Attachment 2: MW-13 Outlier Analysis, Trend Tests, and Prediction Limits
Attachment 3: Comment 2 Well-Constituent Pairs Prediction Limits
Attachment 4: MW-11 Outlier Analysis, Trend Tests, and Prediction Limits

XC: Scott Cowman, Director – Routt County Environmental Health Department
Alan Goldich – Routt County Planning Department
Lacie Coupe – Twin Enviro Services, Apex Waste Solutions
Rebecca Lindeman, PE – Jardon Engineering & Inspections LLC
Sarah Foreman, PE – CDPHE Solid Waste Permitting -Engineering Design Unit

Attachment 1:

Tables 7-15: Statistical Baseline and Limits for Monitoring Wells

Table 7: Statistical Baseline and Limits for MW-1

Analyte	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jun-1985	Oct-2006	Dec-2022	32	0	Not Significant	None	Normal	330
Carbonate as CaCO ₃	mg/L	Jun-1985	Oct-2006	Dec-2022	32	100	Not Significant	None	NDs	2
Chloride	mg/L	Jun-1985	Oct-2006	Dec-2022	32	0	Not Significant	None	Normal	8.4
Nitrate as N	mg/L	Jun-1985	Oct-2006	Dec-2022	32	31	Not Significant	None	Non-Normal	0.68
Nitrite as N	mg/L	Aug-1986	Oct-2006	Dec-2022	32	91	Not Significant	None	NDs	0.02
Sulfate	mg/L	Jun-1985	Oct-2006	Dec-2022	32	0	Not Significant	None	Normal	370
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	57	Not Significant	None	Non-Normal	0.0036
Arsenic, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	29	Not Significant	None	Non-Normal	0.0013
Barium, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	0	Not Significant	None	Non-Normal	0.083
Beryllium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	71	Not Significant	None	Non-Normal	0.00022
Cadmium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	71	Not Significant	None	Non-Normal	0.00013
Chromium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	64	Not Significant	None	Non-Normal	0.0027
Cobalt, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	0	Not Significant	None	Normal	0.0026
Copper, total	mg/L	Jun-1985	Oct-2006	Dec-2022	32	88	Not Significant	None	NDs	0.02
Lead, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	0	Not Significant	None	Normal	0.23
Nickel, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	100	Not Significant	None	NDs	0.008
Selenium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	43	Not Significant	None	Non-Normal	0.0008
Silver, total	mg/L	Apr-1994	Jun-2016	Dec-2022	14	100	Not Significant	None	NDs	0.0001
Thallium, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	78	Not Significant	None	NDs	0.001
Vanadium, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	88	Not Significant	None	NDs	0.01
Zinc, total	mg/L	Jun-1985	Jun-2016	Dec-2022	13	15	Not Significant	6/21/2022	Normal	0.017

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 8: Statistical Baseline and Limits for MW-3

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jun-1985	Oct-2006	Dec-2022	29	0	Not Significant	None	Normal	610
Carbonate as CaCO ₃	mg/L	Jun-1985	Oct-2006	Dec-2022	29	100	Not Significant	None	NDs	2
Chloride	mg/L	Jun-1985	May-2009	Jun-2016	14	0	Not Significant	None	Normal	72
Nitrate as N	mg/L	Aug-1986	Jun-2016	Dec-2022	11	27	Not Significant	None	Non-Normal	0.87
Nitrite as N	mg/L	Aug-1986	Oct-2006	Dec-2022	29	69	Not Significant	None	Non-Normal	0.06
Sulfate	mg/L	Jun-1985	Oct-2006	Dec-2022	29	0	Not Significant	None	Normal	4500
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	Non-Normal	0.0008
Arsenic, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	Non-Normal	0.0004
Barium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	9	Not Significant	None	Normal	0.029
Beryllium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.0002
Cadmium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.0002
Chromium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.001
Cobalt, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	0	Not Significant	None	Normal	0.017
Copper, total	mg/L	Jun-1985	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.02
Lead, total	mg/L	Nov-2012	Jun-2016	Dec-2022	11	9	Not Significant	None	Normal	0.025
Nickel, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	45	Not Significant	None	Non-Normal	0.04
Selenium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	45	Not Significant	None	Non-Normal	0.0004
Silver, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.0002
Thallium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.0002
Vanadium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	11	100	Not Significant	None	NDs	0.02
Zinc, total	mg/L	Jun-1985	Jun-2016	Dec-2022	11	0	Not Significant	None	Normal	0.026

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 9: Statistical Baseline and Limits for MW-4

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jun-1985	Nov-2002	Jun-2012	20	0	Not Significant	None	Non-Normal	370
Carbonate as CaCO ₃	mg/L	Jun-1985	Oct-2006	Dec-2022	32	100	Not Significant	None	NDs	2
Chloride	mg/L	Jun-1985	Nov-2002	Jun-2012	20	0	Not Significant	None	Non-Normal	14
Nitrate as N	mg/L	Jun-1985	Jun-2016	Dec-2022	15	36	Negative	None	Non-Normal	2.2
Nitrite as N	mg/L	Aug-1986	Oct-2006	Dec-2022	32	75	Not Significant	None	Non-Normal	0.04
Sulfate	mg/L	Jun-1985	Oct-2006	Dec-2022	32	0	Negative	None	Normal	1500
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Apr-1994	Oct-2006	Dec-2022	33	97	Not Significant	None	NDs	0.0031
Arsenic, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	31	Not Significant	11/17/2016	Normal	0.0021
Barium, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	3	Not Significant	6/27/2012	Normal	0.06
Beryllium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	100	Not Significant	None	NDs	0.00047
Cadmium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	0	Negative	None	Normal	0.0011
Chromium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	40	Not Significant	None	Non-Normal	0.0065
Cobalt, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	0	Not Significant	None	Normal	0.011
Copper, total	mg/L	Jun-1985	Jun-2016	Dec-2022	15	67	Not Significant	None	Non-Normal	0.03
Lead, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	20	Negative	None	Non-Normal	0.0026
Nickel, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	40	Not Significant	None	Non-Normal	0.02
Selenium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	13	0	Not Significant	5/24/2017	Normal	0.00048
Silver, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	100	Not Significant	None	NDs	0.00093
Thallium, total	mg/L	Apr-1994	Oct-2006	Dec-2022	32	97	Not Significant	None	NDs	0.0002
Vanadium, total	mg/L	Apr-1994	Jun-2016	Dec-2022	15	93	Positive	None	NDs	0.01
Zinc, total	mg/L	Jun-1985	Oct-2006	Dec-2022	33	45	Negative	None	Non-Normal	0.04*

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 10: Statistical Baseline and Limits for MW-6

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jul-1996	Oct-2006	Dec-2022	32	0	Not Significant	5/22/2017	Normal	260
Carbonate as CaCO ₃	mg/L	Jul-1996	Oct-2006	Dec-2022	33	94	Not Significant	None	NDs	11
Chloride	mg/L	Jul-1996	Oct-2006	Dec-2022	33	0	Negative	None	Normal	8.6
Nitrate as N	mg/L	Jul-1996	Oct-2006	Dec-2022	33	0	Negative	4/30/2006	Normal	3.2
Nitrite as N	mg/L	Jul-1996	Oct-2006	Dec-2022	33	100	Not Significant	None	NDs	0.01
Sulfate	mg/L	Jul-1996	Oct-2006	Dec-2022	33	0	Negative	None	Normal	110
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Jul-1996	Oct-2006	Dec-2022	33	100	Not Significant	None	NDs	0.0004
Arsenic, total	mg/L	Jul-1996	Oct-2006	Dec-2022	32	22	Negative	1/14/2021	Non-Normal	0.0024
Barium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	32	0	Not Significant	1/14/2021	Normal	0.17
Beryllium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	86	Not Significant	None	NDs	0.00089
Cadmium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	93	Not Significant	None	NDs	0.0004
Chromium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	12	33	Not Significant	6/24/2022, 1/14/2021	Non-Normal	0.0016
Cobalt, total	mg/L	Jul-1996	Jun-2016	Dec-2022	13	0	Not Significant	1/14/2021	Normal	0.001
Copper, total	mg/L	Jul-1996	Oct-2006	Dec-2022	33	100	Not Significant	Not Significant	NDs	0.02
Lead, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	29	Not Significant	None	Non-Normal	0.011
Nickel, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	93	Not Significant	None	NDs	0.022
Selenium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	31	0	Not Significant	12/22/2014, 12-9/2010	Normal	0.0056
Silver, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	93	Positive	None	NDs	0.00017
Thallium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	33	91	Not Significant	None	NDs	0.0005
Vanadium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	33	79	Not Significant	None	NDs	0.033
Zinc, total	mg/L	Jul-1996	Jun-2016	Dec-2022	14	50	Not Significant	None	Non-Normal	0.061

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 11: Statistical Baseline and Limits for MW-8

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jul-1996	Nov-2008	Dec-2015	14	0	Not Significant	None	Normal	280
Carbonate as CaCO ₃	mg/L	Jul-1996	Oct-2006	Dec-2022	32	100	Not Significant	None	NDs	2
Chloride	mg/L	Jul-1996	Jun-2016	Dec-2022	14	0	Not Significant	None	Normal	64
Nitrate as N	mg/L	Jul-1996	Oct-2006	Dec-2022	32	0	Not Significant	None	Normal	8.9
Nitrite as N	mg/L	Jul-1996	Oct-2006	Dec-2022	32	47	Not Significant	None	Non-Normal	0.06
Sulfate	mg/L	Jul-1996	Oct-2006	Dec-2022	32	0	Not Significant	None	Normal	160
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	97	Not Significant	None	NDs	0.0004*
Arsenic, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	6	Not Significant	None	Normal	0.025
Barium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	0	Not Significant	None	Non-Normal	0.76
Beryllium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	31	Negative	None	Non-Normal	0.0025
Cadmium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	13	Negative	None	Normal	0.0018
Chromium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	56	Not Significant	None	Non-Normal	0.049
Cobalt, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	13	Negative	None	Normal	0.029
Copper, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	65	Not Significant	None	Non-Normal	0.09
Lead, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	13	Negative	None	Normal	0.068
Nickel, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	62	Not Significant	None	Non-Normal	0.054
Selenium, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	19	Not Significant	None	Non-Normal	0.0063
Silver, total	mg/L	Jul-1996	Jun-2016	Dec-2022	16	63	Not Significant	None	Non-Normal	0.002
Thallium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	76	Not Significant	None	NDs	0.0006*
Vanadium, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	24	Not Significant	None	Non-Normal	0.1
Zinc, total	mg/L	Jul-1996	Oct-2006	Dec-2022	34	21	Not Significant	None	Non-Normal	0.42

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 12: Statistical Baseline and Limits for MW-9

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Jun-2011	Jun-2016	Dec-2022	14	0	Not Significant	None	Normal	240
Carbonate as CaCO ₃	mg/L	Jun-2011	Jun-2016	Dec-2022	14	95	Not Significant	None	NDs	9
Chloride	mg/L	Jun-2011	Jun-2012	Dec-2022	20	0	Not Significant	None	Normal	9.3
Nitrate as N	mg/L	Jun-2011	Jun-2012	Dec-2022	20	5	Not Significant	None	Normal	0.59
Nitrite as N	mg/L	Jun-2011	Jun-2012	Dec-2022	20	80	Not Significant	None	NDs	0.02
Sulfate	mg/L	Jun-2011	Jun-2012	Dec-2022	20	0	Not Significant	None	Normal	140
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	100	Not Significant	None	NDs	0.004
Arsenic, total	mg/L	Jun-2011	Jun-2011	May-2017	10	10	Not Significant	11/30/2011	Normal	0.03
Barium, total	mg/L	Jun-2011	Jun-2011	May-2017	10	0	Not Significant	11/30/2011	Normal	0.69
Beryllium, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	35	Negative	None	Non-Normal	0.0077*
Cadmium, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	30	Negative	None	Non-Normal	0.0066
Chromium, total	mg/L	Jun-2011	Jun-2011	May-2017	10	10	Not Significant	11/30/2011	Normal	0.26
Cobalt, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	20	Not Significant	None	Non-Normal	0.078
Copper, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	35	Not Significant	None	Non-Normal	0.17
Lead, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	20	Negative	None	Non-Normal	0.14
Nickel, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	20	Not Significant	None	Non-Normal	0.18
Selenium, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	30	Not Significant	None	Non-Normal	0.007
Silver, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	45	Negative	None	Non-Normal	0.01
Thallium, total	mg/L	Jun-2011	Jun-2012	Dec-2022	20	20	Not Significant	None	Non-Normal	0.0021
Vanadium, total	mg/L	Jun-2011	Jun-2011	May-2017	10	0	Not Significant	11/30/2011	Normal	0.081
Zinc, total	mg/L	Jun-2011	Jun-2011	May-2017	10	10	Not Significant	11/30/2011	Normal	0.2

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 13: Statistical Baseline and Limits for MW-12

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	940
Carbonate as CaCO ₃	mg/L	Dec-2018	Dec-2018	Dec-2022	9	100	Not Significant	None	NDs	2
Chloride	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	37
Nitrate as N	mg/L	Dec-2018	Dec-2018	Dec-2022	9	78	Not Significant	None	NDs	0.39
Nitrite as N	mg/L	Dec-2018	Dec-2018	Dec-2022	9	67	Not Significant	None	Non-Normal	0.02
Sulfate	mg/L	Dec-2018	Dec-2018	Dec-2022	8	0	Not Significant	6/2/2021	Normal	570
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	89	Not Significant	None	NDs	0.0004*
Arsenic, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	0.075
Barium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	2.7
Beryllium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	11	Not Significant	None	Normal	0.015
Cadmium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	11	Not Significant	None	Normal	0.011
Chromium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	11	Not Significant	None	Normal	0.12
Cobalt, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	0.14
Copper, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	33	Not Significant	None	Normal	0.27
Lead, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	0.16
Nickel, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	56	Not Significant	None	Non-Normal	0.18
Selenium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	11	Not Significant	None	Normal	0.013
Silver, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	44	Not Significant	None	Non-Normal	0.0016
Thallium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	33	Not Significant	None	Non-Normal	0.0019
Vanadium, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	33	Not Significant	None	Non-Normal	0.37
Zinc, total	mg/L	Dec-2018	Dec-2018	Dec-2022	9	0	Not Significant	None	Normal	1.4

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 14: Statistical Baseline and Limits for MW-13

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	830
Carbonate as CaCO ₃	mg/L	Nov-2018	Nov-2018	Dec-2022	9	100	Not Significant	None	NDs	2
Chloride	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	22
Nitrate as N	mg/L	Nov-2018	Nov-2018	Dec-2022	9	78	Not Significant	None	NDs	0.1
Nitrite as N	mg/L	Nov-2018	Nov-2018	Dec-2022	9	89	Not Significant	None	NDs	0.03
Sulfate	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	750
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	100	Not Significant	None	NDs	0.004
Arsenic, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	0.19
Barium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	2
Beryllium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	33	Not Significant	None	Non-Normal	0.0044
Cadmium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	11	Not Significant	None	Normal	0.0054
Chromium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	0.11
Cobalt, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Negative	None	Normal	0.062
Copper, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	33	Not Significant	None	Non-Normal	0.11
Lead, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	0.14
Nickel, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	67	Not Significant	None	Non-Normal	0.1
Selenium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	44	Not Significant	None	Non-Normal	0.003
Silver, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	67	Not Significant	None	Non-Normal	0.001
Thallium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	44	Not Significant	None	Non-Normal	0.001
Vanadium, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	44	Not Significant	None	Non-Normal	0.14
Zinc, total	mg/L	Nov-2018	Nov-2018	Dec-2022	9	0	Not Significant	None	Normal	0.7

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Table 15: Statistical Baseline and Limits for MW-11

Analytes	Units	Start of Period of Record	Start of Background	End of Background	Data Points in Background	% Non-detects in Background Data	Temporal Trends in Background Data	Rejected Outliers in Background Data	Background Data Distribution	Current Statistical Limit
Appendix IA: General Groundwater Quality Indicator Parameters										
Bicarbonate as CaCO ₃	mg/L	Dec-2018	Dec-2018	May-2023	7	0	Not Significant	5/16/2023	Normal	820
Carbonate as CaCO ₃	mg/L	Dec-2018	Dec-2018	May-2023	8	100	Not Significant	None	NDs	2
Chloride	mg/L	Dec-2018	Dec-2018	May-2023	7	0	Not Significant	5/16/2023	Normal	33
Nitrate as N	mg/L	Dec-2018	Dec-2018	May-2023	8	50	Not Significant	None	Non-Normal	1.4
Nitrite as N	mg/L	Dec-2018	Dec-2018	May-2023	8	50	Not Significant	None	Non-Normal	0.024
Sulfate	mg/L	Dec-2018	Dec-2018	May-2023	6	0	Not Significant	6/2/2021, 5/16/2023	Normal	1100
Appendix IB: Inorganic Constituents										
Antimony, total	mg/L	Dec-2018	Dec-2018	May-2023	8	100	Not Significant	None	NDs	0.0004
Arsenic, total	mg/L	Dec-2018	Dec-2018	May-2023	8	0	Not Significant	None	Normal	0.0065
Barium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	0	Not Significant	None	Normal	0.27
Beryllium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	50	Not Significant	None	Non-Normal	0.00087
Cadmium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	25	Not Significant	None	Normal	0.00084
Chromium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	38	Not Significant	None	Normal	0.011
Cobalt, total	mg/L	Dec-2018	Dec-2018	May-2023	8	0	Not Significant	None	Normal	0.025
Copper, total	mg/L	Dec-2018	Dec-2018	May-2023	8	100	Not Significant	None	NDs	0.01*
Lead, total	mg/L	Dec-2018	Dec-2018	May-2023	8	25	Not Significant	None	Non-Normal	0.013
Nickel, total	mg/L	Dec-2018	Dec-2018	May-2023	8	88	Not Significant	None	NDs	0.013*
Selenium, total	mg/L	Dec-2018	Dec-2018	May-2023	7	29	Not Significant	5/16/2023	Normal	0.00057
Silver, total	mg/L	Dec-2018	Dec-2018	May-2023	8	88	Not Significant	None	NDs	0.0001
Thallium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	88	Not Significant	None	NDs	0.0001
Vanadium, total	mg/L	Dec-2018	Dec-2018	May-2023	8	88	Not Significant	None	NDs	0.01
Zinc, total	mg/L	Dec-2018	Dec-2018	May-2023	8	25	Not Significant	None	Non-Normal	0.04

Notes:

mg/L: milligrams per liter.

NDs: Background data sets with greater than 75% non-detects.

Intrawell parametric prediction limits were set for all background data sets with normal distributions.

Non-parametric intrawell prediction limits were set for all background data sets with non-normal distribution or greater than 75% non-detects.

*: Predition Limits set to limit other than calculated predition limit as requested by the Division

Attachment 2:

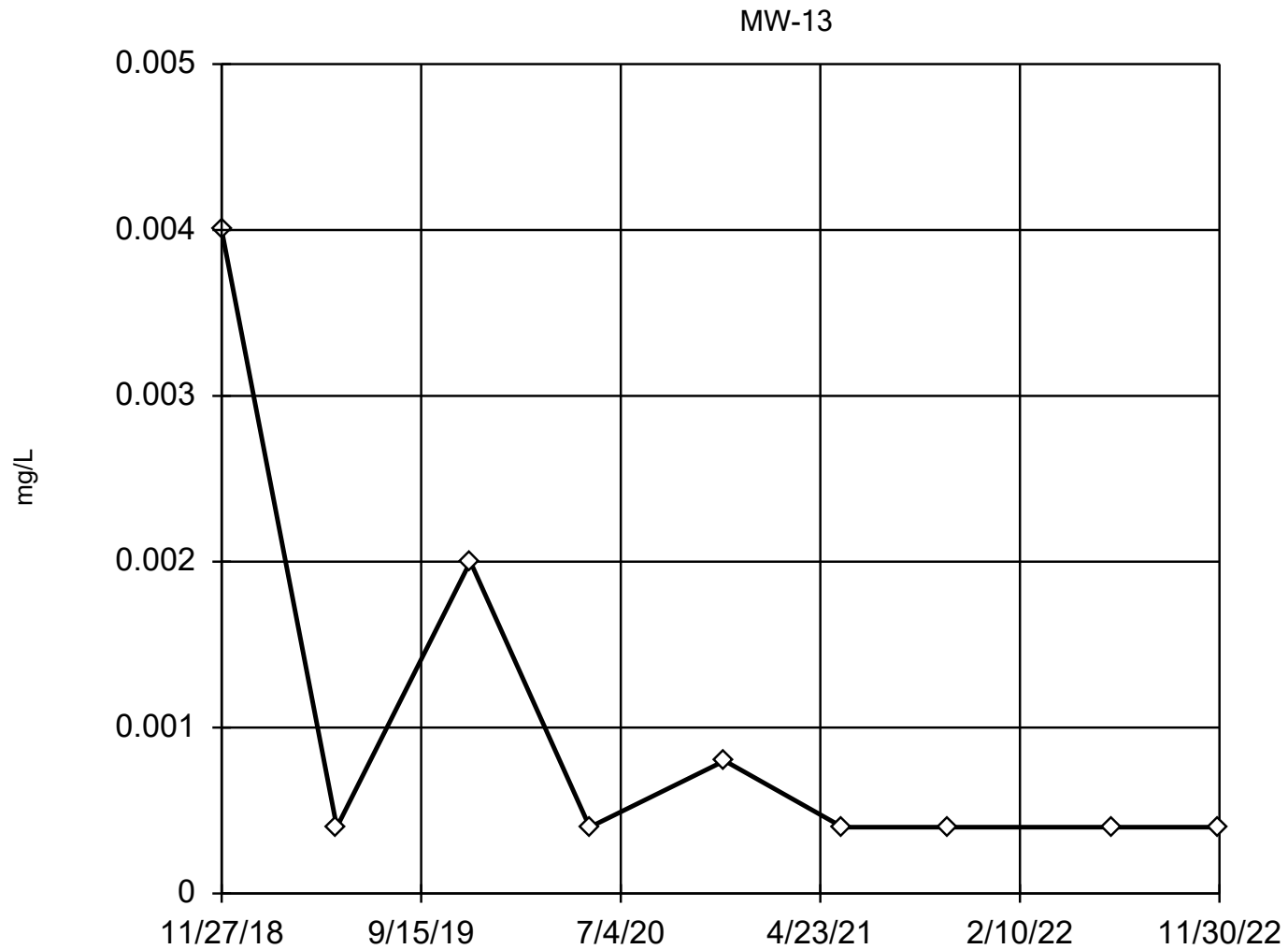
Monitoring Well MW-13 Outlier Analysis, Trend Tests, and Prediction Limits

Background Dataset Outlier Screening

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 2/3/2025, 1:11 PM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony, total (...)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.001...	0.0012347	unknown	ShapiroWilk
Arsenic, total (m...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.018209	0.015569	ln(x)	ShapiroWilk
Barium, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.31876	0.38492	ln(x)	ShapiroWilk
Beryllium, total ...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.001...	0.0014543	ln(x)	ShapiroWilk
Bicarbonate as Ca...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	759.56	22.417	normal	ShapiroWilk
Cadmium, total (m...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.000...	0.0010365	ln(x)	ShapiroWilk
Carbonate as CaCO...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	2	0	unknown	ShapiroWilk
Chloride (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	17.089	1.4836	normal	ShapiroWilk
Chromium, total (...)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.016862	0.020904	ln(x)	ShapiroWilk
Cobalt, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.012603	0.012486	ln(x)	ShapiroWilk
Copper, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.033222	0.035874	unknown	ShapiroWilk
Lead, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.01764	0.02643	ln(x)	ShapiroWilk
Nickel, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.026778	0.030511	unknown	ShapiroWilk
Nitrate as N, dis...	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.042222	0.03383	unknown	ShapiroWilk
Nitrite as N, dis...	MW-13	n/a	n/a	n/a	EPA 1989	0.05	9	0.012222	0.0066667	unknown	ShapiroWilk
Selenium, total (...)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.000...	0.0009714	ln(x)	ShapiroWilk
Silver, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.000...	0.0003...	unknown	ShapiroWilk
Sulfate (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	629.67	37.878	normal	ShapiroWilk
Thallium, total (...)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.000...	0.0003...	unknown	ShapiroWilk
Vanadium, total (...)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.04	0.044486	ln(x)	ShapiroWilk
Zinc, total (mg/L)	MW-13	No	n/a	n/a	EPA 1989	0.05	9	0.0968	0.13872	ln(x)	ShapiroWilk

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.0010222, std. dev.
0.0012347, critical Tn
2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.67476
Critical = 0.829

Constituent: Antimony, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

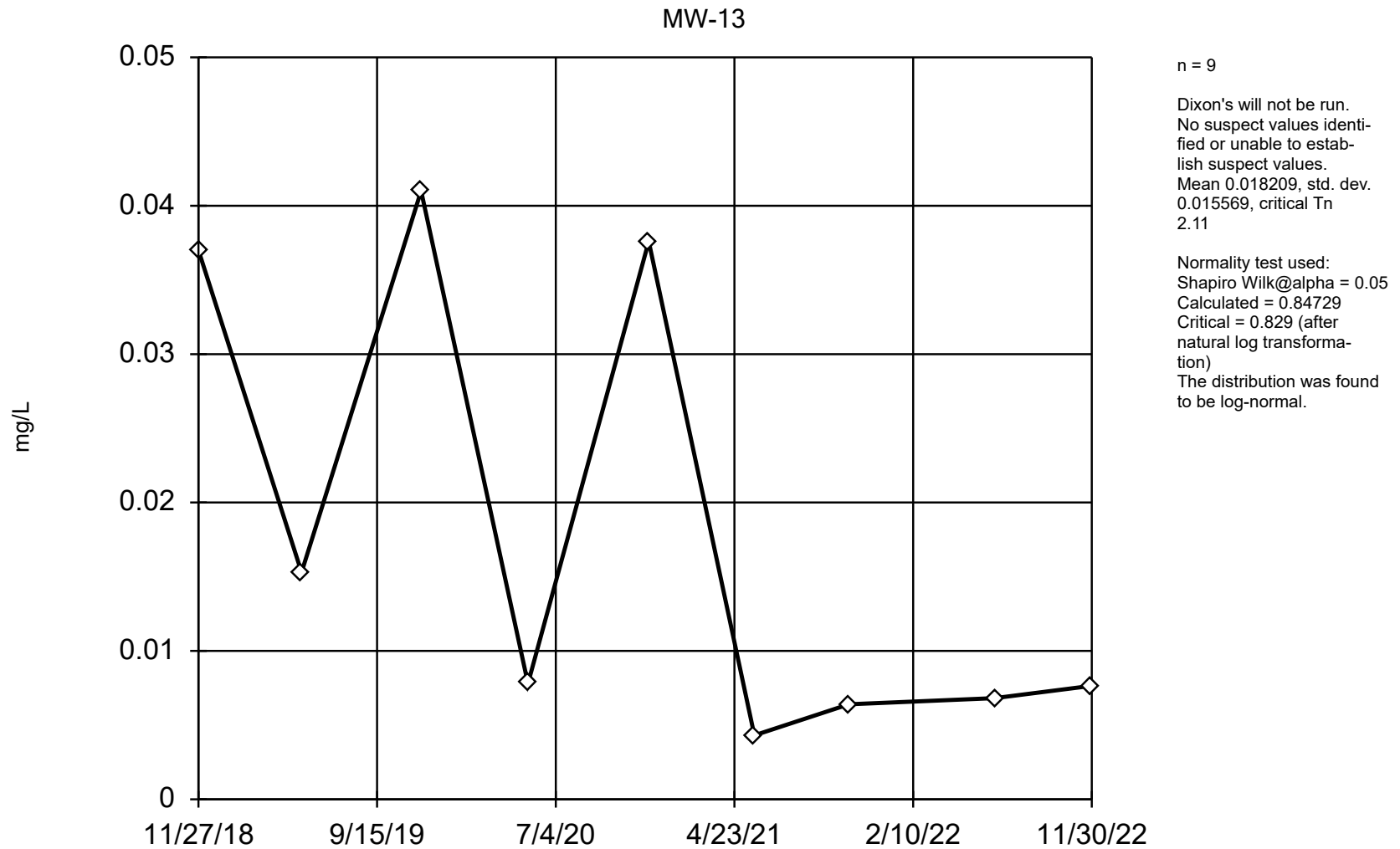
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Antimony, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	<0.004
5/15/2019	<0.0004
11/27/2019	<0.002
5/20/2020	<0.0004
12/4/2020	<0.0008
5/26/2021	<0.0004
10/28/2021	<0.0004
6/24/2022	<0.0004
11/30/2022	<0.0004

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Arsenic, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

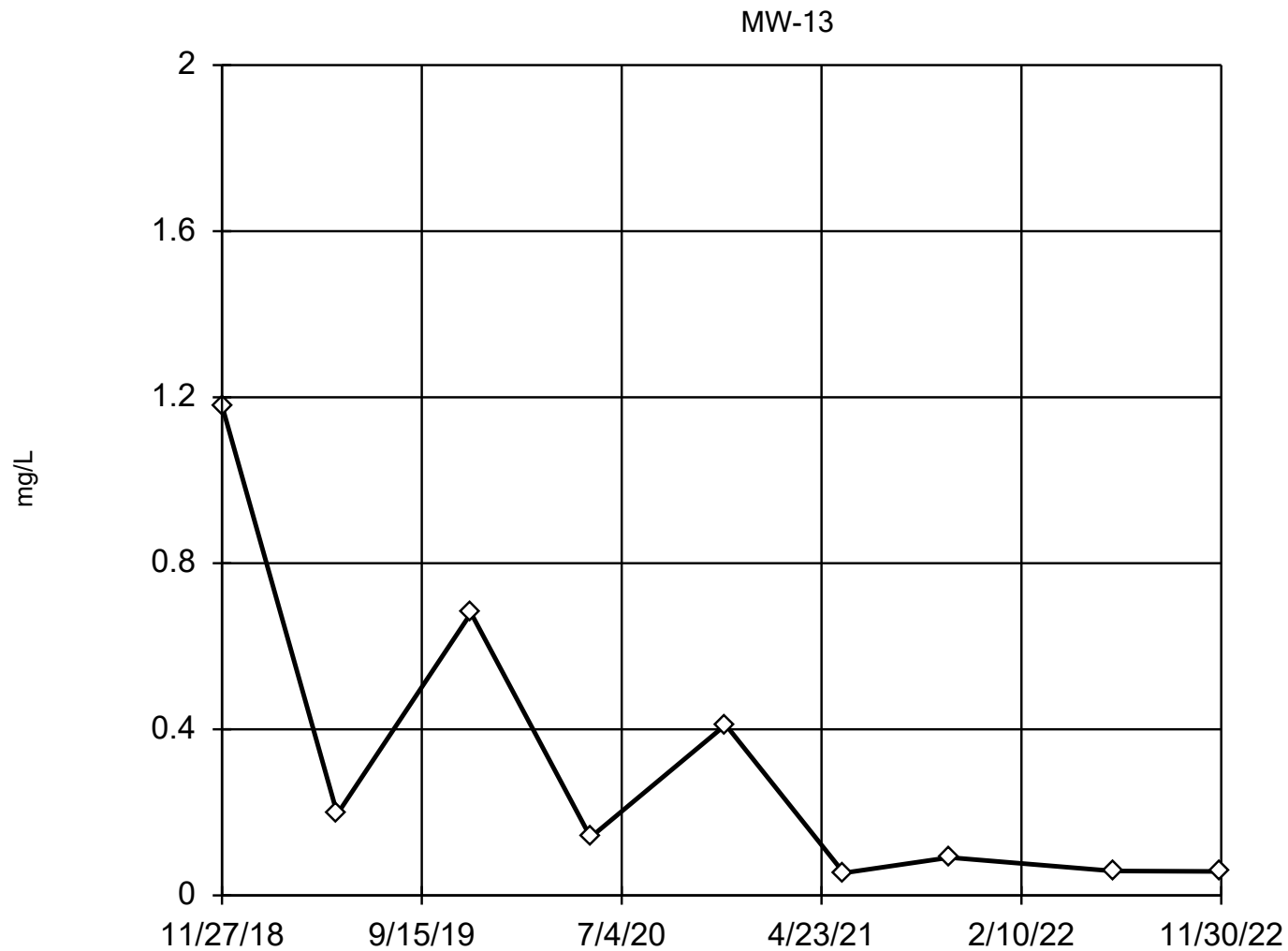
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Arsenic, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.037
5/15/2019	0.0153
11/27/2019	0.041
5/20/2020	0.0078
12/4/2020	0.0376
5/26/2021	0.00431
10/28/2021	0.0064
6/24/2022	0.00682
11/30/2022	0.00765

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.31876, std. dev. 0.38492, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.89899
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Barium, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

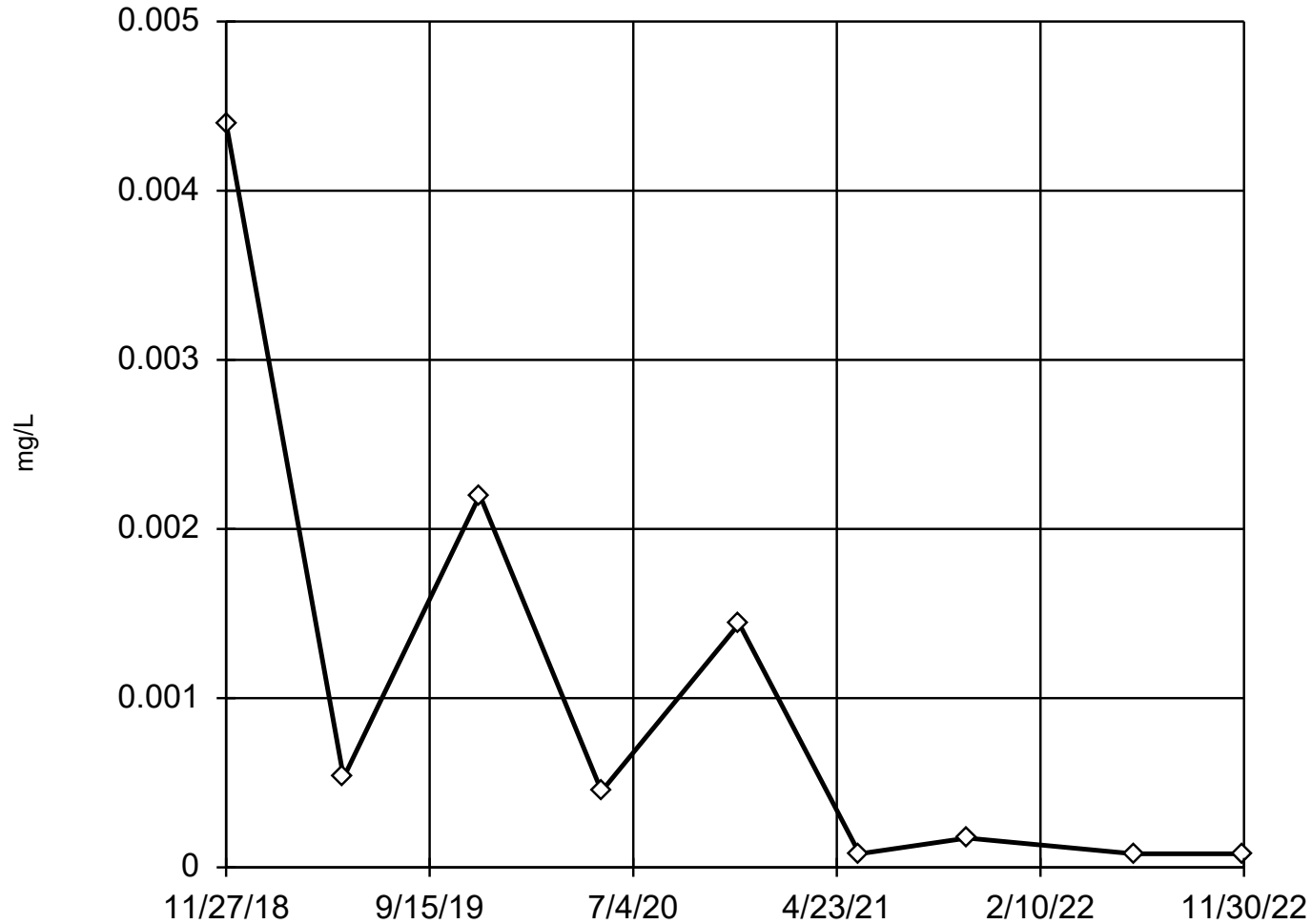
Constituent: Barium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	1.18
5/15/2019	0.196
11/27/2019	0.68
5/20/2020	0.14
12/4/2020	0.411
5/26/2021	0.054
10/28/2021	0.0914
6/24/2022	0.0587
11/30/2022	0.0577

EPA Screening (suspected outliers for Dixon's Test)

MW-13



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0010481, std. dev. 0.0014543, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.89636
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Beryllium, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

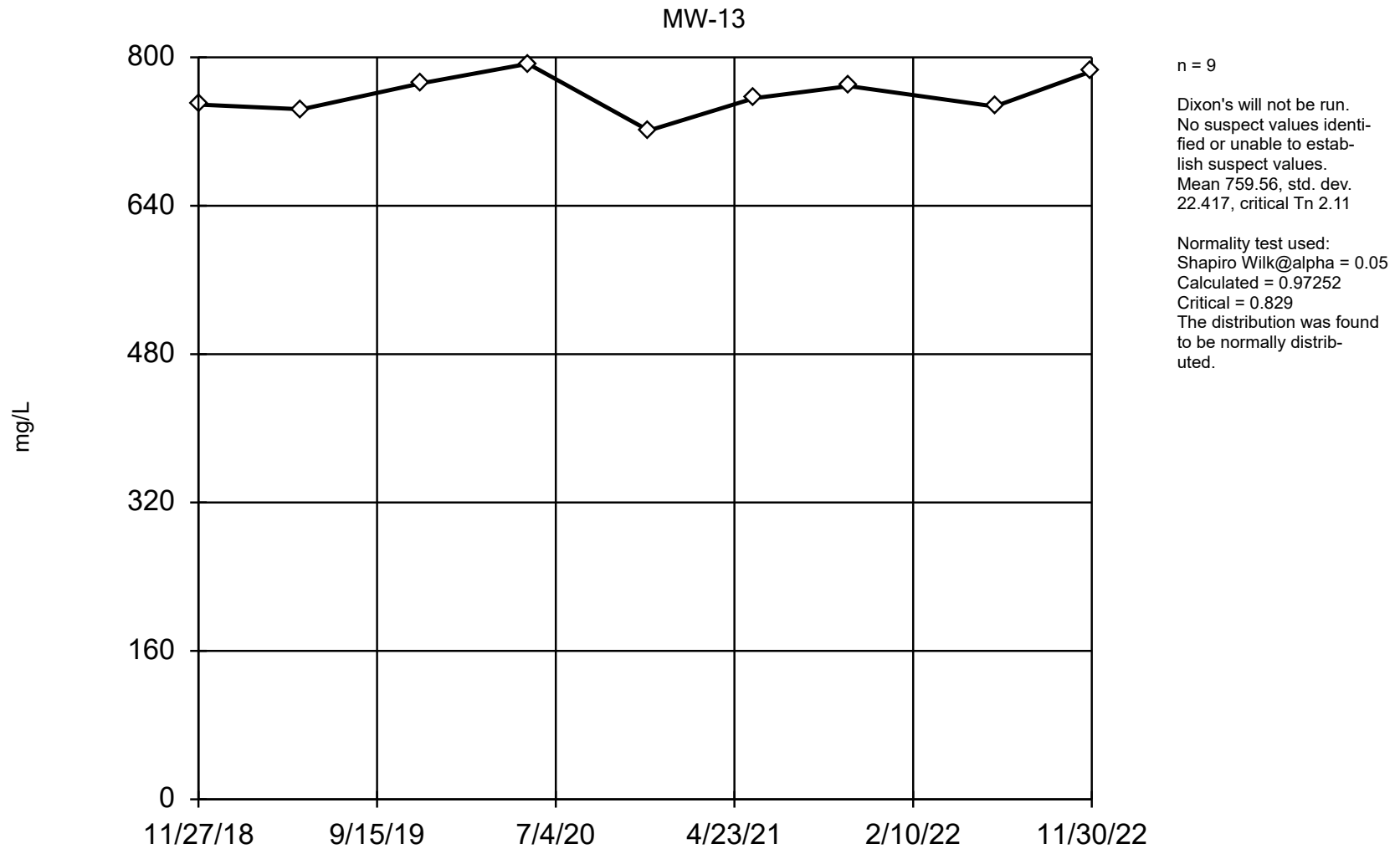
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Beryllium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0044
5/15/2019	0.00053
11/27/2019	0.0022
5/20/2020	0.00045
12/4/2020	0.00144
5/26/2021	<8E-05
10/28/2021	0.000173 (B)
6/24/2022	<8E-05
11/30/2022	<8E-05

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Bicarbonate as CaCO3 Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

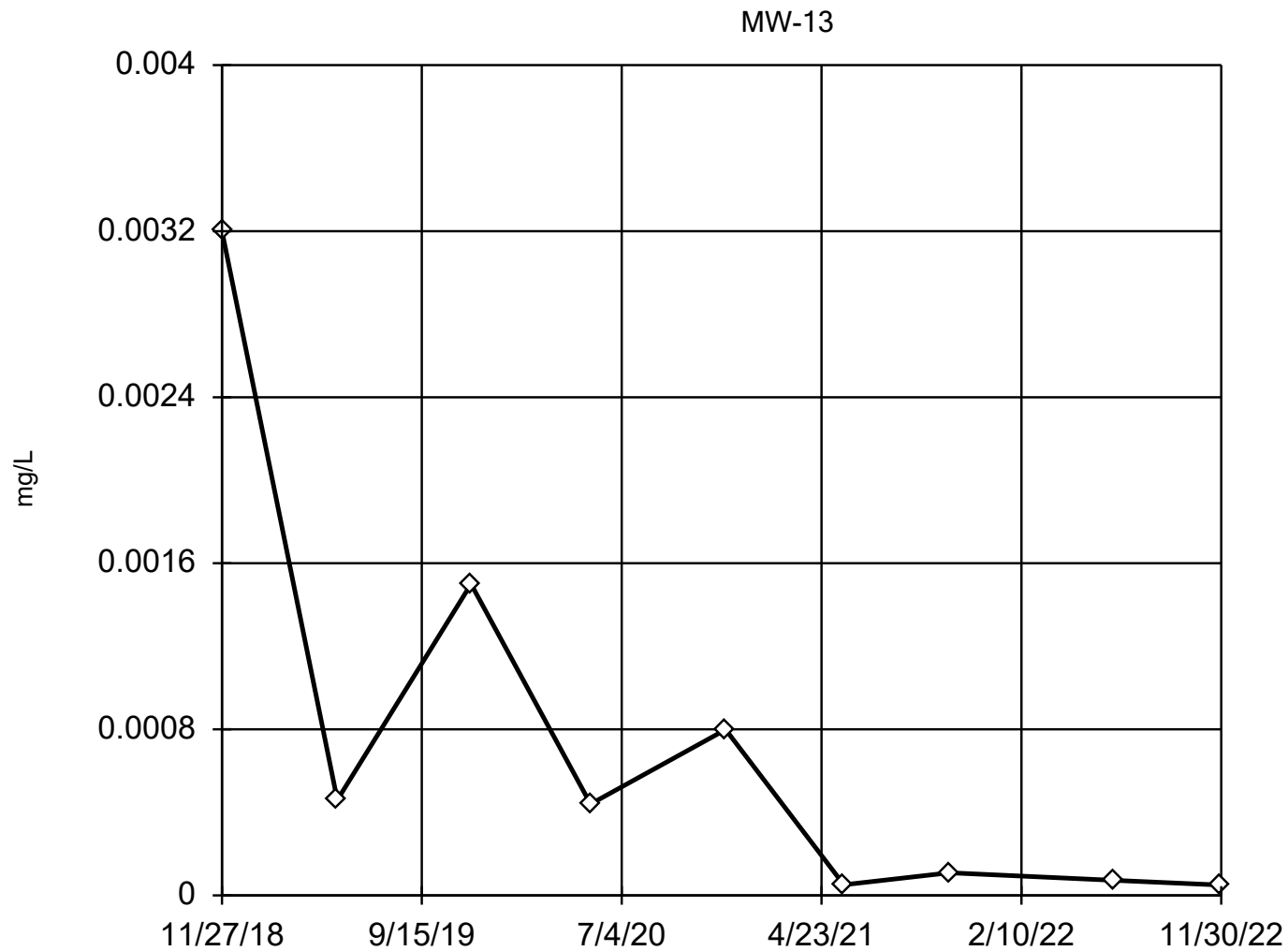
EPA 1989 Outlier Screening

Constituent: Bicarbonate as CaCO3 (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	749
5/15/2019	744
11/27/2019	772
5/20/2020	793
12/4/2020	721
5/26/2021	756
10/28/2021	769
6/24/2022	747
11/30/2022	785

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00074244, std. dev. 0.0010365, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.91582
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Cadmium, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

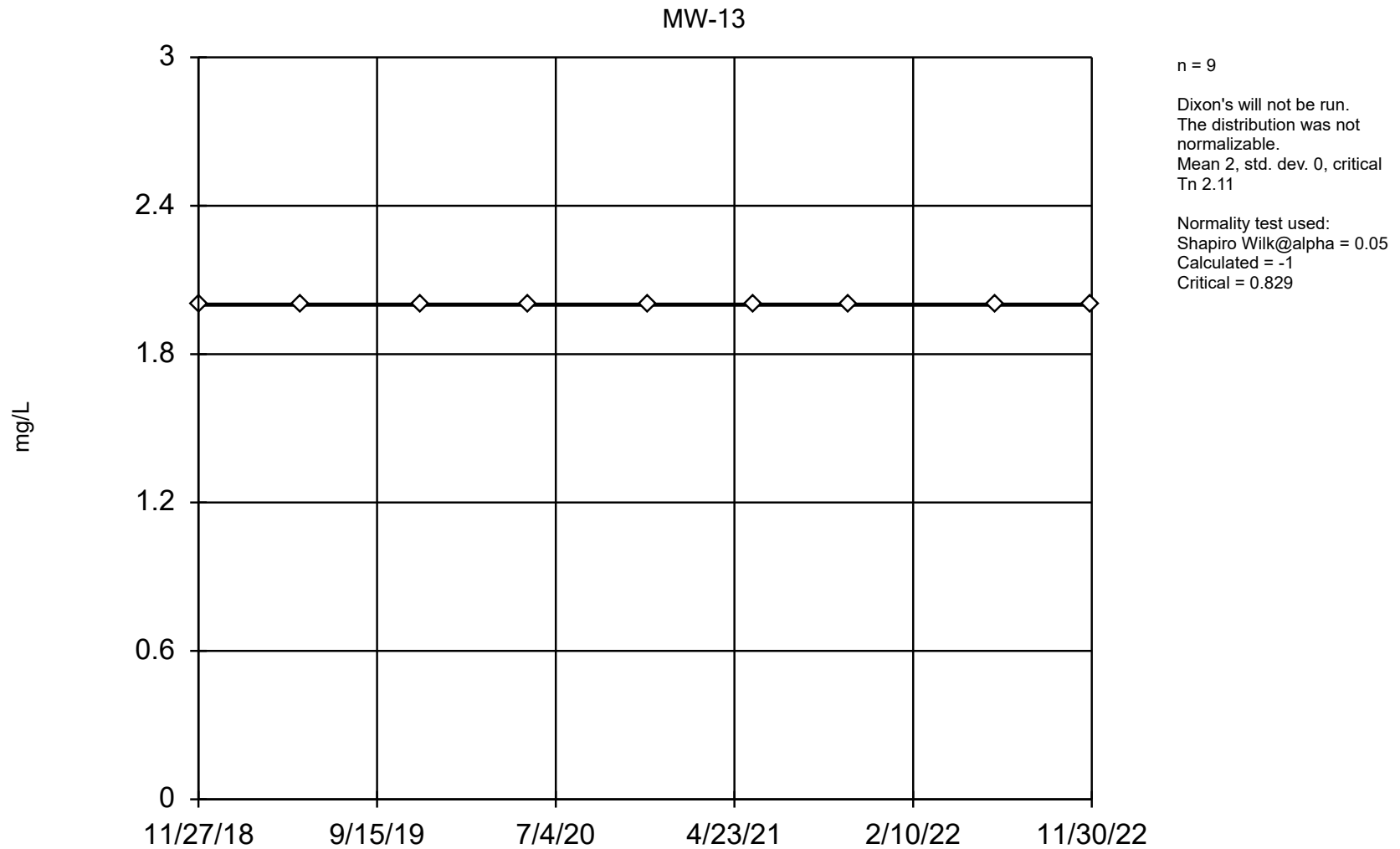
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Cadmium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0032
5/15/2019	0.00046
11/27/2019	0.0015
5/20/2020	0.00044
12/4/2020	0.000799
5/26/2021	5.1E-05 (B)
10/28/2021	0.000109 (B)
6/24/2022	7.3E-05 (B)
11/30/2022	<5E-05

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Carbonate as CaCO₃ Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

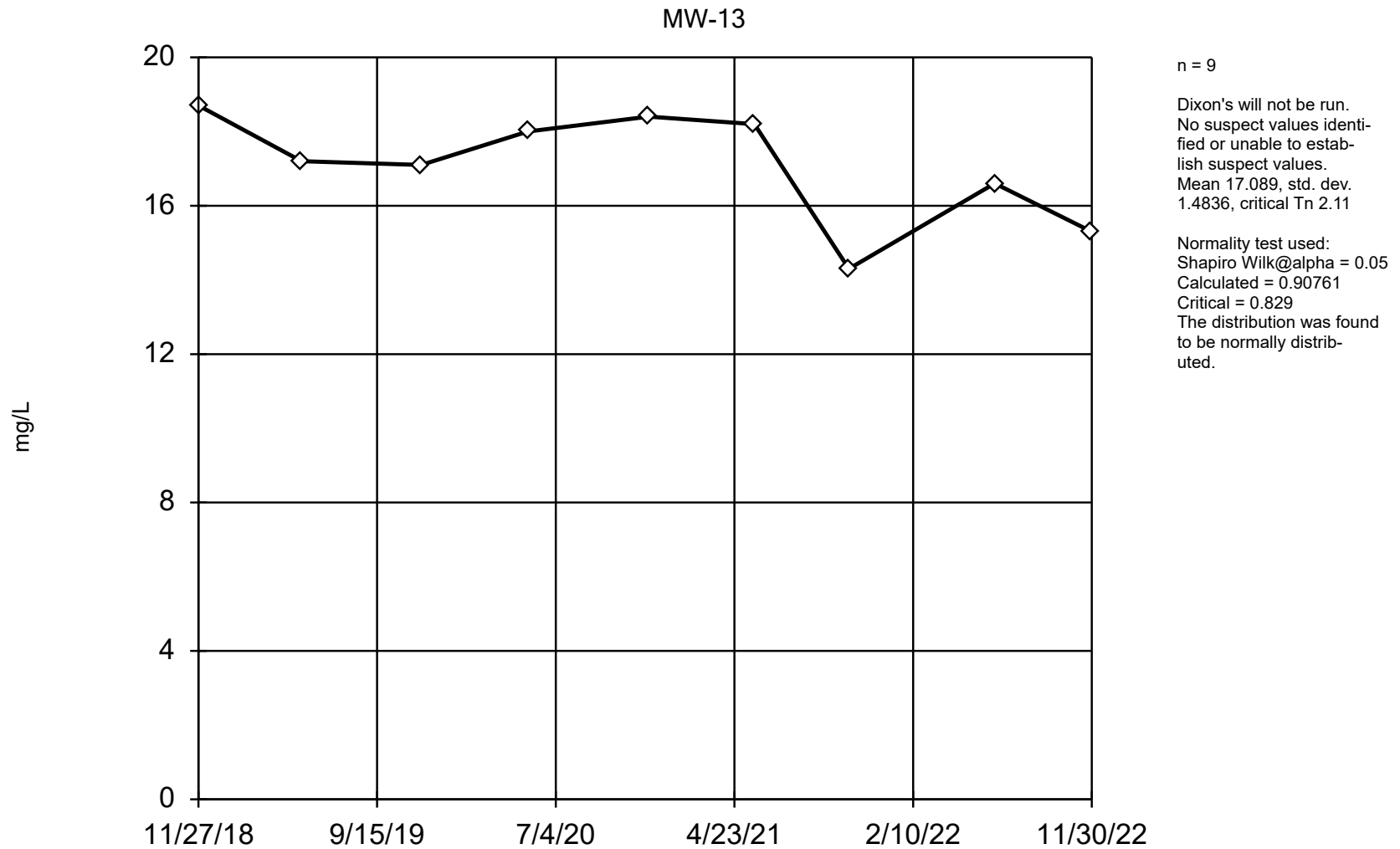
EPA 1989 Outlier Screening

Constituent: Carbonate as CaCO3 (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	<2
5/15/2019	<2
11/27/2019	<2
5/20/2020	<2
12/4/2020	<2
5/26/2021	<2
10/28/2021	<2
6/24/2022	<2
11/30/2022	<2

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Chloride Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Chloride (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics

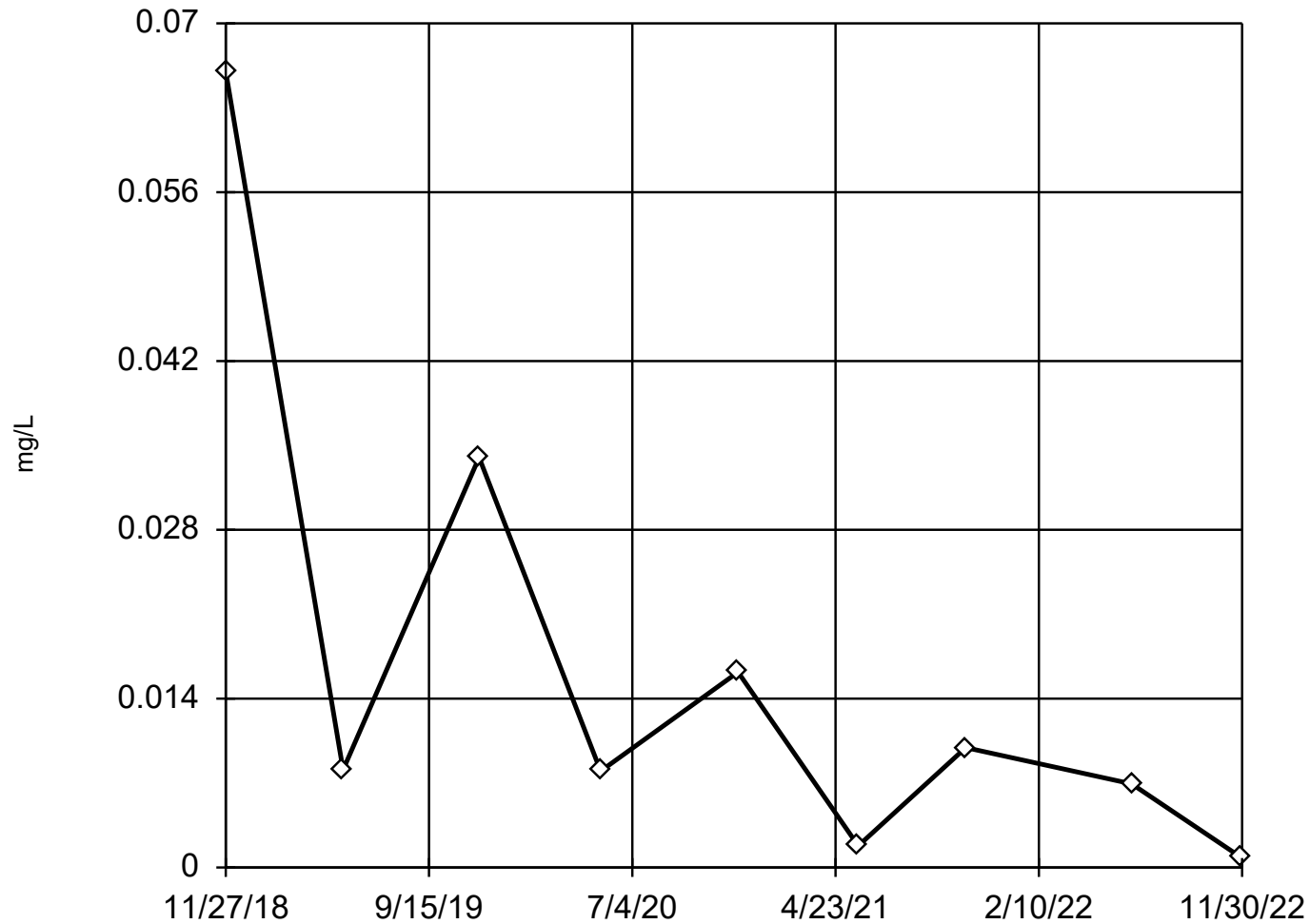
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	18.7
5/15/2019	17.2
11/27/2019	17.1
5/20/2020	18
12/4/2020	18.4
5/26/2021	18.2
10/28/2021	14.3
6/24/2022	16.6
11/30/2022	15.3

EPA Screening (suspected outliers for Dixon's Test)

MW-13



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.016862, std. dev. 0.020904, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.95755
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chromium, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

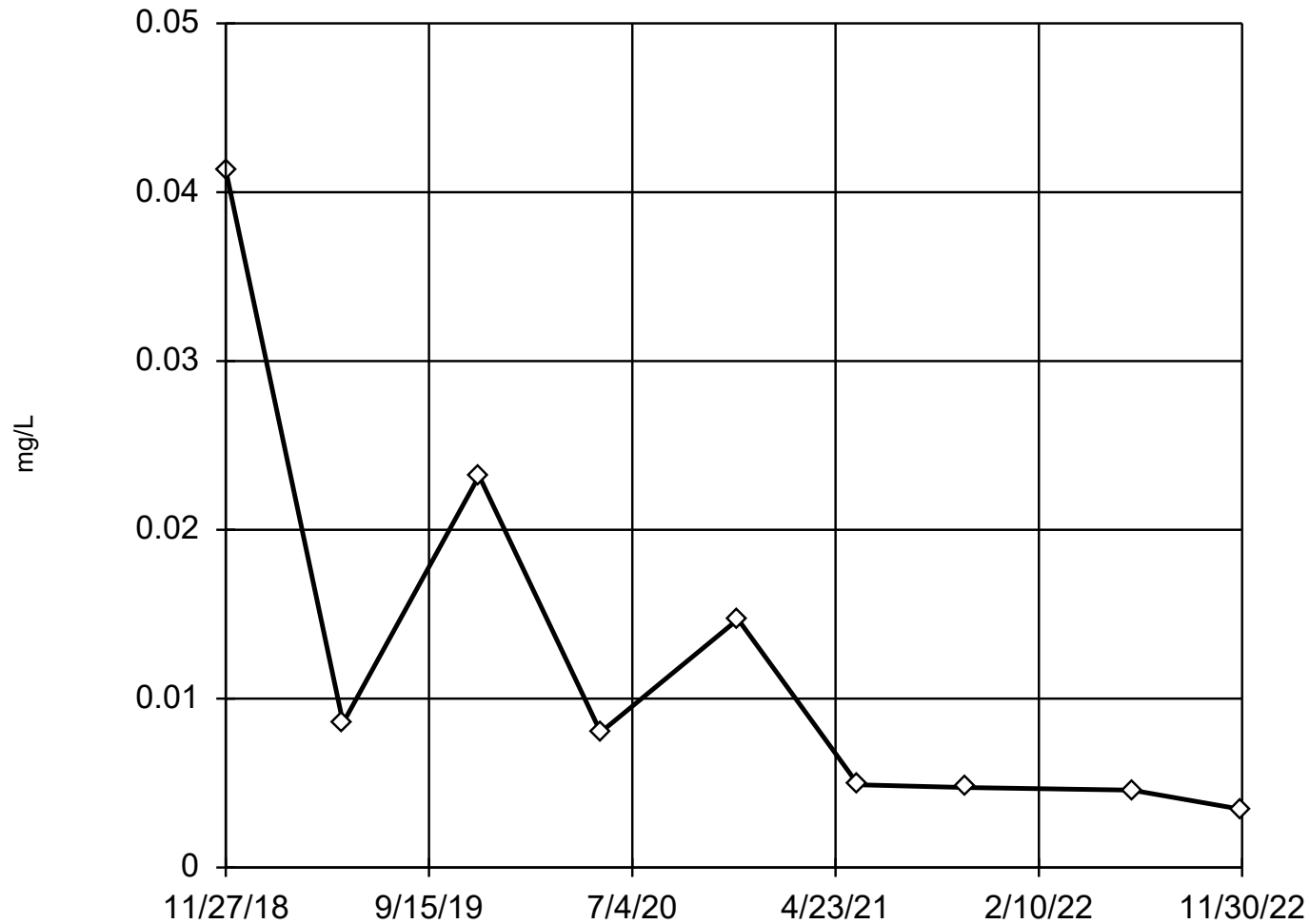
EPA 1989 Outlier Screening

Constituent: Chromium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.066
5/15/2019	0.0081
11/27/2019	0.034
5/20/2020	0.008
12/4/2020	0.0162
5/26/2021	0.0018 (B)
10/28/2021	0.00994
6/24/2022	0.00693
11/30/2022	0.00079 (B)

EPA Screening (suspected outliers for Dixon's Test)

MW-13



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.012603, std. dev. 0.012486, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.91121
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Cobalt, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

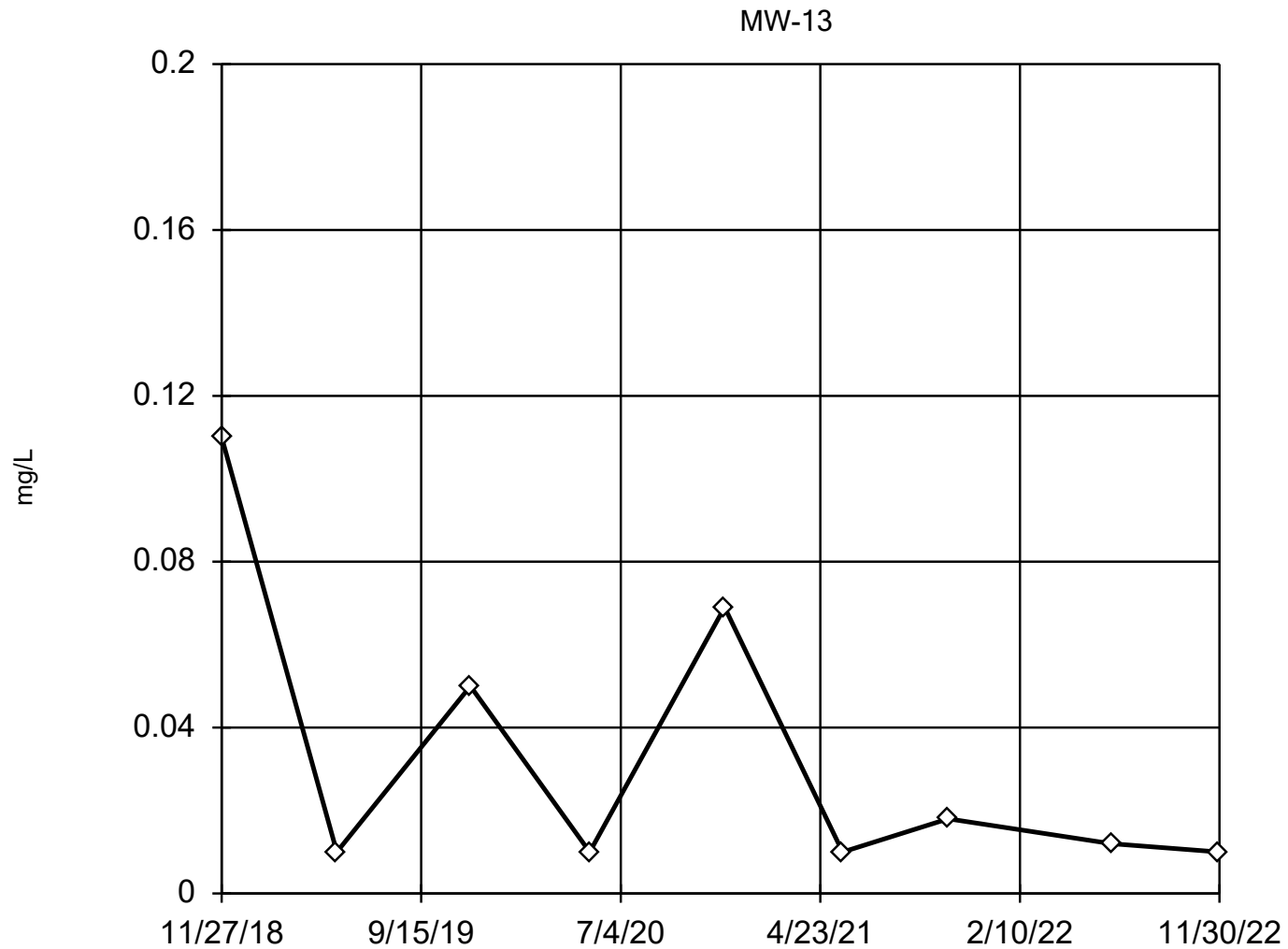
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Cobalt, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0413
5/15/2019	0.00856
11/27/2019	0.0232
5/20/2020	0.00801
12/4/2020	0.0147
5/26/2021	0.0049
10/28/2021	0.00474
6/24/2022	0.00458
11/30/2022	0.00344

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.033222, std. dev.
0.035874, critical Tn
2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.78116
Critical = 0.829

Constituent: Copper, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

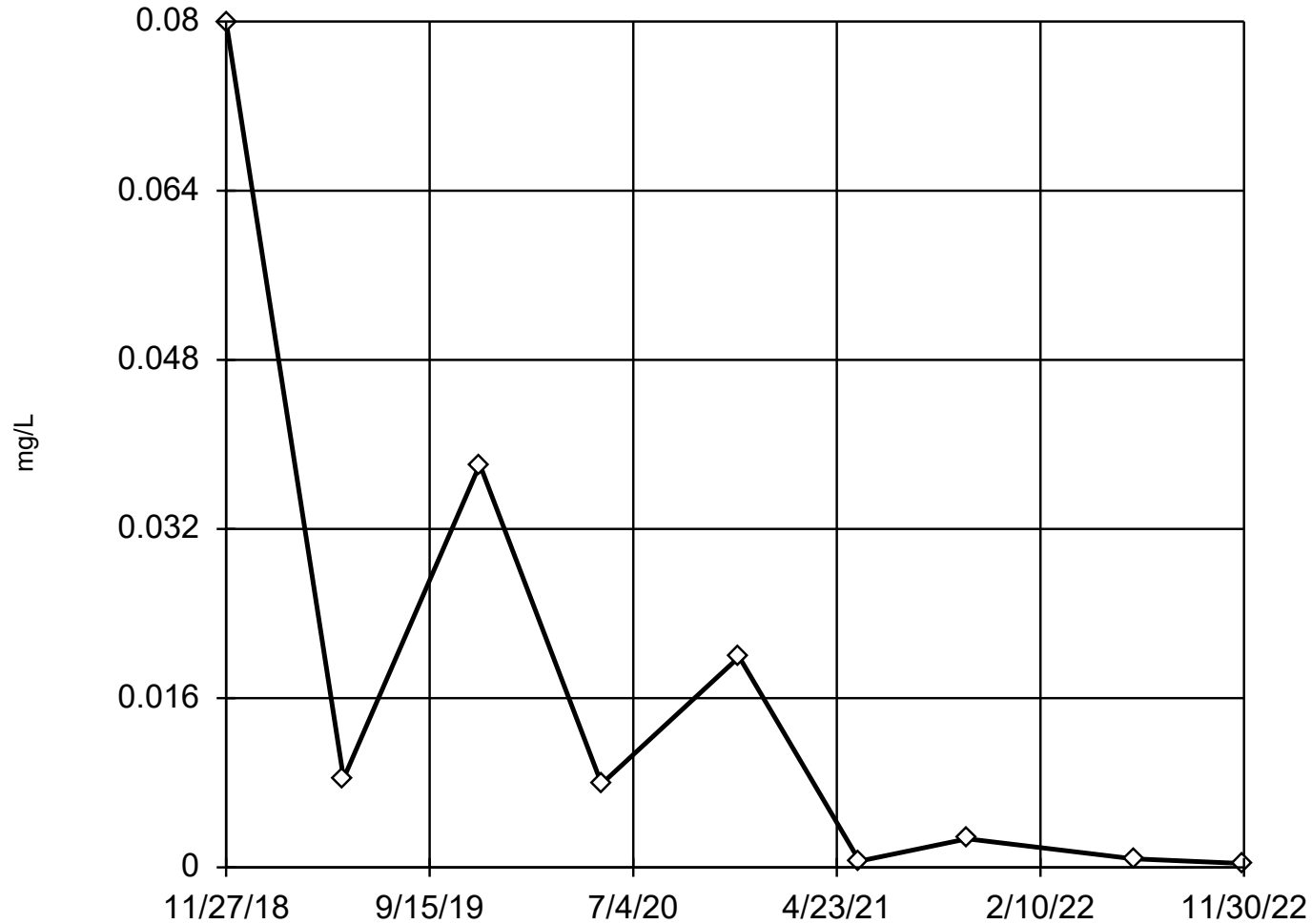
EPA 1989 Outlier Screening

Constituent: Copper, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.11 (B)
5/15/2019	0.01 (B)
11/27/2019	<0.05
5/20/2020	0.01 (B)
12/4/2020	0.069 (B)
5/26/2021	<0.01
10/28/2021	0.018 (B)
6/24/2022	0.012 (B)
11/30/2022	<0.01

EPA Screening (suspected outliers for Dixon's Test)

MW-13



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.01764, std. dev. 0.02643, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.94668
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Lead, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

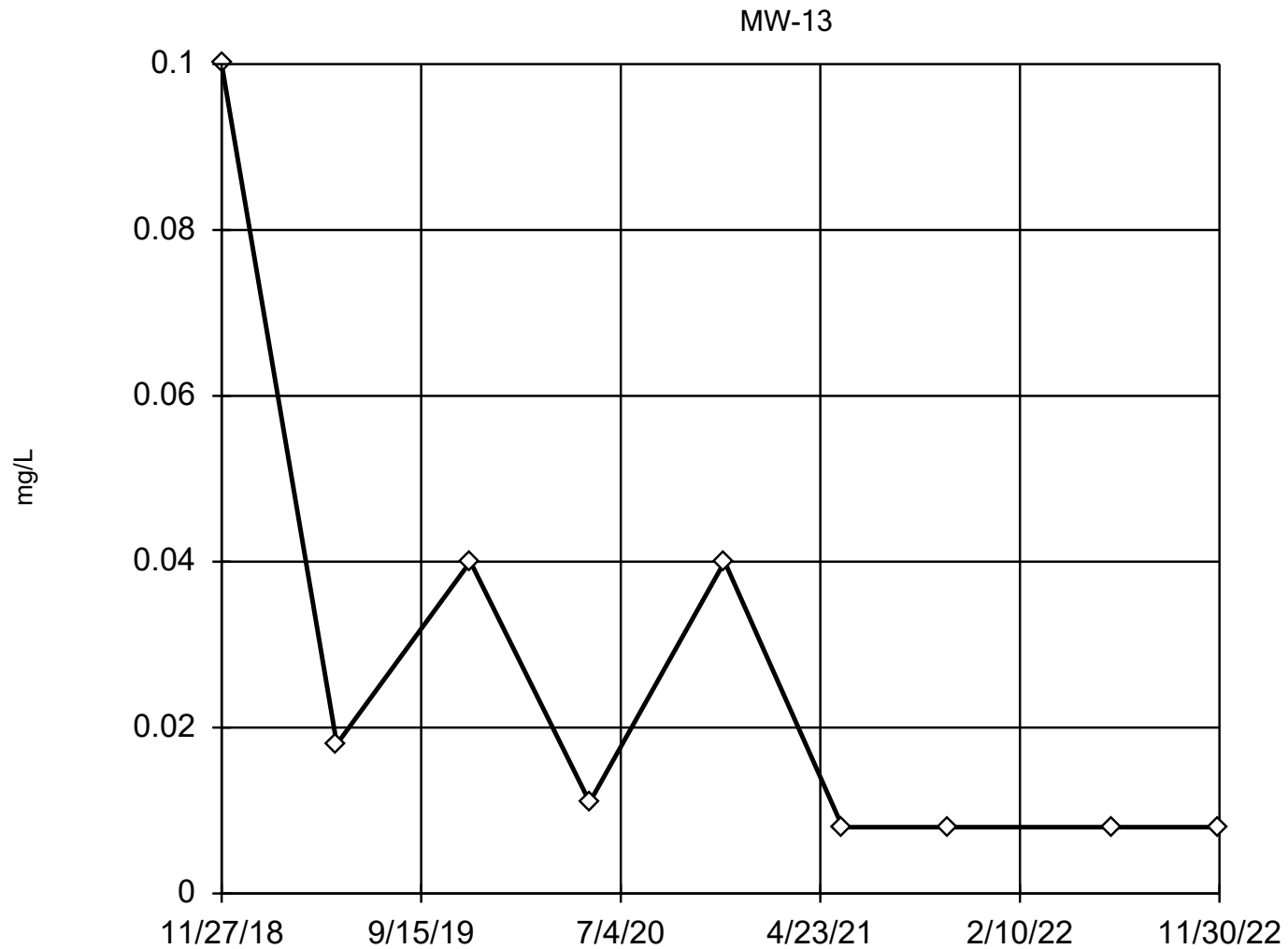
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Lead, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.08
5/15/2019	0.0084
11/27/2019	0.0381
5/20/2020	0.0079
12/4/2020	0.0199
5/26/2021	0.00059
10/28/2021	0.0027
6/24/2022	0.00081
11/30/2022	0.00036 (B)

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.026778, std. dev.
0.030511, critical Tn
2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.81762
Critical = 0.829

Constituent: Nickel, total Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

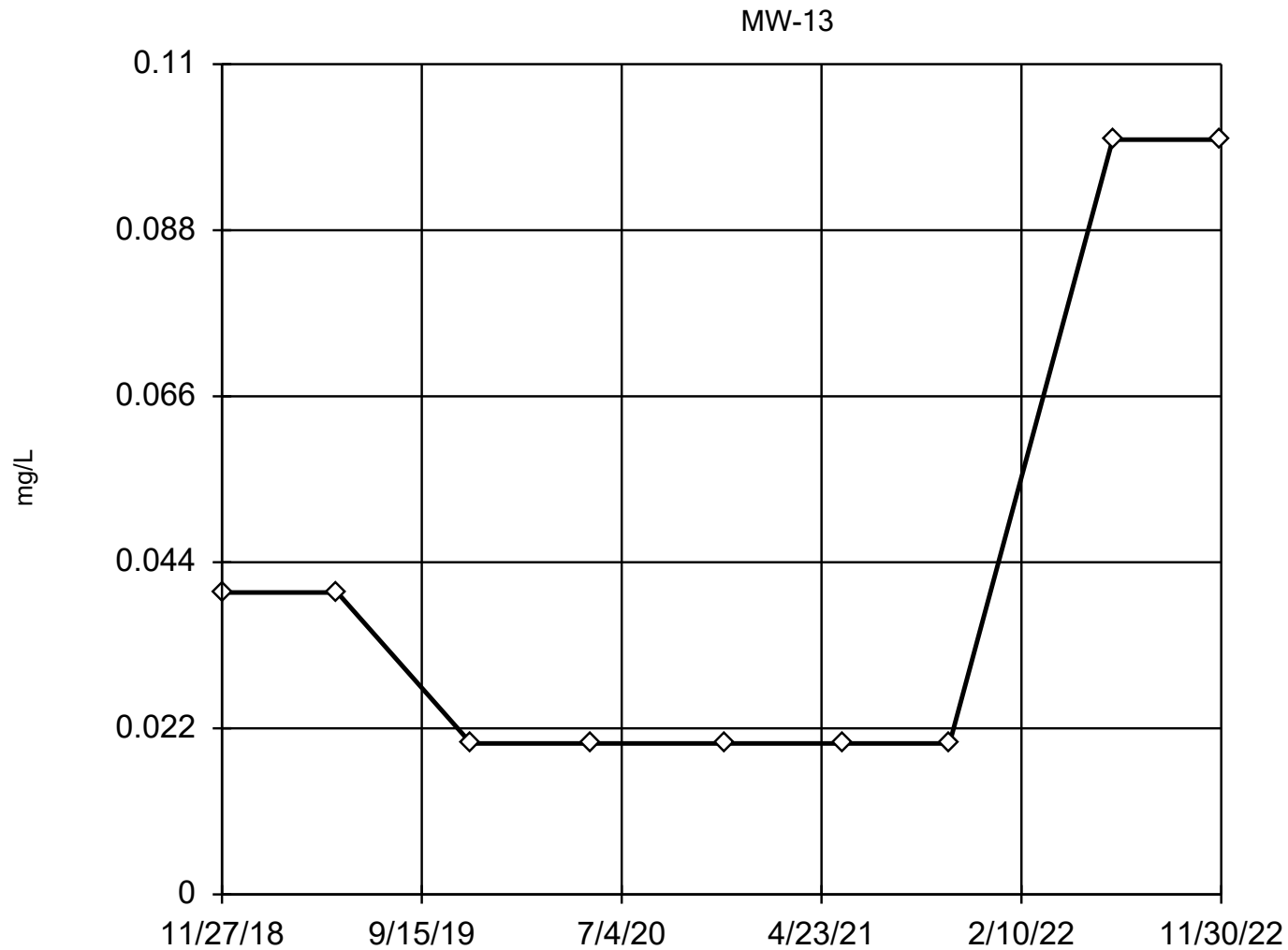
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Nickel, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.1 (B)
5/15/2019	0.018 (B)
11/27/2019	<0.04
5/20/2020	0.011 (B)
12/4/2020	<0.04
5/26/2021	<0.008
10/28/2021	<0.008
6/24/2022	<0.008
11/30/2022	<0.008

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.042222, std. dev.
0.03383, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.73888
Critical = 0.829

Constituent: Nitrate as N, dissolved Analysis Run 2/3/2025 1:09 PM View: MW-13 - Inorganics

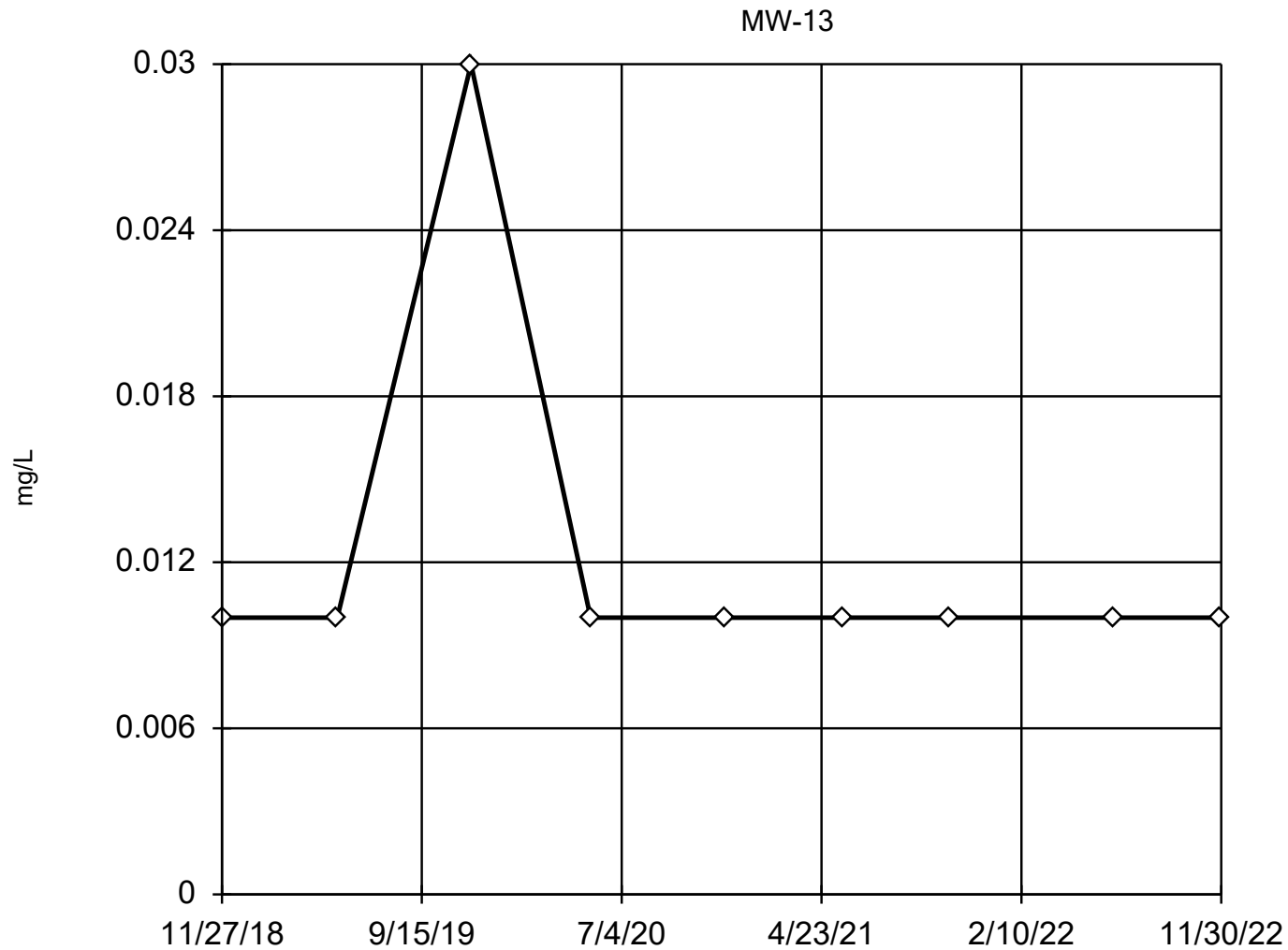
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Nitrate as N, dissolved (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.04 (B)
5/15/2019	0.04 (B)
11/27/2019	<0.02
5/20/2020	<0.02
12/4/2020	<0.02
5/26/2021	<0.02
10/28/2021	<0.02
6/24/2022	<0.1 (D)
11/30/2022	<0.1

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.012222, std. dev.
0.0066667, critical Tn
2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.39002
Critical = 0.829

Constituent: Nitrite as N, dissolved Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

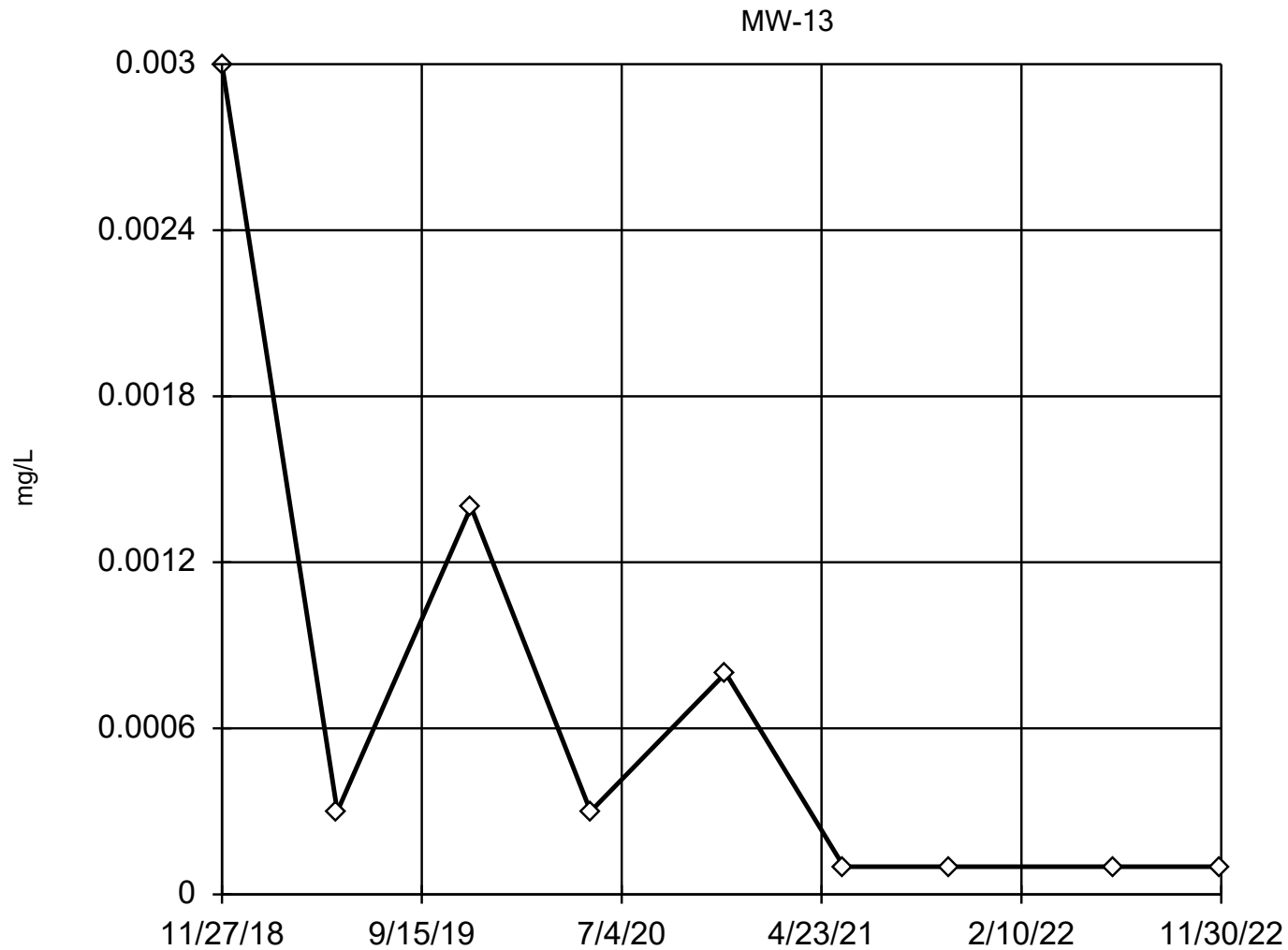
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Nitrite as N, dissolved (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	<0.01
5/15/2019	<0.01
11/27/2019	0.03 (B)
5/20/2020	<0.01
12/4/2020	<0.01
5/26/2021	<0.01
10/28/2021	<0.01
6/24/2022	<0.01
11/30/2022	<0.01

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00068889, std. dev. 0.0009714, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.84658
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Selenium, total Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

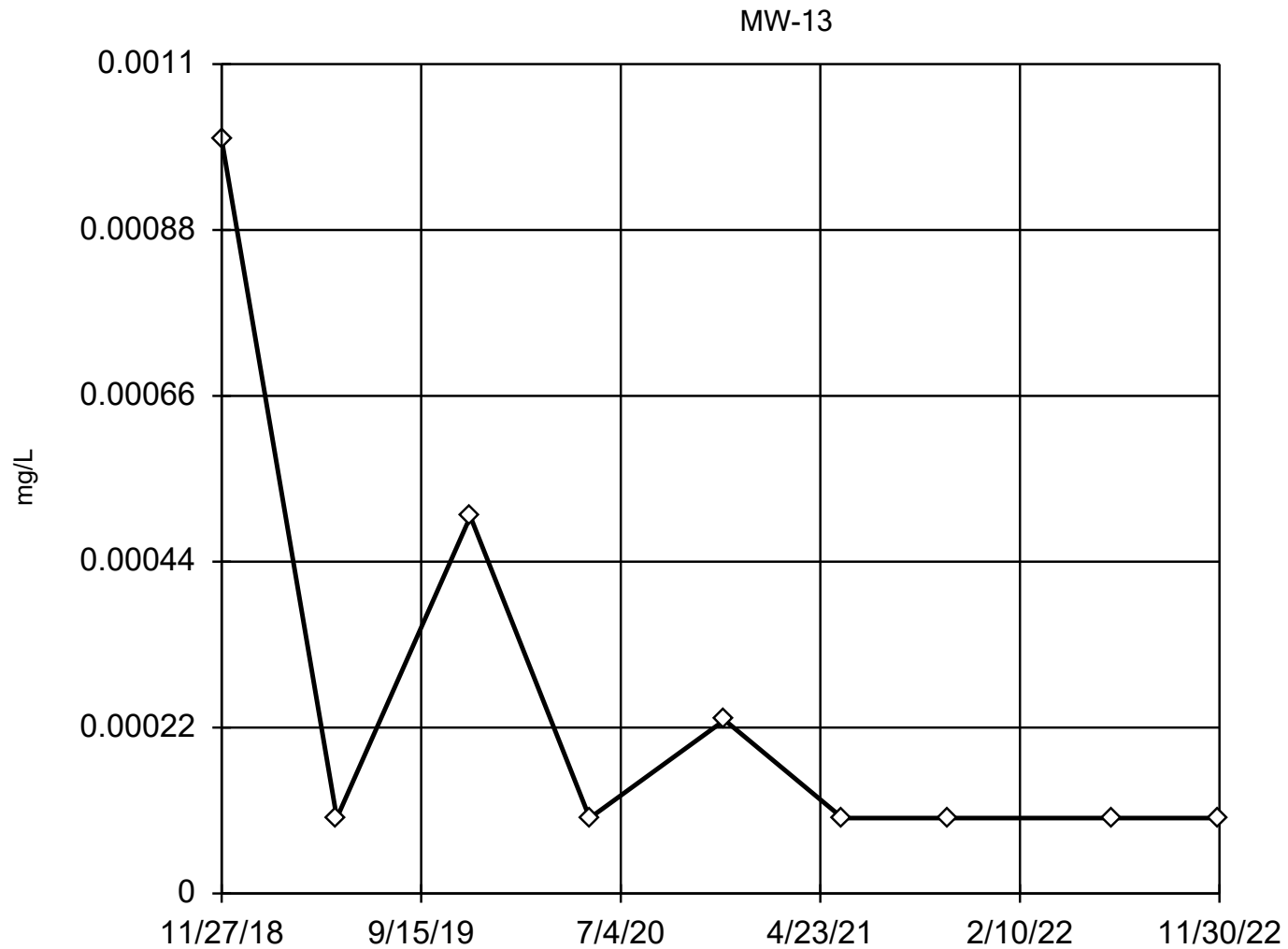
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Selenium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.003
5/15/2019	0.0003
11/27/2019	0.0014
5/20/2020	0.0003
12/4/2020	0.0008
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.00025889, std.
dev. 0.00030816, critical
Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.68563
Critical = 0.829

Constituent: Silver, total Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

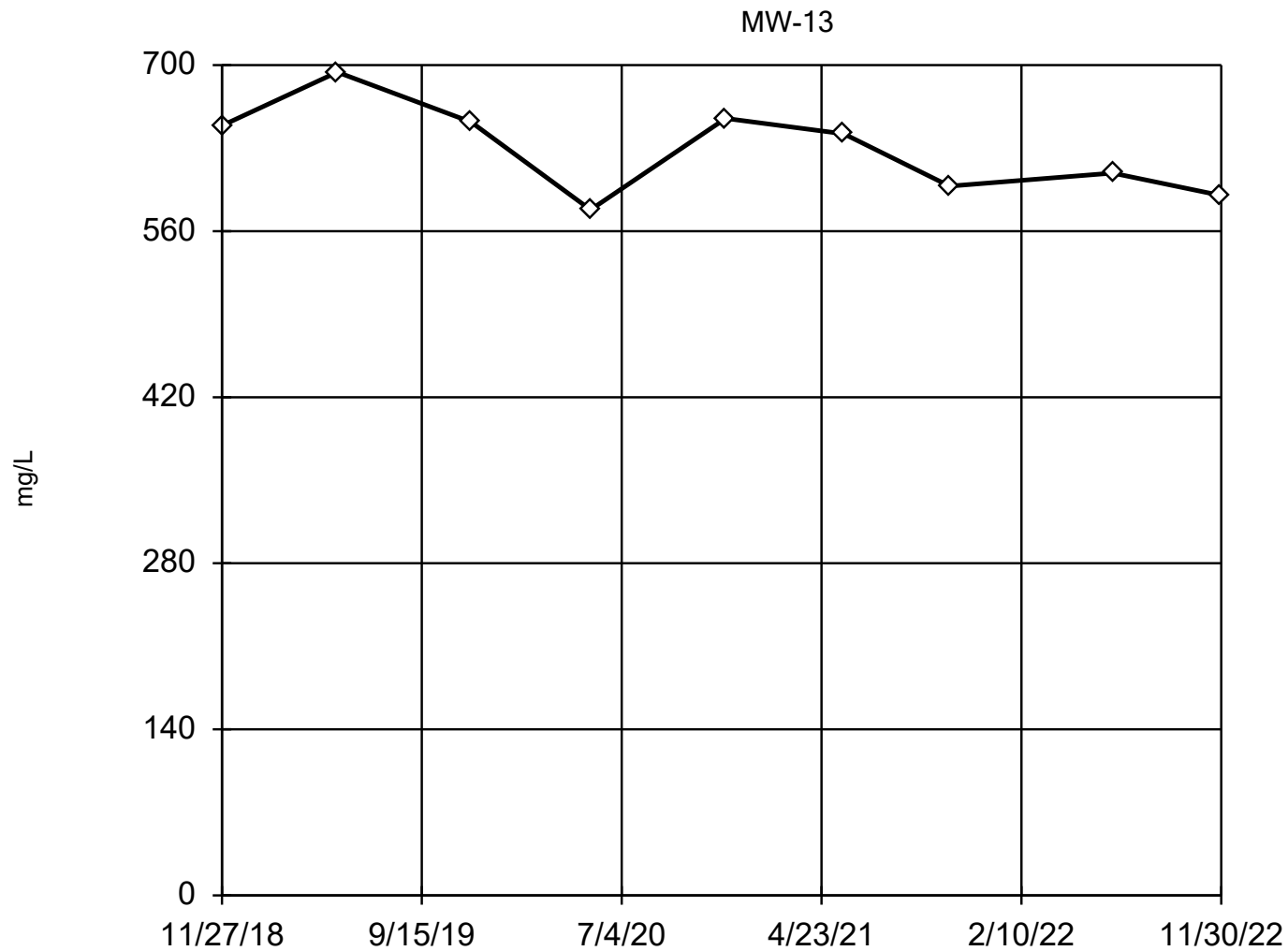
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Silver, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	<0.001
5/15/2019	0.0001 (B)
11/27/2019	<0.0005
5/20/2020	0.0001 (B)
12/4/2020	0.00023 (B)
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 629.67, std. dev. 37.878, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.93952
Critical = 0.829
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

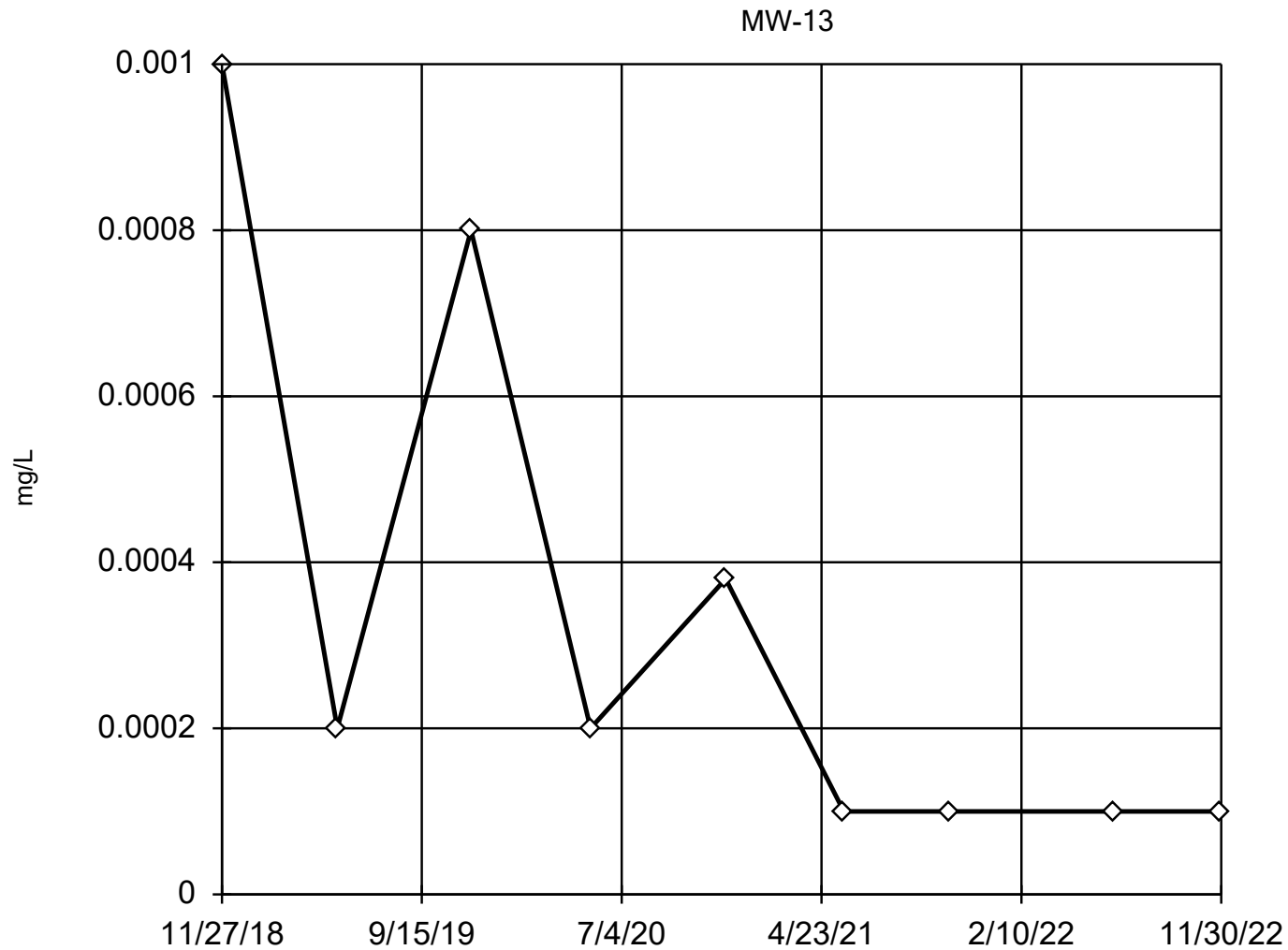
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Sulfate (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	649
5/15/2019	694
11/27/2019	652
5/20/2020	578
12/4/2020	655
5/26/2021	642
10/28/2021	598
6/24/2022	609
11/30/2022	590

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.00033111, std.
dev. 0.00033869, critical
Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.82341
Critical = 0.829

Constituent: Thallium, total Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

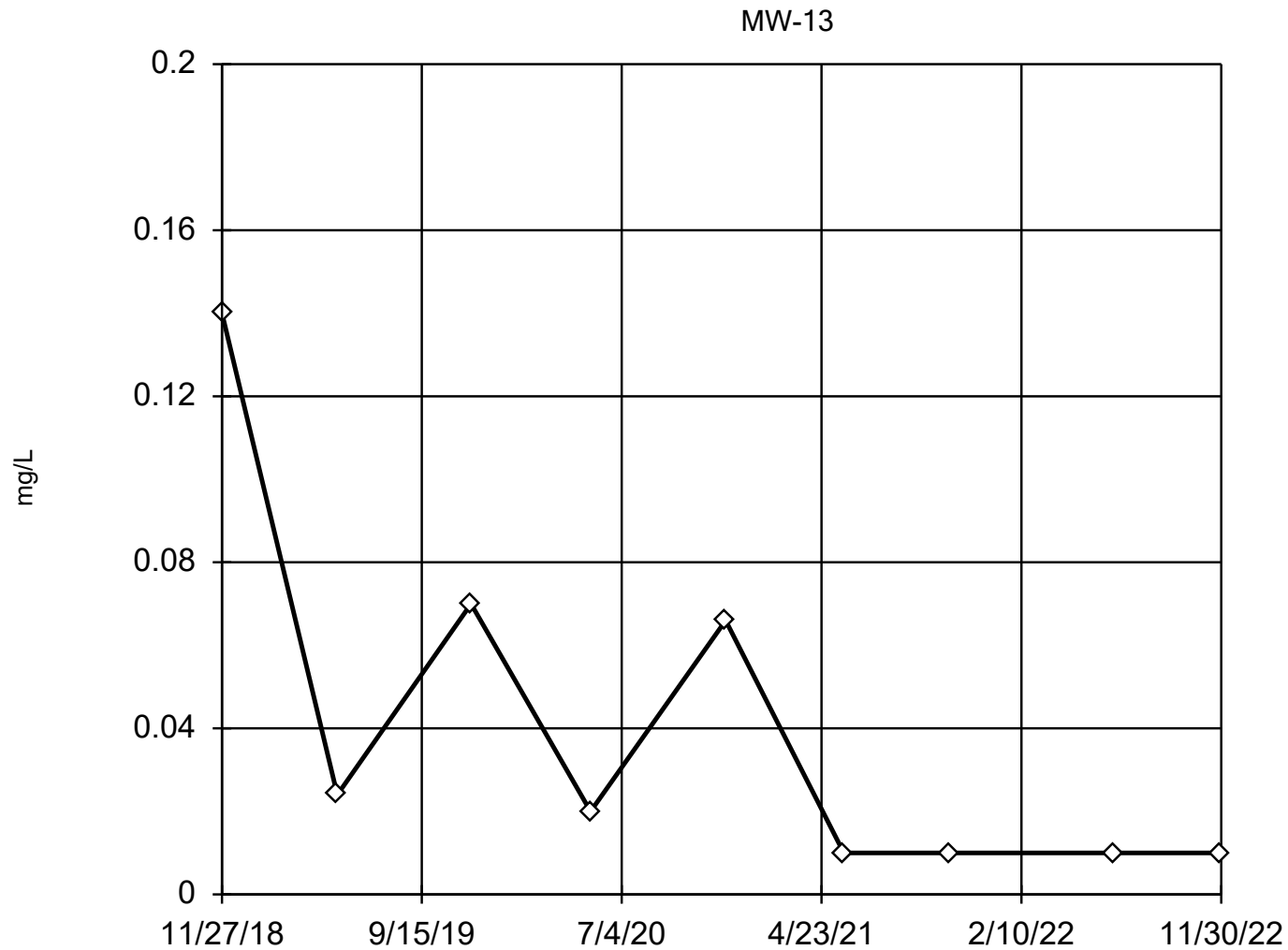
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Thallium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.001 (B)
5/15/2019	0.0002 (B)
11/27/2019	0.0008 (B)
5/20/2020	0.0002 (B)
12/4/2020	0.00038 (B)
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.04, std. dev. 0.044486, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.83272
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Vanadium, total Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

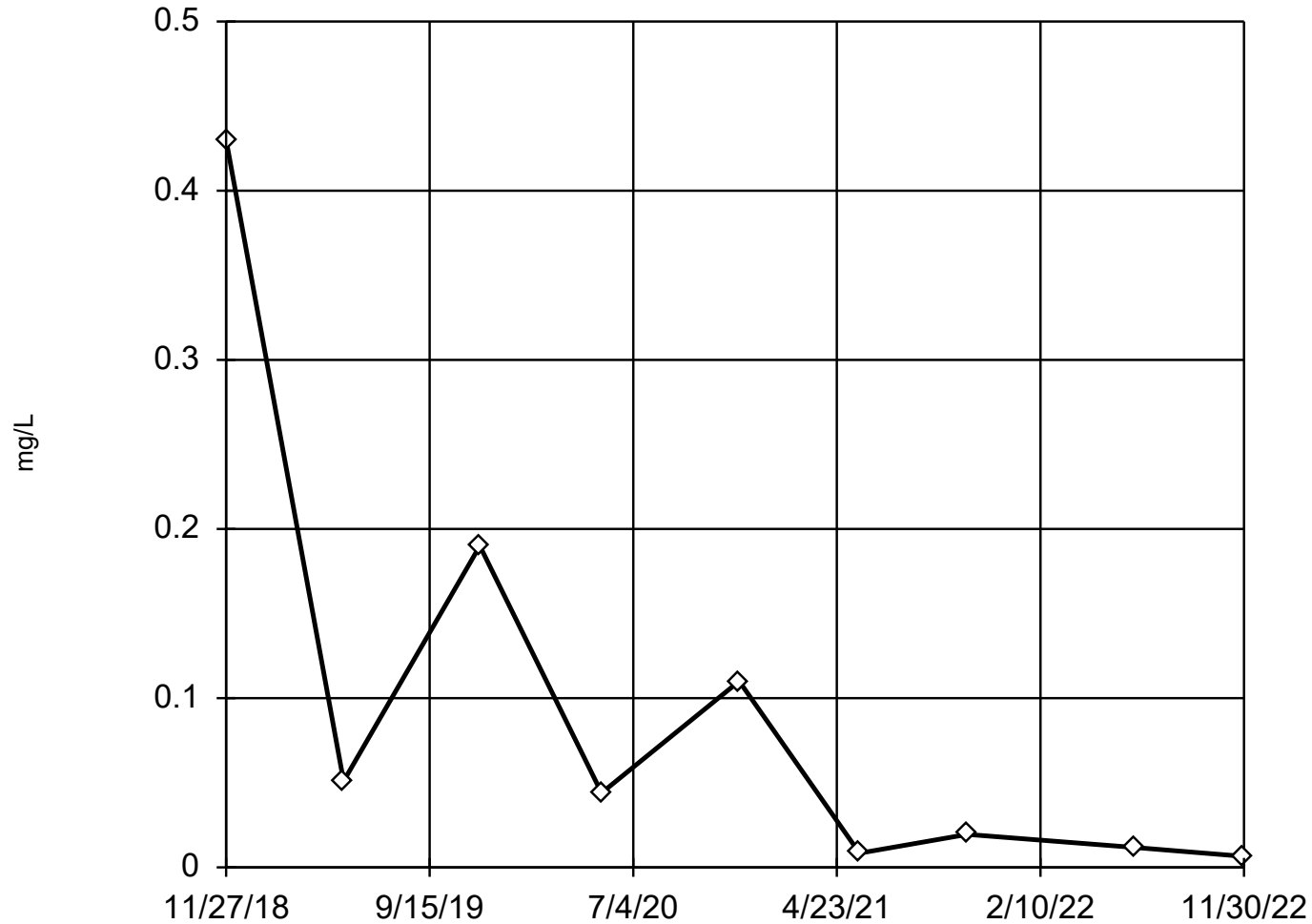
EPA 1989 Outlier Screening

Constituent: Vanadium, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.14
5/15/2019	0.024 (B)
11/27/2019	0.07 (B)
5/20/2020	0.02 (B)
12/4/2020	0.066 (B)
5/26/2021	<0.01
10/28/2021	<0.01
6/24/2022	<0.01
11/30/2022	<0.01

EPA Screening (suspected outliers for Dixon's Test)

MW-13



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0968, std. dev. 0.13872, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.95232
Critical = 0.829 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Zinc, total Analysis Run 2/3/2025 1:10 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Zinc, total (mg/L) Analysis Run 2/3/2025 1:11 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.43
5/15/2019	0.051
11/27/2019	0.19
5/20/2020	0.044
12/4/2020	0.11
5/26/2021	0.0084 (B)
10/28/2021	0.0195
6/24/2022	0.0118 (B)
11/30/2022	0.0065 (B)

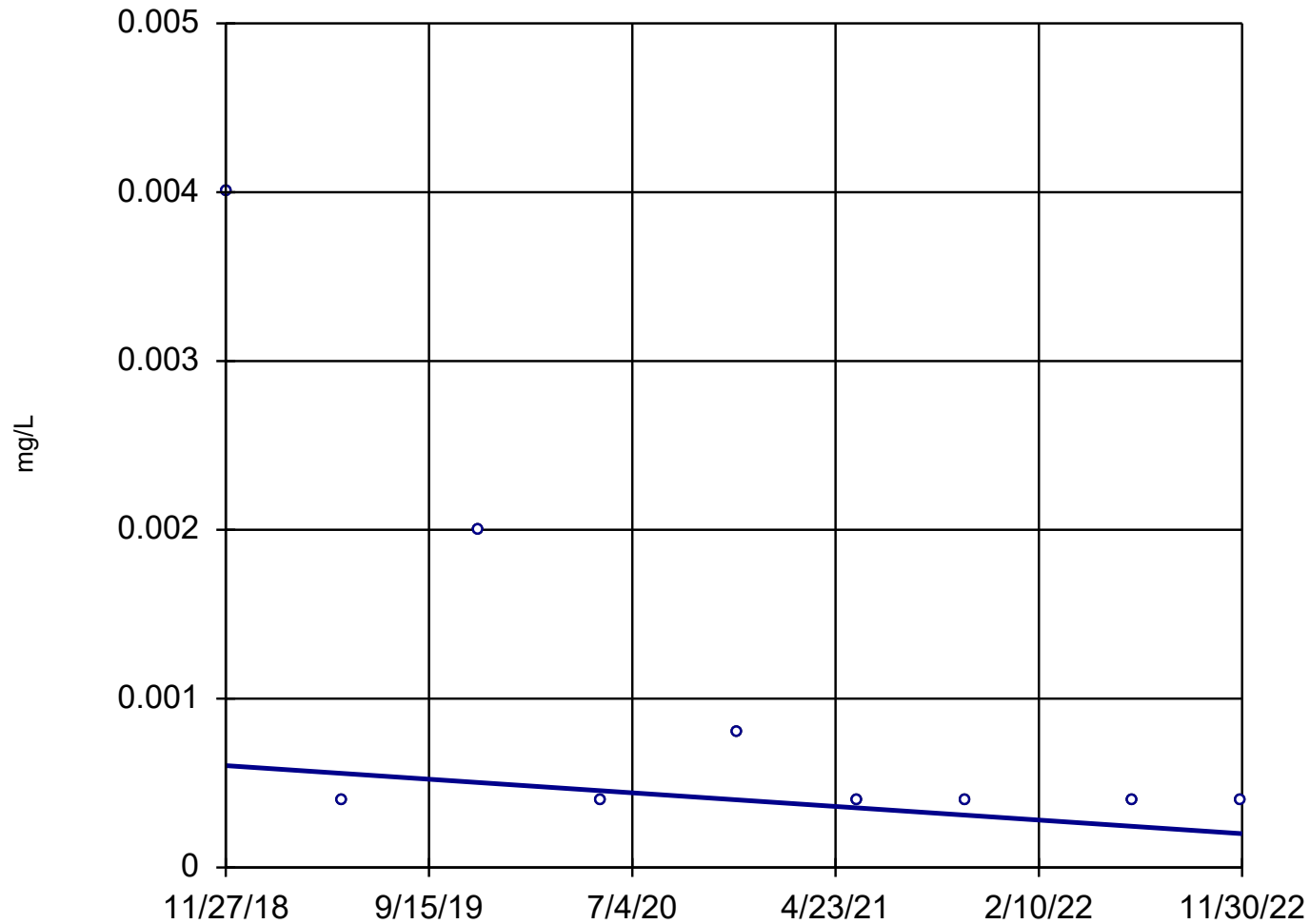
Trend Test

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 2/3/2025, 1:16 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>
Antimony, total (mg/L)	MW-13	-0.00010055	-15	-23	No	9	100	0.02
Arsenic, total (mg/L)	MW-13	-0.0035275	-14	-23	No	9	0	0.02
Barium, total (mg/L)	MW-13	-0.13112	-24	-23	Yes	9	0	0.02
Beryllium, total (mg/L)	MW-13	-0.00052388	-25	-23	Yes	9	33.333	0.02
Bicarbonate as CaCO3 (mg/L)	MW-13	5.1103	6	23	No	9	0	0.02
Cadmium, total (mg/L)	MW-13	-0.00037964	-26	-23	Yes	9	11.111	0.02
Carbonate as CaCO3 (mg/L)	MW-13	0	0	23	No	9	100	0.02
Chloride (mg/L)	MW-13	-0.56144	-16	-23	No	9	0	0.02
Chromium, total (mg/L)	MW-13	-0.0073568	-22	-23	No	9	0	0.02
Cobalt, total (mg/L)	MW-13	-0.0043604	-30	-23	Yes	9	0	0.02
Copper, total (mg/L)	MW-13	-0.0082499	-10	-23	No	9	33.333	0.02
Lead, total (mg/L)	MW-13	-0.0085078	-26	-23	Yes	9	0	0.02
Nickel, total (mg/L)	MW-13	-0.005903	-23	-23	No	9	66.667	0.02
Nitrate as N, dissolved (mg/L)	MW-13	0	4	23	No	9	77.778	0.02
Nitrite as N, dissolved (mg/L)	MW-13	0	-4	-23	No	9	88.889	0.02
Selenium, total (mg/L)	MW-13	-0.00027435	-23	-23	No	9	44.444	0.02
Silver, total (mg/L)	MW-13	-0.000032679	-15	-23	No	9	66.667	0.02
Sulfate (mg/L)	MW-13	-22.805	-16	-23	No	9	0	0.02
Thallium, total (mg/L)	MW-13	-0.00011958	-23	-23	No	9	44.444	0.02
Vanadium, total (mg/L)	MW-13	-0.0083887	-24	-23	Yes	9	44.444	0.02
Zinc, total (mg/L)	MW-13	-0.04353	-26	-23	Yes	9	0	0.02

Sen's Slope Estimator

MW-13



n = 9

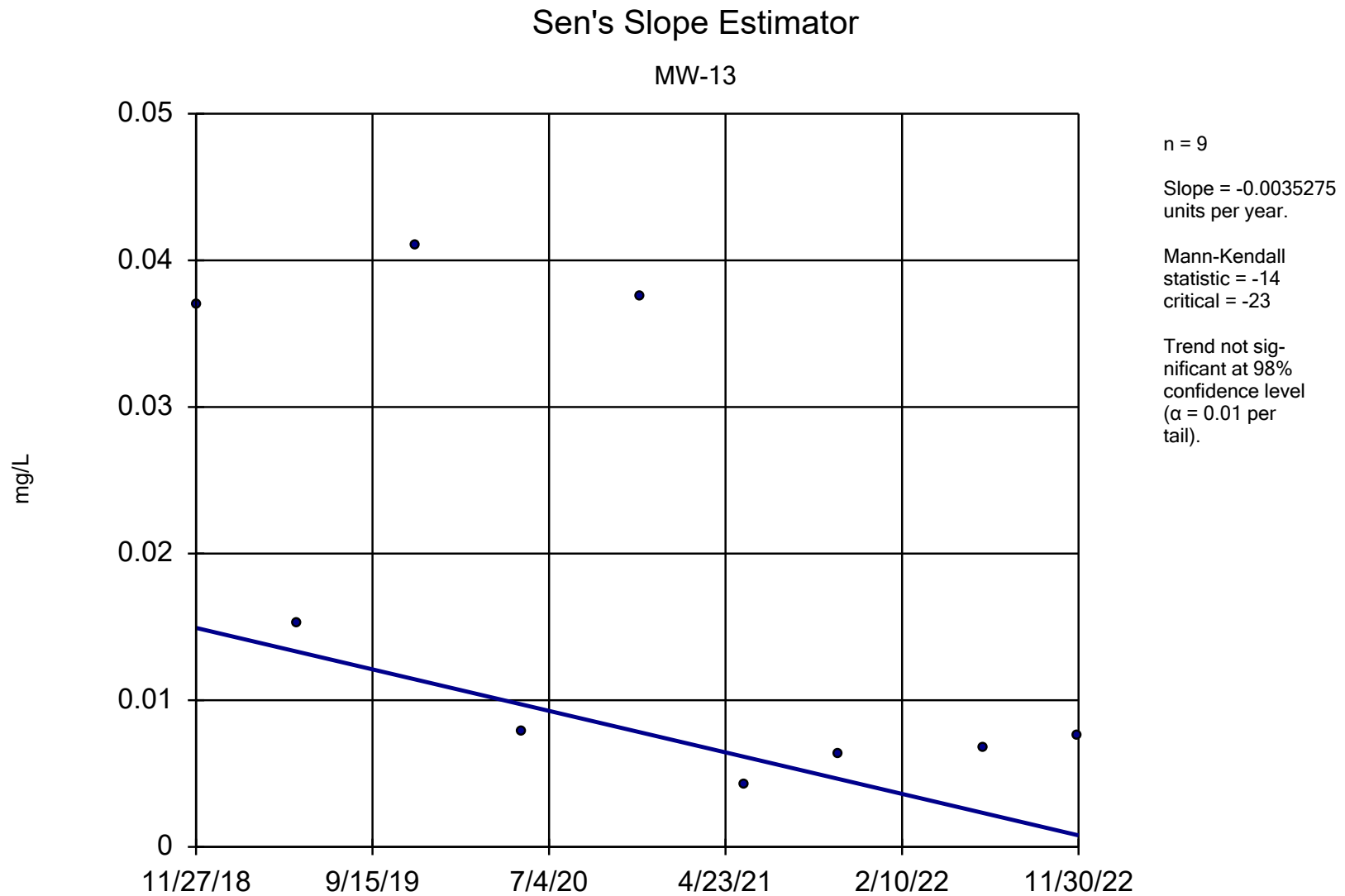
Slope = -0.00010055
units per year.

Mann-Kendall
statistic = -15
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

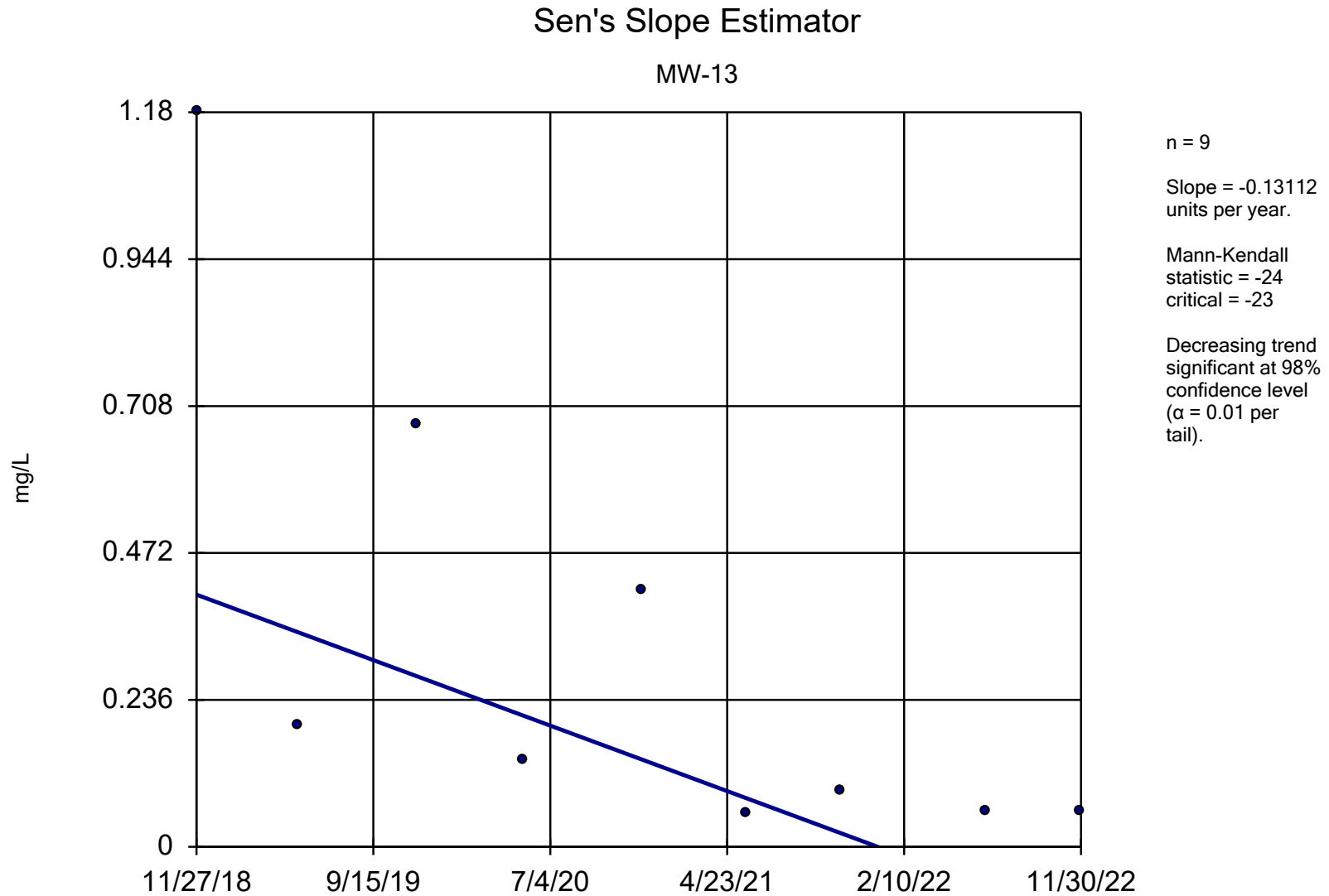
Constituent: Antimony, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working



Constituent: Arsenic, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

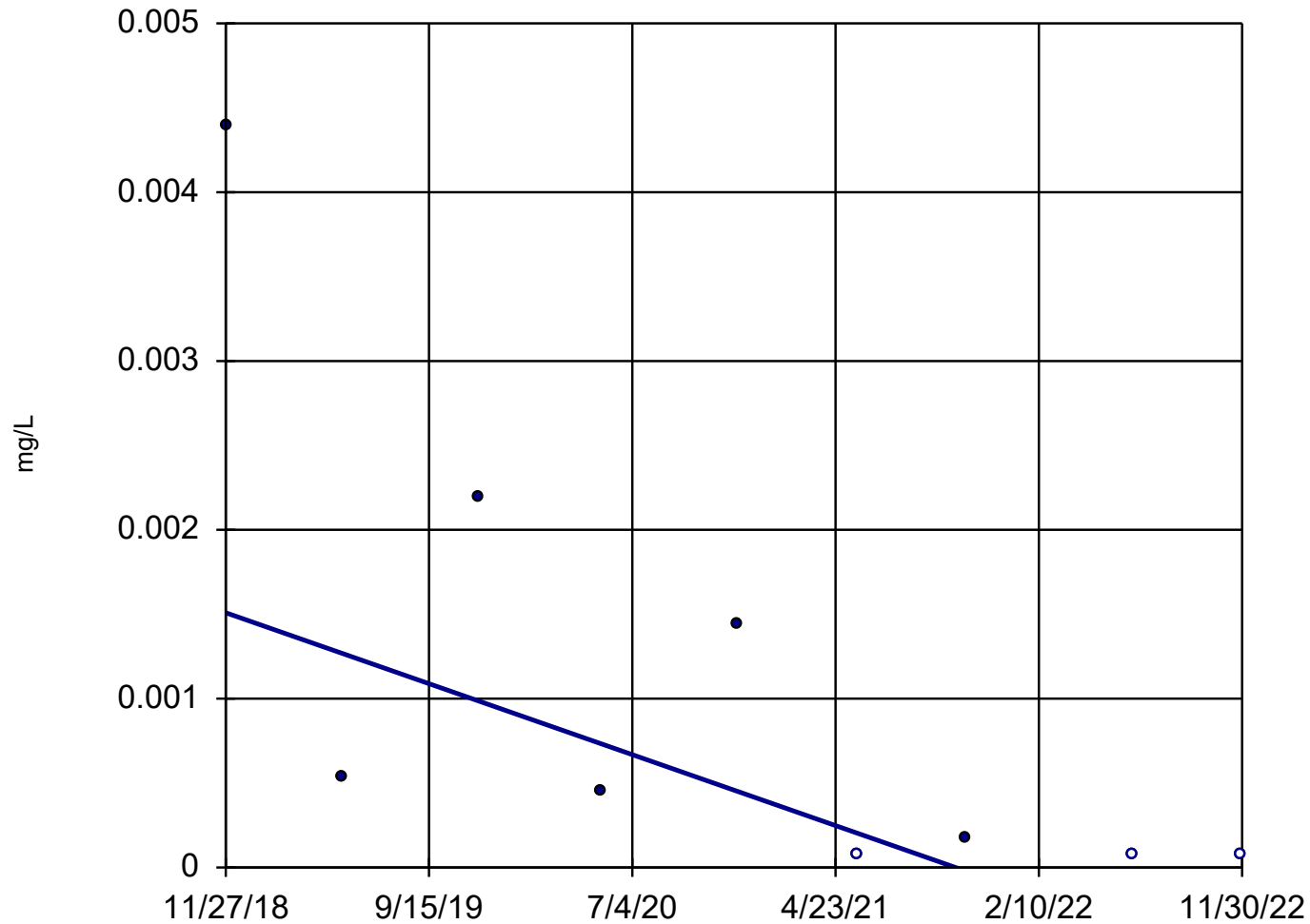


Constituent: Barium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

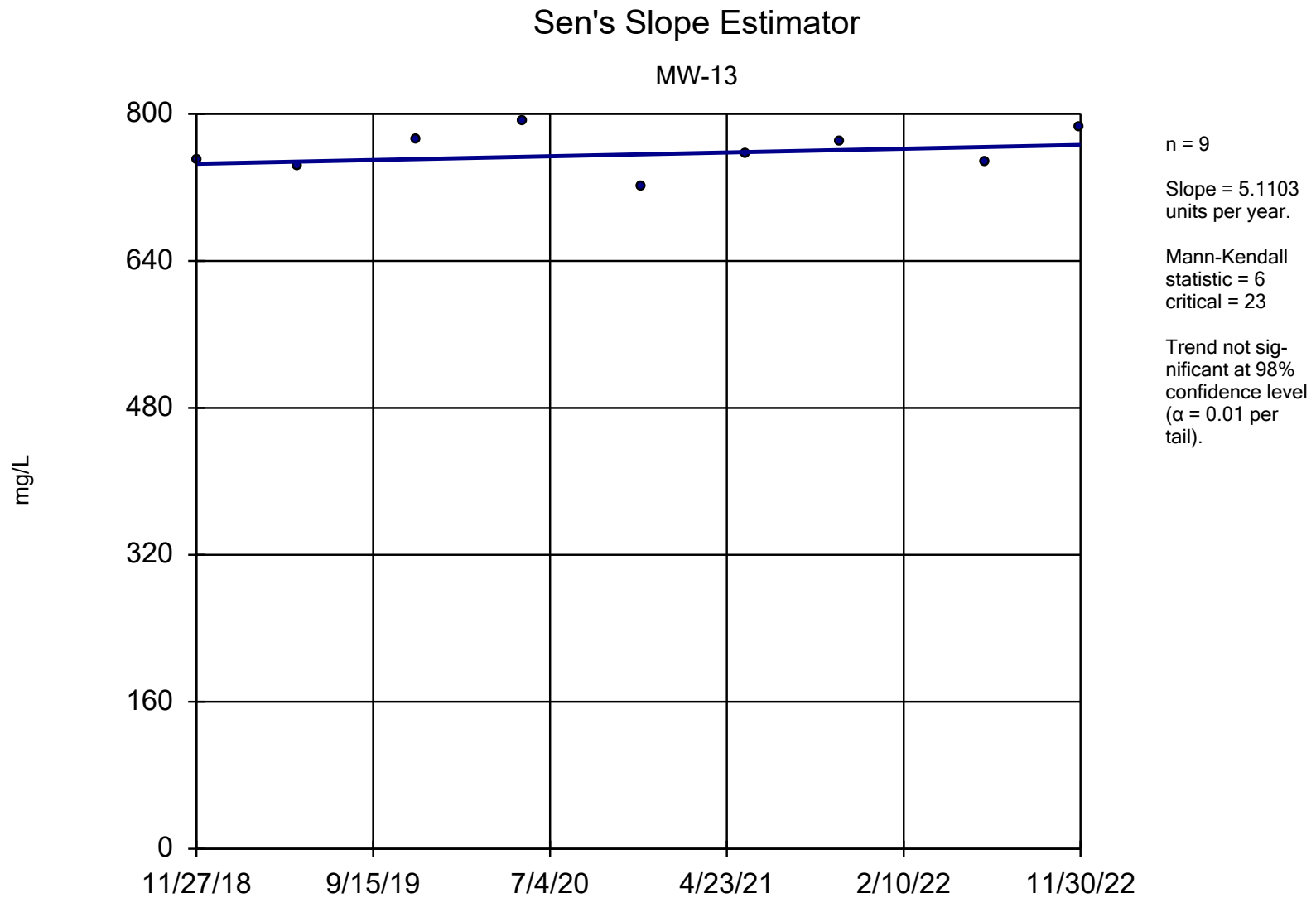
Slope = -0.00052388
units per year.

Mann-Kendall
statistic = -25
critical = -23

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Beryllium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

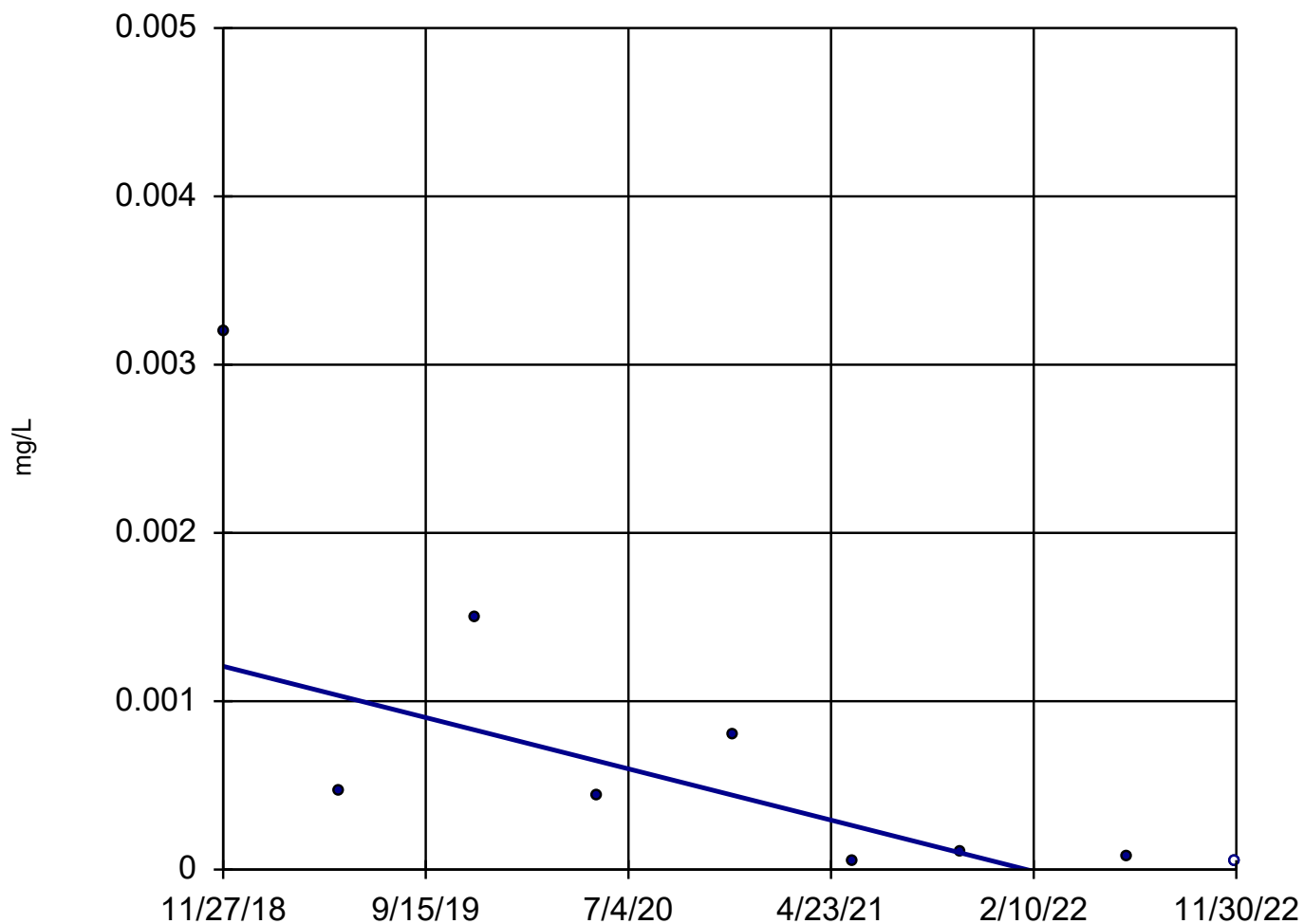


Constituent: Bicarbonate as CaCO₃ Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

Slope = -0.00037964
units per year.

Mann-Kendall
statistic = -26
critical = -23

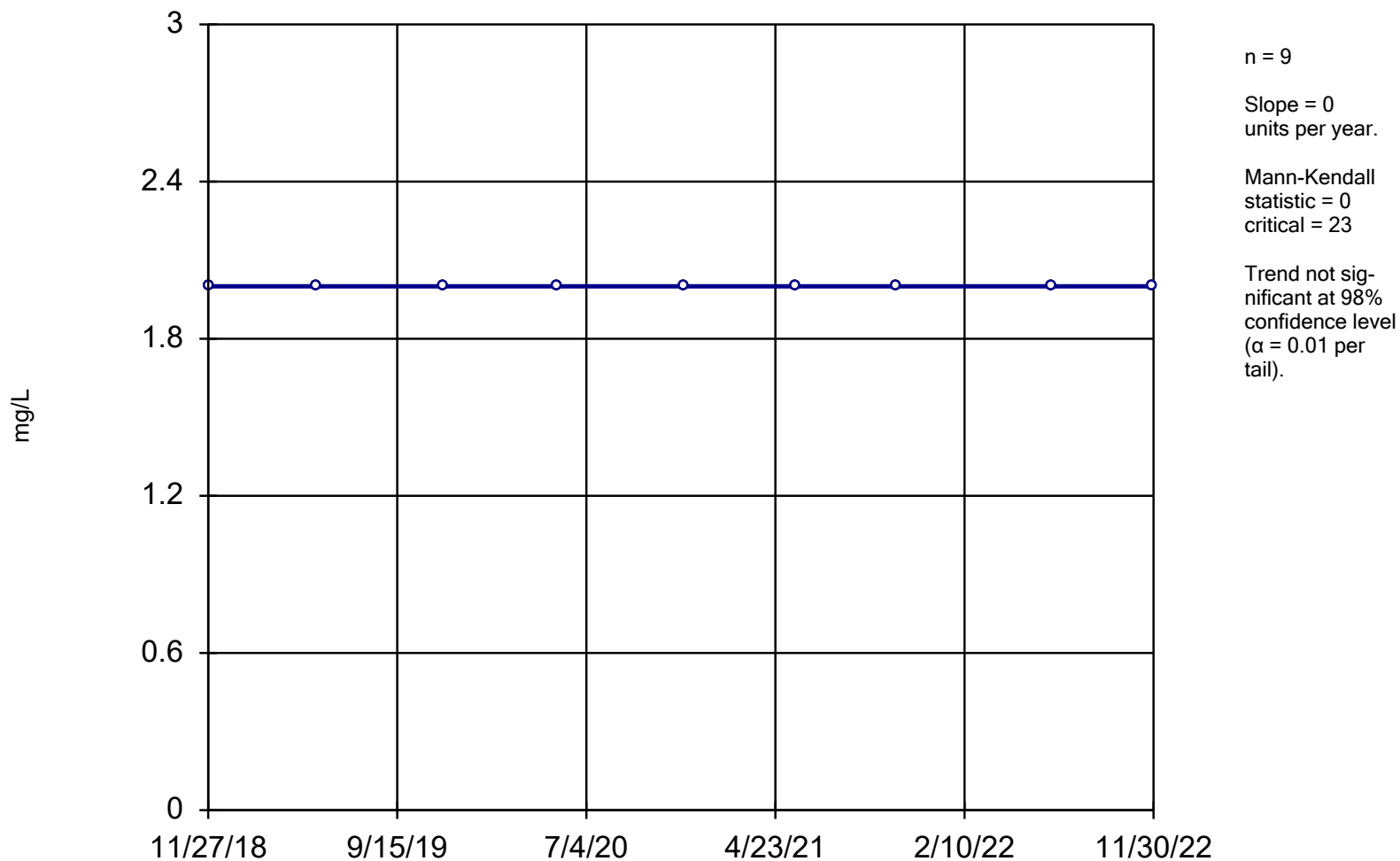
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Cadmium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

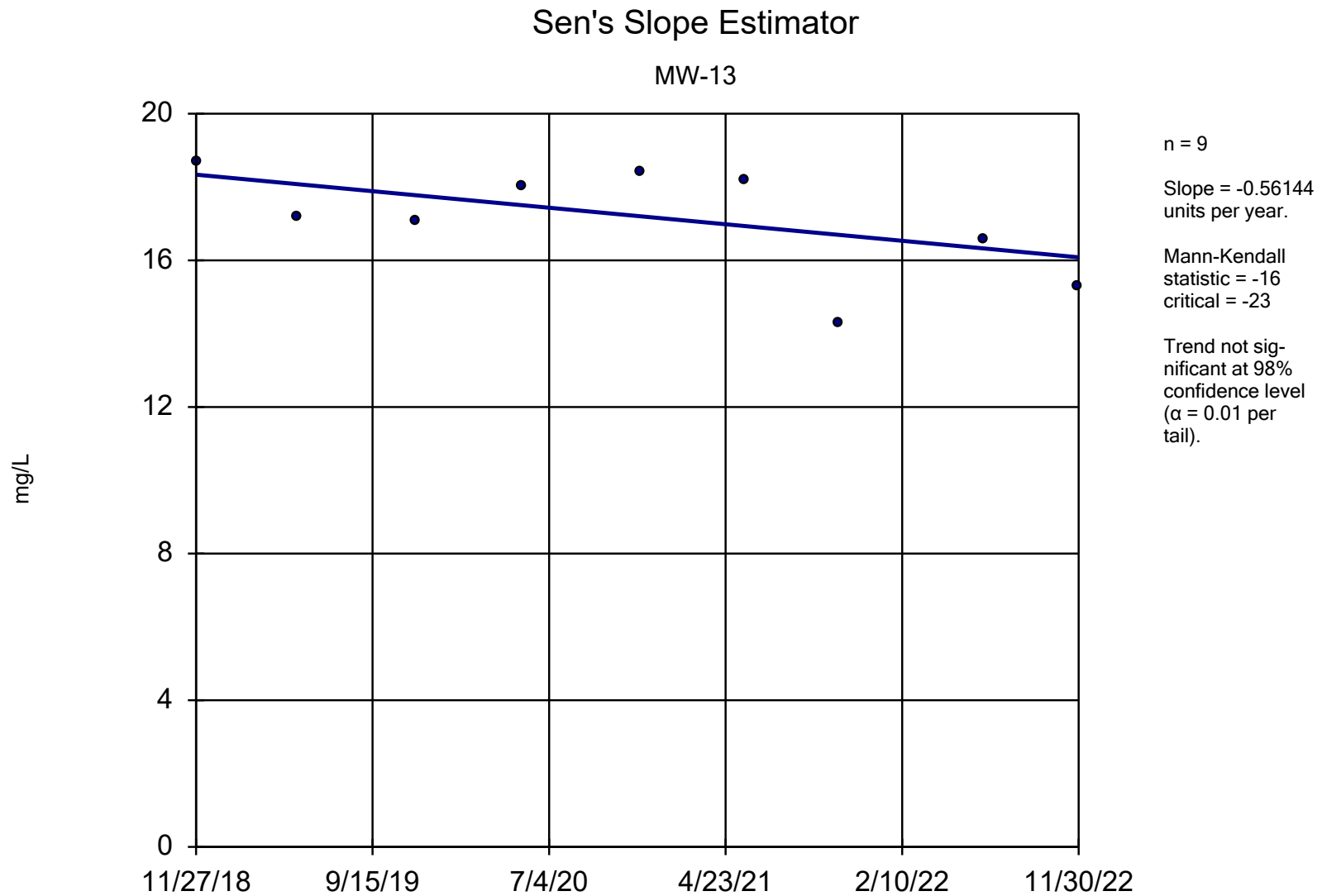
Sen's Slope Estimator

MW-13



Constituent: Carbonate as CaCO₃ Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

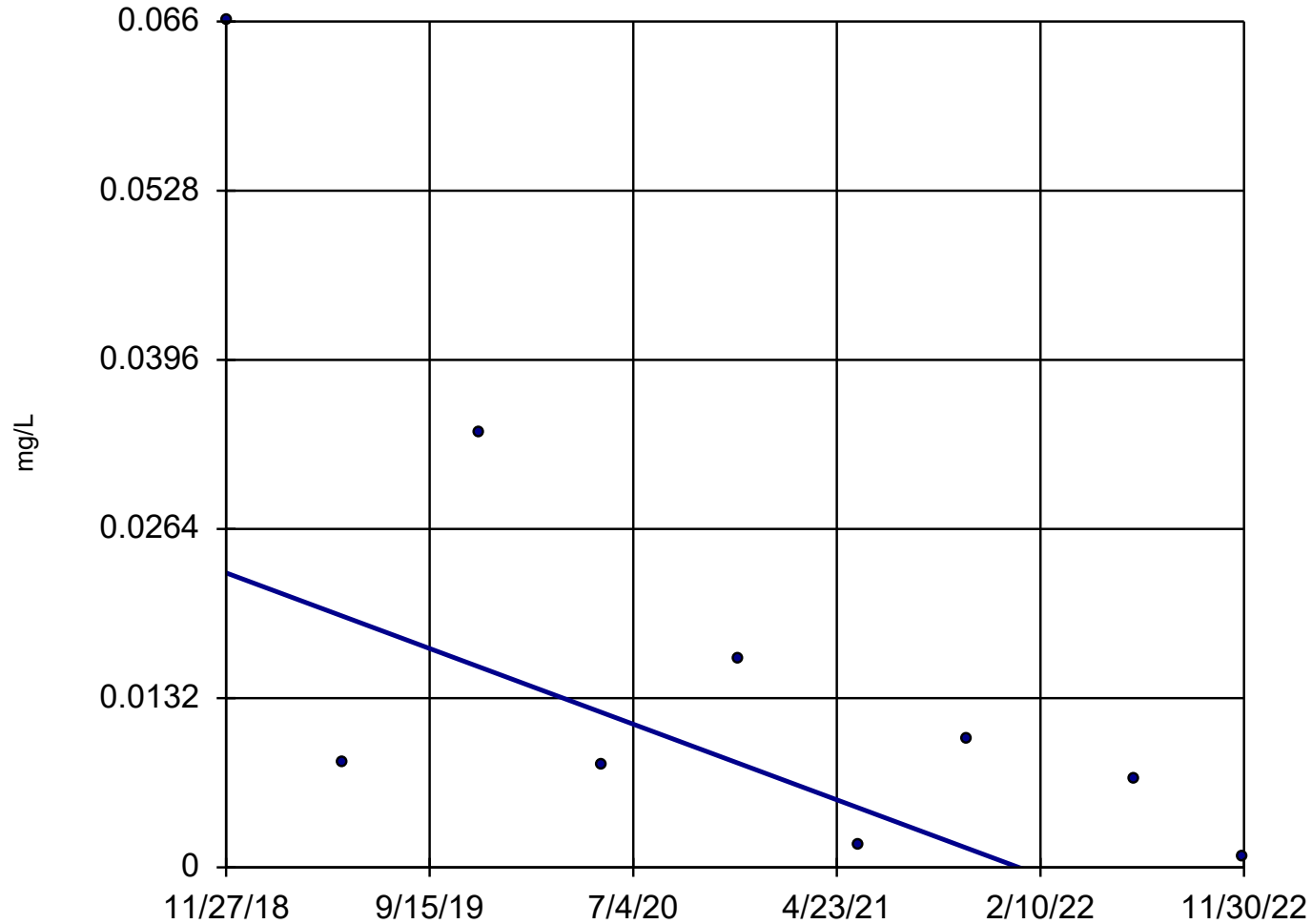


Constituent: Chloride Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

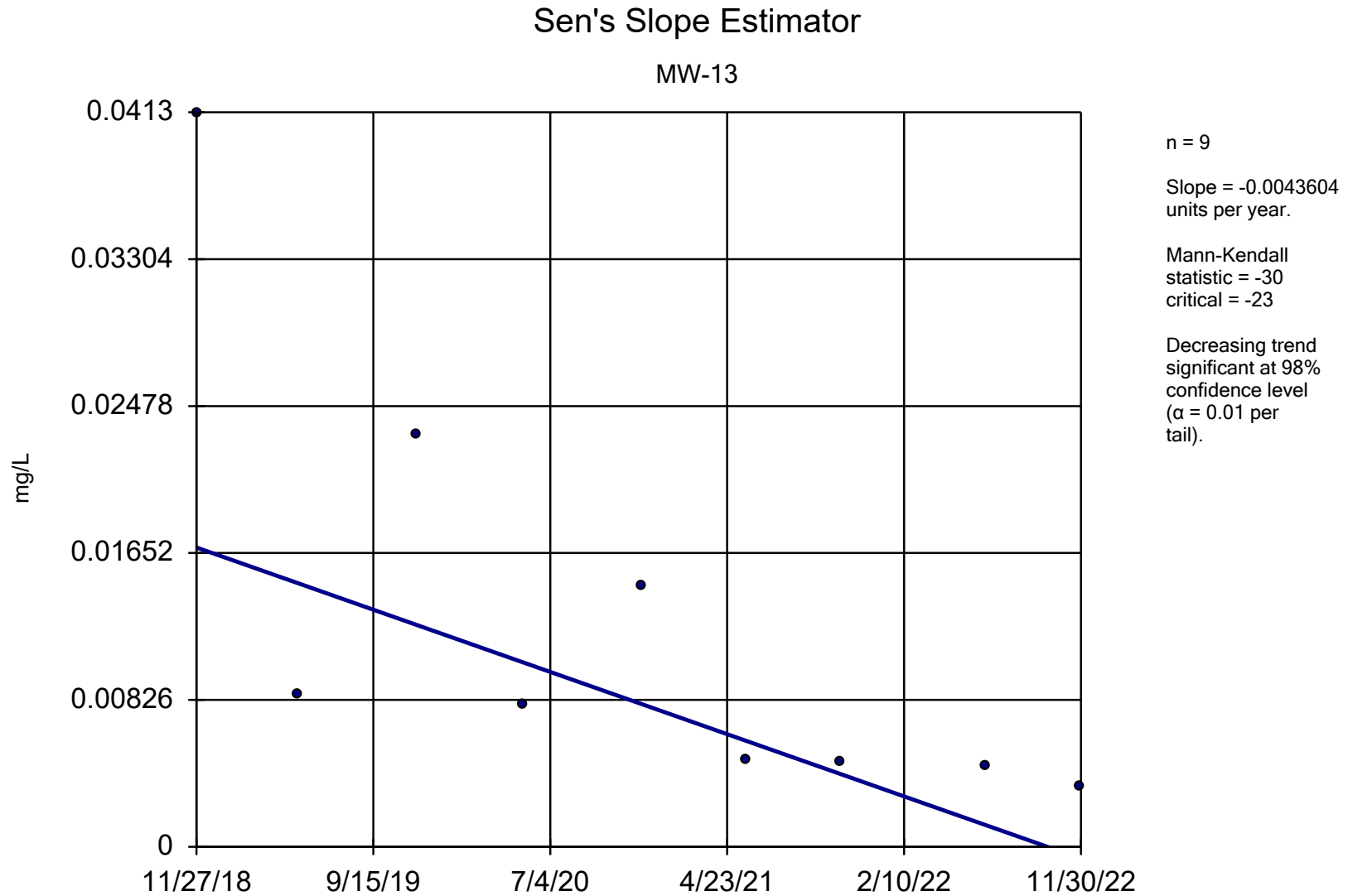
Slope = -0.0073568
units per year.

Mann-Kendall
statistic = -22
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chromium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

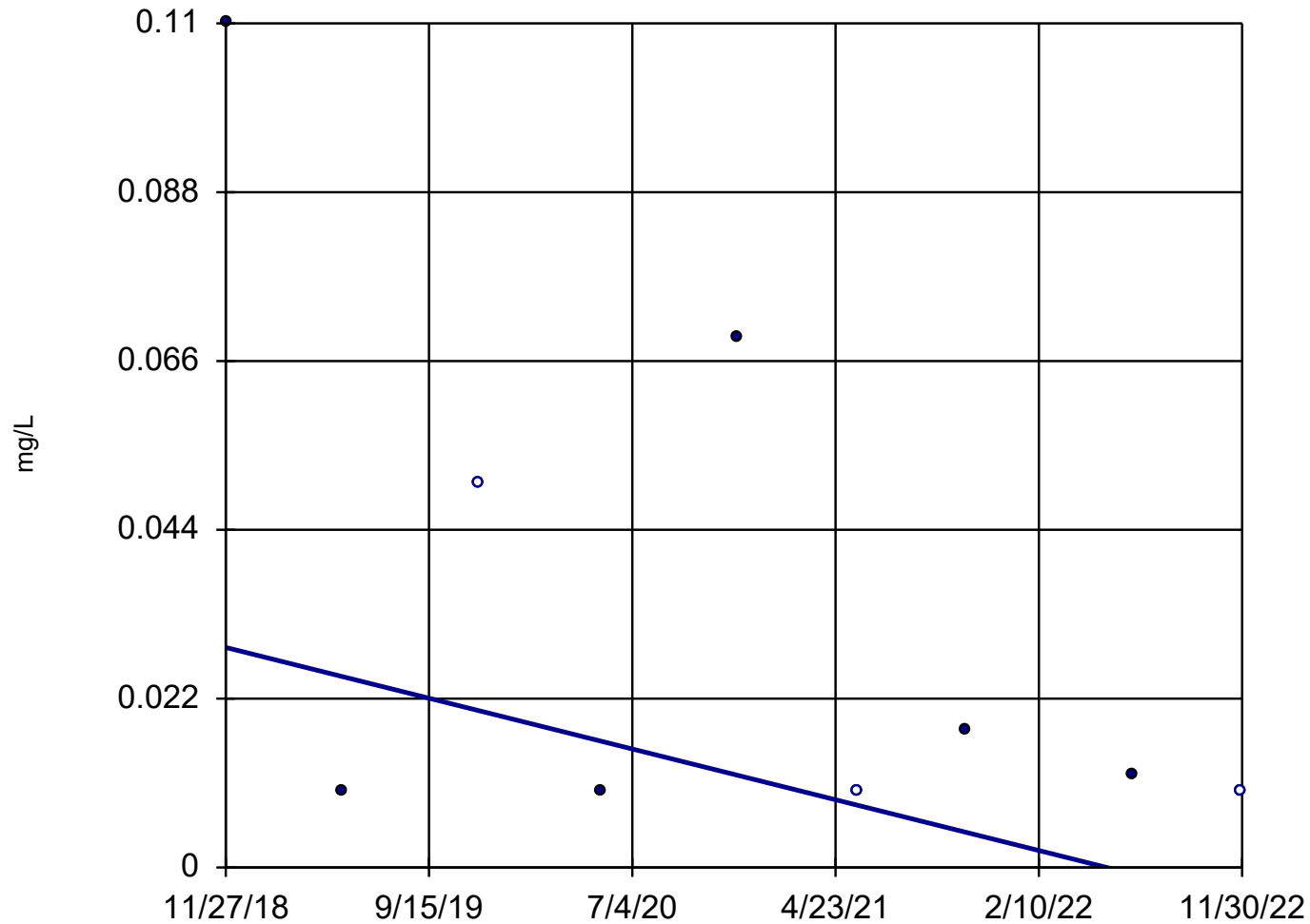


Constituent: Cobalt, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

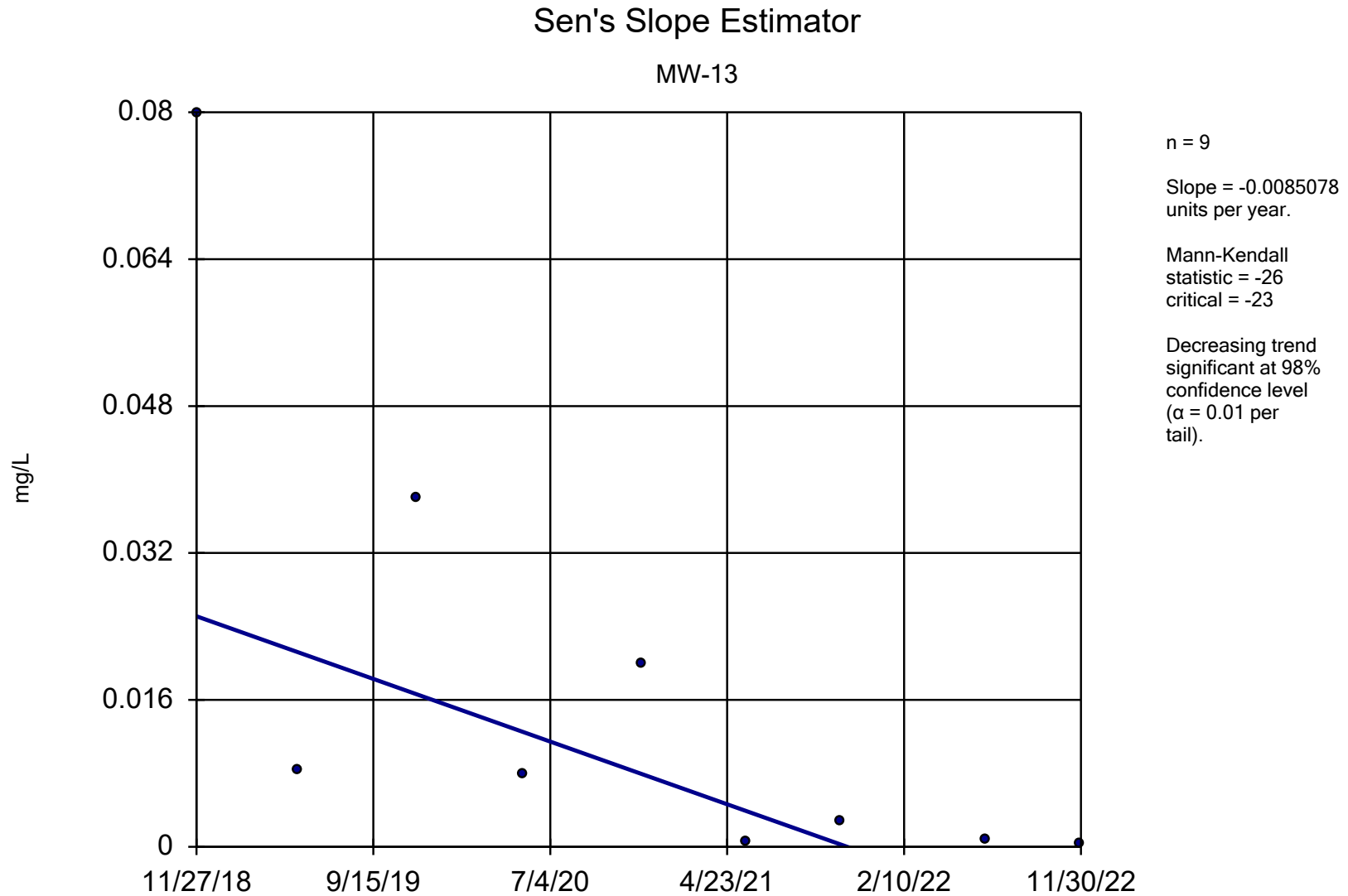
Slope = -0.0082499
units per year.

Mann-Kendall
statistic = -10
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Copper, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

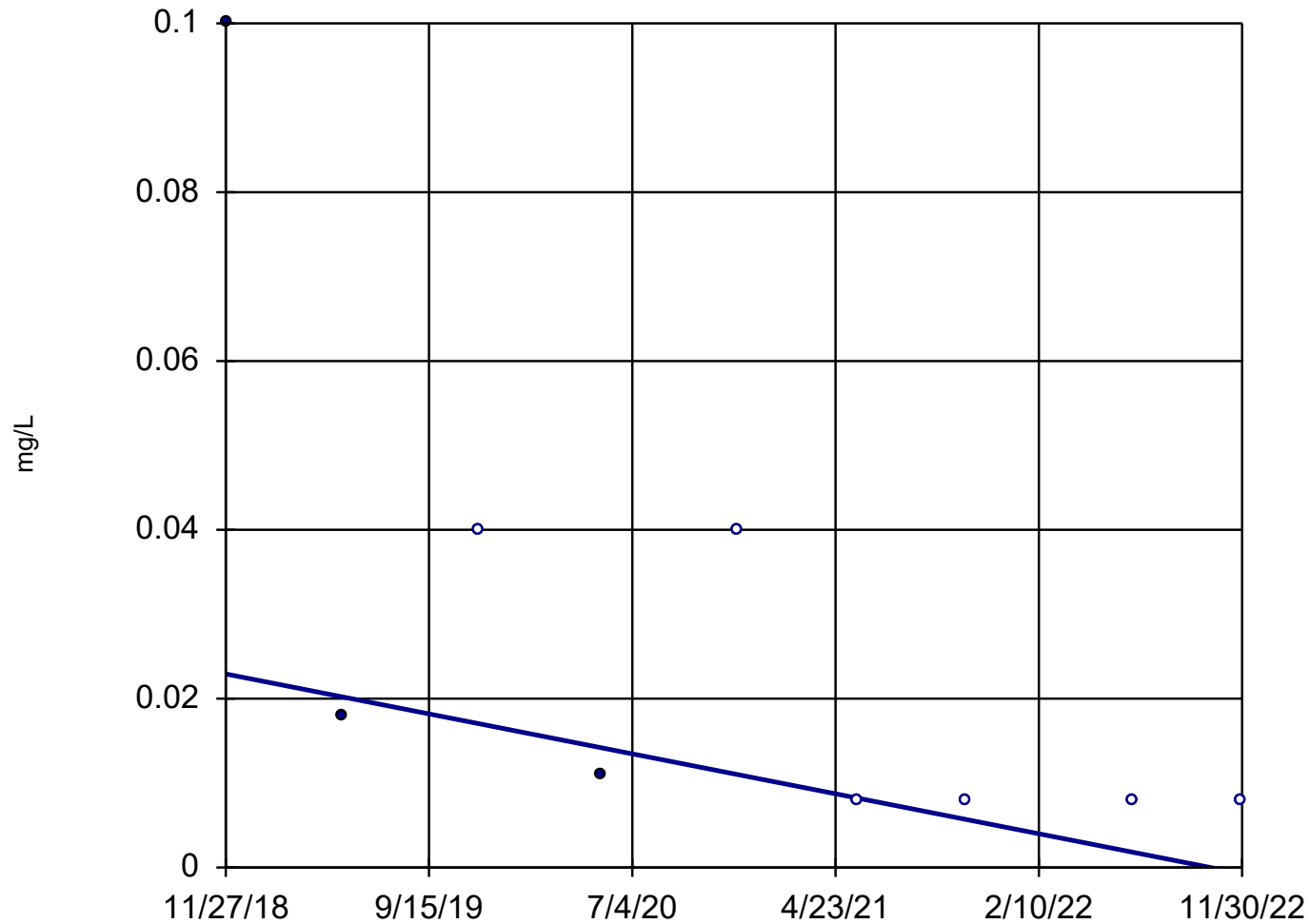
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working



Constituent: Lead, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

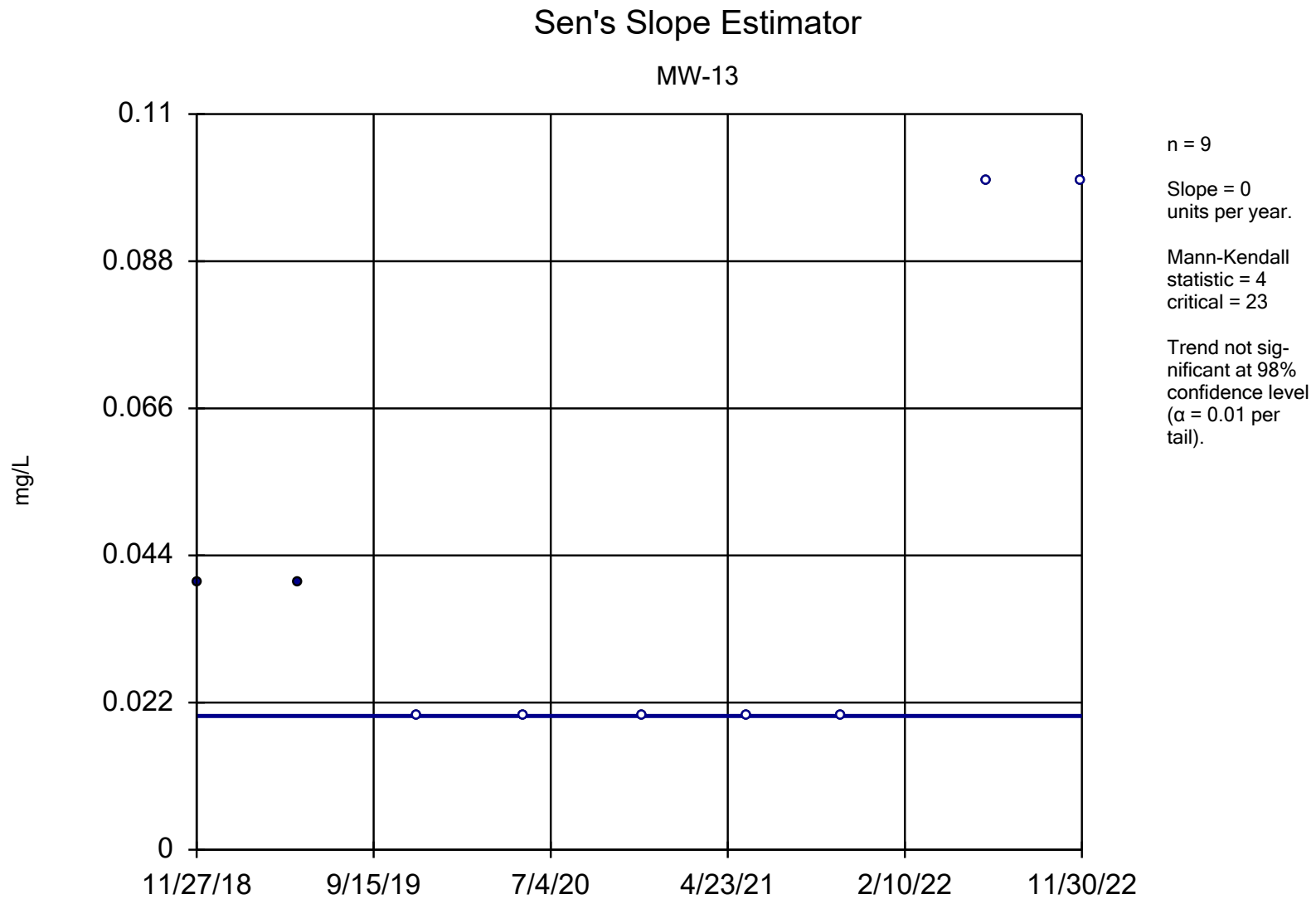
Slope = -0.005903
units per year.

Mann-Kendall
statistic = -23
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

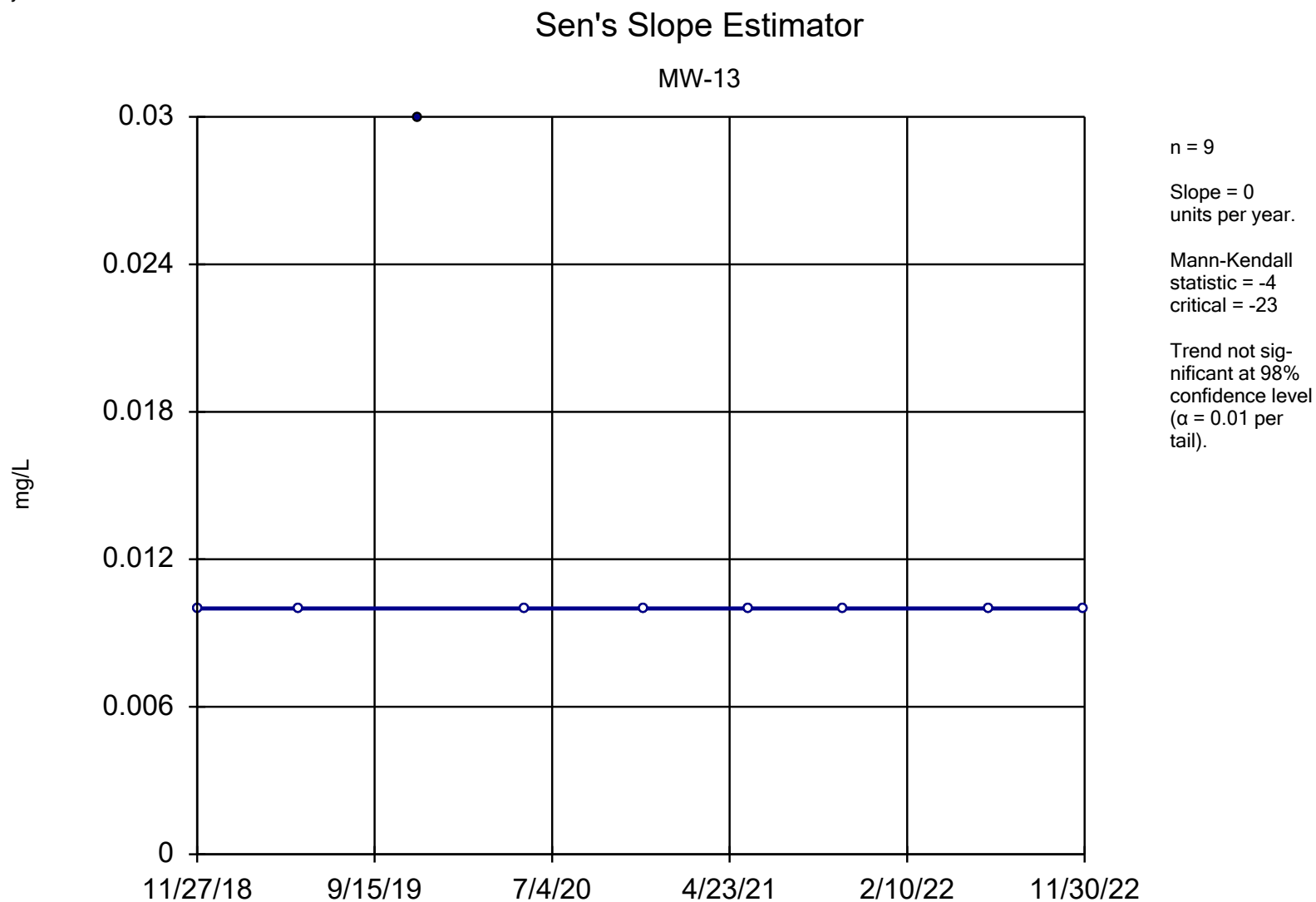
Constituent: Nickel, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working



Constituent: Nitrate as N, dissolved Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

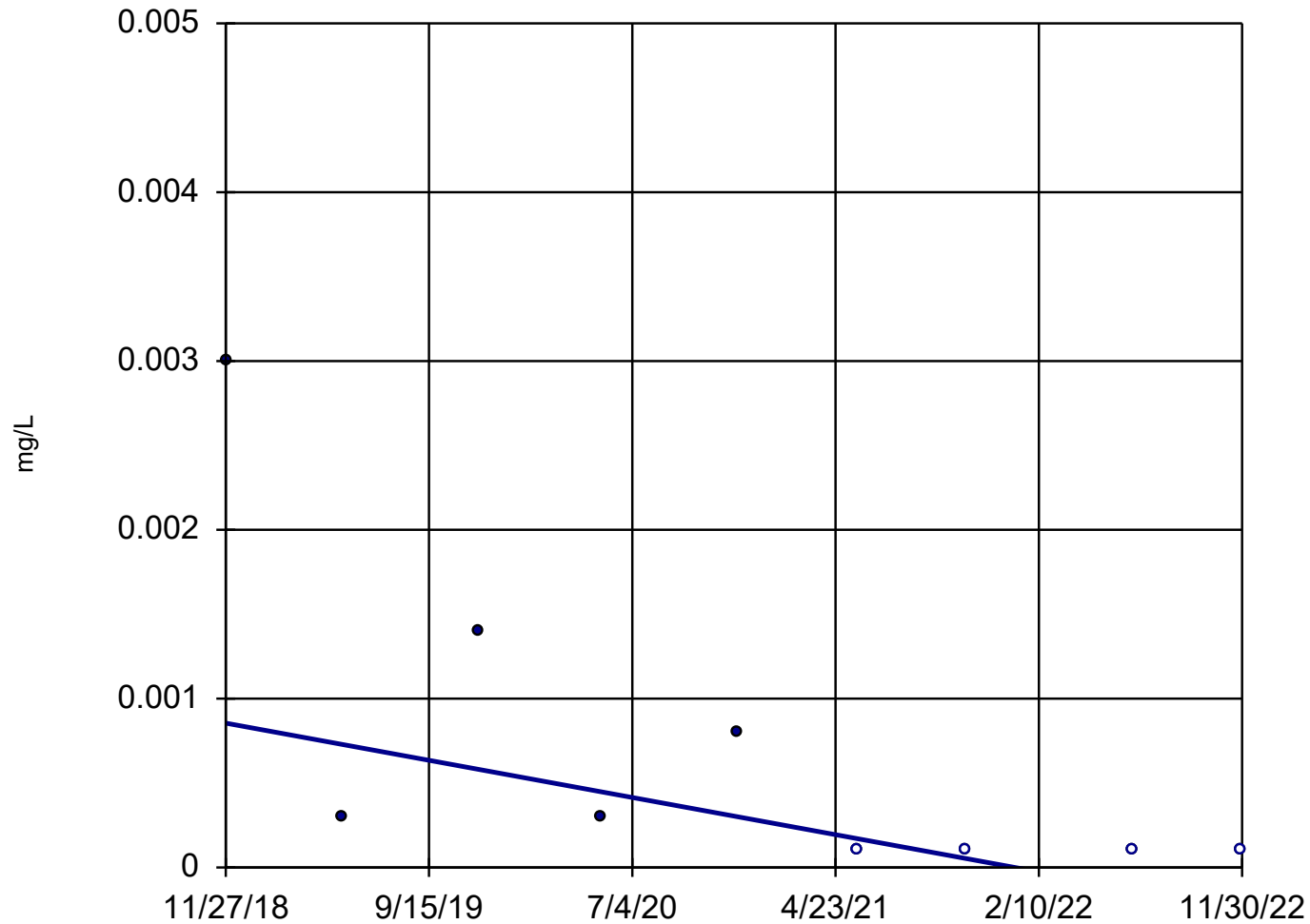


Constituent: Nitrite as N, dissolved Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

Slope = -0.00027435
units per year.

Mann-Kendall
statistic = -23
critical = -23

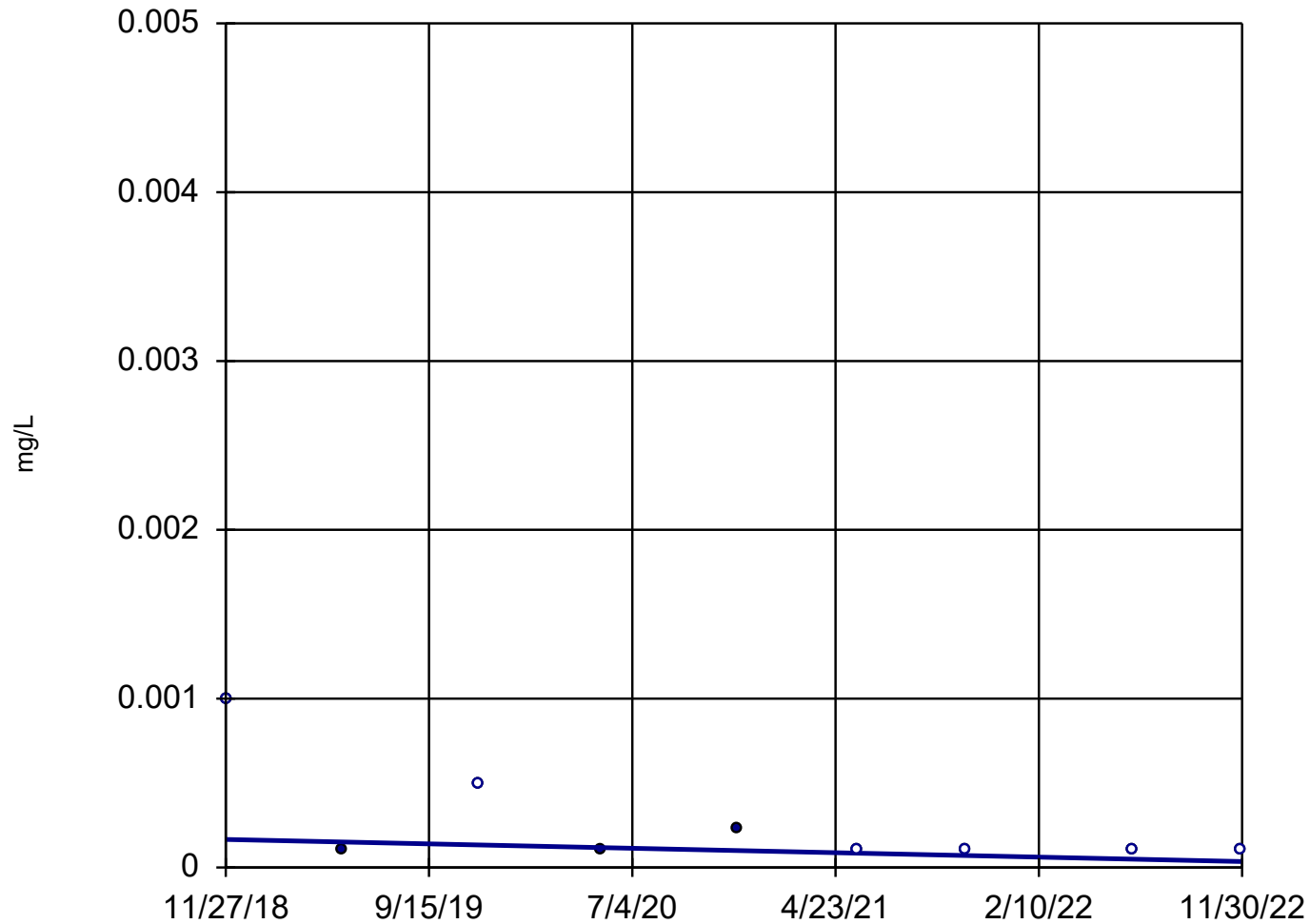
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Selenium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

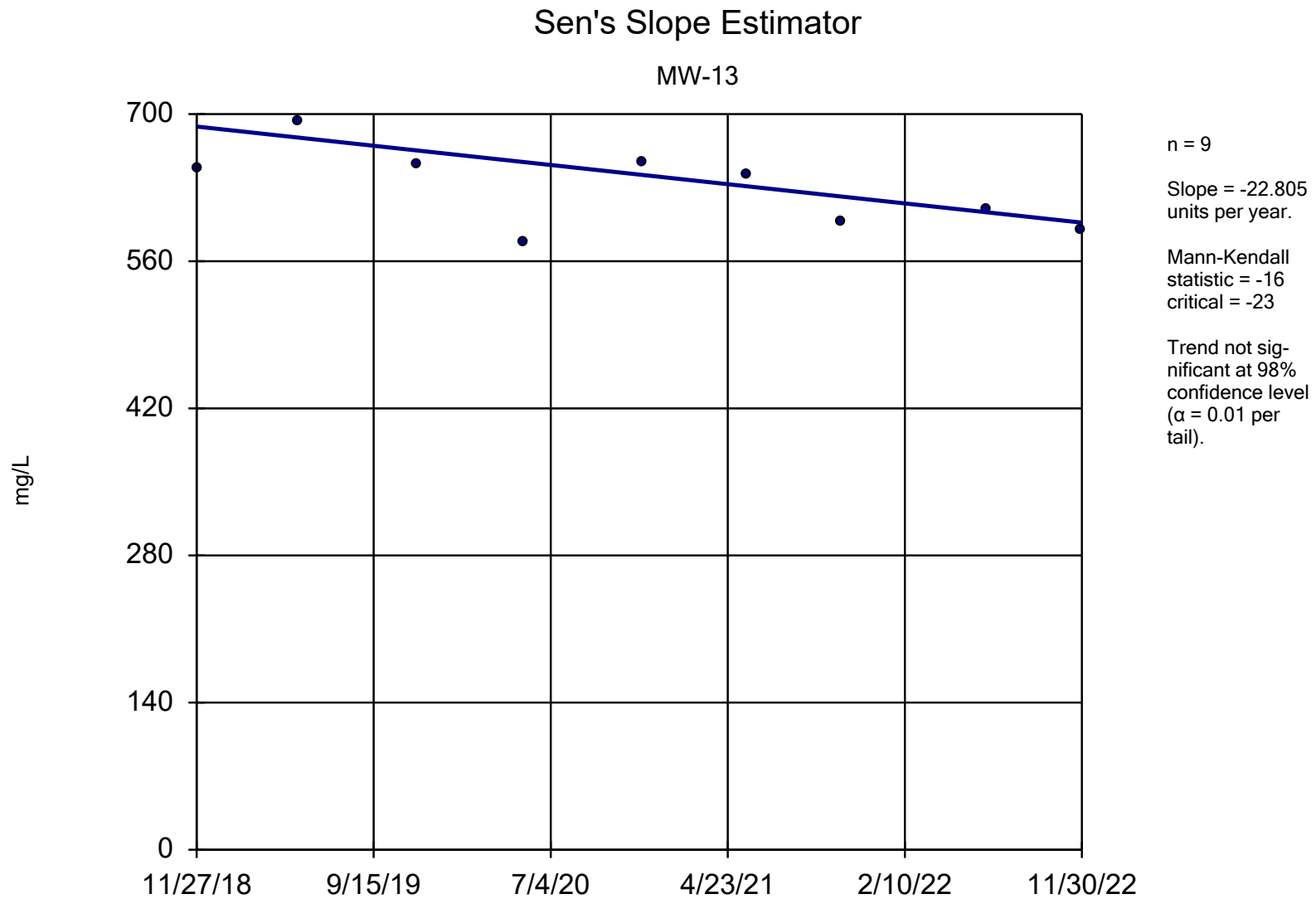
Slope = -0.000032679
units per year.

Mann-Kendall
statistic = -15
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Silver, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

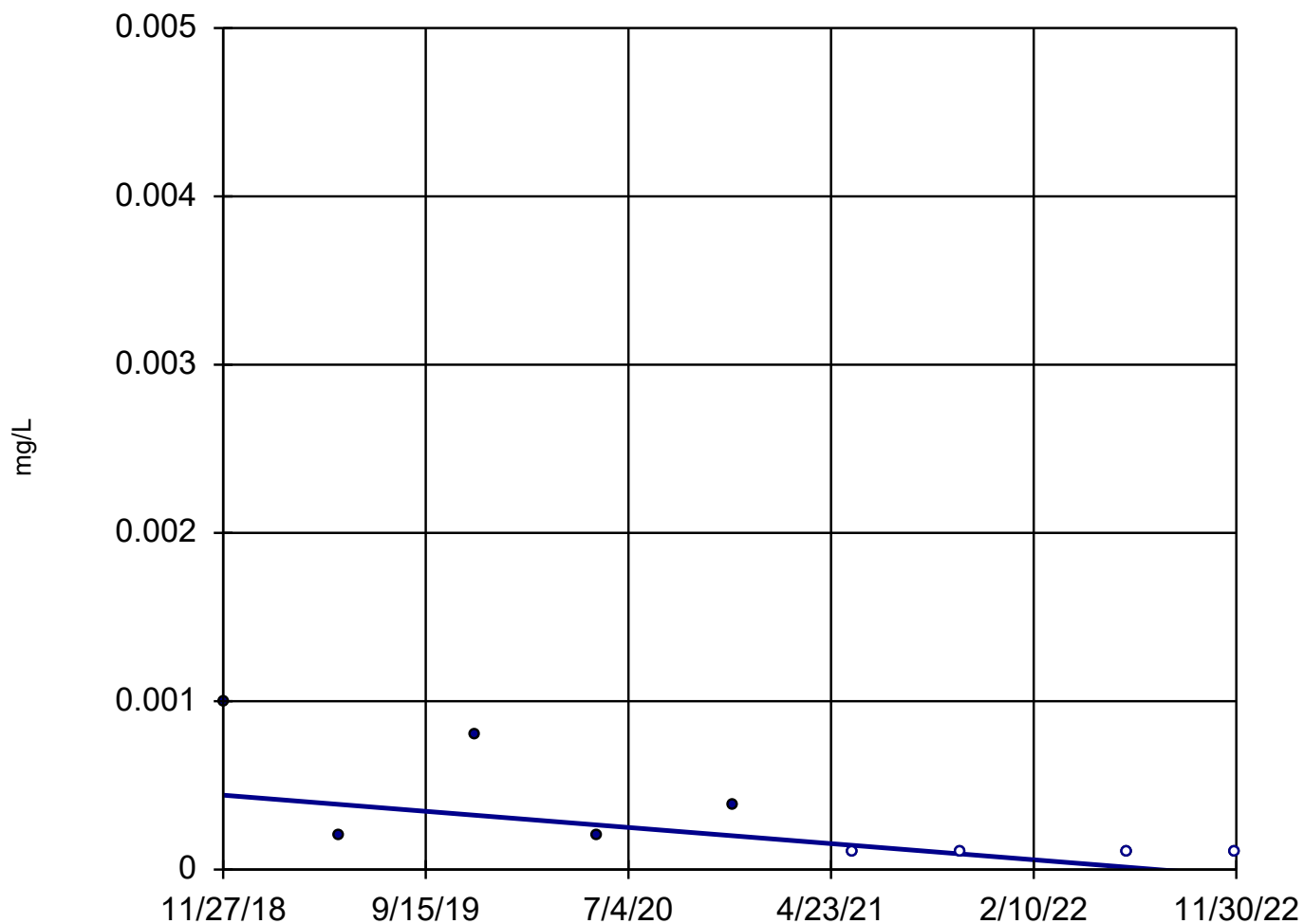
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working



Constituent: Sulfate Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

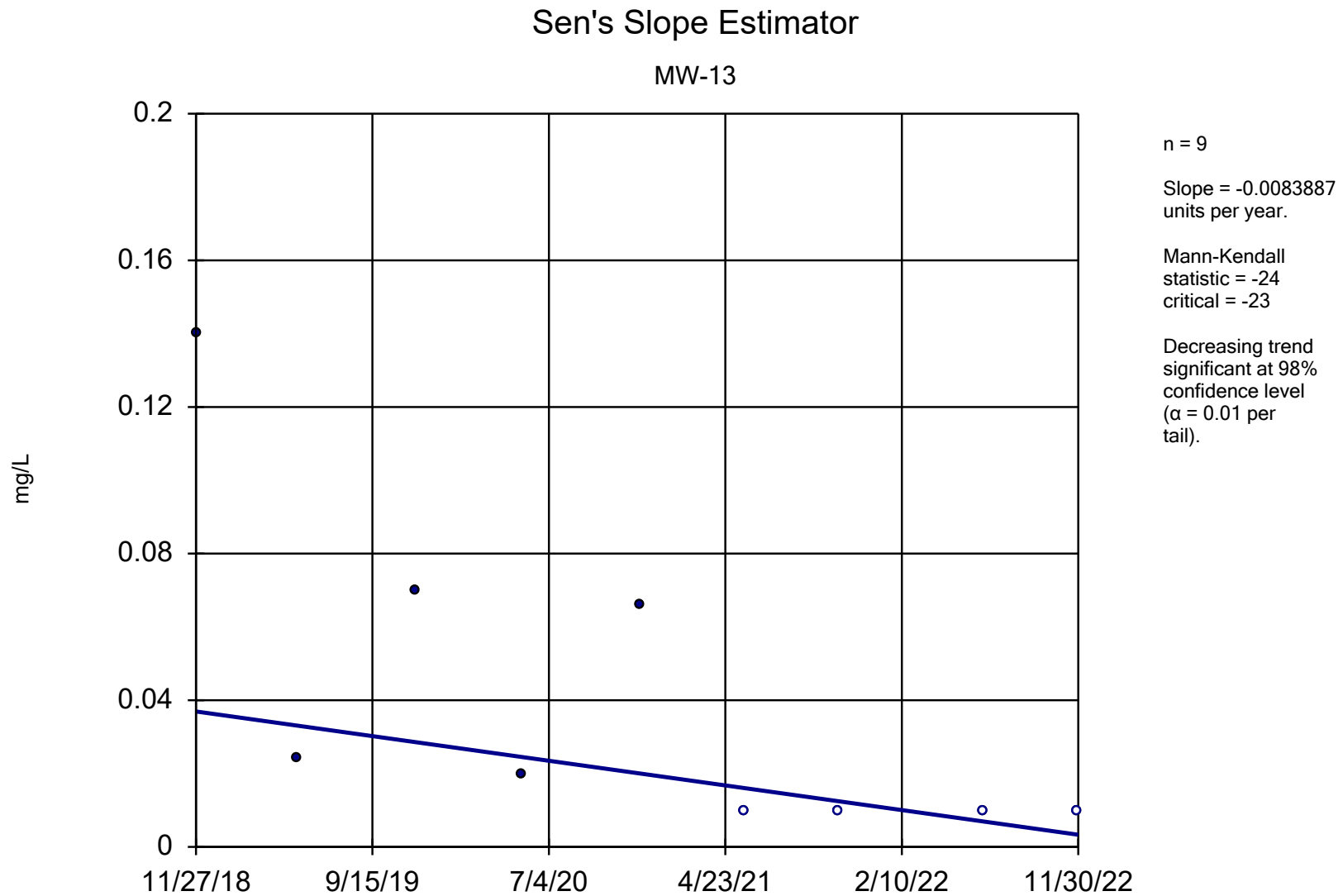
Slope = -0.00011958
units per year.

Mann-Kendall
statistic = -23
critical = -23

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Thallium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

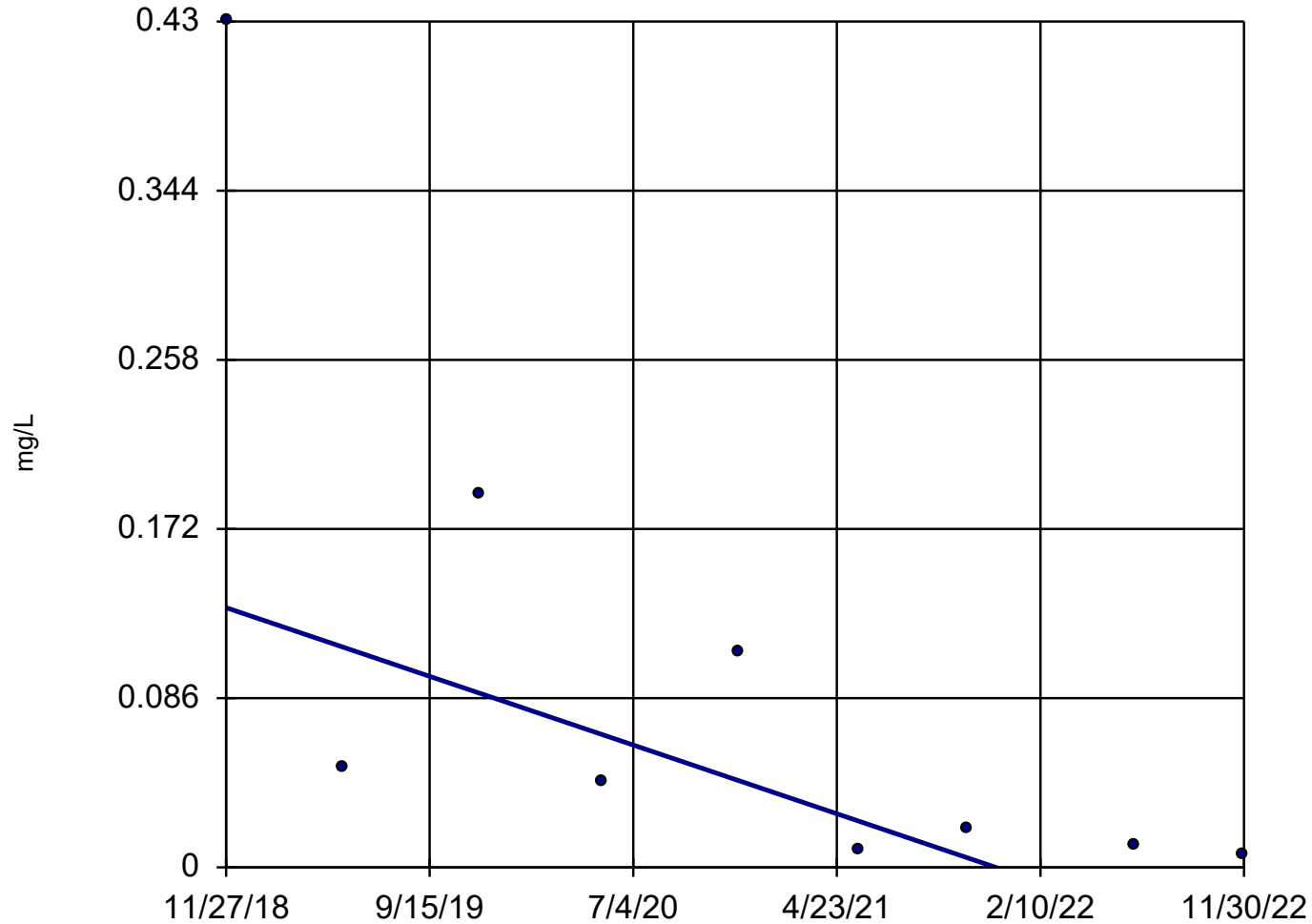


Constituent: Vanadium, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

MW-13



n = 9

Slope = -0.04353
units per year.

Mann-Kendall
statistic = -26
critical = -23

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

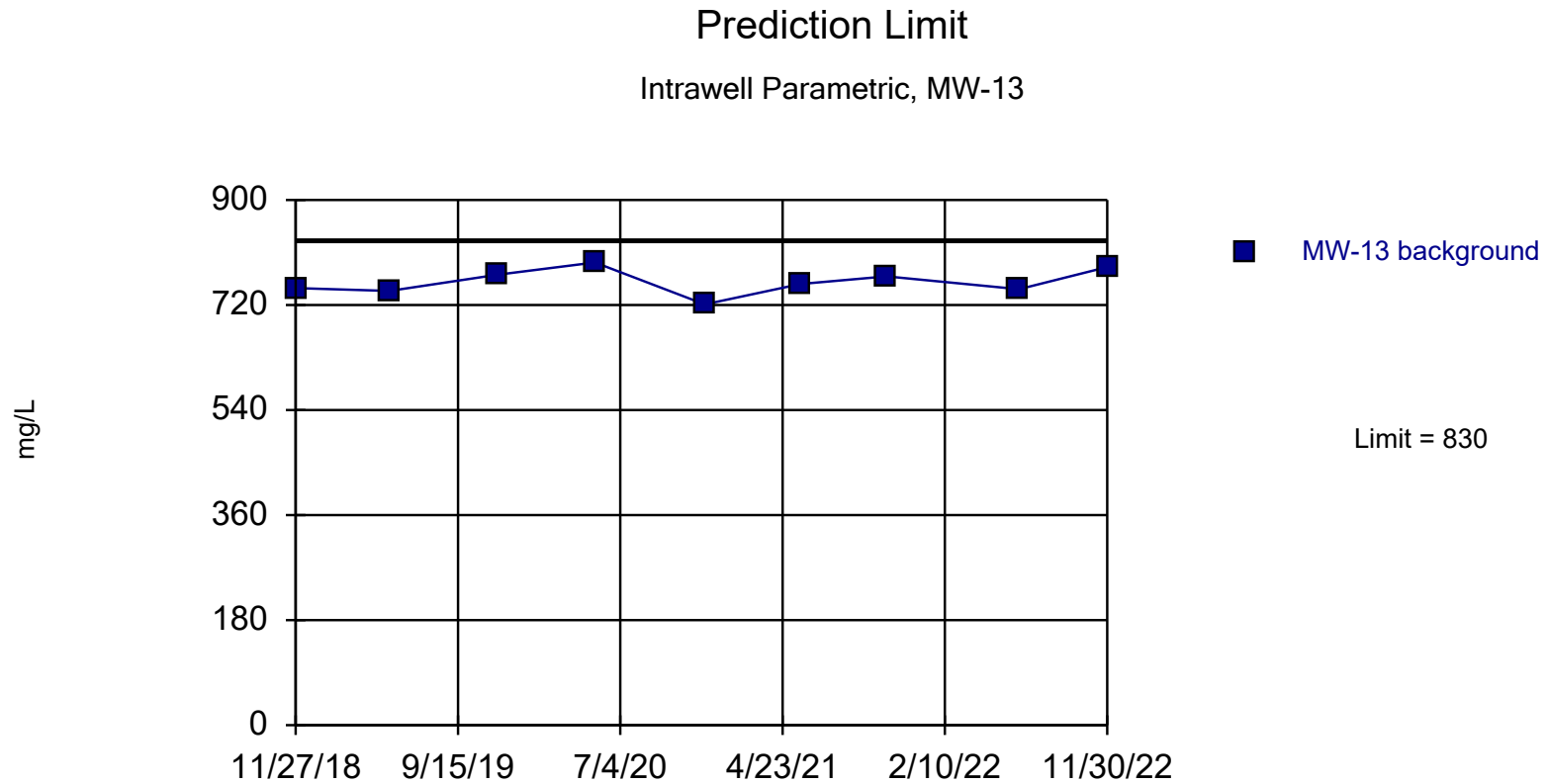
Constituent: Zinc, total Analysis Run 2/3/2025 1:15 PM View: MW-13 - Inorganics

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 2/4/2025, 2:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bq N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Bicarbonate as CaCO3 (mg/L)	MW-13	830	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Carbonate as CaCO3 (mg/L)	MW-13	2.0	n/a	n/a	1 future	n/a	9	100	n/a	0.1	NP Intra (NDs)
Chloride (mg/L)	MW-13	22	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Nitrate as N, dissolved (mg/L)	MW-13	0.10	n/a	n/a	1 future	n/a	9	77.778	n/a	0.1	NP Intra (NDs)
Nitrite as N, dissolved (mg/L)	MW-13	0.030	n/a	n/a	1 future	n/a	9	88.889	n/a	0.1	NP Intra (NDs)
Sulfate (mg/L)	MW-13	750	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Antimony, total (mg/L)	MW-13	0.0040	n/a	n/a	1 future	n/a	9	100	n/a	0.1	NP Intra (NDs)
Arsenic, total (mg/L)	MW-13	0.19	n/a	n/a	1 future	n/a	9	0	ln(x)	0.01	Param Intra
Barium, total (mg/L)	MW-13	2	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra
Beryllium, total (mg/L)	MW-13	0.0044	n/a	n/a	1 future	n/a	9	33.333	n/a	0.1	NP Intra (Cohens/xform)
Cadmium, total (mg/L)	MW-13	0.0054	n/a	n/a	1 future	n/a	9	11.111	sqrt(x)	0.01	Param Intra
Chromium, total (mg/L)	MW-13	0.11	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra
Cobalt, total (mg/L)	MW-13	0.062	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra
Copper, total (mg/L)	MW-13	0.11	n/a	n/a	1 future	n/a	9	33.333	n/a	0.1	NP Intra (normality)
Lead, total (mg/L)	MW-13	0.14	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra
Nickel, total (mg/L)	MW-13	0.10	n/a	n/a	1 future	n/a	9	66.667	n/a	0.1	NP Intra (normality)
Selenium, total (mg/L)	MW-13	0.0030	n/a	n/a	1 future	n/a	9	44.444	n/a	0.1	NP Intra (Cohens/xform)
Silver, total (mg/L)	MW-13	0.0010	n/a	n/a	1 future	n/a	9	66.667	n/a	0.1	NP Intra (normality)
Thallium, total (mg/L)	MW-13	0.0010	n/a	n/a	1 future	n/a	9	44.444	n/a	0.1	NP Intra (normality)
Vanadium, total (mg/L)	MW-13	0.14	n/a	n/a	1 future	n/a	9	44.444	n/a	0.1	NP Intra (Cohens/xform)
Zinc, total (mg/L)	MW-13	0.7	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra



Background Data Summary: Mean=759.56, Std. Dev.=22.417, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.97252, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Bicarbonate as CaCO₃ Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

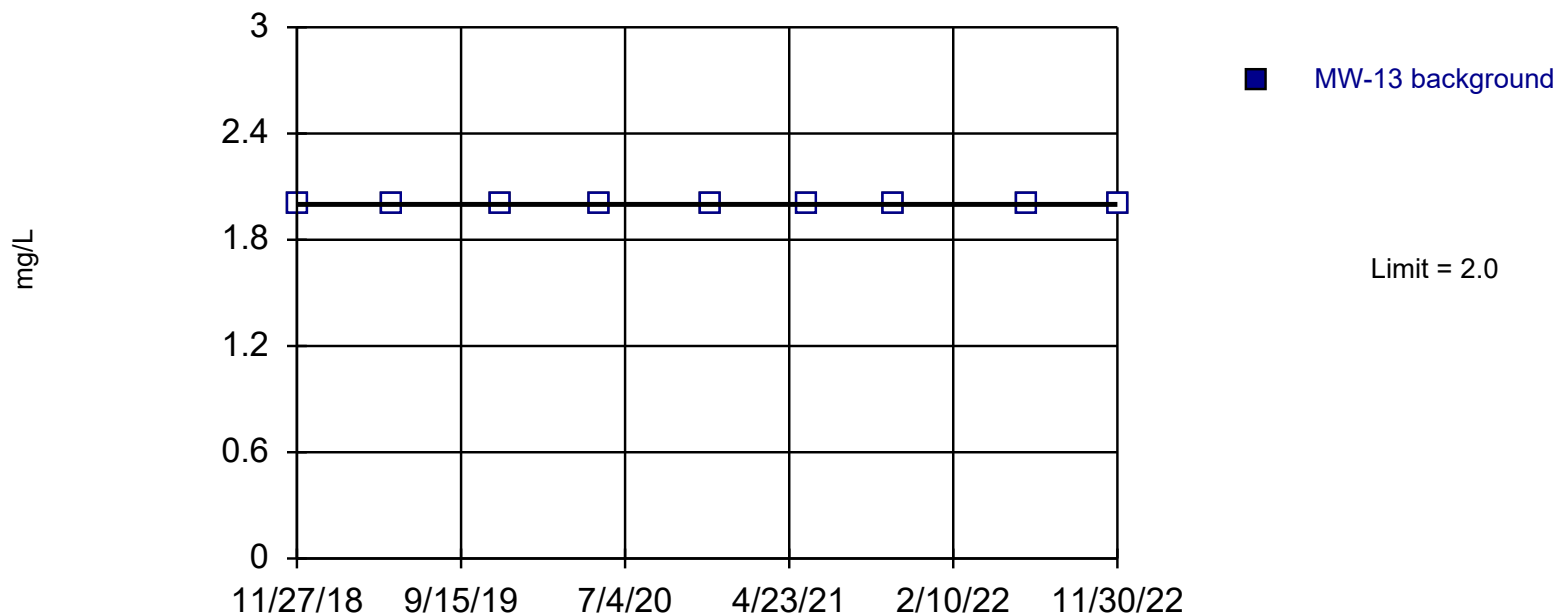
Prediction Limit

Constituent: Bicarbonate as CaCO3 (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	749
5/15/2019	744
11/27/2019	772
5/20/2020	793
12/4/2020	721
5/26/2021	756
10/28/2021	769
6/24/2022	747
11/30/2022	785

Prediction Limit

Intrawell Non-parametric, MW-13



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 9 background values. 100% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Carbonate as CaCO₃ Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

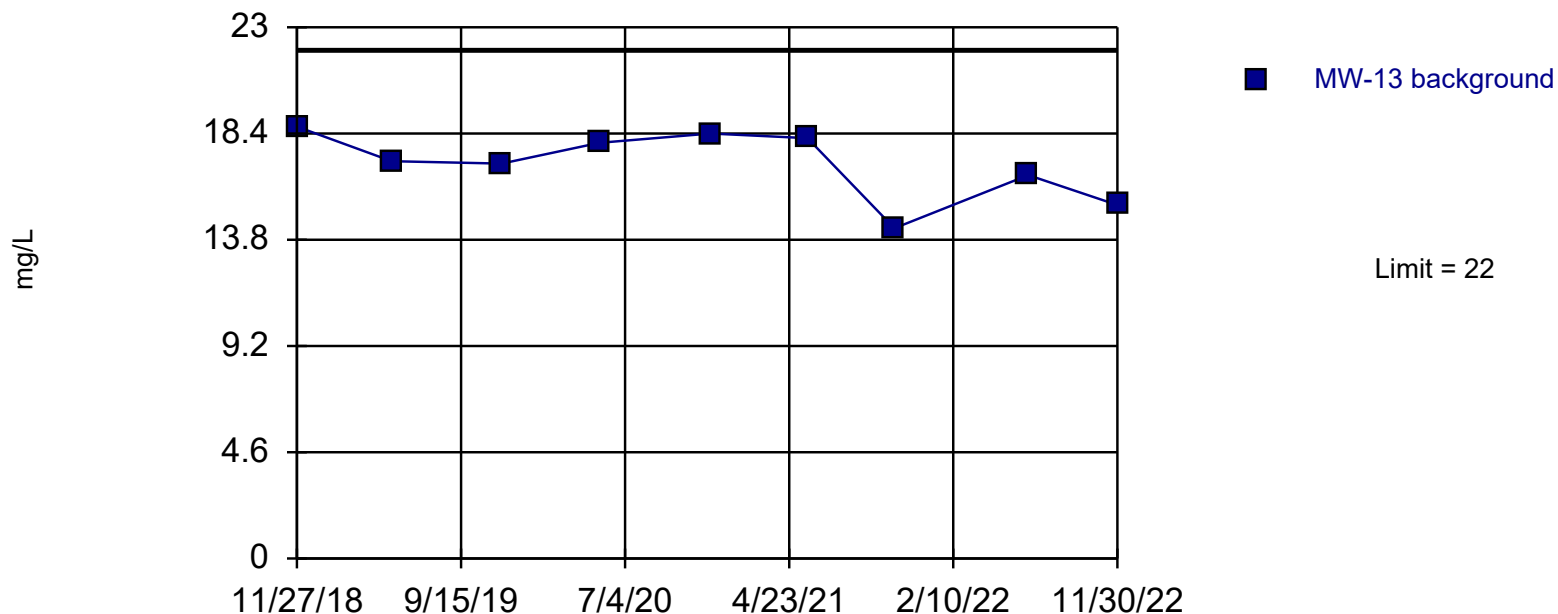
Constituent: Carbonate as CaCO3 (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	<2
5/15/2019	<2
11/27/2019	<2
5/20/2020	<2
12/4/2020	<2
5/26/2021	<2
10/28/2021	<2
6/24/2022	<2
11/30/2022	<2

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary: Mean=17.089, Std. Dev.=1.4836, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.90761, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Chloride Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only
 Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

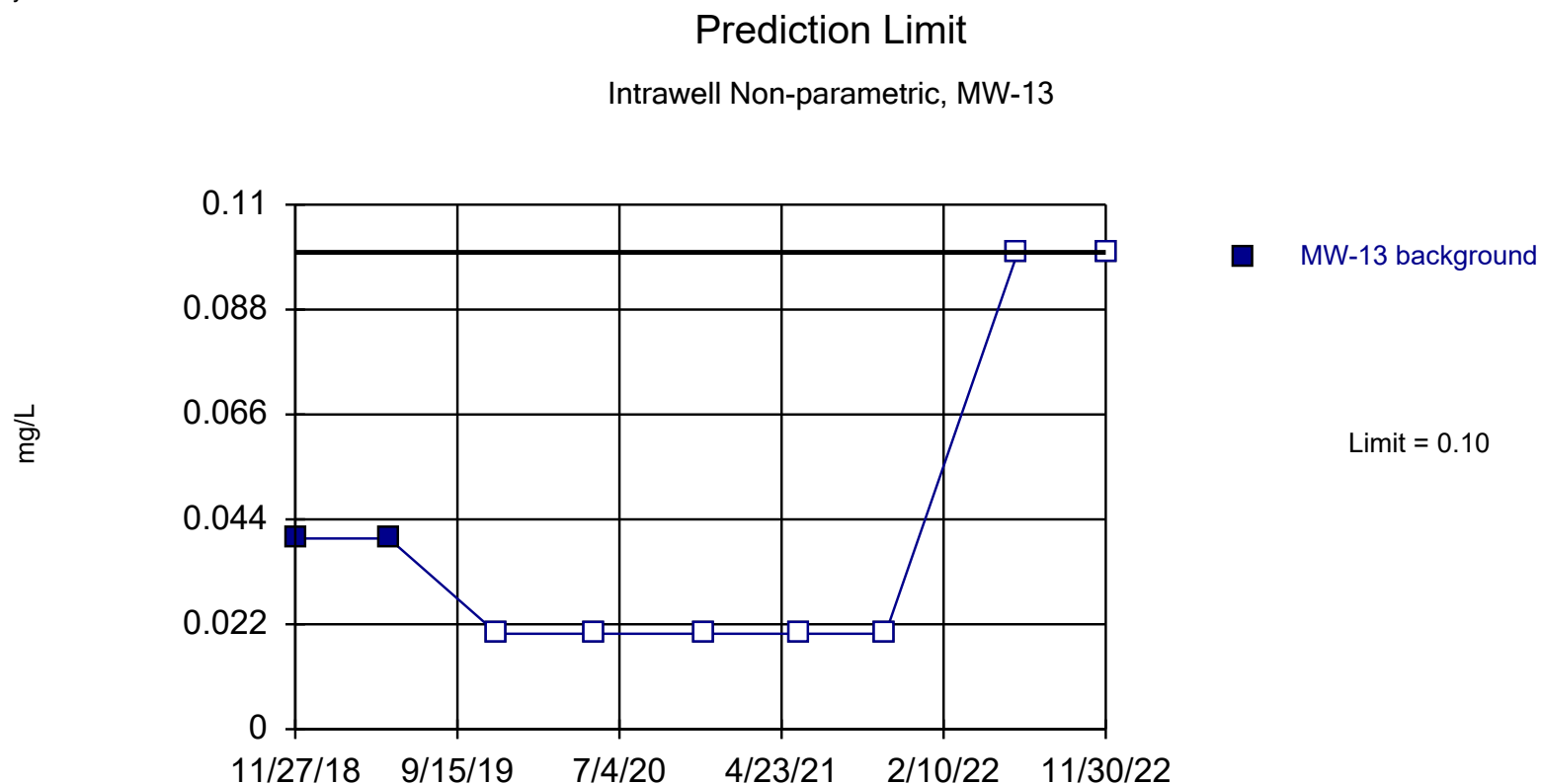
Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	18.7
5/15/2019	17.2
11/27/2019	17.1
5/20/2020	18
12/4/2020	18.4
5/26/2021	18.2
10/28/2021	14.3
6/24/2022	16.6
11/30/2022	15.3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 9 background values. 77.778% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

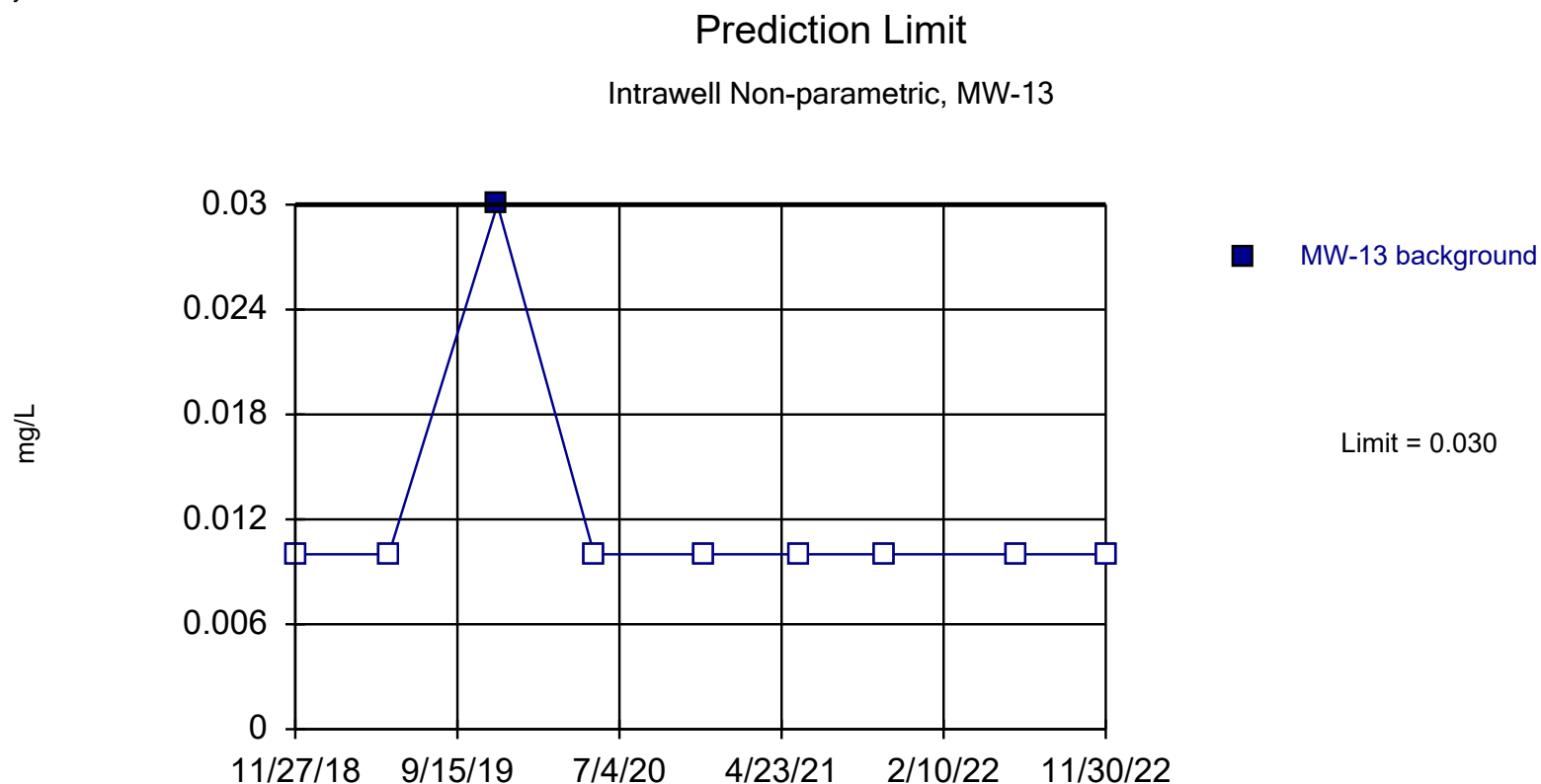
Constituent: Nitrate as N, dissolved Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Nitrate as N, dissolved (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.04 (B)
5/15/2019	0.04 (B)
11/27/2019	<0.02
5/20/2020	<0.02
12/4/2020	<0.02
5/26/2021	<0.02
10/28/2021	<0.02
6/24/2022	<0.1 (D)
11/30/2022	<0.1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 9 background values. 88.889% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

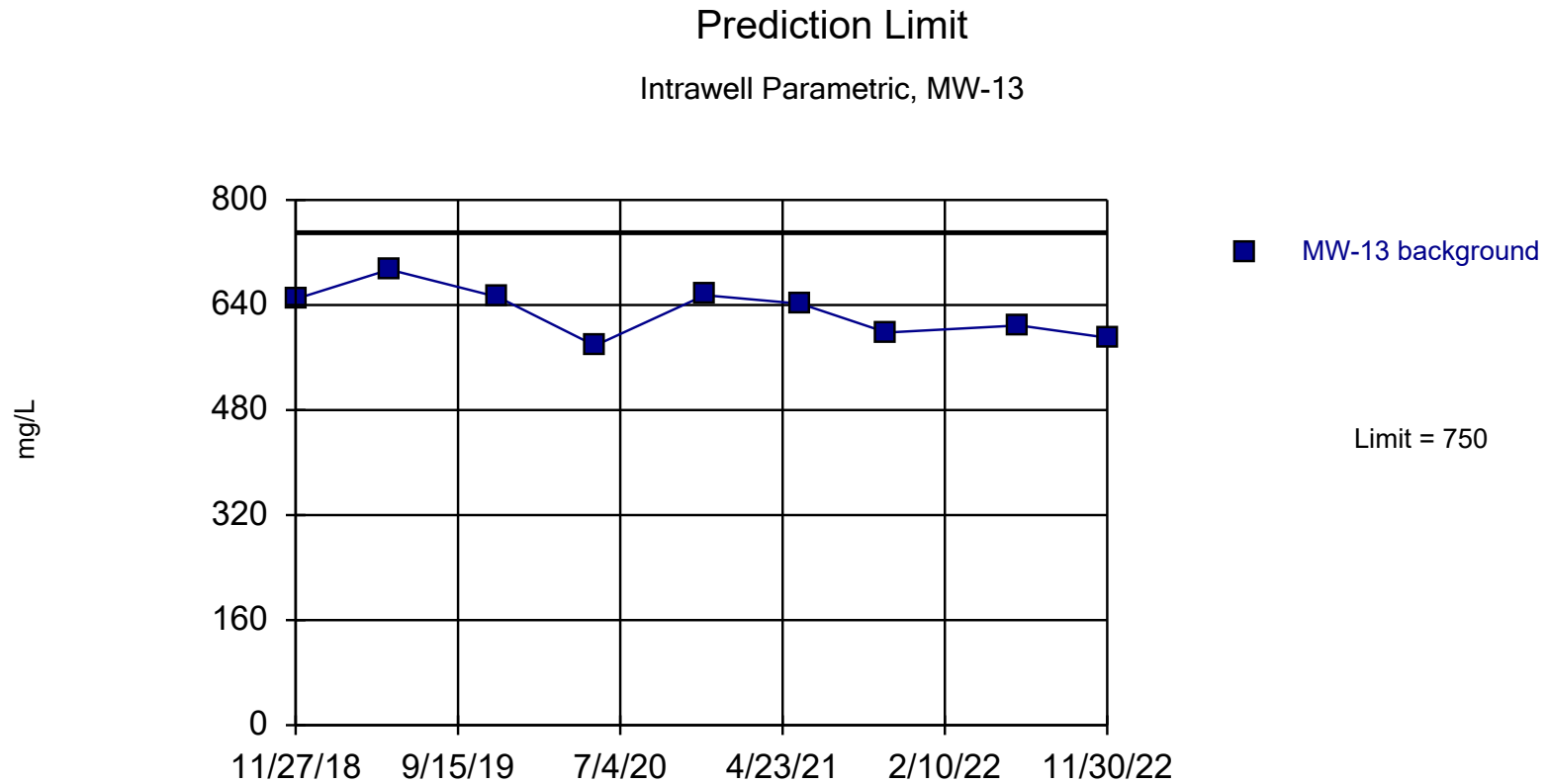
Constituent: Nitrite as N, dissolved Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Nitrite as N, dissolved (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	<0.01
5/15/2019	<0.01
11/27/2019	0.03 (B)
5/20/2020	<0.01
12/4/2020	<0.01
5/26/2021	<0.01
10/28/2021	<0.01
6/24/2022	<0.01
11/30/2022	<0.01



Background Data Summary: Mean=629.67, Std. Dev.=37.878, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.93952, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Sulfate Analysis Run 2/4/2025 2:31 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

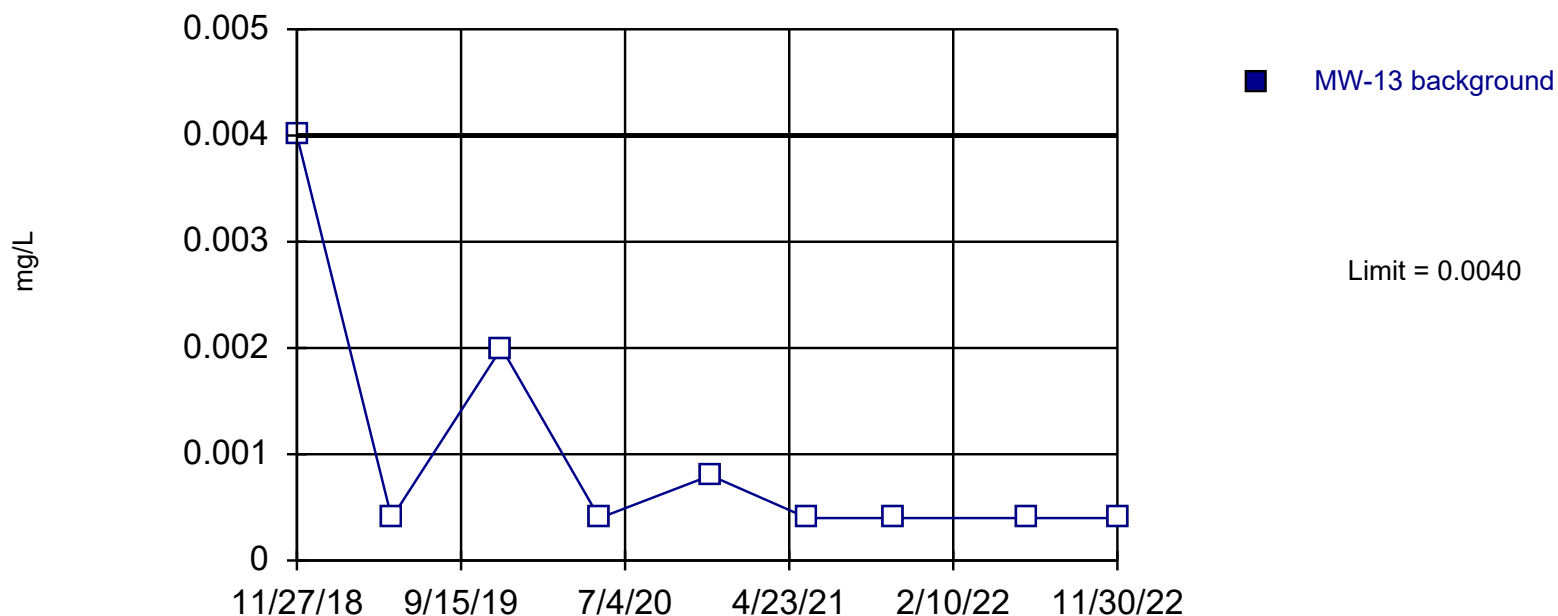
Constituent: Sulfate (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IA Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13

11/27/2018	649
5/15/2019	694
11/27/2019	652
5/20/2020	578
12/4/2020	655
5/26/2021	642
10/28/2021	598
6/24/2022	609
11/30/2022	590

Prediction Limit

Intrawell Non-parametric, MW-13



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 9 background values. 100% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Antimony, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

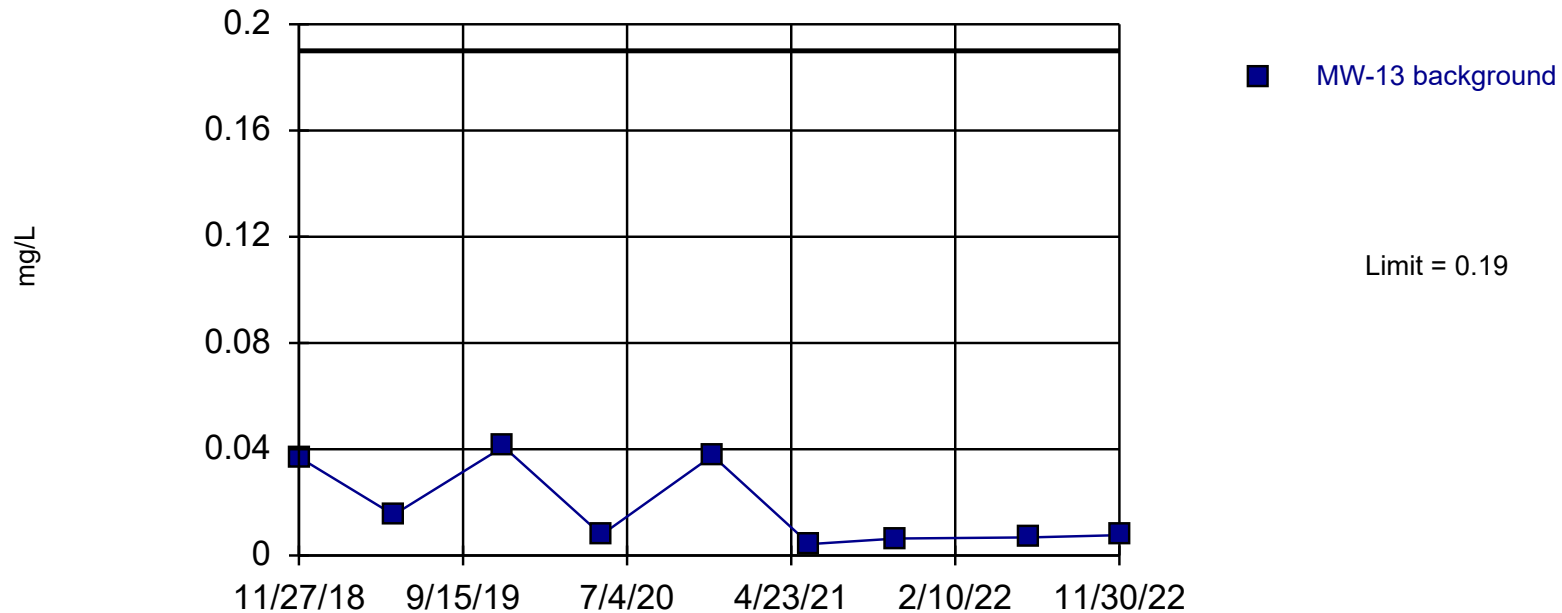
Prediction Limit

Constituent: Antimony, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	<0.004
5/15/2019	<0.0004
11/27/2019	<0.002
5/20/2020	<0.0004
12/4/2020	<0.0008
5/26/2021	<0.0004
10/28/2021	<0.0004
6/24/2022	<0.0004
11/30/2022	<0.0004

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on natural log transformation): Mean=-4.3516, Std. Dev.=0.88363, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.84729, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Arsenic, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

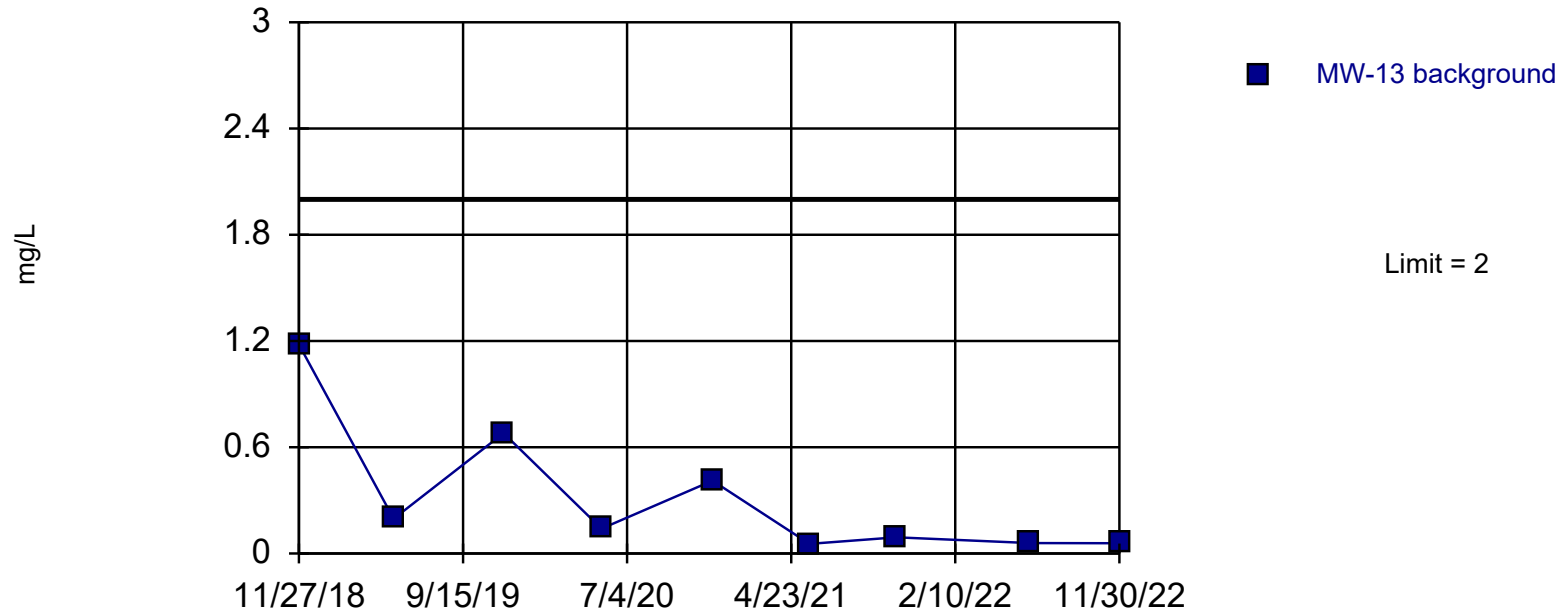
Prediction Limit

Constituent: Arsenic, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.037
5/15/2019	0.0153
11/27/2019	0.041
5/20/2020	0.0078
12/4/2020	0.0376
5/26/2021	0.00431
10/28/2021	0.0064
6/24/2022	0.00682
11/30/2022	0.00765

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.48734, Std. Dev.=0.30234, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8415, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Barium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

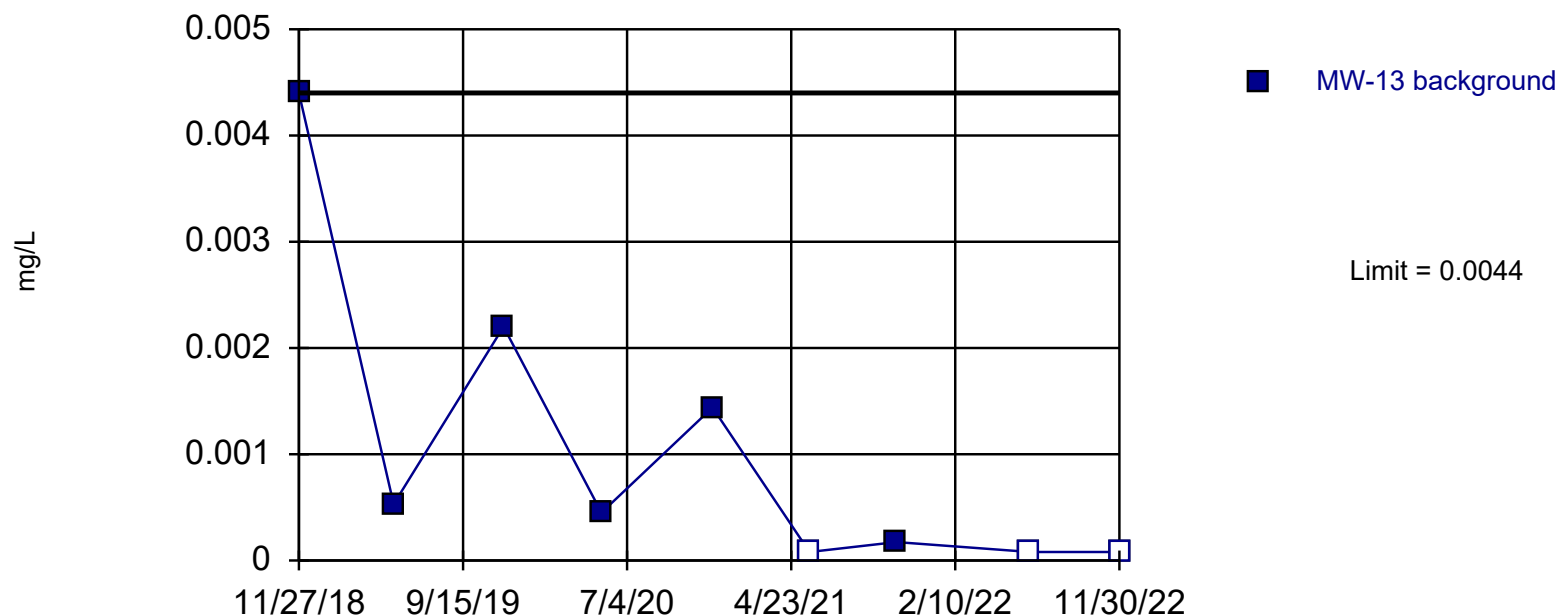
Prediction Limit

Constituent: Barium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	1.18
5/15/2019	0.196
11/27/2019	0.68
5/20/2020	0.14
12/4/2020	0.411
5/26/2021	0.054
10/28/2021	0.0914
6/24/2022	0.0587
11/30/2022	0.0577

Prediction Limit

Intrawell Non-parametric, MW-13



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 9 background values. 33.333% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Beryllium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

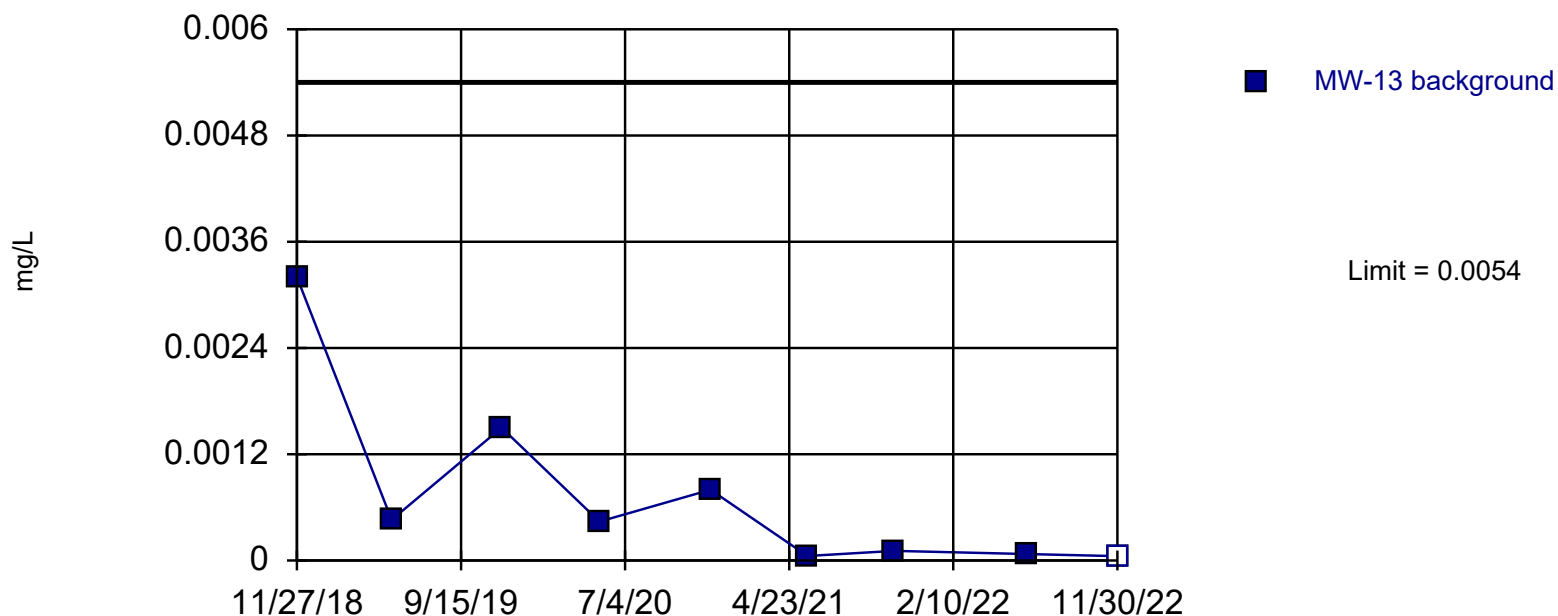
Prediction Limit

Constituent: Beryllium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0044
5/15/2019	0.00053
11/27/2019	0.0022
5/20/2020	0.00045
12/4/2020	0.00144
5/26/2021	<8E-05
10/28/2021	0.000173 (B)
6/24/2022	<8E-05
11/30/2022	<8E-05

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.022132, Std. Dev.=0.016859, n=9, 11.111% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.86434, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Cadmium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

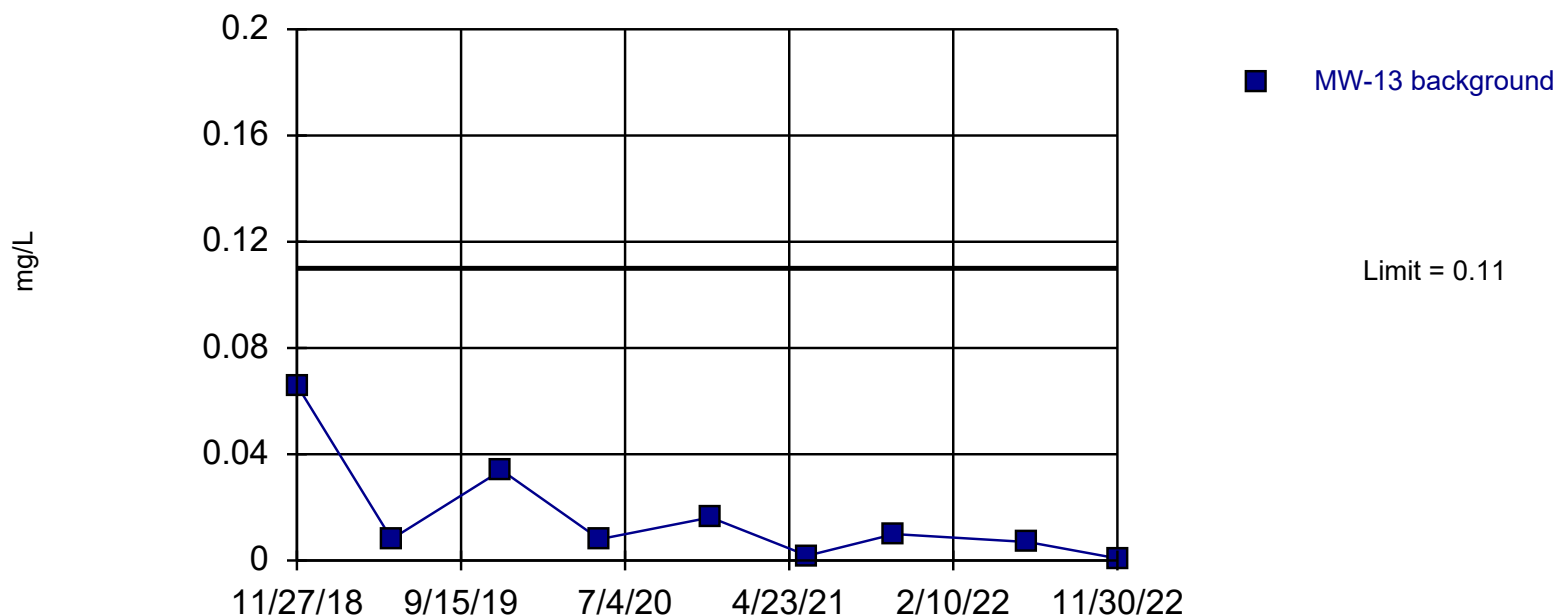
Prediction Limit

Constituent: Cadmium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0032
5/15/2019	0.00046
11/27/2019	0.0015
5/20/2020	0.00044
12/4/2020	0.000799
5/26/2021	5.1E-05 (B)
10/28/2021	0.000109 (B)
6/24/2022	7.3E-05 (B)
11/30/2022	<5E-05

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.11128, Std. Dev.=0.070989, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.89959, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Chromium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

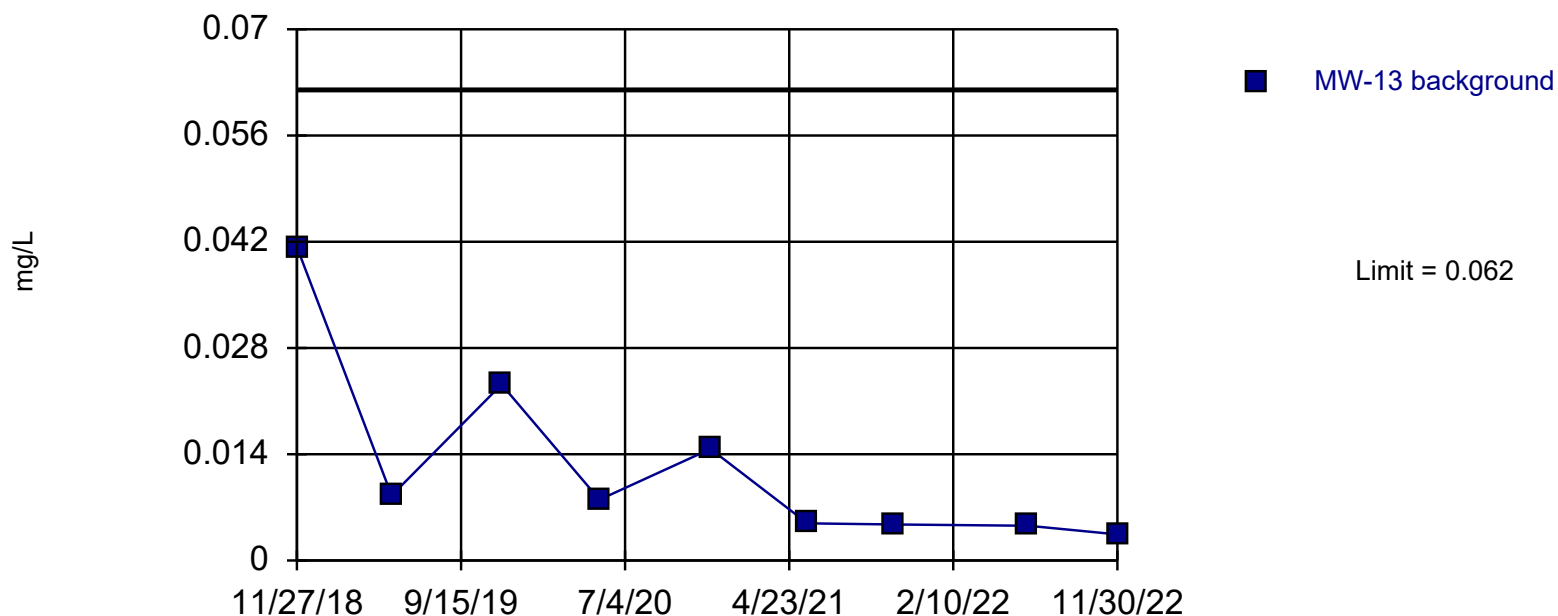
Prediction Limit

Constituent: Chromium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.066
5/15/2019	0.0081
11/27/2019	0.034
5/20/2020	0.008
12/4/2020	0.0162
5/26/2021	0.0018 (B)
10/28/2021	0.00994
6/24/2022	0.00693
11/30/2022	0.00079 (B)

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.10266, Std. Dev.=0.04818, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.84229, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

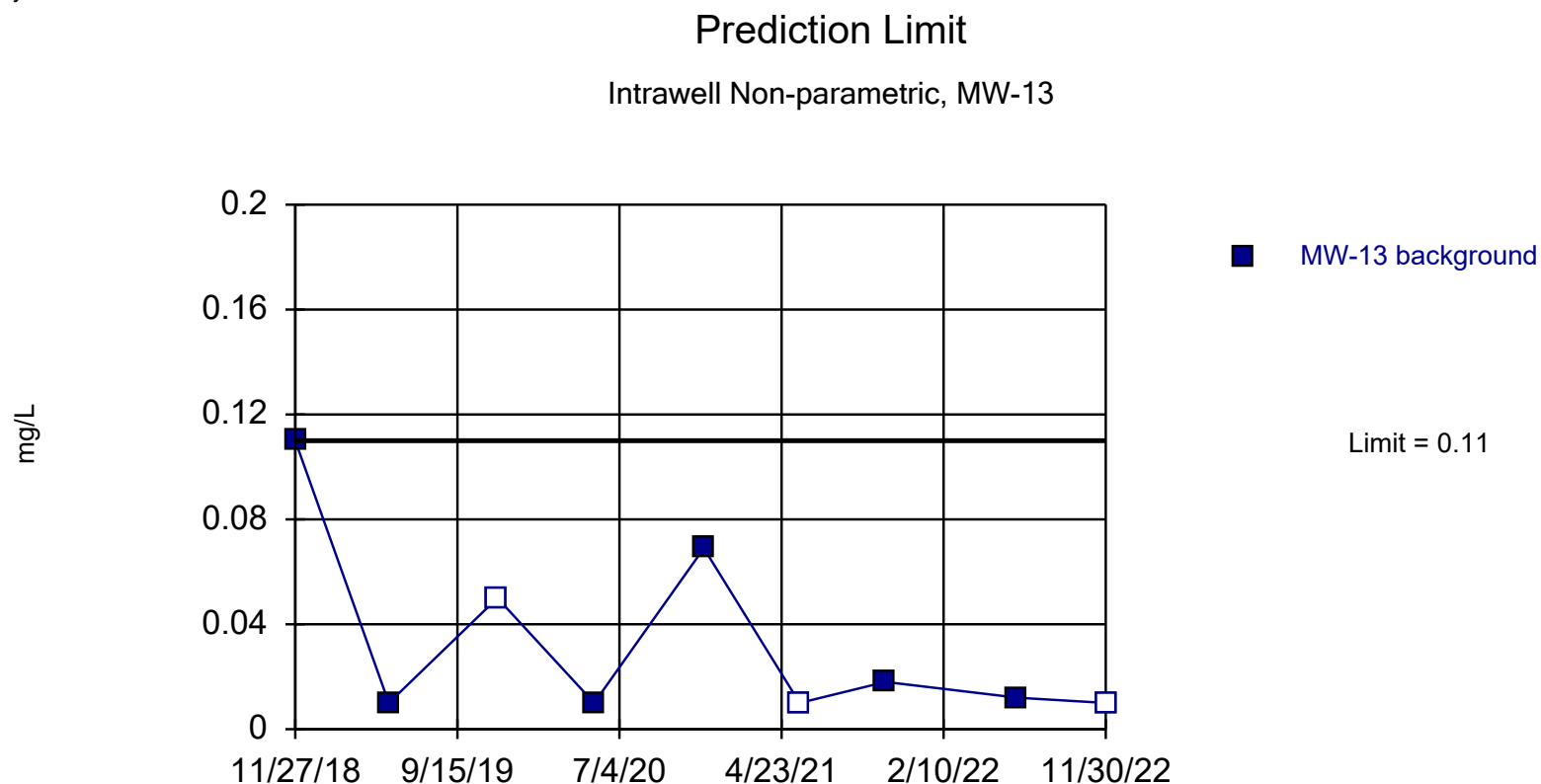
Constituent: Cobalt, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Cobalt, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.0413
5/15/2019	0.00856
11/27/2019	0.0232
5/20/2020	0.00801
12/4/2020	0.0147
5/26/2021	0.0049
10/28/2021	0.00474
6/24/2022	0.00458
11/30/2022	0.00344



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 9 background values. 33.333% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Copper, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

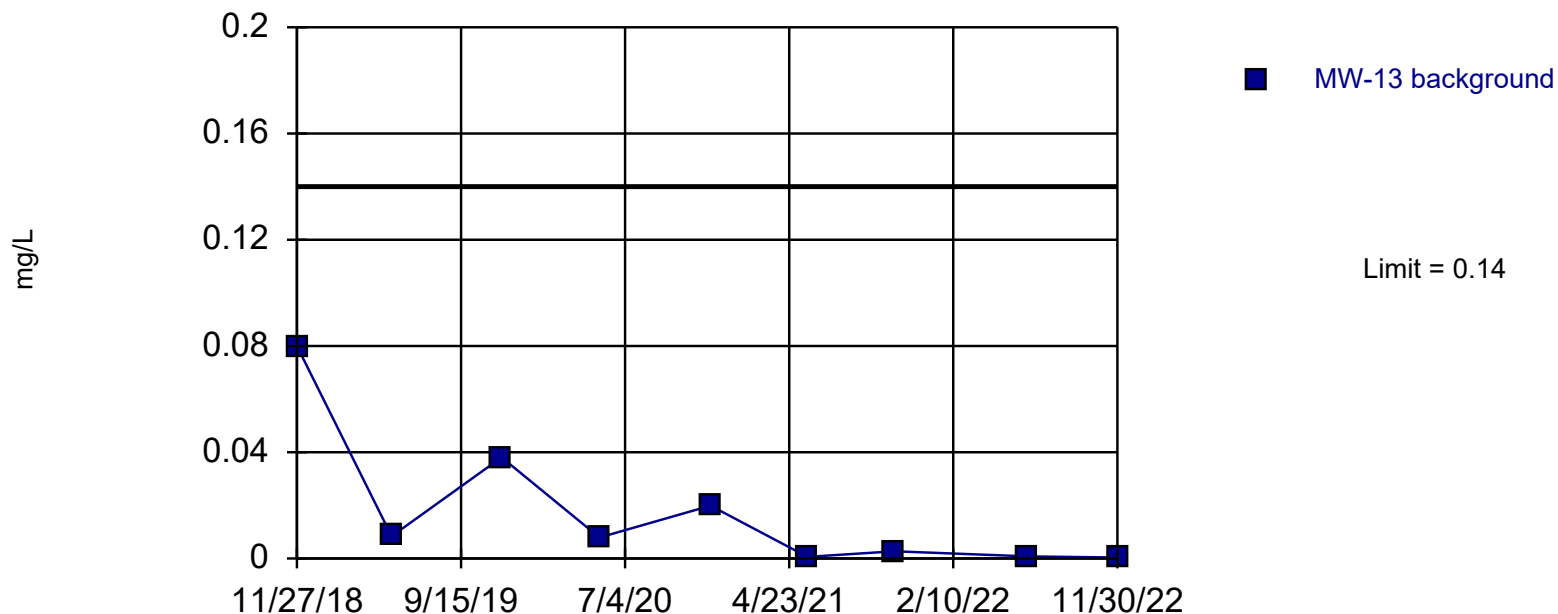
Prediction Limit

Constituent: Copper, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.11 (B)
5/15/2019	0.01 (B)
11/27/2019	<0.05
5/20/2020	0.01 (B)
12/4/2020	0.069 (B)
5/26/2021	<0.01
10/28/2021	0.018 (B)
6/24/2022	0.012 (B)
11/30/2022	<0.01

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.10259, Std. Dev.=0.089467, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8758, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

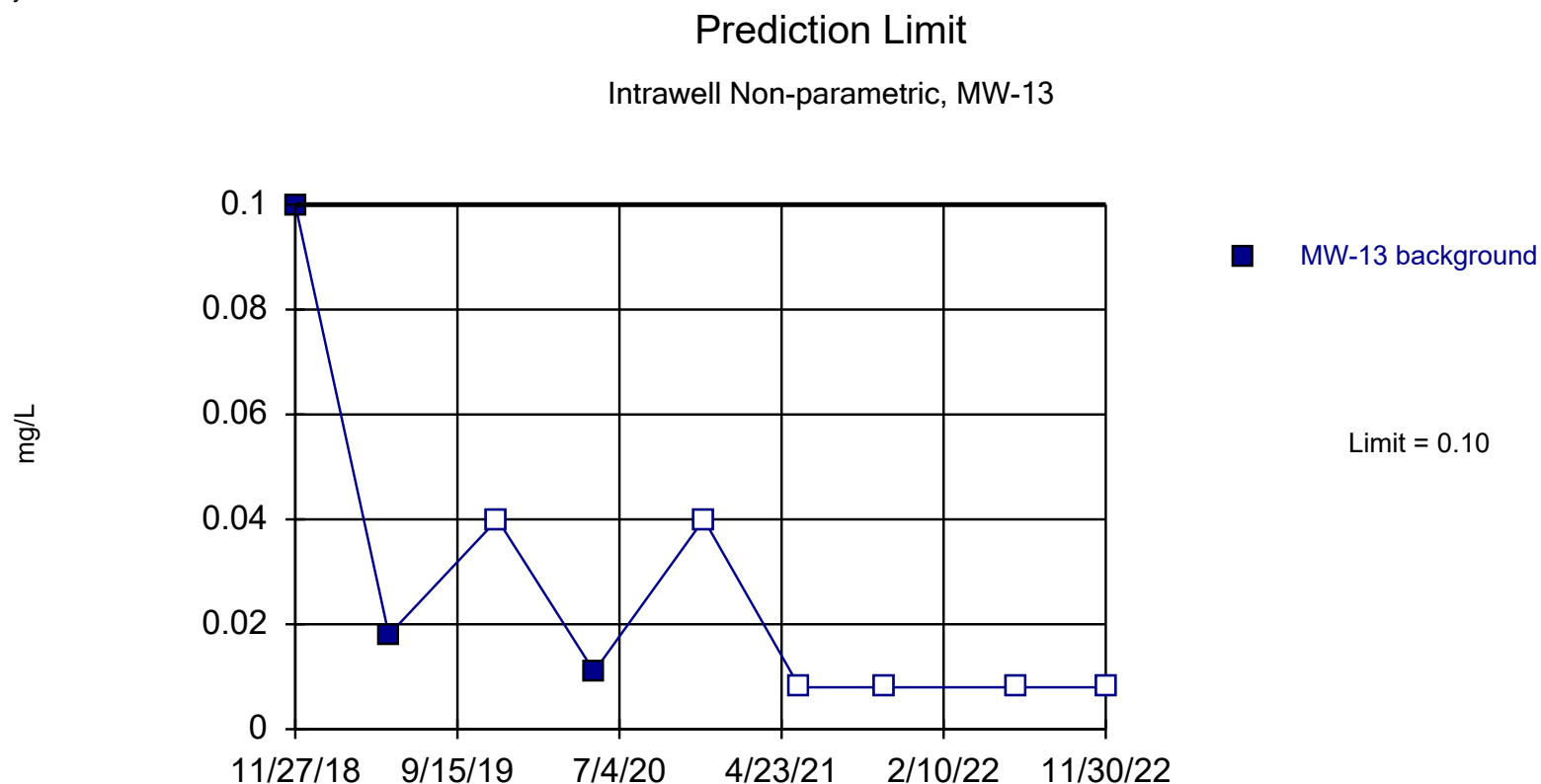
Constituent: Lead, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Lead, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.08
5/15/2019	0.0084
11/27/2019	0.0381
5/20/2020	0.0079
12/4/2020	0.0199
5/26/2021	0.00059
10/28/2021	0.0027
6/24/2022	0.00081
11/30/2022	0.00036 (B)



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 9 background values. 66.667% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

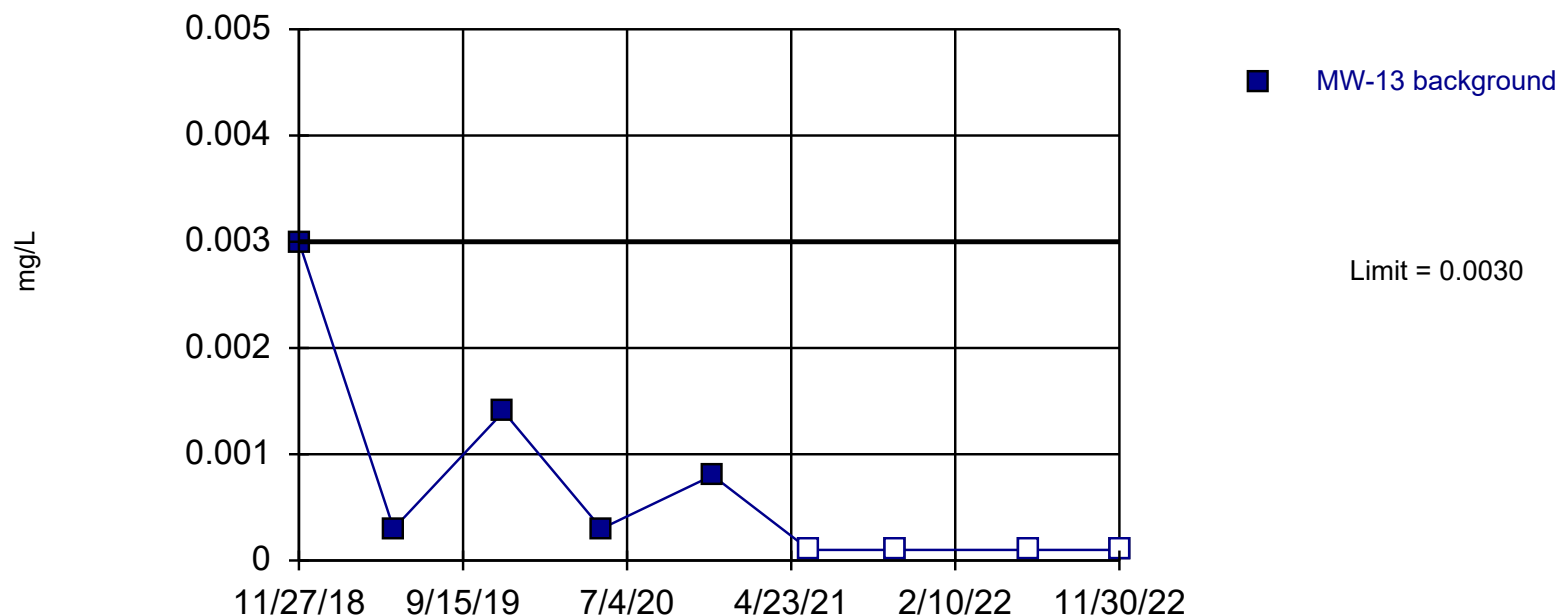
Prediction Limit

Constituent: Nickel, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.1 (B)
5/15/2019	0.018 (B)
11/27/2019	<0.04
5/20/2020	0.011 (B)
12/4/2020	<0.04
5/26/2021	<0.008
10/28/2021	<0.008
6/24/2022	<0.008
11/30/2022	<0.008

Prediction Limit

Intrawell Non-parametric, MW-13



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 9 background values. 44.444% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

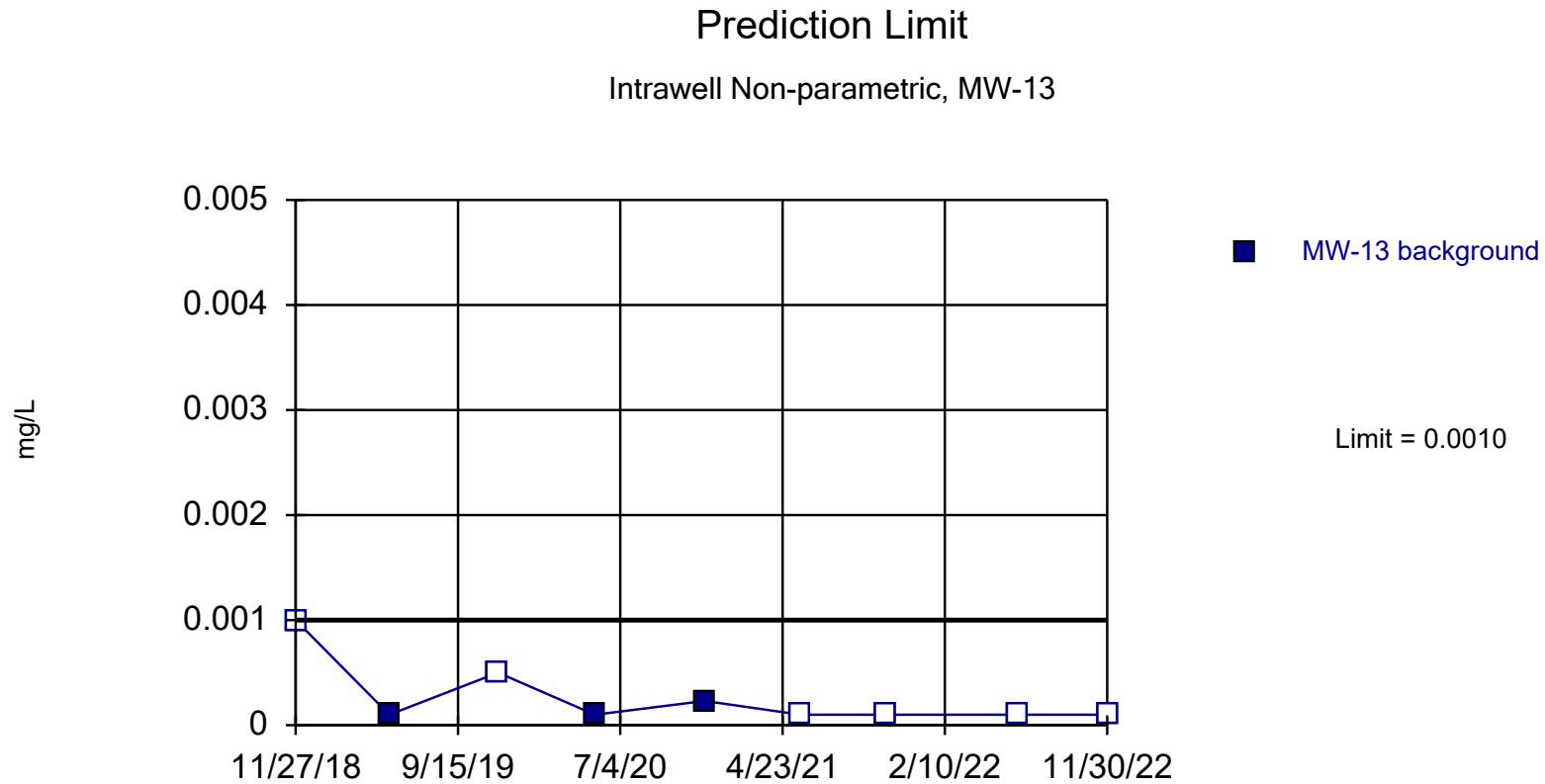
Constituent: Selenium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Selenium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.003
5/15/2019	0.0003
11/27/2019	0.0014
5/20/2020	0.0003
12/4/2020	0.0008
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001



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 9 background values. 66.667% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

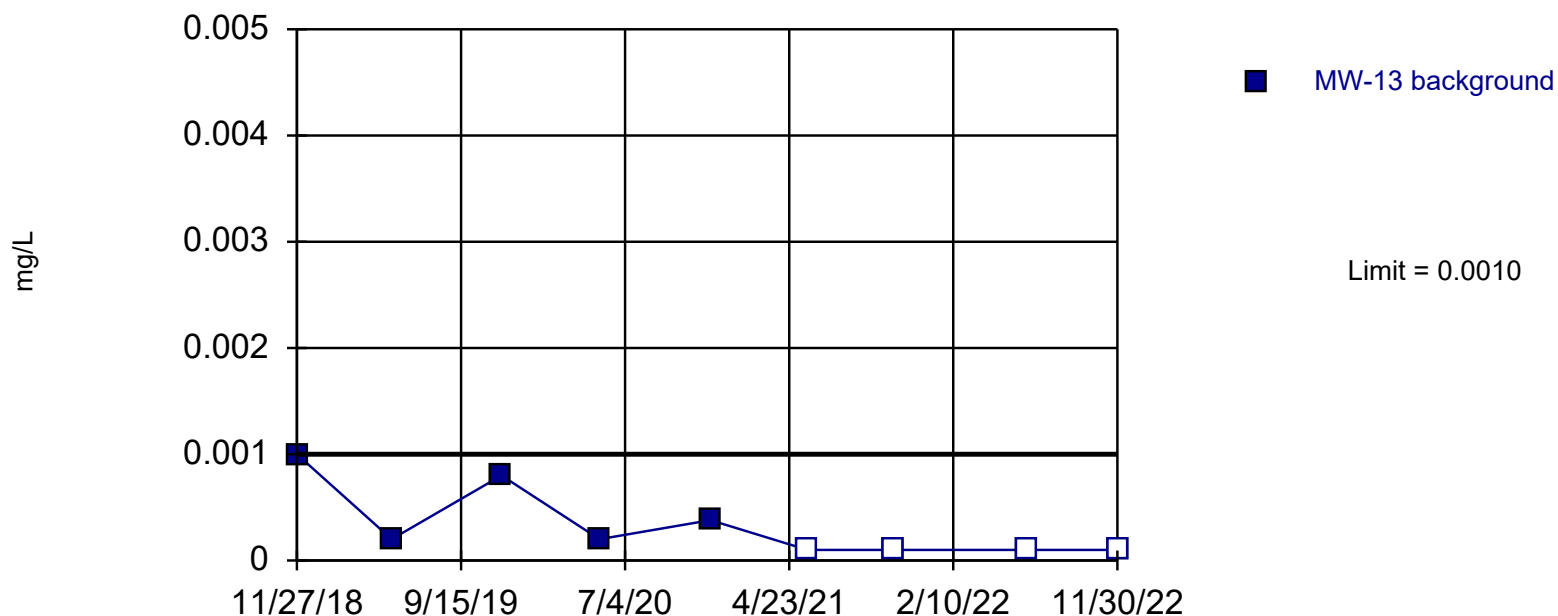
Prediction Limit

Constituent: Silver, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	<0.001
5/15/2019	0.0001 (B)
11/27/2019	<0.0005
5/20/2020	0.0001 (B)
12/4/2020	0.00023 (B)
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001

Prediction Limit

Intrawell Non-parametric, MW-13



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 9 background values. 44.444% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

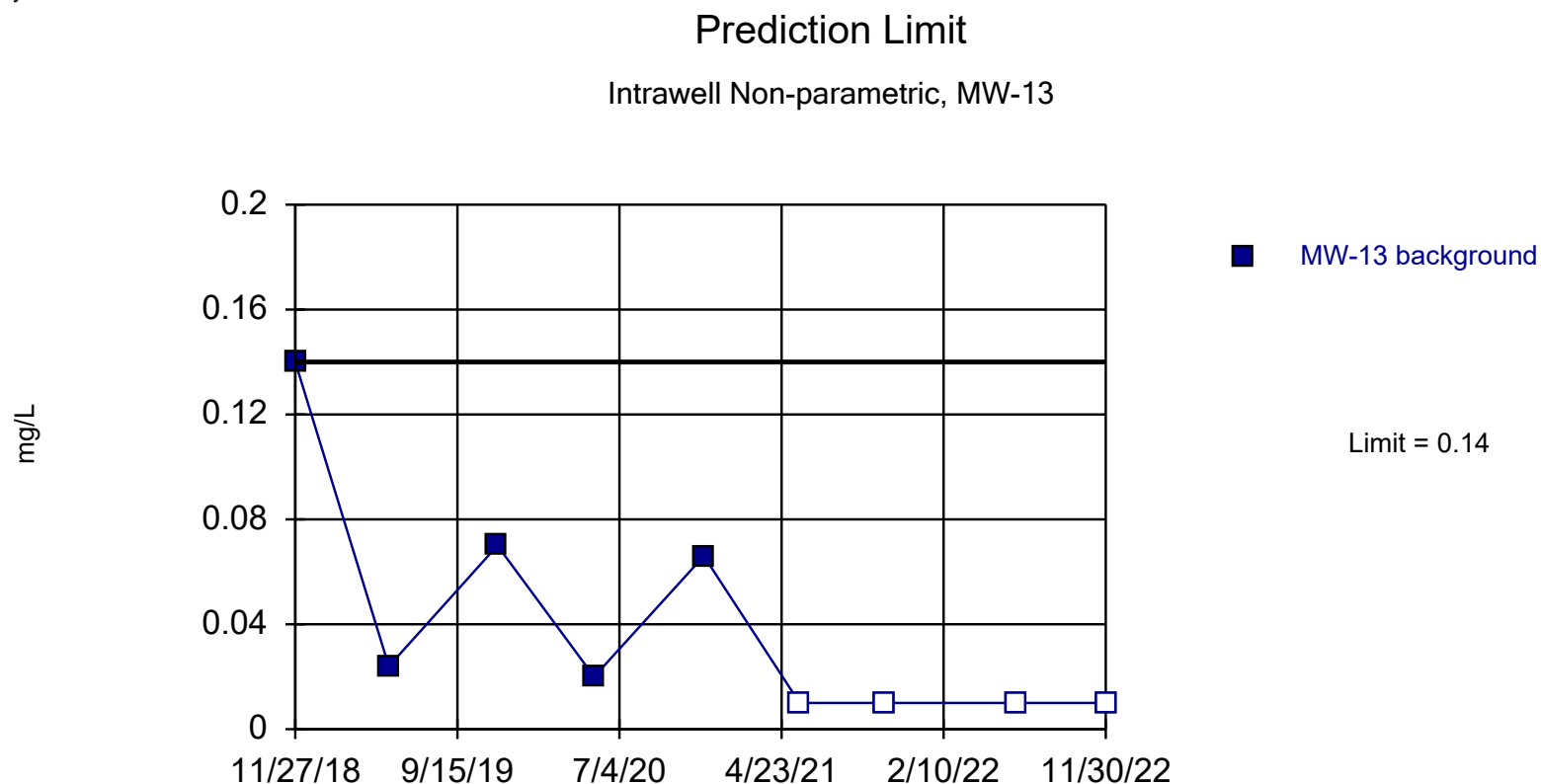
Constituent: Thallium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Thallium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.001 (B)
5/15/2019	0.0002 (B)
11/27/2019	0.0008 (B)
5/20/2020	0.0002 (B)
12/4/2020	0.00038 (B)
5/26/2021	<0.0001
10/28/2021	<0.0001
6/24/2022	<0.0001
11/30/2022	<0.0001



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 9 background values. 44.444% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Vanadium, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

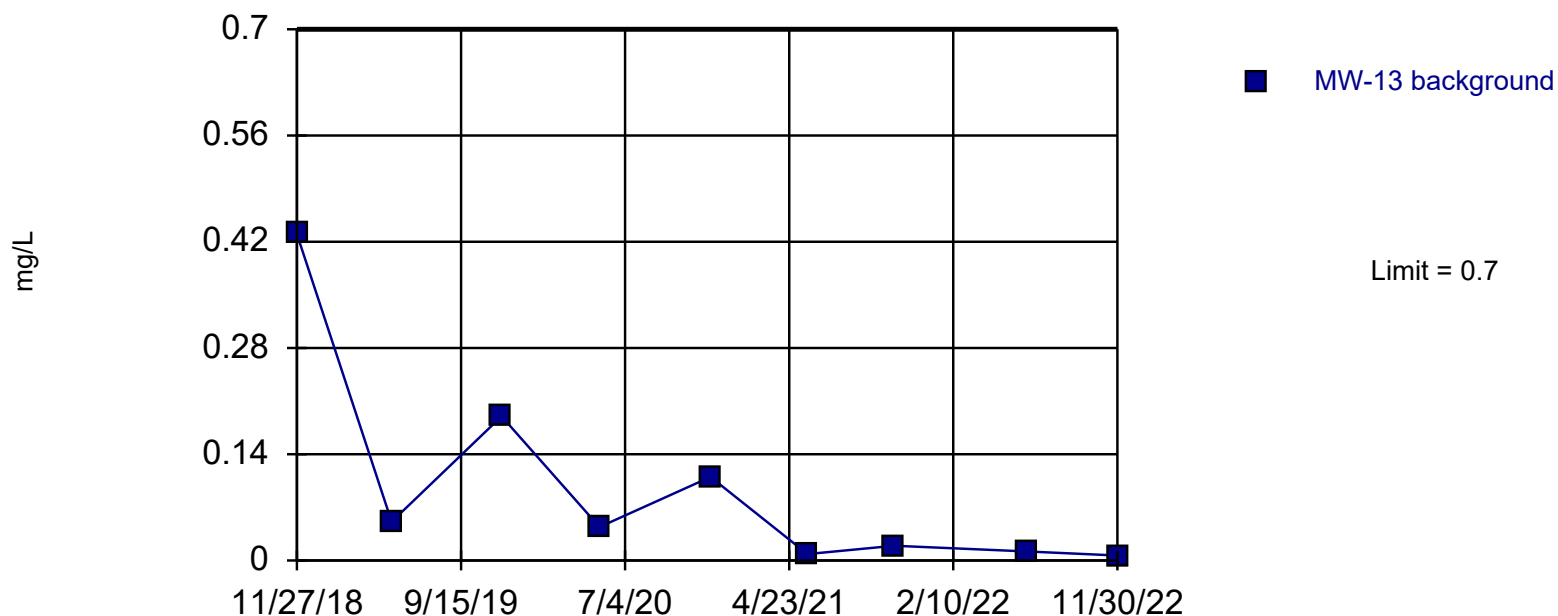
Prediction Limit

Constituent: Vanadium, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-13	
11/27/2018	0.14
5/15/2019	0.024 (B)
11/27/2019	0.07 (B)
5/20/2020	0.02 (B)
12/4/2020	0.066 (B)
5/26/2021	<0.01
10/28/2021	<0.01
6/24/2022	<0.01
11/30/2022	<0.01

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on square root transformation): Mean=0.25327, Std. Dev.=0.19167, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.85932, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Zinc, total Analysis Run 2/4/2025 2:32 PM View: Inorganics - App IB Only

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Zinc, total (mg/L) Analysis Run 2/4/2025 2:33 PM View: Inorganics - App IB Only
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.43
5/15/2019	0.051
11/27/2019	0.19
5/20/2020	0.044
12/4/2020	0.11
5/26/2021	0.0084 (B)
10/28/2021	0.0195
6/24/2022	0.0118 (B)
11/30/2022	0.0065 (B)

Attachment 3:

Comment 2 Well-Constituent Pairs Prediction Limits

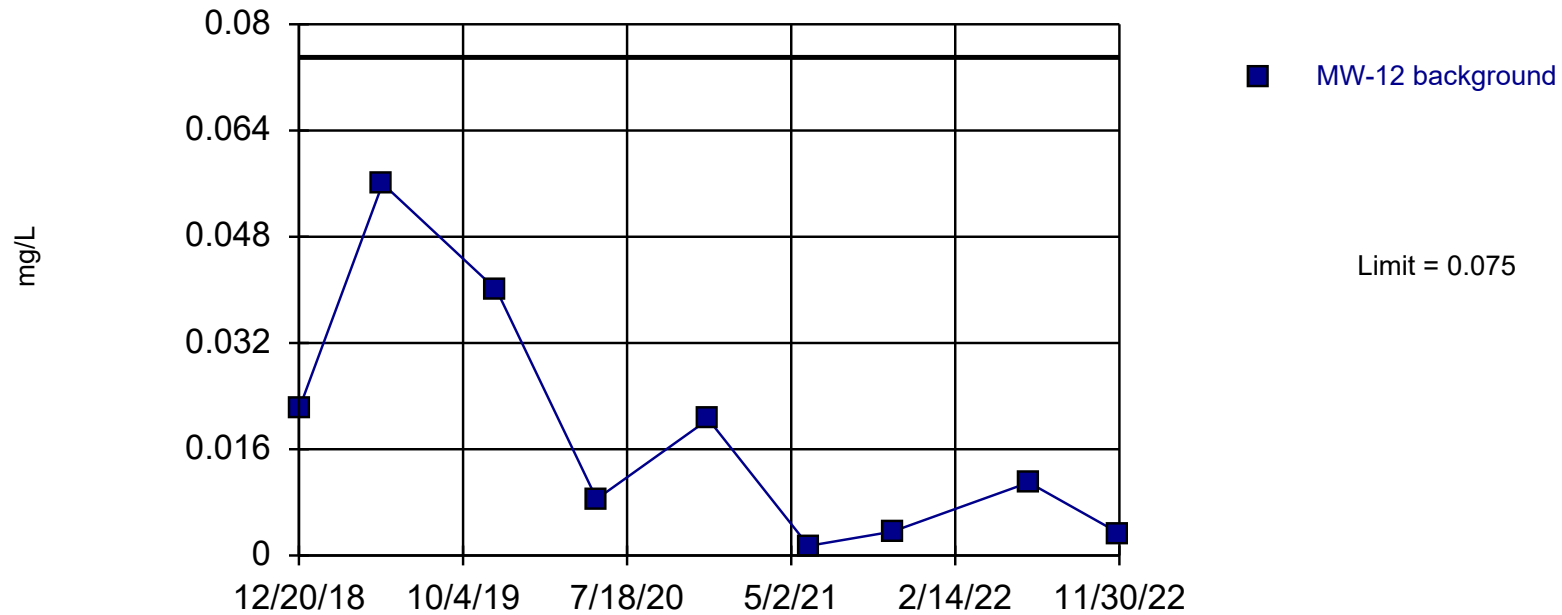
Prediction Limit

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 2/3/2025, 1:50 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bq N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic, total (mg/L)	MW-12	0.075	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Arsenic, total (mg/L)	MW-13	0.19	n/a	n/a	1 future	n/a	9	0	ln(x)	0.01	Param Intra
Arsenic, total (mg/L)	MW-8	0.025	n/a	n/a	1 future	n/a	34	5.8824	ln(x)	0.01	Param Intra
Barium, total (mg/L)	MW-12	2.7	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Beryllium, total (mg/L)	MW-12	0.015	n/a	n/a	1 future	n/a	9	11.111	sqrt(x)	0.01	Param Intra
Cadmium, total (mg/L)	MW-12	0.011	n/a	n/a	1 future	n/a	9	11.111	sqrt(x)	0.01	Param Intra
Chromium, total (mg/L)	MW-12	0.12	n/a	n/a	1 future	n/a	9	11.111	No	0.01	Param Intra
Cobalt, total (mg/L)	MW-12	0.14	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra
Copper, total (mg/L)	MW-12	0.27	n/a	n/a	1 future	n/a	9	33.333	No	0.01	Param Intra
Lead, total (mg/L)	MW-1	0.23	n/a	n/a	1 future	n/a	14	0	x^(1/3)	0.01	Param Intra
Lead, total (mg/L)	MW-12	0.16	n/a	n/a	1 future	n/a	9	0	No	0.01	Param Intra
Nickel, total (mg/L)	MW-12	0.18	n/a	n/a	1 future	n/a	9	55.556	n/a	0.1	NP Intra (Cohens/xform)
Selenium, total (mg/L)	MW-12	0.013	n/a	n/a	1 future	n/a	9	11.111	sqrt(x)	0.01	Param Intra
Vanadium, total (mg/L)	MW-12	0.37	n/a	n/a	1 future	n/a	9	33.333	n/a	0.1	NP Intra (Cohens/xform)
Zinc, total (mg/L)	MW-12	1.4	n/a	n/a	1 future	n/a	9	0	sqrt(x)	0.01	Param Intra

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary: Mean=0.018487, Std. Dev.=0.018654, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.855, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Arsenic, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

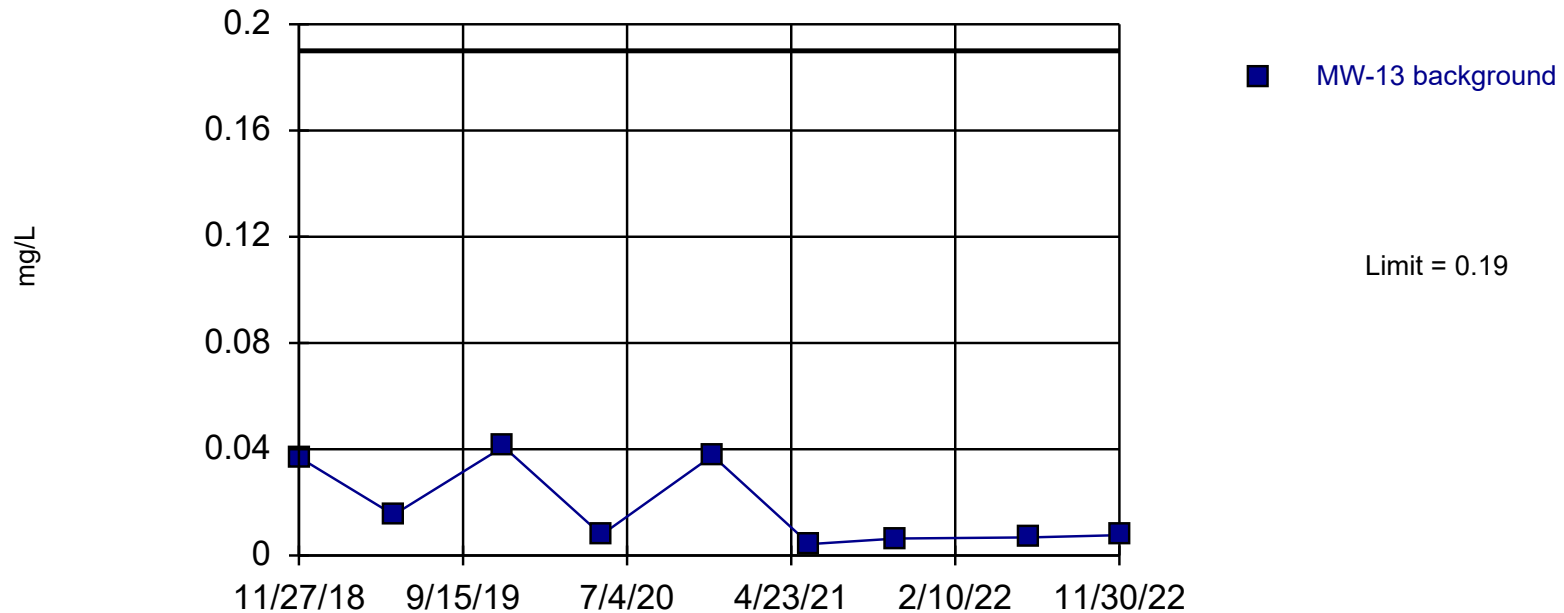
Prediction Limit

Constituent: Arsenic, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.022
5/16/2019	0.056
12/2/2019	0.04
5/26/2020	0.0085
12/8/2020	0.0205
6/2/2021	0.00145
10/27/2021	0.0036
6/24/2022	0.011
11/30/2022	0.00333

Prediction Limit

Intrawell Parametric, MW-13



Background Data Summary (based on natural log transformation): Mean=-4.3516, Std. Dev.=0.88363, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.84729, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Arsenic, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

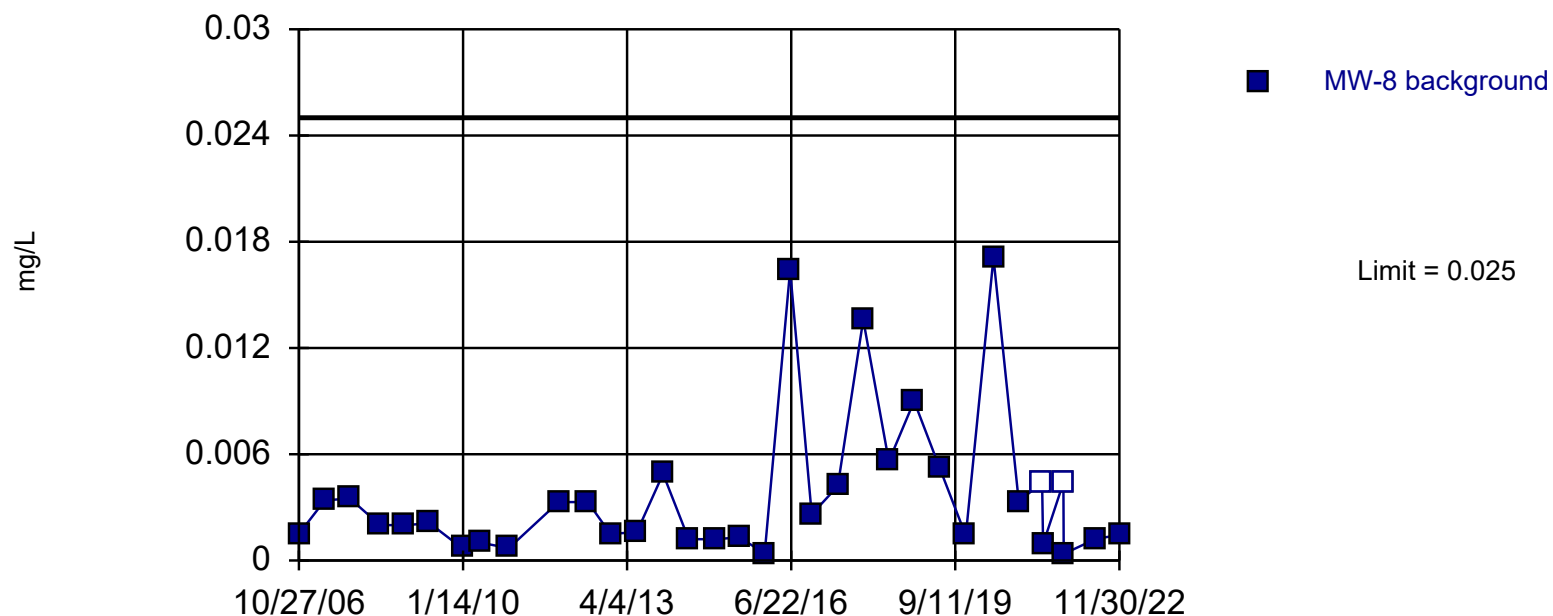
Prediction Limit

Constituent: Arsenic, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-13
11/27/2018	0.037
5/15/2019	0.0153
11/27/2019	0.041
5/20/2020	0.0078
12/4/2020	0.0376
5/26/2021	0.00431
10/28/2021	0.0064
6/24/2022	0.00682
11/30/2022	0.00765

Prediction Limit

Intrawell Parametric, MW-8



Background Data Summary (based on natural log transformation): Mean=-6.0529, Std. Dev.=0.95658, n=34, 5.8824% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.96871, critical = 0.933. Report alpha = 0.01. Assumes 1 future value.

Constituent: Arsenic, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

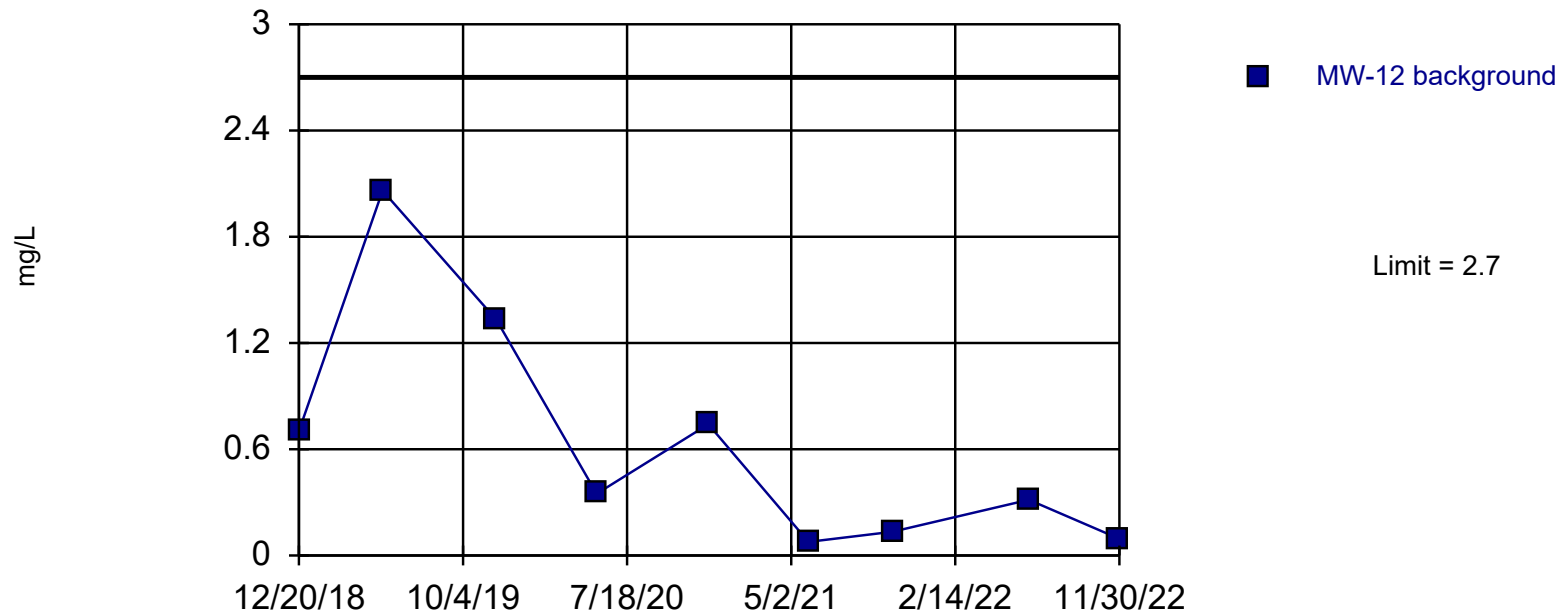
Prediction Limit

Constituent: Arsenic, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-8
10/27/2006	0.0015
4/30/2007	0.0034
10/27/2007	0.0035
5/30/2008	0.002
11/21/2008	0.002
5/21/2009	0.0021
1/8/2010	0.0007
5/28/2010	0.001
12/9/2010	0.0007
11/30/2011	0.0033
6/27/2012	0.0033
12/6/2012	0.0015
6/13/2013	0.0016
12/18/2013	0.0049
6/19/2014	0.0012
12/23/2014	0.0012
6/19/2015	0.0013
12/16/2015	0.0004 (B)
6/15/2016	0.0164
11/17/2016	0.0026
5/23/2017	0.0042
11/21/2017	0.0136
5/23/2018	0.0056
11/21/2018	0.009
5/24/2019	0.0052
11/26/2019	0.0014
6/11/2020	0.0171
12/9/2020	0.00334
5/26/2021	<0.0044
6/2/2021	0.00092 (B)
10/25/2021	<0.0044
10/28/2021	0.00037
6/20/2022	0.00124
11/30/2022	0.00143

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary: Mean=0.64476, Std. Dev.=0.66784, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.83426, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Barium, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

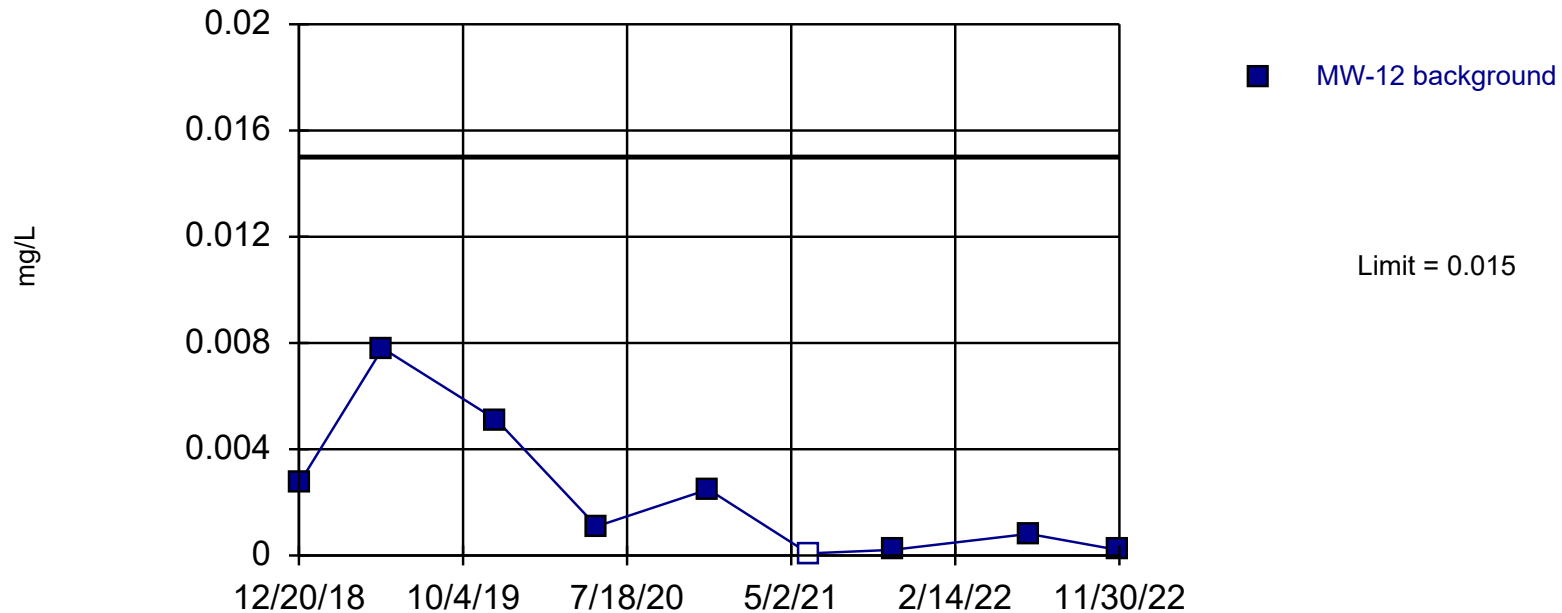
Constituent: Barium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-12

12/20/2018	0.703
5/16/2019	2.06
12/2/2019	1.33
5/26/2020	0.349
12/8/2020	0.741
6/2/2021	0.0769
10/27/2021	0.134
6/24/2022	0.315
11/30/2022	0.0939

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (based on square root transformation): Mean=0.040116, Std. Dev.=0.027422, n=9, 11.111% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.92778, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Beryllium, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

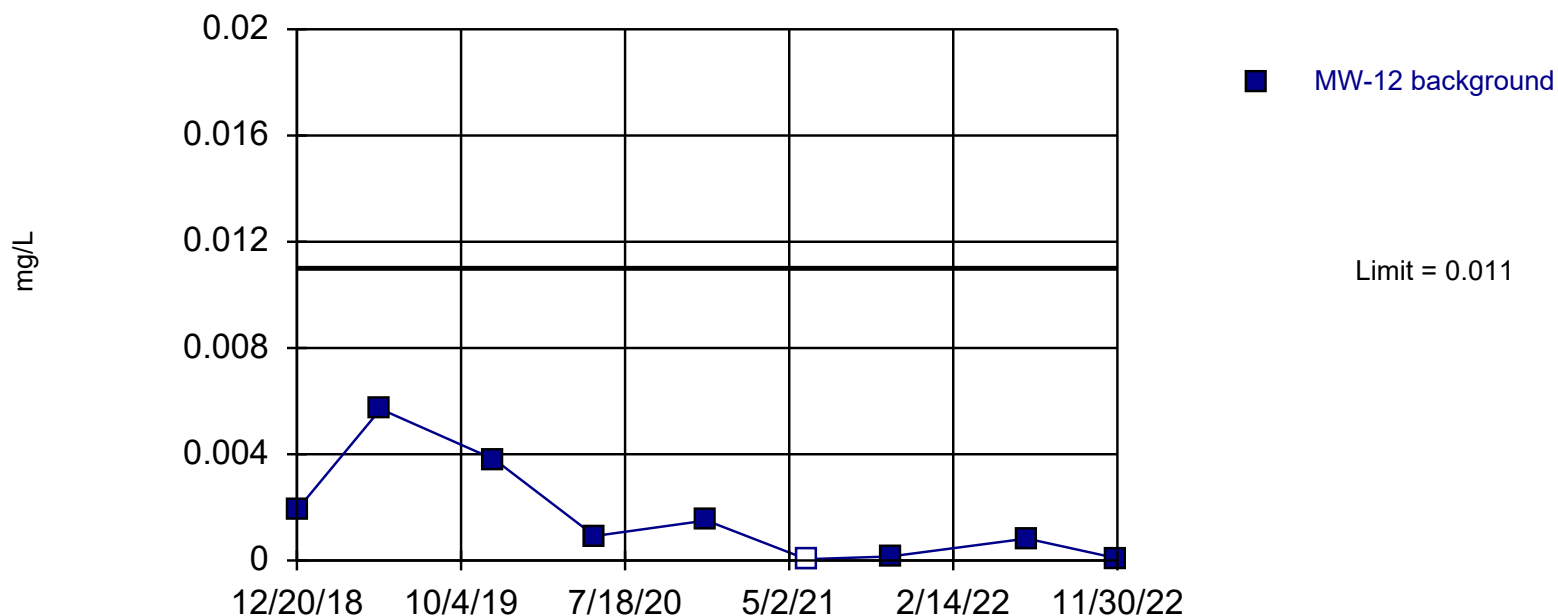
Prediction Limit

Constituent: Beryllium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.0027
5/16/2019	0.0078
12/2/2019	0.0051
5/26/2020	0.0011
12/8/2020	0.00249
6/2/2021	<8E-05
10/27/2021	0.000215 (B)
6/24/2022	0.000814
11/30/2022	0.0002 (B)

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (based on square root transformation): Mean=0.034118, Std. Dev.=0.023616, n=9, 11.111% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.93225, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Cadmium, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

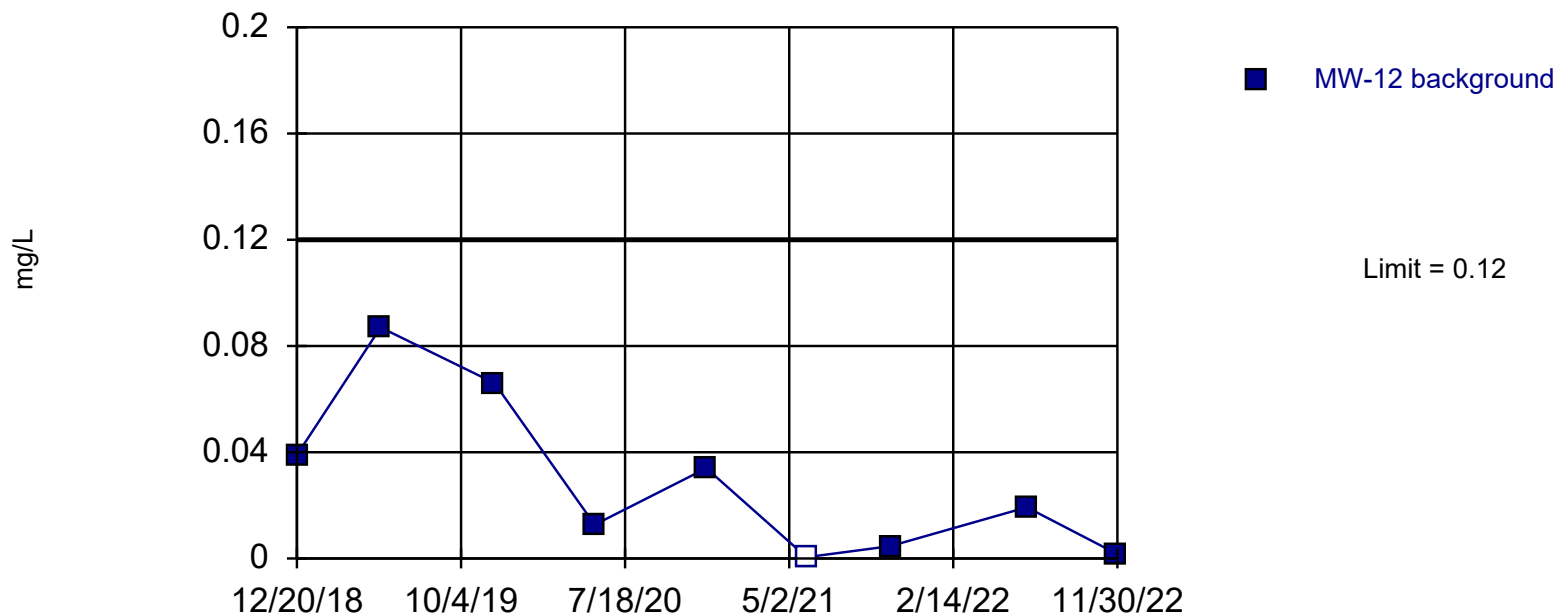
Prediction Limit

Constituent: Cadmium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.0019
5/16/2019	0.0057
12/2/2019	0.0038
5/26/2020	0.00092
12/8/2020	0.00151
6/2/2021	<5E-05
10/27/2021	0.000151 (B)
6/24/2022	0.000825
11/30/2022	8.2E-05 (B)

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary: Mean=0.029418, Std. Dev.=0.030355, n=9, 11.111% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.88177, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Chromium, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

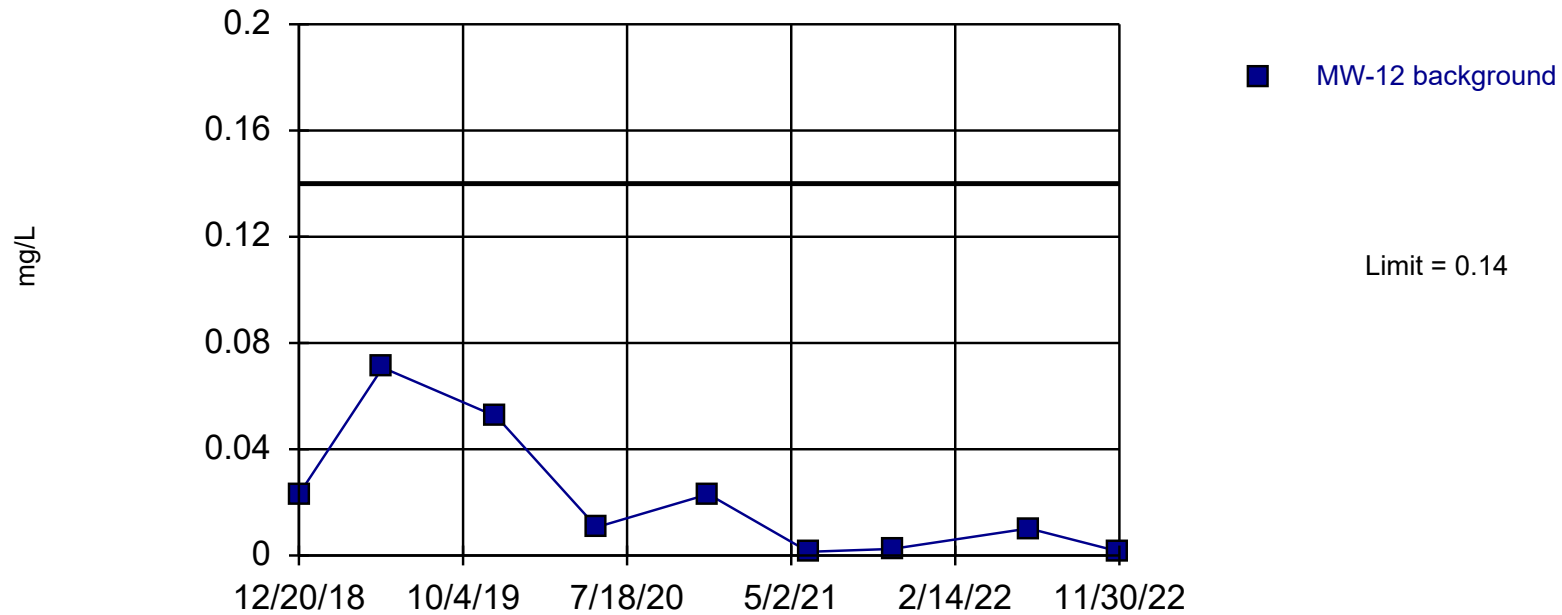
Prediction Limit

Constituent: Chromium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.039
5/16/2019	0.087
12/2/2019	0.066
5/26/2020	0.0127
12/8/2020	0.034
6/2/2021	<0.0005
10/27/2021	0.00464
6/24/2022	0.0193
11/30/2022	0.00162 (B)

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (based on square root transformation): Mean=0.12527, Std. Dev.=0.082195, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.90805, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Cobalt, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

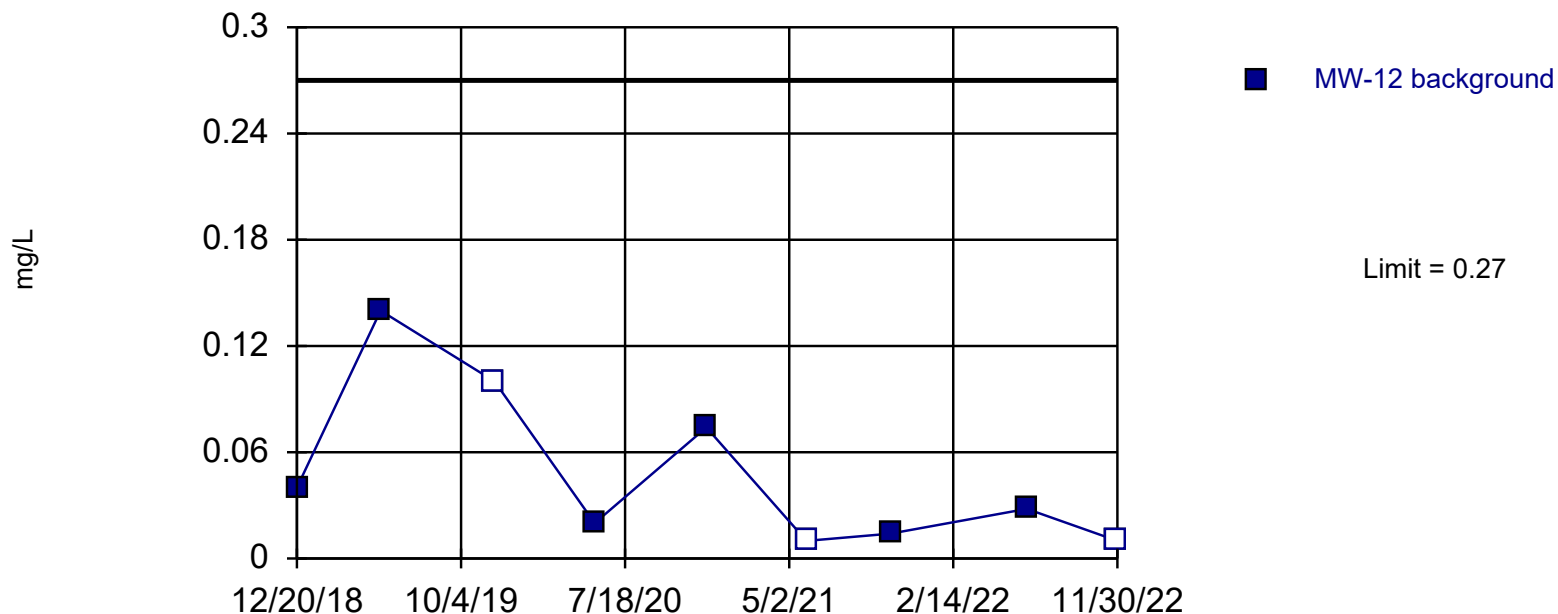
Prediction Limit

Constituent: Cobalt, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.023
5/16/2019	0.0707
12/2/2019	0.0523
5/26/2020	0.0107
12/8/2020	0.0231
6/2/2021	0.00139
10/27/2021	0.00247
6/24/2022	0.0102
11/30/2022	0.00143

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (after Cohen's Adjustment): Mean=0.082756, Std. Dev.=0.060884, n=9, 33.333% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.83329, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

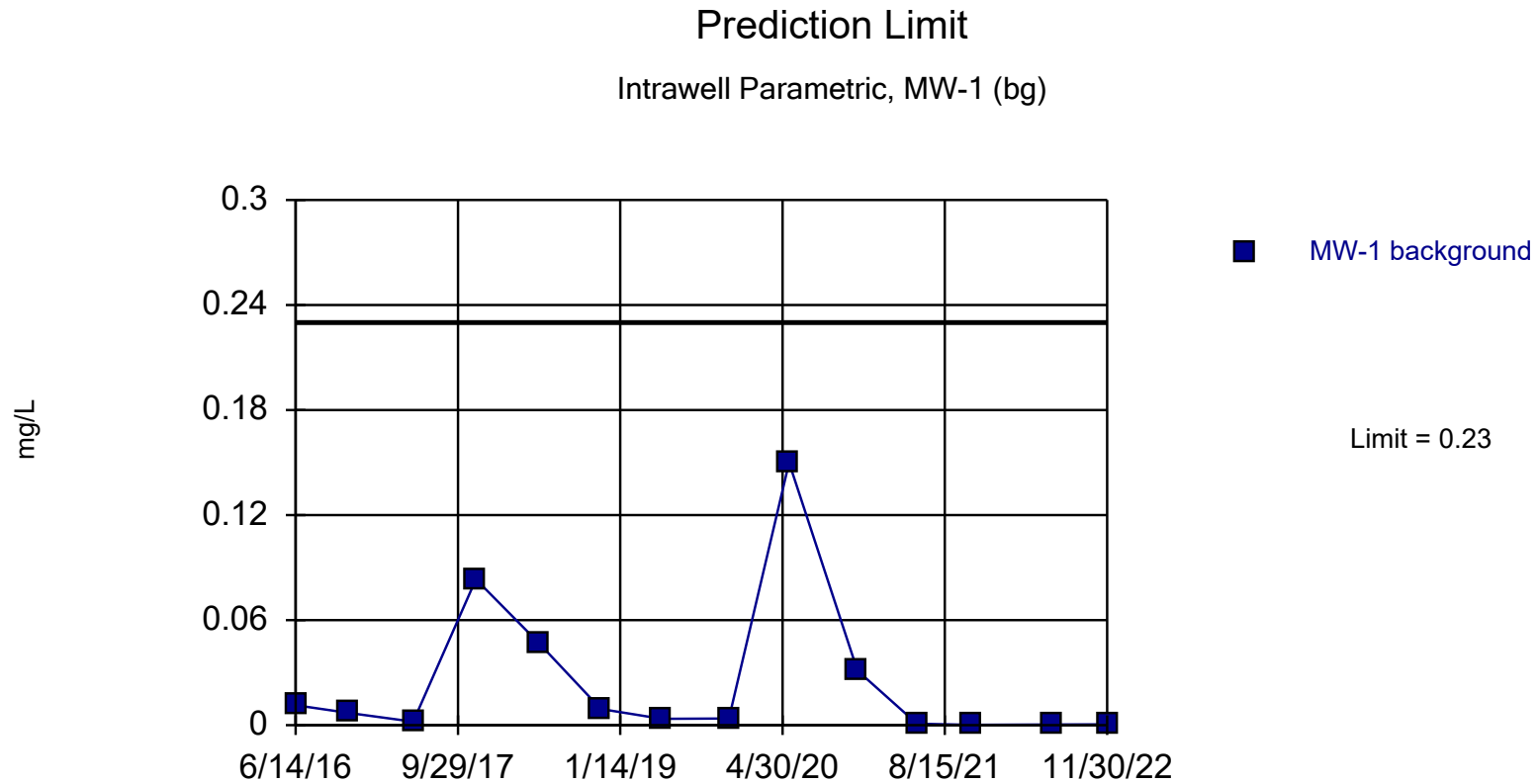
Constituent: Copper, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Copper, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.04 (B)
5/16/2019	0.14 (B)
12/2/2019	<0.1
5/26/2020	0.02 (B)
12/8/2020	0.074 (B)
6/2/2021	<0.01
10/27/2021	0.014 (B)
6/24/2022	0.028 (B)
11/30/2022	<0.01



Background Data Summary (based on cube root transformation): Mean=0.2147, Std. Dev.=0.1455, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.89657, critical = 0.874. Report alpha = 0.01. Assumes 1 future value.

Constituent: Lead, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

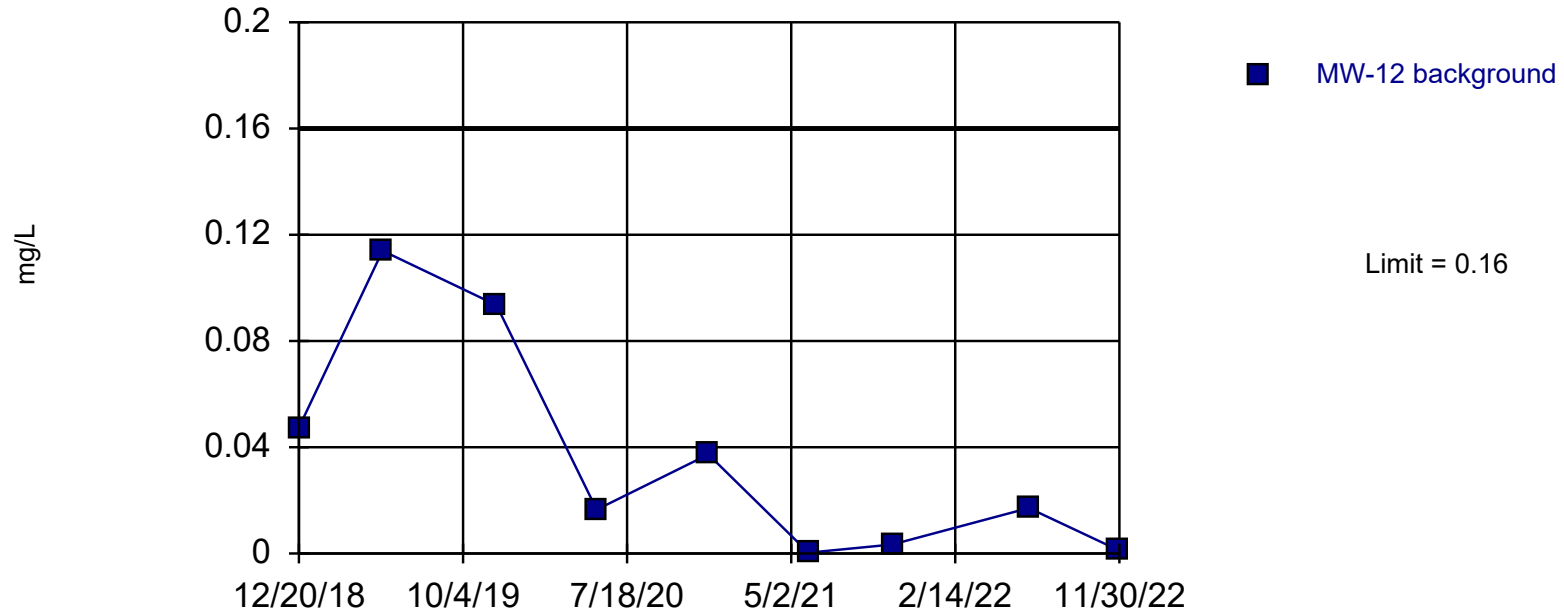
Constituent: Lead, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-1

10/27/2006	<0.04
4/30/2007	<0.04
10/28/2007	0.07
5/30/2008	<0.04
11/21/2008	<0.04
5/21/2009	<0.04
12/1/2009	<0.04
5/28/2010	<0.04
12/13/2010	<0.04
6/10/2011	<0.04
11/30/2011	<0.04
6/27/2012	<0.04
7/5/2013	<0.04
12/18/2013	0.04
6/19/2014	0.29
12/23/2014	<0.03
6/19/2015	<0.03
12/15/2015	<0.03
6/14/2016	0.0114
11/16/2016	0.007
5/22/2017	0.002
11/20/2017	0.0833
5/22/2018	0.047
11/19/2018	0.0092
5/15/2019	0.0036
11/26/2019	0.0038
5/19/2020	0.15
12/4/2020	0.0312
5/26/2021	0.00082
10/29/2021	0.00018 (B)
6/21/2022	0.00039 (B)
11/30/2022	0.00047 (B)

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary: Mean=0.036731, Std. Dev.=0.04155, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.83816, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Lead, total Analysis Run 2/3/2025 1:47 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

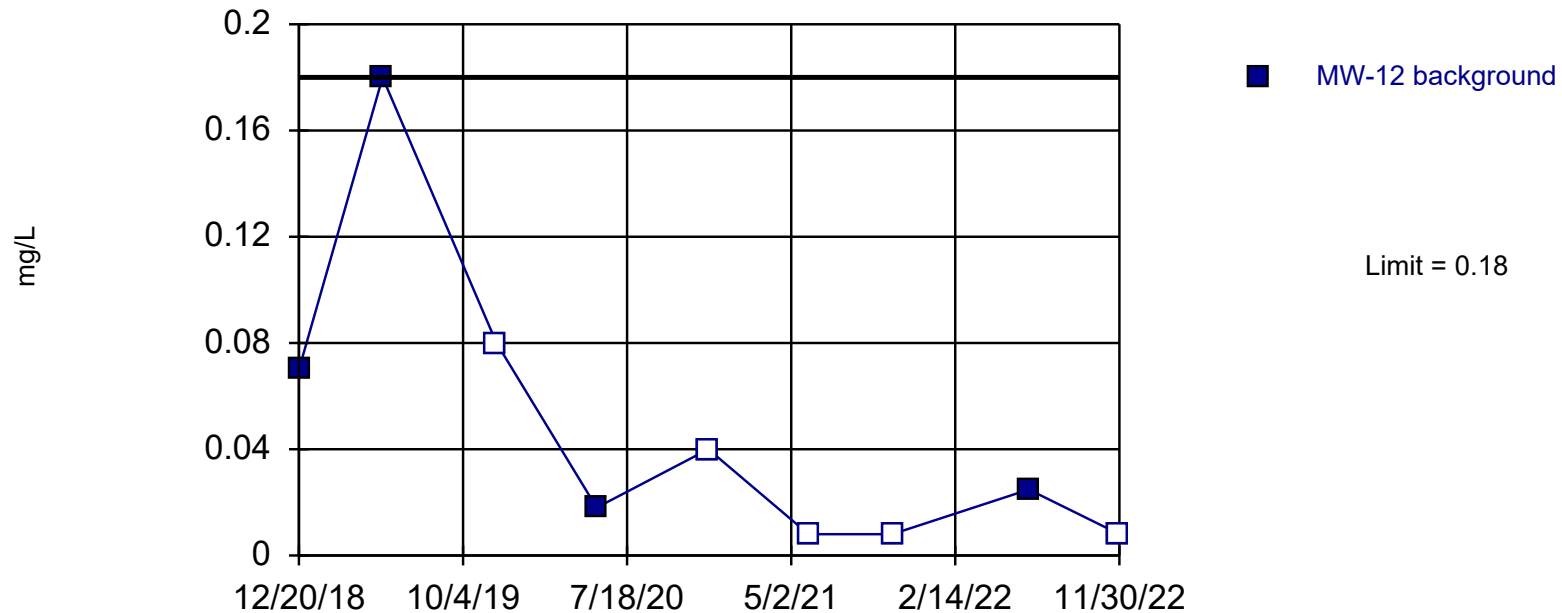
Prediction Limit

Constituent: Lead, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.0474
5/16/2019	0.114
12/2/2019	0.0935
5/26/2020	0.0165
12/8/2020	0.0373
6/2/2021	0.0003 (B)
10/27/2021	0.0034
6/24/2022	0.0171
11/30/2022	0.00108

Prediction Limit

Intrawell Non-parametric, MW-12



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 9 background values. 55.556% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel, total Analysis Run 2/3/2025 1:48 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

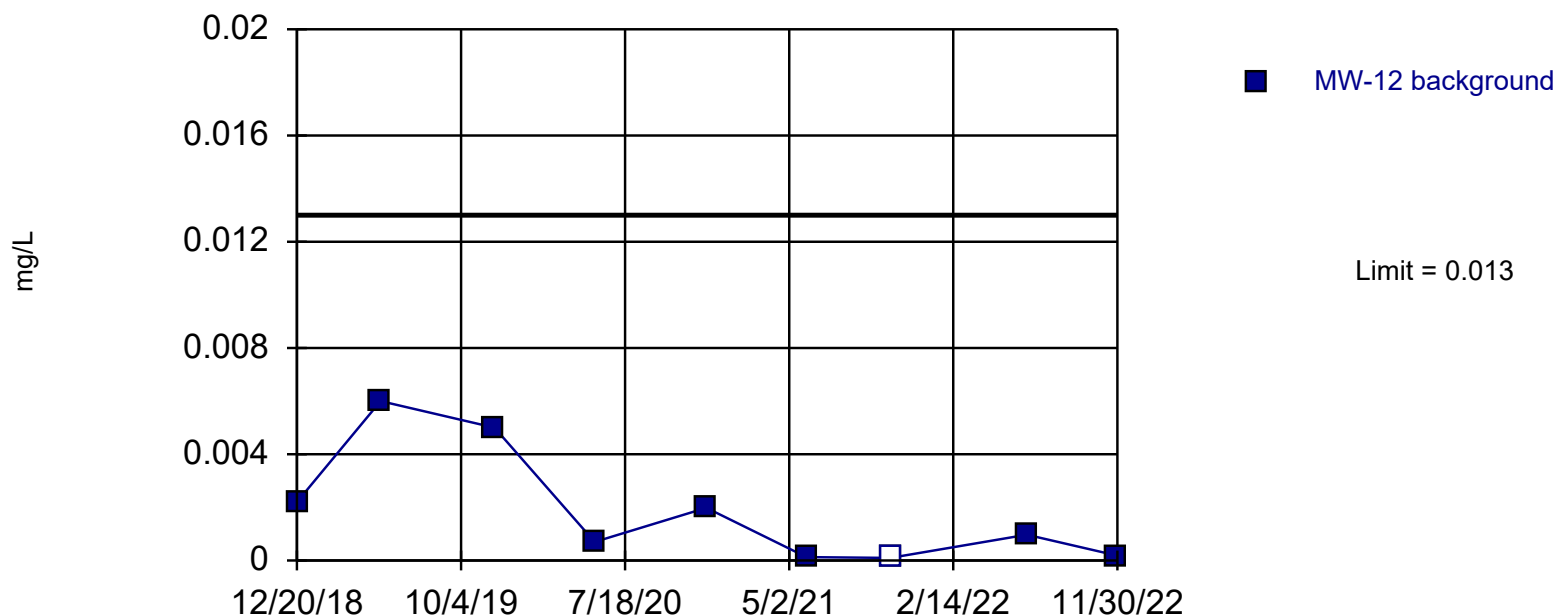
Prediction Limit

Constituent: Nickel, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.07 (B)
5/16/2019	0.18 (B)
12/2/2019	<0.08
5/26/2020	0.018 (B)
12/8/2020	<0.04
6/2/2021	<0.008
10/27/2021	<0.008
6/24/2022	0.0248 (B)
11/30/2022	<0.008

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (based on square root transformation): Mean=0.036888, Std. Dev.=0.025034, n=9, 11.111% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.90304, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Selenium, total Analysis Run 2/3/2025 1:48 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

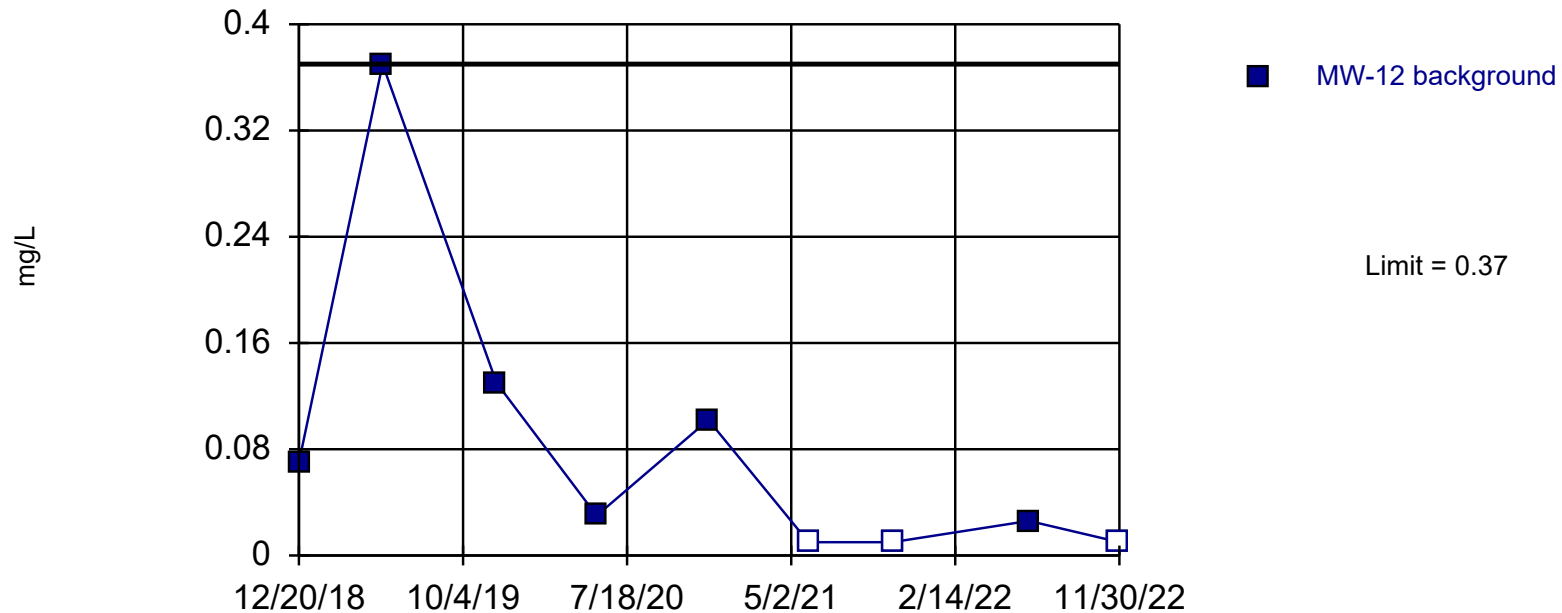
Prediction Limit

Constituent: Selenium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.0022
5/16/2019	0.006
12/2/2019	0.005
5/26/2020	0.0007
12/8/2020	0.00198
6/2/2021	0.00013 (B)
10/27/2021	<0.0001
6/24/2022	0.00097
11/30/2022	0.00018 (B)

Prediction Limit

Intrawell Non-parametric, MW-12



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 9 background values. 33.333% NDs. Report alpha = 0.1. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Vanadium, total Analysis Run 2/3/2025 1:48 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

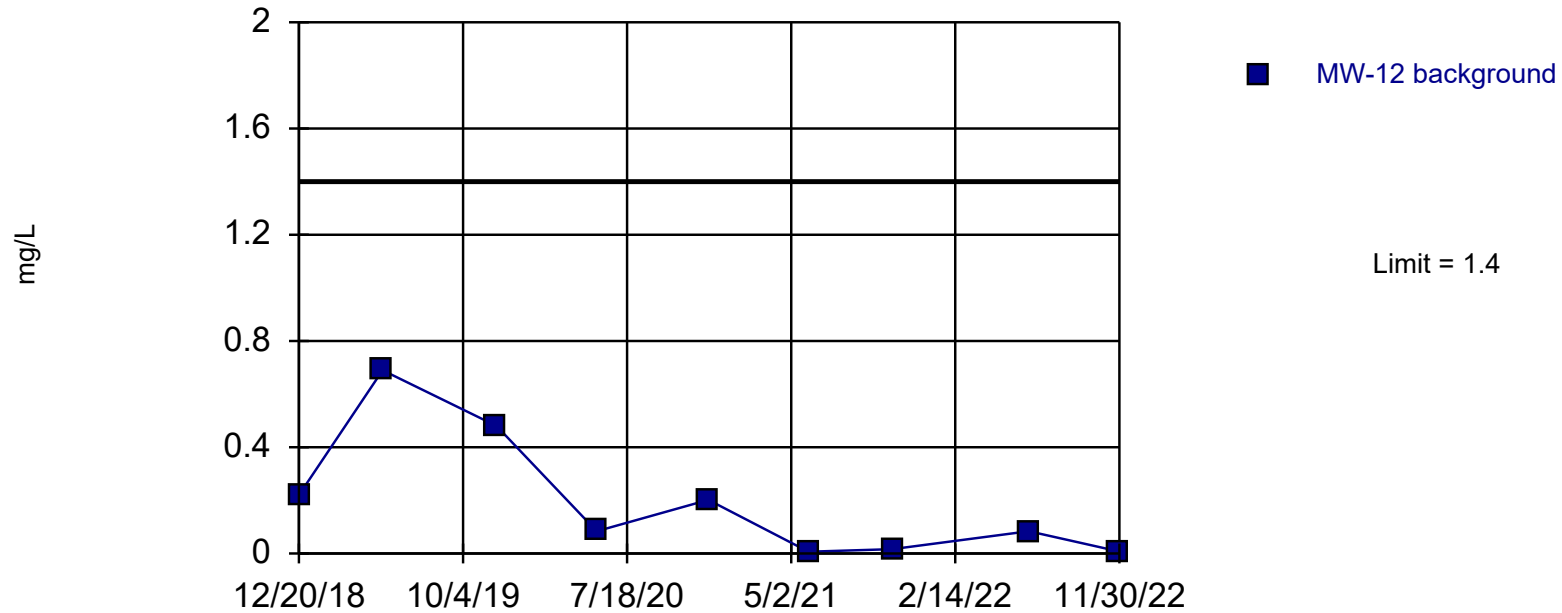
Prediction Limit

Constituent: Vanadium, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-12
12/20/2018	0.07
5/16/2019	0.37
12/2/2019	0.13 (B)
5/26/2020	0.03
12/8/2020	0.102 (B)
6/2/2021	<0.01
10/27/2021	<0.01
6/24/2022	0.026
11/30/2022	<0.01

Prediction Limit

Intrawell Parametric, MW-12



Background Data Summary (based on square root transformation): Mean=0.36868, Std. Dev.=0.26622, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.91324, critical = 0.829. Report alpha = 0.01. Assumes 1 future value.

Constituent: Zinc, total Analysis Run 2/3/2025 1:48 PM View: BG - Response Constituents

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Zinc, total (mg/L) Analysis Run 2/3/2025 1:50 PM View: BG - Response Constituents
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-12

12/20/2018	0.22
5/16/2019	0.69
12/2/2019	0.48
5/26/2020	0.084
12/8/2020	0.202
6/2/2021	0.0069 (B)
10/27/2021	0.0164
6/24/2022	0.0836
11/30/2022	0.0074 (B)

Attachment 4:

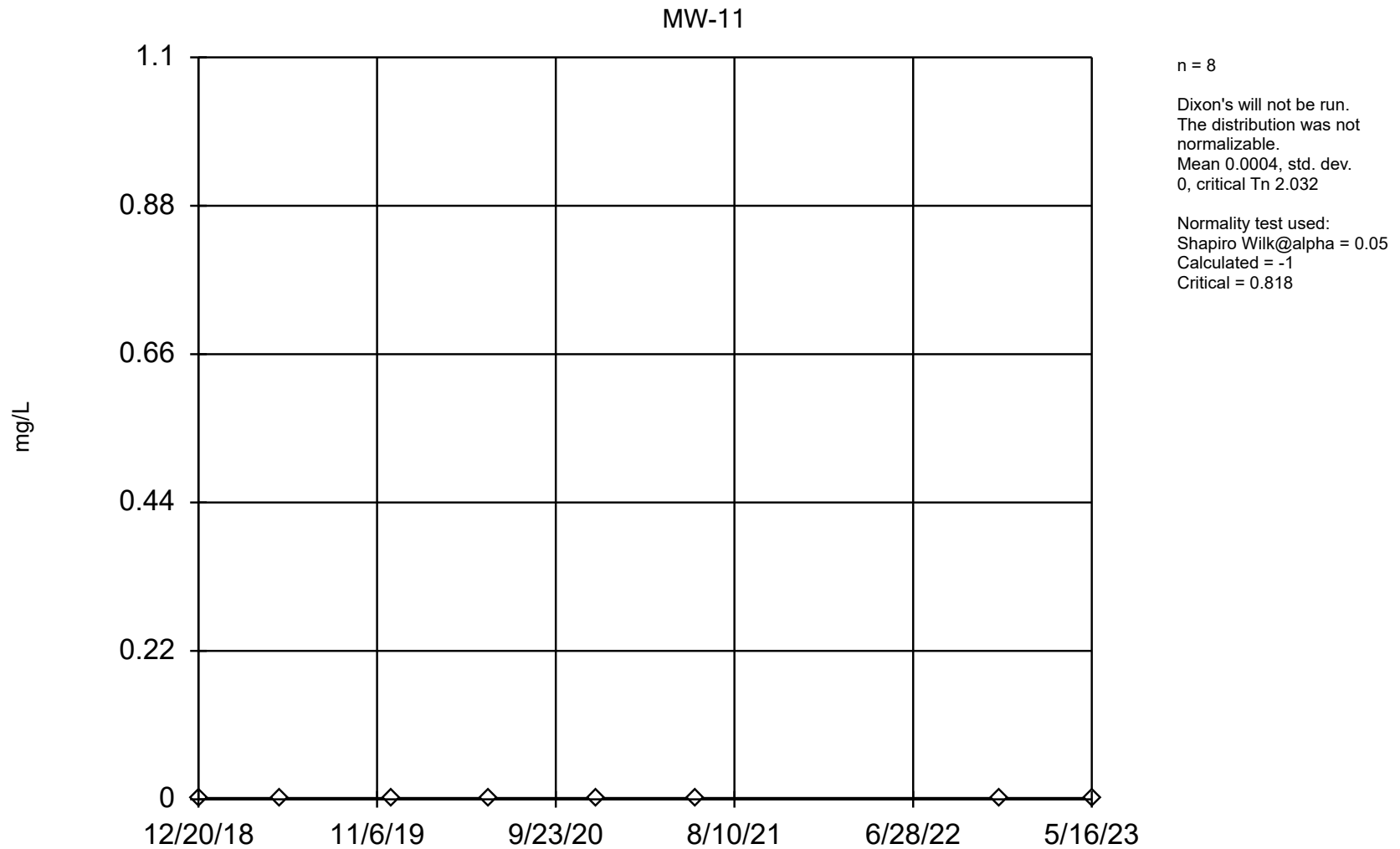
Monitoring Well MW-11 Outlier Analysis, Trend Tests, and Prediction Limits

Background Dataset Outlier Screening

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 12/10/2024, 5:10 PM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony, total (...)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.0004	0	unknown	ShapiroWilk
Arsenic, total (m...	MW-11	No	n/a	n/a	Dixon`s	0.05	8	0.002...	0.0013918	normal	ShapiroWilk
Barium, total (mg/L)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.081688	0.059252	normal	ShapiroWilk
Beryllium, total ...	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.000...	0.0003...	unknown	ShapiroWilk
Bicarbonate as Ca...	MW-11	Yes	613	5/16/2023	Dixon`s	0.05	8	758	59.488	normal	ShapiroWilk
Cadmium, total (m...	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.000...	0.0001...	normal	ShapiroWilk
Carbonate as CaCO...	MW-11	No	n/a	n/a	EPA 1989	0.05	8	2	0	unknown	ShapiroWilk
Chloride (mg/L)	MW-11	Yes	10.4	5/16/2023	Dixon`s	0.05	8	23.35	5.6838	normal	ShapiroWilk
Chromium, total (...)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.002365	0.0020755	normal	ShapiroWilk
Cobalt, total (mg/L)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.004...	0.0050971	ln(x)	ShapiroWilk
Copper, total (mg/L)	MW-11	n/a	n/a	n/a	EPA 1989	0.05	8	0.01125	0.0035355	unknown	ShapiroWilk
Lead, total (mg/L)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.00385	0.0049947	ln(x)	ShapiroWilk
Nickel, total (mg/L)	MW-11	n/a	n/a	n/a	EPA 1989	0.05	8	0.010125	0.0043568	unknown	ShapiroWilk
Nitrate as N, dis...	MW-11	n/a	n/a	n/a	EPA 1989	0.05	8	0.22875	0.48625	unknown	ShapiroWilk
Nitrite as N, dis...	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.01475	0.0057508	unknown	ShapiroWilk
Selenium, total (...)	MW-11	Yes	0.00273	5/16/2023	Dixon`s	0.05	8	0.000515	0.0008...	normal	ShapiroWilk
Silver, total (mg/L)	MW-11	n/a	n/a	n/a	EPA 1989	0.05	8	0.0001	8.9e-13	unknown	ShapiroWilk
Sulfate (mg/L)	MW-11	Yes	1110,1370	6/2/2021,5/16/2023	Dixon`s	0.05	8	1034.4	147	normal	ShapiroWilk
Thallium, total (...)	MW-11	n/a	n/a	n/a	EPA 1989	0.05	8	0.0001	8.9e-13	unknown	ShapiroWilk
Vanadium, total (...)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.008875	0.0021002	unknown	ShapiroWilk
Zinc, total (mg/L)	MW-11	No	n/a	n/a	EPA 1989	0.05	8	0.016625	0.013228	ln(x)	ShapiroWilk

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Antimony, total Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Antimony, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11

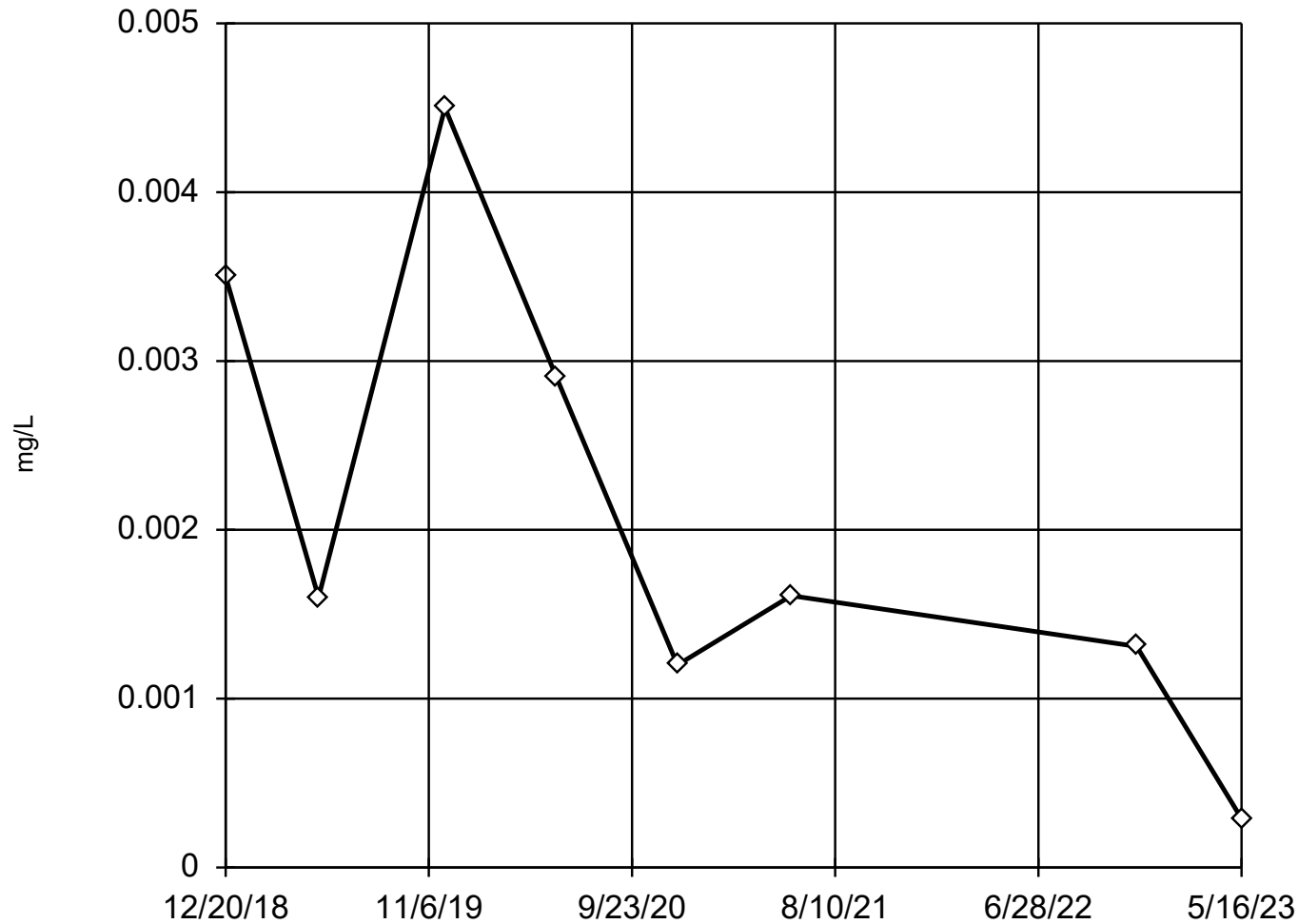
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<0.0004
5/16/2019	<0.0004
12/2/2019	<0.0004
5/27/2020	<0.0004
12/4/2020	<0.0004
6/2/2021	<0.0004
12/1/2022	<0.0004
5/16/2023	<0.0004

Dixon's Outlier Test

MW-11



n = 8

No statistical outliers.
Testing for 1 low outlier.
Mean = 0.0021138.
Std. Dev. = 0.0013918.
0.00029 (J): c = 0.28349
tab1 = 0.554.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.86357
Critical = 0.803
The distribution was found
to be normally distrib-
uted.

Constituent: Arsenic, total Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

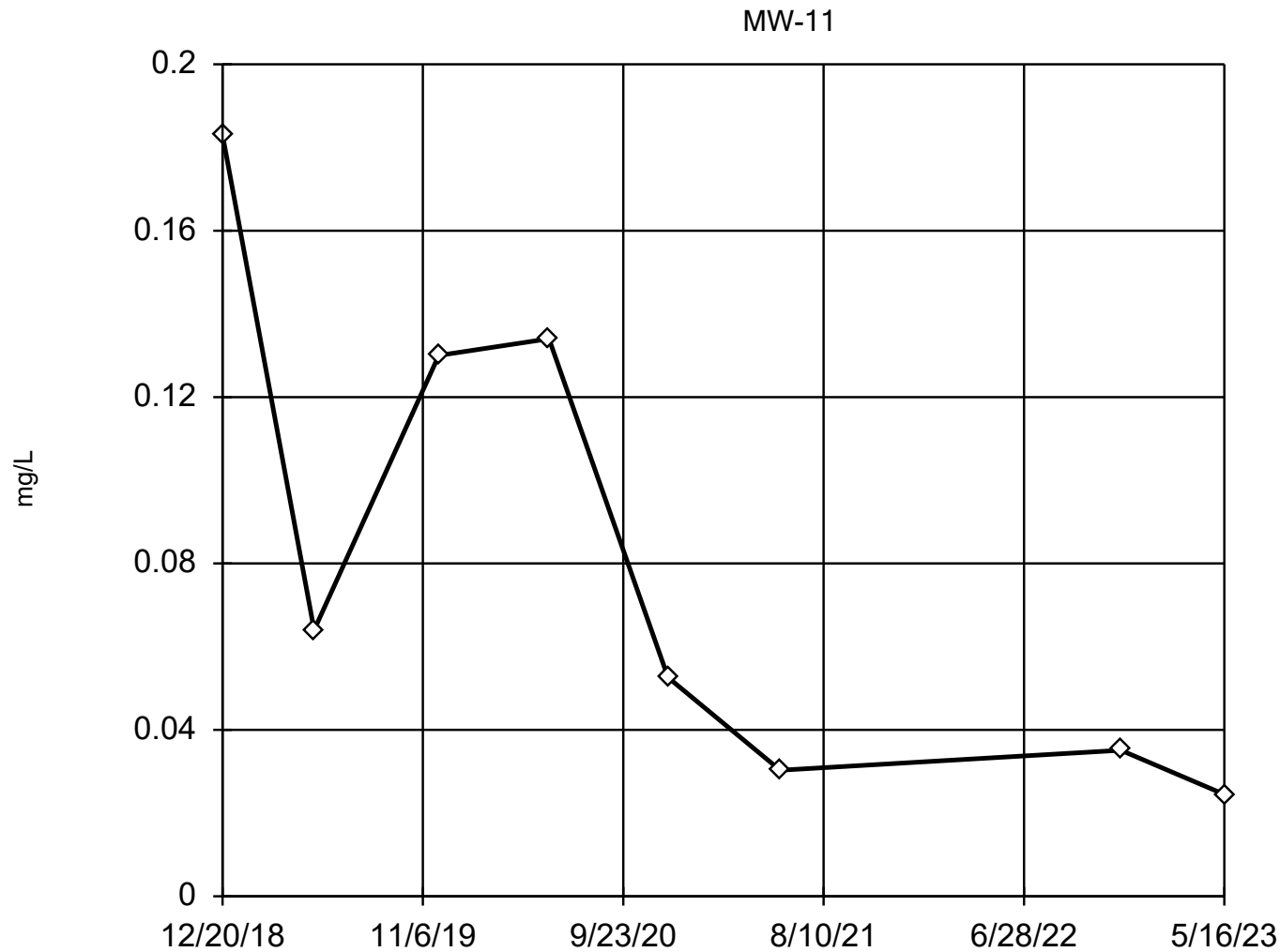
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Dixon's Outlier Test

Constituent: Arsenic, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0035
5/16/2019	0.0016
12/2/2019	0.0045
5/27/2020	0.0029
12/4/2020	0.0012
6/2/2021	0.00161
12/1/2022	0.00131
5/16/2023	0.00029 (J)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.081688, std. dev. 0.059252, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.86637
Critical = 0.818
The distribution was found to be normally distributed.

Constituent: Barium, total Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

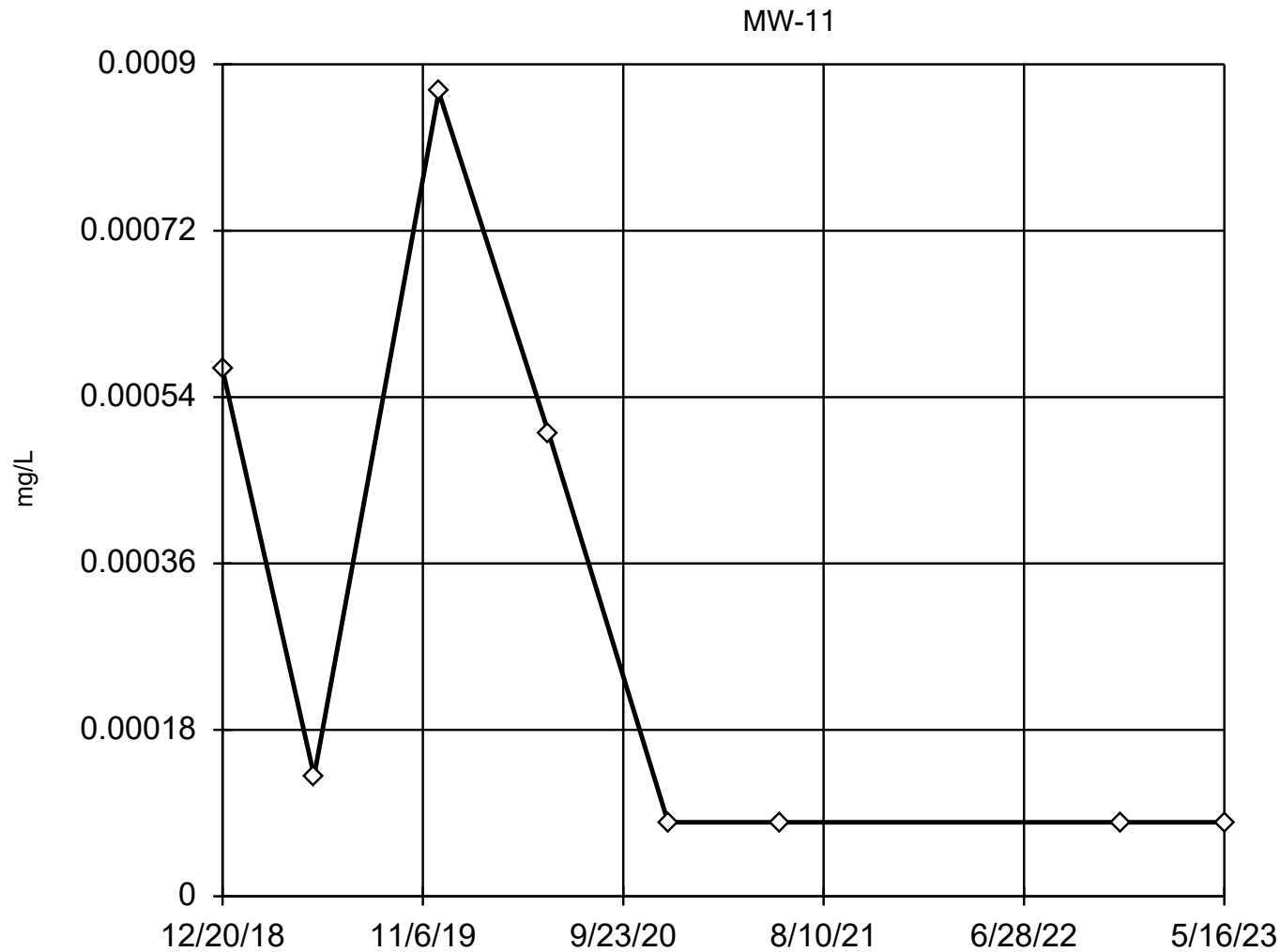
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Barium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.183
5/16/2019	0.064
12/2/2019	0.13
5/27/2020	0.134
12/4/2020	0.0526
6/2/2021	0.0303 (B)
12/1/2022	0.0351
5/16/2023	0.0245 (J)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.00029875, std.
dev. 0.00030713, critical
Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.76695
Critical = 0.818

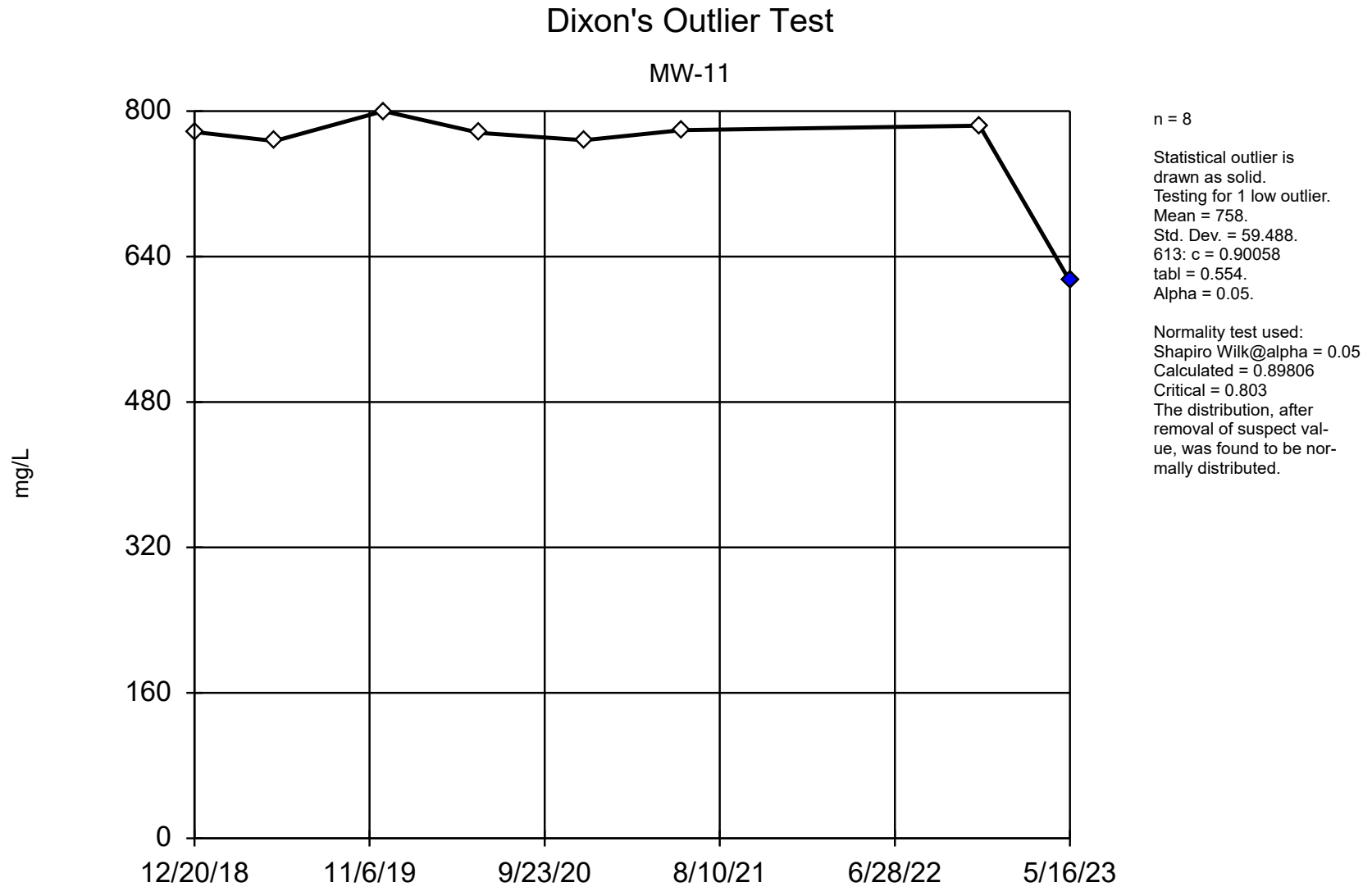
Constituent: Beryllium, total Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Beryllium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.00057
5/16/2019	0.00013 (B)
12/2/2019	0.00087
5/27/2020	0.0005
12/4/2020	<8E-05
6/2/2021	<8E-05
12/1/2022	<8E-05
5/16/2023	<8E-05



Constituent: Bicarbonate as CaCO₃ Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

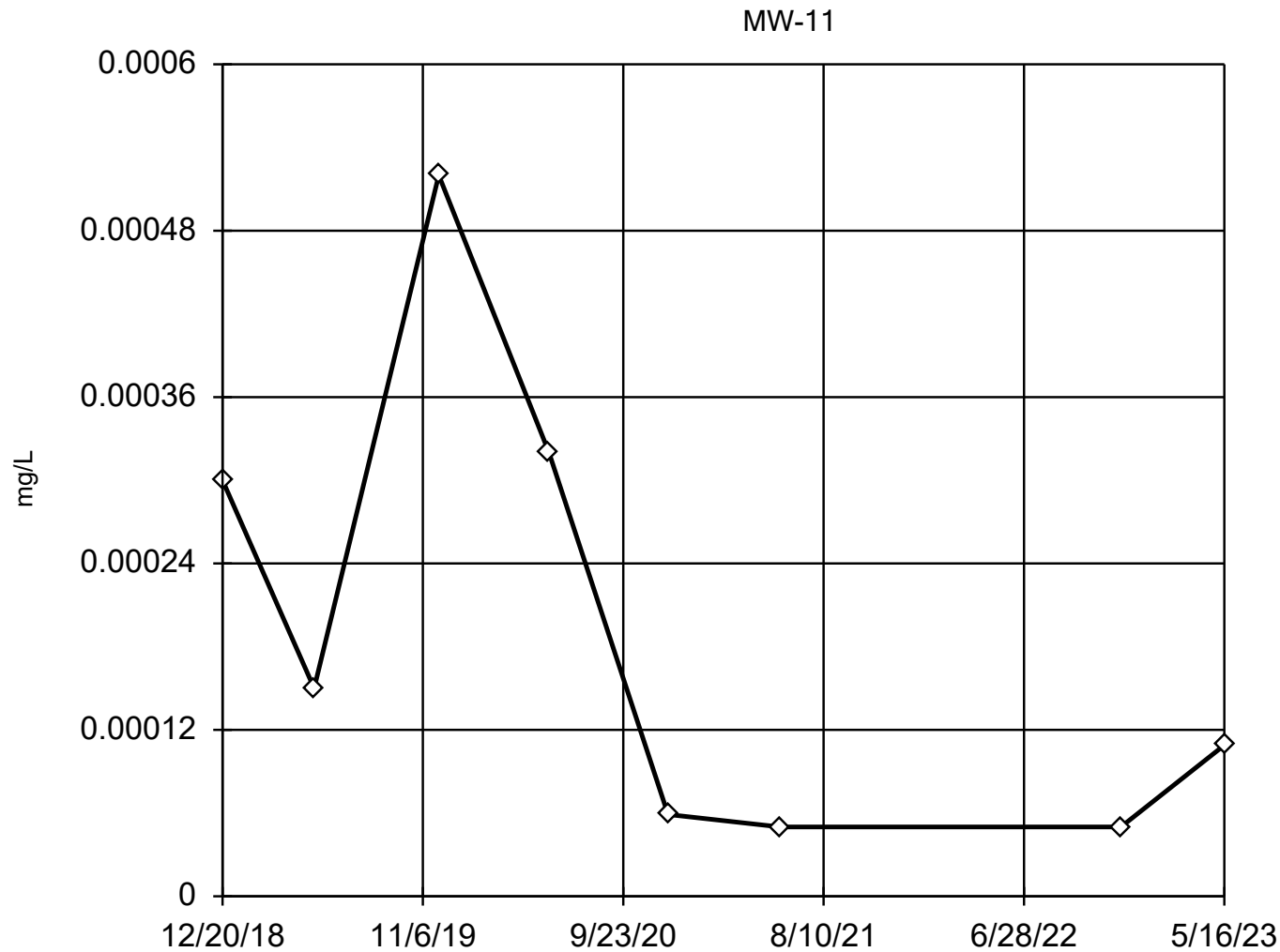
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Dixon's Outlier Test

Constituent: Bicarbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	777
5/16/2019	767
12/2/2019	800
5/27/2020	776
12/4/2020	768
6/2/2021	779
12/1/2022	784
5/16/2023	613 (O)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00019475, std. dev. 0.00016998, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.84821
Critical = 0.818
The distribution was found to be normally distributed.

Constituent: Cadmium, total Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

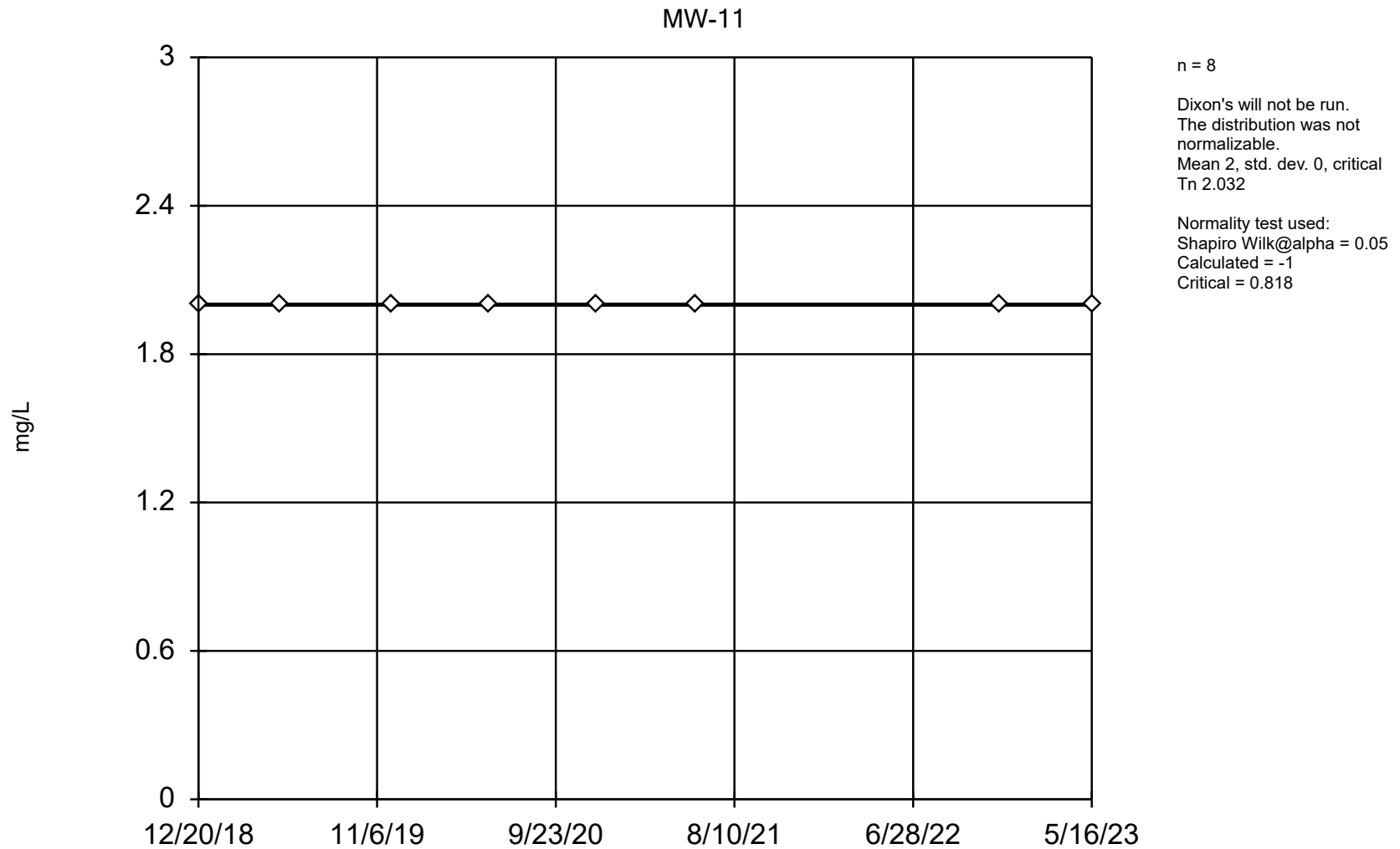
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Cadmium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0003
5/16/2019	0.00015 (B)
12/2/2019	0.00052
5/27/2020	0.00032
12/4/2020	5.9E-05 (B)
6/2/2021	<5E-05
12/1/2022	<5E-05
5/16/2023	0.000109 (J)

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Carbonate as CaCO₃ Analysis Run 12/10/2024 5:08 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

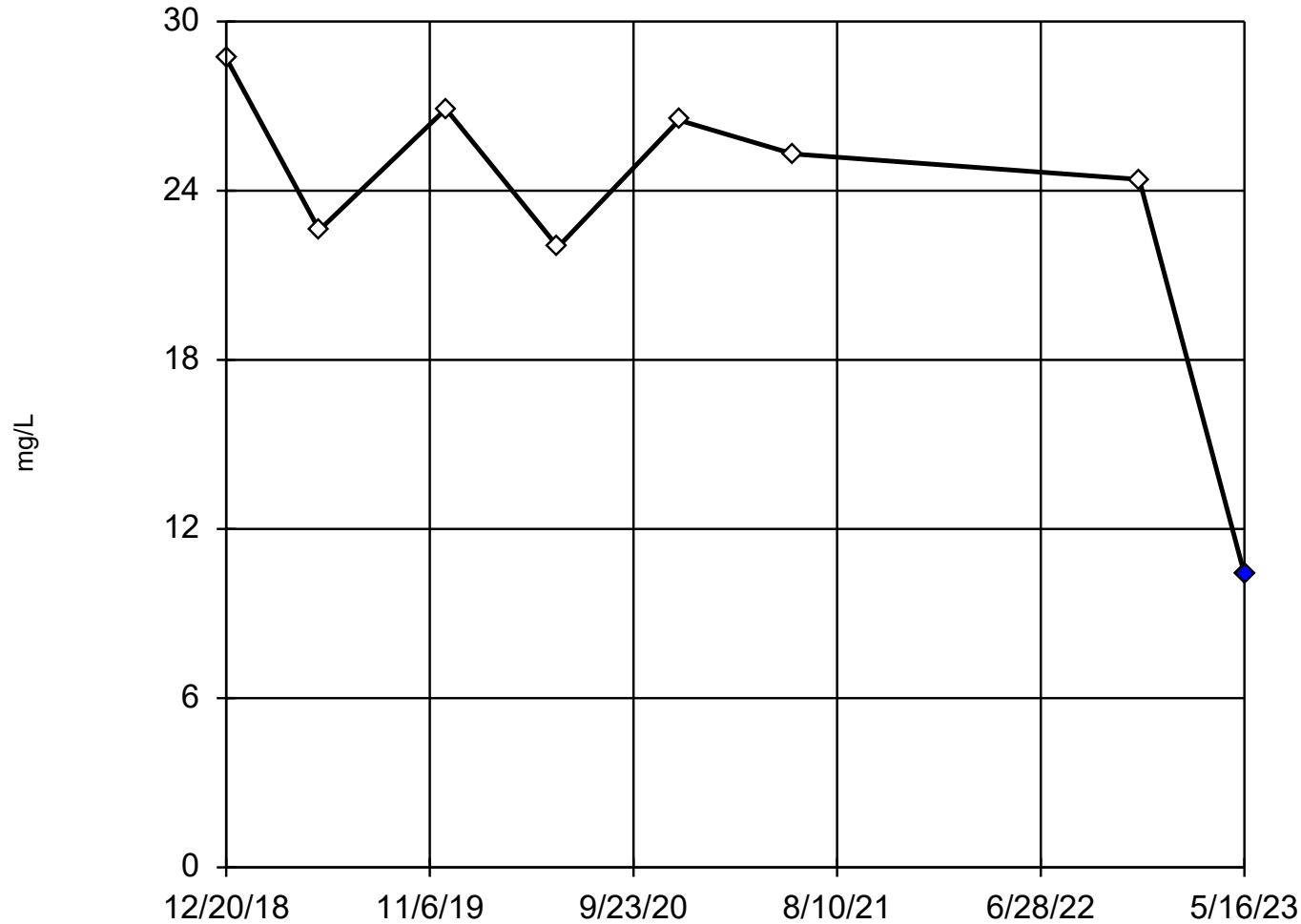
Constituent: Carbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<2
5/16/2019	<2
12/2/2019	<2
5/27/2020	<2
12/4/2020	<2
6/2/2021	<2
12/1/2022	<2
5/16/2023	<2

Dixon's Outlier Test

MW-11



n = 8

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 23.35.
Std. Dev. = 5.6838.
10.4: c = 0.70303
tab1 = 0.554.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.96679
Critical = 0.803
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Dixon's Outlier Test

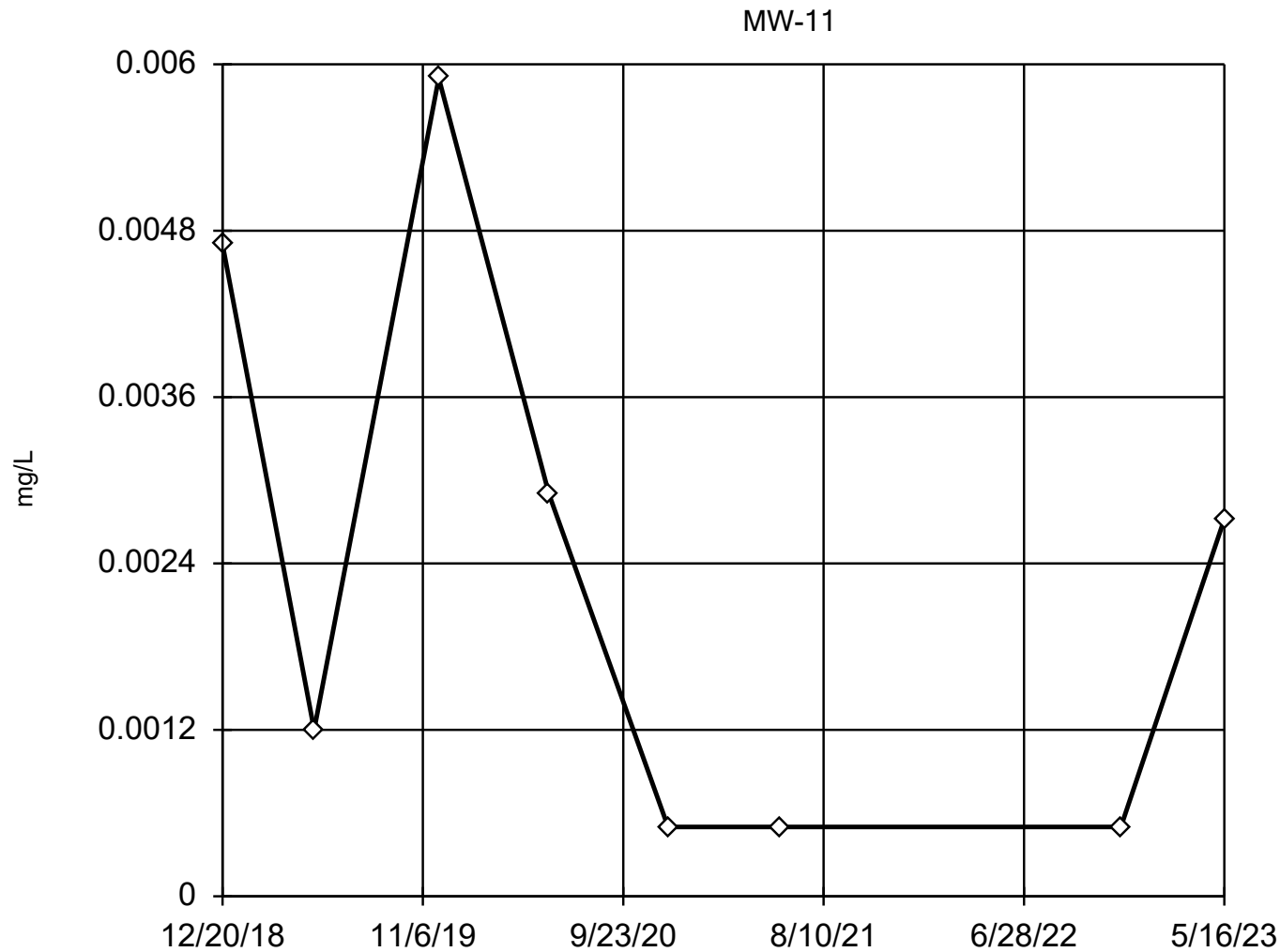
Constituent: Chloride (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	28.7
5/16/2019	22.6
12/2/2019	26.9
5/27/2020	22
12/4/2020	26.5
6/2/2021	25.3
12/1/2022	24.4
5/16/2023	10.4 (O)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.002365, std. dev. 0.0020755, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.8628
Critical = 0.818
The distribution was found to be normally distributed.

Constituent: Chromium, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

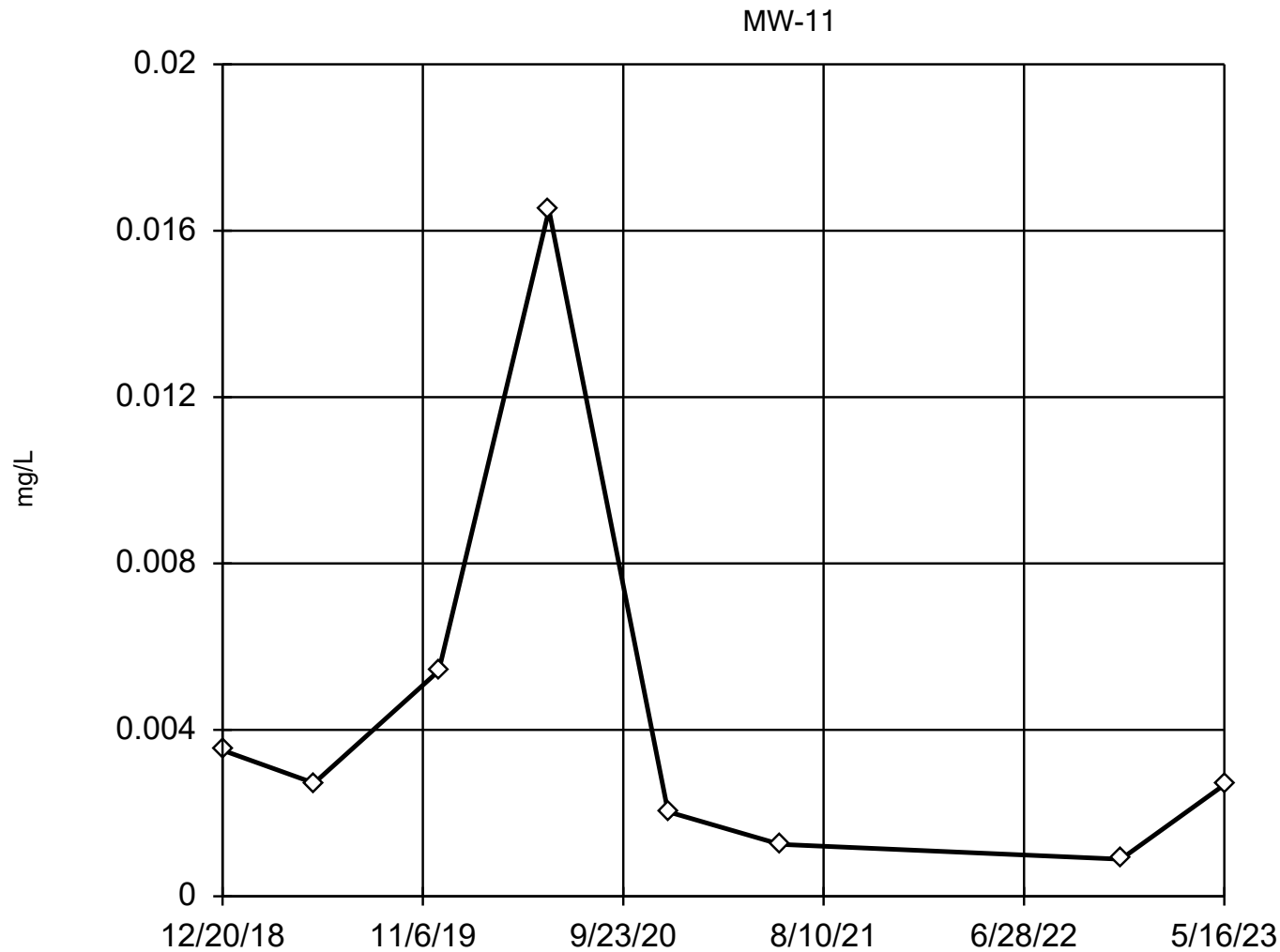
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Chromium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0047
5/16/2019	0.0012 (B)
12/2/2019	0.0059
5/27/2020	0.0029
12/4/2020	<0.0005
6/2/2021	<0.0005
12/1/2022	<0.0005
5/16/2023	0.00272

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0043753, std. dev. 0.0050971, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.95163
Critical = 0.818 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Cobalt, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

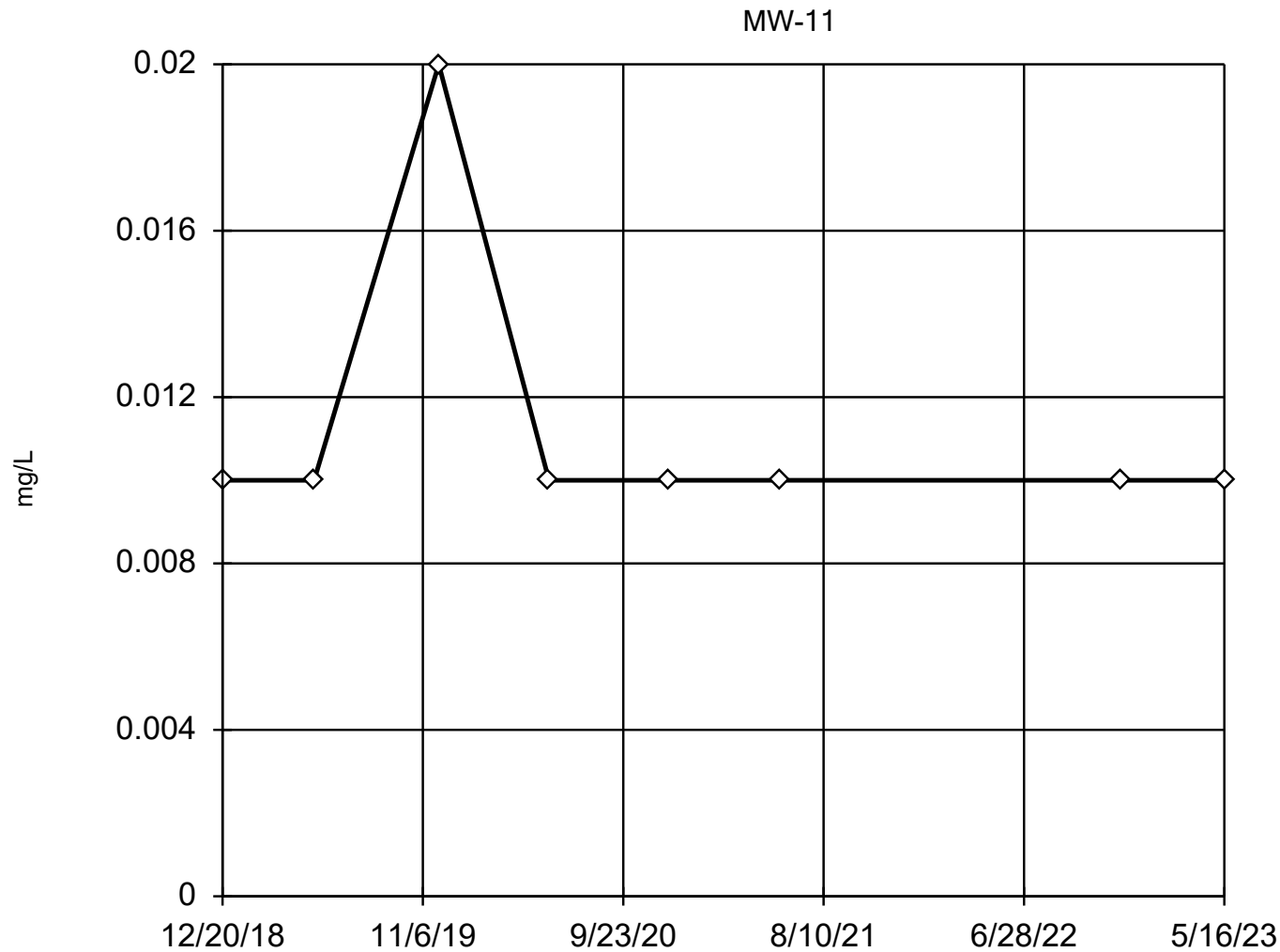
EPA 1989 Outlier Screening

Constituent: Cobalt, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	0.00351
5/16/2019	0.00272
12/2/2019	0.00542
5/27/2020	0.0165
12/4/2020	0.00203
6/2/2021	0.00125
12/1/2022	0.000892
5/16/2023	0.00268

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.01125, std. dev.
0.0035355, critical Tn
2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.41859
Critical = 0.818

Constituent: Copper, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

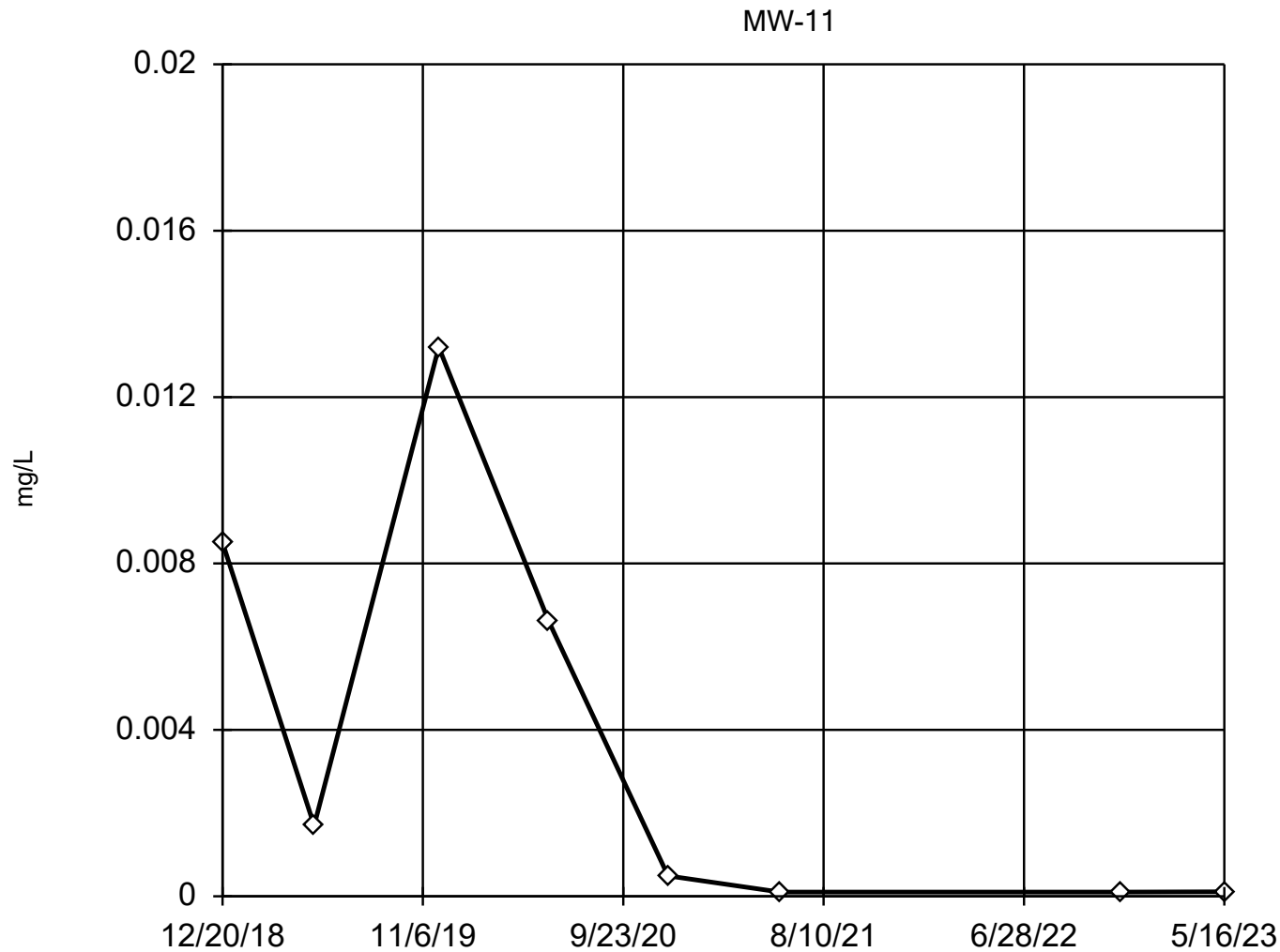
EPA 1989 Outlier Screening

Constituent: Copper, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<0.01
5/16/2019	<0.01
12/2/2019	<0.02
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00385, std. dev. 0.0049947, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.85236
Critical = 0.818 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Lead, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

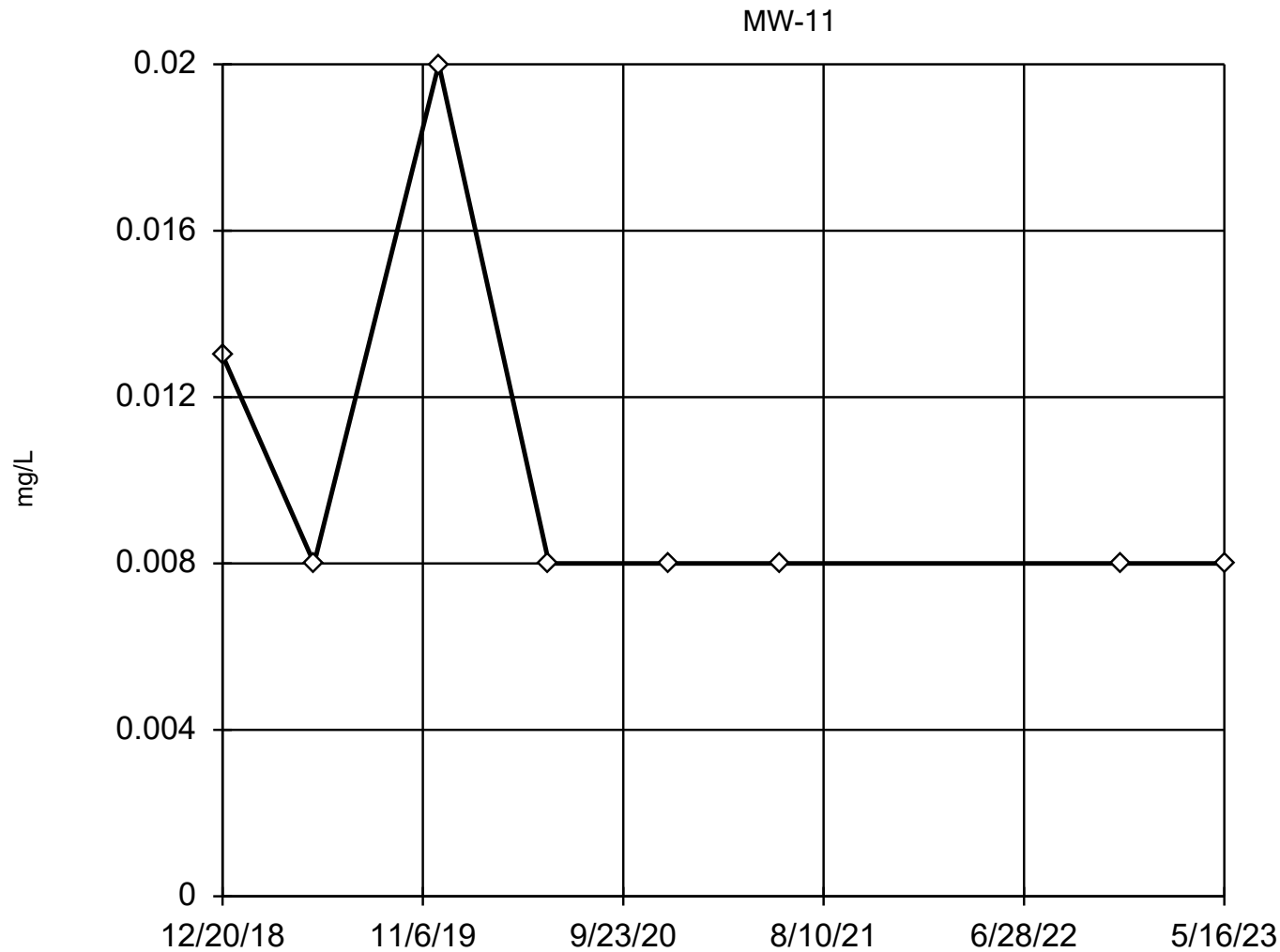
EPA 1989 Outlier Screening

Constituent: Lead, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0085
5/16/2019	0.0017
12/2/2019	0.0132
5/27/2020	0.0066
12/4/2020	0.00049 (B)
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	0.00011 (J)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.010125, std. dev.
0.0043568, critical Tn
2.032. After removing
suspect data: mean 0.0087143,
std. dev. 0.0018898, Tn
1.938.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.60443
Critical = 0.818

Constituent: Nickel, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

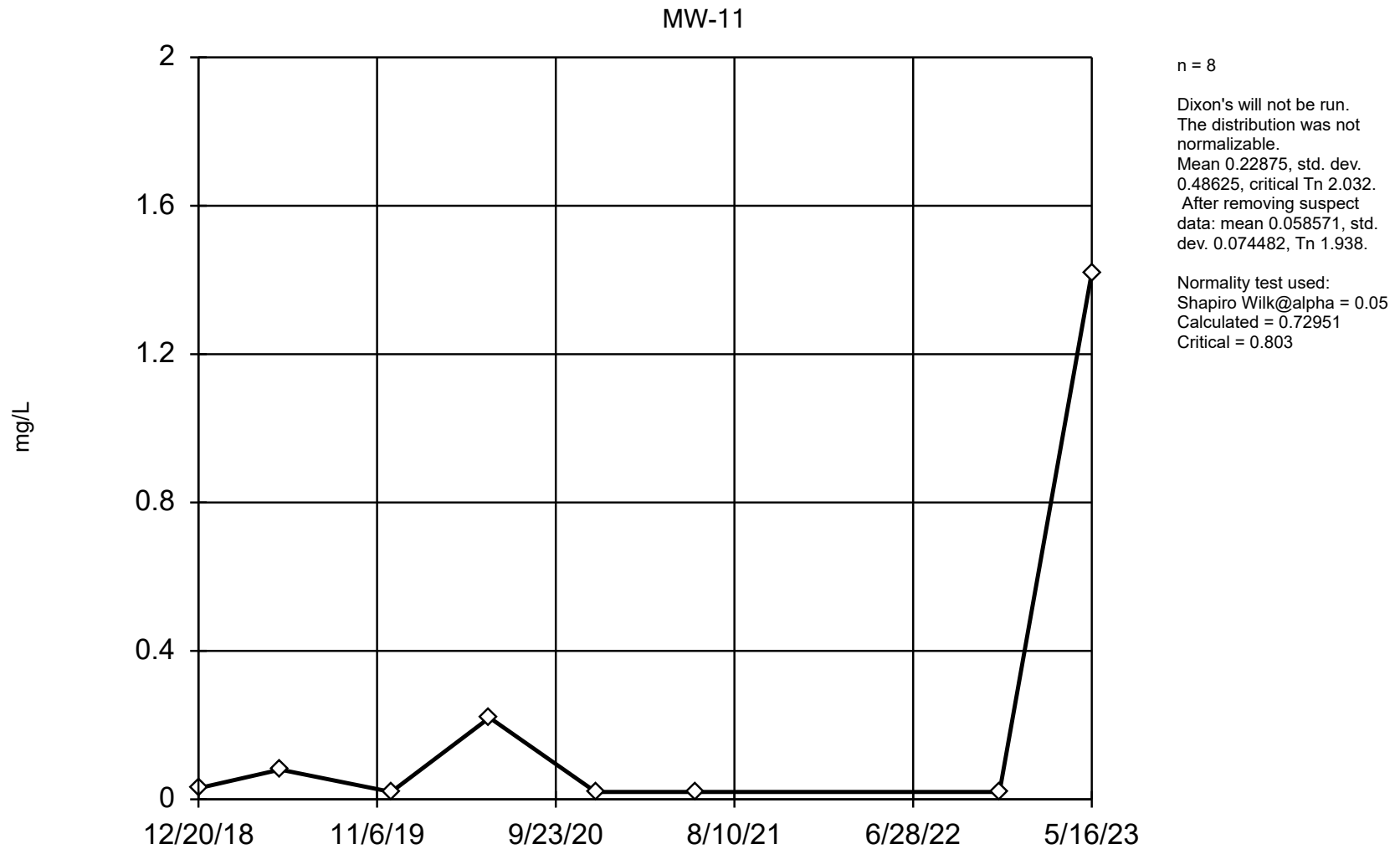
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Nickel, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	0.013 (B)
5/16/2019	<0.008
12/2/2019	<0.02
5/27/2020	<0.008
12/4/2020	<0.008
6/2/2021	<0.008
12/1/2022	<0.008
5/16/2023	<0.008

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Nitrate as N, dissolved Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

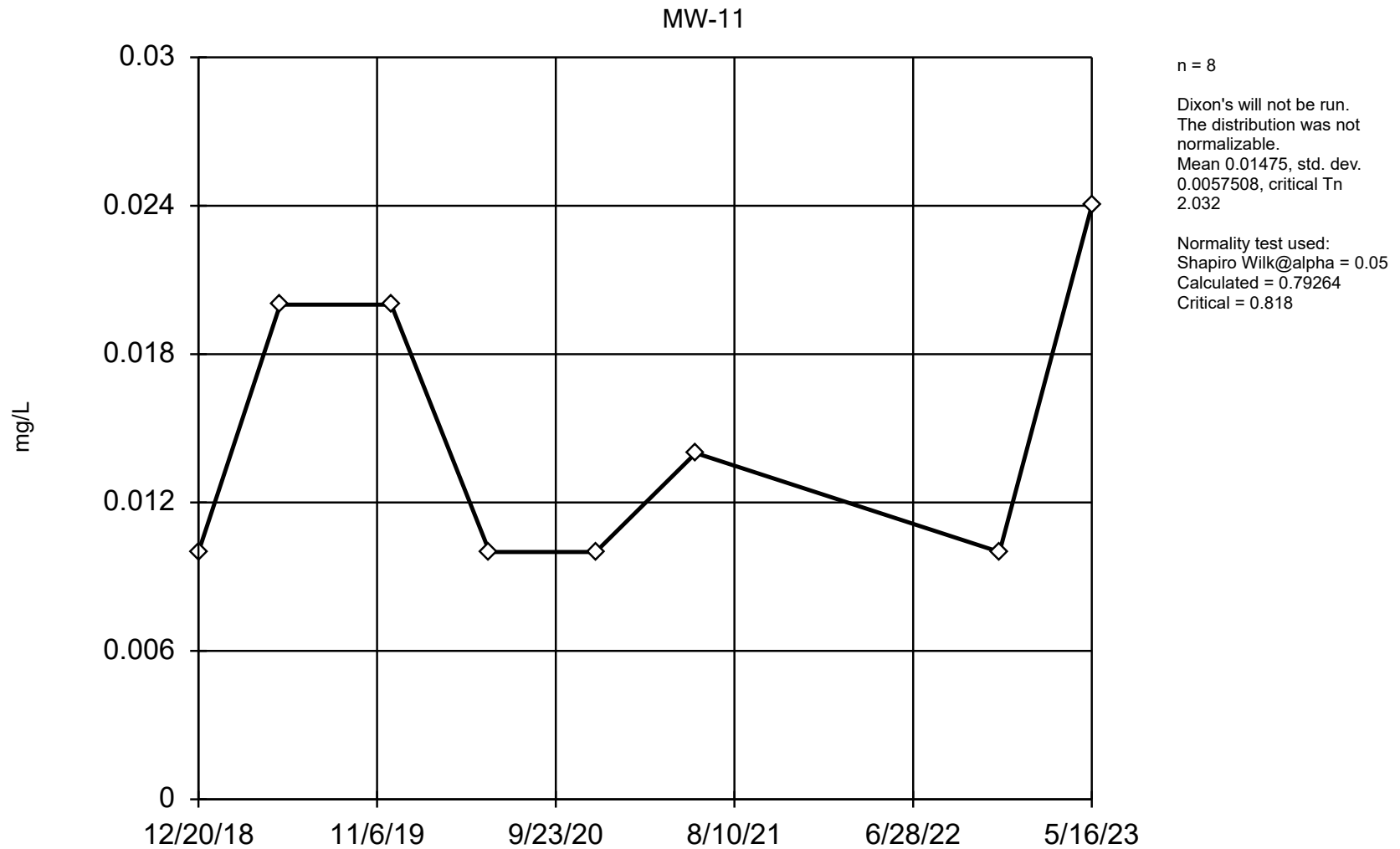
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Nitrate as N, dissolved (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.03 (B)
5/16/2019	0.08 (B)
12/2/2019	<0.02
5/27/2020	0.22
12/4/2020	<0.02
6/2/2021	<0.02
12/1/2022	<0.02
5/16/2023	1.42

EPA Screening (suspected outliers for Dixon's Test)



Constituent: Nitrite as N, dissolved Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

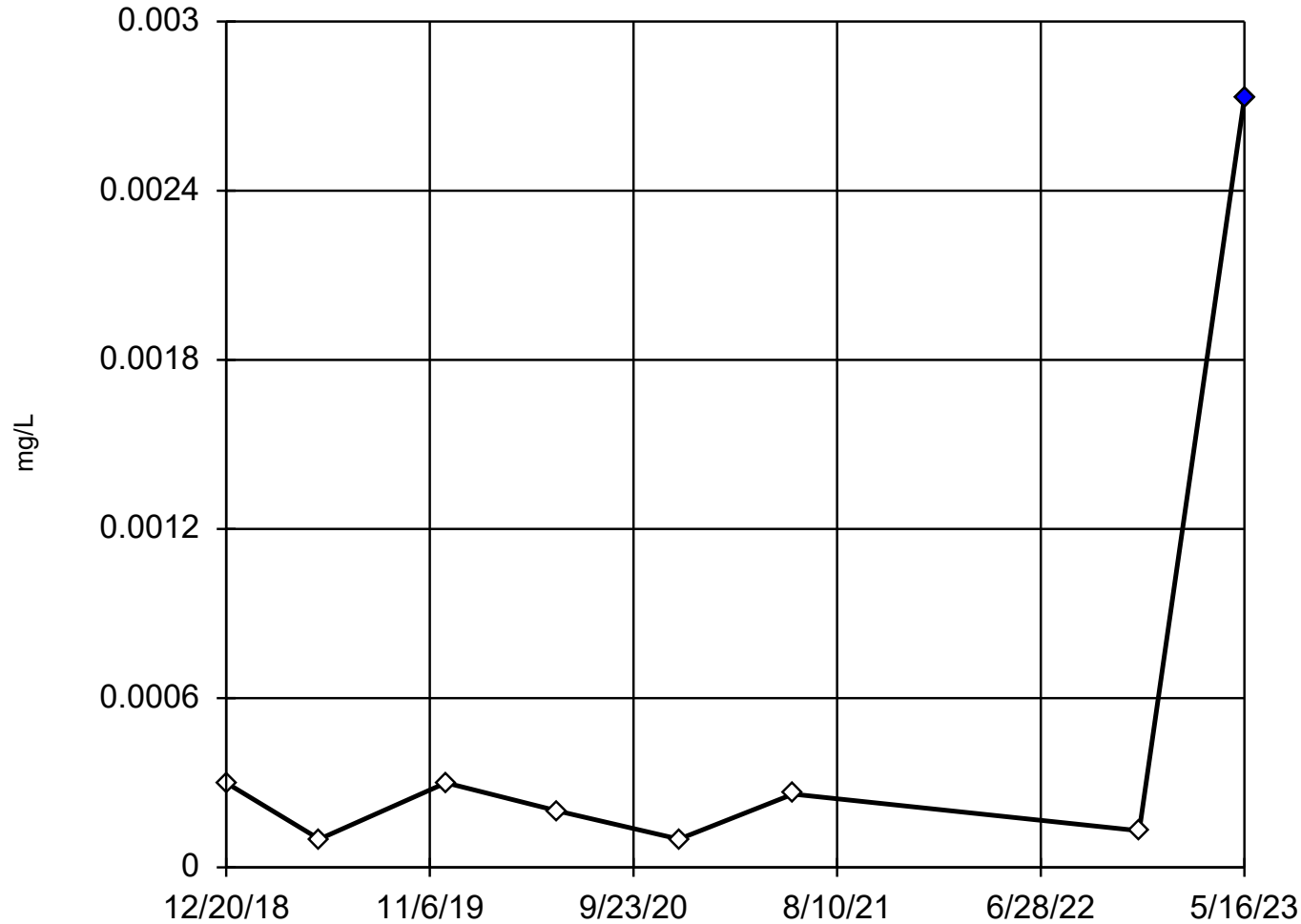
EPA 1989 Outlier Screening

Constituent: Nitrite as N, dissolved (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.01
5/16/2019	0.02 (B)
12/2/2019	0.02 (B)
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	0.014 (B)
12/1/2022	<0.01
5/16/2023	0.024 (J)

Dixon's Outlier Test

MW-11



n = 8

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.000515.
Std. Dev. = 0.00089886.
0.00273: c = 0.92395
tab1 = 0.554.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.85405
Critical = 0.803
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Selenite, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

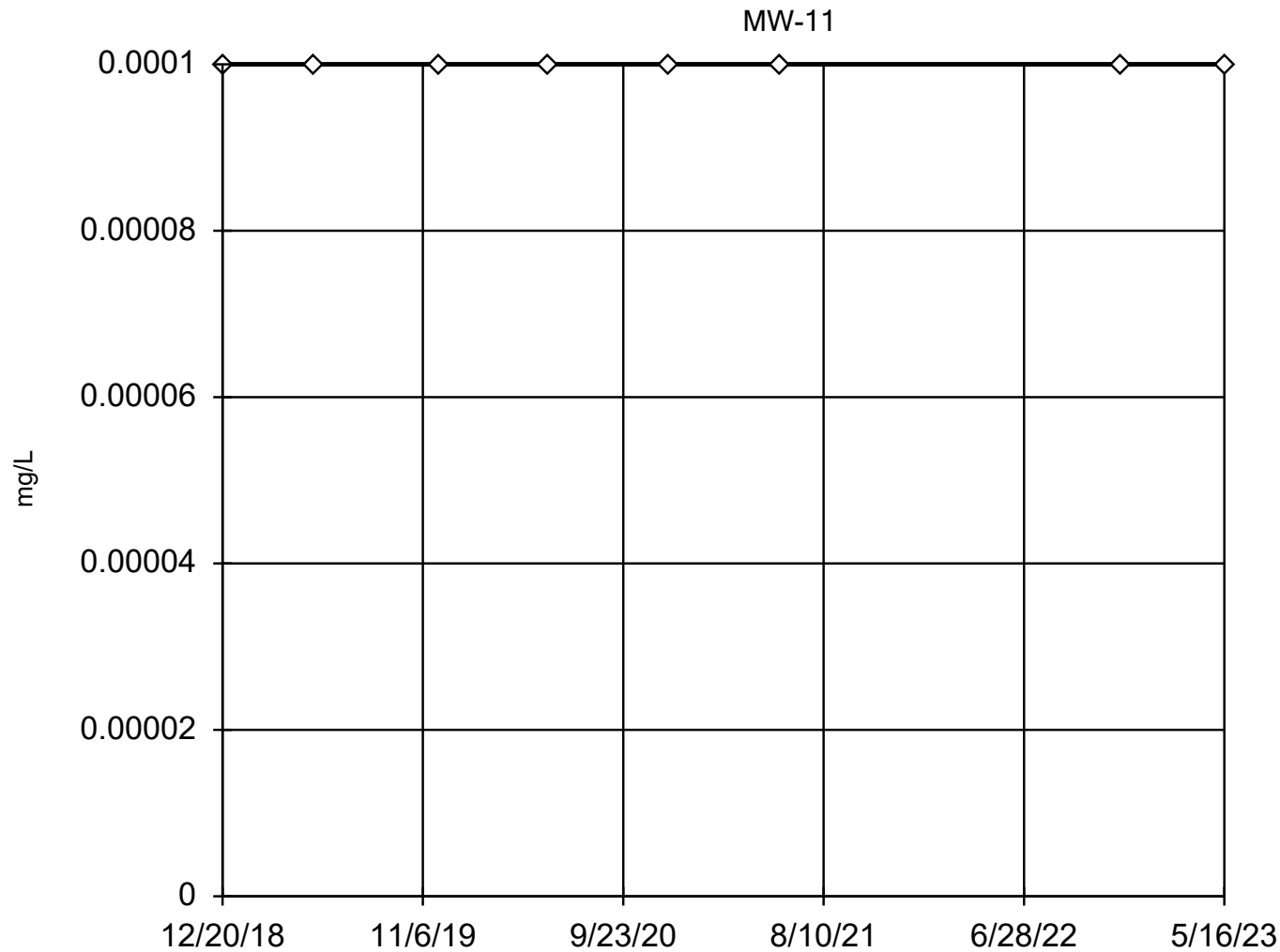
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Dixon's Outlier Test

Constituent: Selenium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0003
5/16/2019	<0.0001
12/2/2019	0.0003
5/27/2020	0.0002 (B)
12/4/2020	<0.0001
6/2/2021	0.00026
12/1/2022	0.00013 (B)
5/16/2023	0.00273 (O)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.0001, std. dev.
8.9e-13, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.41859
Critical = 0.818

Constituent: Silver, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

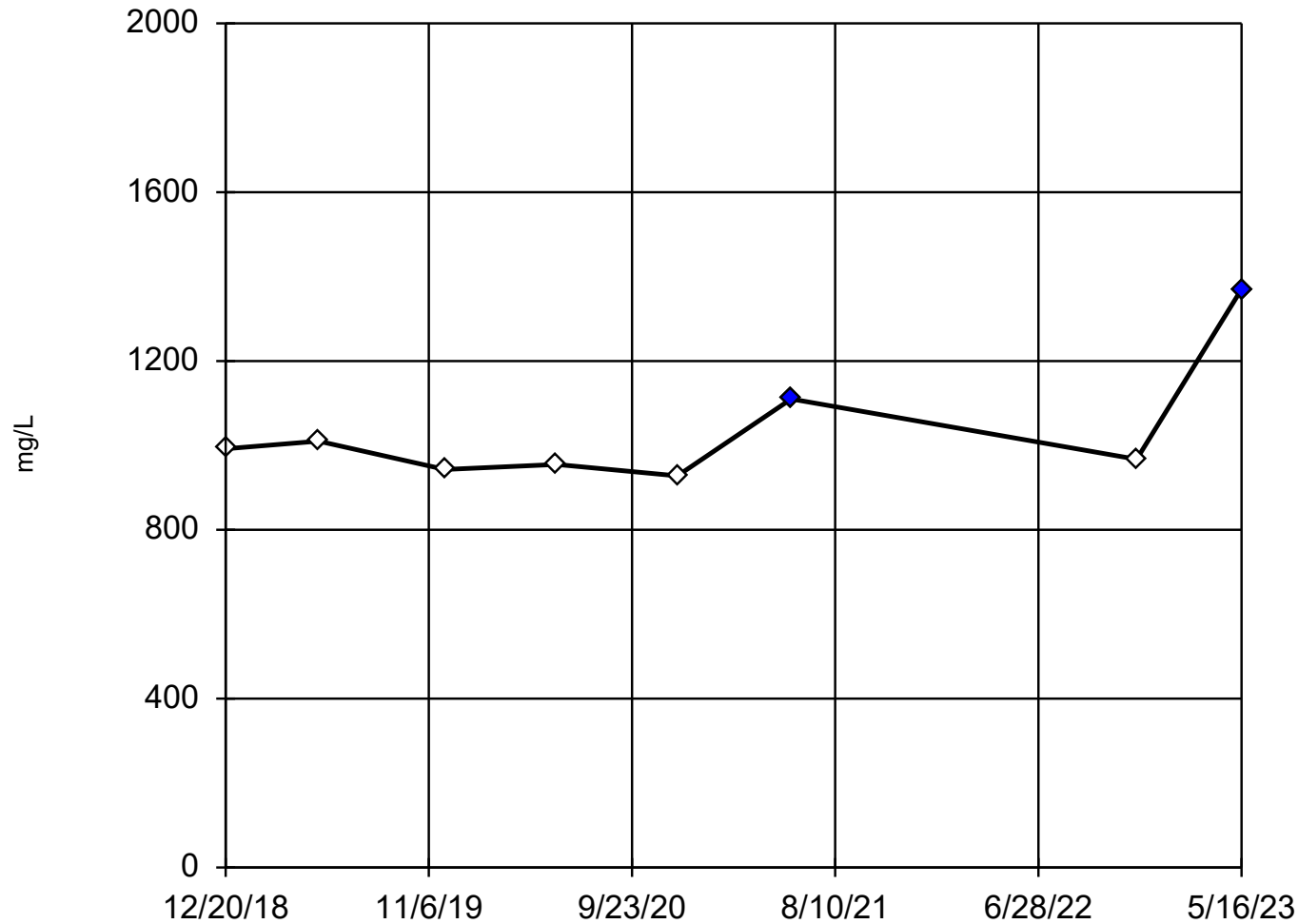
EPA 1989 Outlier Screening

Constituent: Silver, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001

Dixon's Outlier Test

MW-11



n = 8

Statistical outliers are drawn as solid.
Testing for 2 high outliers.
Mean = 1034.4.
Std. Dev. = 147.
1110: c = 0.5988
tab1 = 0.554.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.96897
Critical = 0.788
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Dixon's Outlier Test

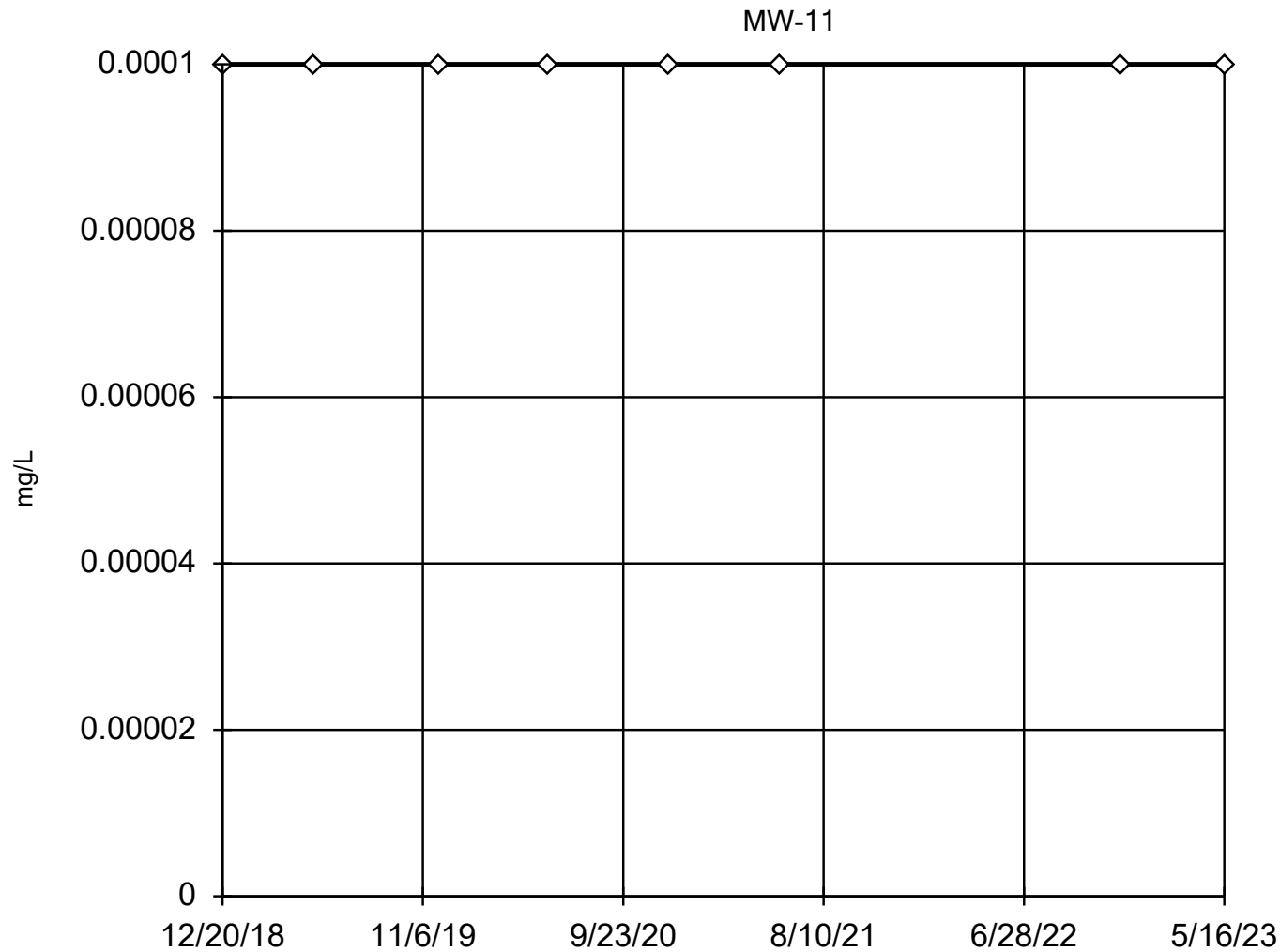
Constituent: Sulfate (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	992
5/16/2019	1010
12/2/2019	943
5/27/2020	955
12/4/2020	928
6/2/2021	1110 (O)
12/1/2022	967
5/16/2023	1370 (O)

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.0001, std. dev.
8.9e-13, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.41859
Critical = 0.818

Constituent: Thallium, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

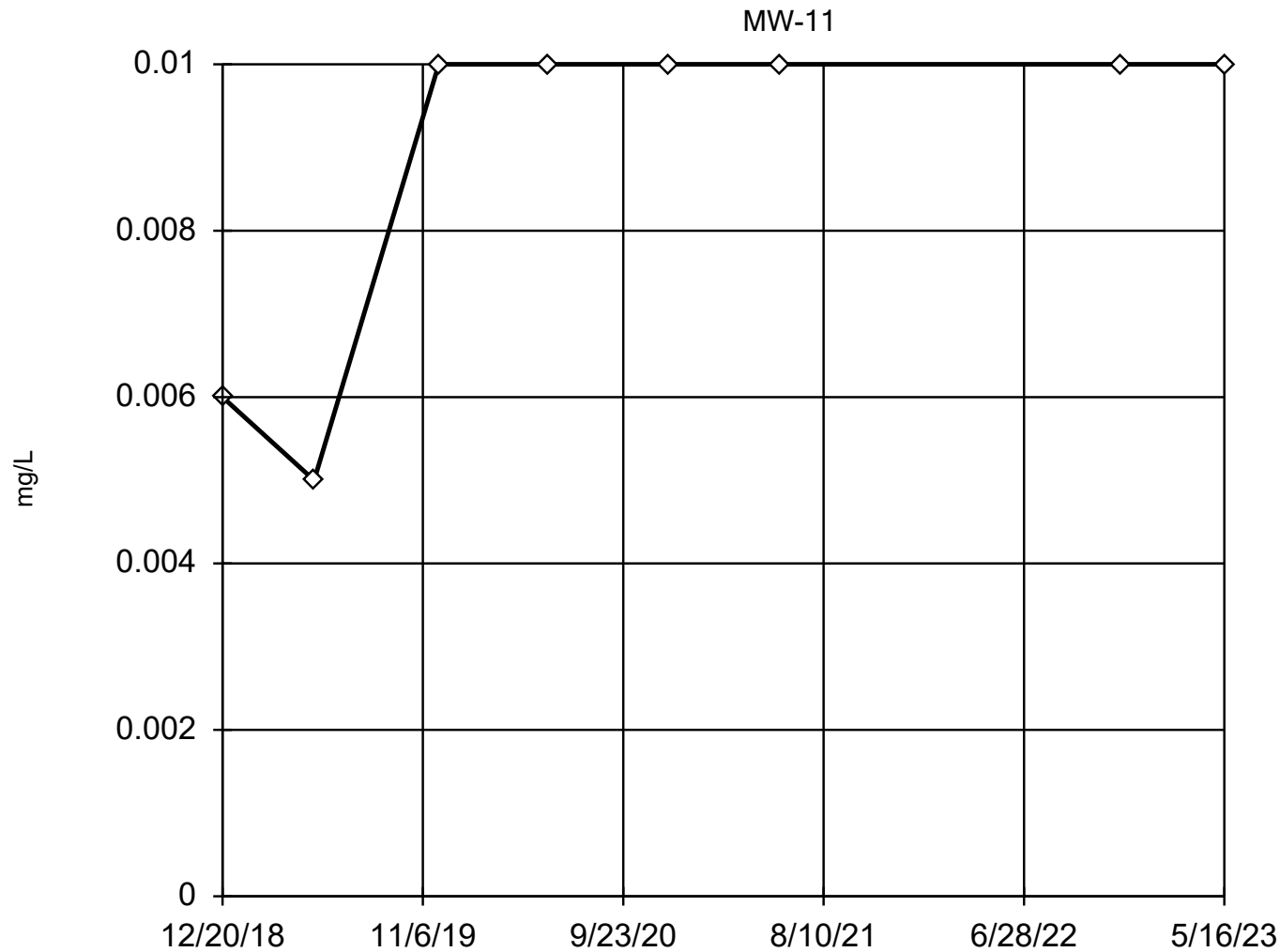
EPA 1989 Outlier Screening

Constituent: Thallium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
The distribution was not
normalizable.
Mean 0.008875, std. dev.
0.0021002, critical Tn
2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.60281
Critical = 0.818

Constituent: Vanadium, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

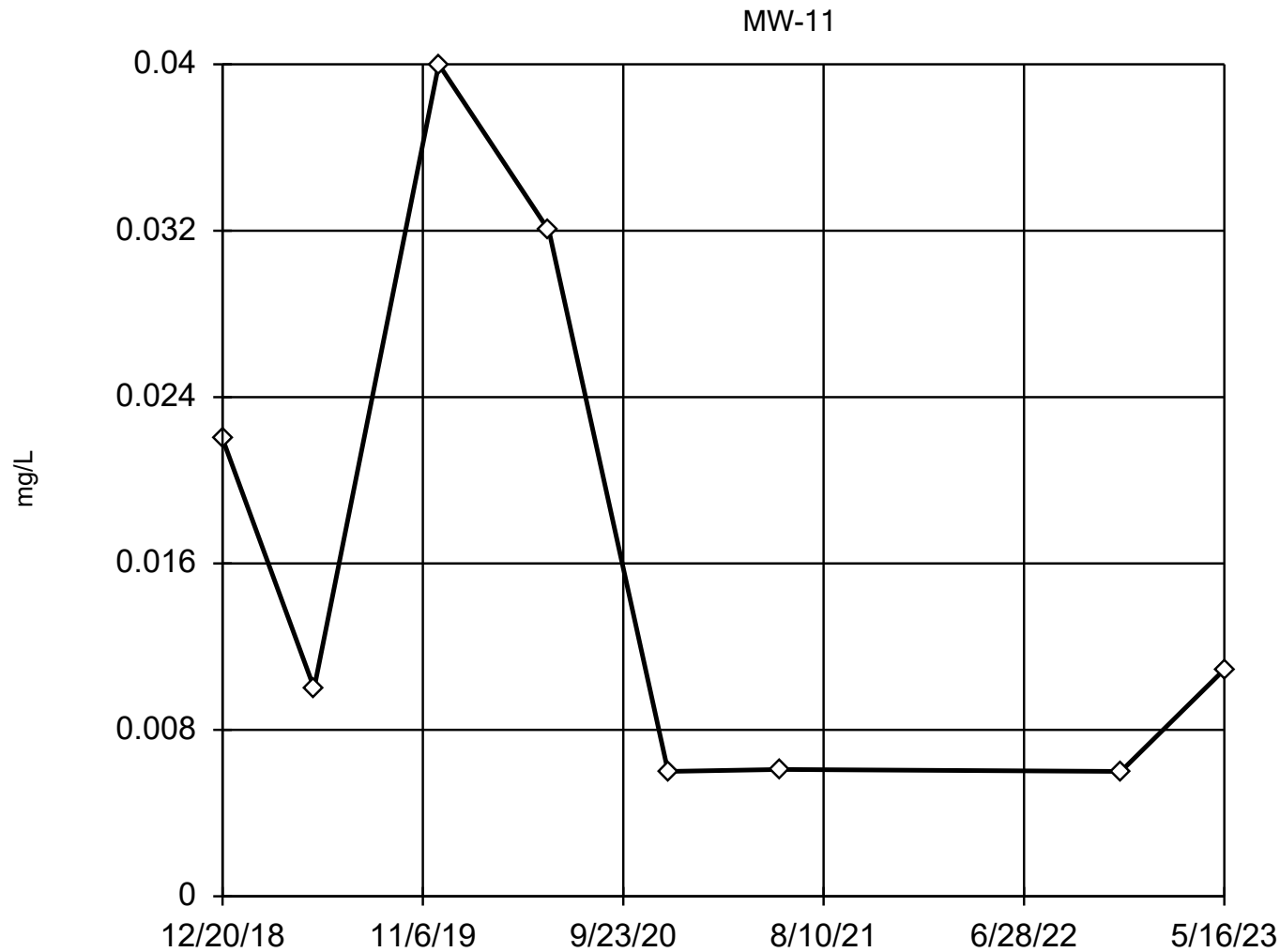
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Vanadium, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	0.006 (B)
5/16/2019	<0.005
12/2/2019	<0.01
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01

EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.016625, std. dev. 0.013228, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.05
Calculated = 0.86208
Critical = 0.818 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Zinc, total Analysis Run 12/10/2024 5:09 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

EPA 1989 Outlier Screening

Constituent: Zinc, total (mg/L) Analysis Run 12/10/2024 5:10 PM View: BG - MW-11

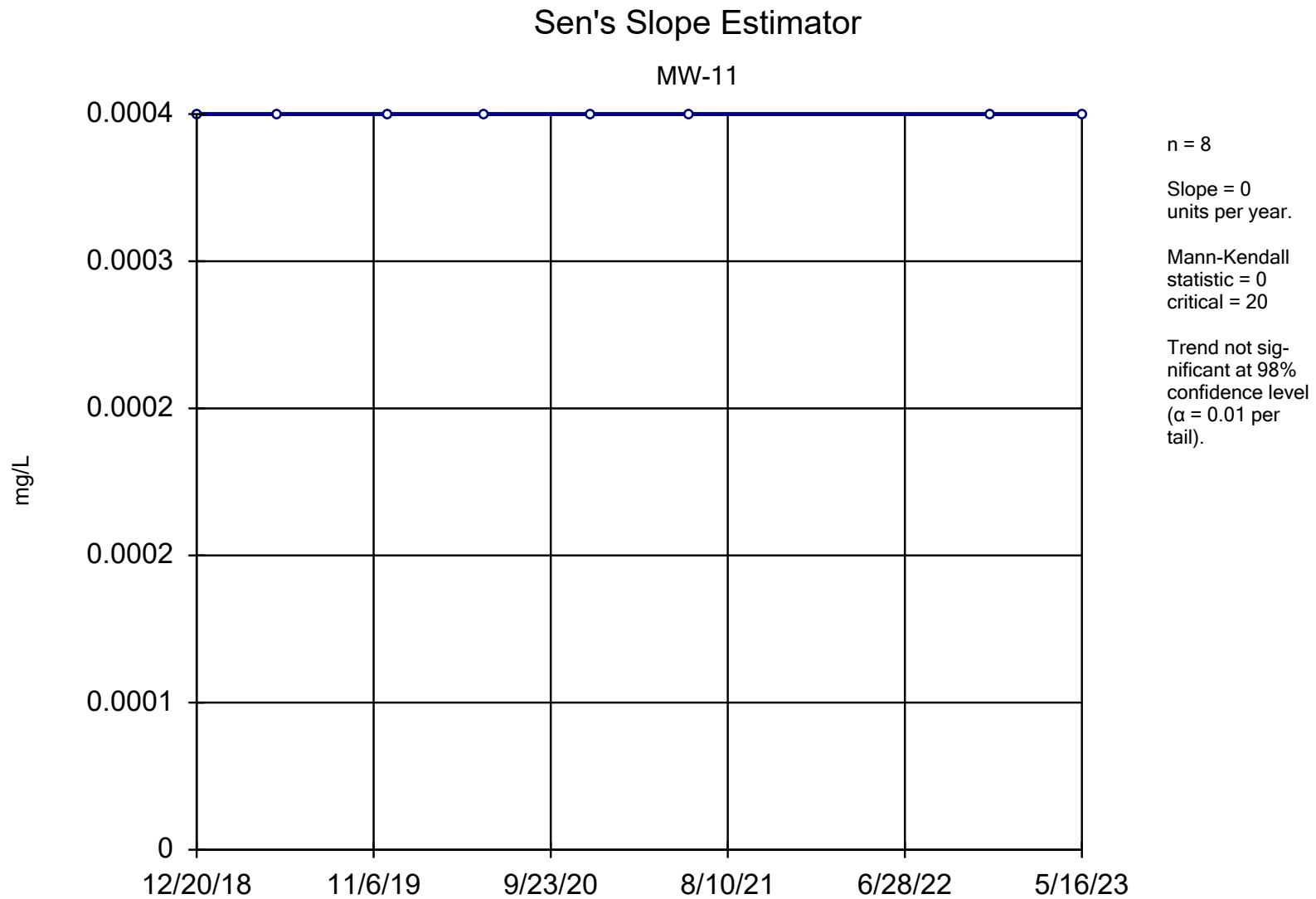
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.022
5/16/2019	0.01
12/2/2019	0.04
5/27/2020	0.032
12/4/2020	<0.006
6/2/2021	0.0061 (B)
12/1/2022	<0.006
5/16/2023	0.0109 (J)

Trend Test

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 12/10/2024, 4:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>
Antimony, total (mg/L)	MW-11	0	0	20	No	8	100	0.02
Arsenic, total (mg/L)	MW-11	-0.00065396	-16	-20	No	8	0	0.02
Barium, total (mg/L)	MW-11	-0.032883	-20	-20	No	8	0	0.02
Beryllium, total (mg/L)	MW-11	-0.000079992	-16	-20	No	8	50	0.02
Bicarbonate as CaCO3 (mg/L)	MW-11	-2.6455	-2	-20	No	8	0	0.02
Cadmium, total (mg/L)	MW-11	-0.000053637	-13	-20	No	8	25	0.02
Carbonate as CaCO3 (mg/L)	MW-11	0	0	20	No	8	100	0.02
Chloride (mg/L)	MW-11	-1.1057	-14	-20	No	8	0	0.02
Chromium, total (mg/L)	MW-11	-0.00044963	-11	-20	No	8	37.5	0.02
Cobalt, total (mg/L)	MW-11	-0.00061701	-12	-20	No	8	0	0.02
Copper, total (mg/L)	MW-11	0	-3	-20	No	8	100	0.02
Lead, total (mg/L)	MW-11	-0.001614	-17	-20	No	8	25	0.02
Nickel, total (mg/L)	MW-11	0	-9	-20	No	8	87.5	0.02
Nitrate as N, dissolved (mg/L)	MW-11	0	0	20	No	8	50	0.02
Nitrite as N, dissolved (mg/L)	MW-11	0	3	20	No	8	50	0.02
Selenium, total (mg/L)	MW-11	4.2e-6	2	20	No	8	25	0.02
Silver, total (mg/L)	MW-11	0	0	20	No	8	87.5	0.02
Sulfate (mg/L)	MW-11	22.163	6	20	No	8	0	0.02
Thallium, total (mg/L)	MW-11	0	0	20	No	8	87.5	0.02
Vanadium, total (mg/L)	MW-11	0	11	20	No	8	87.5	0.02
Zinc, total (mg/L)	MW-11	-0.002545	-9	-20	No	8	25	0.02



Constituent: Antimony, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

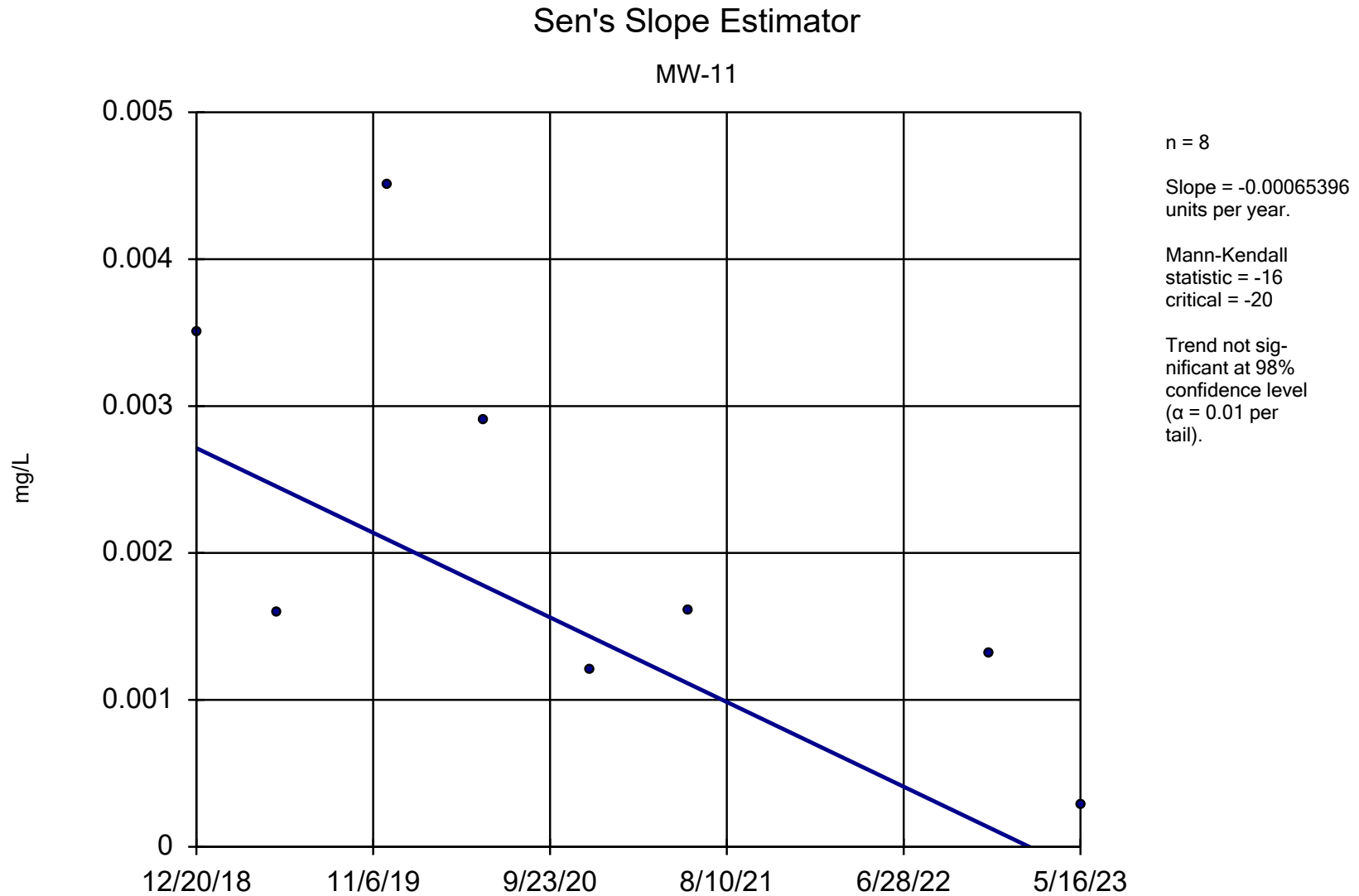
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Antimony, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<0.0004
5/16/2019	<0.0004
12/2/2019	<0.0004
5/27/2020	<0.0004
12/4/2020	<0.0004
6/2/2021	<0.0004
12/1/2022	<0.0004
5/16/2023	<0.0004



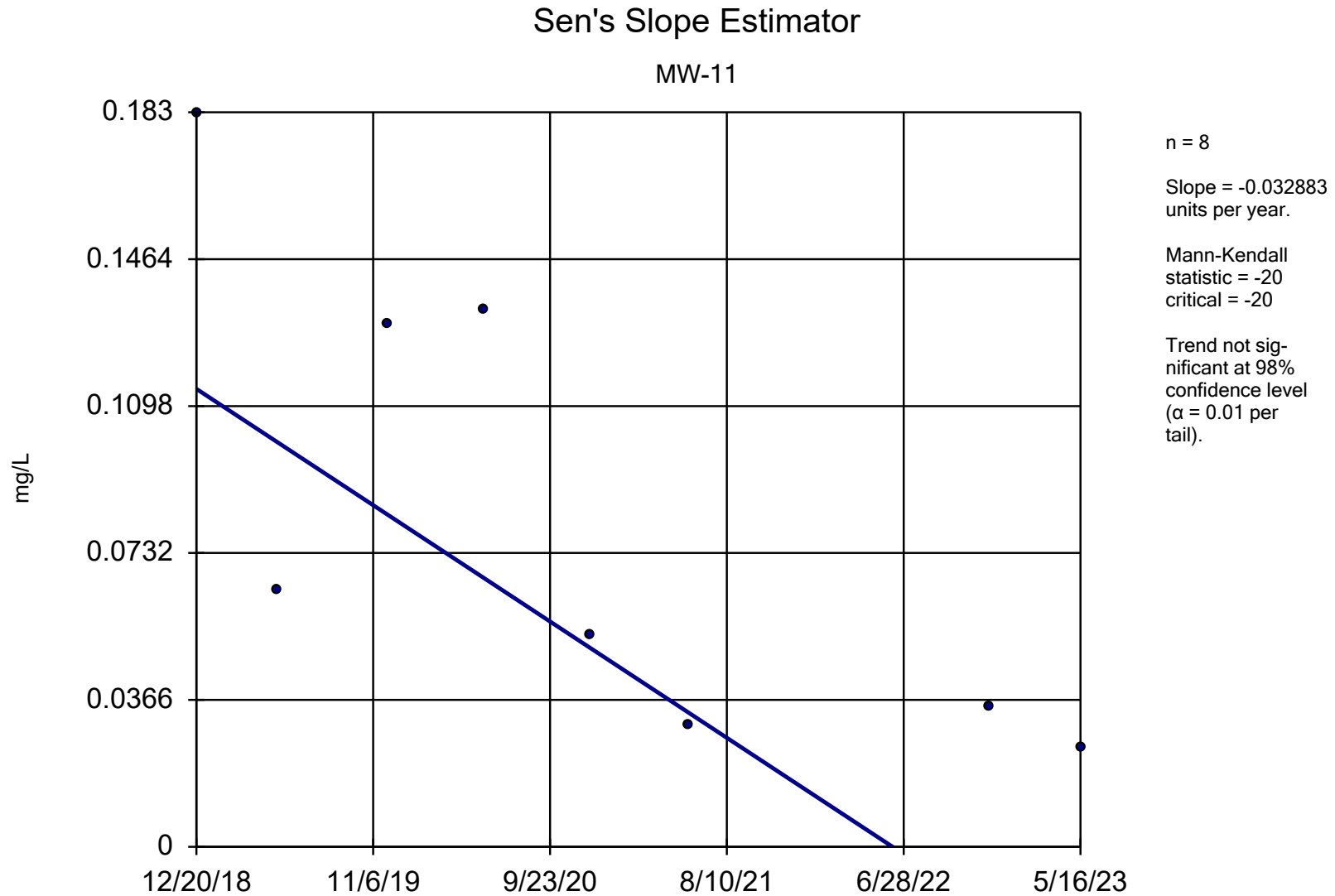
Constituent: Arsenic, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Arsenic, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	0.0035
5/16/2019	0.0016
12/2/2019	0.0045
5/27/2020	0.0029
12/4/2020	0.0012
6/2/2021	0.00161
12/1/2022	0.00131
5/16/2023	0.00029 (J)



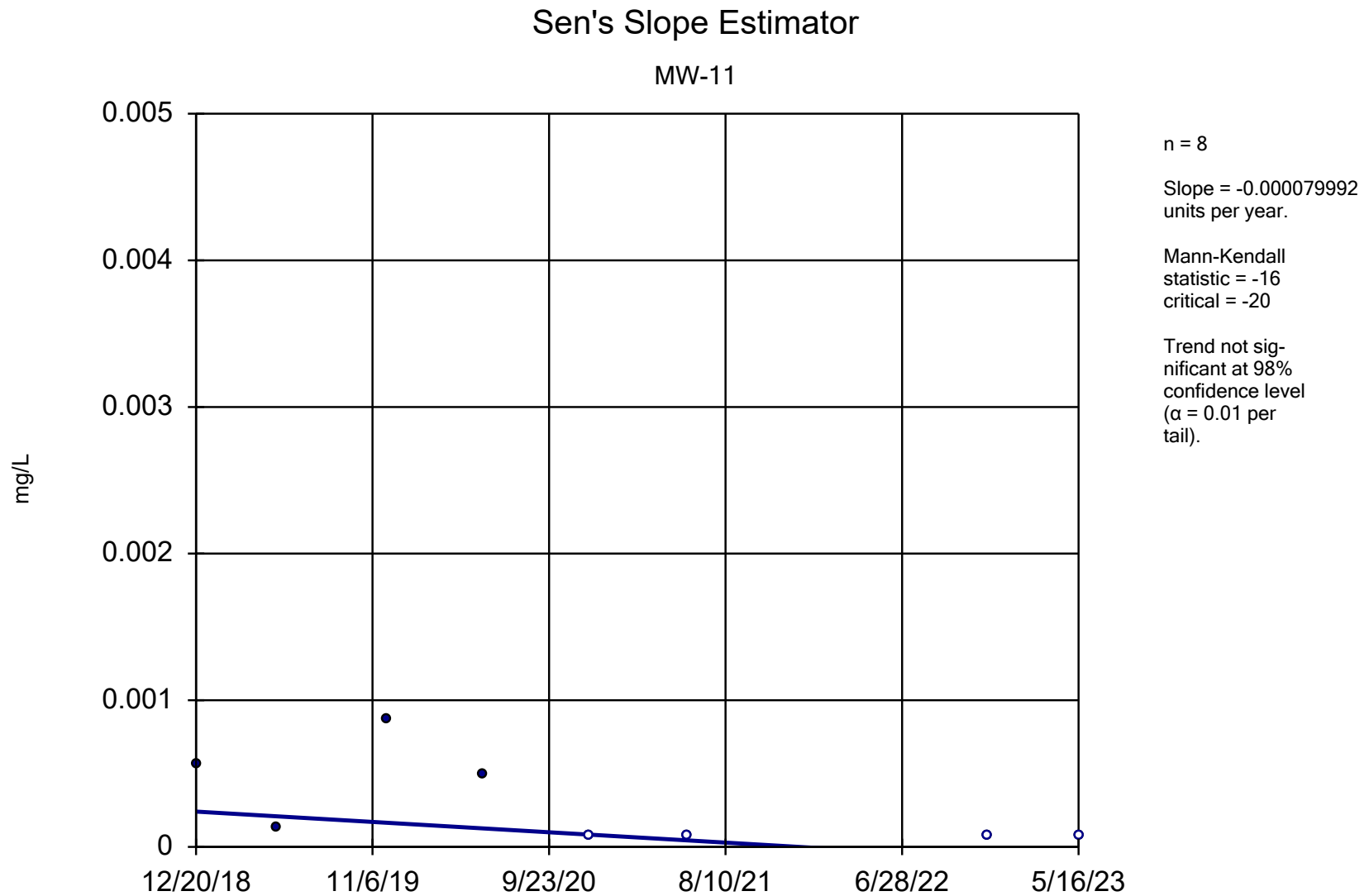
Constituent: Barium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Barium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.183
5/16/2019	0.064
12/2/2019	0.13
5/27/2020	0.134
12/4/2020	0.0526
6/2/2021	0.0303 (B)
12/1/2022	0.0351
5/16/2023	0.0245 (J)

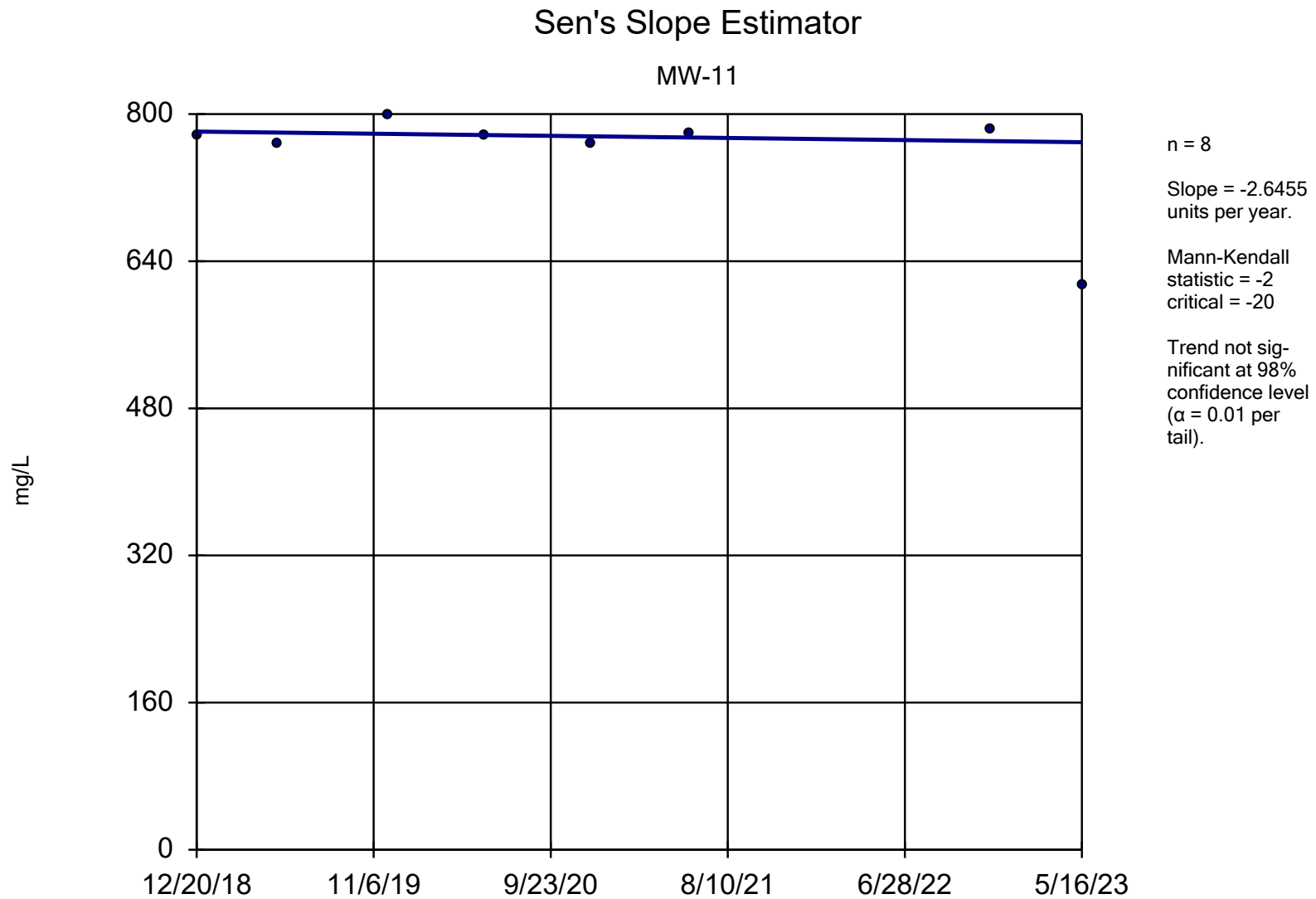


Constituent: Beryllium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Beryllium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.00057
5/16/2019	0.00013 (B)
12/2/2019	0.00087
5/27/2020	0.0005
12/4/2020	<8E-05
6/2/2021	<8E-05
12/1/2022	<8E-05
5/16/2023	<8E-05



Constituent: Bicarbonate as CaCO₃ Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

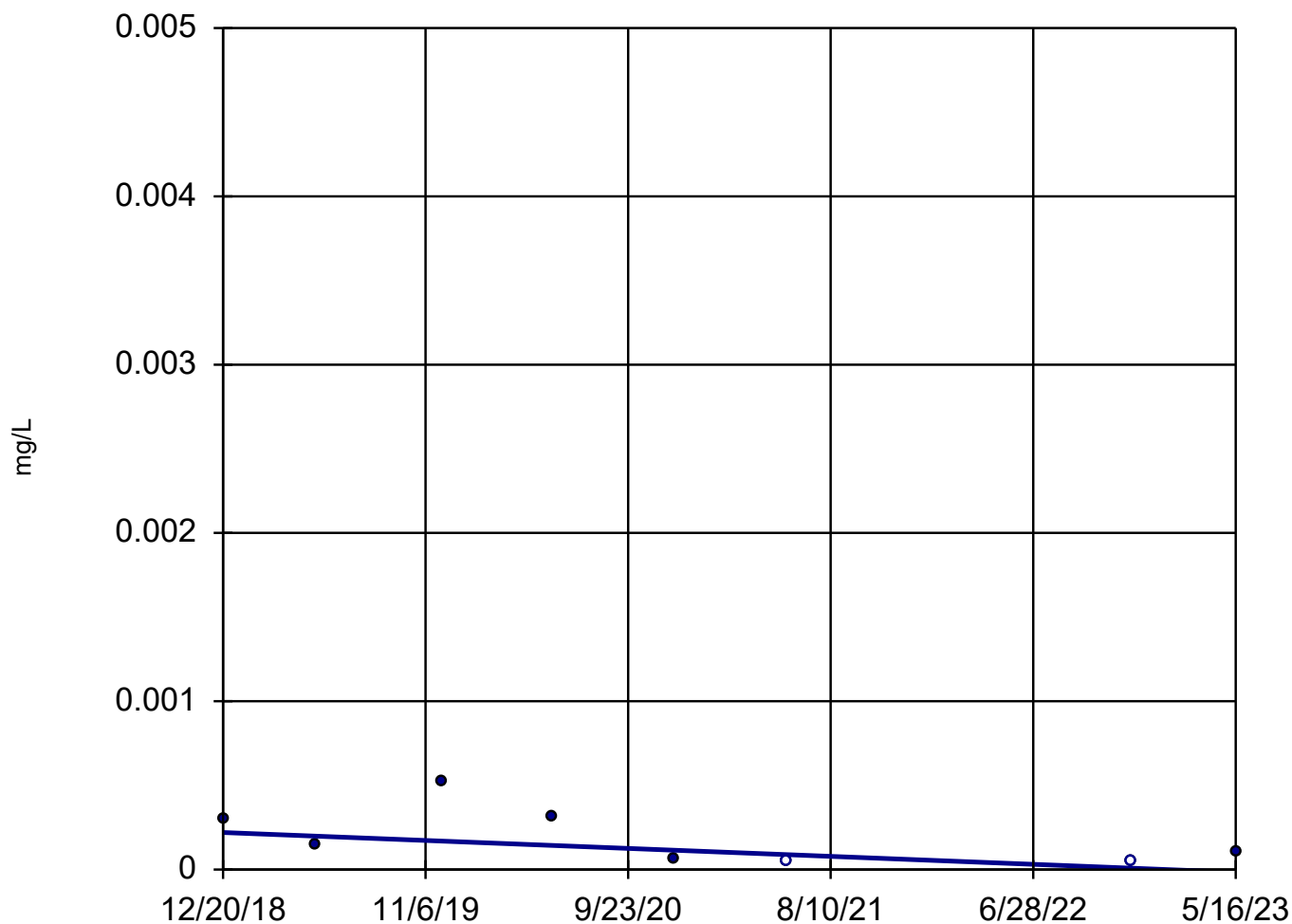
Constituent: Bicarbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	777
5/16/2019	767
12/2/2019	800
5/27/2020	776
12/4/2020	768
6/2/2021	779
12/1/2022	784
5/16/2023	613

Sen's Slope Estimator

MW-11



n = 8

Slope = -0.000053637
units per year.

Mann-Kendall
statistic = -13
critical = -20

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

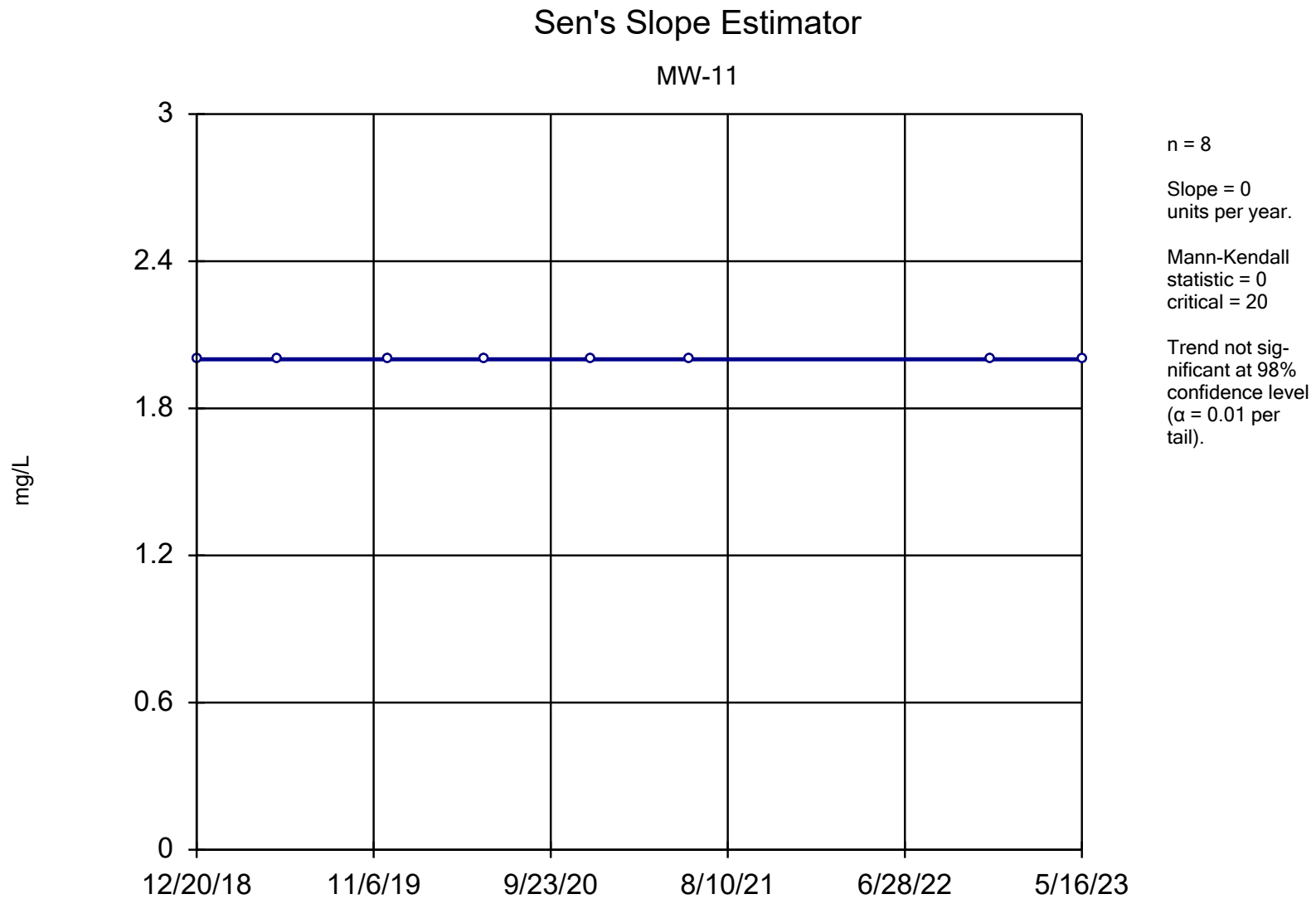
Constituent: Cadmium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Cadmium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0003
5/16/2019	0.00015 (B)
12/2/2019	0.00052
5/27/2020	0.00032
12/4/2020	5.9E-05 (B)
6/2/2021	<5E-05
12/1/2022	<5E-05
5/16/2023	0.000109 (J)



Constituent: Carbonate as CaCO₃ Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

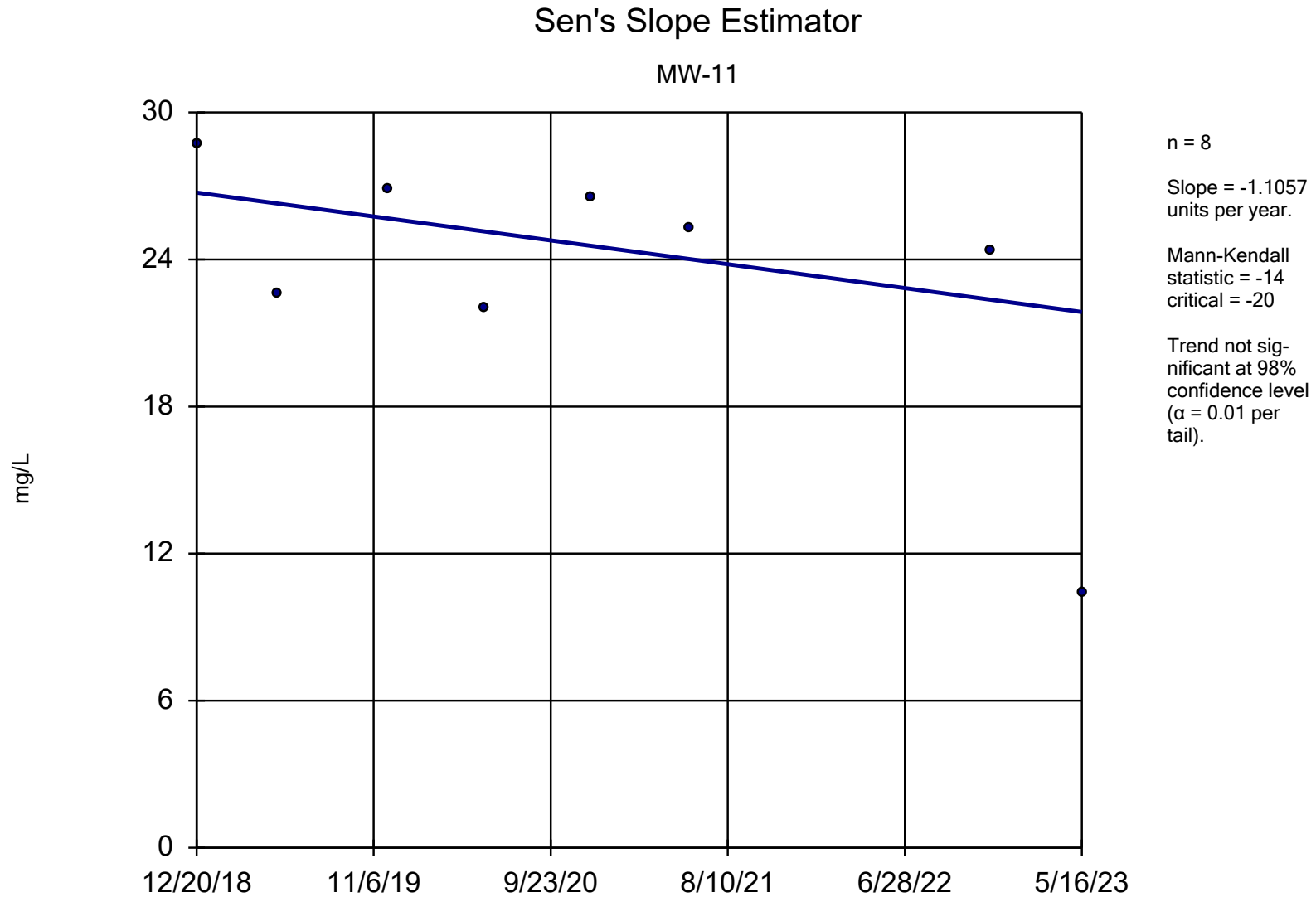
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Carbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<2
5/16/2019	<2
12/2/2019	<2
5/27/2020	<2
12/4/2020	<2
6/2/2021	<2
12/1/2022	<2
5/16/2023	<2



Constituent: Chloride Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

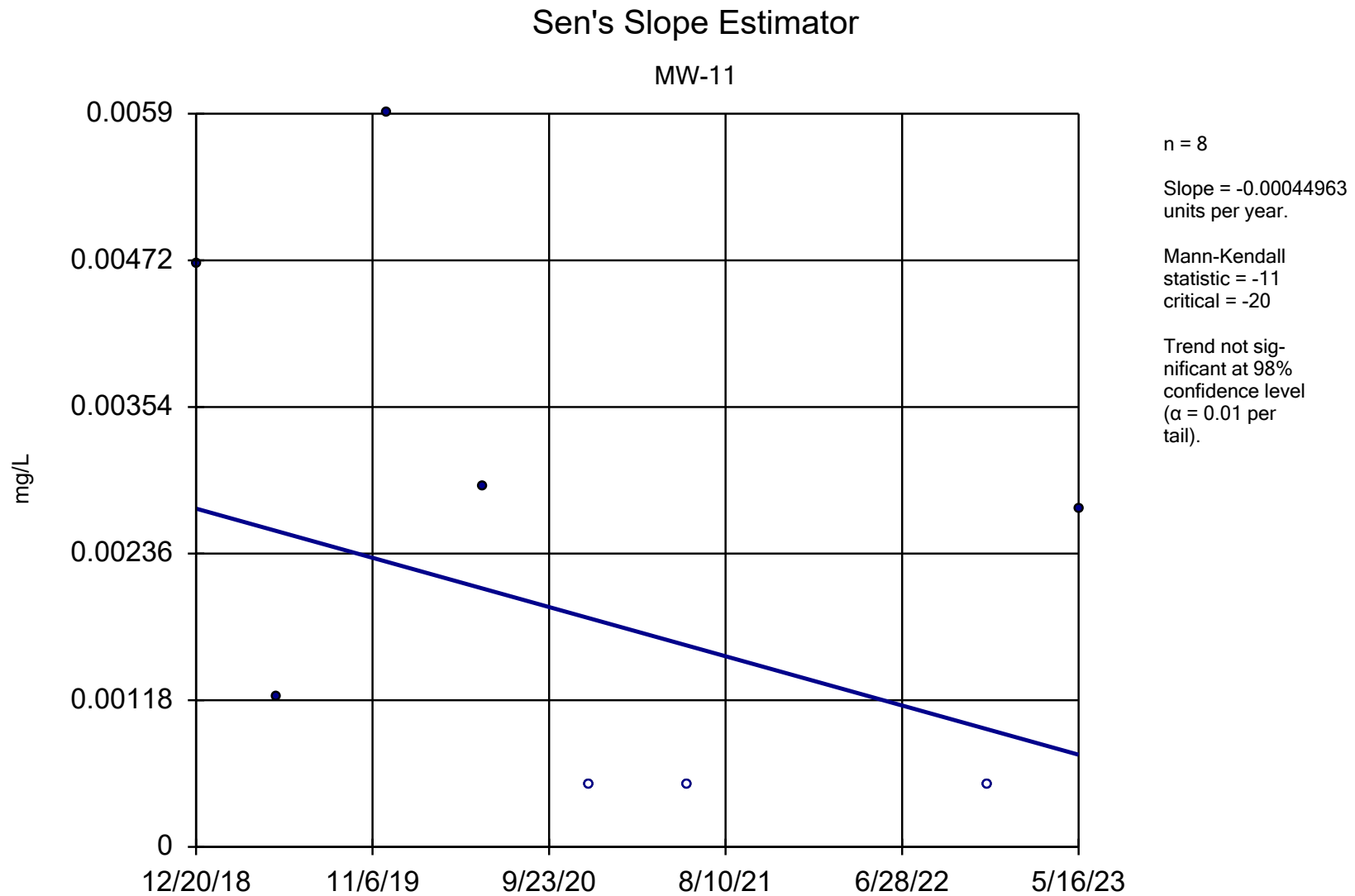
Sen's Slope Estimator

Constituent: Chloride (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	28.7
5/16/2019	22.6
12/2/2019	26.9
5/27/2020	22
12/4/2020	26.5
6/2/2021	25.3
12/1/2022	24.4
5/16/2023	10.4

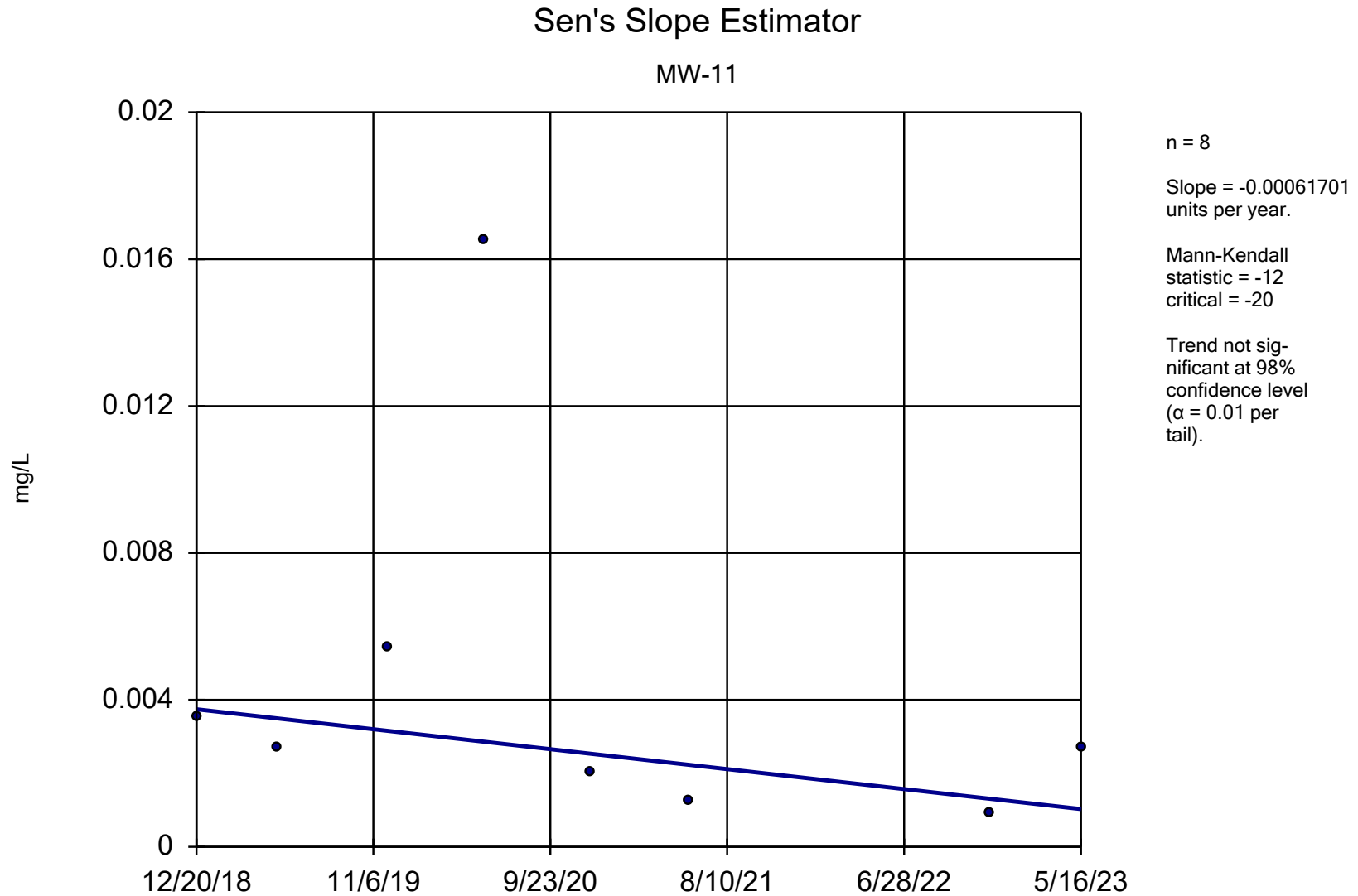


Constituent: Chromium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Chromium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0047
5/16/2019	0.0012 (B)
12/2/2019	0.0059
5/27/2020	0.0029
12/4/2020	<0.0005
6/2/2021	<0.0005
12/1/2022	<0.0005
5/16/2023	0.00272

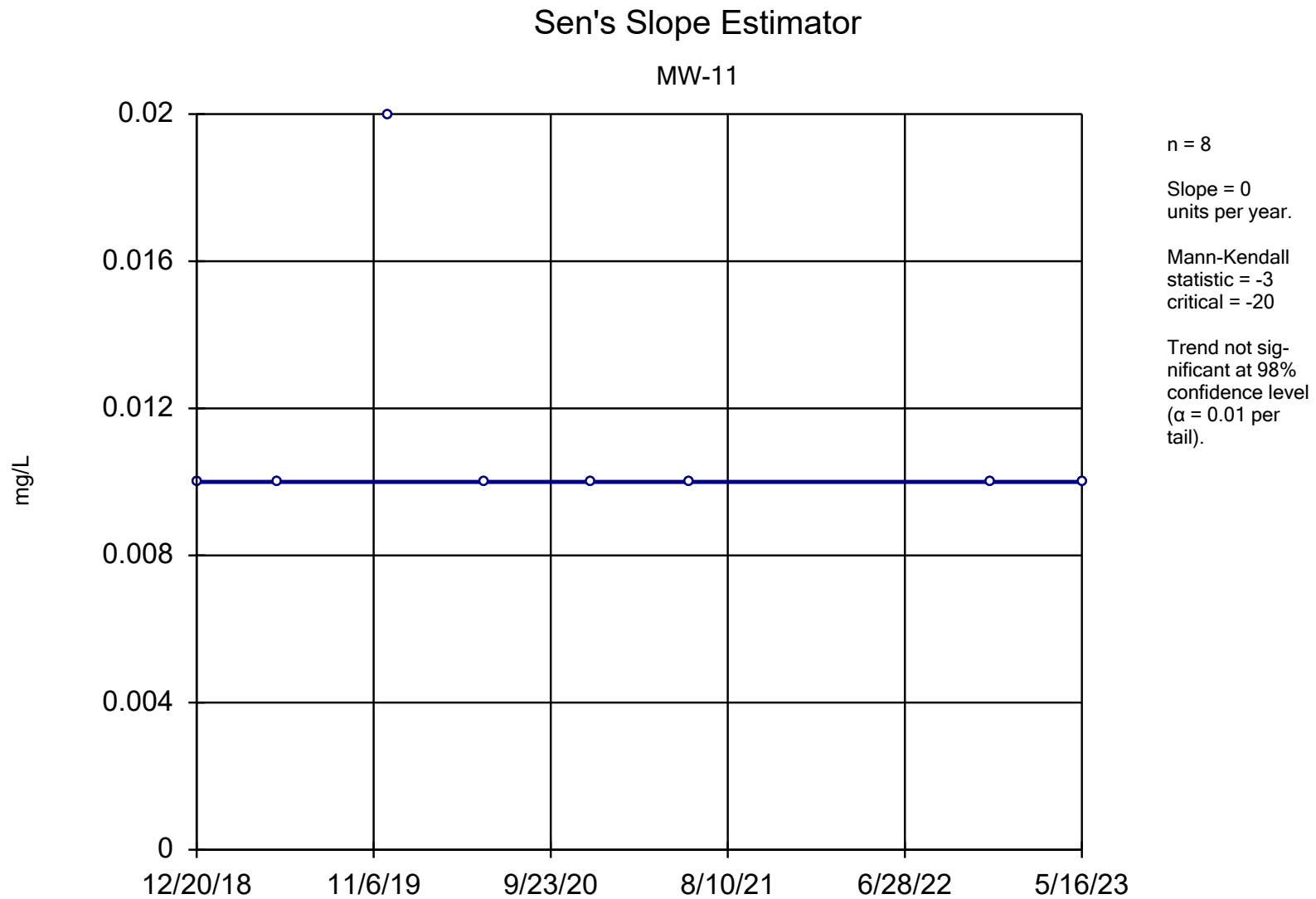


Constituent: Cobalt, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Cobalt, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.00351
5/16/2019	0.00272
12/2/2019	0.00542
5/27/2020	0.0165
12/4/2020	0.00203
6/2/2021	0.00125
12/1/2022	0.000892
5/16/2023	0.00268



Constituent: Copper, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

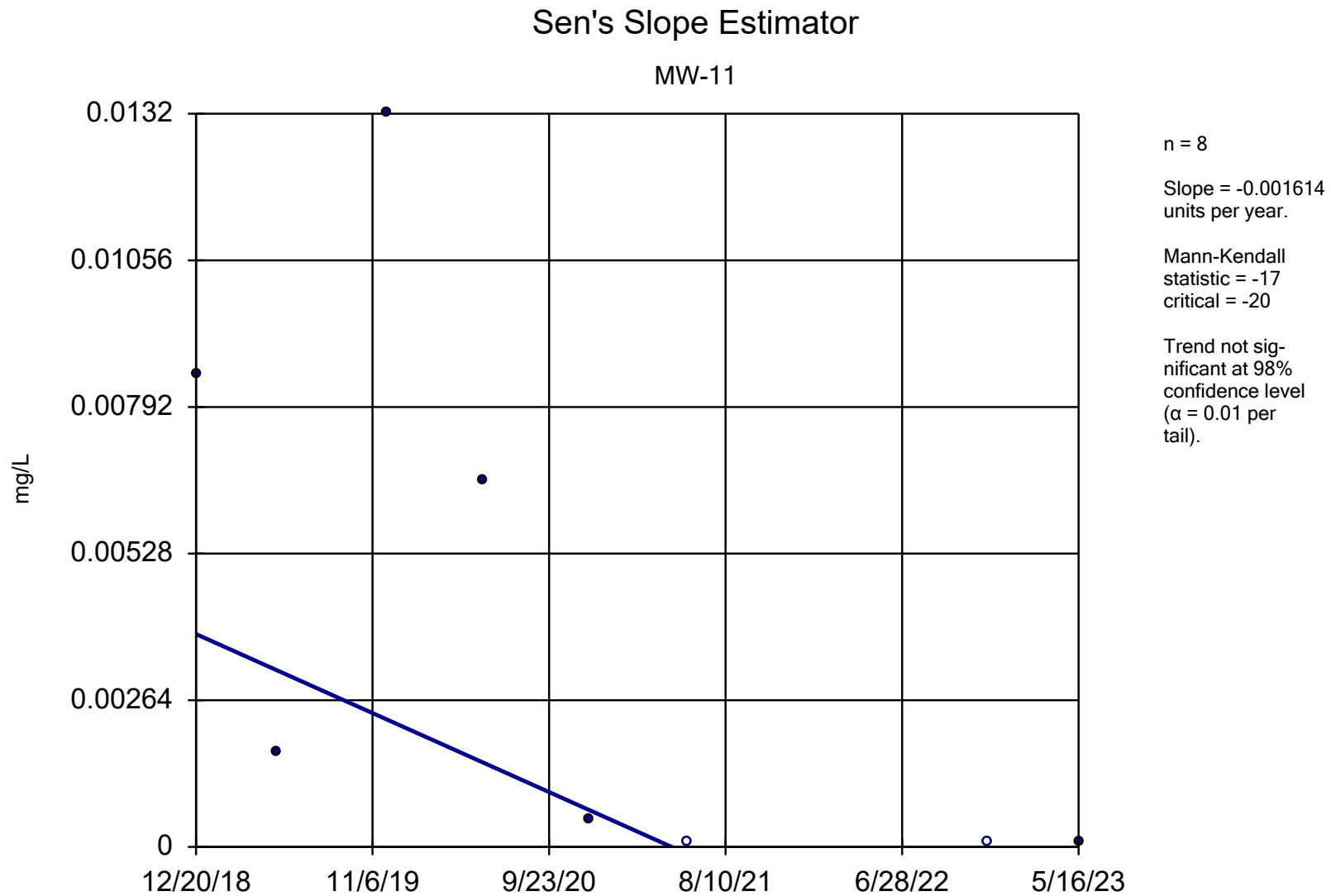
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Copper, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	<0.01
5/16/2019	<0.01
12/2/2019	<0.02
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01



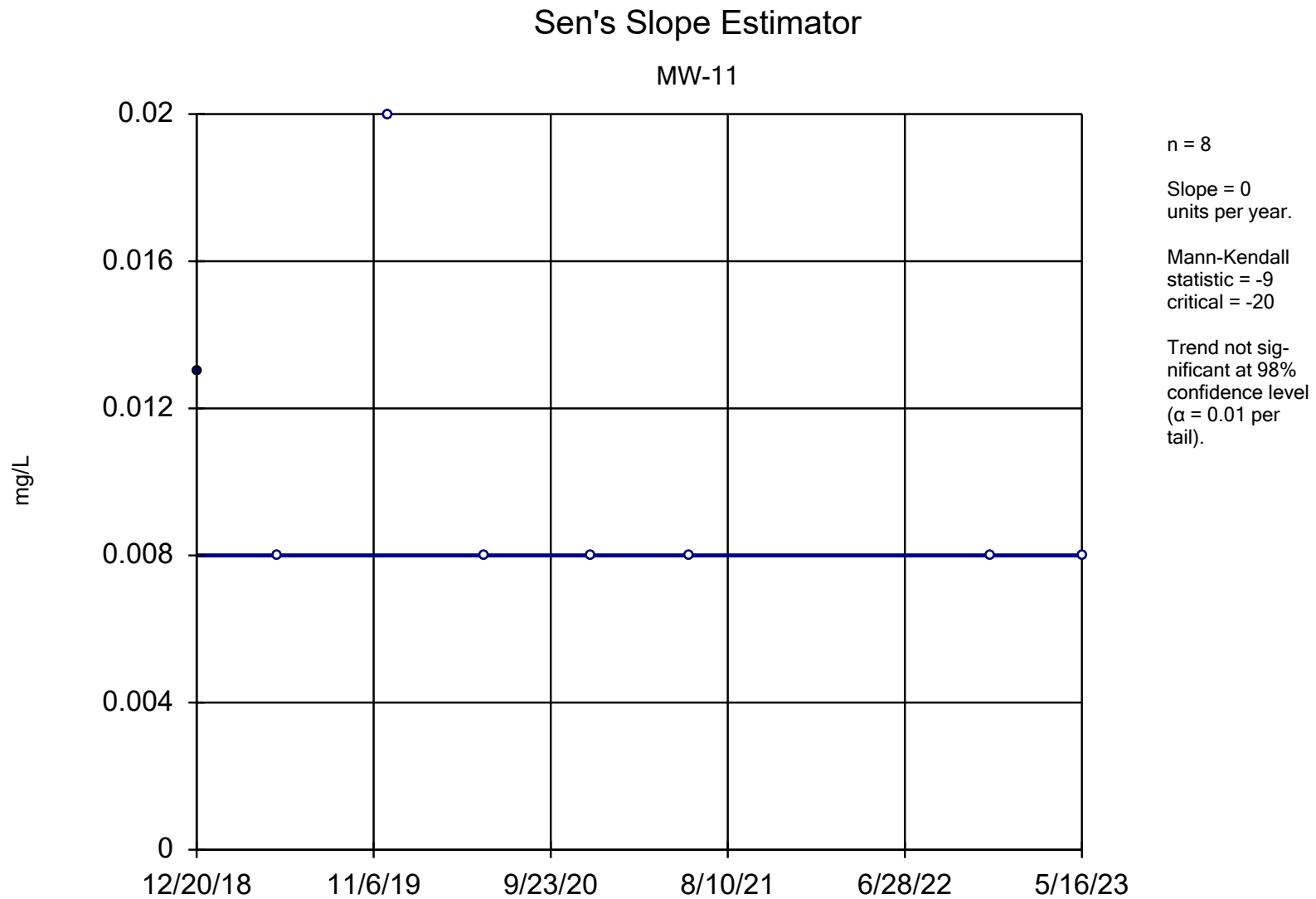
Constituent: Lead, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Lead, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0085
5/16/2019	0.0017
12/2/2019	0.0132
5/27/2020	0.0066
12/4/2020	0.00049 (B)
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	0.00011 (J)

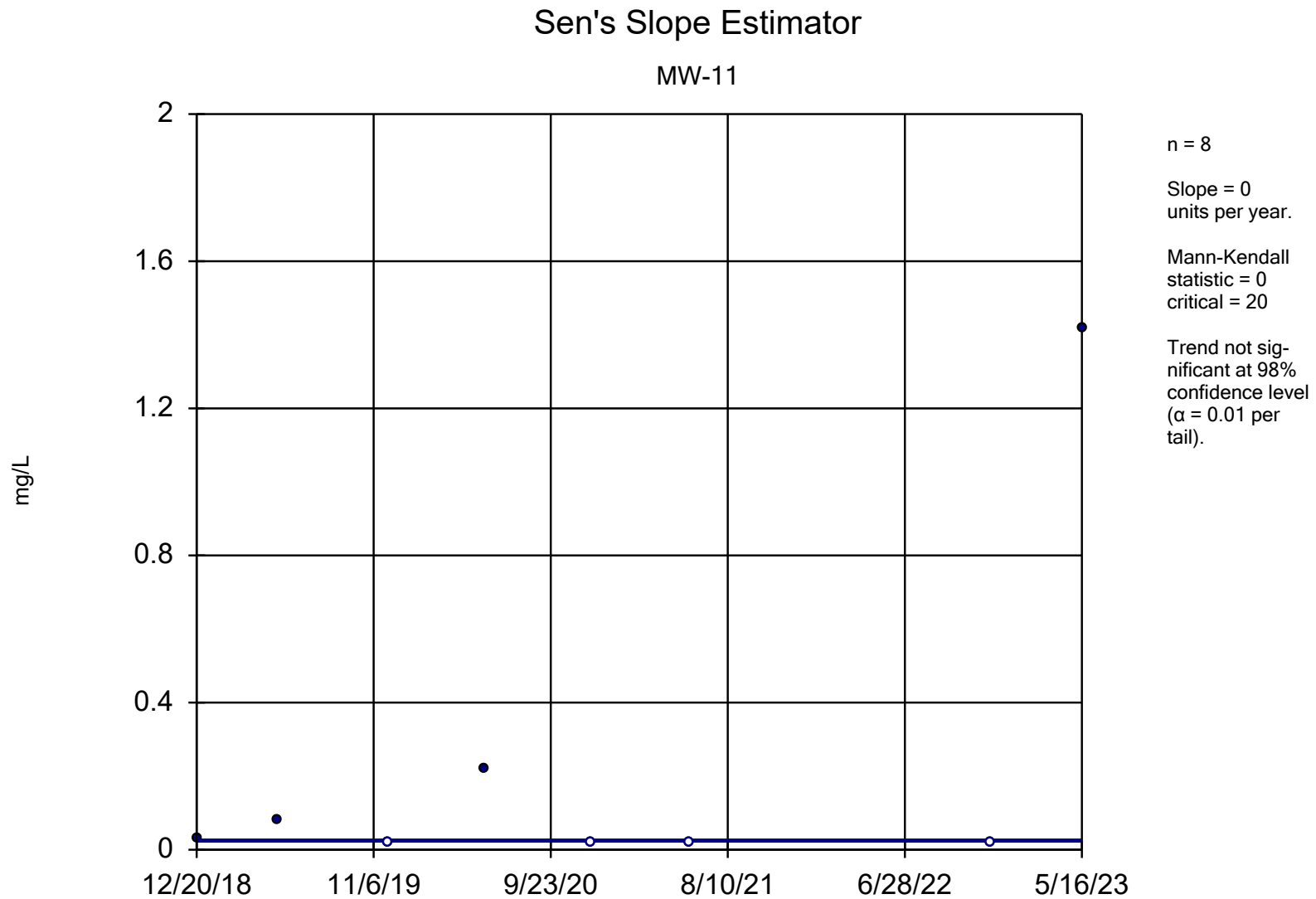


Constituent: Nickel, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Nickel, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.013 (B)
5/16/2019	<0.008
12/2/2019	<0.02
5/27/2020	<0.008
12/4/2020	<0.008
6/2/2021	<0.008
12/1/2022	<0.008
5/16/2023	<0.008



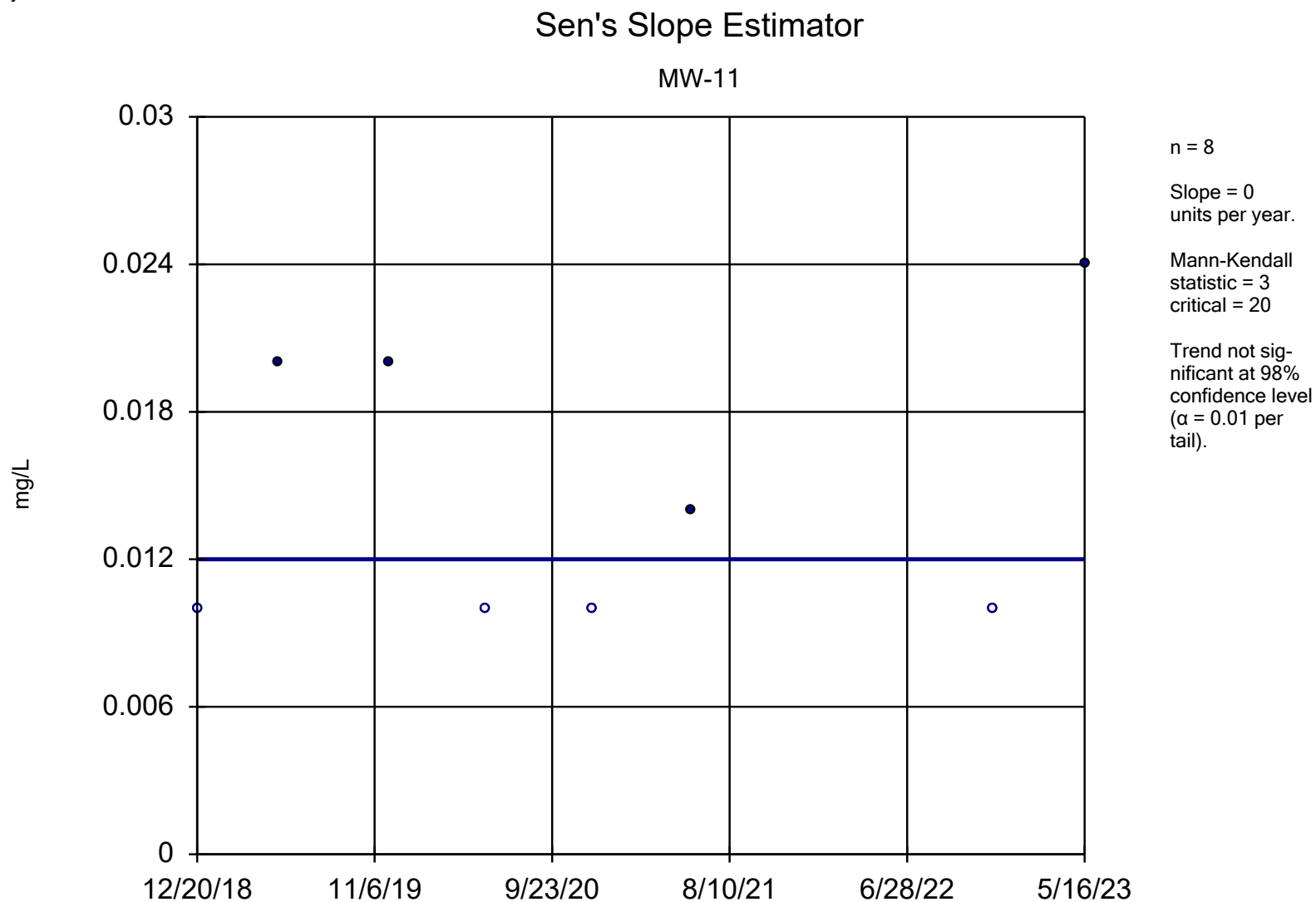
Constituent: Nitrate as N, dissolved Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Nitrate as N, dissolved (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.03 (B)
5/16/2019	0.08 (B)
12/2/2019	<0.02
5/27/2020	0.22
12/4/2020	<0.02
6/2/2021	<0.02
12/1/2022	<0.02
5/16/2023	1.42



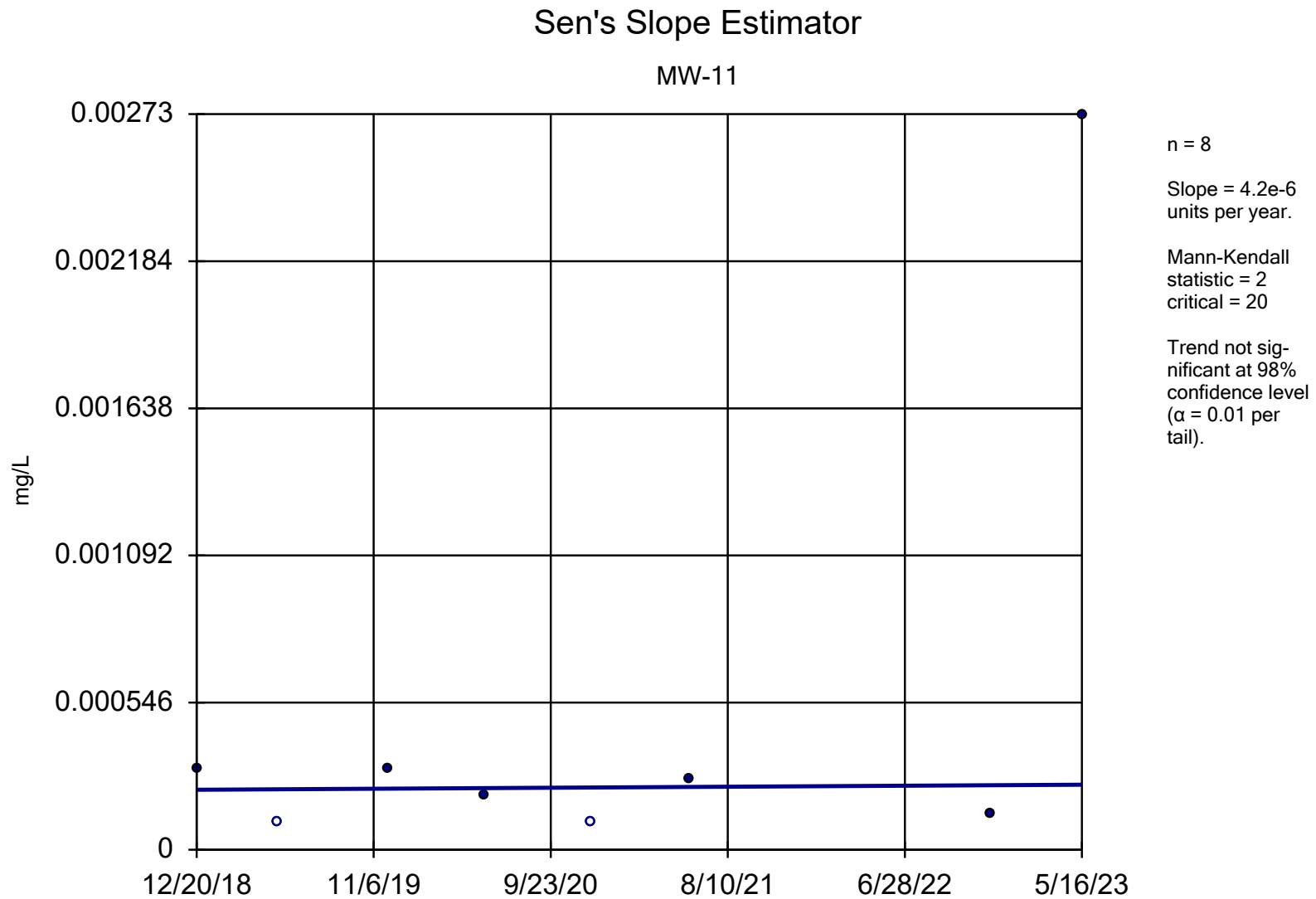
Constituent: Nitrite as N, dissolved Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Nitrite as N, dissolved (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.01
5/16/2019	0.02 (B)
12/2/2019	0.02 (B)
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	0.014 (B)
12/1/2022	<0.01
5/16/2023	0.024 (J)



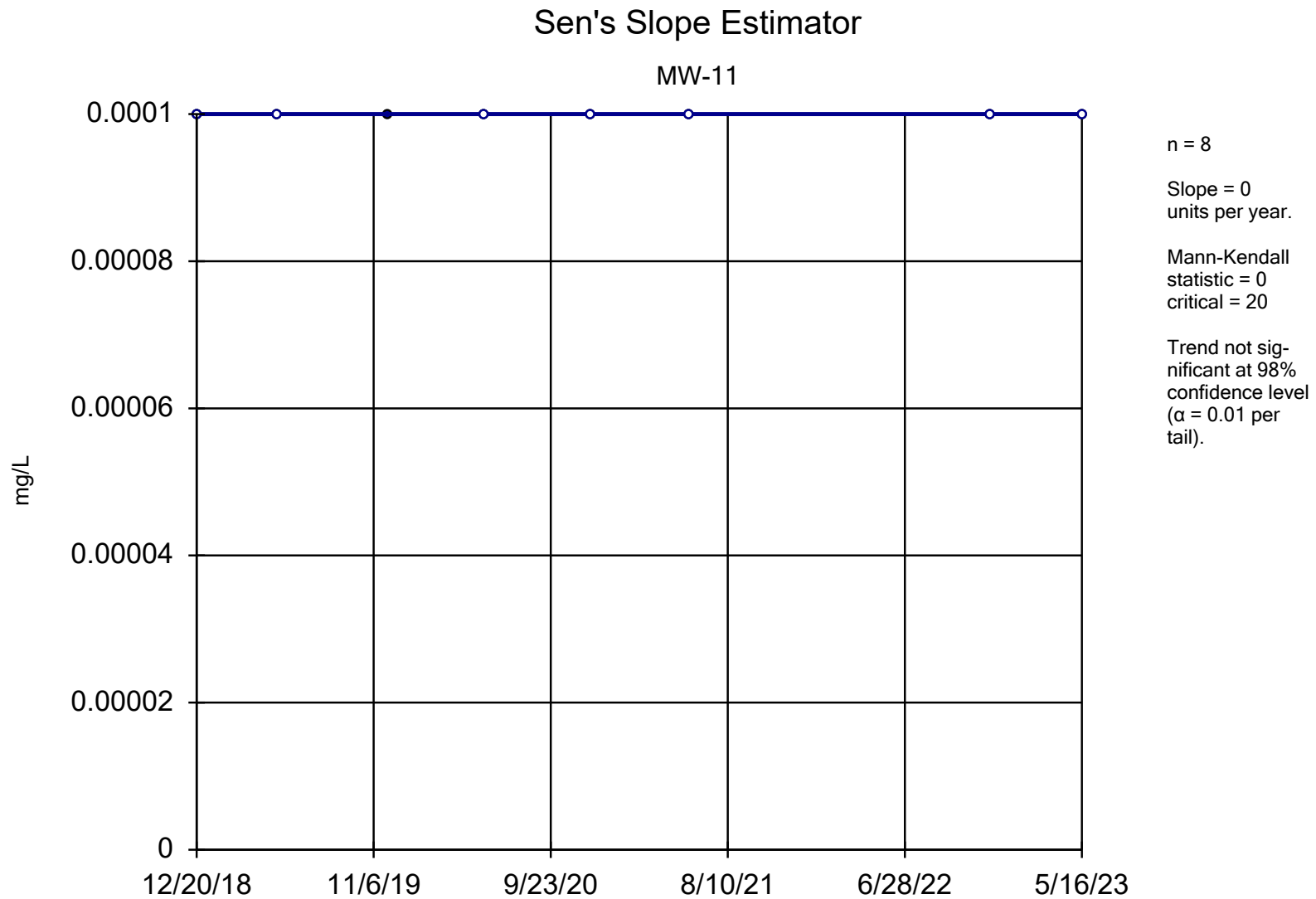
Constituent: Selenium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Selenium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0003
5/16/2019	<0.0001
12/2/2019	0.0003
5/27/2020	0.0002 (B)
12/4/2020	<0.0001
6/2/2021	0.00026
12/1/2022	0.00013 (B)
5/16/2023	0.00273

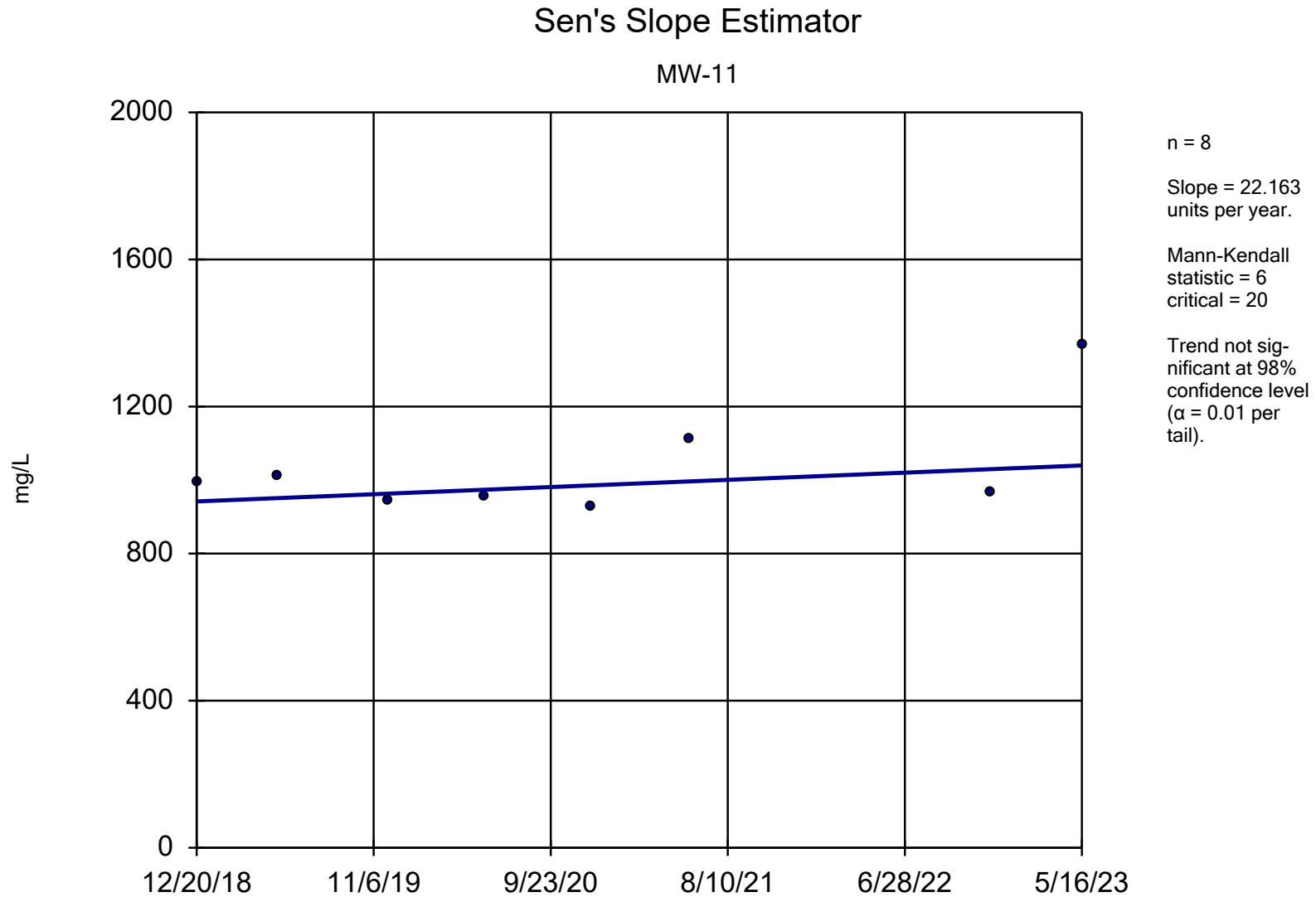


Constituent: Silver, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Silver, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001



Constituent: Sulfate Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

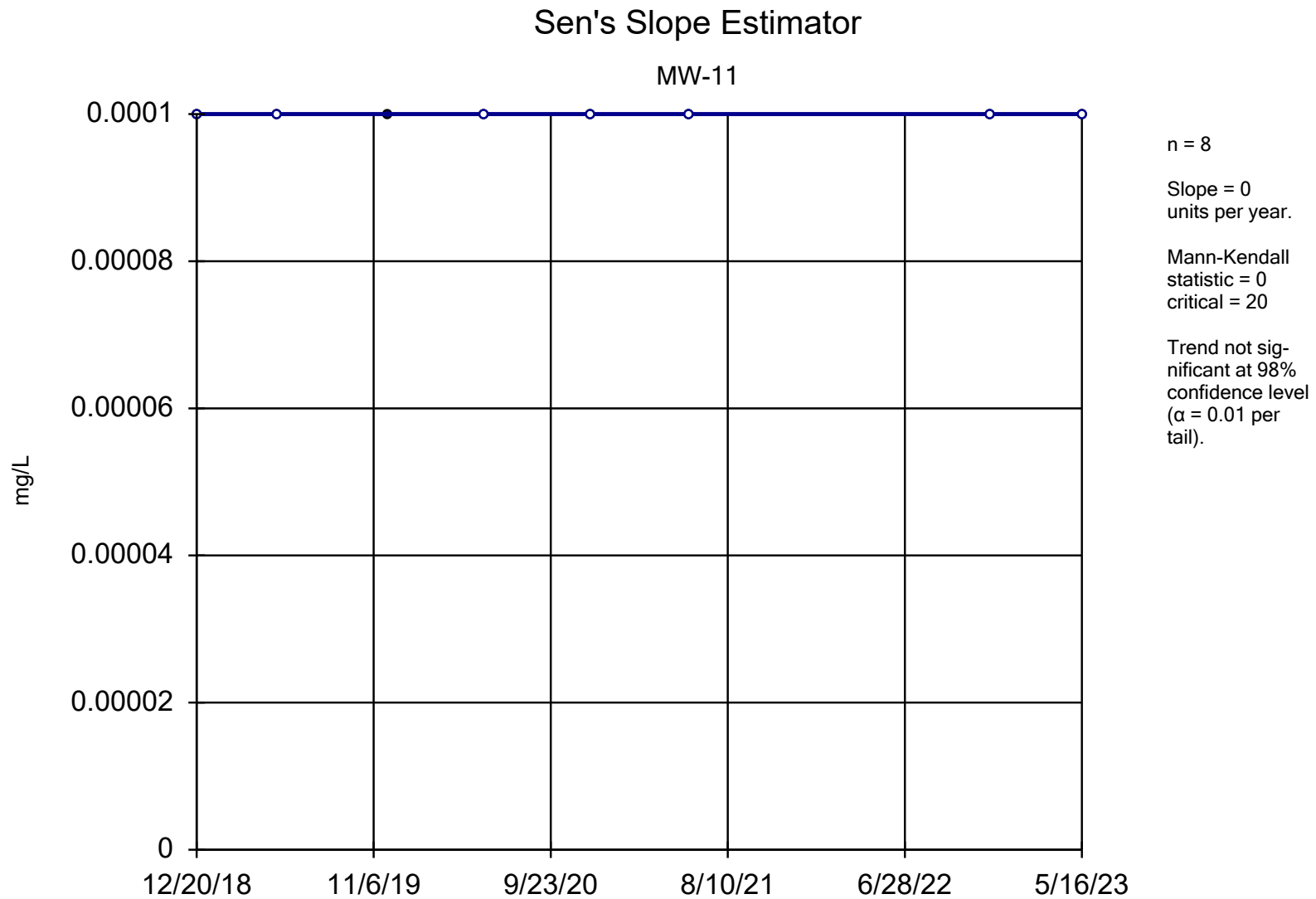
Sen's Slope Estimator

Constituent: Sulfate (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11

12/20/2018	992
5/16/2019	1010
12/2/2019	943
5/27/2020	955
12/4/2020	928
6/2/2021	1110
12/1/2022	967
5/16/2023	1370



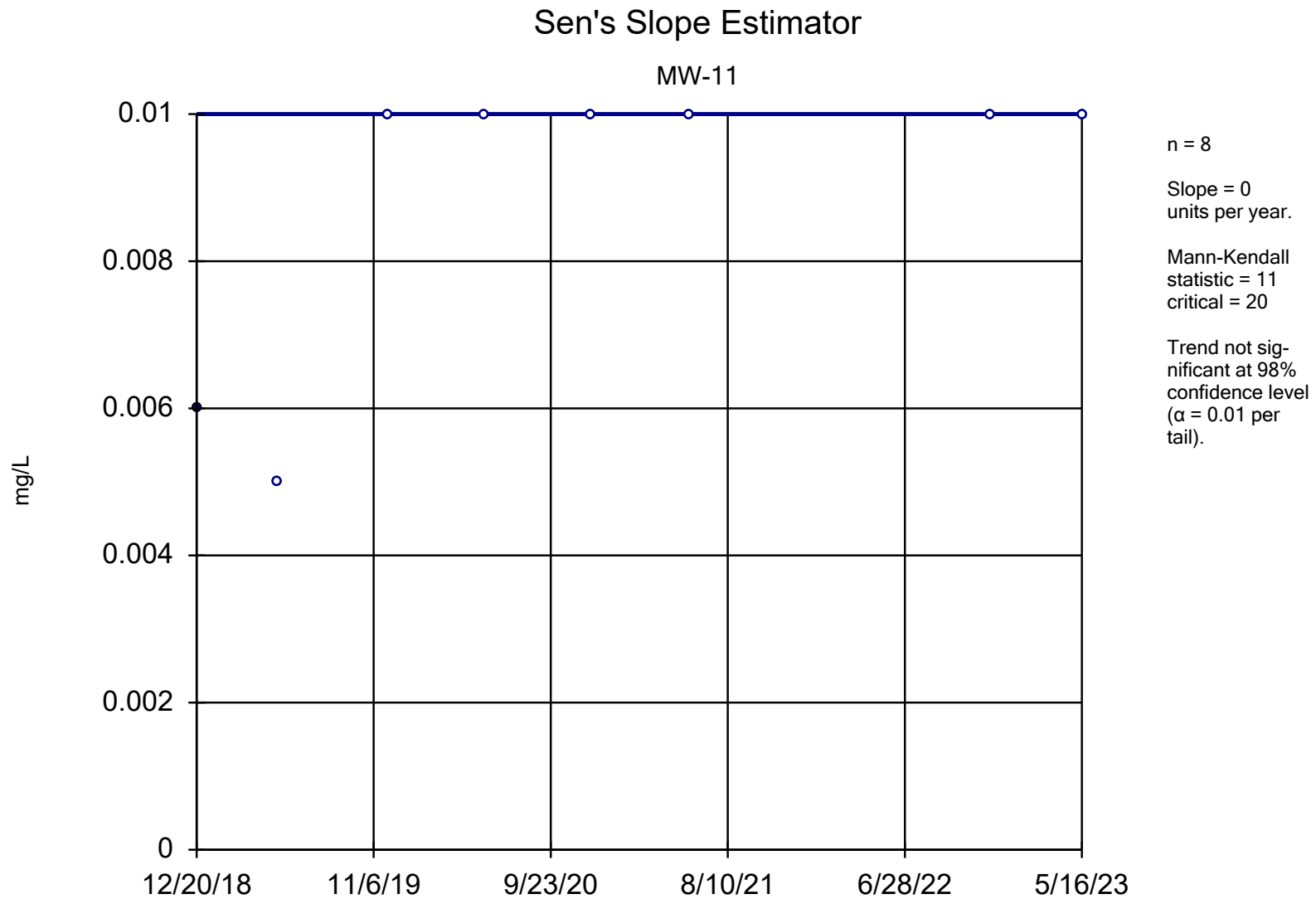
Constituent: Thallium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Thallium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001



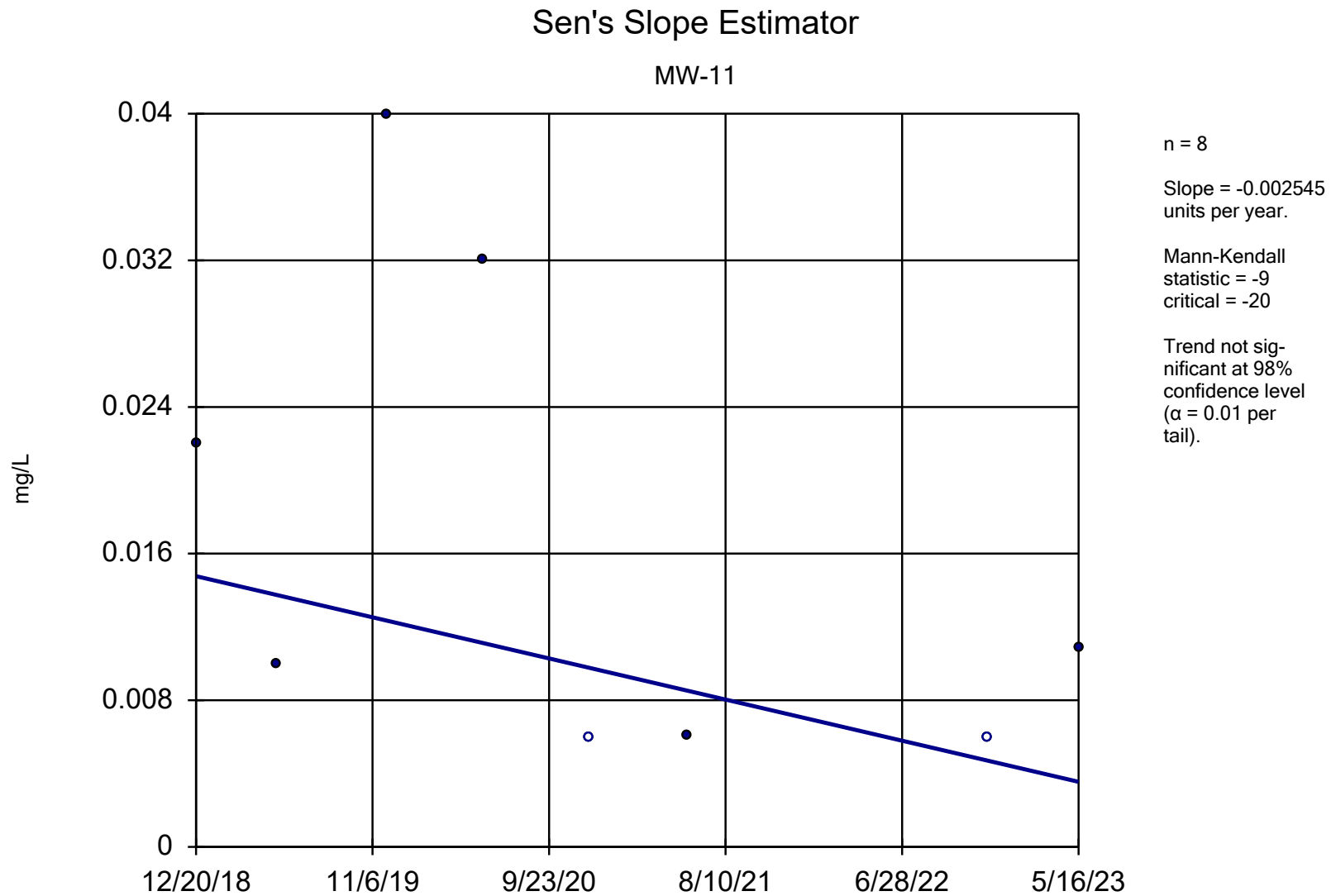
Constituent: Vanadium, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Vanadium, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.006 (B)
5/16/2019	<0.005
12/2/2019	<0.01
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01



Constituent: Zinc, total Analysis Run 12/10/2024 4:54 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Sen's Slope Estimator

Constituent: Zinc, total (mg/L) Analysis Run 12/10/2024 4:55 PM View: BG - MW-11

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.022
5/16/2019	0.01
12/2/2019	0.04
5/27/2020	0.032
12/4/2020	<0.006
6/2/2021	0.0061 (B)
12/1/2022	<0.006
5/16/2023	0.0109 (J)

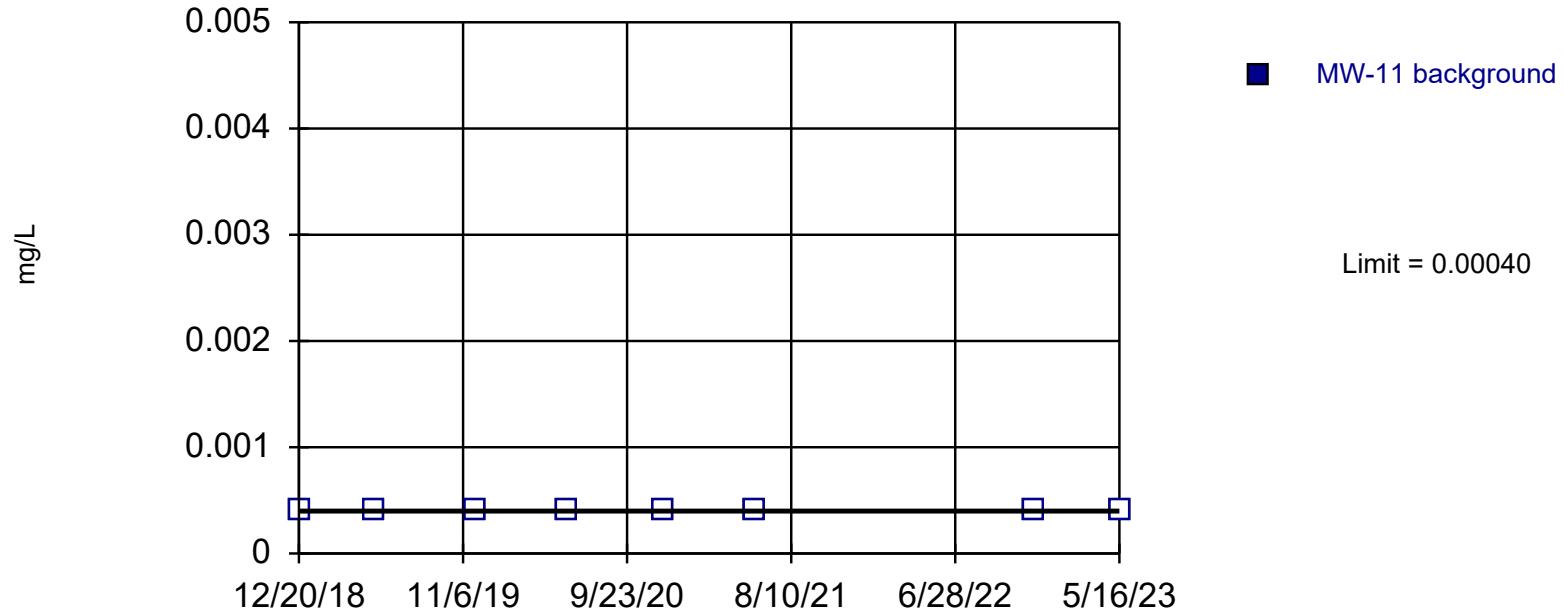
Prediction Limit

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working Printed 12/10/2024, 5:40 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	%NDs	Transform	Alpha	Method
Antimony, total (mg/L)	MW-11	0.00040	n/a	n/a	1 future	n/a	8	100	n/a	0.11111	NP Intra (NDs)
Arsenic, total (mg/L)	MW-11	0.0065	n/a	n/a	1 future	n/a	8	0	No	0.01	Param Intra
Barium, total (mg/L)	MW-11	0.27	n/a	n/a	1 future	n/a	8	0	No	0.01	Param Intra
Beryllium, total (mg/L)	MW-11	0.00087	n/a	n/a	1 future	n/a	8	50	n/a	0.11111	NP Intra (normality)
Bicarbonate as CaCO3 (mg/L)	MW-11	820	n/a	n/a	1 future	n/a	7	0	No	0.01	Param Intra
Cadmium, total (mg/L)	MW-11	0.00084	n/a	n/a	1 future	n/a	8	25	No	0.01	Param Intra
Carbonate as CaCO3 (mg/L)	MW-11	2.0	n/a	n/a	1 future	n/a	8	100	n/a	0.11111	NP Intra (NDs)
Chloride (mg/L)	MW-11	33	n/a	n/a	1 future	n/a	7	0	No	0.01	Param Intra
Chromium, total (mg/L)	MW-11	0.011	n/a	n/a	1 future	n/a	8	37.5	No	0.01	Param Intra
Cobalt, total (mg/L)	MW-11	0.025	n/a	n/a	1 future	n/a	8	0	sqrt(x)	0.01	Param Intra
Copper, total (mg/L)	MW-11	0.020	n/a	n/a	1 future	n/a	8	100	n/a	0.11111	NP Intra (NDs)
Lead, total (mg/L)	MW-11	0.013	n/a	n/a	1 future	n/a	8	25	n/a	0.11111	NP Intra (Cohens/xform)
Nickel, total (mg/L)	MW-11	0.020	n/a	n/a	1 future	n/a	8	87.5	n/a	0.11111	NP Intra (NDs)
Nitrate as N, dissolved (mg/L)	MW-11	1.4	n/a	n/a	1 future	n/a	8	50	n/a	0.11111	NP Intra (normality)
Nitrite as N, dissolved (mg/L)	MW-11	0.024	n/a	n/a	1 future	n/a	8	50	n/a	0.11111	NP Intra (normality)
Selenium, total (mg/L)	MW-11	0.00057	n/a	n/a	1 future	n/a	7	28.571	No	0.01	Param Intra
Silver, total (mg/L)	MW-11	0.00010	n/a	n/a	1 future	n/a	8	87.5	n/a	0.11111	NP Intra (NDs)
Sulfate (mg/L)	MW-11	1100	n/a	n/a	1 future	n/a	6	0	No	0.01	Param Intra
Thallium, total (mg/L)	MW-11	0.00010	n/a	n/a	1 future	n/a	8	87.5	n/a	0.11111	NP Intra (NDs)
Vanadium, total (mg/L)	MW-11	0.010	n/a	n/a	1 future	n/a	8	87.5	n/a	0.11111	NP Intra (NDs)
Zinc, total (mg/L)	MW-11	0.040	n/a	n/a	1 future	n/a	8	25	n/a	0.11111	NP Intra (Cohens/xform)

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 100% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Antimony, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

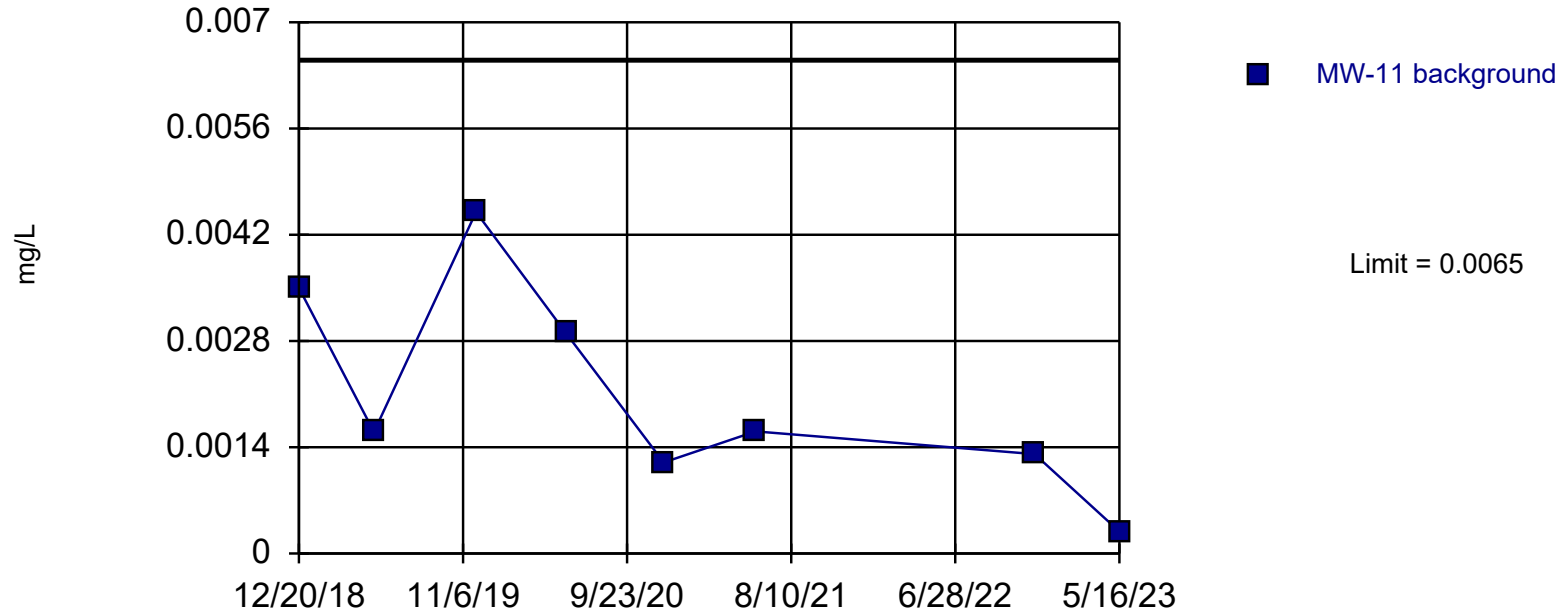
Prediction Limit

Constituent: Antimony, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	<0.0004
5/16/2019	<0.0004
12/2/2019	<0.0004
5/27/2020	<0.0004
12/4/2020	<0.0004
6/2/2021	<0.0004
12/1/2022	<0.0004
5/16/2023	<0.0004

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary: Mean=0.0021138, Std. Dev.=0.0013918, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.93121, critical = 0.818. Report alpha = 0.01. Assumes 1 future value.

Constituent: Arsenic, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

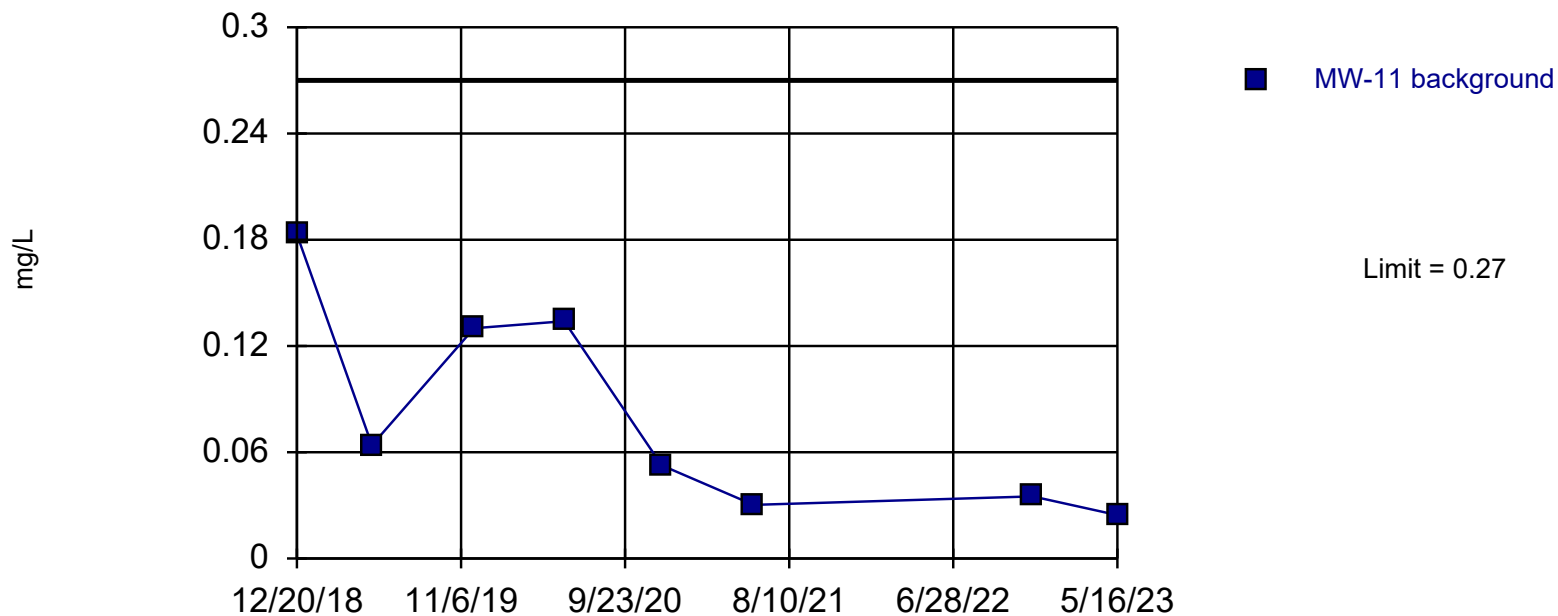
Prediction Limit

Constituent: Arsenic, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

MW-11	
12/20/2018	0.0035
5/16/2019	0.0016
12/2/2019	0.0045
5/27/2020	0.0029
12/4/2020	0.0012
6/2/2021	0.00161
12/1/2022	0.00131
5/16/2023	0.00029 (J)

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary: Mean=0.081688, Std. Dev.=0.059252, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.86637, critical = 0.818. Report alpha = 0.01. Assumes 1 future value.

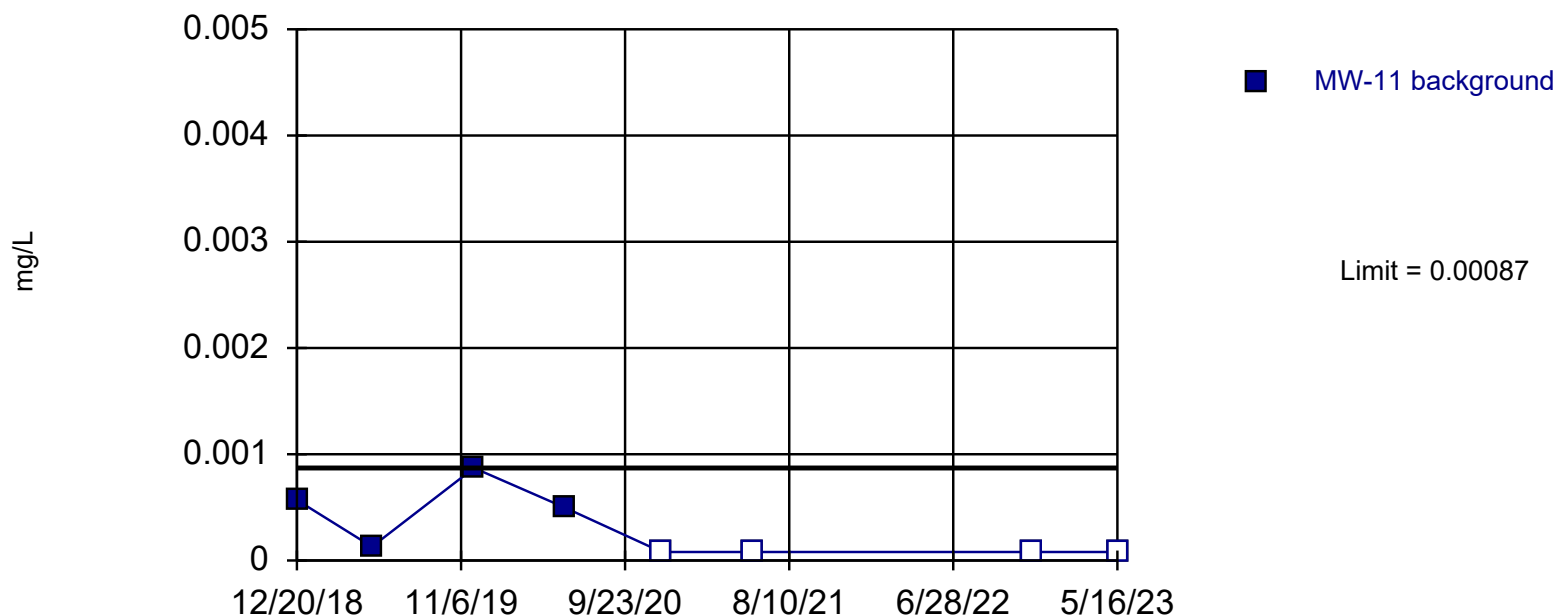
Prediction Limit

Constituent: Barium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.183
5/16/2019	0.064
12/2/2019	0.13
5/27/2020	0.134
12/4/2020	0.0526
6/2/2021	0.0303 (B)
12/1/2022	0.0351
5/16/2023	0.0245 (J)

Prediction Limit

Intrawell Non-parametric, MW-11



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 8 background values. 50% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Beryllium, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

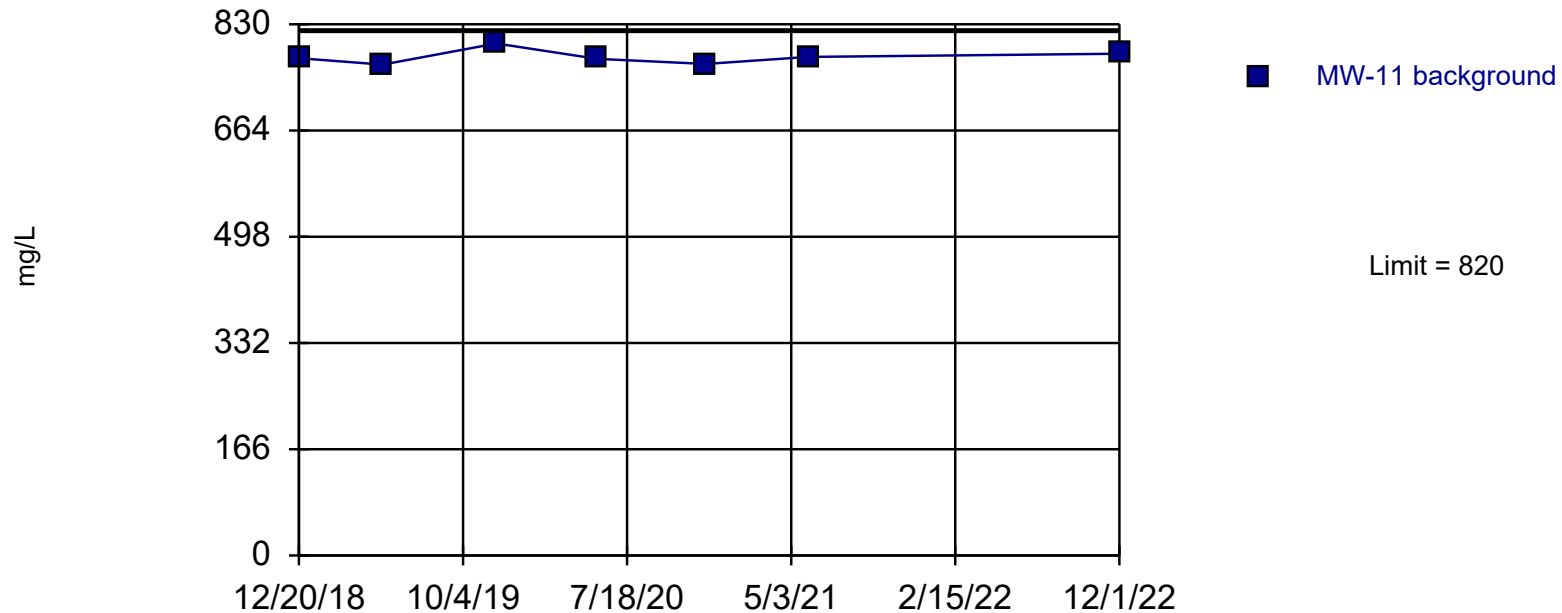
Prediction Limit

Constituent: Beryllium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.00057
5/16/2019	0.00013 (B)
12/2/2019	0.00087
5/27/2020	0.0005
12/4/2020	<8E-05
6/2/2021	<8E-05
12/1/2022	<8E-05
5/16/2023	<8E-05

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary: Mean=778.71, Std. Dev.=11.131, n=7. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.89806, critical = 0.803. Report alpha = 0.01. Assumes 1 future value.

Constituent: Bicarbonate as CaCO₃ Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

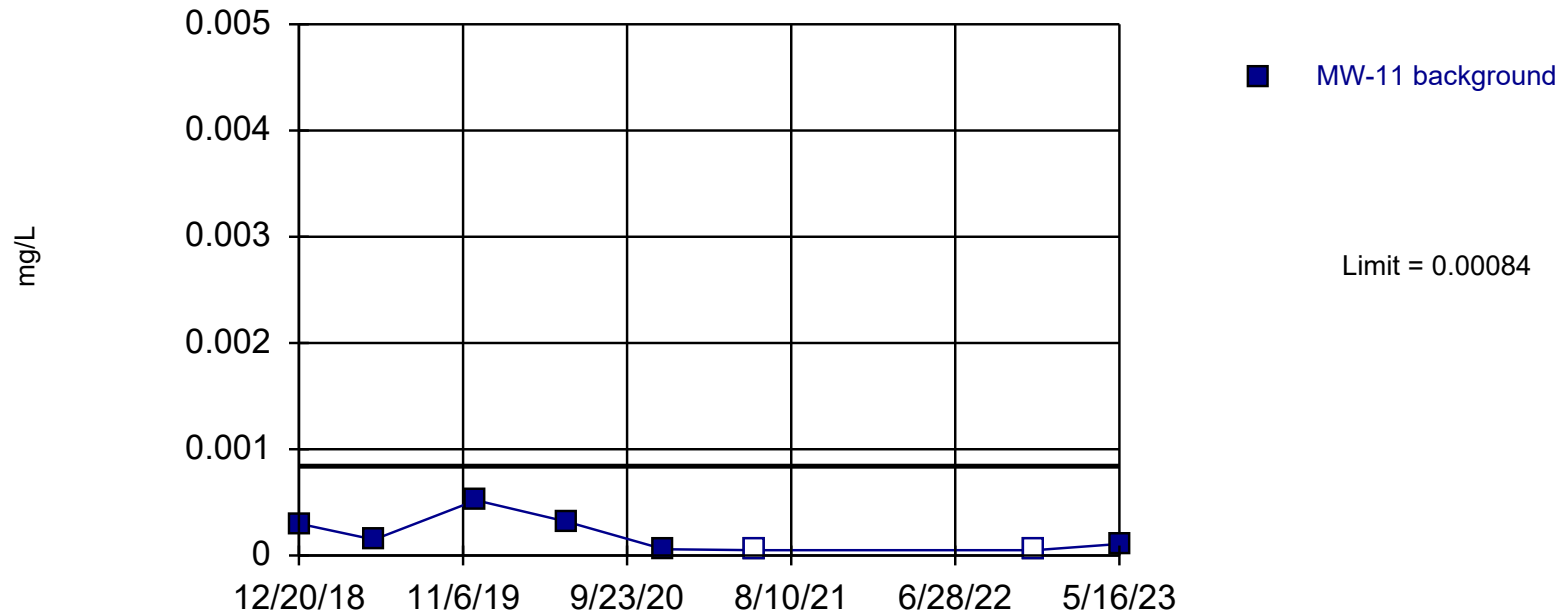
Prediction Limit

Constituent: Bicarbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11	
12/20/2018	777	
5/16/2019	767	
12/2/2019	800	
5/27/2020	776	
12/4/2020	768	
6/2/2021	779	
12/1/2022	784	
5/16/2023		613 (O)

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary (after Cohen's Adjustment): Mean=0.00016105, Std. Dev.=0.00021235, n=8, 25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.84821, critical = 0.818. Report alpha = 0.01. Assumes 1 future value.

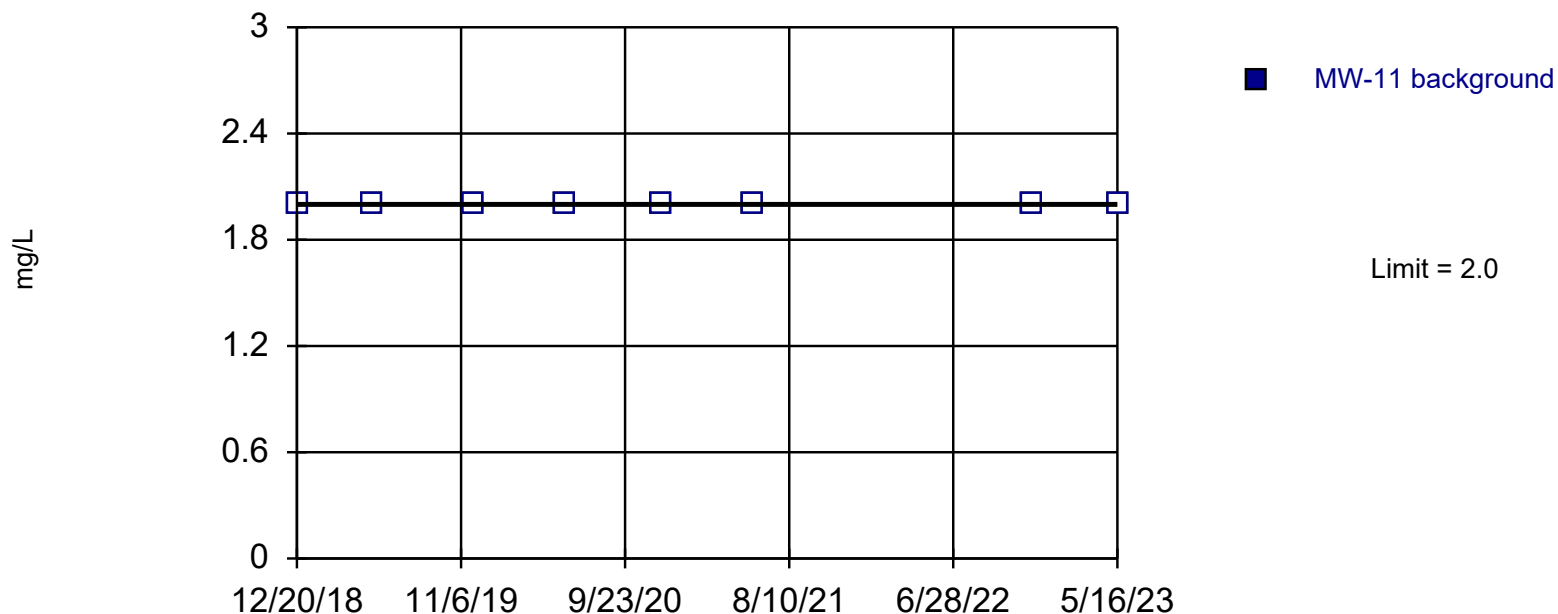
Prediction Limit

Constituent: Cadmium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0003
5/16/2019	0.00015 (B)
12/2/2019	0.00052
5/27/2020	0.00032
12/4/2020	5.9E-05 (B)
6/2/2021	<5E-05
12/1/2022	<5E-05
5/16/2023	0.000109 (J)

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 100% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Carbonate as CaCO₃ Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

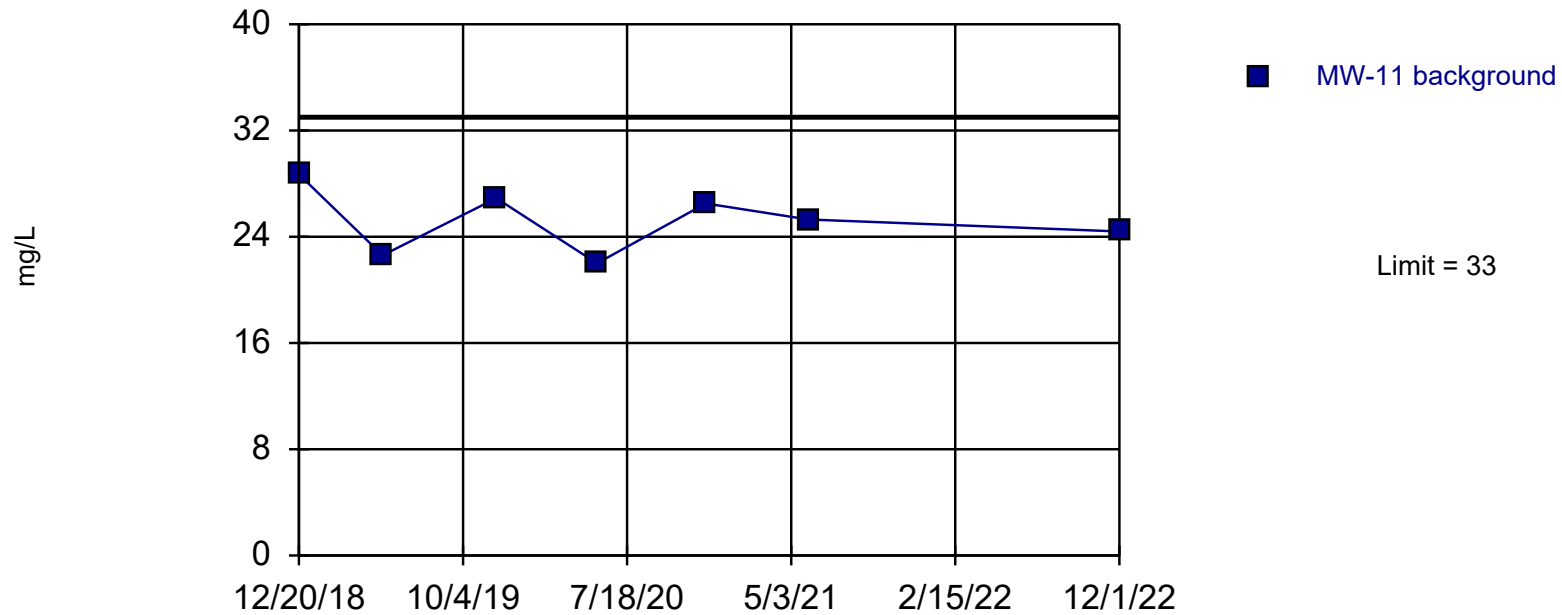
Prediction Limit

Constituent: Carbonate as CaCO3 (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<2
5/16/2019	<2
12/2/2019	<2
5/27/2020	<2
12/4/2020	<2
6/2/2021	<2
12/1/2022	<2
5/16/2023	<2

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary: Mean=25.2, Std. Dev.=2.3972, n=7. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.96679, critical = 0.803. Report alpha = 0.01. Assumes 1 future value.

Constituent: Chloride Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

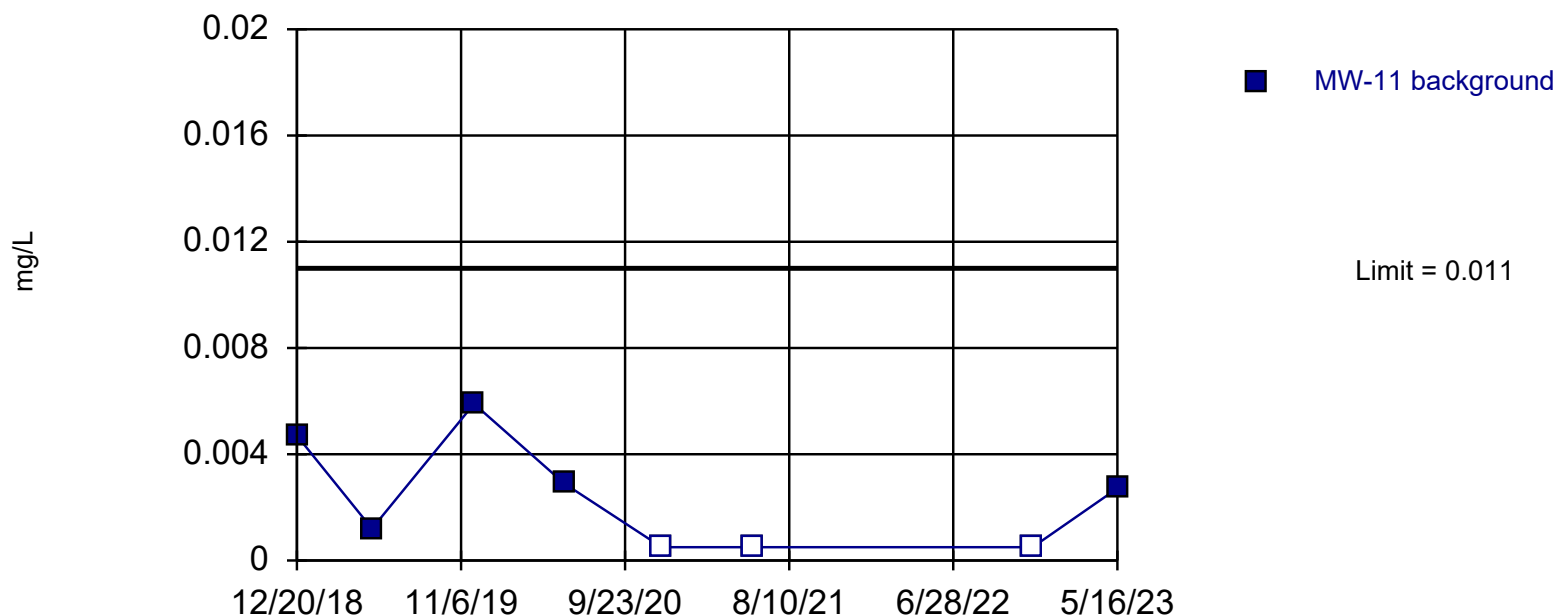
Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11	
12/20/2018	28.7	
5/16/2019	22.6	
12/2/2019	26.9	
5/27/2020	22	
12/4/2020	26.5	
6/2/2021	25.3	
12/1/2022	24.4	
5/16/2023		10.4 (O)

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary (after Cohen's Adjustment): Mean=0.0015996, Std. Dev.=0.0029979, n=8, 37.5% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8628, critical = 0.818. Report alpha = 0.01. Assumes 1 future value.

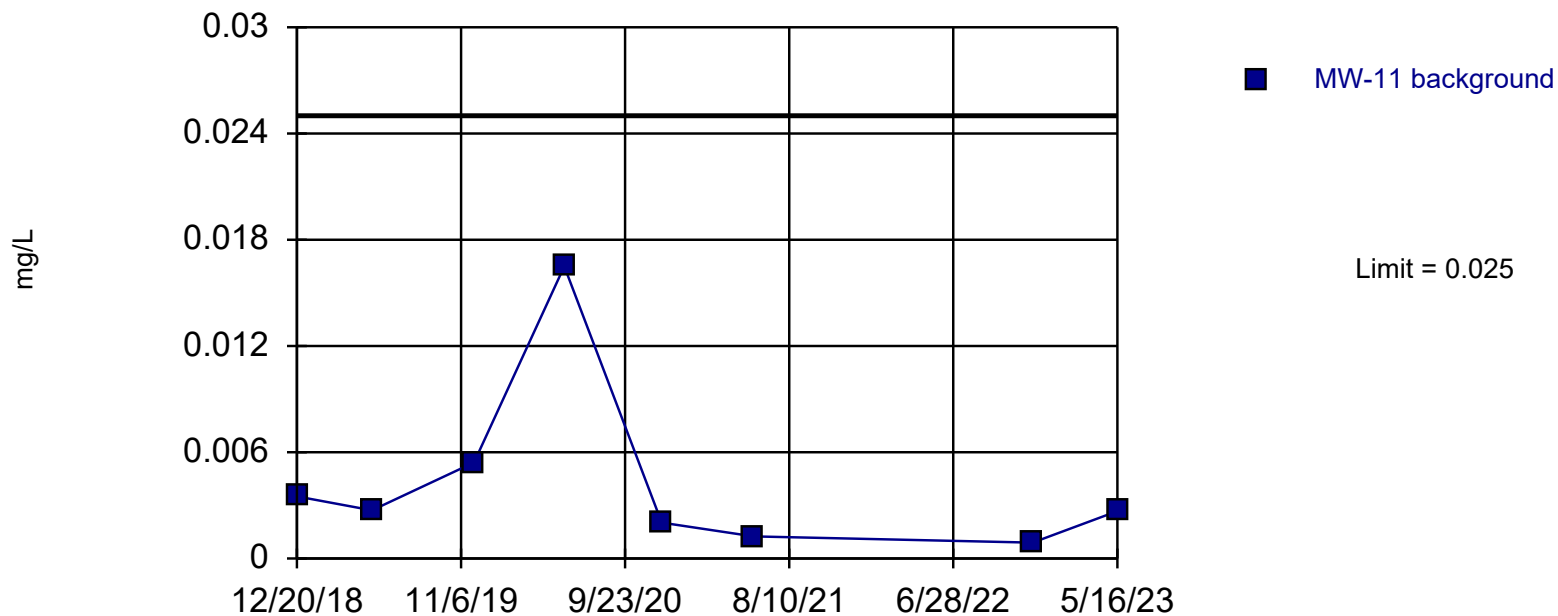
Prediction Limit

Constituent: Chromium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0047
5/16/2019	0.0012 (B)
12/2/2019	0.0059
5/27/2020	0.0029
12/4/2020	<0.0005
6/2/2021	<0.0005
12/1/2022	<0.0005
5/16/2023	0.00272

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary (based on square root transformation): Mean=0.05944, Std. Dev.=0.031024, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.81864, critical = 0.818. Report alpha = 0.01. Assumes 1 future value.

Constituent: Cobalt, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

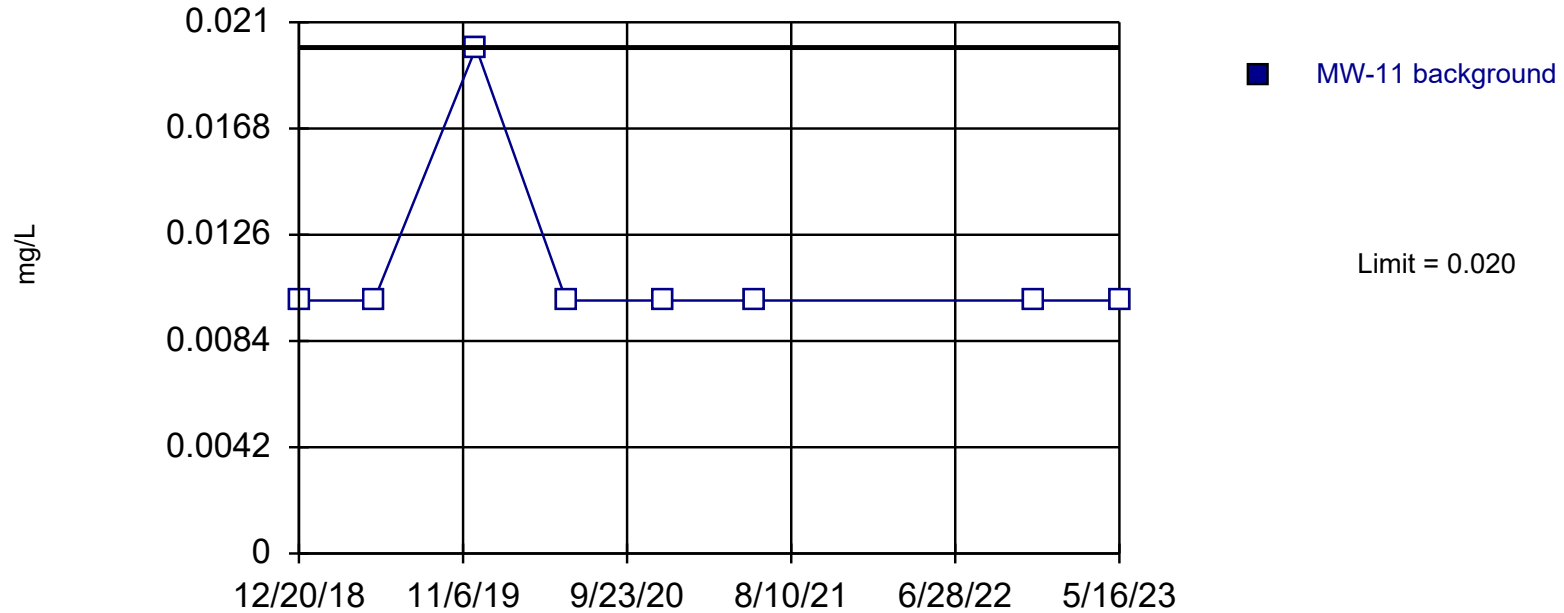
Prediction Limit

Constituent: Cobalt, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.00351
5/16/2019	0.00272
12/2/2019	0.00542
5/27/2020	0.0165
12/4/2020	0.00203
6/2/2021	0.00125
12/1/2022	0.000892
5/16/2023	0.00268

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 100% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Copper, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

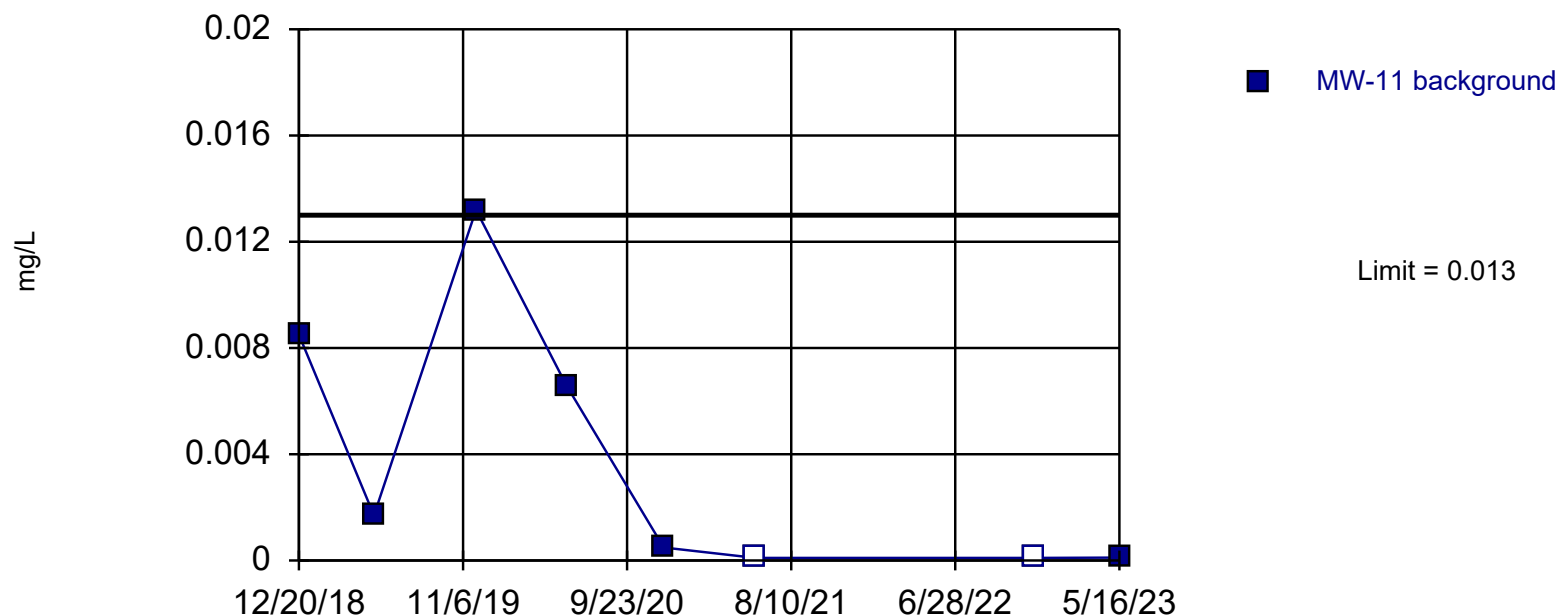
Prediction Limit

Constituent: Copper, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.01
5/16/2019	<0.01
12/2/2019	<0.02
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 8 background values. 25% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

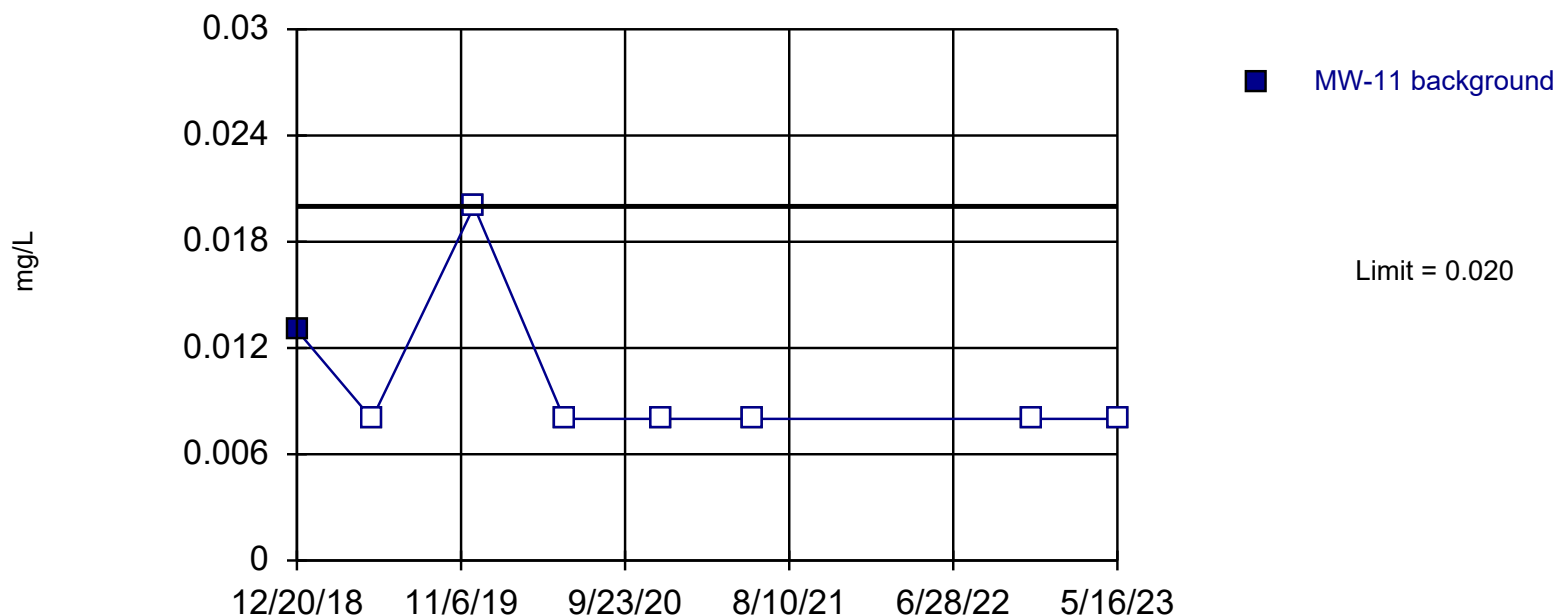
Prediction Limit

Constituent: Lead, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.0085
5/16/2019	0.0017
12/2/2019	0.0132
5/27/2020	0.0066
12/4/2020	0.00049 (B)
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	0.00011 (J)

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 87.5% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

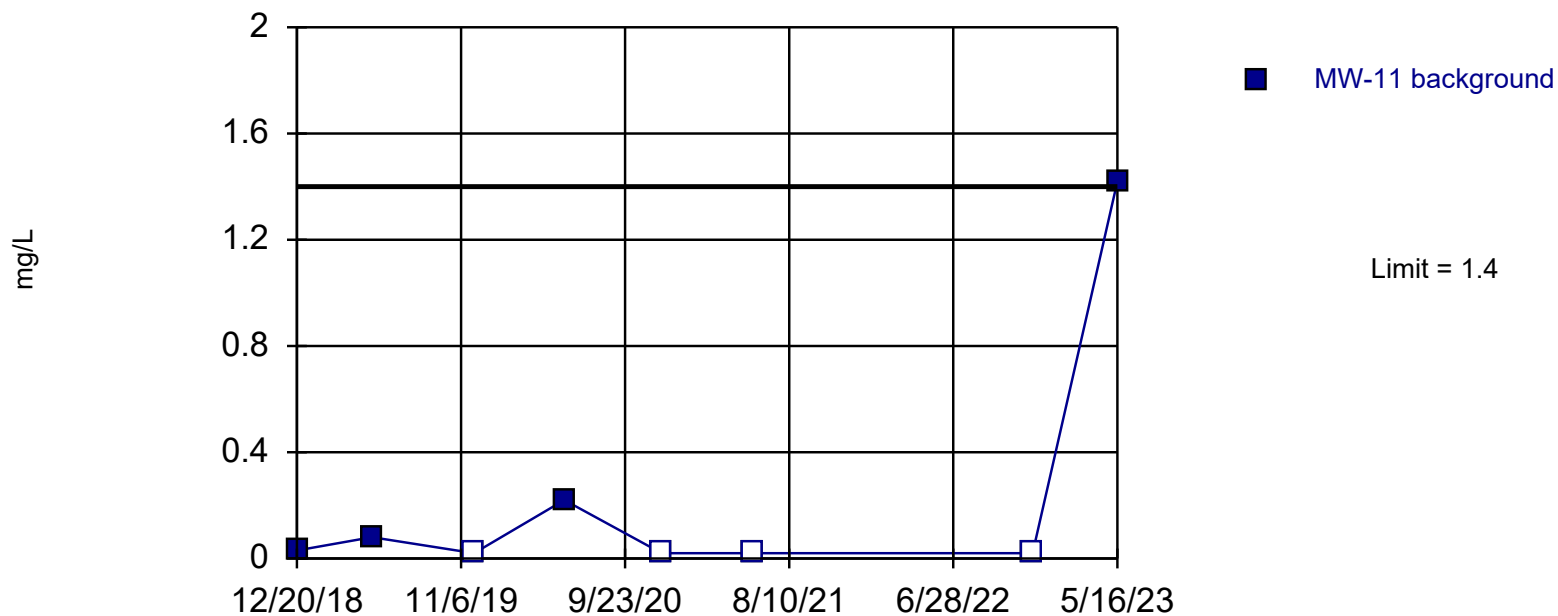
Prediction Limit

Constituent: Nickel, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.013 (B)
5/16/2019	<0.008
12/2/2019	<0.02
5/27/2020	<0.008
12/4/2020	<0.008
6/2/2021	<0.008
12/1/2022	<0.008
5/16/2023	<0.008

Prediction Limit

Intrawell Non-parametric, MW-11



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 8 background values. 50% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

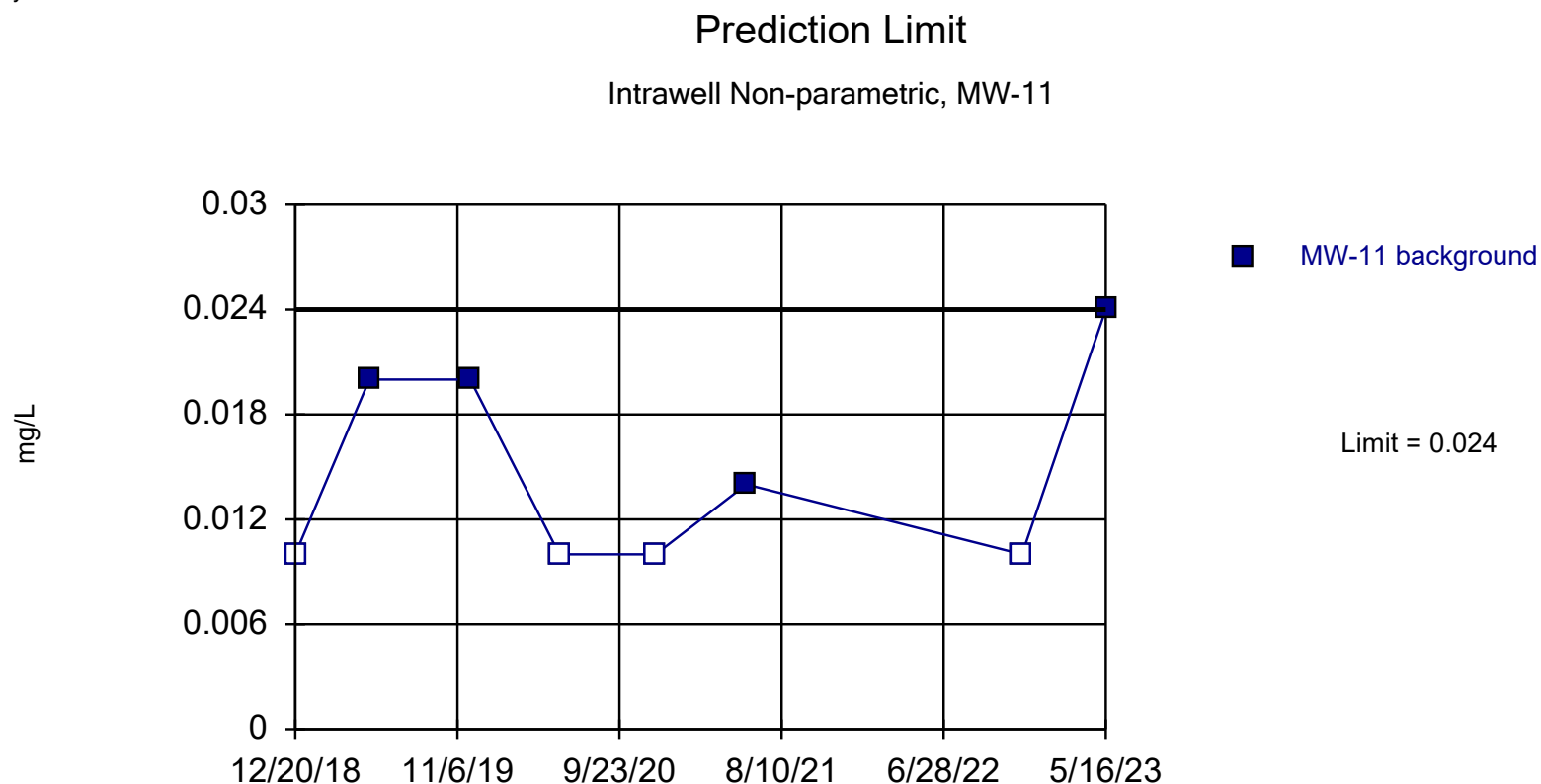
Constituent: Nitrate as N, dissolved Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Nitrate as N, dissolved (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.03 (B)
5/16/2019	0.08 (B)
12/2/2019	<0.02
5/27/2020	0.22
12/4/2020	<0.02
6/2/2021	<0.02
12/1/2022	<0.02
5/16/2023	1.42



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 8 background values. 50% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

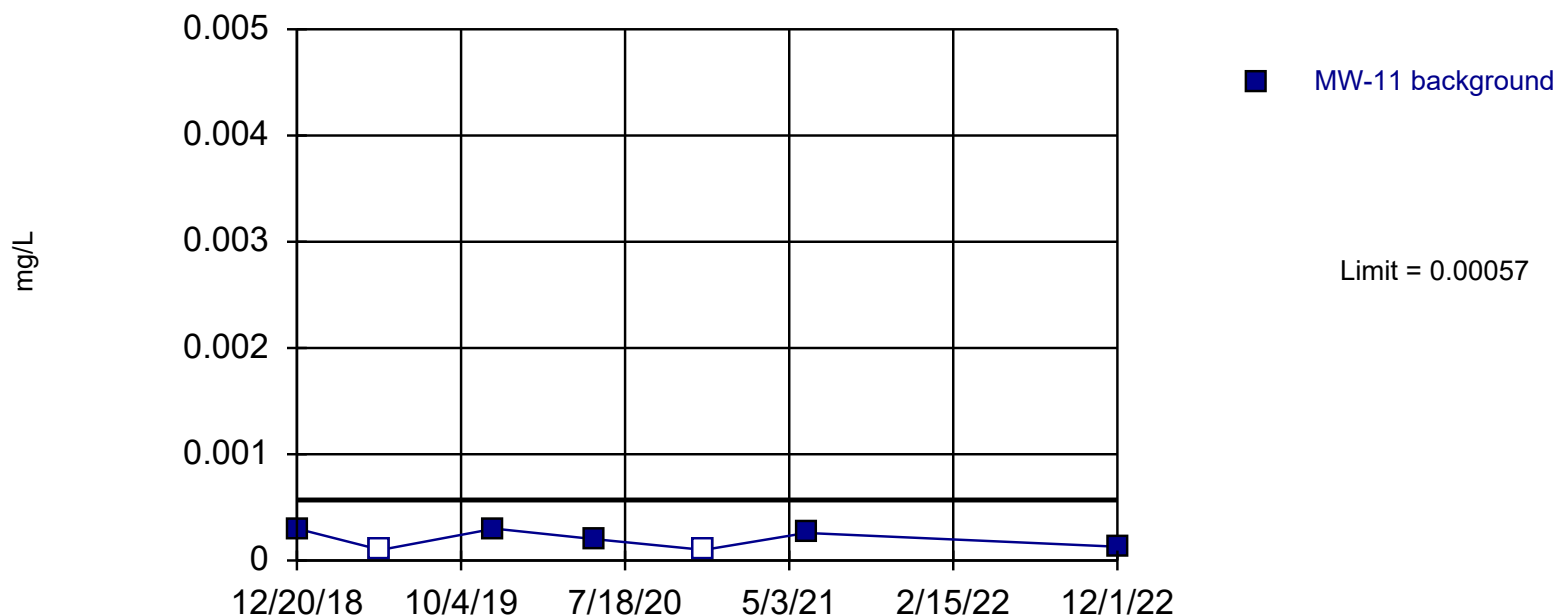
Prediction Limit

Constituent: Nitrite as N, dissolved (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.01
5/16/2019	0.02 (B)
12/2/2019	0.02 (B)
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	0.014 (B)
12/1/2022	<0.01
5/16/2023	0.024 (J)

Prediction Limit

Intrawell Parametric, MW-11



Background Data Summary (after Cohen's Adjustment): Mean=0.0001787, Std. Dev.=0.00011621, n=7, 28.571% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.85405, critical = 0.803. Report alpha = 0.01. Assumes 1 future value.

Constituent: Selenium, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

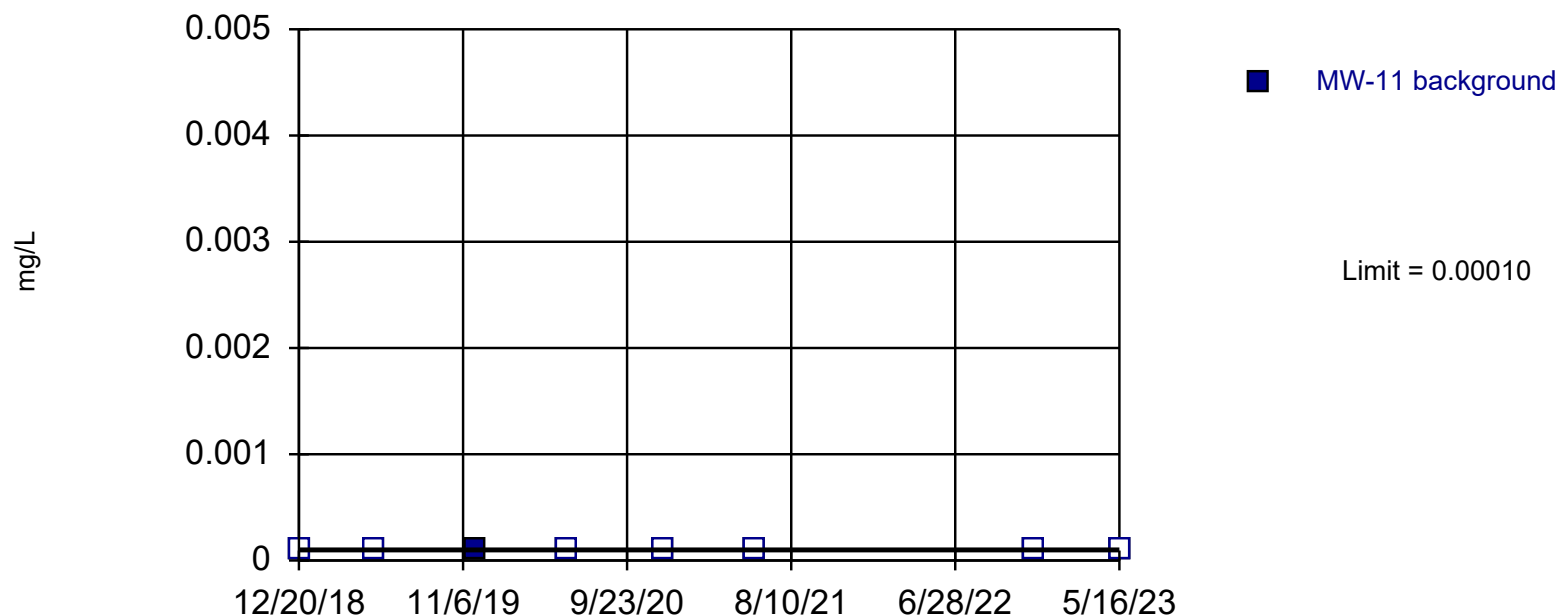
Prediction Limit

Constituent: Selenium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11	
12/20/2018	0.0003	
5/16/2019	<0.0001	
12/2/2019	0.0003	
5/27/2020	0.0002 (B)	
12/4/2020	<0.0001	
6/2/2021	0.00026	
12/1/2022	0.00013 (B)	
5/16/2023		0.00273 (O)

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 87.5% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

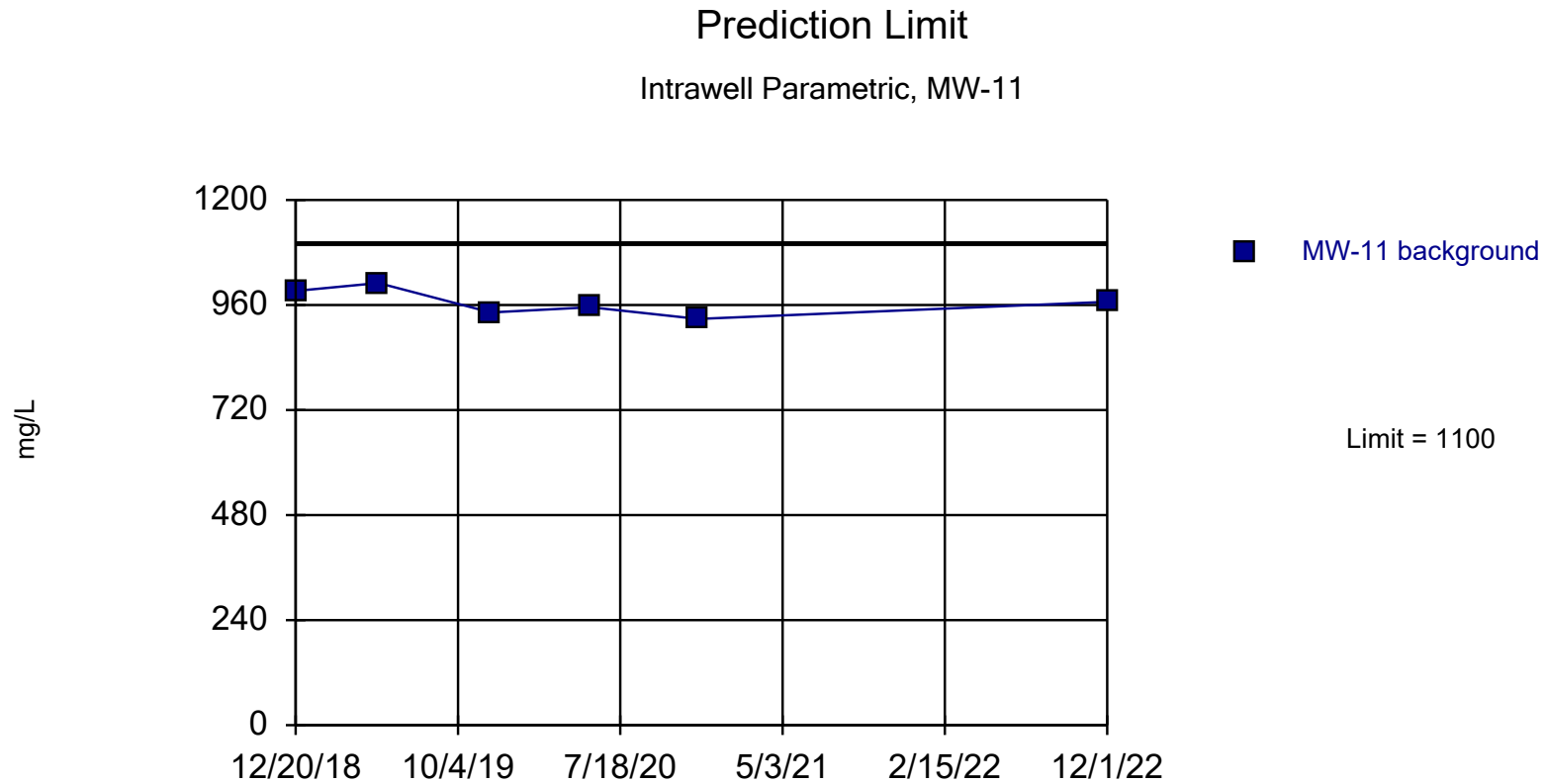
Constituent: Silver, total Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Silver, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001



Background Data Summary: Mean=965.83, Std. Dev.=30.682, n=6. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.96897, critical = 0.788. Report alpha = 0.01. Assumes 1 future value.

Constituent: Sulfate Analysis Run 12/10/2024 5:39 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

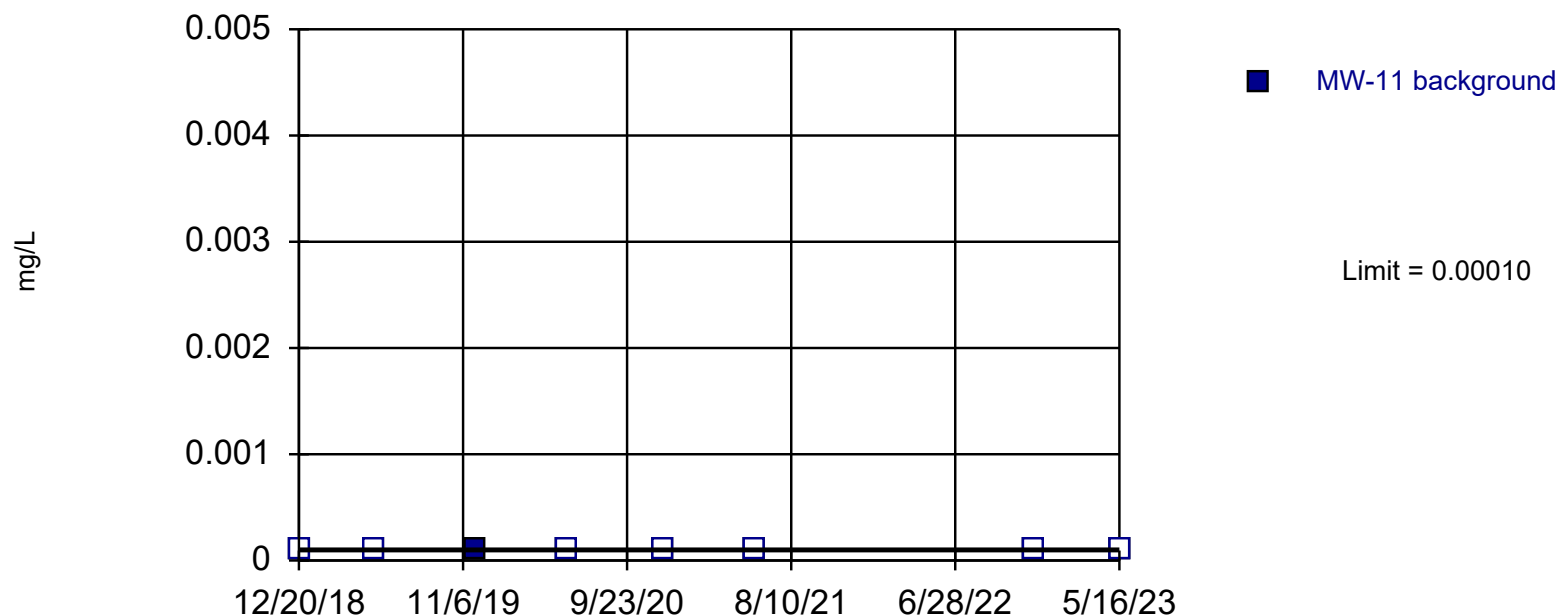
Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11	
12/20/2018	992	
5/16/2019	1010	
12/2/2019	943	
5/27/2020	955	
12/4/2020	928	
6/2/2021		1110 (O)
12/1/2022	967	
5/16/2023		1370 (O)

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 87.5% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Thallium, total Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

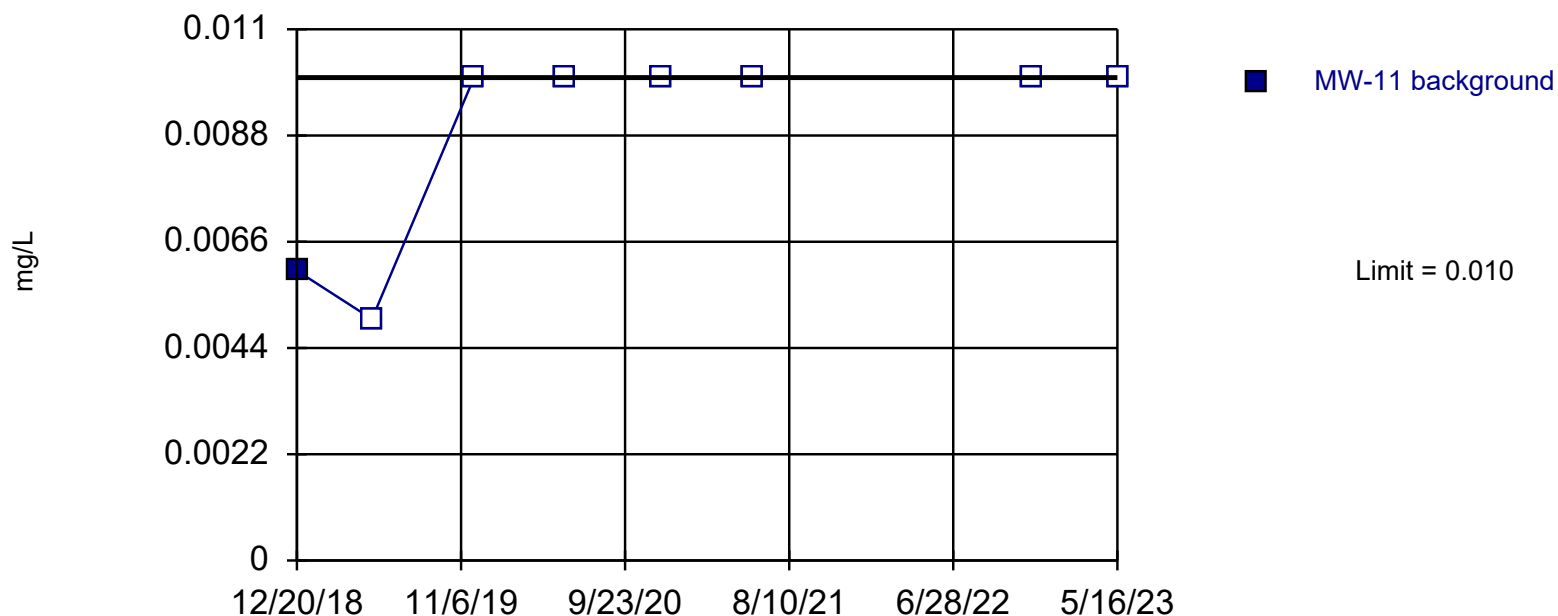
Prediction Limit

Constituent: Thallium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	<0.0001
5/16/2019	<0.0001
12/2/2019	0.0001 (B)
5/27/2020	<0.0001
12/4/2020	<0.0001
6/2/2021	<0.0001
12/1/2022	<0.0001
5/16/2023	<0.0001

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 75%. Limit is highest of 8 background values. 87.5% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Vanadium, total Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

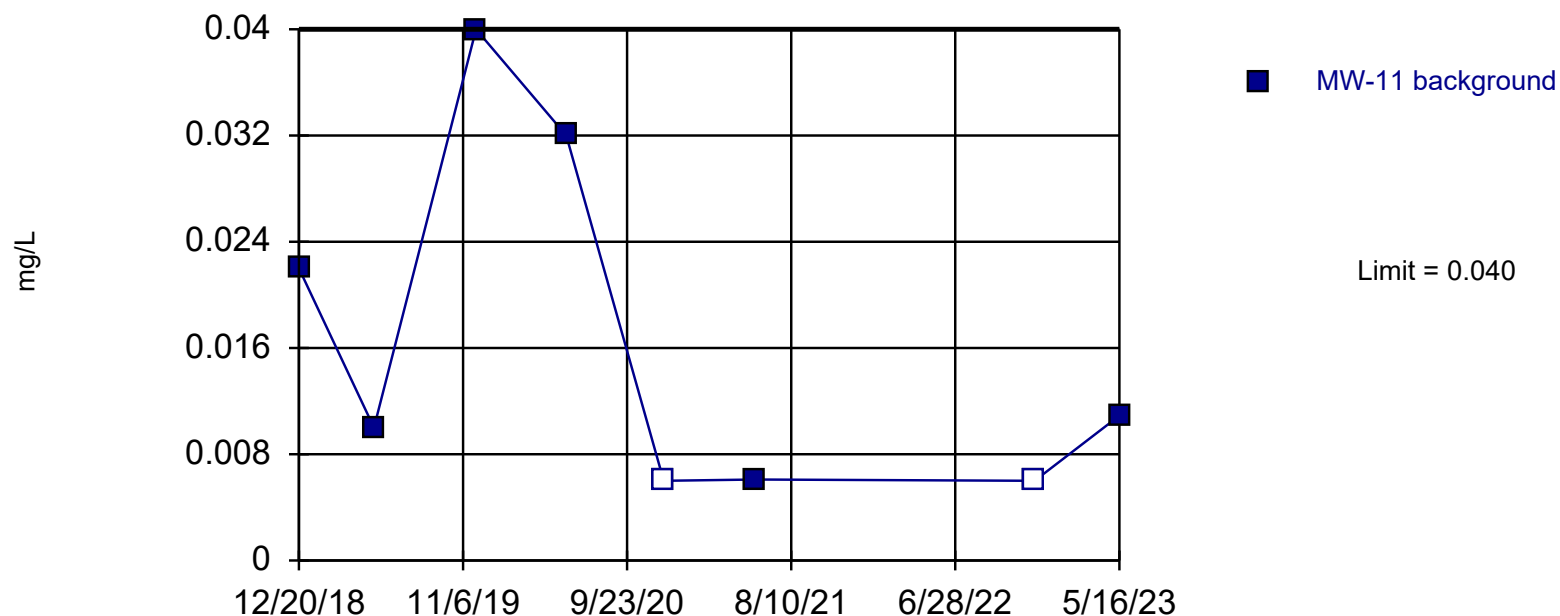
Prediction Limit

Constituent: Vanadium, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.006 (B)
5/16/2019	<0.005
12/2/2019	<0.01
5/27/2020	<0.01
12/4/2020	<0.01
6/2/2021	<0.01
12/1/2022	<0.01
5/16/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-11



Non-parametric test used in lieu of parametric prediction limit because the data required both a power transformation and Cohen's adjustment. Limit is highest of 8 background values. 25% NDs. Report alpha = 0.11111. Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc, total Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+

Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

Prediction Limit

Constituent: Zinc, total (mg/L) Analysis Run 12/10/2024 5:40 PM View: MW-11 - Inorganics 2018+
Milner Landfill Client: Twin Enviro Services Data: Milner Landfill GW Database SanitasMatrix Working

	MW-11
12/20/2018	0.022
5/16/2019	0.01
12/2/2019	0.04
5/27/2020	0.032
12/4/2020	<0.006
6/2/2021	0.0061 (B)
12/1/2022	<0.006
5/16/2023	0.0109 (J)