Loudon County Solid Waste Disposal Commission
Voting Meeting
August 17th, 2023
6:00PM
Loudon County Annex

- Public Comments
- Approval of July 20th Minutes
- Approval of Expenses
- Workshops & Committee Meetings
- Financials
- Audit Verbiage Approval
- 10 Year Report Update
- Equipment Rodeo
- LCSWDC Paying for Minutes

- Part II Update
- Slug Update
- Semi Annual Ground Water Monitoring
- Tipping Fees
- Operations
- Host & Security Fees Letter
- Airspace Utilization Report
- TDEC Inspection – July 2023
- Matlock Bend Landfill – Corrective Action Plan - Update

- Action Items

- Adjourn

MINUTES

LOUDON COUNTY SOLID WASTE DISPOSAL COMMISSION

July 20, 2023

The Loudon County Solid Waste Disposal Commission met on July 20th, 2023, at 6:00 p.m. at the Loudon County Annex Building. The commission was represented by Chairman Mr. Adam Waller, Ms. Pat Hunter, Mr. Larry Rolen, Mr. Gary Busch, Ms. Monty Ross and Mr. David Hall in attendance. Other attendees included Republic Services representatives; Mr. Lou Cunningham, Mr. David Hollinshead, and Ms. Teresa Fox.

Chairman Mr. Adam Waller called the meeting to order at 6:05 p.m.

Chairman Mr. Adam Waller opened the floor for items of public concerns – comments:

Public Comments:

- Richard Anklin of Tellico Village – Raised question regarding bond amount of $8.5 + $1m and carried through 2023 vs. 2022 and total of $9.4, Mr. Waller confirmed. Raised additional questions regarding tipping fees list, origin report, additional sludge from two additional counties, Anderson & Blount, and status.
- No other public comments

Roll Call _ Mr. Rolen, Mr. Busch, Mr. Hall, Mr. Waller, Ms. Ross, and Ms. Hunter present, None absent

Chairman Mr. Waller – May minutes prepared by Ms. Ross will need to be approved along with June 15th minutes.

MOTION: Ms. Hunter made a motion to approve the May 18th and June 15th minutes corrected and amended, Ms. Ross seconded, vote taken – approved unanimously

Chairman Mr. Waller requested approvals for expenses of Ms. Murphy, sent her bills for April, May and June including technical advisor, any questions for the advisor for Part 2 will need to be sent into Ms. Murphy. Chairman Mr. Waller raise question related to payroll expenses per month. Agreement to do Ms. Murphy's bill and three commission meetings vote.

- Mr. Hall made request a debrief of the Technical Advisor in time for Commission to vote on findings in August.

MOTION: Ms. Hunter made a motion to approve the stipends, and legal bill, Mr. Ross seconded; roll call vote taken: Yea votes Ms. Hunter, Ms. Ross, Mr. Waller, Mr. Hall, Mr. Rolen, Mr. Busch passed unanimously 6-0

Chairman Mr. Waller raised question if Commission wants to hold workshop on 10th of August, Ms. Hunter brought up Mr. Hall's recommendation to have Technical Advisor report findings.

Chairman Mr. Waller made the recommendation to establish a 10yr plan sub-committee made up of Ms. Ross & Mr. Busch. Appointments accepted by Ms. Ross & Mr. Busch

- Chairman Mr. Waller made recommendation for this committee to make and file meeting minutes.

Chairman Mr. Waller discussed financials, talked to Mr. Miller regarding trustee fee 1% of hosting and interest, negotiated our rate for fund balance, should see more coming back into account.

Chairman Mr. Waller opened discussion regarding part time administrator, Mr. Hall stated concern for Chairman's time if working full-time, Chairman Mr. Waller shelved the discussion to August meeting.

Chairman Mr. Waller opened discussion on LCSWDC 2023-2024 budget discussed in workshop, not sure engineering fee needed to be in budget, commission agreed to leave in at this time. Request motion to pass the 2023-2024 budget.

MOTION: Mr. Hall made a motion to approve the Budget, Ms. Ross seconded, roll call vote taken: Yea votes Ms. Hunter, Ms. Ross, Mr. Waller, Mr. Hall, Mr. Rolen, Mr. Busch passed unanimously 6-0

Chairman Mr. Waller – raised discussion on audit verbiage, hasn't received yet from Ms. Murphy. Ms. Murphy is working with Richard and the Comptroller's office. Intent is to vote in August.

Chairman Mr. Waller requested motion to approve Part 1 for expansion with corrections, re-voting what was voted on June 15th.

MOTION: Mr. Hall made a motion to approve, Mr. Rolen seconded roll count taken: Yea votes Mr. Rolen, Mr. Hall, Mr. Waller, Ms. Ross, Ms. Hunter, Mr. Busch passed unanimous 6-0

Chairman Mr. Waller requested review of the Operations Report by Republic, Mr. Hollinshead reviewed each report.

- Ms. Hunter raised question related to Mr. Anklin public question regarding additional sludge being brought into the landfill by Anderson County, when did this start, which wasn't approved by this commission. Mr. Hollinshead will look into and provide follow up to LCSWDC at August 10th workshop.
- Mr. Hall question regarding Misc. Special Waste, classification definitions and TDEC regulations. Mr. Hollinshead confirmed that is controlled by TDEC
- Mr. Hollinshead air space was updated in June, Chairman Mr. Waller questioned if Mike had submitted the most recent elevation information, Mr. Hollinshead to follow-up

Chairman Mr. Waller: Action items –

- Chairman Mr. Waller to check on financial assurance items for Ms. Hunter
- Mr. Hall – research terms for special waste types & provide back to the commission.
- Ms. Ross – start working on 10 year plan – reach out to other counties
- Chairman Mr. Waller –continue to work on the financials related to audit and Elizabeth to continue working on Audit verbiage for commission to vote on it
- Chairman Mr. Waller to also get the Technical Advisor for the August Workshop
- Mr. Hall request to Elizabeth, if consultant sees a problem that she makes commission aware immediately and not wait until next workshop

MOTION: Chairman Mr. Waller asked for a Motion to adjourn. Mr. Hall made motion, Ms. Ross seconded the motion. The motion passed unanimously 6-0. Meeting adjourned 6:35pm

The next Loudon County Solid Waste Disposal Commission meeting will be held August 17th, 2023 at 6p.m. at the Loudon County Annex Building.

Respectfully Submitted by Gary M Busch LCSWDC Secretary,

Adam Waller – Chairman

Loudon County Solid Waste Disposal Commission

Loudon County Department of Accounts and Budgets
Solid Waste Disposal Fund 207
Monthly Cash Report
July 2023

June 2023 Combined Ending Cash Balance per Monthly Report		5,245,204.60	
Adjustments:			
Trustee's Commission (June 2023)	(283.08)		
	0.00		
Total Adjustments		(283.08)	
Adjusted June 2023 Combined Ending Balance per Loudon Co Trustee			**5,244,921.52**

Solid Waste Disposal Commission Operating Fund

Operating Fund Ending Balance June 2023		**5,217,030.21**	
Cash Receipts:			
Surcharge - Security Fees *(June 2023 In-Transit)*	22,554.49		
Surcharge - Host Fees *(June 2023 In-Transit)*	24,809.93		
Investment Income *(May 2023 In-Transit)*	(12.97)		
Investment Income *(June 2023 In-Transit)*	2,405.03		
Total Monthly Revenue		49,756.48	
Cash Disbursements:			
Board & Committee Members Fees *(June Payable)*	(725.00)		
Board & Committee Members Fees	(675.00)		
Social Security *(June Payable)*	(4.65)		
Employer Medicare *(June Payable)*	(2.16)		
Audit Services (Mitchell Emert & Hill)			
Engineering Services			
Legal Services *(E. Murphy - June Payable)*	(12,960.00)		
Contracted Services			
Building & Content Insurance			
Trustee's Commission (Corr May23 Rept)	37.04		
Total Cash Disbursements		(14,329.77)	
Expenditure Credit:			
Trustee Commission Adjustment		1.37	
Operating Fund Ending Balance July 2023			**5,252,458.29**

Poplar Springs Subfund

Poplar Springs Subfund Balance June 2023		**27,891.31**	
Cash Receipts:			
Investment Income *(May 2023)*	12.97		
Investment Income *(June 2022 In-Transit)*			
Total Monthly Revenue		12.97	
Cash Disbursements:			
Engineering Services	0.00		
Trustee's Commission (May 2023)	(1.37)		
Trustee's Commission (Corr May23 Rept)	(37.04)		
Total Cash Disbursements		(38.41)	
Poplar Springs Subfund Balance July 2023			**27,865.87**
TOTAL COMBINED OPERATING AND POPLAR SPRINGS JULY 2023 BALANCE			**5,280,324.16**

Combined Summary - July 2023	
Beginning Balance	**5,244,921.52**
Plus Operating Revenue	**49,769.45**
Less Operating and Poplar Springs Disbursements	**(14,366.81)**
TOTAL COMBINED BALANCE - JULY 2023	**5,280,324.16**

NOTE: Accounting Dept did not have Trustee's Jul report at the time of preparation.

Matlock Bend Landfill
21712 TN-72, Loudon, TN 37774
o 865.458.2651 republicservices.com

July 26, 2023

Mr. Revendra Awasthi
Tennessee Department of Environment and Conservation
Division of Solid Waste Management
Knoxville Field Office
3711 Middlebrook Pike
Knoxville, TN 37920

Subject: 1st Semiannual 2023 Groundwater Monitoring Report
Matlock Bend Landfill
Permit No. SNL #53-103-0203

Dear Mr. Awasthi:

Please see the attached 1st Semiannual 2023 Groundwater Monitoring Report for Matlock Bend Landfill. This report has been prepared by CEC, Inc. dated July 26, 2023.

If you have any questions on this document or any other items regarding the Matlock Bend Landfill, please feel free to contact me at 423-994-3133 or via email at BHaney@republicservices.com.

Sincerely,

Ben Haney

Ben Haney, E.I.T.
Environmental Manager
Matlock Bend Landfill

cc: Molly Stanford, TDEC (electronic)
Operating Record (Hard copy and electronic)
Mike Classen, Republic Services (electronic)
Joe Montello, Senior Manager, Hydrogeology, Republic Services (electronic)
Michael Johnson, P.G., Civil & Environmental Consultants, Inc. (electronic)

July 26, 2023

Mr. Ben Haney
Environmental Manager
Matlock Bend Landfill
21712 TN-72
Loudon, TN 37774

Dear Mr. Haney:

Subject: 1st Semiannual 2023 Groundwater Monitoring Report
Matlock Bend Landfill
Permit# SNL #53-103-0203
CEC Project 313-710

Civil & Environmental Consultants, Inc. (CEC) has prepared this report for the 1st semiannual sampling event of 2023 for the Matlock Bend Landfill in general accordance with the site's Groundwater Monitoring Plan incorporated in the landfill's December 1996 Operation Plan (Revised September 2016). The Matlock Bend Landfill is located approximately five miles west of Loudon, Tennessee. The site consists of 37.4 constructed acres of ridge-top and sloped hillside topography bordering Tennessee Highway 72 for approximately 250 feet extending northward 4,800 feet.

The groundwater monitoring network consists of six monitoring wells, three downgradient wells associated with Phase I (MW-01, MW-1A, and MW-02), two downgradient wells associated with Phase II/IV (MW-03 and MW-05), and one upgradient well (MW-4R) used for both Phase I and Phase II/IV. In accordance with the TDEC groundwater report review dated September 30, 2016, the facility is now monitored as one unit. The current monitoring program is considered adequate to monitor groundwater quality at the facility, based on a review of well locations, flow direction, flow gradient, flow rates, and availability of groundwater for sampling purposes.

CEC conducted the current semiannual monitoring event on May 30, 2023. The analytical program for the event for the detection monitoring wells (MW-4R, MW-03 and MW-05) included Appendix I list of parameters. The wells currently in the assessment-monitoring program (MW-01, MW-1A, and MW-02) were sampled for the Appendix II list of parameters to fulfill the annual requirement established under Phase 2 of assessment monitoring. Monitoring wells (MW-01, MW-

1A, MW-02, MW-03, MW-4R) were also sampled for the 14 additional parameters (Total Ca, Fe, Mg, K, Na, Dissolved Mn, COD, NH_3, TDS, Chloride, NO_3, SO_4, CN, TOC) required for the Phase I landfill unit. The samples were analyzed by Pace in Mt Juliet, Tennessee, and the results were reported on June 29, 2023. Appendix A provides a potentiometric surface map (Figure 1) utilizing groundwater level data collected during the event. A field data summary table including groundwater flow directions and rates for each well is also included in Appendix A as Table 1.

In accordance with the TDEC comment letter dated April 8, 2019, the groundwater statistical analysis method has been modified for the facility from interwell to intrawell statistical evaluations for the Appendix I parameters, and also includes trend analysis for the 14 additional parameters required for the Phase I landfill unit. Historical data prior to 2017 had higher reporting limits and are no longer used for statistical analysis. In general, the first N=8 data collected between April 2017 and April 2020 are considered the established background data set and the current results are compared to the established background. The detections for barium at MW-05 (November 2019) and zinc at MW-02 (April 2020) have been considered outliers/anomalous high concentrations in the background data set in past reports and have been removed from the background data set to allow for more conservative statistical exceedance threshold criteria.

In cases where an inorganic parameter is detected at a frequency greater than 25% during the background period, a combined Shewart-CUSUM Control Chart is produced and used to determine if there is a Statistically Significant Increase (SSI) over background.

In cases where an inorganic parameter is detected at a frequency less than 25% during the background period, a non-parametric prediction limit is calculated and used to determine if there is a SSI over background.

The Double Quantification Rule is used to determine SSIs for volatile organic compounds as recommended in the US EPA Unified Guidance (March 2009). For wells with confirmed, repeated detections for a given VOC for two or more consecutive sampling events, the SSI is declared. For wells with an initial detection for a given VOC, a confirmatory resample is performed. If the initial detection is confirmed through resample (two successive quantified detections above the laboratory-reporting limit) or if a resample is not collected, the detected VOC is considered an SSI. If the result of the resample indicates that the VOC is not detected above the laboratory-reporting limit, the initial detection is not confirmed, so there is no SSI for the VOC in question. However, both laboratory results (the initial concentration and follow-up confirmatory concentration (i.e., ND)) will be kept in the data record unless there is substantiated evidence that the initial detection is an artifact due to field error, laboratory error or other extrinsic influences.

A complete Appendix I inorganic analytical data summary for the event (Table 2) and the associated statistical charts and data outputs are included in Appendix B. The laboratory analytical data reports and associated field information logs are included as Appendix C.

The results of the current event analysis are summarized as follows:

Routine Detection Monitoring

Intrawell SSIs for the Appendix I inorganic parameters identified during the current event include the following:

- Beryllium (MW-02): Beryllium was detected at a concentration of 0.00264 mg/L at MW-02 during the event and is a previously confirmed SSI. The detected concentration is the same as the previous (December 2022) detection of 0.00264 mg/L. The concentrations of beryllium detected to date at MW-02 have never approached the 0.004 mg/L MCL.

- Cadmium (MW-02): Cadmium was detected at a concentration of 0.00235 mg/L at MW-2 during the current event and is a previously confirmed SSI. The detected concentration is slightly higher than the previous (December 2022) detection of 0.00232 mg/L and is above the intrawell non-parametric prediction limit (0.000938 mg/L). The prediction limit is based on the highest value in the established intrawell background data set. The reported concentrations of cadmium to date at MW-02 have never approached the 0.005 mg/L MCL.

- Nickel (MW-02): Nickel was detected at a concentration of 0.0375 mg/L at MW-02 during the current event and is a previously confirmed SSI. The detected concentration of nickel at MW-02 is slightly lower than the previous (December 2022) event result of 0.0386 mg/L. Nickel is routinely detected in both upgradient MW-4R and downgradient well locations. The detected concentrations of nickel are all below the 0.1 mg/L MCL referenced from the Division of Water Resources Rule 0400-45-01-.06. Given the routine occurrence of low-level nickel in both upgradient and downgradient locations in the limited data available, nickel is likely naturally occurring in local groundwater at the reported concentrations.

- Zinc (MW-02): Zinc is routinely detected in both upgradient MW-4R and downgradient well locations. The reported concentrations are generally consistent with historical concentrations observed in the data available. An ASD was presented in Appendix F of the 2nd 2020 Groundwater Monitoring Report indicating that zinc is found at significant concentrations in borrow area soils used at the site for cover material. The TDEC concurred

with the findings of the ASD in the February 5, 2021 letter and indicated that SSIs for zinc or exceedances of the GWPS shall continue to be noted in reports, but will not require further action, unless site conditions change.

- The low pH values generally observed in site monitoring wells are thought to contribute to the dissolution of naturally occurring metals to groundwater and are considered the likely source of the low-level SSIs for metals discussed above.

- No VOCs were detected during the event and is consistent with previous events.

Routine Phase I Landfill Additional Parameter Trend Analysis

The results of the additional water quality parameters (Ca, Fe, Mg, K, Na, Dissolved Mn, COD, NH_3, TDS, Chloride, NO_3, SO_4, CN, TOC) required for the Phase I landfill unit wells (MW-01, MW-1A, MW-02, and MW-03) are evaluated for statistically significant trends using the Sen's Slope Test. Upgradient well MW-4R is also sampled for these parameters to establish upgradient/background concentrations for these parameters.

Statistically significant increasing trends were identified in the data available at MW-1A (magnesium, dissolved manganese, and potassium MW-02 (sodium) and MW-03 (dissolved manganese). These statistically significant increasing trends for MW-1A and MW-03 are consistent with recent events; however, this is the first event where sodium exhibits an increasing trend at MW-02. The concentrations of sodium at MW-02 have generally been reported only slightly above the <2 mg/L reporting limit of the laboratory ranging from 2.15 mg/L to 4.07 mg/L with the exception of one anomalously higher detection of 32.5 mg/L during the October 2020 event and are generally the lowest concentrations of sodium observed in site monitoring wells. A complete analytical data summary for the additional 14 parameters collected during the event (Table 3) and the associated time series graphs and trend analyses are included in Appendix B. The laboratory analytical data reports are included as Appendix C.

Assessment Monitoring Program Update

In accordance with TDEC correspondence dated February 5, 2021 regarding the Division's review of the 2nd 2020 semiannual report prepared for the facility, Matlock Bend initiated assessment monitoring for the confirmed detection of nitrate at MW-1A above the 10 mg/L MCL. Nitrate is included in the analysis of the 14 additional parameters routinely collected at the Phase I landfill monitoring wells as described in the previous section of this report.

As documented in the 1st Semiannual 2021 Groundwater Monitoring Report dated July 21, 2021, a subset of monitoring points (MW-01, MW-1A, MW-02, MW-03 and MW-4R) were sampled for the full Appendix II list of parameters in June 2021 to fulfill the initial assessment monitoring for the confirmed detection of nitrate at MW-1A above the established 10 mg/L US EPA Drinking Water MCL during both semiannual events of 2020. The results of the initial assessment monitoring event as documented in the 1st Semiannual 2021 Report dated July 21, 2021 indicated that no Appendix II inorganics (outside of what is also included in the Appendix I list) and no Appendix II VOCs, SVOCs, herbicides, or pesticides were detected at any location. Nitrate was detected at MW-1A, MW-01, and MW-02 during the initial assessment monitoring event (June 2021), which is consistent with recent events; however, the concentrations were all below the 10 mg/L MCL. Therefore, in accordance with TDEC Rule 0400-11-01-.04(7)6 (iii), after obtaining the results from the initial Appendix II sampling event, the facility resampled all wells within 90 days (i.e., 3rd Quarter 2021) and conducted analyses for the Appendix I list of parameters and for those constituents in Appendix II that are detected in response to the initial assessment monitoring event. However, no Appendix II parameters were detected during the initial Appendix II event; therefore, the wells needed to be sampled strictly for the Appendix I list of parameters. The results of the 3rd Quarter 2021 assessment monitoring event were submitted to TDEC on November 15, 2021. Nitrate was not detected above the 10 mg/L MCL at any location during the 3rd Quarter 2021 assessment monitoring event.

As indicated in TDEC correspondence dated December 1, 2021, regarding the Division's review of the 3rd Quarter 2021 assessment monitoring event report, MW-1A, MW-01 and MW-02 were entered into Phase 2 of assessment monitoring for detections of nitrate above background. MW-02 is also in assessment for confirmed statistically significant increases (SSIs) in concentrations of beryllium and cadmium. Phase 2 of assessment monitoring requires semiannual sampling, with one event consisting of sampling for the full Appendix II list of parameters, and one event consisting of sampling for the Appendix I list of parameters and any Appendix II parameters previously detected. Since assessment monitoring for the Appendix II list of parameters was initiated at the site during the 1st Semiannual Event of 2021, it was proposed that the future Phase 2 assessment monitoring schedule consist of sampling MW-1A, MW-01, and MW-02 for the Appendix II list of parameters during the 1st semiannual event of each year, and the 2nd semiannual event to consist of sampling for the Appendix I list plus any previously detected Appendix II parameters. The TDEC accepted the Phase 2 assessment-monitoring schedule in their April 11, 2022 letter regarding review of the 2nd 2021 Semiannual Groundwater Report submittal.

No Appendix II parameters (outside of which are also included in the Appendix I detection monitoring parameter list) were detected at MW-1A, MW-01 or MW-02 during the current annual Appendix II monitoring event.

Nitrate was detected at assessment wells MW-1A (6.38 mg/L), MW-01 (0.856 mg/L), and MW-02 (3.27 mg/L) during the current event. Nitrate was also detected at detection monitoring well MW-03 at a reported concentration of 0.358 mg/L and is considered the sample concentration for the final (3 of 3) verification sampling event for nitrate detections above background at MW-03 and is a confirmed SSI. MW-03 will be placed into the assessment monitoring program for detections of nitrate above background. The detected concentrations of nitrate reported for the event all remain below the 10 mg/L MCL but are above background since nitrate has not been detected at upgradient/background well MW-4R. Although nitrate has not exceeded the MCL at any location since initiating the assessment monitoring program, the Matlock Bend landfill will continue to evaluate potential sources of nitrate and additional elevated metals observed at MW-02 to determine if the concentrations detected above background are a result of landfill operations or potentially from an off-site source. Our experience at many sites indicates that nitrate is not a typical indicator of landfill leachate migration. It appears more likely that the nitrate detections are due to an alternate source.

Should you have any questions or concerns, please do not hesitate to contact us at (615) 333-7797.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Michael Johnson
Project Manager

Kevin Wolfe
Vice-President

Enclosures: Appendix A - Potentiometric Surface Map & Field Data Summary
Appendix B - Analytical Data Summaries and Statistical Results
Appendix C - Laboratory Analytical Report & Field Information Logs

cc: Joe Montello, Senior Manager, Hydrogeology, Republic Services (Electronic)
Matlock Bend Landfill (Hard Copy)

Civil & Environmental Consultants, Inc.

1st Semiannual Groundwater Monitoring Report 2023

Matlock Bend Landfill
Loudon County, Tennessee
Permit No. SNL #53-103-0203

For Submittal to:
Tennessee Department of Environment and Conservation

Prepared by:
Civil & Environmental Consultants, Inc.
117 Seaboard Lane
Suite E-100
Franklin, TN 37067

Certification

I certify that I am a qualified groundwater professional who has received a baccalaureate or post-graduate degree in the natural sciences and am licensed as a Professional Geologist in the State of Tennessee. I have sufficient training and experience in groundwater hydrology that enables me to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective-action.

I further certify that this report was prepared by me or by a subordinate working under my direction.

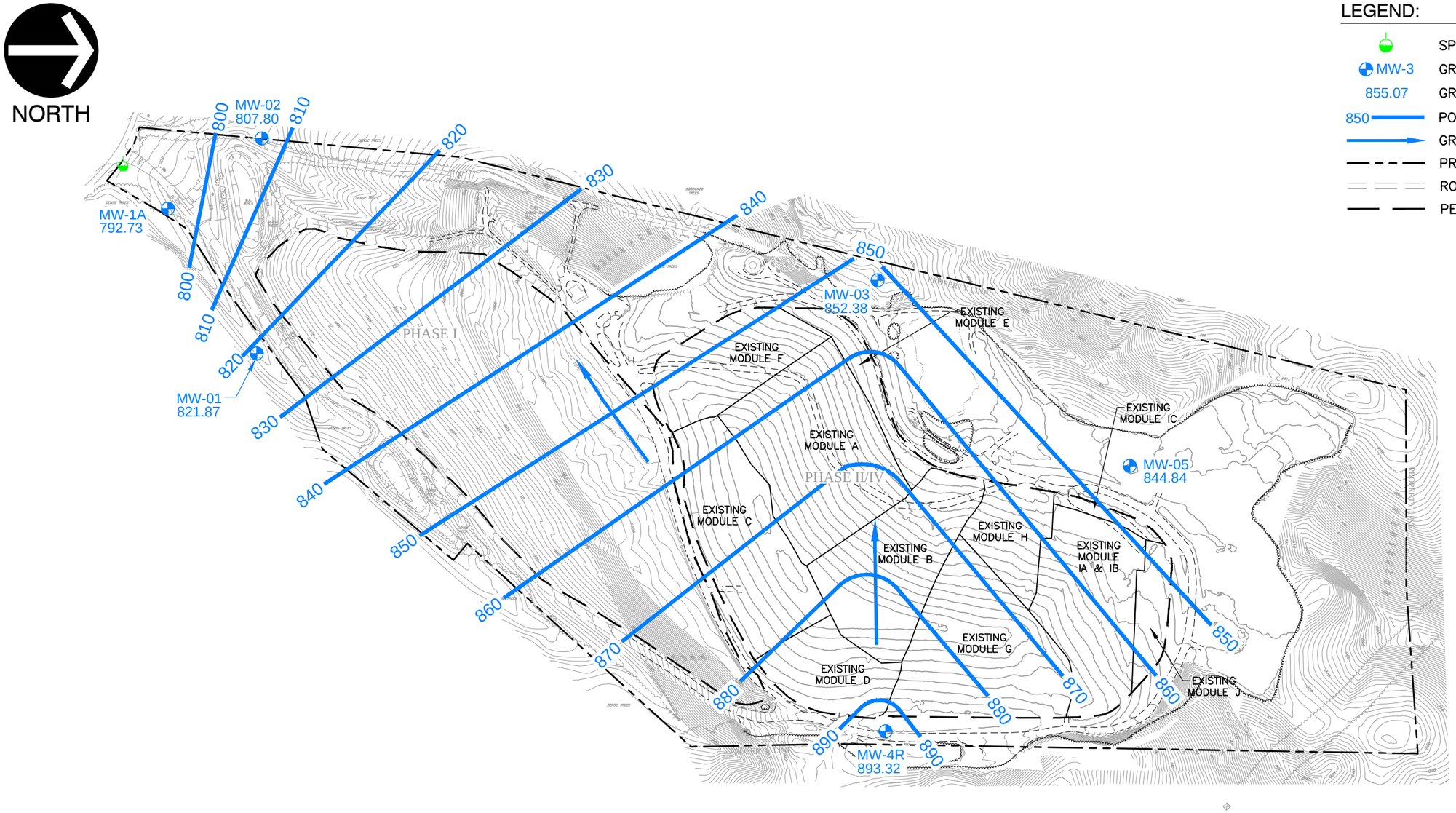
Michael Johnson, P.G. — July 27, 2023
Date

APPENDIX A
POTENTIOMETRIC SURFACE MAP & FIELD DATA SUMMARY

Table 1
Field Data Summary
Matlock Bend Landfill
1st Semiannual 2023 Event

Well No.	Elevation TOC	Depth to GW (ft below TOC)	Water Elevation (fmsl)	Temperature (^{o}C)	pH (S.U.)	Cond. (umhos) uS/cm	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Contour Elevation [(a)] (fmsl)	Distance (ft)	Hydraulic Conductivity (ft/min) (k)	Effective Porosity (unitless) (n)	Hydraulic Gradient (ft/ft) (i)	Average Linear Velocity (ft/day)	Direction
MW-01	830.87	9.00	821.87	15.0	6.18	336.2	41.8	1.86	92.7	820	50	4.70E-06	0.18	3.74E-02	1.41E-03	SW
MW-1A*	805.13	12.40	792.73	19.4	6.59	1637.0	4.51	0.87	76.5	800	150	3.93E-06	0.18	4.85E-02	1.52E-03	S
MW-02	825.20	17.40	807.80	16.1	4.56	76.7	3.27	4.44	198.2	800	175	5.90E-06	0.18	4.46E-02	2.10E-03	SW
MW-03	867.86	15.48	852.38	17.2	5.98	335.7	7.85	3.57	93.1	850	125	1.20E-05	0.18	1.90E-02	1.83E-03	SW
MW-4R**	992.32	99.00	893.32	18.4	6.33	174.1	2.8	1.03	67.4	890	100	1.90E-05	0.18	3.32E-02	5.05E-03	NW
MW-05	936.84	92.00	844.84	16.9	7.51	237.2	19	10.10	96.9	850	175	2.20E-05	0.18	2.95E-02	5.19E-03	NW

*-The hydraulic conductivity for MW-1A is an average from monitoring wells MW-01, MW-02 and MW-03.
**-The hydraulic conductivity for MW-4R is from MW-04
a -Contour elevation refers to interpreted contour nearest each well location used to determine hydraulic gradient.



LEGEND:

- SPRING OR SURFACE WATER
- MW-3 GROUNDWATER MONITORING WELL
- 855.07 GROUNDWATER ELEVATION (fmsl)
- 850 POTENTIOMETRIC SURFACE CONTOUR (fmsl)
- GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARY
- ROAD
- PERMITTED LIMITS OF WASTE

GROUNDWATER CONDITIONS

THE WATER LEVELS PRESENTED HEREIN ARE APPLICABLE TO THE LOCATION AND TIME OF MEASUREMENT DECEMBER 8, 2022. WATER LEVELS MAY FLUCTUATE THROUGH TIME.

POTENTIOMETRIC CONTOURS GENERATED FROM THESE DATA ARE CONSTRUCTED BY INTERPOLATION BETWEEN POINTS OF KNOWN STATIC WATER LEVEL ELEVATIONS AND USING KNOWLEDGE OF SPECIFIC SITE CONDITIONS. ACTUAL STATIC WATER LEVELS AT LOCATIONS BETWEEN THE MONITORING POINTS MAY DIFFER FROM THOSE DEPICTED.

REFERENCE:

1. TOPOGRAPHIC INFORMATION WITHIN THE LANDFILL LIMITS TAKEN FROM FIRMATEK DRONE SOLUTION. DATED MARCH 23, 2023, AS PROVIDED BY REPUBLIC.
2. TOPOGRAPHIC CONTOURS SHOWN WERE PROVIDED BY SOUTHERN RESOURCES MAPPING CORP., NORTHPORT, ALABAMA.

SCALE IN FEET

0 400' 800'

*HAND SIGNATURE ON FILE

CEC
Civil & Environmental Consultants, Inc.
117 Seaboard Lane · Suite E-100 · Franklin, TN 37067
615-333-7797 · 800-763-2326
www.cecinc.com

MATLOCK BEND LANDFILL
LOUDON, COUNTY TENNESSEE

MAY 2023
POTENTIOMETRIC SURFACE MAP

DRAWN BY:	KLU	CHECKED BY:	KBW	APPROVED BY:	*MJJ	FIGURE NO.:	2
DATE:	JULY 2023	DWG SCALE:	1"=400'	PROJECT NO:	313-710		

P:\310-000\313-710\-CADD\DWG\2023\313-710-POTENTIOMETRIC MAP LOUDON COUNTY-MATLOCK BEND MAY.DWG{FIG 2}LS:(KUNDERWOOD - 7/21/2023) - LP: 7/24/2023_1:59:41_PM

APPENDIX B
ANALYTICAL DATA SUMMARIES AND STATISTICAL RESULTS

Table 2
Summary of Appendix I Inorganic Results (mg/L)
Matlock Bend Landfill
1st Semiannual 2023 Event

Parameter	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Fluoride	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MCL/GWPS	0.006	0.01	2	0.004	0.005	0.1	0.006 (5)	1.3 (1)	4	0.015 (1)	0.002	0.1 (2)	0.05	0.10 (3)	0.002	0.086 (5)	5.0 (4)
MW-4R	<0.004	<0.002	0.0145	<0.002	<0.001	<0.002	<0.002	<0.005	<0.15	<0.002	<0.0002	0.00417	<0.002	<0.002	<0.002	<0.005	<0.025
MW-01	<0.004	<0.002	**0.0244**	<0.002	<0.001	0.00204	<0.002	<0.005	<0.15	<0.002	**0.000312**	<0.002	<0.002	<0.002	<0.002	<0.005	<0.025
MW-1A	<0.004	<0.002	**0.147**	<0.002	<0.001	<0.002	<0.002	<0.005	<0.15	<0.002	<0.0002	**0.00284**	<0.002	<0.002	<0.002	<0.005	<0.025
MW-02	<0.004	<0.002	**0.0697**	**0.00264**	**0.00235**	<0.002	<0.002	<0.005	<0.15	<0.002	<0.0002	**0.0375**	<0.002	<0.002	<0.002	<0.005	**0.337**
MW-03	<0.004	<0.002	**0.0203**	<0.002	<0.001	<0.002	<0.002	<0.005	<0.15	<0.002	**0.000272**	<0.002	<0.002	<0.002	<0.002	<0.005	<0.025
MW-05	<0.004	<0.002	**0.0092**	<0.002	<0.001	<0.002	<0.002	<0.005	<0.15	<0.002	<0.0002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.025

Notes:

Bold value indicates parameter detected above the reporting limit of the laboratory.

Shaded value indicates result is a calculated intrawell SSI for the current data.

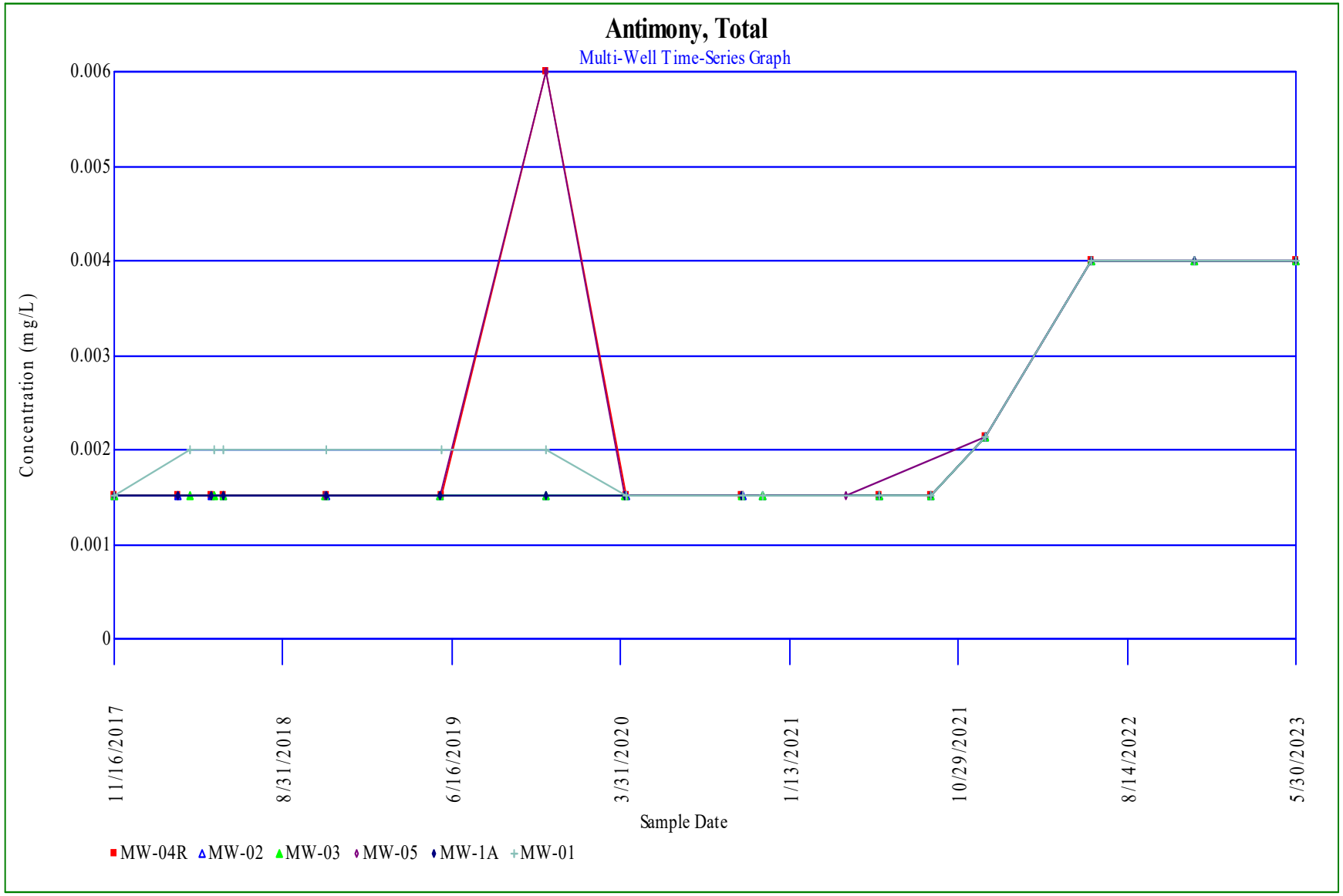
[1] - Action Level concentration from TN Division of Water Resources Rule 0400-45-01-.33.

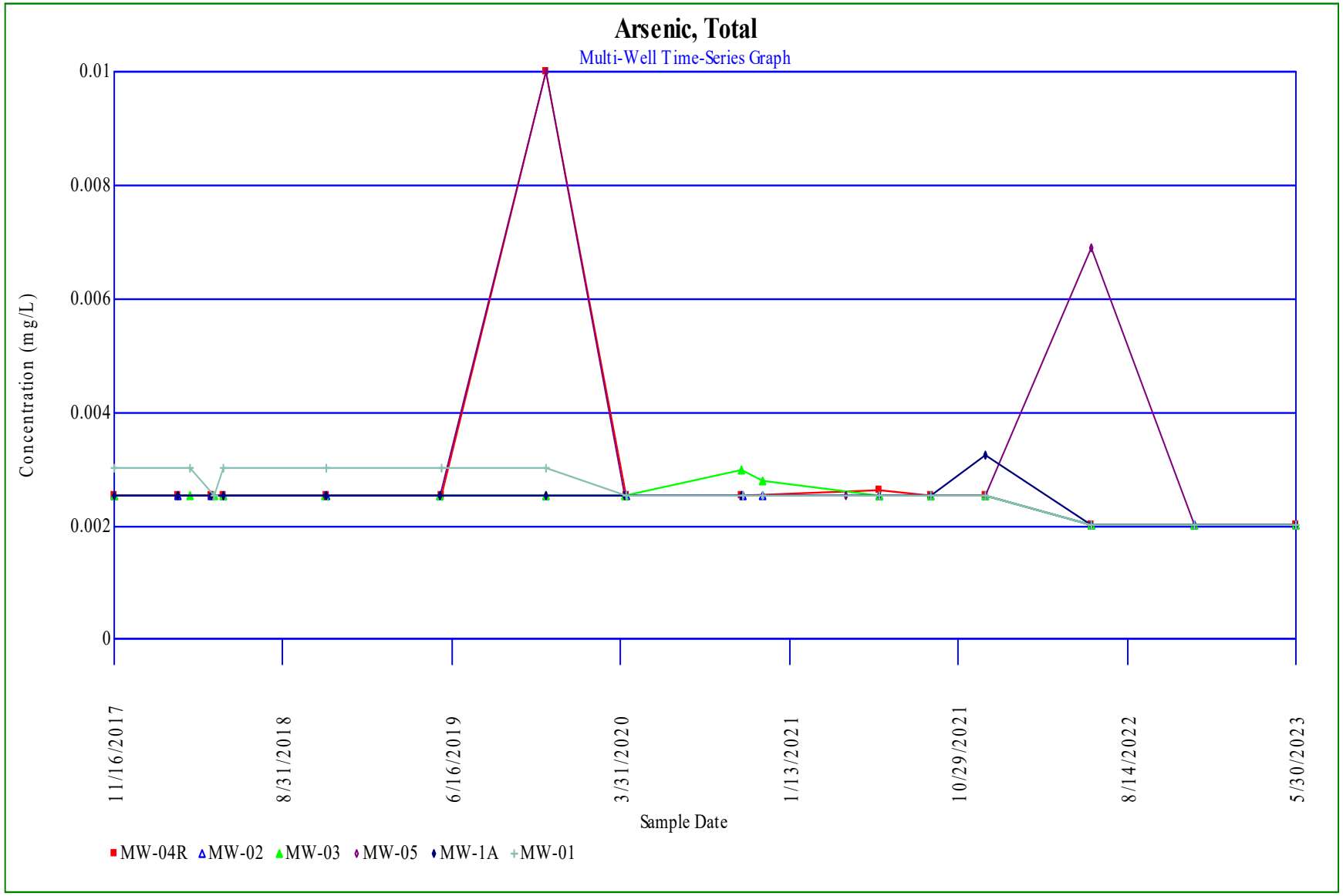
[2] - MCL value obtained from TN Division of Water Resources Rule 0400-45-01-.06.

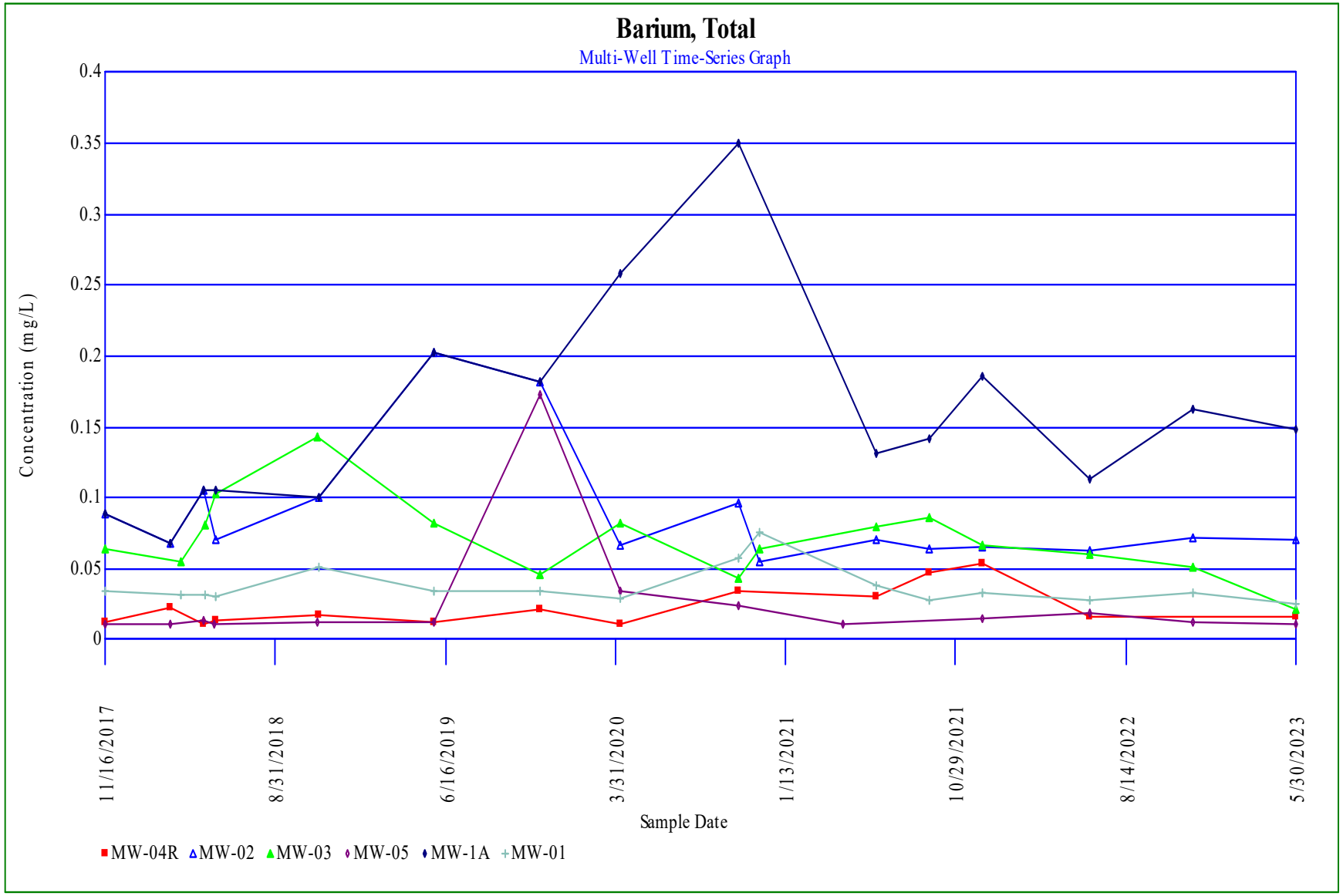
[3] - MCL value obtained from TN Division of Water Resources Rule 0400-45-01-.12 (EPA Secondary Drinking Water Standard).

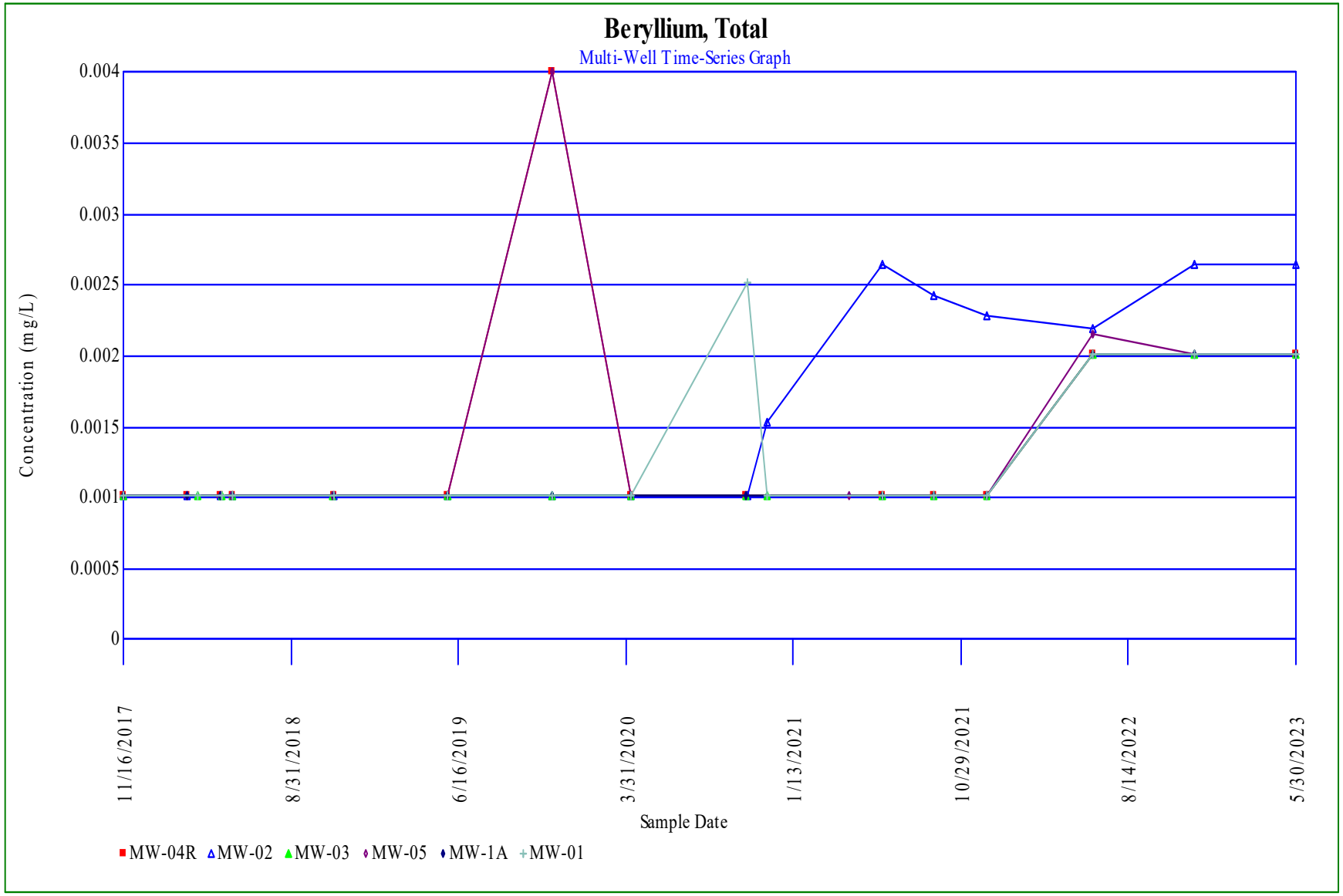
[4] -GWPS referenced value obtained from EPA secondary drinking water standards.

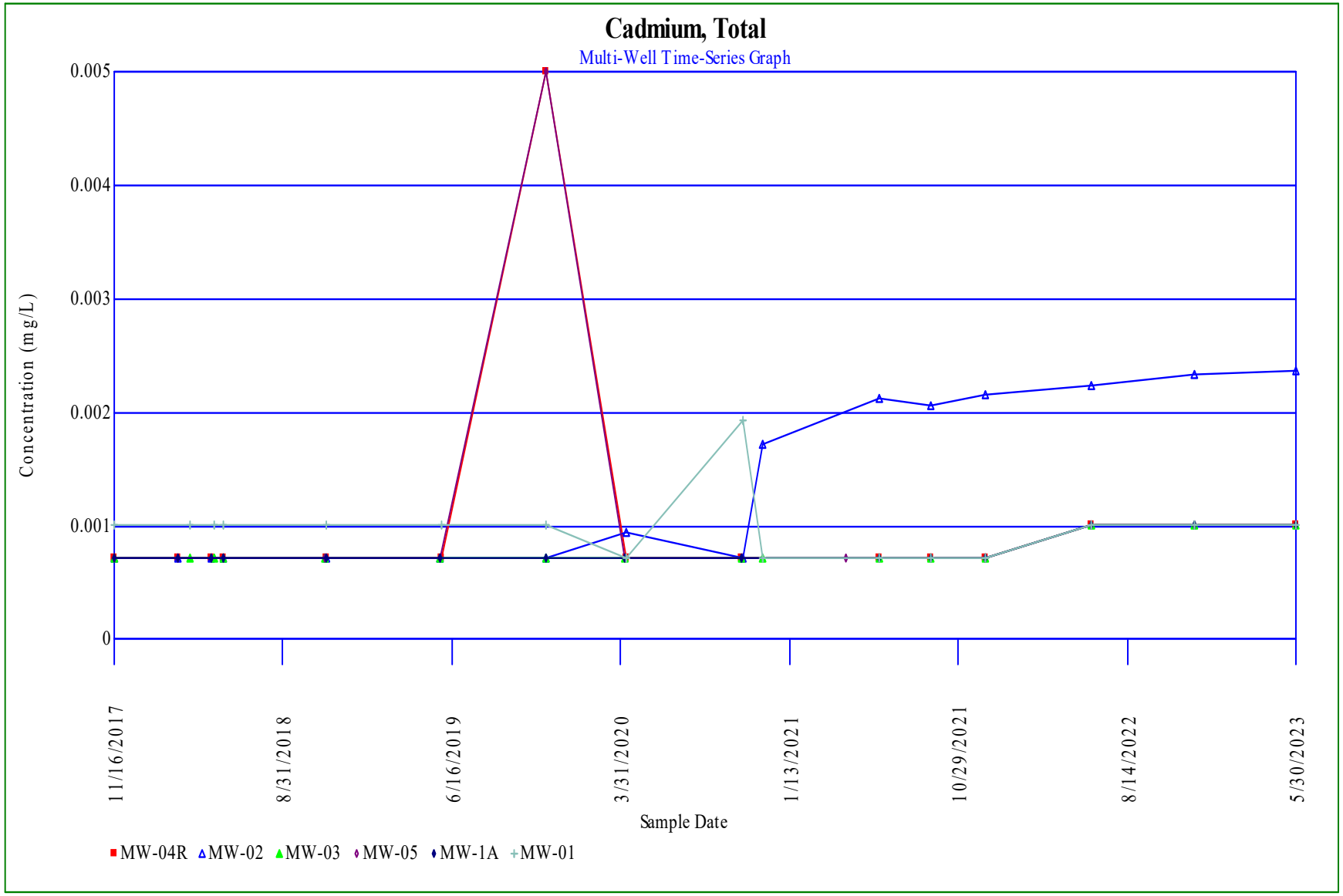
[5] -GWPS referenced value obtained from EPA Regional Screening Level (THQ= 1) for tapwater.

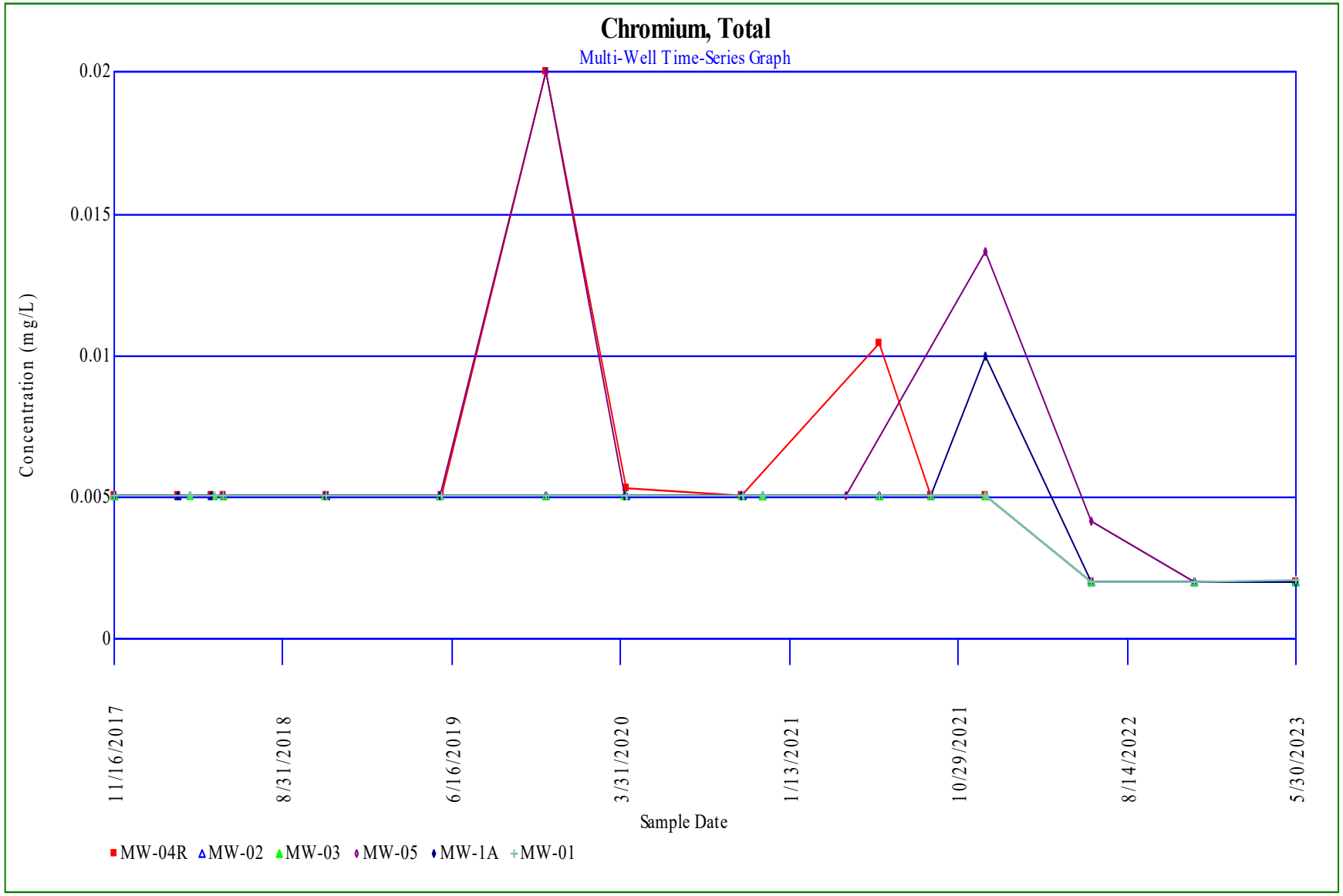

Antimony, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.006
0.005
0.004
0.003
0.002
0.001
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

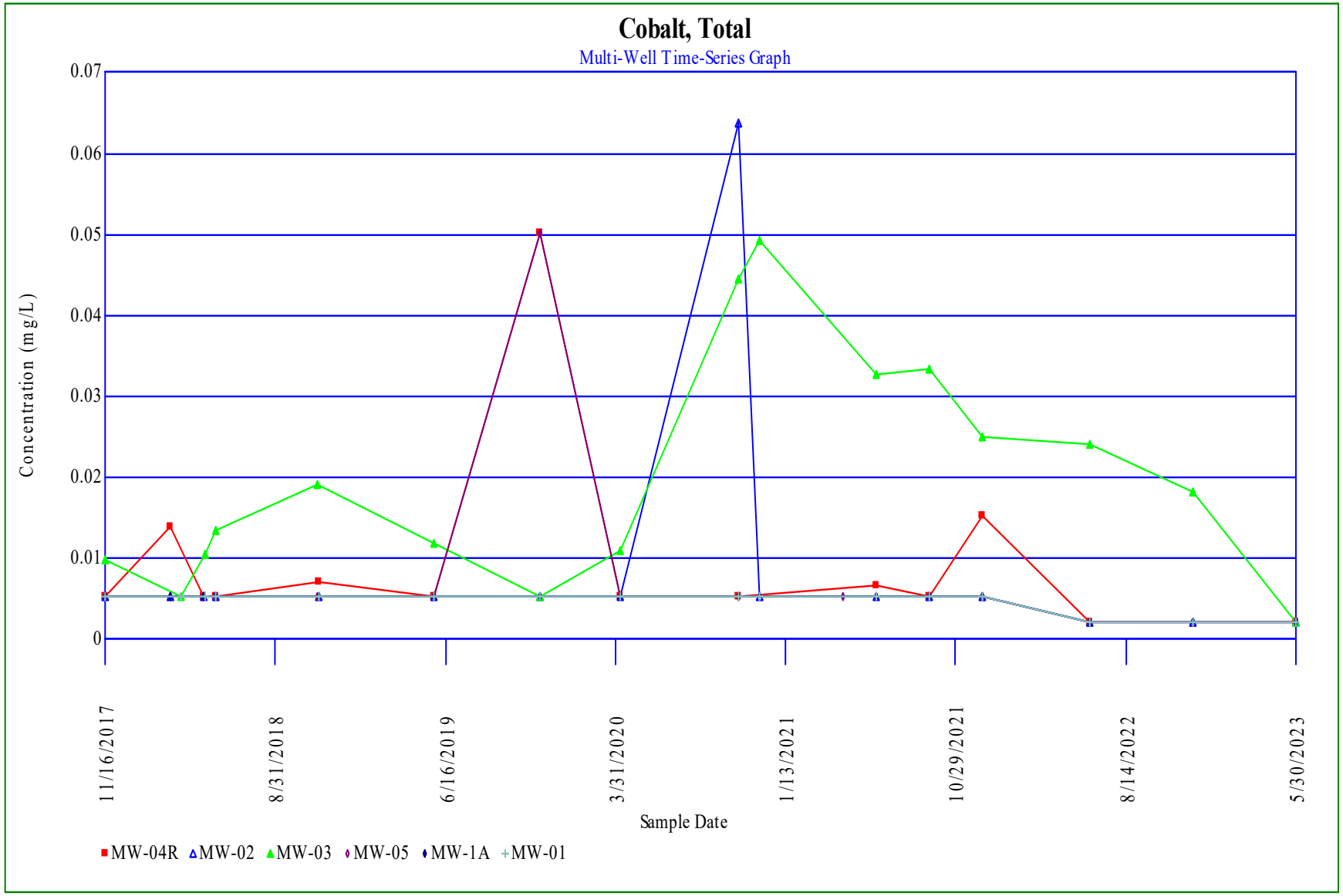

Arsenic, Total
Multi-Well Time-Series Graph
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

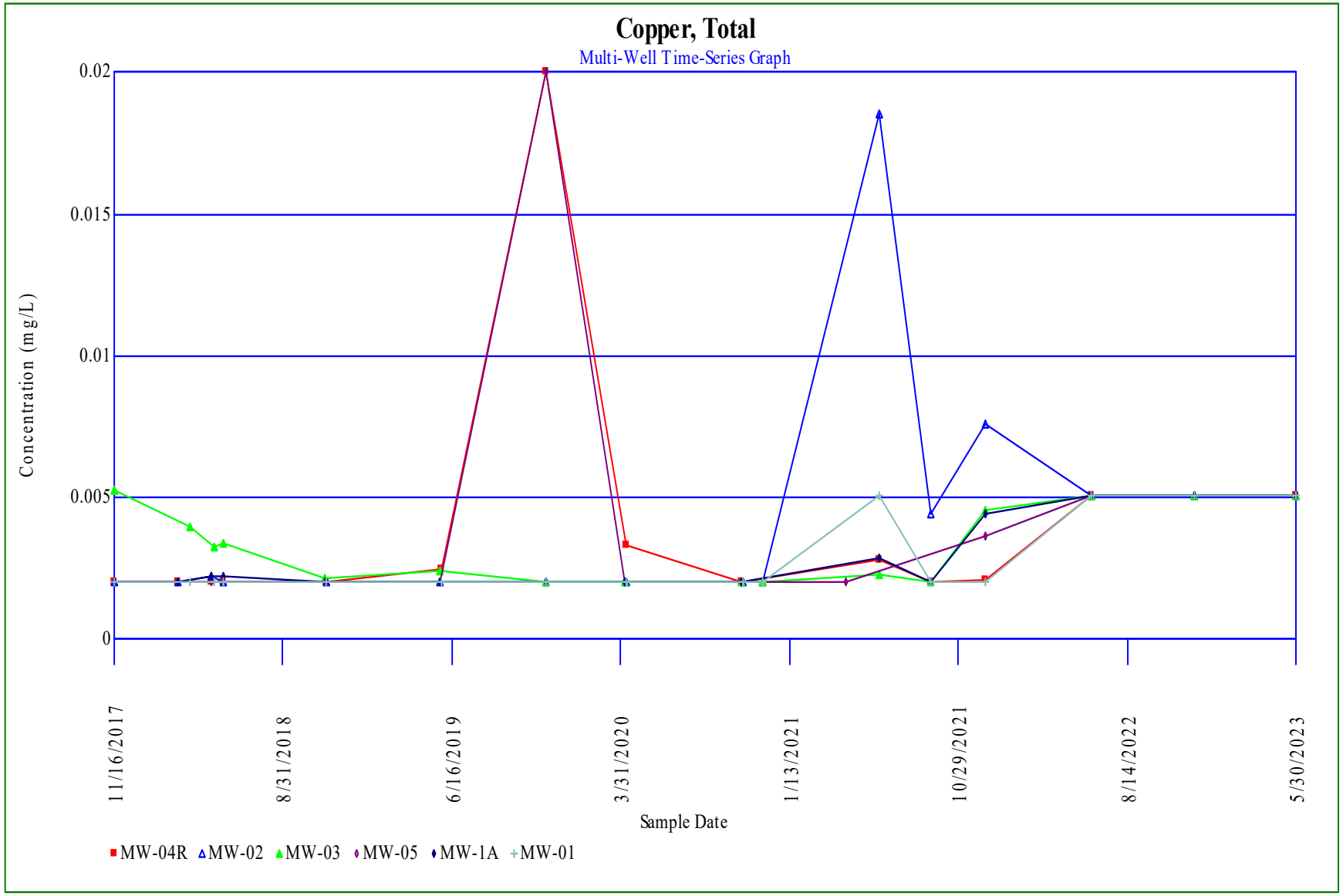

Barium, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

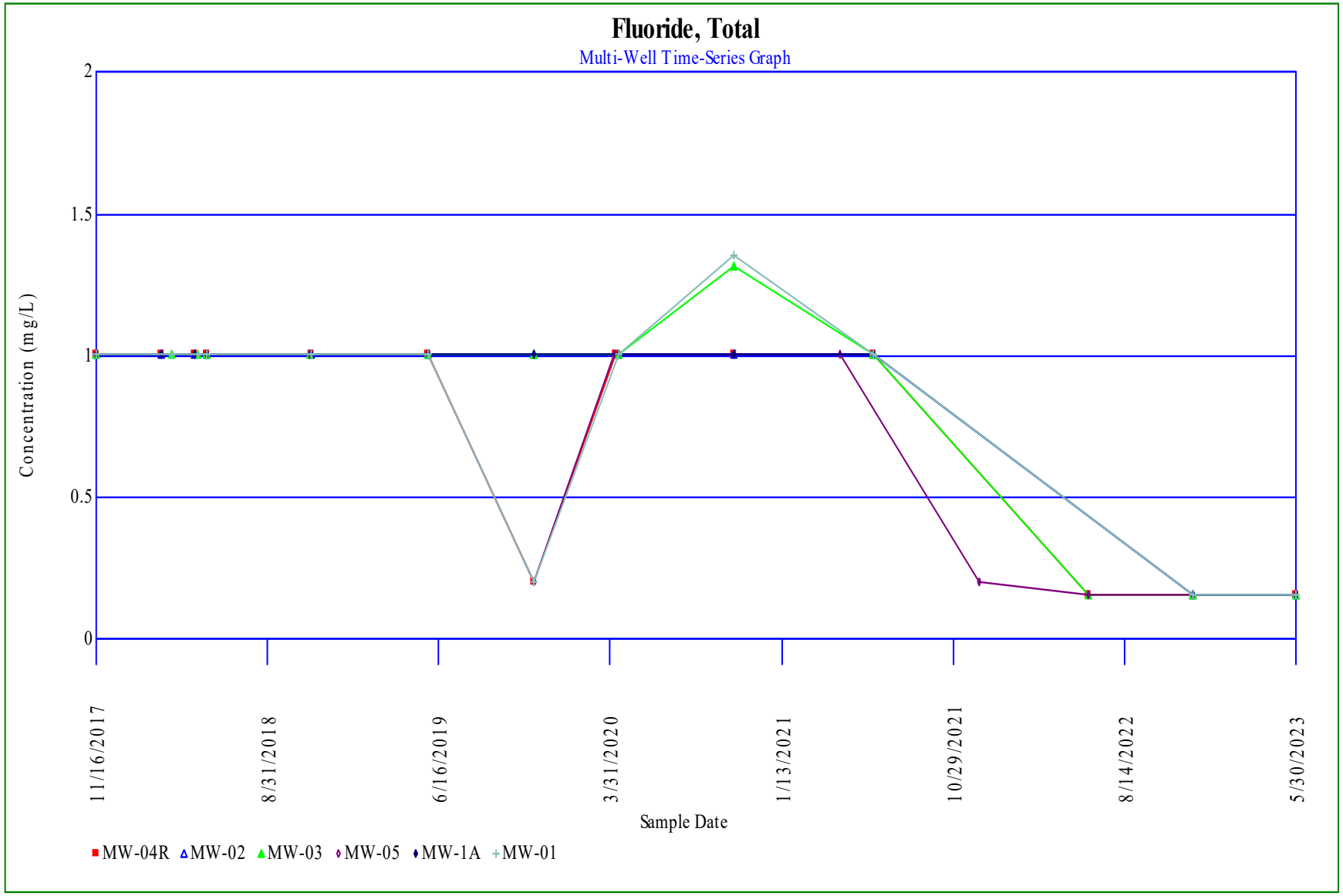

Beryllium, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

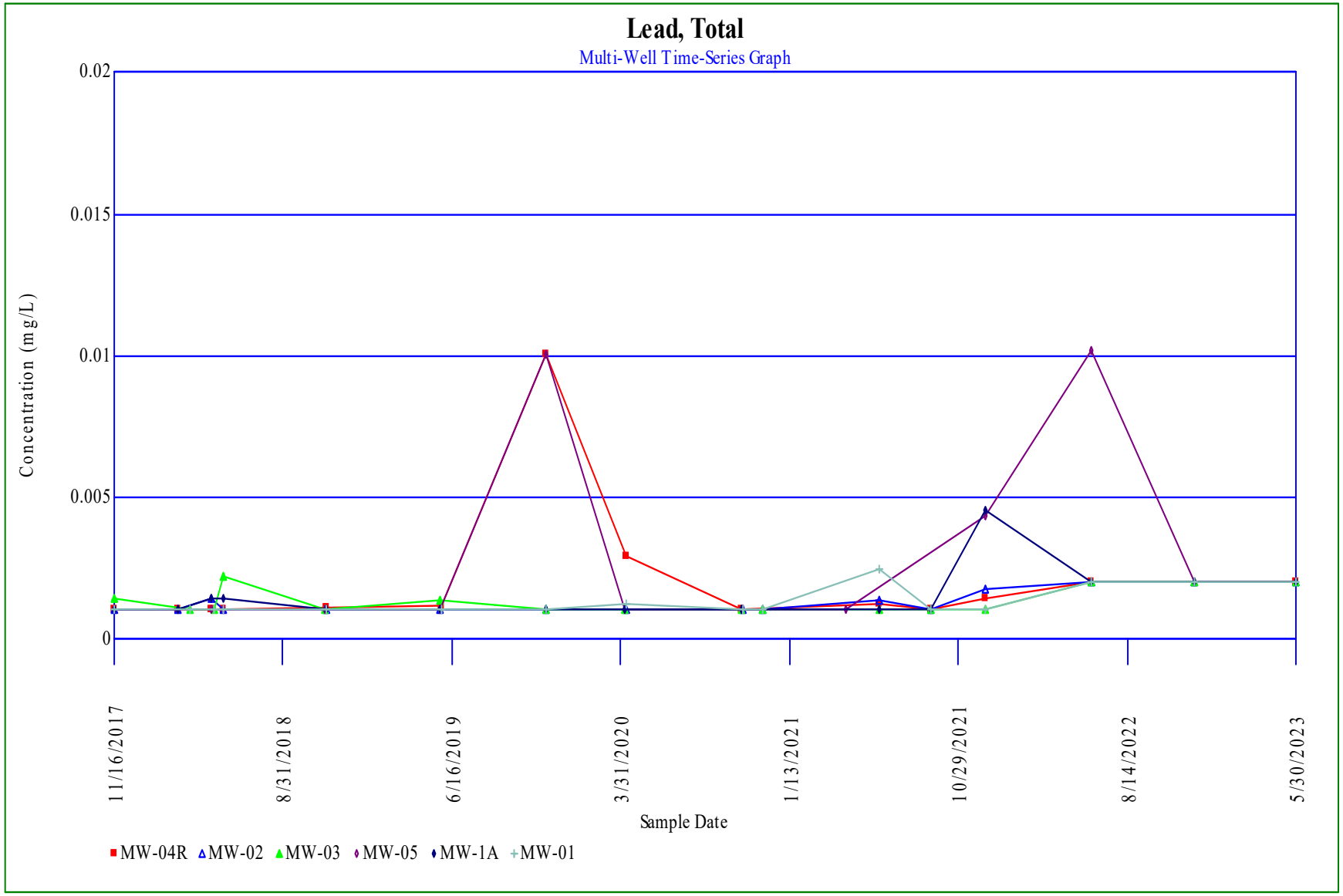

Cadmium, Total
Multi-Well Time-Series Graph
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

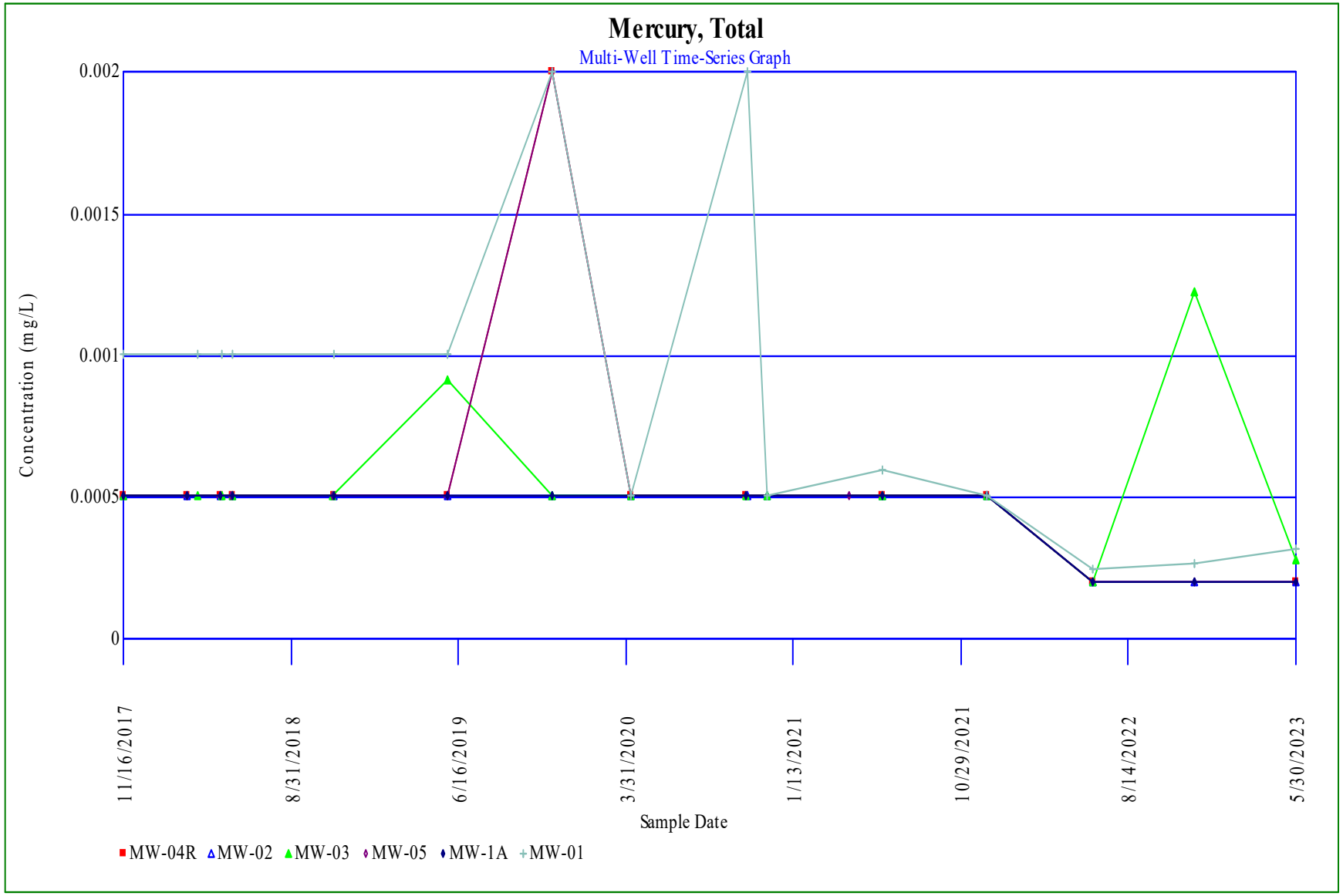

Chromium, Total
Multi-Well Time-Series Graph
0.02
0.015
0.01
0.005
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

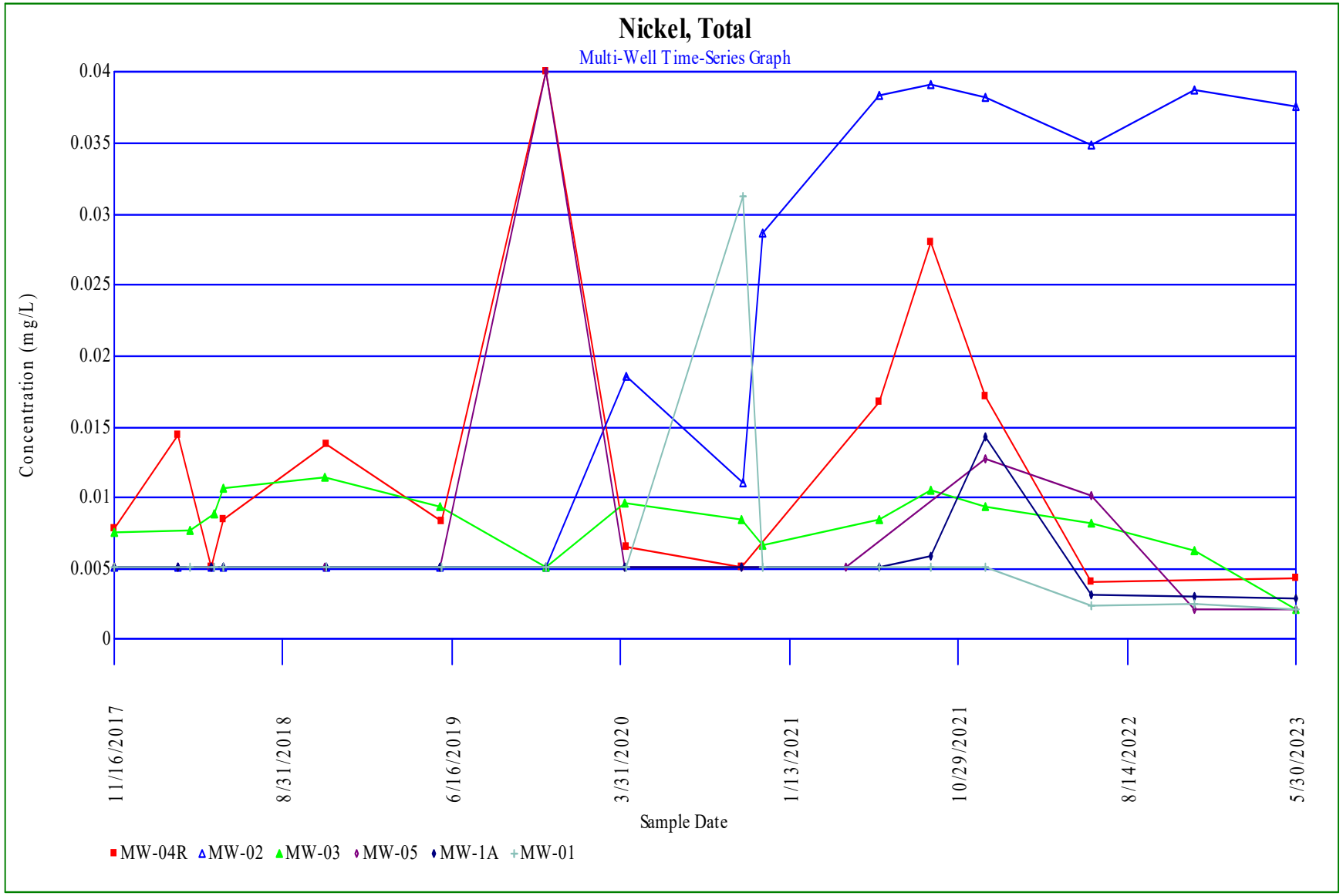

Cobalt, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

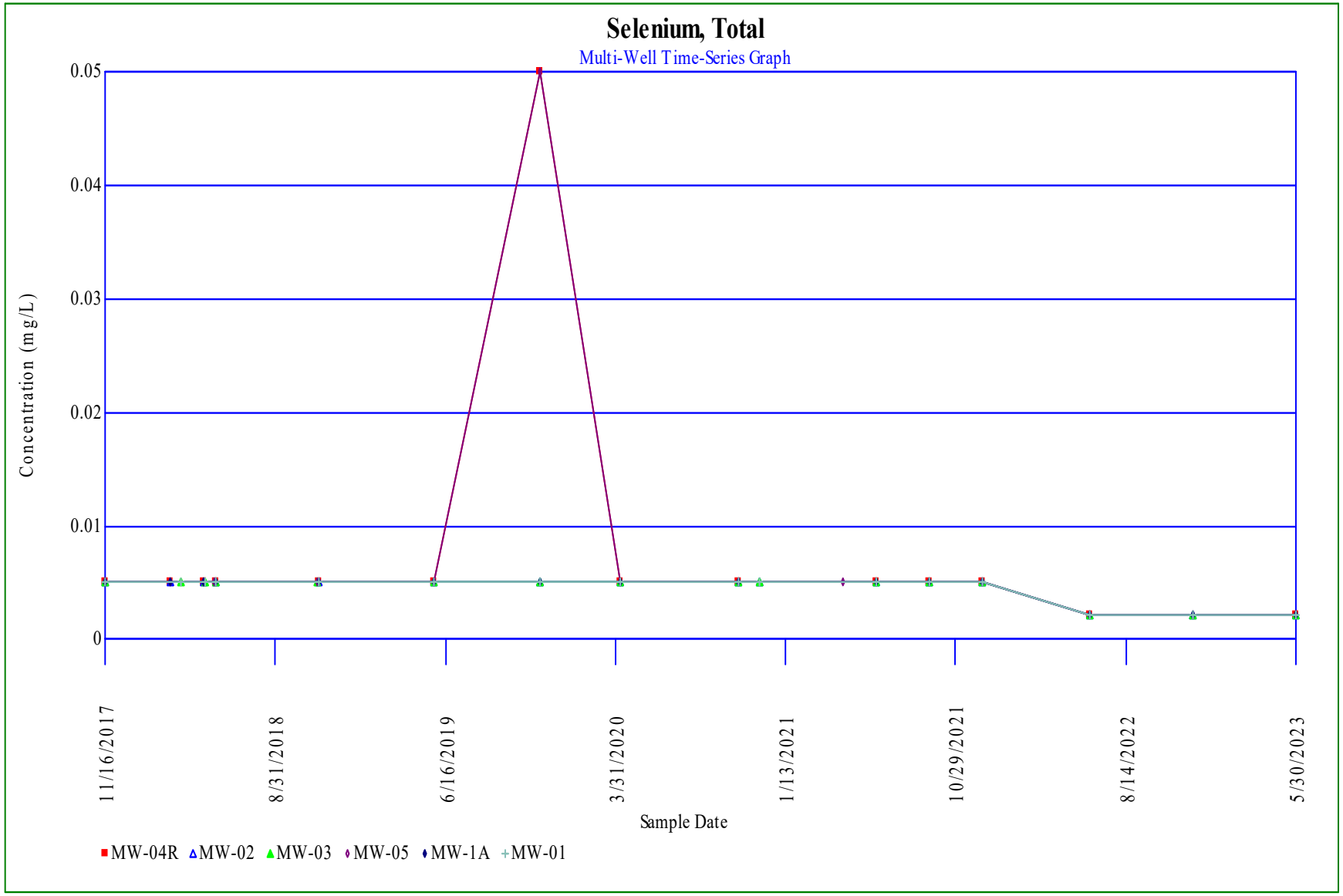

Copper, Total
Multi-Well Time-Series Graph
0.02
0.015
0.01
0.005
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

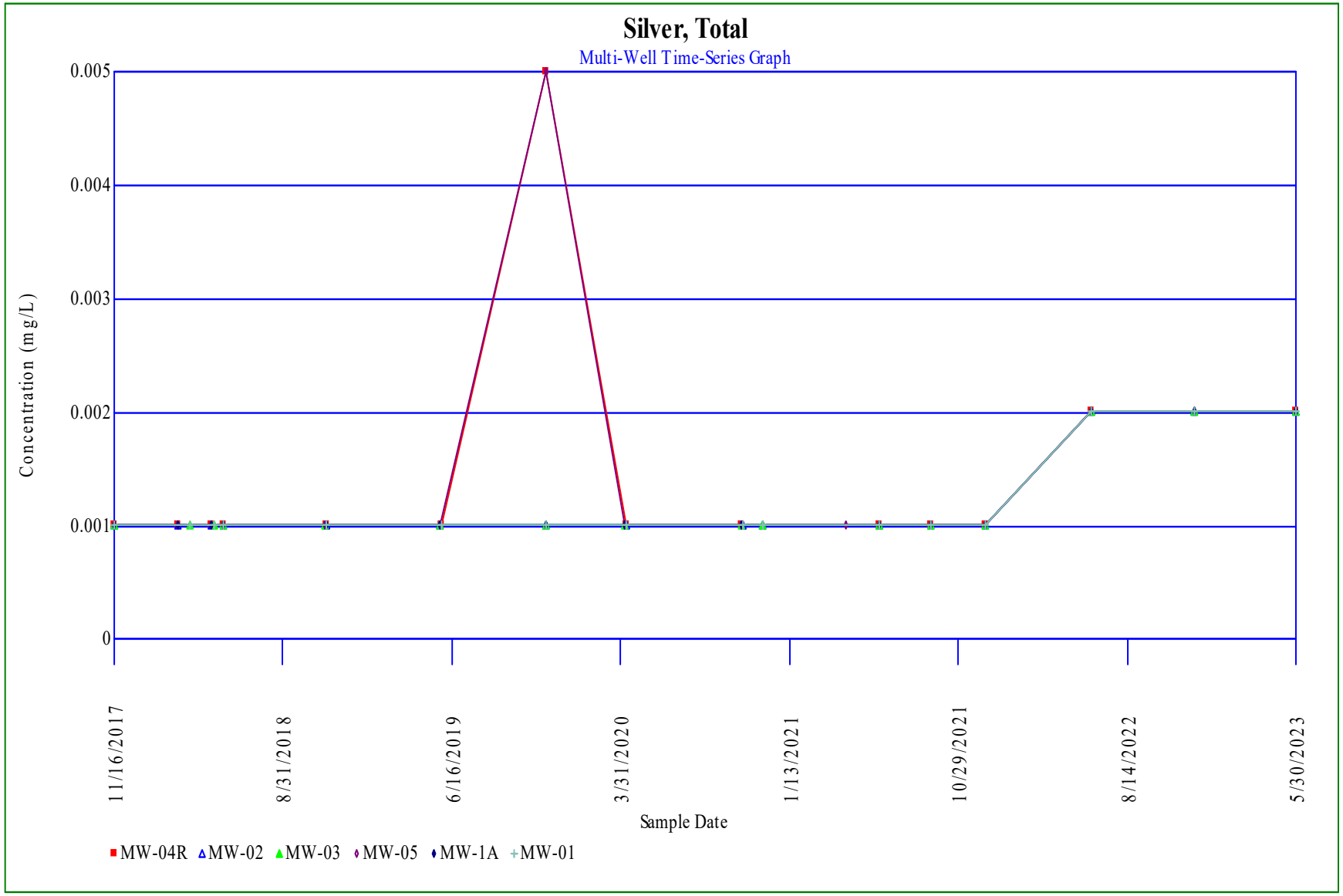

Fluoride, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
2
1.5
1
0.5
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

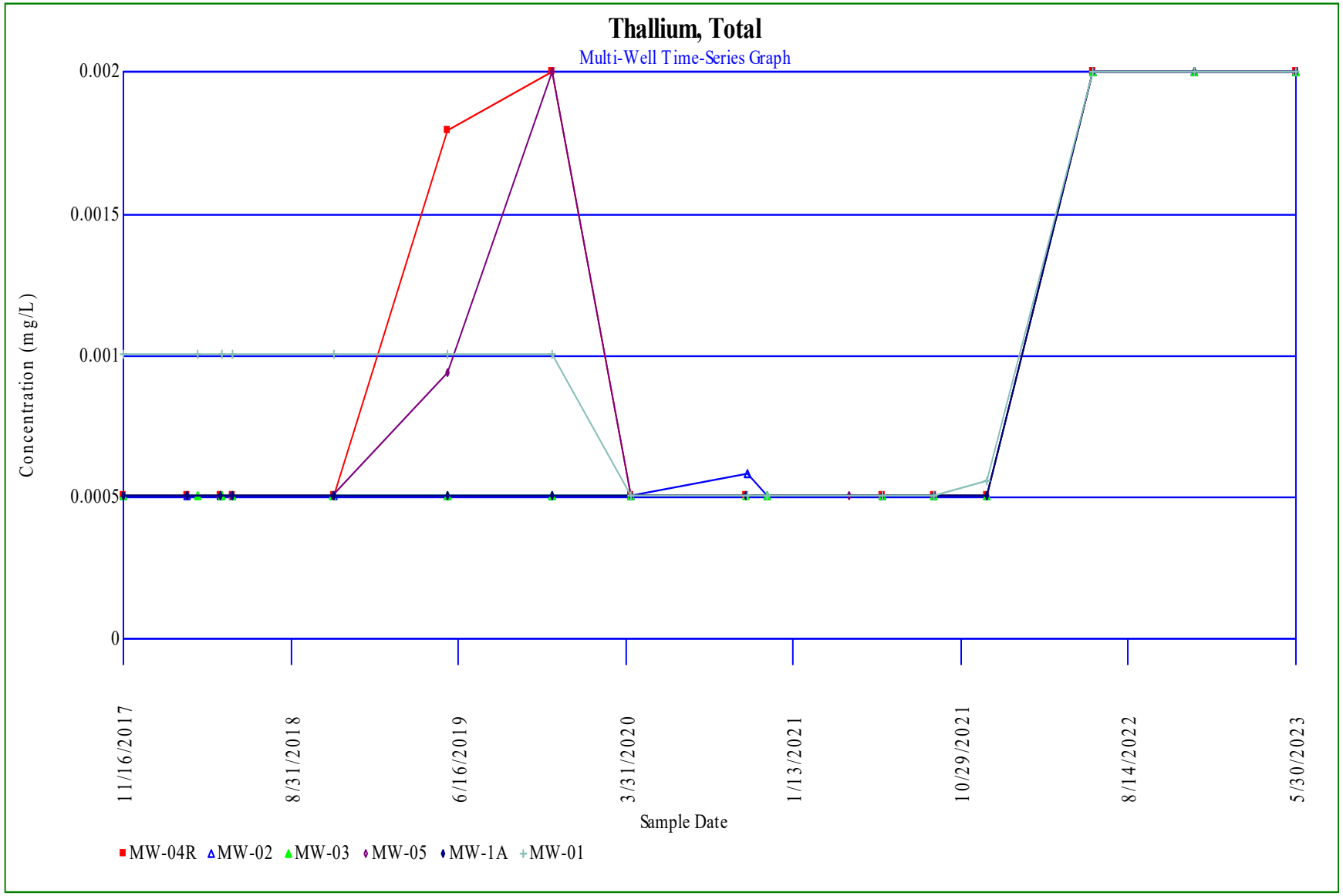

Lead, Total
Multi-Well Time-Series Graph
0.02
0.015
0.01
0.005
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

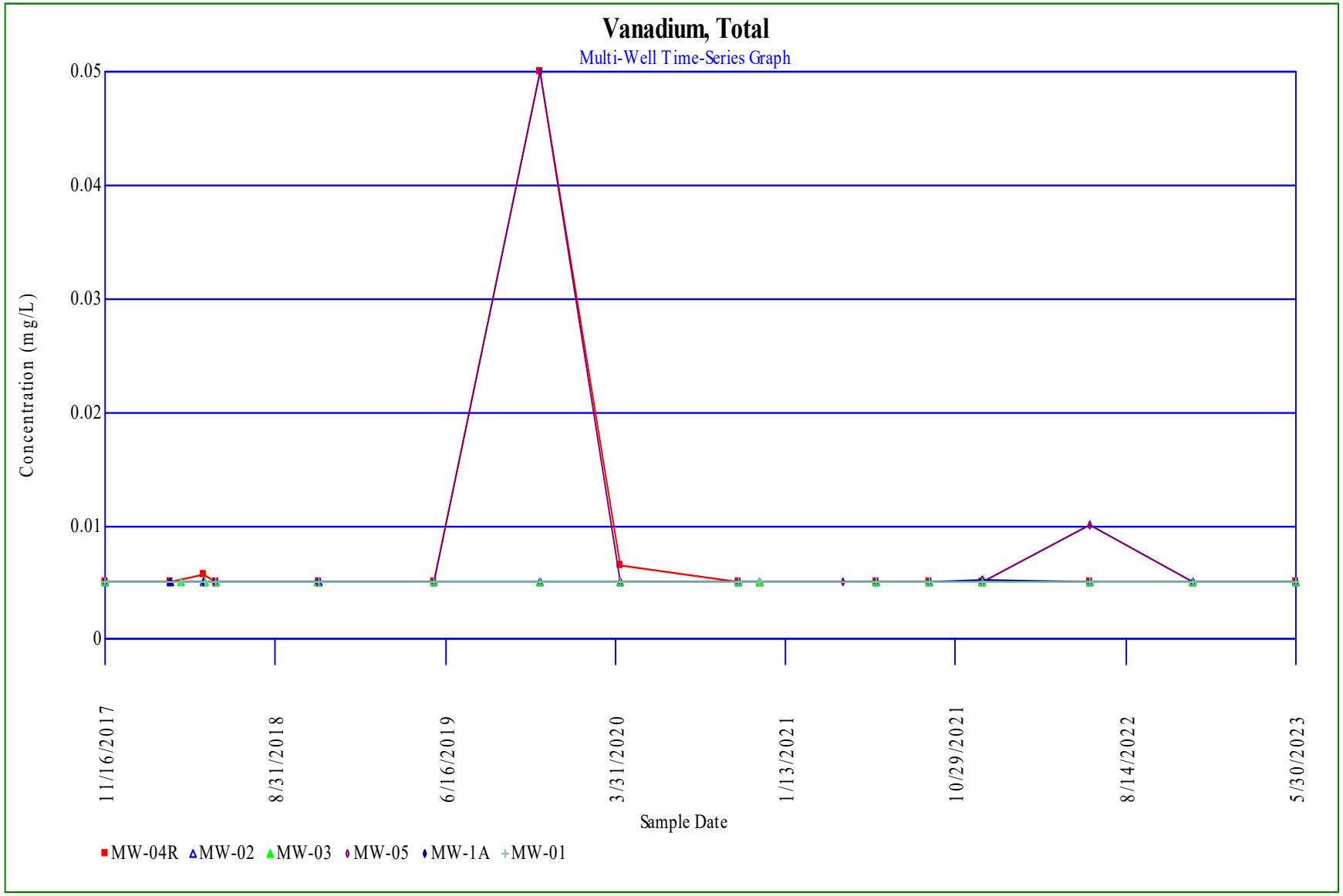

Mercury, Total
Multi-Well Time-Series Graph
0.002
0.0015
0.001
0.0005
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

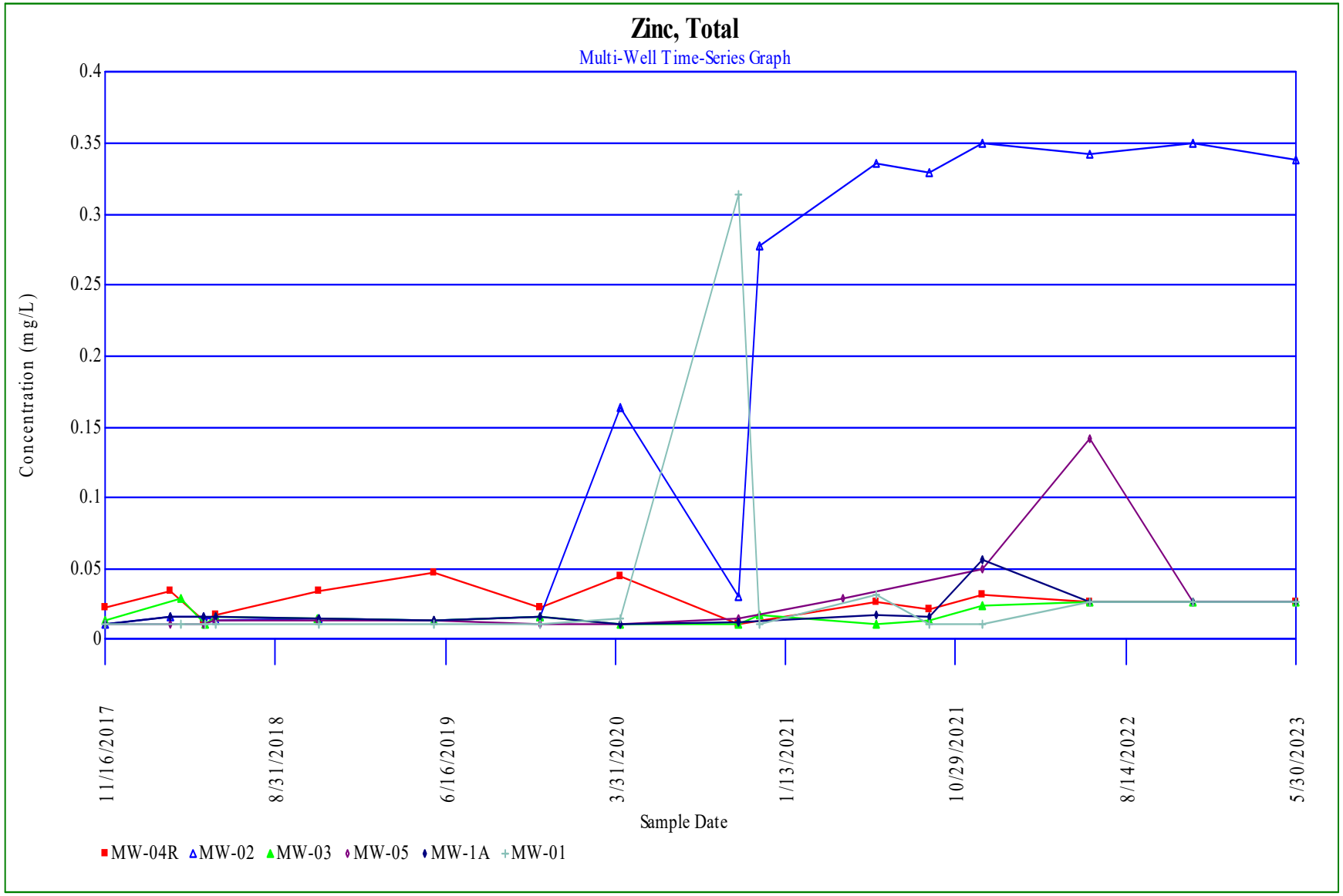

Nickel, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

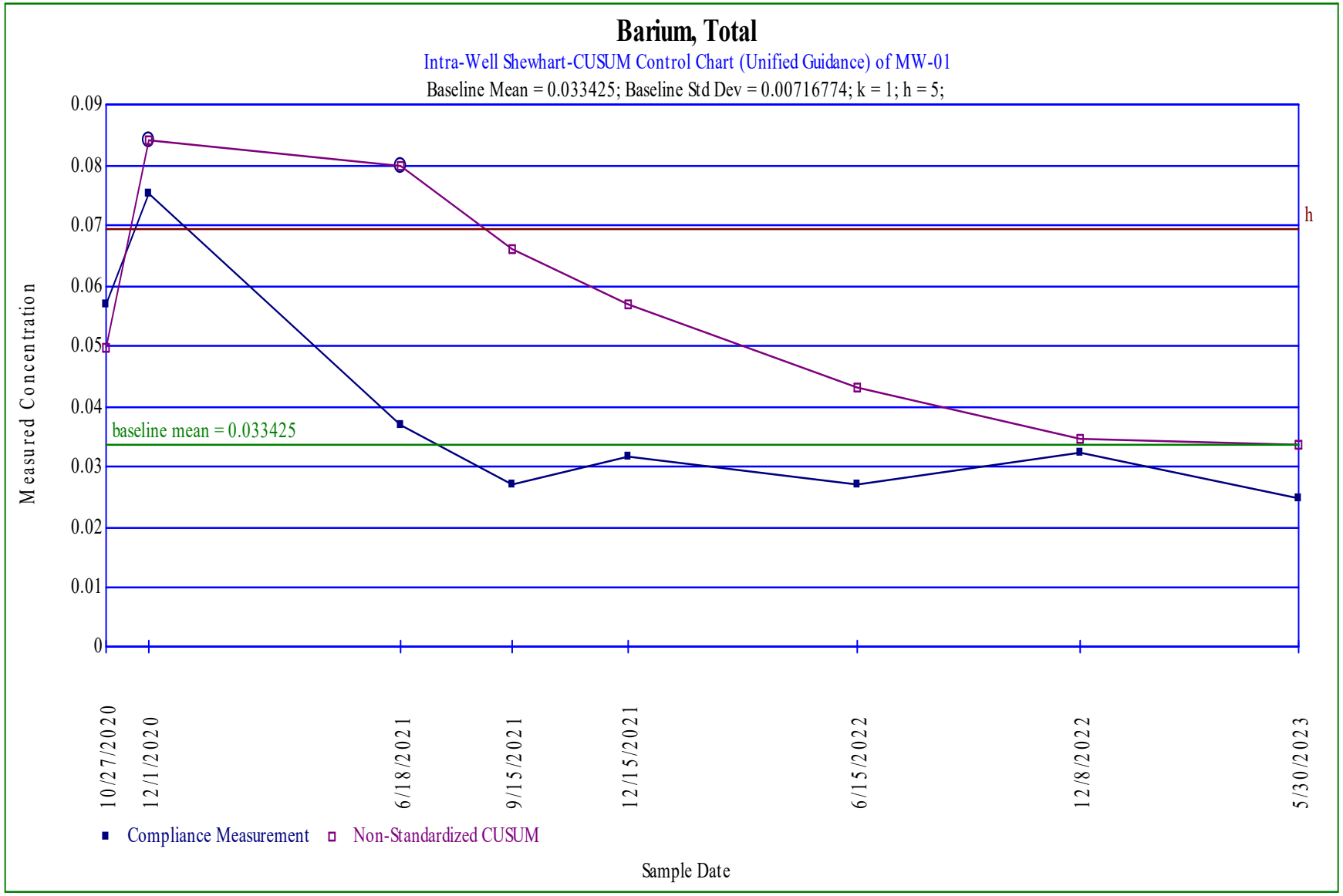

Selenium, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.05
0.04
0.03
0.02
0.01
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

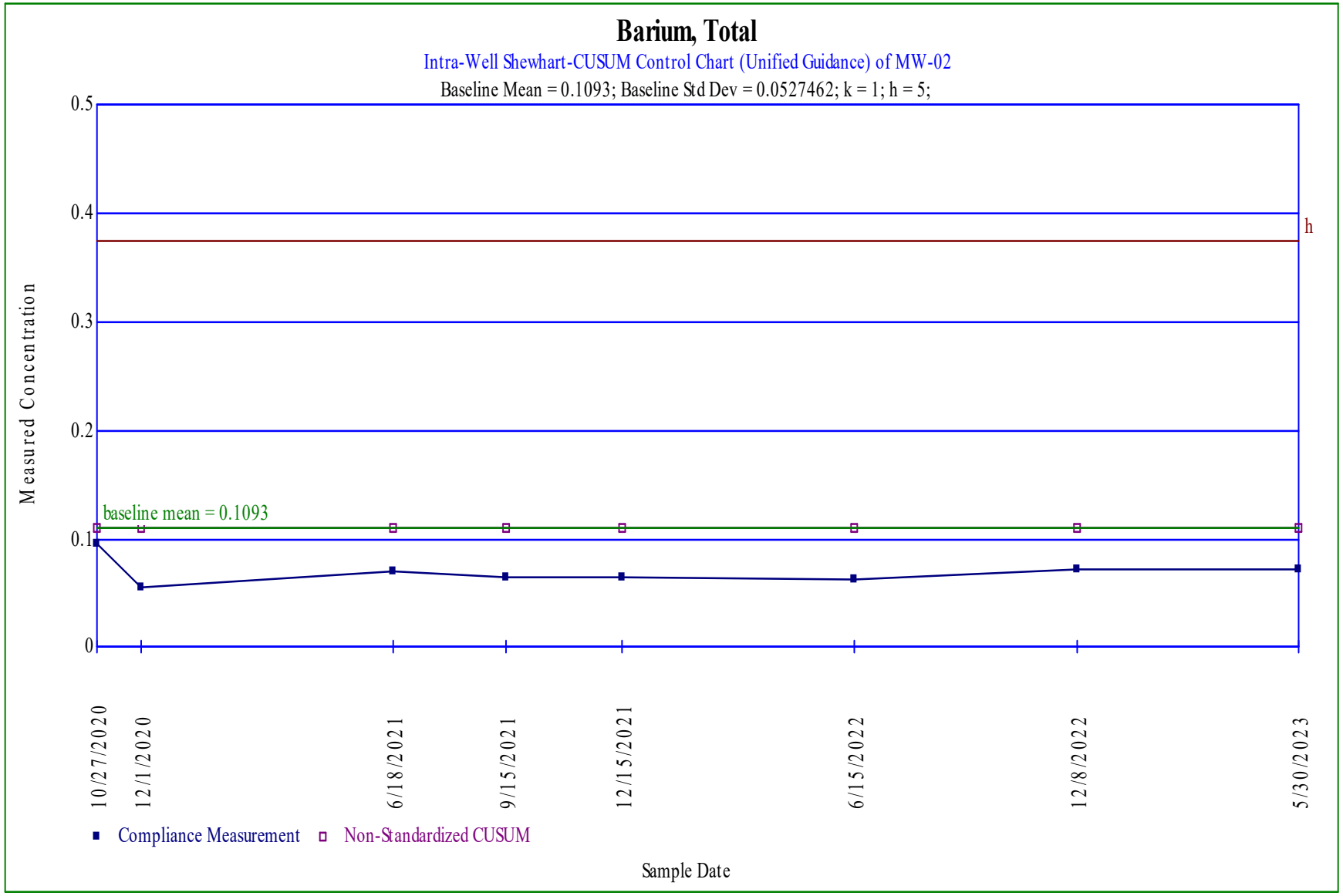

Silver, Total
Multi-Well Time-Series Graph
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

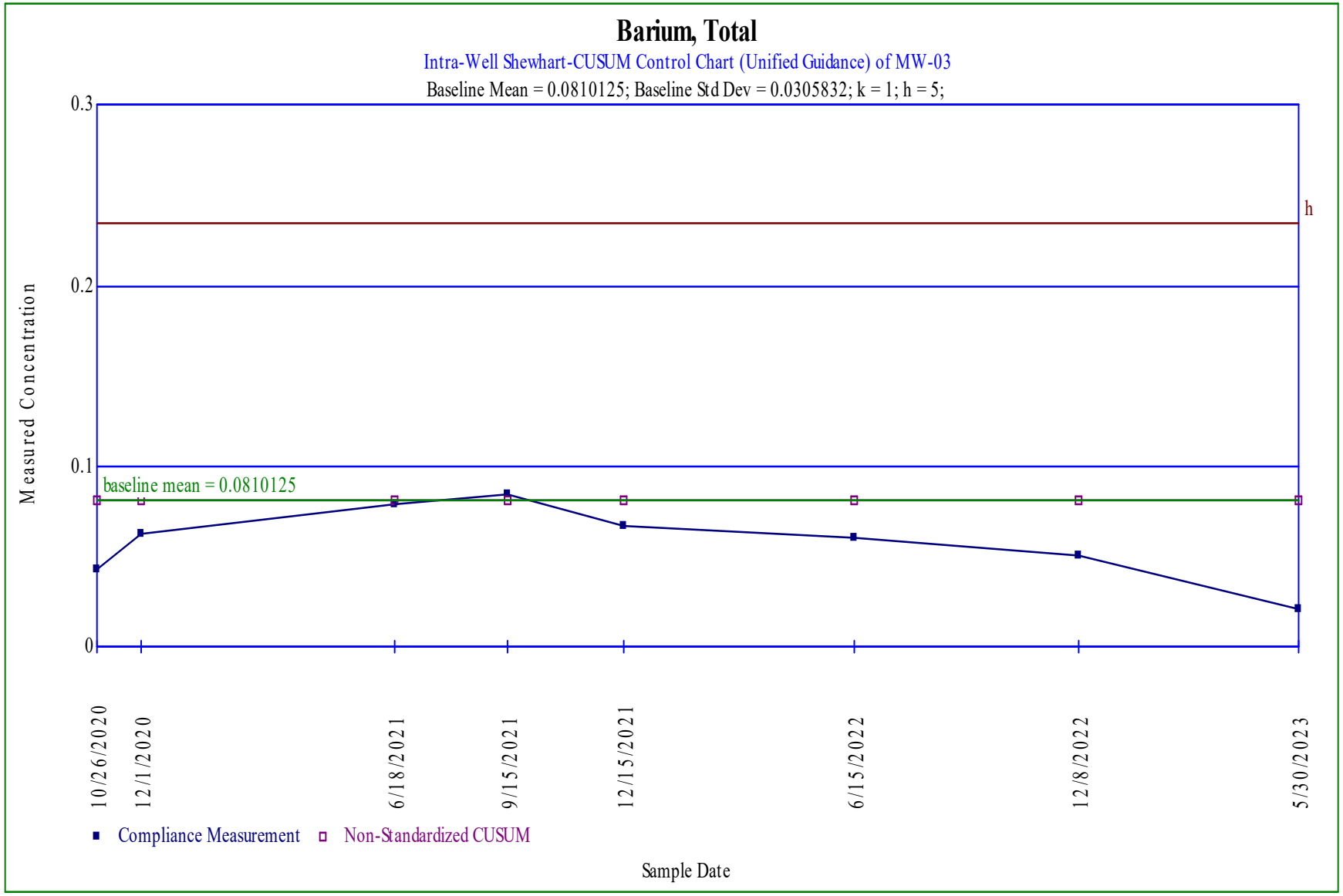

Thallium, Total
Multi-Well Time-Series Graph
0.002
0.0015
0.001
0.0005
0
Concentration (mg/L)
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

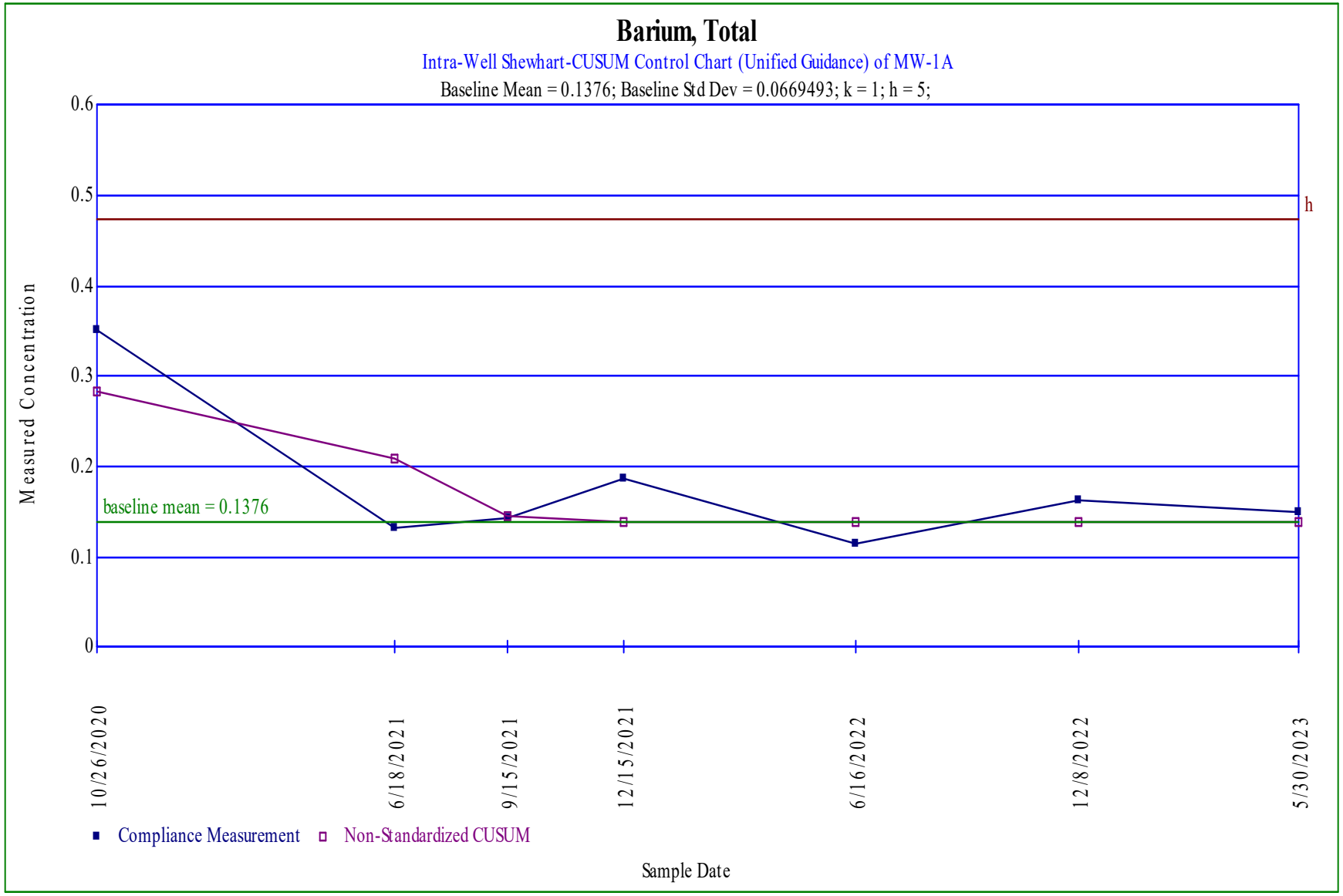

Vanadium, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.05
0.04
0.03
0.02
0.01
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01

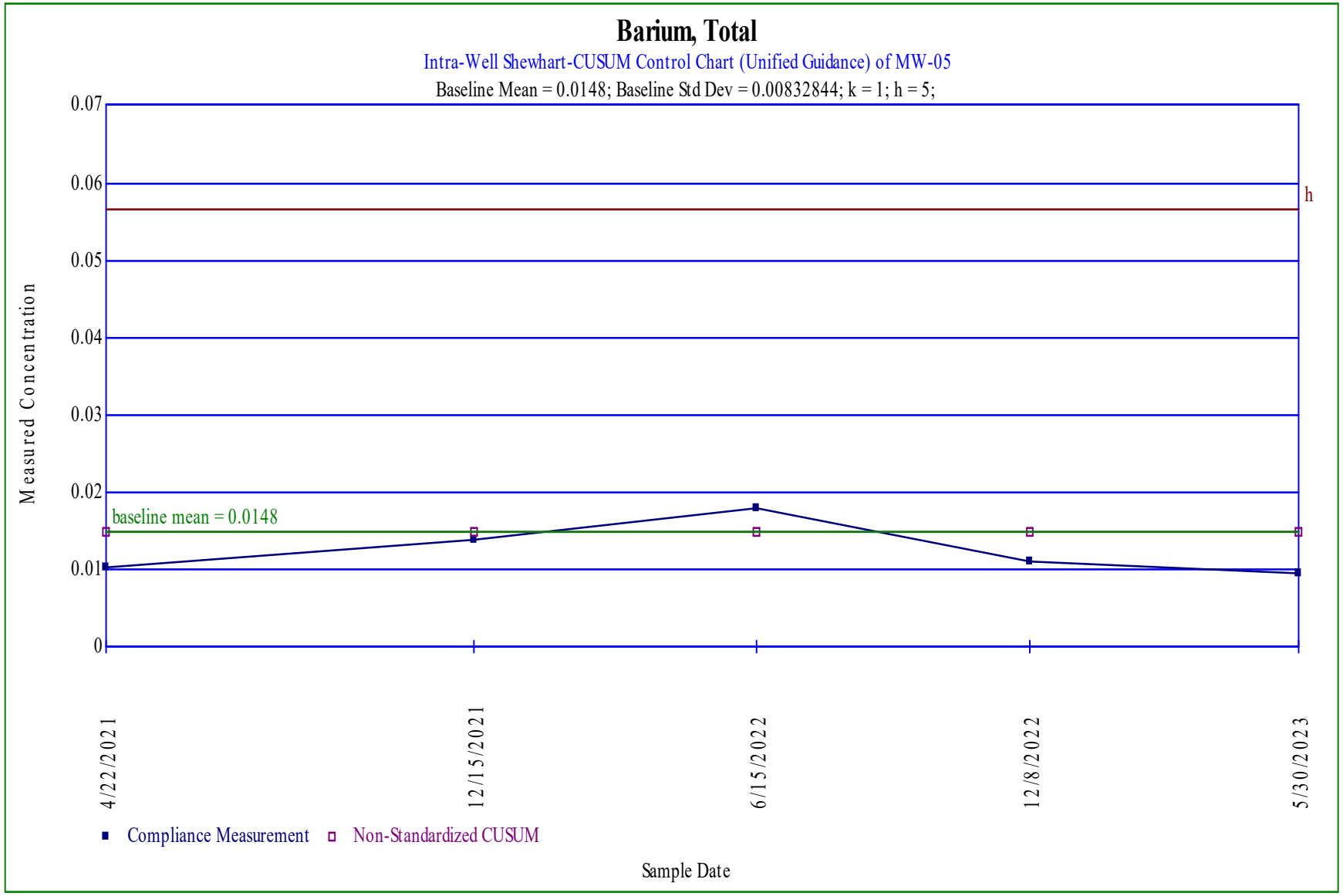

Zinc, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
11/16/2017
8/31/2018
6/16/2019
3/31/2020
1/13/2021
10/29/2021
8/14/2022
5/30/2023
Sample Date
MW-04R
MW-02
MW-03
MW-05
MW-1A
MW-01


Barium, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-01
Baseline Mean = 0.033425; Baseline Std Dev = 0.00716774; k = 1; h = 5;
Measured Concentration
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
h
baseline mean = 0.033425
10/27/2020
12/1/2020
6/18/2021
9/15/2021
12/15/2021
6/15/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date


Barium, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-02
Baseline Mean = 0.1093; Baseline Std Dev = 0.0527462; k = 1; h = 5;
Measured Concentration
0.5
0.4
0.3
0.2
0.1
0
h
baseline mean = 0.1093
10/27/2020
12/1/2020
6/18/2021
9/15/2021
12/15/2021
6/15/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date


Barium, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-03
Baseline Mean = 0.0810125; Baseline Std Dev = 0.0305832; k = 1; h = 5;
0.3
0.2
0.1
0
h
baseline mean = 0.0810125
Measured Concentration
10/26/2020
12/1/2020
6/18/2021
9/15/2021
12/15/2021
6/15/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date


Barium, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-1A
Baseline Mean = 0.1376; Baseline Std Dev = 0.0669493; k = 1; h = 5;
Measured Concentration
0.6
0.5
0.4
0.3
0.2
0.1
0
h
baseline mean = 0.1376
10/26/2020
6/18/2021
9/15/2021
12/15/2021
6/16/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date


Barium, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-05
Baseline Mean = 0.0148; Baseline Std Dev = 0.00832844; k = 1; h = 5;
Measured Concentration
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
h
baseline mean = 0.0148
4/22/2021
12/15/2021
6/15/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-02
Parameter: Beryllium, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.001
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/16/2017	<0.001
	3/7/2018	<0.001
	5/3/2018	<0.001
	5/23/2018	<0.001
	11/14/2018	<0.001
	5/29/2019	<0.001
	11/26/2019	<0.001
	4/10/2020	<0.001

Date	Count	Mean	Significant
5/30/2023	**1**	**0.00264**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-02
Parameter: Cadmium, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 87.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.000938
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/16/2017	<0.0007
	3/7/2018	<0.0007
	5/3/2018	<0.0007
	5/23/2018	<0.0007
	11/14/2018	<0.0007
	5/29/2019	<0.0007
	11/26/2019	<0.0007
	4/10/2020	0.000938

Date	Count	Mean	Significant
5/30/2023	**1**	**0.00235**	**TRUE**

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-01
Parameter: Mercury, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.002
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/17/2017	<0.001
	3/26/2018	<0.001
	5/7/2018	<0.001
	5/23/2018	<0.001
	11/14/2018	<0.001
	5/30/2019	<0.001
	11/26/2019	<0.002
	4/10/2020	<0.0005

Date	Count	Mean	Significant
5/30/2023	1	0.000312	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-03
Parameter: Mercury, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 87.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.00091
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/16/2017	<0.0005
	3/26/2018	<0.0005
	5/7/2018	<0.0005
	5/23/2018	<0.0005
	11/13/2018	<0.0005
	5/29/2019	0.00091
	11/26/2019	<0.0005
	4/9/2020	<0.0005

Date	Count	Mean	Significant
5/30/2023	1	0.000272	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-1A
Parameter: Nickel, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 100%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.005
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/16/2017	<0.005
	3/7/2018	<0.005
	5/3/2018	<0.005
	5/23/2018	<0.005
	11/14/2018	<0.005
	5/29/2019	<0.005
	11/26/2019	<0.005
	4/9/2020	<0.005

Date	Count	Mean	Significant
5/30/2023	1	0.00284	FALSE

Non-Parametric Prediction Interval

Intra-Well Comparison for MW-02
Parameter: Nickel, Total
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

Total Percent Non-Detects = 87.5%
Future Samples (k) = 1
Recent Dates = 1
Baseline Measurements (n) = 8
Maximum Baseline Concentration = 0.0184
Confidence Level = 88.9%
False Positive Rate = 11.1%

Baseline Measurements	Date	Value
	11/16/2017	<0.005
	3/7/2018	<0.005
	5/3/2018	<0.005
	5/23/2018	<0.005
	11/14/2018	<0.005
	5/29/2019	<0.005
	11/26/2019	<0.005
	4/10/2020	0.0184

Date	Count	Mean	Significant
5/30/2023	**1**	**0.0375**	**TRUE**

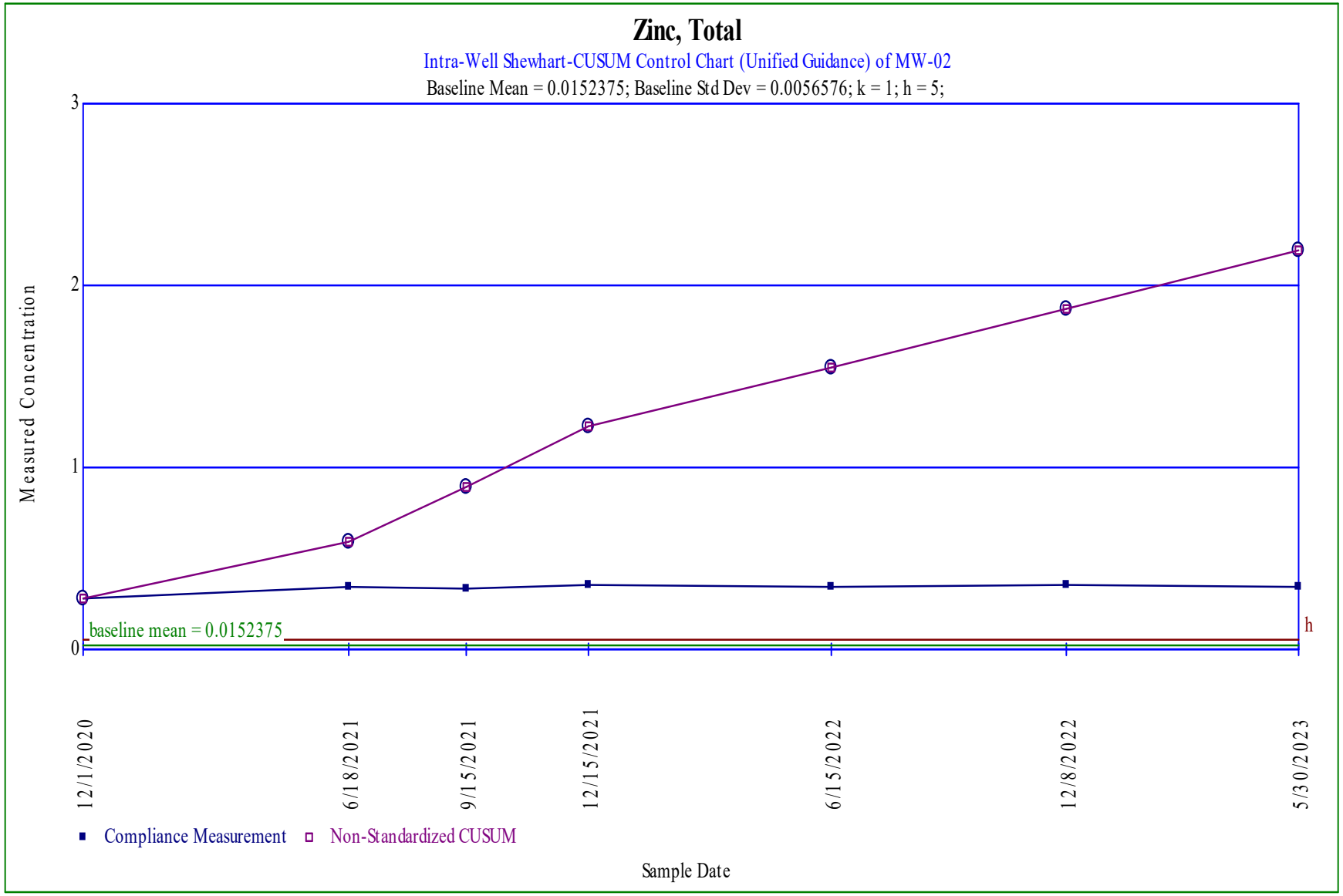

Zinc, Total
Intra-Well Shewhart-CUSUM Control Chart (Unified Guidance) of MW-02
Baseline Mean = 0.0152375; Baseline Std Dev = 0.0056576; k = 1; h = 5;
Measured Concentration
3
2
1
0
baseline mean = 0.0152375
h
12/1/2020
6/18/2021
9/15/2021
12/15/2021
6/15/2022
12/8/2022
5/30/2023
Compliance Measurement
Non-Standardized CUSUM
Sample Date

Table 3
Summary of Additional Parameters Monitored at the
Matlock Bend Phase I Landfill Unit (mg/L)
1st Semiannual 2023 Monitoring Event

Parameter	Calcium	COD	Chloride	Cyanide	Iron	Magnesium	Manganese (dissolved)	Nitrogen (Ammonia)	Nitrogen (Nitrate)	Potassium	Sodium	Sulfate	TDS	TOC
MCL/GWPS	NA	NA	250 [(1)]	0.2	0.3 [(1)]	NA	0.43 [(2)]	NA	10	NA	NA	250 [(1)]	500 [(1)]	NA
MW-4R	**17.9**	<20	<1	<0.005	<0.1	**10.7**	**3.79**	<0.25	<0.1	**2.47**	<2	<5	**121**	<1
MW-01	**37.4**	**24.6**	**15.6**	<0.005	**0.8**	**23.3**	<0.005	<0.25	**0.856**	**2.12**	**8.28**	<5	**213**	<1
MW-1A	**87.7**	<20	**201**	<0.005	<0.1	**34.9**	**0.0483**	<0.25	**6.38**	**47.6**	**107**	**24.8**	**604**	<1
MW-02	**1.81**	<20	**3.71**	<0.005	<0.1	**1.65**	**0.18**	<0.25	**3.27**	**2.86**	**3.69**	<5	**56**	<1
MW-03	**3.66**	<20	**38.8**	<0.005	**0.596**	**1.5**	**9.33**	**2.67**	**0.358**	<2	**3.88**	**32.8**	**183**	**3.7**

[1] -GWPS referenced value obtained from EPA secondary drinking water standards (non-enforceable).

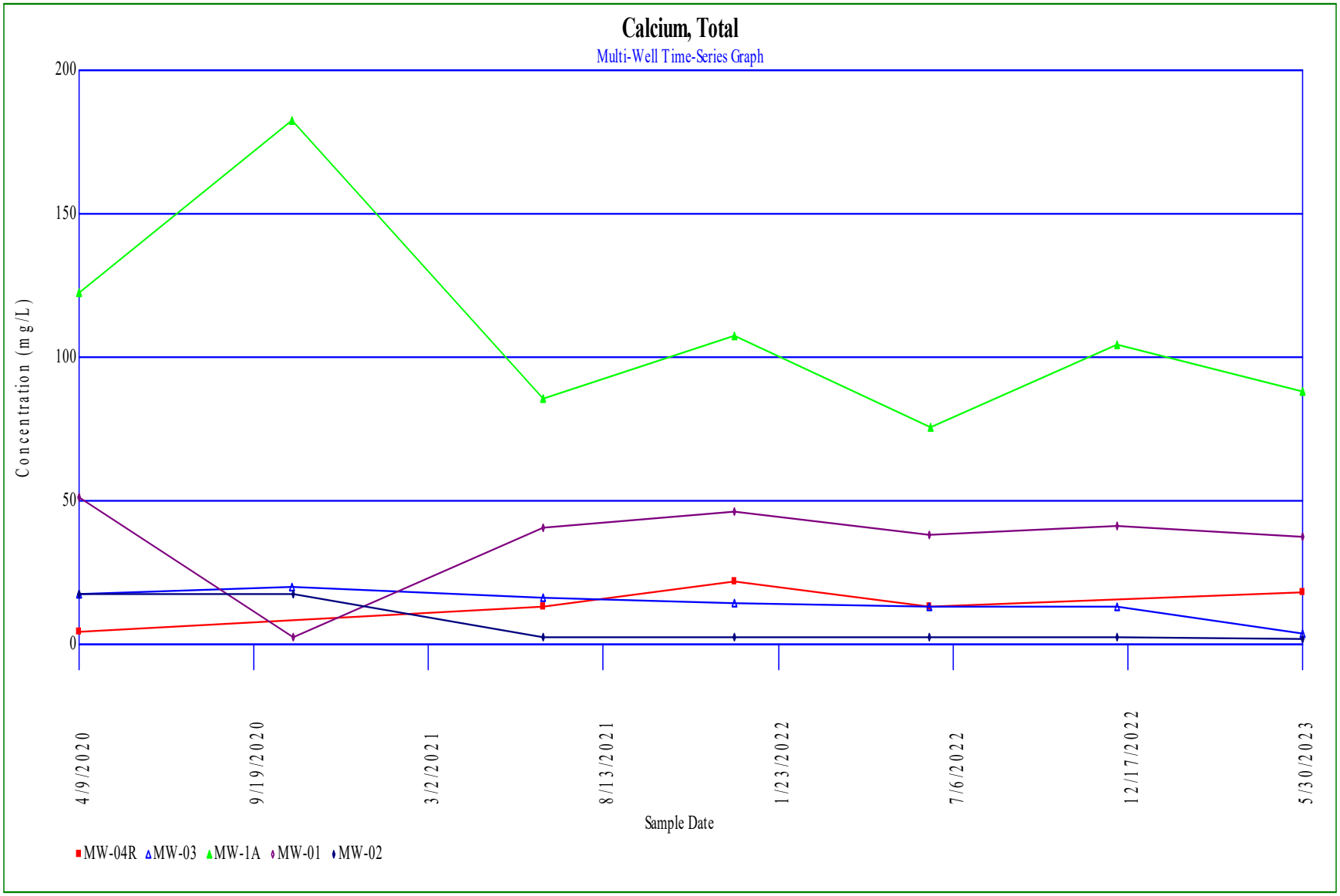
[2] -GWPS referenced value obtained from most recent EPA Regional Screening Levels (THQ=1.0).

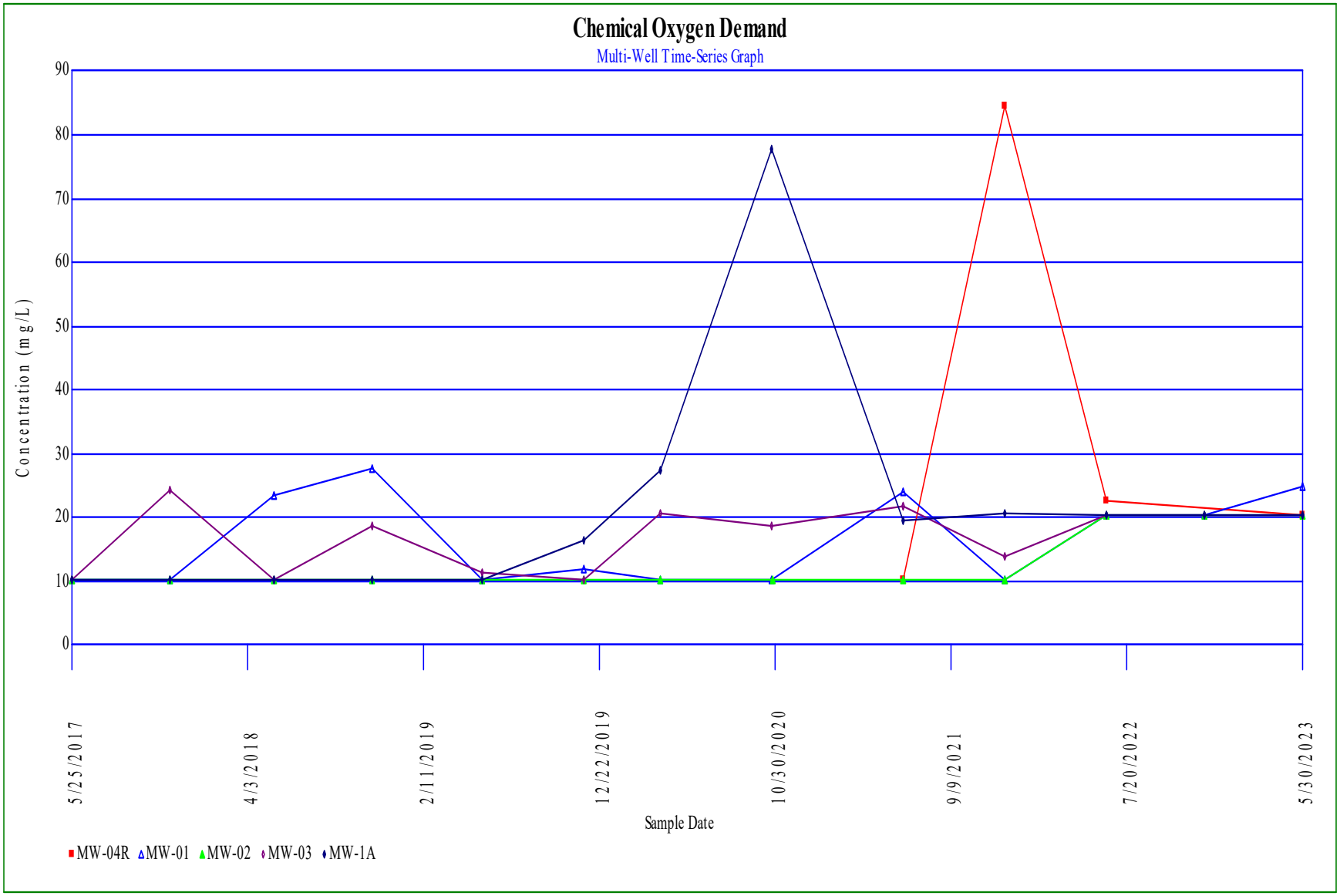
Bold value indicates result detected above the laboratory reporting limit.

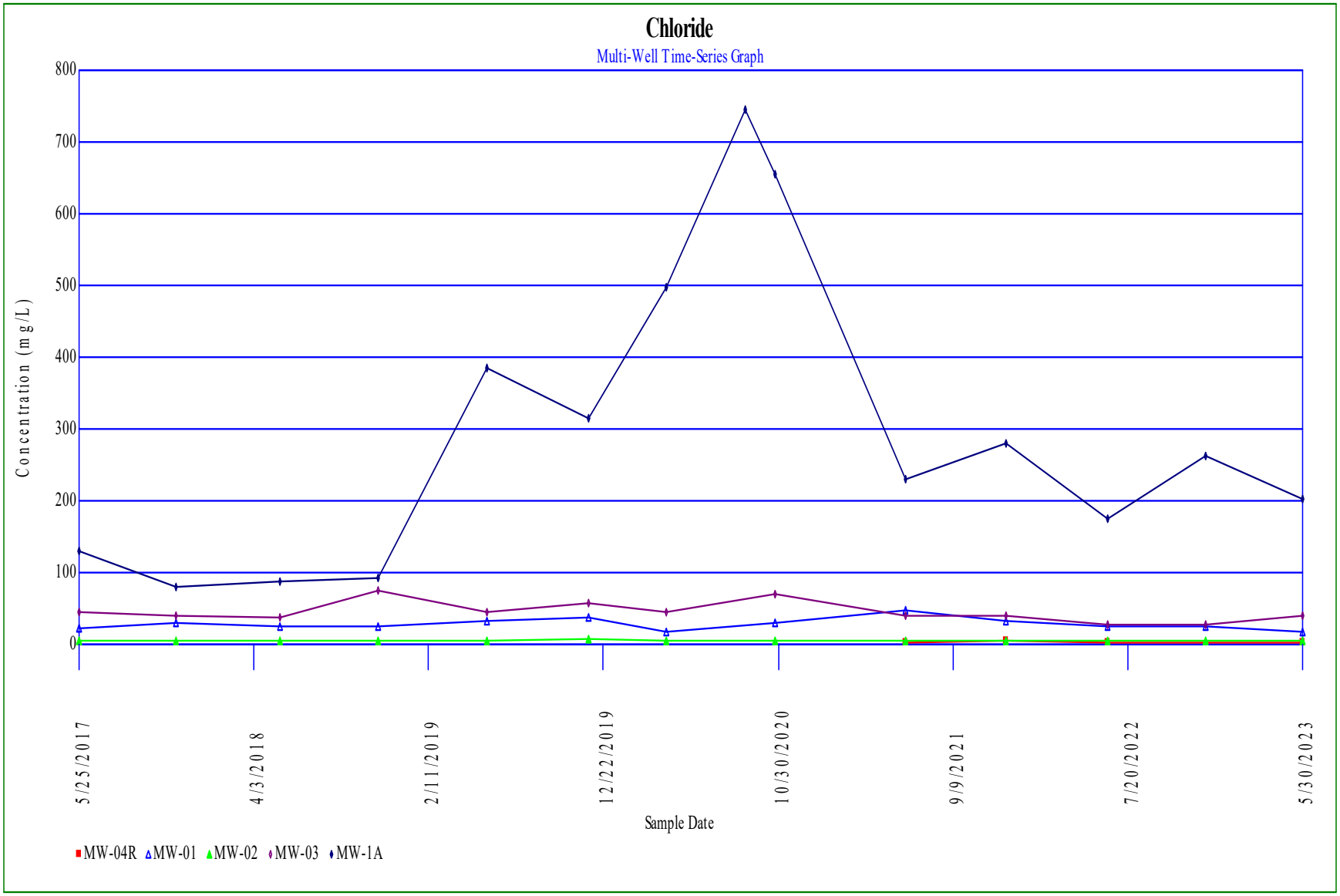
Shaded cell indicates parameter exhibits an increasing trend in concentrations when considering all data.

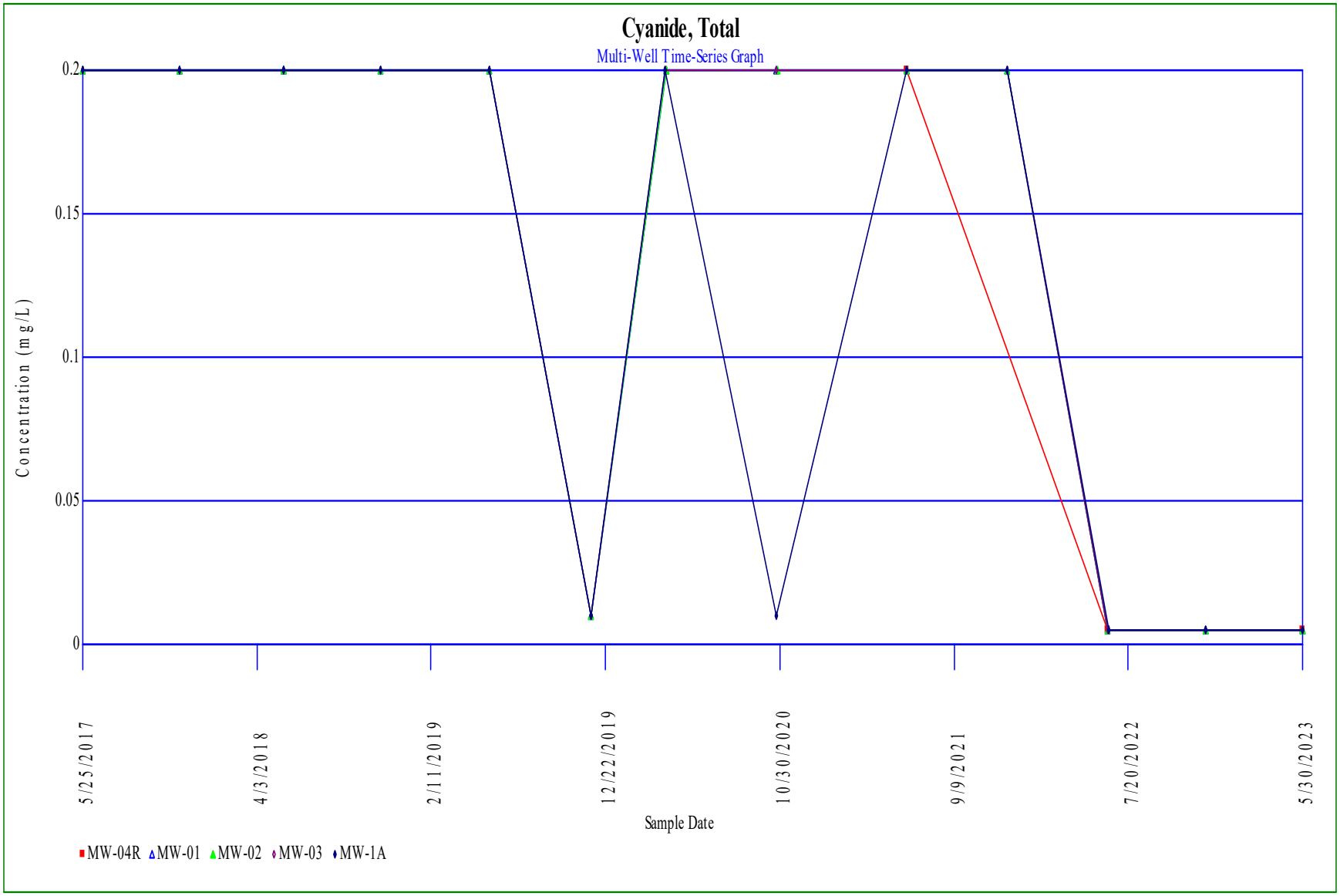
NA: Parameter does not have an established MCL or EPA RSL.

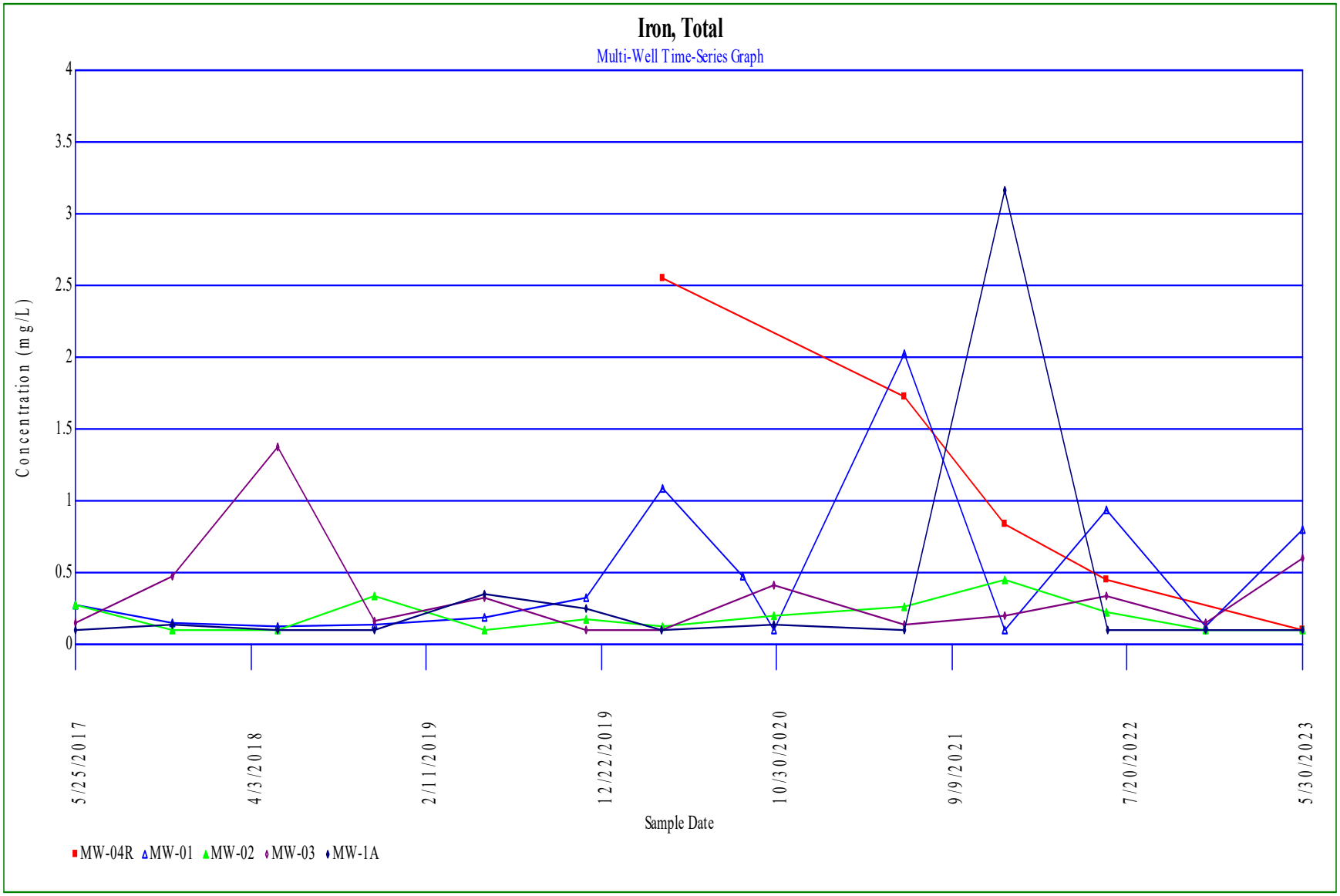
--: Parameter not analyzed.

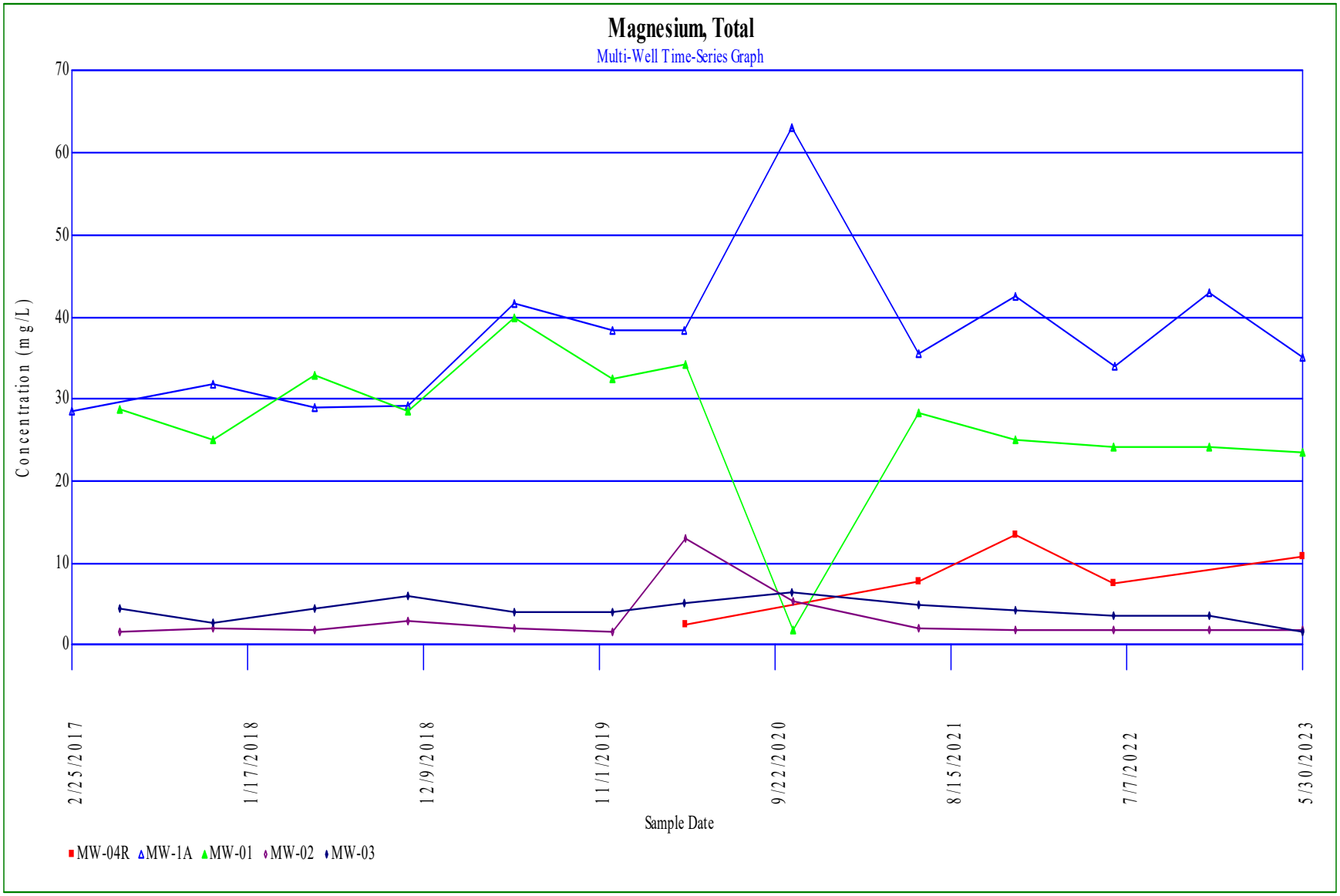

Calcium, Total
Multi-Well Time-Series Graph
200
150
100
50
0
Concentration (mg/L)
4/9/2020
9/19/2020
3/2/2021
8/13/2021
1/23/2022
7/6/2022
12/17/2022
5/30/2023
Sample Date
MW-04R
MW-03
MW-1A
MW-01
MW-02

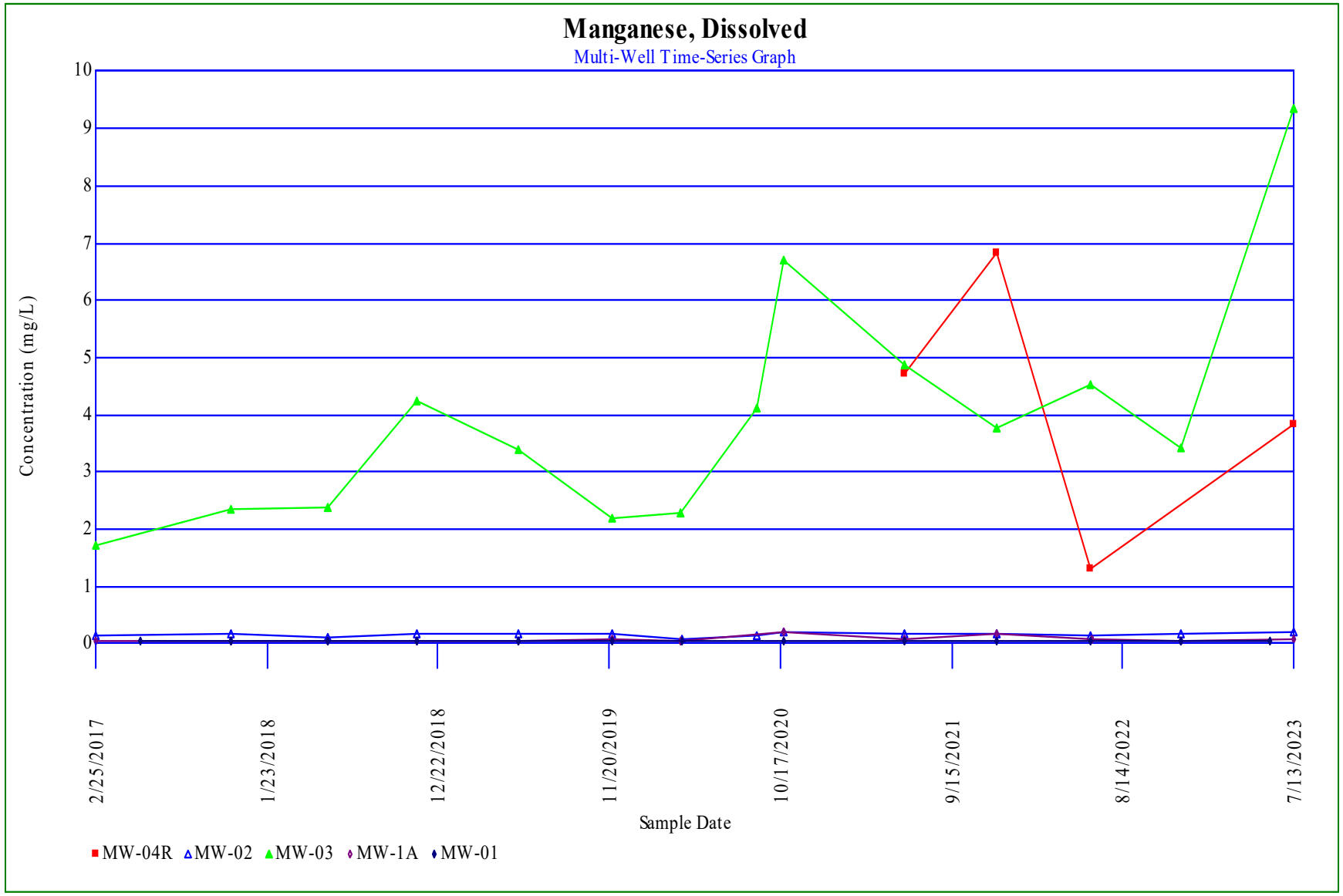

Chemical Oxygen Demand
Multi-Well Time-Series Graph
Concentration (mg/L)
90
80
70
60
50
40
30
20
10
0
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

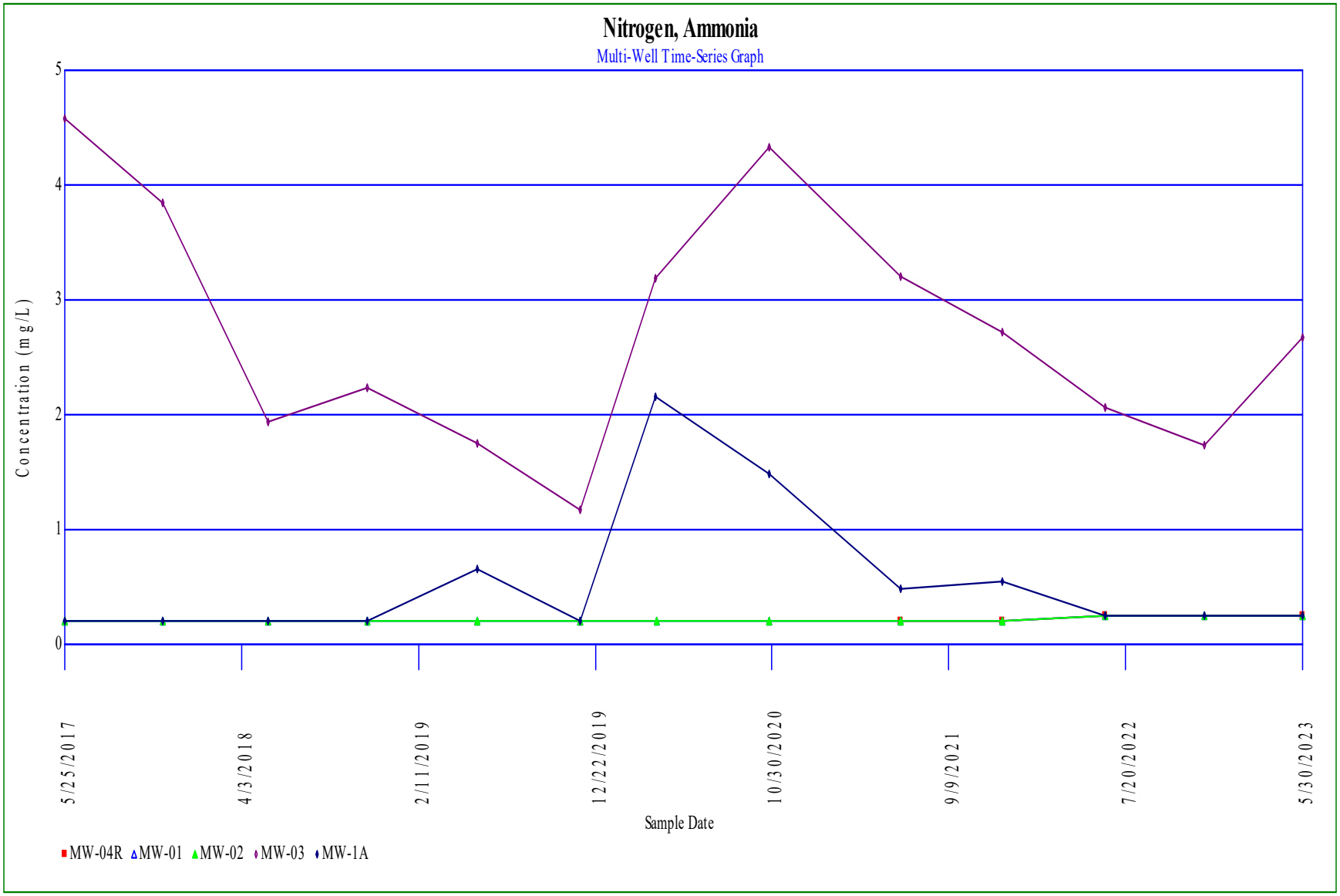

Chloride
Multi-Well Time-Series Graph
800
700
600
500
400
300
200
100
0
Concentration (mg/L)
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

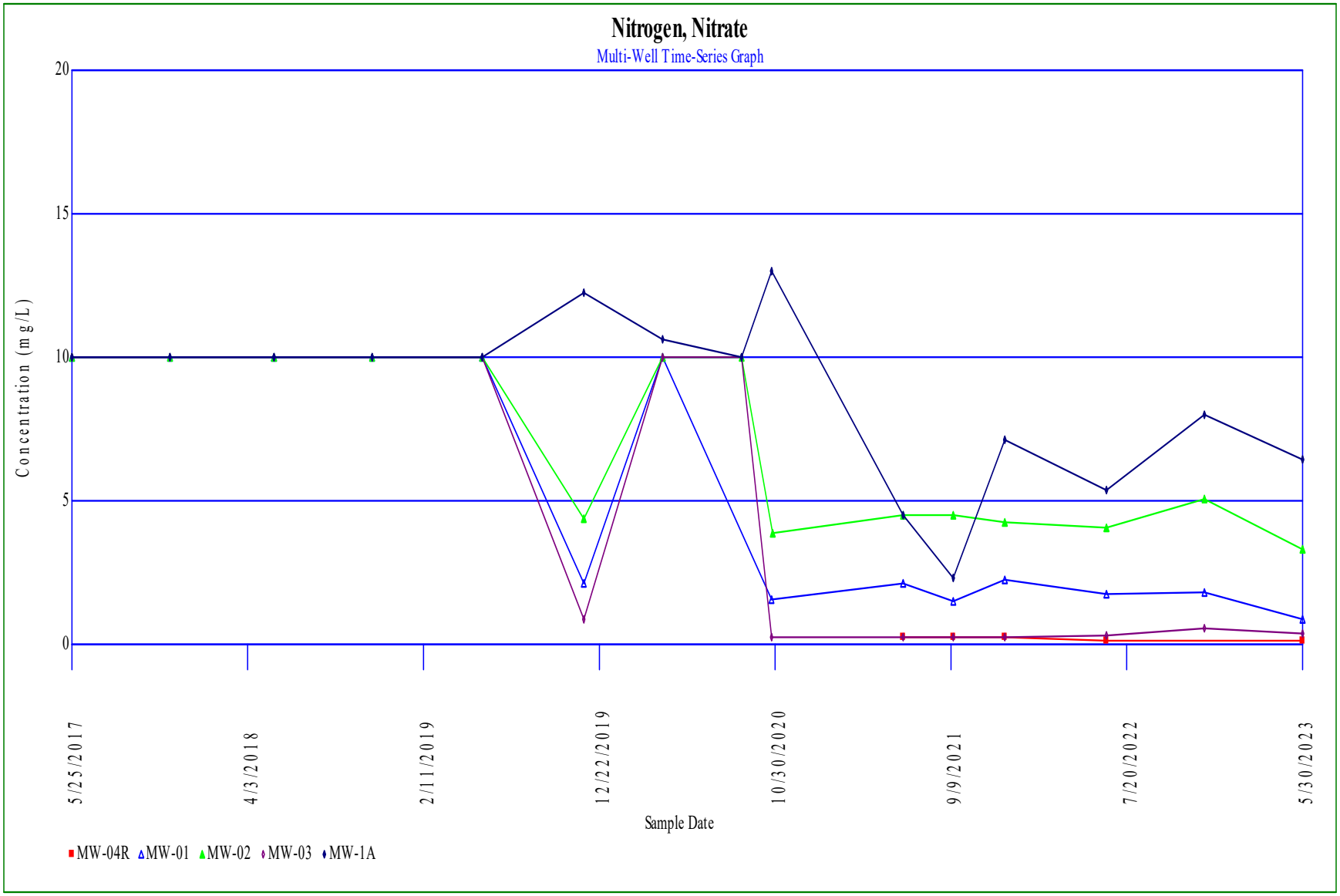

Cyanide, Total
Multi-Well Time-Series Graph
0.2
0.15
0.1
0.05
0
Concentration (mg/L)
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

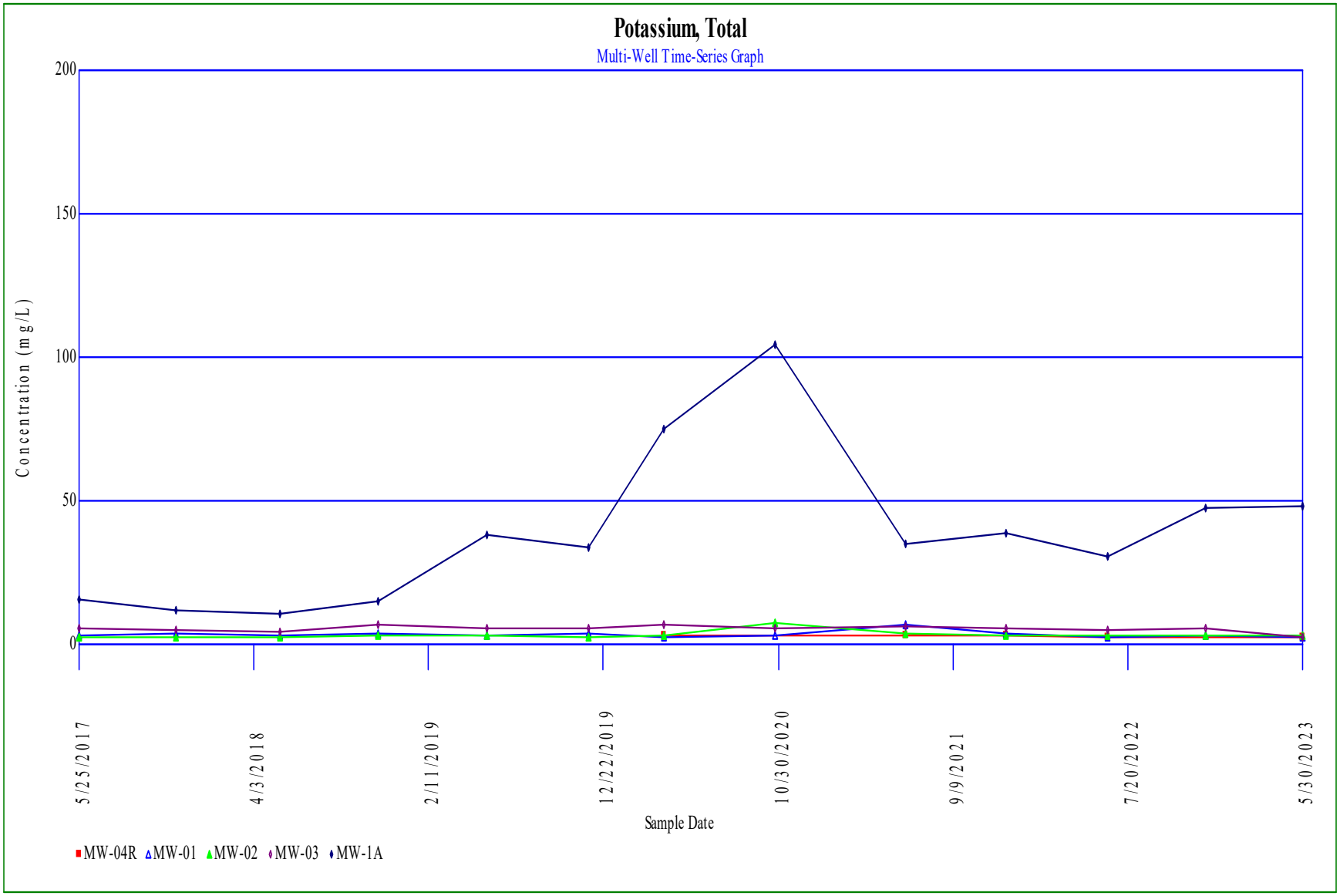

Iron, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

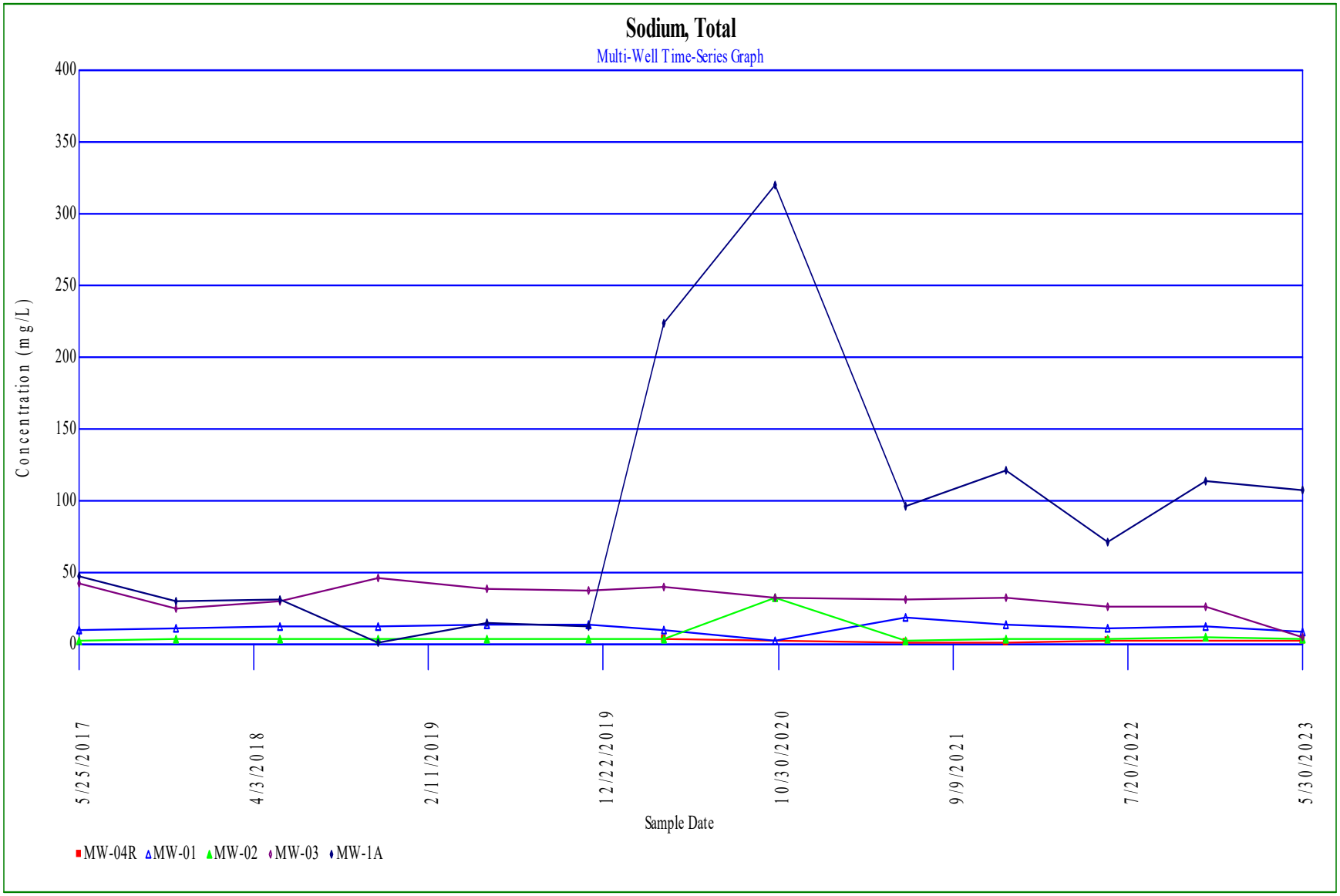

Magnesium, Total
Multi-Well Time-Series Graph
70
60
50
40
30
20
10
0
Concentration (mg/L)
2/25/2017
1/17/2018
12/9/2018
11/1/2019
9/22/2020
8/15/2021
7/7/2022
5/30/2023
Sample Date
MW-04R
MW-1A
MW-01
MW-02
MW-03

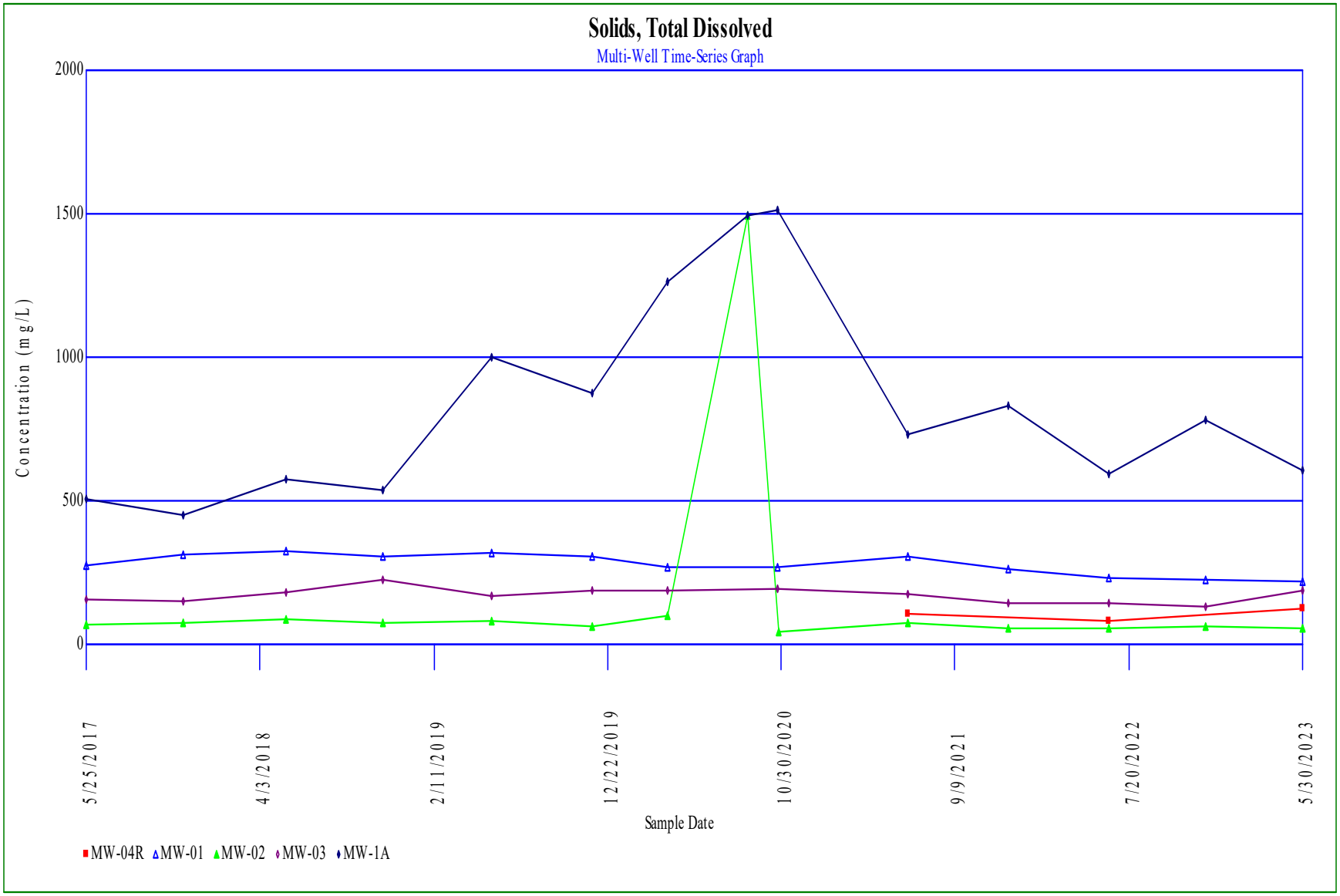

Manganese, Dissolved
Multi-Well Time-Series Graph
Concentration (mg/L)
10
9
8
7
6
5
4
3
2
1
0
2/25/2017
1/23/2018
12/22/2018
11/20/2019
10/17/2020
9/15/2021
8/14/2022
7/13/2023
Sample Date
MW-04R
MW-02
MW-03
MW-1A
MW-01

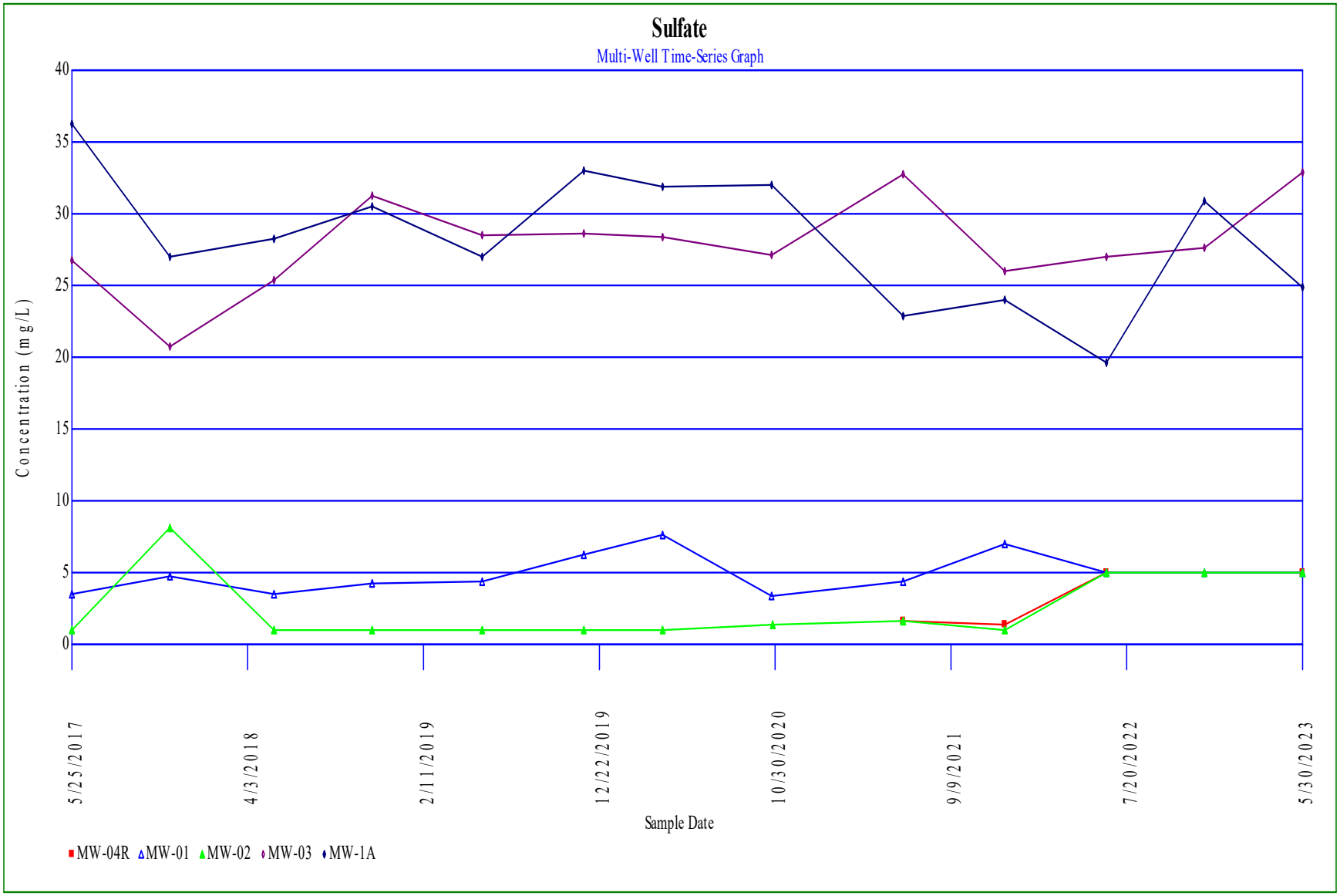

Nitrogen, Ammonia
Multi-Well Time-Series Graph
Concentration (mg/L)
5
4
3
2
1
0
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

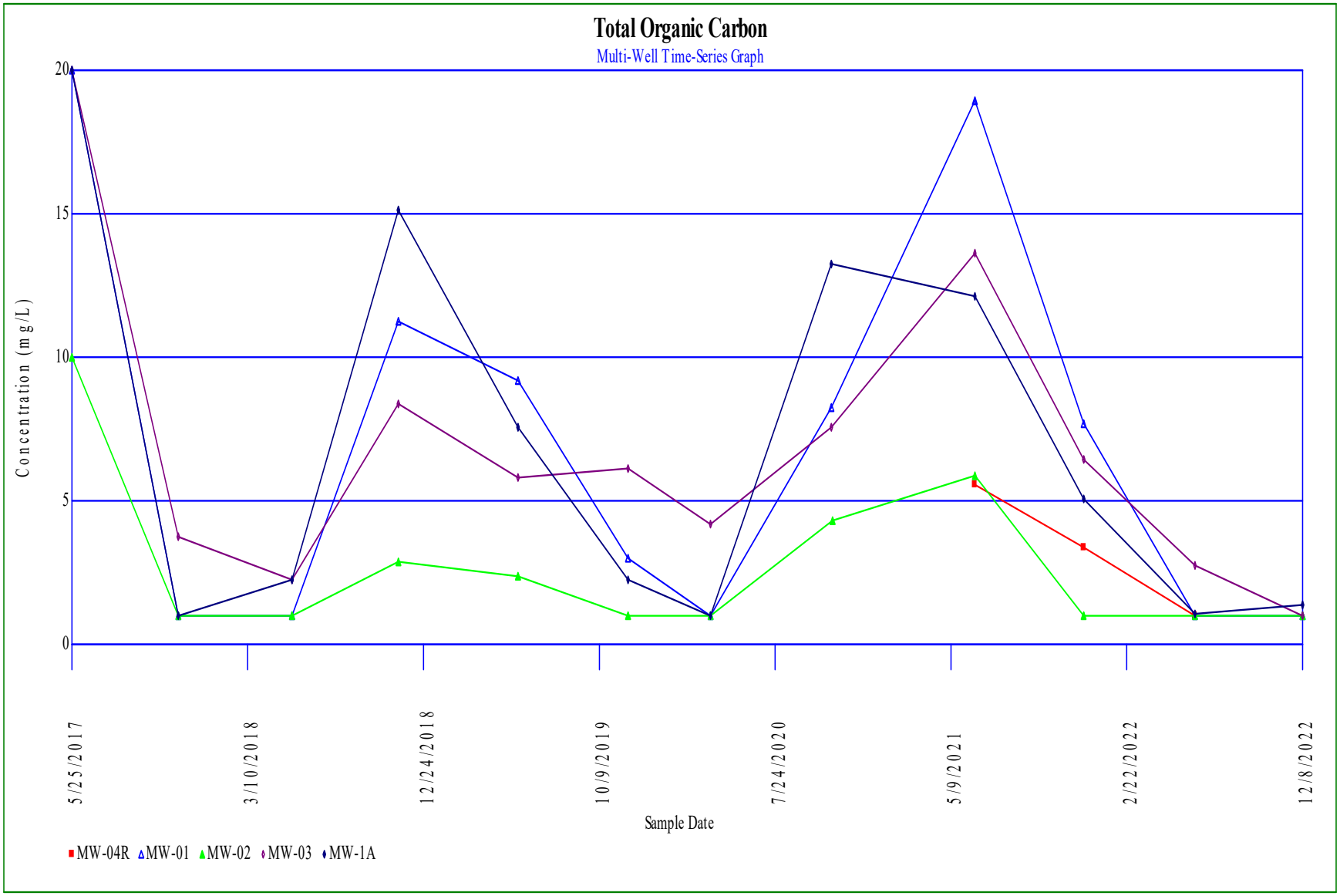

Nitrogen, Nitrate
Multi-Well Time-Series Graph
20
15
10
5
0
Concentration (mg/L)
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A


Potassium, Total
Multi-Well Time-Series Graph
200
150
100
50
0
Concentration (mg/L)
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A


Sodium, Total
Multi-Well Time-Series Graph
Concentration (mg/L)
400
350
300
250
200
150
100
50
0
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A


Solids, Total Dissolved
Multi-Well Time-Series Graph
2000
1500
1000
500
0
Concentration (mg/L)
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A


Sulfate
Multi-Well Time-Series Graph
Concentration (mg/L)
40
35
30
25
20
15
10
5
0
5/25/2017
4/3/2018
2/11/2019
12/22/2019
10/30/2020
9/9/2021
7/20/2022
5/30/2023
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A


Total Organic Carbon
Multi-Well Time-Series Graph
Concentration (mg/L)
20
15
10
5
0
5/25/2017
3/10/2018
12/24/2018
10/9/2019
7/24/2020
5/9/2021
2/22/2022
12/8/2022
Sample Date
MW-04R
MW-01
MW-02
MW-03
MW-1A

Sen's Slope Analysis

Parameter: Calcium, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is 3.13625

Time Period	Observations
4/10/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 300
b = 540
c = 40
Group Variance = 16.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.71508
M1 = (10 - 6.71508)/2.0 = 1.64246
M2 = (10 + 6.71508)/2.0 + 1 = 9.35754
Lower limit is -1.9 = Q(2)
Upper limit is 8.705 = Q(9)
-1.9 < 0 < 8.705 indicating no trend in data.

Sen's Slope Analysis

Parameter: Calcium, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 21
Sen's Estimator (Median Q) is -1.75

Time Period	Observations
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 798
b = 1890
c = 84
Group Variance = 44.3333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 10.952
M1 = (21 - 10.952)/2.0 = 5.02401
M2 = (21 + 10.952)/2.0 + 1 = 16.976
Lower limit is -3.188 = Q(5)
Upper limit is -0.86 = Q(17)
-0.86 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Calcium, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 21
Sen's Estimator (Median Q) is -5.71667

Time Period	Observations
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 798
b = 1890
c = 84
Group Variance = 44.3333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 10.952
M1 = (21 - 10.952)/2.0 = 5.02401
M2 = (21 + 10.952)/2.0 + 1 = 16.976
Lower limit is -19.5 = Q(5)
Upper limit is 6.05 = Q(17)
-19.5 < 0 < 6.05 indicating no trend in data.

Sen's Slope Analysis

Parameter: Calcium, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 21
Sen's Estimator (Median Q) is -1.3

Time Period	Observations
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 798
b = 1890
c = 84
Group Variance = 44.3333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 10.952
M1 = (21 - 10.952)/2.0 = 5.02401
M2 = (21 + 10.952)/2.0 + 1 = 16.976
Lower limit is -3.275 = Q(5)
Upper limit is 7.088 = Q(17)
-3.275 < 0 < 7.088 indicating no trend in data.

Sen's Slope Analysis

Parameter: Calcium, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 21
Sen's Estimator (Median Q) is -0.27

Time Period	Observations
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 798
b = 1890
c = 84
Group Variance = 44.3333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 10.952
M1 = (21 - 10.952)/2.0 = 5.02401
M2 = (21 + 10.952)/2.0 + 1 = 16.976
Lower limit is -5.08 = Q(5)
Upper limit is -0.11 = Q(17)
-0.11 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Chemical Oxygen Demand
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 6
Sen's Estimator (Median Q) is 0.4

Time Period	Observations
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 156
b = 216
c = 24
Group Variance = 8.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.84232
M1 = (6 - 4.84232)/2.0 = 0.578842
M2 = (6 + 4.84232)/2.0 + 1 = 6.42116
Lower limit is -61.8 = Q(1)
Upper limit is 74.2 = Q(6)
-61.8 < 0 < 74.2 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chemical Oxygen Demand
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.106667

Tied Group	Value	Members
1	10	6
2	20	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 528
B = 0
C = 120
D = 0
E = 32
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 239.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 25.4465
M1 = (78 - 25.4465)/2.0 = 26.2767
M2 = (78 + 25.4465)/2.0 + 1 = 52.7233
Lower limit is 0 = Q(26)
Upper limit is 1.66667 = Q(53)
0 < 0 < 1.66667 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chemical Oxygen Demand
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	10	10
2	20	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 2316
B = 0
C = 726
D = 0
E = 96
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 140
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 19.4622
M1 = (78 - 19.4622)/2.0 = 29.2689
M2 = (78 + 19.4622)/2.0 + 1 = 49.7311
Lower limit is 0 = Q(29)
Upper limit is 0.909091 = Q(50)
0 < 0 < 0.909091 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chemical Oxygen Demand
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.44

Tied Group	Value	Members
1	10	3
2	20	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 132
B = 0
C = 12
D = 0
E = 12
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 261.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.5904
M1 = (78 - 26.5904)/2.0 = 25.7048
M2 = (78 + 26.5904)/2.0 + 1 = 53.2952
Lower limit is 0 = Q(26)
Upper limit is 1.11111 = Q(53)
0 < 0 < 1.11111 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chemical Oxygen Demand
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 1.025

Tied Group	Value	Members
1	10	5
2	20	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 366
B = 0
C = 66
D = 0
E = 26
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 248.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 25.9206
M1 = (78 - 25.9206)/2.0 = 26.0397
M2 = (78 + 25.9206)/2.0 + 1 = 52.9603
Lower limit is 0 = Q(26)
Upper limit is 1.42857 = Q(53)
0 < 0 < 1.42857 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chloride
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 6
Sen's Estimator (Median Q) is -0.1125

Tied Group	Value	Members
1	1	2

Time Period	Observations
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 156
b = 216
c = 24
Group Variance = 7.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.55439
M1 = (6 - 4.55439)/2.0 = 0.722804
M2 = (6 + 4.55439)/2.0 + 1 = 6.2772
Lower limit is -3.2 = Q(1)
Upper limit is 2.93 = Q(6)
-3.2 < 0 < 2.93 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chloride
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.156944

Tied Group	Value	Members
1	23.9	2
2	31	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 266.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.8603
M1 = (78 - 26.8603)/2.0 = 25.5698
M2 = (78 + 26.8603)/2.0 + 1 = 53.4302
Lower limit is -1.19091 = Q(26)
Upper limit is 1.18333 = Q(53)
-1.19091 < 0 < 1.18333 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chloride
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.0753977

Tied Group	Value	Members
1	2.58	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is 0.0244444 = Q(26)
Upper limit is 0.12 = Q(53)
0.0244444 > 0 indicating an upward trend in data.

Sen's Slope Analysis

Parameter: Chloride
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -1.11111

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -3.66 = Q(26)
Upper limit is 0.214286 = Q(53)
-3.66 < 0 < 0.214286 indicating no trend in data.

Sen's Slope Analysis

Parameter: Chloride
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is 10.3909

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
9/2/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is -15.125 = Q(30)
Upper limit is 37.2 = Q(62)
-15.125 < 0 < 37.2 indicating no trend in data.

Sen's Slope Analysis

Parameter: Cyanide, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 3
Sen's Estimator (Median Q) is -0.0975

Tied Group	Value	Members
1	0.005	2

Time Period	Observations
6/18/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 66
b = 54
c = 12
Group Variance = 2.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 2.68603
M1 = (3 - 2.68603)/2.0 = 0.156983
M2 = (3 + 2.68603)/2.0 + 1 = 3.84302
Lower limit is 0 = Q(0)
Upper limit is 0 = Q(4)
0 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Cyanide, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.2	9
2	0.005	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 1722
B = 0
C = 510
D = 0
E = 78
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 173
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.6347
M1 = (78 - 21.6347)/2.0 = 28.1827
M2 = (78 + 21.6347)/2.0 + 1 = 50.8173
Lower limit is -0.0195 = Q(28)
Upper limit is 0 = Q(51)
-0.0195 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Cyanide, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.2	9
2	0.005	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 1722
B = 0
C = 510
D = 0
E = 78
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 173
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.6347
M1 = (78 - 21.6347)/2.0 = 28.1827
M2 = (78 + 21.6347)/2.0 + 1 = 50.8173
Lower limit is -0.0195 = Q(28)
Upper limit is 0 = Q(51)
-0.0195 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Cyanide, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.2	9
2	0.005	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 1722
B = 0
C = 510
D = 0
E = 78
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 173
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 21.6347
M1 = (78 - 21.6347)/2.0 = 28.1827
M2 = (78 + 21.6347)/2.0 + 1 = 50.8173
Lower limit is -0.0195 = Q(28)
Upper limit is 0 = Q(51)
-0.0195 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Cyanide, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.000916667

Tied Group	Value	Members
1	0.2	8
2	0.01	2
3	0.005	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 1260
B = 0
C = 342
D = 0
E = 64
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 198.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.1841
M1 = (78 - 23.1841)/2.0 = 27.408
M2 = (78 + 23.1841)/2.0 + 1 = 51.592
Lower limit is -0.0216667 = Q(27)
Upper limit is 0 = Q(52)
-0.0216667 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Iron, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is -0.62425

Time Period	Observations
4/10/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 300
b = 540
c = 40
Group Variance = 16.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.71508
M1 = (10 - 6.71508)/2.0 = 1.64246
M2 = (10 + 6.71508)/2.0 + 1 = 9.35754
Lower limit is -0.8565 = Q(2)
Upper limit is -0.3635 = Q(9)
-0.3635 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Iron, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is 0.0288571

Tied Group	Value	Members
1	0.1	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
9/2/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 332.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0007
M1 = (91 - 30.0007)/2.0 = 30.4996
M2 = (91 + 30.0007)/2.0 + 1 = 61.5004
Lower limit is -0.008625 = Q(30)
Upper limit is 0.0784 = Q(62)
-0.008625 < 0 < 0.0784 indicating no trend in data.

Sen's Slope Analysis

Parameter: Iron, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.1	5

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 300
B = 0
C = 60
D = 0
E = 20
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 252
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.1112
M1 = (78 - 26.1112)/2.0 = 25.9444
M2 = (78 + 26.1112)/2.0 + 1 = 53.0556
Lower limit is -0.0132 = Q(26)
Upper limit is 0.01675 = Q(53)
-0.0132 < 0 < 0.01675 indicating no trend in data.

Sen's Slope Analysis

Parameter: Iron, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.000295455

Tied Group	Value	Members
1	0.1	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is -0.027 = Q(26)
Upper limit is 0.0273333 = Q(53)
-0.027 < 0 < 0.0273333 indicating no trend in data.

Sen's Slope Analysis

Parameter: Iron, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.1	8
2	0.137	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 1194
B = 0
C = 336
D = 0
E = 58
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 202.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 23.397
M1 = (78 - 23.397)/2.0 = 27.3015
M2 = (78 + 23.397)/2.0 + 1 = 51.6985
Lower limit is -0.00336364 = Q(27)
Upper limit is 0 = Q(52)
-0.00336364 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Magnesium, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is 1.89125

Time Period	Observations
4/10/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 300
b = 540
c = 40
Group Variance = 16.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.71508
M1 = (10 - 6.71508)/2.0 = 1.64246
M2 = (10 + 6.71508)/2.0 + 1 = 9.35754
Lower limit is -1.25 = Q(2)
Upper limit is 5.475 = Q(9)
-1.25 < 0 < 5.475 indicating no trend in data.

Sen's Slope Analysis

Parameter: Magnesium, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.683333

Time Period	Observations
2/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is 0.16 = Q(26)
Upper limit is 1.55556 = Q(53)
0.16 > 0 indicating an upward trend in data.

Sen's Slope Analysis

Parameter: Magnesium, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.561111

Tied Group	Value	Members
1	24.9	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is -1.4 = Q(26)
Upper limit is -0.0666667 = Q(53)
-0.0666667 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Magnesium, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.00677778

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.035 = Q(26)
Upper limit is 0.045 = Q(53)
-0.035 < 0 < 0.045 indicating no trend in data.

Sen's Slope Analysis

Parameter: Magnesium, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.0841364

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.28625 = Q(26)
Upper limit is 0.0466667 = Q(53)
-0.28625 < 0 < 0.0466667 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Ammonia
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 6
Sen's Estimator (Median Q) is 0.0208333

Tied Group	Value	Members
1	0.2	2
2	0.25	2

Time Period	Observations
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 156
b = 216
c = 24
Group Variance = 6.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.24699
M1 = (6 - 4.24699)/2.0 = 0.876504
M2 = (6 + 4.24699)/2.0 + 1 = 6.1235
Lower limit is 0 = Q(1)
Upper limit is 0.05 = Q(6)
0 < 0 < 0.05 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Ammonia
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.2	10
2	0.25	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 2316
B = 0
C = 726
D = 0
E = 96
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 140
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 19.4622
M1 = (78 - 19.4622)/2.0 = 29.2689
M2 = (78 + 19.4622)/2.0 + 1 = 49.7311
Lower limit is 0 = Q(29)
Upper limit is 0.00454545 = Q(50)
0 < 0 < 0.00454545 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Ammonia
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.2	10
2	0.25	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 2316
B = 0
C = 726
D = 0
E = 96
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 140
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 19.4622
M1 = (78 - 19.4622)/2.0 = 29.2689
M2 = (78 + 19.4622)/2.0 + 1 = 49.7311
Lower limit is 0 = Q(29)
Upper limit is 0.00454545 = Q(50)
0 < 0 < 0.00454545 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Ammonia
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.100682

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.259091 = Q(26)
Upper limit is 0.074 = Q(53)
-0.259091 < 0 < 0.074 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Ammonia
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.00477273

Tied Group	Value	Members
1	0.2	5
2	0.25	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 366
B = 0
C = 66
D = 0
E = 26
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 248.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 25.9206
M1 = (78 - 25.9206)/2.0 = 26.0397
M2 = (78 + 25.9206)/2.0 + 1 = 52.9603
Lower limit is 0 = Q(26)
Upper limit is 0.0382222 = Q(53)
0 < 0 < 0.0382222 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Nitrate
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is -0.04375

Tied Group	Value	Members
1	0.25	3
2	0.1	2

Time Period	Observations
6/18/2021	1
9/15/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 84
B = 0
C = 6
D = 0
E = 8
F = 0
a = 300
b = 540
c = 40
Group Variance = 12
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 5.69794
M1 = (10 - 5.69794)/2.0 = 2.15103
M2 = (10 + 5.69794)/2.0 + 1 = 8.84897
Lower limit is -0.075 = Q(2)
Upper limit is 0 = Q(9)
-0.075 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Nitrate
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is -0.746364

Tied Group	Value	Members
1	10	6

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
9/15/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 510
B = 0
C = 120
D = 0
E = 30
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 305.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 28.7418
M1 = (91 - 28.7418)/2.0 = 31.1291
M2 = (91 + 28.7418)/2.0 + 1 = 60.8709
Lower limit is -1.016 = Q(31)
Upper limit is -0.0725 = Q(61)
-0.0725 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Nitrate
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 105
Sen's Estimator (Median Q) is -0.45

Tied Group	Value	Members
1	10	7

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
9/2/2020	1
10/27/2020	1
6/18/2021	1
9/15/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 798
B = 0
C = 210
D = 0
E = 42
F = 0
a = 7350
b = 24570
c = 420
Group Variance = 364
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 31.3818
M1 = (105 - 31.3818)/2.0 = 36.8091
M2 = (105 + 31.3818)/2.0 + 1 = 69.1909
Lower limit is -0.662222 = Q(37)
Upper limit is -0.025 = Q(69)
-0.025 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Nitrate
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 105
Sen's Estimator (Median Q) is -0.727692

Tied Group	Value	Members
1	10	7
2	0.25	4

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
9/2/2020	1
10/26/2020	1
6/18/2021	1
9/15/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 954
B = 0
C = 234
D = 0
E = 54
F = 0
a = 7350
b = 24570
c = 420
Group Variance = 355.333
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 31.006
M1 = (105 - 31.006)/2.0 = 36.997
M2 = (105 + 31.006)/2.0 + 1 = 69.003
Lower limit is -1.08333 = Q(37)
Upper limit is 0 = Q(69)
-1.08333 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Nitrogen, Nitrate
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 105
Sen's Estimator (Median Q) is -0.278462

Tied Group	Value	Members
1	10	6

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
9/2/2020	1
10/26/2020	1
6/18/2021	1
9/15/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 510
B = 0
C = 120
D = 0
E = 30
F = 0
a = 7350
b = 24570
c = 420
Group Variance = 380
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 32.0641
M1 = (105 - 32.0641)/2.0 = 36.468
M2 = (105 + 32.0641)/2.0 + 1 = 69.532
Lower limit is -0.57875 = Q(36)
Upper limit is 0 = Q(70)
-0.57875 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Potassium, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is -0.09875

Time Period	Observations
4/10/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 300
b = 540
c = 40
Group Variance = 16.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.71508
M1 = (10 - 6.71508)/2.0 = 1.64246
M2 = (10 + 6.71508)/2.0 + 1 = 9.35754
Lower limit is -0.17 = Q(2)
Upper limit is -0.04 = Q(9)
-0.04 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Potassium, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.0191667

Tied Group	Value	Members
1	2.86	2
2	3.18	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 36
B = 0
C = 0
D = 0
E = 4
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 266.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.8603
M1 = (78 - 26.8603)/2.0 = 25.5698
M2 = (78 + 26.8603)/2.0 + 1 = 53.4302
Lower limit is -0.0927273 = Q(26)
Upper limit is 0.0463636 = Q(53)
-0.0927273 < 0 < 0.0463636 indicating no trend in data.

Sen's Slope Analysis

Parameter: Potassium, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.037

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.00888889 = Q(26)
Upper limit is 0.1 = Q(53)
-0.00888889 < 0 < 0.1 indicating no trend in data.

Sen's Slope Analysis

Parameter: Potassium, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.00318182

Tied Group	Value	Members
1	5.07	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is -0.235 = Q(26)
Upper limit is 0.12375 = Q(53)
-0.235 < 0 < 0.12375 indicating no trend in data.

Sen's Slope Analysis

Parameter: Potassium, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 3.21932

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is 1.325 = Q(26)
Upper limit is 4.05 = Q(53)
1.325 > 0 indicating an upward trend in data.

Sen's Slope Analysis

Parameter: Sodium, Total
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 10
Sen's Estimator (Median Q) is -0.0725

Tied Group	Value	Members
1	2	2

Time Period	Observations
4/10/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 300
b = 540
c = 40
Group Variance = 15.6667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 6.51052
M1 = (10 - 6.51052)/2.0 = 1.74474
M2 = (10 + 6.51052)/2.0 + 1 = 9.25526
Lower limit is -0.968 = Q(2)
Upper limit is 0.678 = Q(9)
-0.968 < 0 < 0.678 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sodium, Total
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.0479167

Tied Group	Value	Members
1	13.6	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is -0.412 = Q(26)
Upper limit is 0.6 = Q(53)
-0.412 < 0 < 0.6 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sodium, Total
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.0920139

Tied Group	Value	Members
1	2.55	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 267.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9107
M1 = (78 - 26.9107)/2.0 = 25.5447
M2 = (78 + 26.9107)/2.0 + 1 = 53.4553
Lower limit is 0.00166667 = Q(26)
Upper limit is 0.145 = Q(53)
0.00166667 > 0 indicating an upward trend in data.

Sen's Slope Analysis

Parameter: Sodium, Total
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -1.79048

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -2.502 = Q(26)
Upper limit is -0.55 = Q(53)
-0.55 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Sodium, Total
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 7.92833

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -4 = Q(26)
Upper limit is 13.9604 = Q(53)
-4 < 0 < 13.9604 indicating no trend in data.

Sen's Slope Analysis

Parameter: Solids, Total Dissolved
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 3
Sen's Estimator (Median Q) is 9

Time Period	Observations
6/18/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 66
b = 54
c = 12
Group Variance = 3.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 3.14965
M1 = (3 - 3.14965)/2.0 = -0.0748269
M2 = (3 + 3.14965)/2.0 + 1 = 4.07483
Lower limit is 0 = Q(0)
Upper limit is 0 = Q(4)
0 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Solids, Total Dissolved
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -8.83333

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -11.2222 = Q(26)
Upper limit is -4.1 = Q(53)
-4.1 < 0 indicating a downward trend in data.

Sen's Slope Analysis

Parameter: Solids, Total Dissolved
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is -1.5

Tied Group	Value	Members
1	72	2

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
9/2/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 332.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0007
M1 = (91 - 30.0007)/2.0 = 30.4996
M2 = (91 + 30.0007)/2.0 + 1 = 61.5004
Lower limit is -3 = Q(30)
Upper limit is 1.33333 = Q(62)
-3 < 0 < 1.33333 indicating no trend in data.

Sen's Slope Analysis

Parameter: Solids, Total Dissolved
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -1.52222

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -6.75 = Q(26)
Upper limit is 2.33333 = Q(53)
-6.75 < 0 < 2.33333 indicating no trend in data.

Sen's Slope Analysis

Parameter: Solids, Total Dissolved
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is 20

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
9/2/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is -27.8333 = Q(30)
Upper limit is 98.3333 = Q(62)
-27.8333 < 0 < 98.3333 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sulfate
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 6
Sen's Estimator (Median Q) is 1.42083

Tied Group	Value	Members
1	5	2

Time Period	Observations
6/18/2021	1
12/15/2021	1
6/15/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 18
B = 0
C = 0
D = 0
E = 2
F = 0
a = 156
b = 216
c = 24
Group Variance = 7.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.55439
M1 = (6 - 4.55439)/2.0 = 0.722804
M2 = (6 + 4.55439)/2.0 + 1 = 6.2772
Lower limit is -0.29 = Q(1)
Upper limit is 3.7 = Q(6)
-0.29 < 0 < 3.7 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sulfate
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.12

Tied Group	Value	Members
1	3.44	2
2	5	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 84
B = 0
C = 6
D = 0
E = 8
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 264
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.7257
M1 = (78 - 26.7257)/2.0 = 25.6372
M2 = (78 + 26.7257)/2.0 + 1 = 53.3628
Lower limit is 0 = Q(26)
Upper limit is 0.27875 = Q(53)
0 < 0 < 0.27875 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sulfate
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.06075

Tied Group	Value	Members
1	1	7
2	5	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 864
B = 0
C = 216
D = 0
E = 48
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 220.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 24.4341
M1 = (78 - 24.4341)/2.0 = 26.783
M2 = (78 + 24.4341)/2.0 + 1 = 52.217
Lower limit is 0 = Q(27)
Upper limit is 0.363636 = Q(52)
0 < 0 < 0.363636 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sulfate
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.261111

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -0.128571 = Q(26)
Upper limit is 0.75 = Q(53)
-0.128571 < 0 < 0.75 indicating no trend in data.

Sen's Slope Analysis

Parameter: Sulfate
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is -0.6

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/15/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 268.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.9609
M1 = (78 - 26.9609)/2.0 = 25.5196
M2 = (78 + 26.9609)/2.0 + 1 = 53.4804
Lower limit is -1.17143 = Q(26)
Upper limit is 0.1 = Q(53)
-1.17143 < 0 < 0.1 indicating no trend in data.

Sen's Slope Analysis

Parameter: Manganese, Dissolved
Location: MW-01
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0

Tied Group	Value	Members
1	0.01	10
2	0.005	3

Time Period	Observations
5/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
5/30/2023	1

There are 0 time periods with multiple data

A = 2316
B = 0
C = 726
D = 0
E = 96
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 140
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 19.4622
M1 = (78 - 19.4622)/2.0 = 29.2689
M2 = (78 + 19.4622)/2.0 + 1 = 49.7311
Lower limit is -0.000454545 = Q(29)
Upper limit is 0 = Q(50)
-0.000454545 < 0 < 0 indicating no trend in data.

Sen's Slope Analysis

Parameter: Manganese, Dissolved
Location: MW-02
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is 0.003875

Time Period	Observations
2/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/10/2020	1
9/2/2020	1
10/27/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
7/13/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is -0.001 = Q(30)
Upper limit is 0.008 = Q(62)
-0.001 < 0 < 0.008 indicating no trend in data.

Sen's Slope Analysis

Parameter: Manganese, Dissolved
Location: MW-03
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 91
Sen's Estimator (Median Q) is 0.296667

Time Period	Observations
2/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
9/2/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/15/2022	1
12/8/2022	1
7/13/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 6006
b = 19656
c = 364
Group Variance = 333.667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 30.0458
M1 = (91 - 30.0458)/2.0 = 30.4771
M2 = (91 + 30.0458)/2.0 + 1 = 61.5229
Lower limit is 0.0972727 = Q(30)
Upper limit is 0.5 = Q(62)
0.0972727 > 0 indicating an upward trend in data.

Sen's Slope Analysis

Parameter: Manganese, Dissolved
Location: MW-04R
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 6
Sen's Estimator (Median Q) is -0.906667

Time Period	Observations
6/18/2021	1
12/15/2021	1
6/15/2022	1
7/13/2023	1

There are 0 time periods with multiple data

A = 0
B = 0
C = 0
D = 0
E = 0
F = 0
a = 156
b = 216
c = 24
Group Variance = 8.66667
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 4.84232
M1 = (6 - 4.84232)/2.0 = 0.578842
M2 = (6 + 4.84232)/2.0 + 1 = 6.42116
Lower limit is -5.52 = Q(1)
Upper limit is 2.5 = Q(6)
-5.52 < 0 < 2.5 indicating no trend in data.

Sen's Slope Analysis

Parameter: Manganese, Dissolved
Location: MW-1A
Original Data (Not Transformed)
Non-Detects Replaced with Detection Limit

90% Confidence Level

Number of Q values = 78
Sen's Estimator (Median Q) is 0.00293583

Tied Group	Value	Members
1	0.01	4

Time Period	Observations
2/25/2017	1
11/16/2017	1
5/22/2018	1
11/13/2018	1
5/29/2019	1
11/26/2019	1
4/9/2020	1
10/26/2020	1
6/18/2021	1
12/15/2021	1
6/16/2022	1
12/8/2022	1
7/13/2023	1

There are 0 time periods with multiple data

A = 156
B = 0
C = 24
D = 0
E = 12
F = 0
a = 4836
b = 15444
c = 312
Group Variance = 260
For 90% confidence interval (two-tailed), Z at (1-0.9)/2 = 1.64485
C = 26.5225
M1 = (78 - 26.5225)/2.0 = 25.7388
M2 = (78 + 26.5225)/2.0 + 1 = 53.2612
Lower limit is 0.00055 = Q(26)
Upper limit is 0.00588 = Q(53)
0.00055 > 0 indicating an upward trend in data.

APPENDIX C
LABORATORY ANALYTICAL REPORT & FIELD INFORMATION LOGS

ANALYTICAL REPORT

June 29, 2023

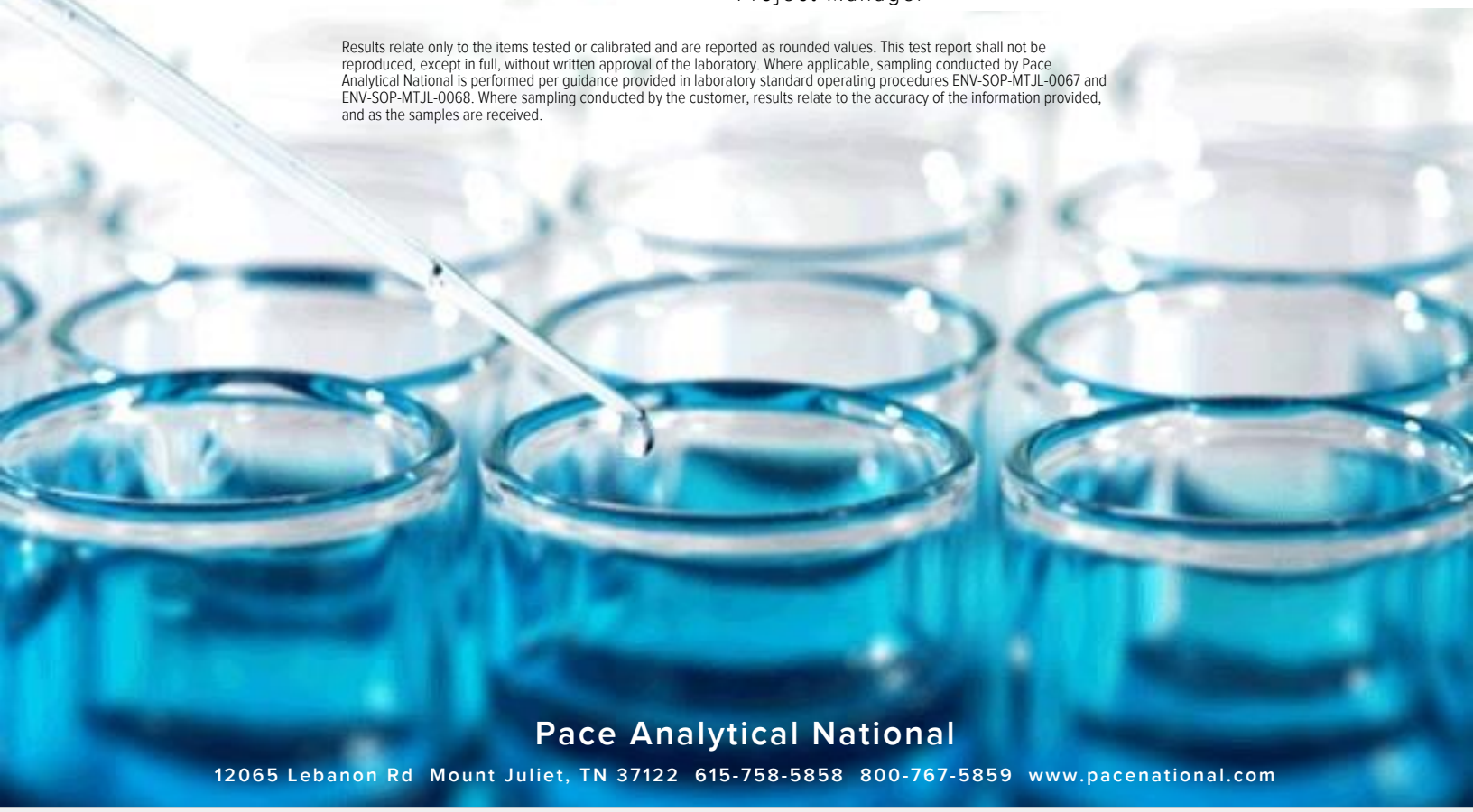
Republic Services - CEC

Sample Delivery Group:	L1621404
Samples Received:	05/31/2023
Project Number:	313-710
Description:	Matlock Bend LF - Loudon, TN
Report To:	Michael Johnson 117 Seaboard Ln. Suite E100 Franklin, TN 37067

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-1 L1621404-01 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 17:08	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:33	06/01/23 15:33	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:10	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:14	CAT	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2069456	1	05/31/23 17:25	05/31/23 17:25	RTW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2069880	1	06/01/23 16:07	06/01/23 16:07	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 09:51	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070011	1	06/05/23 08:40	06/06/23 14:34	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 10:39	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:16	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071809	1	06/05/23 19:14	06/05/23 19:14	ACG	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151	WG2069563	1	06/01/23 08:30	06/02/23 23:44	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG2069549	1	06/01/23 06:46	06/01/23 16:49	NWH	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG2069549	1	06/01/23 06:46	06/01/23 16:49	NWH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1	06/01/23 07:54	06/02/23 09:46	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1	06/01/23 07:54	06/02/23 20:04	JDJ	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

MW-1A L1621404-02 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 15:38	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:34	06/01/23 15:34	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:10	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:48	CAT	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2069456	1	05/31/23 17:25	05/31/23 17:25	RTW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2069880	1	06/01/23 15:17	06/01/23 15:17	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2069880	5	06/01/23 17:10	06/01/23 17:10	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 09:53	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 10:43	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:19	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071809	1	06/05/23 19:35	06/05/23 19:35	ACG	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151	WG2069563	1	06/01/23 08:30	06/02/23 23:55	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG2069549	1	06/01/23 06:46	06/01/23 16:58	NWH	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG2069549	1	06/01/23 06:46	06/01/23 16:58	NWH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1.11	06/01/23 07:54	06/02/23 10:08	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1.11	06/01/23 07:54	06/02/23 20:24	JDJ	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

MW-2 L1621404-03 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 19:03	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:36	06/01/23 15:36	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:10	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:50	CAT	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2069456	1	05/31/23 17:25	05/31/23 17:25	RTW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2069880	1	06/01/23 16:20	06/01/23 16:20	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 09:59	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 10:46	JPD	Mt. Juliet, TN

MW-2 L1621404-03 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 19:03	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:22	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071809	1	06/05/23 19:55	06/05/23 19:55	ACG	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151	WG2069563	1	06/01/23 08:30	06/03/23 00:06	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081	WG2069965	1	06/02/23 13:39	06/03/23 13:49	LTB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG2069965	1	06/02/23 13:39	06/03/23 13:49	LTB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1	06/01/23 07:54	06/02/23 10:30	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2069342	1	06/01/23 07:54	06/02/23 20:45	JDJ	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

MW-3 L1621404-04 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 10:45	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:37	06/01/23 15:37	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:11	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:51	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2078666	1	06/16/23 03:48	06/16/23 03:48	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 10:01	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:23	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 11:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 19:53	06/05/23 19:53	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070402	1	06/02/23 07:37	06/02/23 20:48	RDH	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

MW-4R L1621404-05 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 14:29	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:39	06/01/23 15:39	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:11	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:53	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2069880	1	06/01/23 14:39	06/01/23 14:39	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 10:03	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:26	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:32	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 20:15	06/05/23 20:15	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070402	1.02	06/02/23 07:37	06/02/23 21:00	RDH	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

MW-5 L1621404-06 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 13:33	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2078145	1	06/15/23 18:02	06/15/23 18:02	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 09:38	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:29	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:35	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 20:36	06/05/23 20:36	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070402	1.07	06/02/23 07:37	06/02/23 21:13	RDH	Mt. Juliet, TN

LEACHATE L1621404-07 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 17:38	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2078145	1	06/15/23 18:15	06/15/23 18:15	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 10:06	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:33	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:39	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 20:57	06/05/23 20:57	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070402	1.05	06/02/23 07:37	06/02/23 21:25	RDH	Mt. Juliet, TN

DUPLICATE L1621404-08 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 00:00	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2070356	1	06/02/23 05:42	06/02/23 09:09	AS	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG2069708	1	06/01/23 15:42	06/01/23 15:42	BMD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG2069679	1	06/01/23 09:29	06/01/23 12:11	RTW	Mt. Juliet, TN
Wet Chemistry by Method 4500CN E-2016	WG2069438	1	06/01/23 10:12	06/01/23 18:55	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2078666	1	06/16/23 04:01	06/16/23 04:01	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 10:08	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070011	1	06/05/23 08:40	06/06/23 14:37	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:36	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:42	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 21:19	06/05/23 21:19	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070402	1.06	06/02/23 07:37	06/02/23 21:37	RDH	Mt. Juliet, TN
Subcontracted Analyses	WG2077707	1	06/26/23 00:00	06/26/23 00:00	-	Huntersville, NC 28078

FIELD BLANK L1621404-09 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 14:32	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2078666	1	06/16/23 04:15	06/16/23 04:15	GEB	Mt. Juliet, TN
Mercury by Method 7470	WG2072334	1	06/06/23 11:17	06/07/23 10:10	TDM	Allen, TX
Metals (ICPMS) by Method 6020	WG2070028	1	06/05/23 15:03	06/06/23 13:39	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2072681	1	06/07/23 08:34	06/07/23 12:45	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 16:40	06/05/23 16:40	JAH	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG2070403	1.05	06/02/23 07:42	06/03/23 02:08	RDH	Mt. Juliet, TN

TRIP BLANK L1621404-10 GW

Collected by	Collected date/time	Received date/time
Stuart Miller	05/30/23 10:45	05/31/23 10:39

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2071834	1	06/05/23 17:02	06/05/23 17:02	JAH	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Project Narrative

p-Phenylenediamine is reporting with critically low recovery in the laboratory control sample(s). This compound is a method defined poor performer. Results are estimated.

L1621404 -01, -02, -03, -04, -05, -08 contains subout data that is included after the chain of custody.

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	213		10.0	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.250	1	06/01/2023 15:33	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	24.6		20.0	1	06/01/2023 12:10	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:14	WG2069438

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	05/31/2023 17:25	WG2069456

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	15.6		1.00	1	06/01/2023 16:07	WG2069880
Fluoride	ND		0.150	1	06/01/2023 16:07	WG2069880
Nitrate as (N)	0.856		0.100	1	06/01/2023 16:07	WG2069880
Sulfate	ND		5.00	1	06/01/2023 16:07	WG2069880

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.000312		0.000200	1	06/07/2023 09:51	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:16	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 10:39	WG2070028
Barium	0.0244		0.00200	1	06/06/2023 10:39	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 10:39	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 10:39	WG2070028
Calcium	37.4		1.00	1	06/06/2023 10:39	WG2070028
Chromium	0.00204		0.00200	1	06/06/2023 10:39	WG2070028
Copper	ND		0.00500	1	06/06/2023 10:39	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 10:39	WG2070028
Iron	0.800		0.100	1	06/06/2023 10:39	WG2070028
Lead	ND		0.00200	1	06/06/2023 10:39	WG2070028
Magnesium	23.3		1.00	1	06/06/2023 10:39	WG2070028
Manganese,Dissolved	ND		0.00500	1	06/06/2023 14:34	WG2070011
Nickel	ND		0.00200	1	06/06/2023 10:39	WG2070028

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Potassium	2.12		2.00	1	06/06/2023 10:39	WG2070028
Selenium	ND		0.00200	1	06/06/2023 10:39	WG2070028
Silver	ND		0.00200	1	06/06/2023 10:39	WG2070028
Sodium	8.28		2.00	1	06/06/2023 10:39	WG2070028
Thallium	ND		0.00200	1	06/06/2023 10:39	WG2070028
Tin	ND		0.00200	1	06/07/2023 12:16	WG2072681
Vanadium	ND		0.00500	1	06/06/2023 10:39	WG2070028
Zinc	ND		0.0250	1	06/06/2023 10:39	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 19:14	WG2071809
Acrolein	ND		0.0500	1	06/05/2023 19:14	WG2071809
Acrylonitrile	ND		0.0100	1	06/05/2023 19:14	WG2071809
Benzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Bromodichloromethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
Bromochloromethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
Bromoform	ND		0.00100	1	06/05/2023 19:14	WG2071809
Bromomethane	ND		0.00500	1	06/05/2023 19:14	WG2071809
Carbon disulfide	ND		0.00100	1	06/05/2023 19:14	WG2071809
Carbon tetrachloride	ND		0.00100	1	06/05/2023 19:14	WG2071809
Chlorobenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Chlorodibromomethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
Chloroethane	ND		0.00500	1	06/05/2023 19:14	WG2071809
Chloroform	ND		0.00500	1	06/05/2023 19:14	WG2071809
Chloromethane	ND		0.00250	1	06/05/2023 19:14	WG2071809
1,2-Dibromoethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/05/2023 19:14	WG2071809
Dibromomethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,3-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Dichlorodifluoromethane	ND		0.00500	1	06/05/2023 19:14	WG2071809
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 19:14	WG2071809
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:14	WG2071809
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,3-Dichloropropane	ND		0.00100	1	06/05/2023 19:14	WG2071809
2,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:14	WG2071809
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:14	WG2071809
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1-Dichloropropene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Ethylbenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
2-Hexanone	ND		0.0100	1	06/05/2023 19:14	WG2071809
Iodomethane	ND		0.0100	1	06/05/2023 19:14	WG2071809
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 19:14	WG2071809
Methylene Chloride	ND		0.00500	1	06/05/2023 19:14	WG2071809
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 19:14	WG2071809
Styrene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
Tetrachloroethene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Toluene	ND		0.00100	1	06/05/2023 19:14	WG2071809

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 19:14	WG2071809
Trichloroethene	ND		0.00100	1	06/05/2023 19:14	WG2071809
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 19:14	WG2071809
1,2,3-Trichloropropane	ND		0.00250	1	06/05/2023 19:14	WG2071809
Vinyl acetate	ND		0.0100	1	06/05/2023 19:14	WG2071809
Vinyl chloride	ND		0.00100	1	06/05/2023 19:14	WG2071809
Xylenes, Total	ND		0.00300	1	06/05/2023 19:14	WG2071809
Acetonitrile	ND		0.0500	1	06/05/2023 19:14	WG2071809
Allyl chloride	ND		0.00500	1	06/05/2023 19:14	WG2071809
Chloroprene	ND		0.0500	1	06/05/2023 19:14	WG2071809
trans-1,4-Dichloro-2-butene	ND		0.00250	1	06/05/2023 19:14	WG2071809
Ethyl methacrylate	ND		0.00500	1	06/05/2023 19:14	WG2071809
Isobutanol	ND		0.100	1	06/05/2023 19:14	WG2071809
Methacrylonitrile	ND		0.0500	1	06/05/2023 19:14	WG2071809
Methyl methacrylate	ND		0.00500	1	06/05/2023 19:14	WG2071809
Propionitrile	ND		0.0500	1	06/05/2023 19:14	WG2071809
(S) Toluene-d8	*115*		*80.0-120*		*06/05/2023 19:14*	WG2071809
(S) 4-Bromofluorobenzene	*87.3*		*77.0-126*		*06/05/2023 19:14*	WG2071809
(S) 1,2-Dichloroethane-d4	*123*		*70.0-130*		*06/05/2023 19:14*	WG2071809

Chlorinated Acid Herbicides (GC) by Method 8151

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
2,4-D	ND		0.00200	1	06/02/2023 23:44	WG2069563
2,4,5-T	ND	J4	0.00200	1	06/02/2023 23:44	WG2069563
2,4,5-TP (Silvex)	ND		0.00200	1	06/02/2023 23:44	WG2069563
(S) 2,4-Dichlorophenyl Acetic Acid	*90.1*		*14.0-158*		*06/02/2023 23:44*	WG2069563

Pesticides (GC) by Method 8081

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aldrin	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Alpha BHC	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Beta BHC	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Delta BHC	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Gamma BHC	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Chlordane	ND		0.00500	1	06/01/2023 16:49	WG2069549
4,4-DDD	ND		0.0000500	1	06/01/2023 16:49	WG2069549
4,4-DDE	ND		0.0000500	1	06/01/2023 16:49	WG2069549
4,4-DDT	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Dieldrin	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endosulfan I	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endosulfan II	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endosulfan sulfate	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endrin	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endrin aldehyde	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Endrin ketone	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Heptachlor	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Heptachlor epoxide	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Hexachlorobenzene	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Methoxychlor	ND		0.0000500	1	06/01/2023 16:49	WG2069549
Toxaphene	ND		0.000500	1	06/01/2023 16:49	WG2069549
(S) Decachlorobiphenyl	*26.8*		*10.0-128*		*06/01/2023 16:49*	WG2069549

Pesticides (GC) by Method 8081

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Tetrachloro-m-xylene	*67.2*		*10.0-127*		*06/01/2023 16:49*	WG2069549

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1221	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1232	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1242	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1248	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1254	ND		0.000500	1	06/01/2023 16:49	WG2069549
PCB 1260	ND		0.000500	1	06/01/2023 16:49	WG2069549
Total PCBs	ND		0.000500	1	06/01/2023 16:49	WG2069549
(S) Decachlorobiphenyl	*32.8*		*10.0-128*		*06/01/2023 16:49*	WG2069549
(S) Tetrachloro-m-xylene	*67.9*		*10.0-127*		*06/01/2023 16:49*	WG2069549

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Acenaphthylene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Anthracene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzo(a)anthracene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzo(b)fluoranthene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzo(k)fluoranthene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzo(g,h,i)perylene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzo(a)pyrene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzyl alcohol	ND		0.0100	1	06/02/2023 09:46	WG2069342
Bis(2-chlorethoxy)methane	ND		0.0100	1	06/02/2023 09:46	WG2069342
Bis(2-chloroethyl)ether	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,2-Oxybis(1-Chloropropane)	ND		0.0100	1	06/02/2023 09:46	WG2069342
4-Bromophenyl-phenylether	ND		0.0100	1	06/02/2023 09:46	WG2069342
4-Chloroaniline	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Chloronaphthalene	ND		0.00100	1	06/02/2023 09:46	WG2069342
4-Chlorophenyl-phenylether	ND		0.0100	1	06/02/2023 09:46	WG2069342
Chrysene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Dibenz(a,h)anthracene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Dibenzofuran	ND		0.0100	1	06/02/2023 09:46	WG2069342
3,3-Dichlorobenzidine	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4-Dinitrotoluene	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,6-Dinitrotoluene	ND		0.0100	1	06/02/2023 09:46	WG2069342
Fluoranthene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Fluorene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Hexachlorobenzene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Hexachloro-1,3-butadiene	ND		0.0100	1	06/02/2023 09:46	WG2069342
Hexachlorocyclopentadiene	ND		0.0100	1	06/02/2023 09:46	WG2069342
Hexachloroethane	ND		0.0100	1	06/02/2023 09:46	WG2069342
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Isophorone	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Methylnaphthalene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Naphthalene	ND		0.00100	1	06/02/2023 09:46	WG2069342
2-Nitroaniline	ND		0.0100	1	06/02/2023 09:46	WG2069342
3-Nitroaniline	ND		0.0100	1	06/02/2023 09:46	WG2069342
4-Nitroaniline	ND		0.0100	1	06/02/2023 09:46	WG2069342
Nitrobenzene	ND		0.0100	1	06/02/2023 09:46	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
n-Nitrosodiphenylamine	ND		0.0100	1	06/02/2023 09:46	WG2069342
n-Nitrosodi-n-propylamine	ND		0.0100	1	06/02/2023 09:46	WG2069342
Phenanthrene	ND		0.00100	1	06/02/2023 09:46	WG2069342
Benzylbutyl phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Di-n-butyl phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Diethyl phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Dimethyl phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Di-n-octyl phthalate	ND		0.00300	1	06/02/2023 09:46	WG2069342
Pyrene	ND		0.00100	1	06/02/2023 09:46	WG2069342
1,2,4-Trichlorobenzene	ND		0.0100	1	06/02/2023 09:46	WG2069342
4-Chloro-3-methylphenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Chlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Methylphenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
3&4-Methyl Phenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4-Dichlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4-Dimethylphenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
4,6-Dinitro-2-methylphenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4-Dinitrophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Nitrophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
4-Nitrophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
Pentachlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
Phenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4,5-Trichlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,4,6-Trichlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
Acetophenone	ND		0.0100	1	06/02/2023 09:46	WG2069342
2-Acetylaminofluorene	ND		0.0100	1	06/02/2023 20:04	WG2069342
4-Aminobiphenyl	ND		0.0100	1	06/02/2023 20:04	WG2069342
Chlorobenzilate	ND		0.0500	1	06/02/2023 20:04	WG2069342
Diallate	ND		0.0100	1	06/02/2023 20:04	WG2069342
Dinoseb	ND		0.0500	1	06/02/2023 20:04	WG2069342
Ethyl methanesulfonate	ND		0.0100	1	06/02/2023 20:04	WG2069342
Famphur	ND		0.0200	1	06/02/2023 20:04	WG2069342
Hexachloropropene	ND		0.0500	1	06/02/2023 20:04	WG2069342
Isodrin	ND		0.0100	1	06/02/2023 20:04	WG2069342
Isosafrole	ND		0.0100	1	06/02/2023 20:04	WG2069342
Kepone	ND		0.0200	1	06/02/2023 20:04	WG2069342
Methapyrilene	ND		0.0500	1	06/02/2023 20:04	WG2069342
3-Methylcholanthrene	ND		0.0100	1	06/02/2023 20:04	WG2069342
Methyl methanesulfonate	ND		0.0500	1	06/02/2023 20:04	WG2069342
Methyl parathion	ND		0.0100	1	06/02/2023 20:04	WG2069342
1,4-Naphthoquinone	ND	J4	0.0500	1	06/02/2023 20:04	WG2069342
1-Naphthylamine	ND		0.0100	1	06/02/2023 20:04	WG2069342
2-Naphthylamine	ND		0.0100	1	06/02/2023 20:04	WG2069342
n-Nitrosodi-n-butylamine	ND		0.0100	1	06/02/2023 20:04	WG2069342
n-Nitrosodiethylamine	ND		0.0100	1	06/02/2023 20:04	WG2069342
n-Nitrosodimethylamine	ND		0.0100	1	06/02/2023 09:46	WG2069342
n-Nitrosomethylethylamine	ND		0.0100	1	06/02/2023 20:04	WG2069342
N-Nitrosomorpholine	ND		0.0100	1	06/02/2023 20:04	WG2069342
n-Nitrosopiperidine	ND		0.0100	1	06/02/2023 20:04	WG2069342
n-Nitrosopyrrolidine	ND		0.0100	1	06/02/2023 20:04	WG2069342
5-Nitro-o-toluidine	ND		0.0100	1	06/02/2023 20:04	WG2069342
Ethyl Parathion	ND		0.0100	1	06/02/2023 20:04	WG2069342
Pentachlorobenzene	ND		0.0100	1	06/02/2023 20:04	WG2069342
Pentachloronitrobenzene	ND		0.0100	1	06/02/2023 20:04	WG2069342
Phenacetin	ND		0.0100	1	06/02/2023 20:04	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
p-Phenylenediamine	ND	J4	6.90	1	06/02/2023 20:04	WG2069342
Phorate	ND		0.0500	1	06/02/2023 20:04	WG2069342
Pronamide	ND		0.0100	1	06/02/2023 20:04	WG2069342
Dimethoate	ND		0.0500	1	06/02/2023 20:04	WG2069342
P-(Dimethylamino) Azobenzene	ND		0.0100	1	06/02/2023 20:04	WG2069342
Dimethylbenz (A) Anthracene	ND		0.0100	1	06/02/2023 20:04	WG2069342
3,3-Dimethylbenzidine	ND		0.0100	1	06/02/2023 20:04	WG2069342
1,3-Dinitrobenzene	ND		0.0100	1	06/02/2023 20:04	WG2069342
Diphenylamine	ND		0.0100	1	06/02/2023 09:46	WG2069342
Disulfoton	ND		0.0100	1	06/02/2023 20:04	WG2069342
Safrole	ND		0.0100	1	06/02/2023 20:04	WG2069342
Thionazin	ND		0.0100	1	06/02/2023 20:04	WG2069342
o-Toluidine	ND		0.0100	1	06/02/2023 20:04	WG2069342
O,O,O-Triethyl phosphorothioate	ND		0.0100	1	06/02/2023 20:04	WG2069342
1,3,5-Trinitrobenzene	ND		0.0100	1	06/02/2023 20:04	WG2069342
1,2,4,5-Tetrachlorobenzene	ND		0.0100	1	06/02/2023 09:46	WG2069342
2,6-Dichlorophenol	ND		0.0100	1	06/02/2023 20:04	WG2069342
2,3,4,6-Tetrachlorophenol	ND		0.0100	1	06/02/2023 09:46	WG2069342
(S) 2-Fluorophenol	*33.2*		*10.0-120*		*06/02/2023 09:46*	WG2069342
(S) Phenol-d5	*19.7*		*10.0-120*		*06/02/2023 09:46*	WG2069342
(S) Nitrobenzene-d5	*54.7*		*10.0-127*		*06/02/2023 09:46*	WG2069342
(S) 2-Fluorobiphenyl	*53.8*		*10.0-130*		*06/02/2023 09:46*	WG2069342
(S) 2,4,6-Tribromophenol	*55.5*		*10.0-155*		*06/02/2023 09:46*	WG2069342
(S) p-Terphenyl-d14	*68.5*		*10.0-128*		*06/02/2023 09:46*	WG2069342

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	604		13.3	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.250	1	06/01/2023 15:34	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	ND		20.0	1	06/01/2023 12:10	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:48	WG2069438

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	05/31/2023 17:25	WG2069456

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	201		5.00	5	06/01/2023 17:10	WG2069880
Fluoride	ND		0.150	1	06/01/2023 15:17	WG2069880
Nitrate as (N)	6.38		0.100	1	06/01/2023 15:17	WG2069880
Sulfate	24.8		5.00	1	06/01/2023 15:17	WG2069880

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 09:53	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:19	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 10:43	WG2070028
Barium	0.147		0.00200	1	06/06/2023 10:43	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 10:43	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 10:43	WG2070028
Calcium	87.7		1.00	1	06/06/2023 10:43	WG2070028
Chromium	ND		0.00200	1	06/06/2023 10:43	WG2070028
Copper	ND		0.00500	1	06/06/2023 10:43	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 10:43	WG2070028
Iron	ND		0.100	1	06/06/2023 10:43	WG2070028
Lead	ND		0.00200	1	06/06/2023 10:43	WG2070028
Magnesium	34.9		1.00	1	06/06/2023 10:43	WG2070028
Nickel	0.00284		0.00200	1	06/06/2023 10:43	WG2070028
Potassium	47.6		2.00	1	06/06/2023 10:43	WG2070028

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Selenium	ND		0.00200	1	06/06/2023 10:43	WG2070028
Silver	ND		0.00200	1	06/06/2023 10:43	WG2070028
Sodium	107		2.00	1	06/06/2023 10:43	WG2070028
Thallium	ND		0.00200	1	06/06/2023 10:43	WG2070028
Tin	ND		0.00200	1	06/07/2023 12:19	WG2072681
Vanadium	ND		0.00500	1	06/06/2023 10:43	WG2070028
Zinc	ND		0.0250	1	06/06/2023 10:43	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 19:35	WG2071809
Acrolein	ND		0.0500	1	06/05/2023 19:35	WG2071809
Acrylonitrile	ND		0.0100	1	06/05/2023 19:35	WG2071809
Benzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Bromodichloromethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
Bromochloromethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
Bromoform	ND		0.00100	1	06/05/2023 19:35	WG2071809
Bromomethane	ND		0.00500	1	06/05/2023 19:35	WG2071809
Carbon disulfide	ND		0.00100	1	06/05/2023 19:35	WG2071809
Carbon tetrachloride	ND		0.00100	1	06/05/2023 19:35	WG2071809
Chlorobenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Chlorodibromomethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
Chloroethane	ND		0.00500	1	06/05/2023 19:35	WG2071809
Chloroform	ND		0.00500	1	06/05/2023 19:35	WG2071809
Chloromethane	ND		0.00250	1	06/05/2023 19:35	WG2071809
1,2-Dibromoethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/05/2023 19:35	WG2071809
Dibromomethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,3-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Dichlorodifluoromethane	ND		0.00500	1	06/05/2023 19:35	WG2071809
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 19:35	WG2071809
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:35	WG2071809
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,3-Dichloropropane	ND		0.00100	1	06/05/2023 19:35	WG2071809
2,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:35	WG2071809
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:35	WG2071809
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,1-Dichloropropene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Ethylbenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809
2-Hexanone	ND		0.0100	1	06/05/2023 19:35	WG2071809
Iodomethane	ND		0.0100	1	06/05/2023 19:35	WG2071809
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 19:35	WG2071809
Methylene Chloride	ND		0.00500	1	06/05/2023 19:35	WG2071809
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 19:35	WG2071809
Styrene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
Tetrachloroethene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Toluene	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,2,4-Trichlorobenzene	ND		0.00100	1	06/05/2023 19:35	WG2071809

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 19:35	WG2071809
Trichloroethene	ND		0.00100	1	06/05/2023 19:35	WG2071809
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 19:35	WG2071809
1,2,3-Trichloropropane	ND		0.00250	1	06/05/2023 19:35	WG2071809
Vinyl acetate	ND		0.0100	1	06/05/2023 19:35	WG2071809
Vinyl chloride	ND		0.00100	1	06/05/2023 19:35	WG2071809
Xylenes, Total	ND		0.00300	1	06/05/2023 19:35	WG2071809
Acetonitrile	ND		0.0500	1	06/05/2023 19:35	WG2071809
Allyl chloride	ND		0.00500	1	06/05/2023 19:35	WG2071809
Chloroprene	ND		0.0500	1	06/05/2023 19:35	WG2071809
trans-1,4-Dichloro-2-butene	ND		0.00250	1	06/05/2023 19:35	WG2071809
Ethyl methacrylate	ND		0.00500	1	06/05/2023 19:35	WG2071809
Isobutanol	ND		0.100	1	06/05/2023 19:35	WG2071809
Methacrylonitrile	ND		0.0500	1	06/05/2023 19:35	WG2071809
Methyl methacrylate	ND		0.00500	1	06/05/2023 19:35	WG2071809
Propionitrile	ND		0.0500	1	06/05/2023 19:35	WG2071809
(S) Toluene-d8	*122*	J1	*80.0-120*		*06/05/2023 19:35*	WG2071809
(S) 4-Bromofluorobenzene	*91.8*		*77.0-126*		*06/05/2023 19:35*	WG2071809
(S) 1,2-Dichloroethane-d4	*121*		*70.0-130*		*06/05/2023 19:35*	WG2071809

Chlorinated Acid Herbicides (GC) by Method 8151

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
2,4-D	ND		0.00200	1	06/02/2023 23:55	WG2069563
2,4,5-T	ND	J4	0.00200	1	06/02/2023 23:55	WG2069563
2,4,5-TP (Silvex)	ND		0.00200	1	06/02/2023 23:55	WG2069563
(S) 2,4-Dichlorophenyl Acetic Acid	*68.1*		*14.0-158*		*06/02/2023 23:55*	WG2069563

Pesticides (GC) by Method 8081

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aldrin	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Alpha BHC	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Beta BHC	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Delta BHC	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Gamma BHC	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Chlordane	ND		0.00500	1	06/01/2023 16:58	WG2069549
4,4-DDD	ND		0.0000500	1	06/01/2023 16:58	WG2069549
4,4-DDE	ND		0.0000500	1	06/01/2023 16:58	WG2069549
4,4-DDT	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Dieldrin	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endosulfan I	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endosulfan II	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endosulfan sulfate	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endrin	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endrin aldehyde	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Endrin ketone	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Heptachlor	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Heptachlor epoxide	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Hexachlorobenzene	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Methoxychlor	ND		0.0000500	1	06/01/2023 16:58	WG2069549
Toxaphene	ND		0.000500	1	06/01/2023 16:58	WG2069549
(S) Decachlorobiphenyl	*48.5*		*10.0-128*		*06/01/2023 16:58*	WG2069549
(S) Tetrachloro-m-xylene	*44.1*		*10.0-127*		*06/01/2023 16:58*	WG2069549

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1221	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1232	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1242	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1248	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1254	ND		0.000500	1	06/01/2023 16:58	WG2069549
PCB 1260	ND		0.000500	1	06/01/2023 16:58	WG2069549
Total PCBs	ND		0.000500	1	06/01/2023 16:58	WG2069549
(S) Decachlorobiphenyl	*59.9*		*10.0-128*		*06/01/2023 16:58*	WG2069549
(S) Tetrachloro-m-xylene	*44.3*		*10.0-127*		*06/01/2023 16:58*	WG2069549

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Acenaphthylene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Anthracene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzo(a)anthracene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzo(b)fluoranthene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzo(k)fluoranthene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzo(g,h,i)perylene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzo(a)pyrene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzyl alcohol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Bis(2-chlorethoxy)methane	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Bis(2-chloroethyl)ether	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,2-Oxybis(1-Chloropropane)	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4-Bromophenyl-phenylether	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4-Chloroaniline	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Chloronaphthalene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
4-Chlorophenyl-phenylether	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Chrysene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Dibenz(a,h)anthracene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Dibenzofuran	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
3,3-Dichlorobenzidine	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4-Dinitrotoluene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,6-Dinitrotoluene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Fluoranthene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Fluorene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Hexachlorobenzene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Hexachloro-1,3-butadiene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Hexachlorocyclopentadiene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Hexachloroethane	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Indeno(1,2,3-cd)pyrene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Isophorone	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Methylnaphthalene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Naphthalene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
2-Nitroaniline	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
3-Nitroaniline	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4-Nitroaniline	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Nitrobenzene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
n-Nitrosodiphenylamine	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
n-Nitrosodi-n-propylamine	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Phenanthrene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
Benzylbutyl phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342
Bis(2-ethylhexyl)phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342
Di-n-butyl phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Diethyl phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342
Dimethyl phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342
Di-n-octyl phthalate	ND		0.00333	1.11	06/02/2023 10:08	WG2069342
Pyrene	ND		0.00111	1.11	06/02/2023 10:08	WG2069342
1,2,4-Trichlorobenzene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4-Chloro-3-methylphenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Chlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Methylphenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
3&4-Methyl Phenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4-Dichlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4-Dimethylphenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4,6-Dinitro-2-methylphenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4-Dinitrophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Nitrophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
4-Nitrophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Pentachlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Phenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4,5-Trichlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,4,6-Trichlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Acetophenone	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2-Acetylaminofluorene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
4-Aminobiphenyl	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Chlorobenzilate	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
Diallate	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Dinoseb	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
Ethyl methanesulfonate	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Famphur	ND		0.0222	1.11	06/02/2023 20:24	WG2069342
Hexachloropropene	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
Isodrin	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Isosafrole	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Kepone	ND		0.0222	1.11	06/02/2023 20:24	WG2069342
Methapyrilene	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
3-Methylcholanthrene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Methyl methanesulfonate	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
Methyl parathion	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
1,4-Naphthoquinone	ND	J4	0.0555	1.11	06/02/2023 20:24	WG2069342
1-Naphthylamine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
2-Naphthylamine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
n-Nitrosodi-n-butylamine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
n-Nitrosodiethylamine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
n-Nitrosodimethylamine	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
n-Nitrosomethylethylamine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
N-Nitrosomorpholine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
n-Nitrosopiperidine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
n-Nitrosopyrrolidine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
5-Nitro-o-toluidine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Ethyl Parathion	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Pentachlorobenzene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Pentachloronitrobenzene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Phenacetin	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
p-Phenylenediamine	ND	J4	7.66	1.11	06/02/2023 20:24	WG2069342
Phorate	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
Pronamide	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Dimethoate	ND		0.0555	1.11	06/02/2023 20:24	WG2069342
P-(Dimethylamino) Azobenzene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Dimethylbenz (A) Anthracene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
3,3-Dimethylbenzidine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
1,3-Dinitrobenzene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Diphenylamine	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
Disulfoton	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Safrole	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
Thionazin	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
o-Toluidine	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
O,O,O-Triethyl phosphorothioate	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
1,3,5-Trinitrobenzene	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
1,2,4,5-Tetrachlorobenzene	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
2,6-Dichlorophenol	ND		0.0111	1.11	06/02/2023 20:24	WG2069342
2,3,4,6-Tetrachlorophenol	ND		0.0111	1.11	06/02/2023 10:08	WG2069342
(S) 2-Fluorophenol	*38.5*		*10.0-120*		*06/02/2023 10:08*	WG2069342
(S) Phenol-d5	*23.0*		*10.0-120*		*06/02/2023 10:08*	WG2069342
(S) Nitrobenzene-d5	*52.9*		*10.0-127*		*06/02/2023 10:08*	WG2069342
(S) 2-Fluorobiphenyl	*50.5*		*10.0-130*		*06/02/2023 10:08*	WG2069342
(S) 2,4,6-Tribromophenol	*49.5*		*10.0-155*		*06/02/2023 10:08*	WG2069342
(S) p-Terphenyl-d14	*66.8*		*10.0-128*		*06/02/2023 10:08*	WG2069342

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	56.0		10.0	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.250	1	06/01/2023 15:36	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	ND		20.0	1	06/01/2023 12:10	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:50	WG2069438

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Sulfide	ND		0.0500	1	05/31/2023 17:25	WG2069456

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	3.71		1.00	1	06/01/2023 16:20	WG2069880
Fluoride	ND		0.150	1	06/01/2023 16:20	WG2069880
Nitrate as (N)	3.27		0.100	1	06/01/2023 16:20	WG2069880
Sulfate	ND		5.00	1	06/01/2023 16:20	WG2069880

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 09:59	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:22	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 10:46	WG2070028
Barium	0.0697		0.00200	1	06/06/2023 10:46	WG2070028
Beryllium	0.00264		0.00200	1	06/06/2023 10:46	WG2070028
Cadmium	0.00235		0.00100	1	06/06/2023 10:46	WG2070028
Calcium	1.81		1.00	1	06/06/2023 10:46	WG2070028
Chromium	ND		0.00200	1	06/06/2023 10:46	WG2070028
Copper	ND		0.00500	1	06/06/2023 10:46	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 10:46	WG2070028
Iron	ND		0.100	1	06/06/2023 10:46	WG2070028
Lead	ND		0.00200	1	06/06/2023 10:46	WG2070028
Magnesium	1.65		1.00	1	06/06/2023 10:46	WG2070028
Nickel	0.0375		0.00200	1	06/06/2023 10:46	WG2070028
Potassium	2.86		2.00	1	06/06/2023 10:46	WG2070028

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Selenium	ND		0.00200	1	06/06/2023 10:46	WG2070028
Silver	ND		0.00200	1	06/06/2023 10:46	WG2070028
Sodium	3.69		2.00	1	06/06/2023 10:46	WG2070028
Thallium	ND		0.00200	1	06/06/2023 10:46	WG2070028
Tin	ND		0.00200	1	06/07/2023 12:22	WG2072681
Vanadium	ND		0.00500	1	06/06/2023 10:46	WG2070028
Zinc	0.337		0.0250	1	06/06/2023 10:46	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 19:55	WG2071809
Acrolein	ND		0.0500	1	06/05/2023 19:55	WG2071809
Acrylonitrile	ND		0.0100	1	06/05/2023 19:55	WG2071809
Benzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Bromodichloromethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
Bromochloromethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
Bromoform	ND		0.00100	1	06/05/2023 19:55	WG2071809
Bromomethane	ND		0.00500	1	06/05/2023 19:55	WG2071809
Carbon disulfide	ND		0.00100	1	06/05/2023 19:55	WG2071809
Carbon tetrachloride	ND		0.00100	1	06/05/2023 19:55	WG2071809
Chlorobenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Chlorodibromomethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
Chloroethane	ND		0.00500	1	06/05/2023 19:55	WG2071809
Chloroform	ND		0.00500	1	06/05/2023 19:55	WG2071809
Chloromethane	ND		0.00250	1	06/05/2023 19:55	WG2071809
1,2-Dibromoethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/05/2023 19:55	WG2071809
Dibromomethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,3-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Dichlorodifluoromethane	ND		0.00500	1	06/05/2023 19:55	WG2071809
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 19:55	WG2071809
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:55	WG2071809
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,3-Dichloropropane	ND		0.00100	1	06/05/2023 19:55	WG2071809
2,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:55	WG2071809
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:55	WG2071809
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,1-Dichloropropene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Ethylbenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809
2-Hexanone	ND		0.0100	1	06/05/2023 19:55	WG2071809
Iodomethane	ND		0.0100	1	06/05/2023 19:55	WG2071809
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 19:55	WG2071809
Methylene Chloride	ND		0.00500	1	06/05/2023 19:55	WG2071809
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 19:55	WG2071809
Styrene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
Tetrachloroethene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Toluene	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,2,4-Trichlorobenzene	ND		0.00100	1	06/05/2023 19:55	WG2071809

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 19:55	WG2071809
Trichloroethene	ND		0.00100	1	06/05/2023 19:55	WG2071809
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 19:55	WG2071809
1,2,3-Trichloropropane	ND		0.00250	1	06/05/2023 19:55	WG2071809
Vinyl acetate	ND		0.0100	1	06/05/2023 19:55	WG2071809
Vinyl chloride	ND		0.00100	1	06/05/2023 19:55	WG2071809
Xylenes, Total	ND		0.00300	1	06/05/2023 19:55	WG2071809
Acetonitrile	ND		0.0500	1	06/05/2023 19:55	WG2071809
Allyl chloride	ND		0.00500	1	06/05/2023 19:55	WG2071809
Chloroprene	ND		0.0500	1	06/05/2023 19:55	WG2071809
trans-1,4-Dichloro-2-butene	ND		0.00250	1	06/05/2023 19:55	WG2071809
Ethyl methacrylate	ND		0.00500	1	06/05/2023 19:55	WG2071809
Isobutanol	ND		0.100	1	06/05/2023 19:55	WG2071809
Methacrylonitrile	ND		0.0500	1	06/05/2023 19:55	WG2071809
Methyl methacrylate	ND		0.00500	1	06/05/2023 19:55	WG2071809
Propionitrile	ND		0.0500	1	06/05/2023 19:55	WG2071809
(S) Toluene-d8	*119*		*80.0-120*		*06/05/2023 19:55*	WG2071809
(S) 4-Bromofluorobenzene	*91.0*		*77.0-126*		*06/05/2023 19:55*	WG2071809
(S) 1,2-Dichloroethane-d4	*122*		*70.0-130*		*06/05/2023 19:55*	WG2071809

Chlorinated Acid Herbicides (GC) by Method 8151

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
2,4-D	ND		0.00200	1	06/03/2023 00:06	WG2069563
2,4,5-T	ND	J4	0.00200	1	06/03/2023 00:06	WG2069563
2,4,5-TP (Silvex)	ND		0.00200	1	06/03/2023 00:06	WG2069563
(S) 2,4-Dichlorophenyl Acetic Acid	*86.3*		*14.0-158*		*06/03/2023 00:06*	WG2069563

Pesticides (GC) by Method 8081

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Aldrin	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Alpha BHC	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Beta BHC	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Delta BHC	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Gamma BHC	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Chlordane	ND		0.00500	1	06/03/2023 13:49	WG2069965
4,4-DDD	ND		0.0000500	1	06/03/2023 13:49	WG2069965
4,4-DDE	ND		0.0000500	1	06/03/2023 13:49	WG2069965
4,4-DDT	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Dieldrin	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endosulfan I	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endosulfan II	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endosulfan sulfate	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endrin	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endrin aldehyde	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Endrin ketone	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Heptachlor	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Heptachlor epoxide	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Hexachlorobenzene	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Methoxychlor	ND		0.0000500	1	06/03/2023 13:49	WG2069965
Toxaphene	ND		0.000500	1	06/03/2023 13:49	WG2069965
(S) Decachlorobiphenyl	*71.7*		*10.0-128*		*06/03/2023 13:49*	WG2069965
(S) Tetrachloro-m-xylene	*63.4*		*10.0-127*		*06/03/2023 13:49*	WG2069965

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1221	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1232	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1242	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1248	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1254	ND		0.000500	1	06/03/2023 13:49	WG2069965
PCB 1260	ND		0.000500	1	06/03/2023 13:49	WG2069965
Total PCBs	ND		0.000500	1	06/03/2023 13:49	WG2069965
(S) Decachlorobiphenyl	*71.8*		*10.0-128*		*06/03/2023 13:49*	WG2069965
(S) Tetrachloro-m-xylene	*62.7*		*10.0-127*		*06/03/2023 13:49*	WG2069965

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Acenaphthylene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Anthracene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzo(a)anthracene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzo(b)fluoranthene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzo(k)fluoranthene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzo(g,h,i)perylene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzo(a)pyrene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzyl alcohol	ND		0.0100	1	06/02/2023 10:30	WG2069342
Bis(2-chlorethoxy)methane	ND		0.0100	1	06/02/2023 10:30	WG2069342
Bis(2-chloroethyl)ether	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,2-Oxybis(1-Chloropropane)	ND		0.0100	1	06/02/2023 10:30	WG2069342
4-Bromophenyl-phenylether	ND		0.0100	1	06/02/2023 10:30	WG2069342
4-Chloroaniline	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Chloronaphthalene	ND		0.00100	1	06/02/2023 10:30	WG2069342
4-Chlorophenyl-phenylether	ND		0.0100	1	06/02/2023 10:30	WG2069342
Chrysene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Dibenz(a,h)anthracene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Dibenzofuran	ND		0.0100	1	06/02/2023 10:30	WG2069342
3,3-Dichlorobenzidine	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4-Dinitrotoluene	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,6-Dinitrotoluene	ND		0.0100	1	06/02/2023 10:30	WG2069342
Fluoranthene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Fluorene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Hexachlorobenzene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Hexachloro-1,3-butadiene	ND		0.0100	1	06/02/2023 10:30	WG2069342
Hexachlorocyclopentadiene	ND		0.0100	1	06/02/2023 10:30	WG2069342
Hexachloroethane	ND		0.0100	1	06/02/2023 10:30	WG2069342
Indeno(1,2,3-cd)pyrene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Isophorone	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Methylnaphthalene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Naphthalene	ND		0.00100	1	06/02/2023 10:30	WG2069342
2-Nitroaniline	ND		0.0100	1	06/02/2023 10:30	WG2069342
3-Nitroaniline	ND		0.0100	1	06/02/2023 10:30	WG2069342
4-Nitroaniline	ND		0.0100	1	06/02/2023 10:30	WG2069342
Nitrobenzene	ND		0.0100	1	06/02/2023 10:30	WG2069342
n-Nitrosodiphenylamine	ND		0.0100	1	06/02/2023 10:30	WG2069342
n-Nitrosodi-n-propylamine	ND		0.0100	1	06/02/2023 10:30	WG2069342
Phenanthrene	ND		0.00100	1	06/02/2023 10:30	WG2069342
Benzylbutyl phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342
Bis(2-ethylhexyl)phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342
Di-n-butyl phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Diethyl phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342
Dimethyl phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342
Di-n-octyl phthalate	ND		0.00300	1	06/02/2023 10:30	WG2069342
Pyrene	ND		0.00100	1	06/02/2023 10:30	WG2069342
1,2,4-Trichlorobenzene	ND		0.0100	1	06/02/2023 10:30	WG2069342
4-Chloro-3-methylphenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Chlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Methylphenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
3&4-Methyl Phenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4-Dichlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4-Dimethylphenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
4,6-Dinitro-2-methylphenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4-Dinitrophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Nitrophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
4-Nitrophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
Pentachlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
Phenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4,5-Trichlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,4,6-Trichlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
Acetophenone	ND		0.0100	1	06/02/2023 10:30	WG2069342
2-Acetylaminofluorene	ND		0.0100	1	06/02/2023 20:45	WG2069342
4-Aminobiphenyl	ND		0.0100	1	06/02/2023 20:45	WG2069342
Chlorobenzilate	ND		0.0500	1	06/02/2023 20:45	WG2069342
Diallate	ND		0.0100	1	06/02/2023 20:45	WG2069342
Dinoseb	ND		0.0500	1	06/02/2023 20:45	WG2069342
Ethyl methanesulfonate	ND		0.0100	1	06/02/2023 20:45	WG2069342
Famphur	ND		0.0200	1	06/02/2023 20:45	WG2069342
Hexachloropropene	ND		0.0500	1	06/02/2023 20:45	WG2069342
Isodrin	ND		0.0100	1	06/02/2023 20:45	WG2069342
Isosafrole	ND		0.0100	1	06/02/2023 20:45	WG2069342
Kepone	ND		0.0200	1	06/02/2023 20:45	WG2069342
Methapyrilene	ND		0.0500	1	06/02/2023 20:45	WG2069342
3-Methylcholanthrene	ND		0.0100	1	06/02/2023 20:45	WG2069342
Methyl methanesulfonate	ND		0.0500	1	06/02/2023 20:45	WG2069342
Methyl parathion	ND		0.0100	1	06/02/2023 20:45	WG2069342
1,4-Naphthoquinone	ND	J4	0.0500	1	06/02/2023 20:45	WG2069342
1-Naphthylamine	ND		0.0100	1	06/02/2023 20:45	WG2069342
2-Naphthylamine	ND		0.0100	1	06/02/2023 20:45	WG2069342
n-Nitrosodi-n-butylamine	ND		0.0100	1	06/02/2023 20:45	WG2069342
n-Nitrosodiethylamine	ND		0.0100	1	06/02/2023 20:45	WG2069342
n-Nitrosodimethylamine	ND		0.0100	1	06/02/2023 10:30	WG2069342
n-Nitrosomethylethylamine	ND		0.0100	1	06/02/2023 20:45	WG2069342
N-Nitrosomorpholine	ND		0.0100	1	06/02/2023 20:45	WG2069342
n-Nitrosopiperidine	ND		0.0100	1	06/02/2023 20:45	WG2069342
n-Nitrosopyrrolidine	ND		0.0100	1	06/02/2023 20:45	WG2069342
5-Nitro-o-toluidine	ND		0.0100	1	06/02/2023 20:45	WG2069342
Ethyl Parathion	ND		0.0100	1	06/02/2023 20:45	WG2069342
Pentachlorobenzene	ND		0.0100	1	06/02/2023 20:45	WG2069342
Pentachloronitrobenzene	ND		0.0100	1	06/02/2023 20:45	WG2069342
Phenacetin	ND		0.0100	1	06/02/2023 20:45	WG2069342
p-Phenylenediamine	ND	J4	6.90	1	06/02/2023 20:45	WG2069342
Phorate	ND		0.0500	1	06/02/2023 20:45	WG2069342
Pronamide	ND		0.0100	1	06/02/2023 20:45	WG2069342
Dimethoate	ND		0.0500	1	06/02/2023 20:45	WG2069342
P-(Dimethylamino) Azobenzene	ND		0.0100	1	06/02/2023 20:45	WG2069342
Dimethylbenz (A) Anthracene	ND		0.0100	1	06/02/2023 20:45	WG2069342

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
3,3-Dimethylbenzidine	ND		0.0100	1	06/02/2023 20:45	WG2069342
1,3-Dinitrobenzene	ND		0.0100	1	06/02/2023 20:45	WG2069342
Diphenylamine	ND		0.0100	1	06/02/2023 10:30	WG2069342
Disulfoton	ND		0.0100	1	06/02/2023 20:45	WG2069342
Safrole	ND		0.0100	1	06/02/2023 20:45	WG2069342
Thionazin	ND		0.0100	1	06/02/2023 20:45	WG2069342
o-Toluidine	ND		0.0100	1	06/02/2023 20:45	WG2069342
O,O,O-Triethyl phosphorothioate	ND		0.0100	1	06/02/2023 20:45	WG2069342
1,3,5-Trinitrobenzene	ND		0.0100	1	06/02/2023 20:45	WG2069342
1,2,4,5-Tetrachlorobenzene	ND		0.0100	1	06/02/2023 10:30	WG2069342
2,6-Dichlorophenol	ND		0.0100	1	06/02/2023 20:45	WG2069342
2,3,4,6-Tetrachlorophenol	ND		0.0100	1	06/02/2023 10:30	WG2069342
(S) 2-Fluorophenol	*25.0*		*10.0-120*		*06/02/2023 10:30*	WG2069342
(S) Phenol-d5	*15.8*		*10.0-120*		*06/02/2023 10:30*	WG2069342
(S) Nitrobenzene-d5	*49.7*		*10.0-127*		*06/02/2023 10:30*	WG2069342
(S) 2-Fluorobiphenyl	*47.4*		*10.0-130*		*06/02/2023 10:30*	WG2069342
(S) 2,4,6-Tribromophenol	*30.3*		*10.0-155*		*06/02/2023 10:30*	WG2069342
(S) p-Terphenyl-d14	*58.0*		*10.0-128*		*06/02/2023 10:30*	WG2069342

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	183		10.0	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	2.67		0.250	1	06/01/2023 15:37	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	ND		20.0	1	06/01/2023 12:11	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:51	WG2069438

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	38.8		1.00	1	06/16/2023 03:48	WG2078666
Fluoride	ND		0.150	1	06/16/2023 03:48	WG2078666
Nitrate as (N)	0.358	Q	0.100	1	06/16/2023 03:48	WG2078666
Sulfate	32.8		5.00	1	06/16/2023 03:48	WG2078666

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.000272		0.000200	1	06/07/2023 10:01	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 11:59	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 13:23	WG2070028
Barium	0.0203		0.00200	1	06/06/2023 13:23	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:23	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:23	WG2070028
Calcium	3.66		1.00	1	06/06/2023 13:23	WG2070028
Chromium	ND		0.00200	1	06/06/2023 13:23	WG2070028
Copper	ND		0.00500	1	06/06/2023 13:23	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 13:23	WG2070028
Iron	0.596		0.100	1	06/06/2023 13:23	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:23	WG2070028
Magnesium	1.50		1.00	1	06/06/2023 13:23	WG2070028
Nickel	ND		0.00200	1	06/06/2023 13:23	WG2070028
Potassium	ND		2.00	1	06/06/2023 13:23	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:23	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:23	WG2070028
Sodium	3.88		2.00	1	06/06/2023 13:23	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:23	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:23	WG2070028
Zinc	ND		0.0250	1	06/06/2023 13:23	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 19:53	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 19:53	WG2071834
Benzene	ND		0.00100	1	06/05/2023 19:53	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 19:53	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 19:53	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 19:53	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 19:53	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 19:53	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 19:53	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 19:53	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 19:53	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 19:53	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 19:53	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 19:53	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:53	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 19:53	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:53	WG2071834
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 19:53	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 19:53	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 19:53	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 19:53	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 19:53	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 19:53	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 19:53	WG2071834
Styrene	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 19:53	WG2071834
Toluene	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 19:53	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 19:53	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 19:53	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 19:53	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 19:53	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 19:53	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 19:53	WG2071834
(S) Toluene-d8	*92.4*		*80.0-120*		*06/05/2023 19:53*	WG2071834
(S) 4-Bromofluorobenzene	*79.6*		*77.0-126*		*06/05/2023 19:53*	WG2071834
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*06/05/2023 19:53*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000200	1	06/02/2023 20:48	WG2070402
1,2-Dibromo-3-Chloropropane	ND		0.0000200	1	06/02/2023 20:48	WG2070402

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	121		10.0	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.250	1	06/01/2023 15:39	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	ND		20.0	1	06/01/2023 12:11	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:53	WG2069438

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	ND		1.00	1	06/01/2023 14:39	WG2069880
Fluoride	ND		0.150	1	06/01/2023 14:39	WG2069880
Nitrate as (N)	ND	Q	0.100	1	06/01/2023 14:39	WG2069880
Sulfate	ND		5.00	1	06/01/2023 14:39	WG2069880

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 10:03	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:32	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 13:26	WG2070028
Barium	0.0145		0.00200	1	06/06/2023 13:26	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:26	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:26	WG2070028
Calcium	17.9		1.00	1	06/06/2023 13:26	WG2070028
Chromium	ND		0.00200	1	06/06/2023 13:26	WG2070028
Copper	ND		0.00500	1	06/06/2023 13:26	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 13:26	WG2070028
Iron	ND		0.100	1	06/06/2023 13:26	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:26	WG2070028
Magnesium	10.7		1.00	1	06/06/2023 13:26	WG2070028
Nickel	0.00417		0.00200	1	06/06/2023 13:26	WG2070028
Potassium	2.47		2.00	1	06/06/2023 13:26	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:26	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:26	WG2070028
Sodium	ND		2.00	1	06/06/2023 13:26	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:26	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:26	WG2070028
Zinc	ND		0.0250	1	06/06/2023 13:26	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 20:15	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 20:15	WG2071834
Benzene	ND		0.00100	1	06/05/2023 20:15	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 20:15	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 20:15	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 20:15	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 20:15	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 20:15	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 20:15	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 20:15	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 20:15	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:15	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 20:15	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 20:15	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:15	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 20:15	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:15	WG2071834
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:15	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 20:15	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 20:15	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 20:15	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 20:15	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 20:15	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 20:15	WG2071834
Styrene	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 20:15	WG2071834
Toluene	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 20:15	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 20:15	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 20:15	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 20:15	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 20:15	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 20:15	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 20:15	WG2071834
(S) Toluene-d8	*93.1*		*80.0-120*		*06/05/2023 20:15*	WG2071834
(S) 4-Bromofluorobenzene	*80.6*		*77.0-126*		*06/05/2023 20:15*	WG2071834
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*06/05/2023 20:15*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000204	1.02	06/02/2023 21:00	WG2070402
1,2-Dibromo-3-Chloropropane	ND		0.0000204	1.02	06/02/2023 21:00	WG2070402

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Fluoride	ND		0.150	1	06/15/2023 18:02	WG2078145

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 09:38	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:35	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 13:29	WG2070028
Barium	0.00921		0.00200	1	06/06/2023 13:29	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:29	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:29	WG2070028
Chromium	ND		0.00200	1	06/06/2023 13:29	WG2070028
Copper	ND		0.00500	1	06/06/2023 13:29	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 13:29	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:29	WG2070028
Nickel	ND		0.00200	1	06/06/2023 13:29	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:29	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:29	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:29	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:29	WG2070028
Zinc	ND		0.0250	1	06/06/2023 13:29	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 20:36	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 20:36	WG2071834
Benzene	ND		0.00100	1	06/05/2023 20:36	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 20:36	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 20:36	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 20:36	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 20:36	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 20:36	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 20:36	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 20:36	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 20:36	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:36	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 20:36	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 20:36	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:36	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 20:36	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:36	WG2071834

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:36	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 20:36	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 20:36	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 20:36	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 20:36	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 20:36	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 20:36	WG2071834
Styrene	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 20:36	WG2071834
Toluene	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 20:36	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 20:36	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 20:36	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 20:36	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 20:36	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 20:36	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 20:36	WG2071834
(S) Toluene-d8	*94.4*		*80.0-120*		*06/05/2023 20:36*	WG2071834
(S) 4-Bromofluorobenzene	*82.9*		*77.0-126*		*06/05/2023 20:36*	WG2071834
(S) 1,2-Dichloroethane-d4	*99.7*		*70.0-130*		*06/05/2023 20:36*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000214	1.07	06/02/2023 21:13	WG2070402
1,2-Dibromo-3-Chloropropane	ND		0.0000214	1.07	06/02/2023 21:13	WG2070402

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Fluoride	ND		0.150	1	06/15/2023 18:15	WG2078145

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 10:06	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:39	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 13:33	WG2070028
Barium	0.0384		0.00200	1	06/06/2023 13:33	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:33	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:33	WG2070028
Chromium	ND		0.00200	1	06/06/2023 13:33	WG2070028
Copper	ND		0.00500	1	06/06/2023 13:33	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 13:33	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:33	WG2070028
Nickel	0.00241		0.00200	1	06/06/2023 13:33	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:33	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:33	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:33	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:33	WG2070028
Zinc	ND		0.0250	1	06/06/2023 13:33	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 20:57	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 20:57	WG2071834
Benzene	ND		0.00100	1	06/05/2023 20:57	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 20:57	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 20:57	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 20:57	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 20:57	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 20:57	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 20:57	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 20:57	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 20:57	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 20:57	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 20:57	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 20:57	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:57	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 20:57	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:57	WG2071834

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 20:57	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 20:57	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 20:57	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 20:57	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 20:57	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 20:57	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 20:57	WG2071834
Styrene	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 20:57	WG2071834
Toluene	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 20:57	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 20:57	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 20:57	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 20:57	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 20:57	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 20:57	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 20:57	WG2071834
(S) Toluene-d8	*92.3*		*80.0-120*		*06/05/2023 20:57*	WG2071834
(S) 4-Bromofluorobenzene	*81.9*		*77.0-126*		*06/05/2023 20:57*	WG2071834
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*06/05/2023 20:57*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000210	1.05	06/02/2023 21:25	WG2070402
1,2-Dibromo-3-Chloropropane	ND		0.0000210	1.05	06/02/2023 21:25	WG2070402

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	187		10.0	1	06/02/2023 09:09	WG2070356

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	2.60		0.250	1	06/01/2023 15:42	WG2069708

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	29.7		20.0	1	06/01/2023 12:11	WG2069679

Wet Chemistry by Method 4500CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	06/01/2023 18:55	WG2069438

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	38.9		1.00	1	06/16/2023 04:01	WG2078666
Fluoride	ND		0.150	1	06/16/2023 04:01	WG2078666
Nitrate as (N)	0.817	Q	0.100	1	06/16/2023 04:01	WG2078666
Sulfate	32.7		5.00	1	06/16/2023 04:01	WG2078666

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.000265		0.000200	1	06/07/2023 10:08	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:42	WG2072681
Arsenic	0.00515		0.00200	1	06/06/2023 13:36	WG2070028
Barium	0.0748		0.00200	1	06/06/2023 13:36	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:36	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:36	WG2070028
Calcium	17.6		1.00	1	06/06/2023 13:36	WG2070028
Chromium	0.00397		0.00200	1	06/06/2023 13:36	WG2070028
Copper	ND		0.00500	1	06/06/2023 13:36	WG2070028
Cobalt	0.0285		0.00200	1	06/06/2023 13:36	WG2070028
Iron	1.60		0.100	1	06/06/2023 13:36	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:36	WG2070028
Magnesium	4.66		1.00	1	06/06/2023 13:36	WG2070028
Manganese,Dissolved	7.86		0.00500	1	06/06/2023 14:37	WG2070011
Nickel	0.0110		0.00200	1	06/06/2023 13:36	WG2070028
Potassium	5.78		2.00	1	06/06/2023 13:36	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:36	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:36	WG2070028
Sodium	33.8		2.00	1	06/06/2023 13:36	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:36	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:36	WG2070028

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Zinc	ND		0.0250	1	06/06/2023 13:36	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 21:19	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 21:19	WG2071834
Benzene	ND		0.00100	1	06/05/2023 21:19	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 21:19	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 21:19	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 21:19	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 21:19	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 21:19	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 21:19	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 21:19	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 21:19	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 21:19	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 21:19	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 21:19	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 21:19	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 21:19	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 21:19	WG2071834
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 21:19	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 21:19	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 21:19	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 21:19	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 21:19	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 21:19	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 21:19	WG2071834
Styrene	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 21:19	WG2071834
Toluene	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 21:19	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 21:19	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 21:19	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 21:19	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 21:19	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 21:19	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 21:19	WG2071834
(S) Toluene-d8	*94.8*		*80.0-120*		*06/05/2023 21:19*	WG2071834
(S) 4-Bromofluorobenzene	*84.2*		*77.0-126*		*06/05/2023 21:19*	WG2071834
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*06/05/2023 21:19*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000212	1.06	06/02/2023 21:37	WG2070402
1,2-Dibromo-3-Chloropropane	ND		0.0000212	1.06	06/02/2023 21:37	WG2070402

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Fluoride	ND		0.150	1	06/16/2023 04:15	WG2078666

Mercury by Method 7470

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	06/07/2023 10:10	WG2072334

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	06/07/2023 12:45	WG2072681
Arsenic	ND		0.00200	1	06/06/2023 13:39	WG2070028
Barium	ND		0.00200	1	06/06/2023 13:39	WG2070028
Beryllium	ND		0.00200	1	06/06/2023 13:39	WG2070028
Cadmium	ND		0.00100	1	06/06/2023 13:39	WG2070028
Chromium	ND		0.00200	1	06/06/2023 13:39	WG2070028
Copper	0.00515		0.00500	1	06/06/2023 13:39	WG2070028
Cobalt	ND		0.00200	1	06/06/2023 13:39	WG2070028
Lead	ND		0.00200	1	06/06/2023 13:39	WG2070028
Nickel	ND		0.00200	1	06/06/2023 13:39	WG2070028
Selenium	ND		0.00200	1	06/06/2023 13:39	WG2070028
Silver	ND		0.00200	1	06/06/2023 13:39	WG2070028
Thallium	ND		0.00200	1	06/06/2023 13:39	WG2070028
Vanadium	ND		0.00500	1	06/06/2023 13:39	WG2070028
Zinc	ND		0.0250	1	06/06/2023 13:39	WG2070028

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 16:40	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 16:40	WG2071834
Benzene	ND		0.00100	1	06/05/2023 16:40	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 16:40	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 16:40	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 16:40	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 16:40	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 16:40	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 16:40	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 16:40	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 16:40	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 16:40	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 16:40	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 16:40	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 16:40	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 16:40	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 16:40	WG2071834

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 16:40	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 16:40	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 16:40	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 16:40	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 16:40	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 16:40	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 16:40	WG2071834
Styrene	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 16:40	WG2071834
Toluene	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 16:40	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 16:40	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 16:40	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 16:40	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 16:40	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 16:40	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 16:40	WG2071834
(S) Toluene-d8	*93.3*		*80.0-120*		*06/05/2023 16:40*	WG2071834
(S) 4-Bromofluorobenzene	*84.9*		*77.0-126*		*06/05/2023 16:40*	WG2071834
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*06/05/2023 16:40*	WG2071834

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000210	1.05	06/03/2023 02:08	WG2070403
1,2-Dibromo-3-Chloropropane	ND		0.0000210	1.05	06/03/2023 02:08	WG2070403

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/05/2023 17:02	WG2071834
Acrylonitrile	ND		0.0100	1	06/05/2023 17:02	WG2071834
Benzene	ND		0.00100	1	06/05/2023 17:02	WG2071834
Bromochloromethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
Bromodichloromethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
Bromoform	ND		0.00100	1	06/05/2023 17:02	WG2071834
Bromomethane	ND		0.00500	1	06/05/2023 17:02	WG2071834
Carbon disulfide	ND		0.00100	1	06/05/2023 17:02	WG2071834
Carbon tetrachloride	ND		0.00100	1	06/05/2023 17:02	WG2071834
Chlorobenzene	ND		0.00100	1	06/05/2023 17:02	WG2071834
Chlorodibromomethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
Chloroethane	ND		0.00500	1	06/05/2023 17:02	WG2071834
Chloroform	ND		0.00500	1	06/05/2023 17:02	WG2071834
Chloromethane	ND		0.00250	1	06/05/2023 17:02	WG2071834
Dibromomethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,2-Dichlorobenzene	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,4-Dichlorobenzene	ND		0.00100	1	06/05/2023 17:02	WG2071834
trans-1,4-Dichloro-2-butene	ND	J3 J4	0.00250	1	06/05/2023 17:02	WG2071834
1,1-Dichloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,2-Dichloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,1-Dichloroethene	ND		0.00100	1	06/05/2023 17:02	WG2071834
cis-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 17:02	WG2071834
trans-1,2-Dichloroethene	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,2-Dichloropropane	ND		0.00100	1	06/05/2023 17:02	WG2071834
cis-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 17:02	WG2071834
trans-1,3-Dichloropropene	ND		0.00100	1	06/05/2023 17:02	WG2071834
Ethylbenzene	ND		0.00100	1	06/05/2023 17:02	WG2071834
2-Hexanone	ND		0.0100	1	06/05/2023 17:02	WG2071834
Iodomethane	ND		0.0100	1	06/05/2023 17:02	WG2071834
2-Butanone (MEK)	ND		0.0100	1	06/05/2023 17:02	WG2071834
Methylene Chloride	ND		0.00500	1	06/05/2023 17:02	WG2071834
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/05/2023 17:02	WG2071834
Styrene	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
Tetrachloroethene	ND		0.00100	1	06/05/2023 17:02	WG2071834
Toluene	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,1,1-Trichloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
1,1,2-Trichloroethane	ND		0.00100	1	06/05/2023 17:02	WG2071834
Trichloroethene	ND		0.00100	1	06/05/2023 17:02	WG2071834
Trichlorofluoromethane	ND		0.00500	1	06/05/2023 17:02	WG2071834
1,2,3-Trichloropropane	ND	J3 J4	0.00250	1	06/05/2023 17:02	WG2071834
Vinyl acetate	ND	J3	0.0100	1	06/05/2023 17:02	WG2071834
Vinyl chloride	ND		0.00100	1	06/05/2023 17:02	WG2071834
Xylenes, Total	ND		0.00300	1	06/05/2023 17:02	WG2071834
(S) Toluene-d8	*95.0*		*80.0-120*		*06/05/2023 17:02*	WG2071834
(S) 4-Bromofluorobenzene	*83.3*		*77.0-126*		*06/05/2023 17:02*	WG2071834
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*06/05/2023 17:02*	WG2071834

QUALITY CONTROL SUMMARY

L1621404-01,02,03,04,05,08

Method Blank (MB)

(MB) R3933564-1 06/02/23 09:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1621196-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621196-01 06/02/23 09:09 • (DUP) R3933564-3 06/02/23 09:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	697	701	1	0.572		5

L1621196-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621196-02 06/02/23 09:09 • (DUP) R3933564-4 06/02/23 09:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	707	729	1	3.16		5

Laboratory Control Sample (LCS)

(LCS) R3933564-2 06/02/23 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8440	95.9	77.3-123	

Method Blank (MB)

(MB) R3931791-1 06/01/23 15:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ammonia Nitrogen	U		0.117	0.250

L1621024-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621024-02 06/01/23 15:21 • (DUP) R3931791-5 06/01/23 15:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	ND	ND	1	0.000		10

L1621404-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1621404-08 06/01/23 15:42 • (DUP) R3931791-7 06/01/23 15:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	2.60	2.61	1	0.461		10

Laboratory Control Sample (LCS)

(LCS) R3931791-2 06/01/23 15:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	7.50	7.40	98.6	90.0-110	

L1621022-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621022-02 06/01/23 15:16 • (MS) R3931791-3 06/01/23 15:18 • (MSD) R3931791-4 06/01/23 15:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ammonia Nitrogen	5.00	4.79	9.72	9.80	98.5	100	1	90.0-110			0.871	10

L1621404-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1621404-05 06/01/23 15:39 • (MS) R3931791-6 06/01/23 15:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ammonia Nitrogen	5.00	ND	5.23	105	1	90.0-110	

Method Blank (MB)

(MB) R3931612-1 06/01/23 12:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		11.7	20.0

L1621163-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621163-01 06/01/23 12:07 • (DUP) R3931612-3 06/01/23 12:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	119	119	1	0.193		20

L1621227-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621227-01 06/01/23 12:08 • (DUP) R3931612-4 06/01/23 12:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	405	406	1	0.264		20

Laboratory Control Sample (LCS)

(LCS) R3931612-2 06/01/23 12:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	513	103	90.0-110	

L1621326-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621326-03 06/01/23 12:09 • (MS) R3931612-5 06/01/23 12:09 • (MSD) R3931612-6 06/01/23 12:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	ND	481	462	96.2	92.4	1	80.0-120			3.99	20

QUALITY CONTROL SUMMARY

L1621404-01,02,03,04,05,08

Method Blank (MB)

(MB) R3931909-1 06/01/23 18:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1621404-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621404-01 06/01/23 18:14 • (DUP) R3931909-7 06/01/23 18:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	ND	1	0.000		20

L1621404-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1621404-05 06/01/23 18:53 • (DUP) R3931909-8 06/01/23 18:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3931909-2 06/01/23 18:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.107	107	87.1-120	

L1621508-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621508-04 06/01/23 19:07 • (MS) R3931909-9 06/01/23 19:08 • (MSD) R3931909-10 06/01/23 19:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.104	0.0943	104	94.3	1	90.0-110			9.78	20

L1621509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621509-01 06/01/23 19:14 • (MS) R3931909-11 06/01/23 19:16 • (MSD) R3931909-12 06/01/23 19:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0929	0.0976	92.9	97.6	1	90.0-110			4.93	20

Method Blank (MB)

(MB) R3931285-1 05/31/23 17:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfide	U		0.0250	0.0500

L1621394-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621394-01 05/31/23 17:24 • (DUP) R3931285-3 05/31/23 17:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3931285-2 05/31/23 17:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	0.500	0.536	107	85.0-115	

L1621404-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621404-01 05/31/23 17:25 • (MS) R3931285-4 05/31/23 17:25 • (MSD) R3931285-5 05/31/23 17:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	0.500	ND	0.571	0.545	114	109	1	80.0-120			4.66	20

QUALITY CONTROL SUMMARY

L1621404-01,02,03,05

Method Blank (MB)

(MB) R3937130-1 06/01/23 10:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1621175-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1621175-05 06/01/23 14:14 • (DUP) R3937130-3 06/01/23 19:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	143	143	1	0.0567		15
Fluoride	0.243	0.250	1	2.76		15
Nitrate as (N)	ND	ND	1	5.38		15
Sulfate	ND	ND	1	1.22		15

L1621612-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621612-02 06/01/23 14:01 • (DUP) R3937130-6 06/01/23 20:26

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8.18	7.32	1	11.1		15
Fluoride	ND	ND	1	0.000		15
Nitrate as (N)	1.57	1.57	1	0.261		15
Sulfate	ND	ND	1	2.12		15

Laboratory Control Sample (LCS)

(LCS) R3937130-2 06/01/23 11:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.4	98.4	80.0-120	
Fluoride	8.00	8.12	101	80.0-120	
Nitrate as (N)	8.00	7.61	95.1	80.0-120	
Sulfate	40.0	39.8	99.4	80.0-120	

L1621175-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621175-05 06/01/23 14:14 • (MS) R3937130-4 06/01/23 19:35 • (MSD) R3937130-5 06/01/23 19:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	143	187	187	88.0	86.6	1	80.0-120			0.364	15
Fluoride	5.00	0.243	5.54	5.21	106	99.3	1	80.0-120			6.17	15
Nitrate as (N)	5.00	ND	5.02	5.04	98.9	99.4	1	80.0-120			0.437	15
Sulfate	50.0	ND	55.8	54.0	103	99.0	1	80.0-120			3.28	15

L1621612-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1621612-02 06/01/23 14:01 • (MS) R3937130-7 06/01/23 20:38

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	8.18	55.9	95.5	1	80.0-120	
Fluoride	5.00	ND	5.04	101	1	80.0-120	
Nitrate as (N)	5.00	1.57	6.60	101	1	80.0-120	
Sulfate	50.0	ND	49.7	97.4	1	80.0-120	

QUALITY CONTROL SUMMARY

L1621404-06,07

Method Blank (MB)

(MB) R3937699-1 06/15/23 09:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Fluoride	U		0.0640	0.150

L1620899-39 Original Sample (OS) • Duplicate (DUP)

(OS) L1620899-39 06/15/23 12:40 • (DUP) R3937699-3 06/15/23 12:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	ND	ND	1	0.487		15

L1621551-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621551-01 06/15/23 18:29 • (DUP) R3937699-6 06/15/23 18:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	0.334	0.336	1	0.716		15

Laboratory Control Sample (LCS)

(LCS) R3937699-2 06/15/23 10:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8.00	7.92	99.0	80.0-120	

L1620899-39 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1620899-39 06/15/23 12:40 • (MS) R3937699-4 06/15/23 13:06 • (MSD) R3937699-5 06/15/23 13:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Fluoride	5.00	ND	5.05	5.01	98.5	97.7	1	80.0-120			0.869	15

L1621551-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1621551-01 06/15/23 18:29 • (MS) R3937699-7 06/15/23 18:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Fluoride	5.00	0.334	5.03	93.9	1	80.0-120	

QUALITY CONTROL SUMMARY

L1621404-04,08,09

Method Blank (MB)

(MB) R3938111-1 06/15/23 16:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate as (N)	U		0.0480	0.100
Sulfate	U		0.594	5.00

L1621404-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1621404-09 06/16/23 04:15 • (DUP) R3938111-4 06/16/23 04:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	ND	1	0.000		15
Fluoride	ND	ND	1	0.000		15
Nitrate as (N)	ND	ND	1	0.000		15
Sulfate	ND	ND	1	0.000		15

L1621708-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621708-02 06/16/23 06:58 • (DUP) R3938111-7 06/16/23 07:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4.60	4.58	1	0.558		15
Fluoride	0.161	0.171	1	5.85		15
Sulfate	57.0	56.4	1	0.956		15

Laboratory Control Sample (LCS)

(LCS) R3938111-3 06/15/23 18:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.2	95.5	80.0-120	
Fluoride	8.00	8.03	100	80.0-120	
Nitrate as (N)	8.00	7.50	93.7	80.0-120	
Sulfate	40.0	36.8	92.1	80.0-120	

L1621580-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621580-07 06/16/23 04:56 • (MS) R3938111-5 06/16/23 05:09 • (MSD) R3938111-6 06/16/23 05:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	292	324	325	65.1	66.0	5	80.0-120	V	V	0.138	15
Fluoride	5.00	0.761	5.02	4.99	85.2	84.7	5	80.0-120			0.481	15
Nitrate as (N)	5.00	ND	3.65	3.63	73.1	72.7	5	80.0-120	J6	J6	0.499	15
Sulfate	50.0	115	155	156	80.8	81.1	5	80.0-120			0.0981	15

L1621708-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1621708-02 06/16/23 06:58 • (MS) R3938111-8 06/16/23 07:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	4.60	53.9	98.6	1	80.0-120	
Fluoride	5.00	0.161	5.01	97.0	1	80.0-120	
Sulfate	50.0	57.0	102	90.4	1	80.0-120	

Method Blank (MB)

(MB) R3933657-1 06/07/23 09:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000430	0.000200

Laboratory Control Sample (LCS)

(LCS) R3933657-2 06/07/23 09:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00250	0.00236	94.4	80.0-120	

L1621404-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621404-06 06/07/23 09:38 • (MS) R3933657-3 06/07/23 09:40 • (MSD) R3933657-4 06/07/23 09:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00250	ND	0.00230	0.00228	92.0	91.2	1	80.0-120			0.873	20

QUALITY CONTROL SUMMARY

L1621404-01,08

Method Blank (MB)

(MB) R3933450-2 06/06/23 13:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	U		0.000704	0.00500

Laboratory Control Sample (LCS)

(LCS) R3933450-3 06/06/23 13:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	0.0500	0.0468	93.6	80.0-120	

L1621442-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621442-03 06/06/23 13:20 • (MS) R3933450-5 06/06/23 13:27 • (MSD) R3933450-6 06/06/23 13:30

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	ND	0.0480	0.0490	95.9	98.1	1	75.0-125			2.23	20

Method Blank (MB)

(MB) R3933239-1 06/06/23 10:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.000180	0.00200
Barium	U		0.000381	0.00200
Beryllium	U		0.000190	0.00200
Cadmium	U		0.000150	0.00100
Calcium	U		0.0936	1.00
Chromium	U		0.00124	0.00200
Copper	U		0.00151	0.00500
Cobalt	U		0.0000596	0.00200
Iron	U		0.0281	0.100
Lead	U		0.000849	0.00200
Magnesium	U		0.0735	1.00
Nickel	U		0.000816	0.00200
Potassium	U		0.108	2.00
Selenium	U		0.000300	0.00200
Silver	U		0.0000700	0.00200
Sodium	U		0.376	2.00
Thallium	U		0.000121	0.00200
Vanadium	U		0.000664	0.00500
Zinc	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3933239-2 06/06/23 10:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	0.0500	0.0515	103	80.0-120	
Barium	0.0500	0.0489	97.8	80.0-120	
Beryllium	0.0500	0.0504	101	80.0-120	
Cadmium	0.0500	0.0523	105	80.0-120	
Calcium	5.00	5.09	102	80.0-120	
Chromium	0.0500	0.0517	103	80.0-120	
Copper	0.0500	0.0508	102	80.0-120	
Cobalt	0.0500	0.0522	104	80.0-120	
Iron	1.00	1.06	106	80.0-120	
Lead	0.0500	0.0493	98.5	80.0-120	
Magnesium	5.00	5.03	101	80.0-120	
Nickel	0.0500	0.0522	104	80.0-120	
Potassium	5.00	4.91	98.2	80.0-120	
Selenium	0.0500	0.0544	109	80.0-120	

QUALITY CONTROL SUMMARY

L1621404-01,02,03,04,05,06,07,08,09

Laboratory Control Sample (LCS)

(LCS) R3933239-2 06/06/23 10:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Silver	0.0500	0.0524	105	80.0-120	
Sodium	5.00	5.05	101	80.0-120	
Thallium	0.0500	0.0434	86.8	80.0-120	
Vanadium	0.0500	0.0515	103	80.0-120	
Zinc	0.0500	0.0498	99.6	80.0-120	

L1621484-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621484-04 06/06/23 10:23 • (MS) R3933239-4 06/06/23 10:30 • (MSD) R3933239-5 06/06/23 10:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	ND	0.0510	0.0495	102	99.1	1	75.0-125			2.90	20
Barium	0.0500	0.0235	0.0699	0.0712	92.8	95.3	1	75.0-125			1.80	20
Beryllium	0.0500	ND	0.0496	0.0483	99.3	96.6	1	75.0-125			2.75	20
Cadmium	0.0500	ND	0.0536	0.0529	107	106	1	75.0-125			1.35	20
Calcium	5.00	4.03	8.97	8.99	98.6	99.2	1	75.0-125			0.308	20
Chromium	0.0500	ND	0.0509	0.0500	102	100	1	75.0-125			1.70	20
Copper	0.0500	ND	0.0510	0.0505	102	101	1	75.0-125			1.02	20
Cobalt	0.0500	ND	0.0514	0.0504	102	100	1	75.0-125			1.92	20
Iron	1.00	0.624	1.62	1.58	99.4	95.6	1	75.0-125			2.34	20
Lead	0.0500	ND	0.0511	0.0508	102	102	1	75.0-125			0.564	20
Magnesium	5.00	1.58	6.70	6.60	102	100	1	75.0-125			1.53	20
Nickel	0.0500	ND	0.0509	0.0679	102	136	1	75.0-125		J3 J5	28.7	20
Potassium	5.00	ND	6.15	6.01	99.9	97.0	1	75.0-125			2.35	20
Selenium	0.0500	ND	0.0525	0.0533	105	107	1	75.0-125			1.62	20
Silver	0.0500	ND	0.0525	0.0521	105	104	1	75.0-125			0.739	20
Sodium	5.00	4.04	9.11	9.04	101	100	1	75.0-125			0.703	20
Thallium	0.0500	ND	0.0443	0.0463	84.5	88.7	1	75.0-125			4.57	20
Vanadium	0.0500	ND	0.0511	0.0503	102	101	1	75.0-125			1.57	20
Zinc	0.0500	ND	0.0504	0.0491	101	98.3	1	75.0-125			2.50	20

QUALITY CONTROL SUMMARY

L1621404-01,02,03,04,05,06,07,08,09

Method Blank (MB)

(MB) R3933769-1 06/07/23 11:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00103	0.00400
Tin	U		0.000655	0.00200

Laboratory Control Sample (LCS)

(LCS) R3933769-2 06/07/23 11:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0513	103	80.0-120	
Tin	0.0500	0.0516	103	80.0-120	

L1621404-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621404-04 06/07/23 11:59 • (MS) R3933769-4 06/07/23 12:06 • (MSD) R3933769-5 06/07/23 12:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	ND	0.0508	0.0517	102	103	1	75.0-125			1.74	20
Tin	0.0500	ND	0.0510	0.0520	102	104	1	75.0-125			1.77	20

Method Blank (MB)

(MB) R3933164-4 06/05/23 11:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromochloromethane	U		0.000128	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
Ethylbenzene	U		0.000137	0.00100
2-Hexanone	U		0.000787	0.0100
Iodomethane	U		0.00600	0.0100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Styrene	U		0.000118	0.00100

Method Blank (MB)

(MB) R3933164-4 06/05/23 11:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
Vinyl acetate	U		0.000692	0.0100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
Acetonitrile	U		0.0240	0.0500
Allyl chloride	U		0.000500	0.00500
Chloroprene	U		0.00145	0.0500
trans-1,4-Dichloro-2-butene	U		0.000467	0.00250
Ethyl methacrylate	U		0.00148	0.00500
Isobutanol	U		0.0421	0.100
Methacrylonitrile	U		0.0142	0.0500
Methyl methacrylate	U		0.00152	0.00500
Propionitrile	U		0.0162	0.0500
(S) Toluene-d8	*120*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*126*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3933164-1 06/05/23 10:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetonitrile	0.500	0.674	135	40.0-160	
Chloroprene	0.0500	0.0648	130	60.0-143	
Ethyl methacrylate	0.0500	0.0493	98.6	72.0-129	
Isobutanol	1.00	1.16	116	40.0-160	
Methacrylonitrile	0.500	0.487	97.4	61.0-145	
Methyl methacrylate	0.0500	0.0571	114	63.0-149	
Propionitrile	0.500	0.622	124	49.0-160	
(S) Toluene-d8			*120*	*80.0-120*	

Laboratory Control Sample (LCS)

(LCS) R3933164-1 06/05/23 10:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) 4-Bromofluorobenzene			*92.6*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*121*	*70.0-130*	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933164-2 06/05/23 10:30 • (LCSD) R3933164-3 06/05/23 10:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.0250	0.0231	0.0226	92.4	90.4	19.0-160			2.19	27
Acrolein	0.0250	0.0199	0.0198	79.6	79.2	10.0-160			0.504	26
Acrylonitrile	0.0250	0.0293	0.0294	117	118	55.0-149			0.341	20
Benzene	0.00500	0.00515	0.00482	103	96.4	70.0-123			6.62	20
Bromodichloromethane	0.00500	0.00514	0.00499	103	99.8	75.0-120			2.96	20
Bromochloromethane	0.00500	0.00542	0.00499	108	99.8	76.0-122			8.26	20
Bromoform	0.00500	0.00421	0.00423	84.2	84.6	68.0-132			0.474	20
Bromomethane	0.00500	0.00259	0.00246	51.8	49.2	10.0-160			5.15	25
Carbon disulfide	0.00500	0.00502	0.00452	100	90.4	61.0-128			10.5	20
Carbon tetrachloride	0.00500	0.00597	0.00541	119	108	68.0-126			9.84	20
Chlorobenzene	0.00500	0.00531	0.00473	106	94.6	80.0-121			11.6	20
Chlorodibromomethane	0.00500	0.00507	0.00473	101	94.6	77.0-125			6.94	20
Chloroethane	0.00500	0.00348	0.00316	69.6	63.2	47.0-150			9.64	20
Chloroform	0.00500	0.00544	0.00502	109	100	73.0-120			8.03	20
Chloromethane	0.00500	0.00645	0.00610	129	122	41.0-142			5.58	20
1,2-Dibromoethane	0.00500	0.00479	0.00429	95.8	85.8	80.0-122			11.0	20
1,2-Dibromo-3-Chloropropane	0.00500	0.00414	0.00433	82.8	86.6	58.0-134			4.49	20
Dibromomethane	0.00500	0.00453	0.00433	90.6	86.6	80.0-120			4.51	20
1,2-Dichlorobenzene	0.00500	0.00537	0.00491	107	98.2	79.0-121			8.95	20
1,3-Dichlorobenzene	0.00500	0.00564	0.00514	113	103	79.0-120			9.28	20
1,4-Dichlorobenzene	0.00500	0.00537	0.00508	107	102	79.0-120			5.55	20
Dichlorodifluoromethane	0.00500	0.00532	0.00465	106	93.0	51.0-149			13.4	20
1,1-Dichloroethane	0.00500	0.00597	0.00553	119	111	70.0-126			7.65	20
1,2-Dichloroethane	0.00500	0.00575	0.00553	115	111	70.0-128			3.90	20
1,1-Dichloroethene	0.00500	0.00499	0.00486	99.8	97.2	71.0-124			2.64	20
cis-1,2-Dichloroethene	0.00500	0.00534	0.00468	107	93.6	73.0-120			13.2	20
trans-1,2-Dichloroethene	0.00500	0.00514	0.00463	103	92.6	73.0-120			10.4	20
1,2-Dichloropropane	0.00500	0.00575	0.00531	115	106	77.0-125			7.96	20
1,3-Dichloropropane	0.00500	0.00494	0.00479	98.8	95.8	80.0-120			3.08	20
2,2-Dichloropropane	0.00500	0.00582	0.00548	116	110	58.0-130			6.02	20
cis-1,3-Dichloropropene	0.00500	0.00489	0.00457	97.8	91.4	80.0-123			6.77	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933164-2 06/05/23 10:30 • (LCSD) R3933164-3 06/05/23 10:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.00500	0.00499	0.00467	99.8	93.4	78.0-124			6.63	20
1,1-Dichloropropene	0.00500	0.00545	0.00480	109	96.0	74.0-126			12.7	20
Ethylbenzene	0.00500	0.00515	0.00470	103	94.0	79.0-123			9.14	20
2-Hexanone	0.0250	0.0264	0.0258	106	103	67.0-149			2.30	20
Iodomethane	0.0250	0.0235	0.0215	94.0	86.0	33.0-147			8.89	26
2-Butanone (MEK)	0.0250	0.0257	0.0264	103	106	44.0-160			2.69	20
Methylene Chloride	0.00500	0.00482	0.00475	96.4	95.0	67.0-120			1.46	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0268	0.0258	107	103	68.0-142			3.80	20
Styrene	0.00500	0.00479	0.00406	95.8	81.2	73.0-130			16.5	20
1,1,1,2-Tetrachloroethane	0.00500	0.00517	0.00470	103	94.0	75.0-125			9.52	20
1,1,2,2-Tetrachloroethane	0.00500	0.00391	0.00371	78.2	74.2	65.0-130			5.25	20
Tetrachloroethene	0.00500	0.00584	0.00540	117	108	72.0-132			7.83	20
Toluene	0.00500	0.00543	0.00491	109	98.2	79.0-120			10.1	20
1,2,4-Trichlorobenzene	0.00500	0.00609	0.00603	122	121	57.0-137			0.990	20
1,1,1-Trichloroethane	0.00500	0.00572	0.00516	114	103	73.0-124			10.3	20
1,1,2-Trichloroethane	0.00500	0.00507	0.00487	101	97.4	80.0-120			4.02	20
Trichloroethene	0.00500	0.00528	0.00480	106	96.0	78.0-124			9.52	20
Trichlorofluoromethane	0.00500	0.00542	0.00469	108	93.8	59.0-147			14.4	20
1,2,3-Trichloropropane	0.00500	0.00476	0.00437	95.2	87.4	73.0-130			8.54	20
Vinyl acetate	0.0250	0.0288	0.0269	115	108	11.0-160			6.82	20
Vinyl chloride	0.00500	0.00421	0.00377	84.2	75.4	67.0-131			11.0	20
Xylenes, Total	0.0150	0.0154	0.0136	103	90.7	79.0-123			12.4	20
Allyl chloride	0.0250	0.0260	0.0236	104	94.4	72.0-128			9.68	20
trans-1,4-Dichloro-2-butene	0.00500	0.00350	0.00356	70.0	71.2	33.0-144			1.70	20
(S) Toluene-d8				*119*	*118*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.9*	*92.8*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*121*	*121*	*70.0-130*				

Method Blank (MB)

(MB) R3933781-2 06/05/23 11:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromochloromethane	U		0.000128	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
trans-1,4-Dichloro-2-butene	U		0.000467	0.00250
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
2-Hexanone	U		0.000787	0.0100
Iodomethane	U		0.00600	0.0100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	0.000660	J	0.000478	0.0100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100

Method Blank (MB)

(MB) R3933781-2 06/05/23 11:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
Vinyl acetate	U		0.000692	0.0100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*92.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*84.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933781-1 06/05/23 10:26 • (LCSD) R3933781-3 06/05/23 13:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.0250	0.0287	0.0276	115	110	19.0-160			3.91	27
Acrylonitrile	0.0250	0.0292	0.0273	117	109	55.0-149			6.73	20
Benzene	0.00500	0.00579	0.00560	116	112	70.0-123			3.34	20
Bromochloromethane	0.00500	0.00566	0.00518	113	104	76.0-122			8.86	20
Bromodichloromethane	0.00500	0.00543	0.00509	109	102	75.0-120			6.46	20
Bromoform	0.00500	0.00563	0.00478	113	95.6	68.0-132			16.3	20
Bromomethane	0.00500	0.00490	0.00442	98.0	88.4	10.0-160			10.3	25
Carbon disulfide	0.00500	0.00591	0.00556	118	111	61.0-128			6.10	20
Carbon tetrachloride	0.00500	0.00561	0.00545	112	109	68.0-126			2.89	20
Chlorobenzene	0.00500	0.00547	0.00529	109	106	80.0-121			3.35	20
Chlorodibromomethane	0.00500	0.00543	0.00517	109	103	77.0-125			4.91	20
Chloroethane	0.00500	0.00526	0.00468	105	93.6	47.0-150			11.7	20
Chloroform	0.00500	0.00555	0.00536	111	107	73.0-120			3.48	20
Chloromethane	0.00500	0.00450	0.00439	90.0	87.8	41.0-142			2.47	20
Dibromomethane	0.00500	0.00545	0.00512	109	102	80.0-120			6.24	20
1,2-Dichlorobenzene	0.00500	0.00574	0.00538	115	108	79.0-121			6.47	20
1,4-Dichlorobenzene	0.00500	0.00578	0.00538	116	108	79.0-120			7.17	20
trans-1,4-Dichloro-2-butene	0.00500	0.00723	0.00579	145	116	33.0-144	J4	J3	22.1	20
1,1-Dichloroethane	0.00500	0.00573	0.00520	115	104	70.0-126			9.70	20
1,2-Dichloroethane	0.00500	0.00559	0.00545	112	109	70.0-128			2.54	20
1,1-Dichloroethene	0.00500	0.00594	0.00606	119	121	71.0-124			2.00	20
cis-1,2-Dichloroethene	0.00500	0.00579	0.00510	116	102	73.0-120			12.7	20
trans-1,2-Dichloroethene	0.00500	0.00564	0.00550	113	110	73.0-120			2.51	20
1,2-Dichloropropane	0.00500	0.00546	0.00518	109	104	77.0-125			5.26	20
cis-1,3-Dichloropropene	0.00500	0.00542	0.00514	108	103	80.0-123			5.30	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933781-1 06/05/23 10:26 • (LCSD) R3933781-3 06/05/23 13:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.00500	0.00585	0.00536	117	107	78.0-124			8.74	20
Ethylbenzene	0.00500	0.00533	0.00529	107	106	79.0-123			0.753	20
2-Hexanone	0.0250	0.0265	0.0252	106	101	67.0-149			5.03	20
Iodomethane	0.0250	0.0197	0.0197	78.8	78.8	33.0-147			0.000	26
2-Butanone (MEK)	0.0250	0.0290	0.0280	116	112	44.0-160			3.51	20
Methylene Chloride	0.00500	0.00566	0.00484	113	96.8	67.0-120			15.6	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0286	0.0268	114	107	68.0-142			6.50	20
Styrene	0.00500	0.00539	0.00511	108	102	73.0-130			5.33	20
1,1,1,2-Tetrachloroethane	0.00500	0.00554	0.00517	111	103	75.0-125			6.91	20
1,1,2,2-Tetrachloroethane	0.00500	0.00648	0.00571	130	114	65.0-130			12.6	20
Tetrachloroethene	0.00500	0.00573	0.00569	115	114	72.0-132			0.701	20
Toluene	0.00500	0.00562	0.00540	112	108	79.0-120			3.99	20
1,1,1-Trichloroethane	0.00500	0.00556	0.00551	111	110	73.0-124			0.903	20
1,1,2-Trichloroethane	0.00500	0.00573	0.00550	115	110	80.0-120			4.10	20
Trichloroethene	0.00500	0.00560	0.00547	112	109	78.0-124			2.35	20
Trichlorofluoromethane	0.00500	0.00547	0.00512	109	102	59.0-147			6.61	20
1,2,3-Trichloropropane	0.00500	0.00686	0.00542	137	108	73.0-130	J4	J3	23.5	20
Vinyl acetate	0.0250	0.0305	0.0207	122	82.8	11.0-160		J3	38.3	20
Vinyl chloride	0.00500	0.00540	0.00540	108	108	67.0-131			0.000	20
Xylenes, Total	0.0150	0.0164	0.0158	109	105	79.0-123			3.73	20
(S) Toluene-d8				*90.4*	*89.6*	*80.0-120*				
(S) 4-Bromofluorobenzene				*89.6*	*91.6*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*95.6*	*97.2*	*70.0-130*				

Method Blank (MB)

(MB) R3933219-1 06/02/23 16:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ethylene Dibromide	U		0.00000536	0.0000200
1,2-Dibromo-3-Chloropropane	U		0.00000748	0.0000200

L1620896-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1620896-01 06/02/23 17:30 • (DUP) R3933219-3 06/02/23 17:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	ND	ND	1.01	0.000		20
1,2-Dibromo-3-Chloropropane	ND	ND	1.01	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933219-4 06/02/23 19:34 • (LCSD) R3933219-5 06/02/23 22:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylene Dibromide	0.000250	0.000211	0.000227	84.4	90.8	60.0-140			7.31	20
1,2-Dibromo-3-Chloropropane	0.000250	0.000217	0.000226	86.8	90.4	60.0-140			4.06	20

L1620896-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1620896-02 06/02/23 17:06 • (MS) R3933219-2 06/02/23 16:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.0000995	ND	0.0000988	99.3	1	64.0-159	
1,2-Dibromo-3-Chloropropane	0.0000995	ND	0.0000952	95.7	1	72.0-148	

QUALITY CONTROL SUMMARY

L1621404-09

Method Blank (MB)

(MB) R3933220-1 06/02/23 22:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ethylene Dibromide	U		0.00000536	0.0000200
1,2-Dibromo-3-Chloropropane	U		0.00000748	0.0000200

L1621368-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1621368-02 06/02/23 23:28 • (DUP) R3933220-3 06/02/23 23:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	ND	ND	1	0.000		20
1,2-Dibromo-3-Chloropropane	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933220-4 06/03/23 01:31 • (LCSD) R3933220-5 06/03/23 04:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylene Dibromide	0.000250	0.000219	0.000211	87.6	84.4	60.0-140			3.72	20
1,2-Dibromo-3-Chloropropane	0.000250	0.000220	0.000227	88.0	90.8	60.0-140			3.13	20

L1621368-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1621368-03 06/02/23 23:03 • (MS) R3933220-2 06/02/23 22:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.000108	ND	0.000114	106	1.08	64.0-159	
1,2-Dibromo-3-Chloropropane	0.000108	ND	0.000112	104	1.08	72.0-148	

Method Blank (MB)

(MB) R3932812-1 06/02/23 17:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
2,4-D	U		0.000547	0.00200
2,4,5-T	U		0.000258	0.00200
2,4,5-TP (Silvex)	U		0.000335	0.00200
(S) 2,4-Dichlorophenyl Acetic Acid	*90.0*			*14.0-158*

Laboratory Control Sample (LCS)

(LCS) R3932812-2 06/02/23 17:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.00500	0.00546	109	50.0-120	E
2,4,5-T	0.00500	0.00609	122	54.0-120	E J4
2,4,5-TP (Silvex)	0.00500	0.00581	116	50.0-125	E
(S) 2,4-Dichlorophenyl Acetic Acid			*93.4*	*14.0-158*	

L1621481-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621481-03 06/03/23 00:39 • (MS) R3932812-3 06/03/23 00:50 • (MSD) R3932812-4 06/03/23 01:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2,4-D	0.00590	ND	0.00646	0.00666	109	107	1.18	50.0-120	E	E	3.05	20
2,4,5-T	0.00590	ND	0.00680	0.00683	115	109	1.18	54.0-120	E	E	0.440	20
2,4,5-TP (Silvex)	0.00590	ND	0.00662	0.00549	112	87.8	1.18	50.0-125	E		18.7	20
(S) 2,4-Dichlorophenyl Acetic Acid					*94.9*	*85.6*		*14.0-158*				

Method Blank (MB)

(MB) R3932290-1 06/01/23 14:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aldrin	U		0.0000198	0.0000500
Alpha BHC	U		0.0000172	0.0000500
Beta BHC	U		0.0000208	0.0000500
Delta BHC	U		0.0000150	0.0000500
Gamma BHC	U		0.0000209	0.0000500
Chlordane	U		0.0000198	0.00500
4,4-DDD	U		0.0000177	0.0000500
4,4-DDE	U		0.0000154	0.0000500
4,4-DDT	U		0.0000198	0.0000500
Dieldrin	U		0.0000162	0.0000500
Endosulfan I	U		0.0000160	0.0000500
Endosulfan II	U		0.0000164	0.0000500
Endosulfan sulfate	U		0.0000217	0.0000500
Endrin	U		0.0000161	0.0000500
Endrin aldehyde	U		0.0000237	0.0000500
Endrin ketone	U		0.0000219	0.0000500
Heptachlor	U		0.0000148	0.0000500
Heptachlor epoxide	U		0.0000183	0.0000500
Hexachlorobenzene	U		0.0000176	0.0000500
Methoxychlor	U		0.0000193	0.0000500
Toxaphene	U		0.000168	0.000500
(S) Decachlorobiphenyl	*57.3*			*10.0-128*
(S) Tetrachloro-m-xylene	*71.1*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3932290-5 06/01/23 14:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.00100	0.000768	76.8	22.0-124	
Alpha BHC	0.00100	0.000886	88.6	54.0-130	
Beta BHC	0.00100	0.000927	92.7	53.0-136	
Delta BHC	0.00100	0.00100	100	54.0-133	
Gamma BHC	0.00100	0.000875	87.5	55.0-129	
4,4-DDD	0.00100	0.00120	120	56.0-140	
4,4-DDE	0.00100	0.000979	97.9	52.0-128	
4,4-DDT	0.00100	0.00100	100	50.0-141	
Dieldrin	0.00100	0.000997	99.7	59.0-133	
Endosulfan I	0.00100	0.00101	101	57.0-131	

QUALITY CONTROL SUMMARY

L1621404-01,02

Laboratory Control Sample (LCS)

(LCS) R3932290-5 06/01/23 14:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.00100	0.00110	110	58.0-133	
Endosulfan sulfate	0.00100	0.00103	103	58.0-133	
Endrin	0.00100	0.00104	104	57.0-134	
Endrin aldehyde	0.00100	0.00105	105	53.0-129	
Endrin ketone	0.00100	0.00104	104	60.0-145	
Heptachlor	0.00100	0.000859	85.9	27.0-132	
Heptachlor epoxide	0.00100	0.00102	102	57.0-130	
Hexachlorobenzene	0.00100	0.000776	77.6	30.0-114	
Methoxychlor	0.00100	0.00111	111	54.0-155	
(S) Decachlorobiphenyl			*55.5*	*10.0-128*	
(S) Tetrachloro-m-xylene			*72.2*	*10.0-127*	

L1621347-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621347-01 06/01/23 17:18 • (MS) R3932290-6 06/01/23 17:28 • (MSD) R3932290-7 06/01/23 17:38

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.00100	ND	0.000424	0.000453	42.4	45.3	1	10.0-141			6.61	40
Alpha BHC	0.00100	ND	0.000790	0.000836	79.0	83.6	1	10.0-145			5.66	40
Beta BHC	0.00100	ND	0.000815	0.000836	81.5	83.6	1	14.0-146	P	P	2.54	35
Delta BHC	0.00100	ND	0.000853	0.000826	85.3	82.6	1	17.0-143			3.22	38
Gamma BHC	0.00100	ND	0.000740	0.000789	74.0	78.9	1	14.0-141			6.41	40
4,4-DDD	0.00100	ND	0.000591	0.000635	59.1	63.5	1	10.0-160	P	P	7.18	38
4,4-DDE	0.00100	ND	0.000454	0.000489	45.4	48.9	1	10.0-159			7.42	35
4,4-DDT	0.00100	ND	0.000470	0.000494	47.0	49.4	1	10.0-160			4.98	38
Dieldrin	0.00100	ND	0.000594	0.000631	59.4	63.1	1	10.0-158			6.04	38
Endosulfan I	0.00100	ND	0.00635	0.00683	635	683	1	10.0-153	J5 P	J5 P	7.28	36
Endosulfan II	0.00100	ND	0.00256	0.00316	256	316	1	10.0-159	J5 P	J5 P	21.0	39
Endosulfan sulfate	0.00100	ND	0.000956	0.00108	95.6	108	1	23.0-147	P	P	12.2	35
Endrin	0.00100	ND	0.000546	0.000593	54.6	59.3	1	10.0-160	P		8.25	39
Endrin aldehyde	0.00100	ND	0.000661	0.000679	66.1	67.9	1	10.0-148			2.69	38
Endrin ketone	0.00100	ND	0.000750	0.000816	75.0	81.6	1	10.0-160			8.43	40
Heptachlor	0.00100	ND	0.000570	0.000544	57.0	54.4	1	16.0-136			4.67	40
Heptachlor epoxide	0.00100	ND	0.000633	0.000701	63.3	70.1	1	10.0-160			10.2	36
Hexachlorobenzene	0.00100	ND	0.000640	0.000685	64.0	68.5	1	10.0-130			6.79	40
Methoxychlor	0.00100	ND	0.000791	0.000664	79.1	66.4	1	10.0-160	P		17.5	34
(S) Decachlorobiphenyl					*30.4*	*33.0*		*10.0-128*				
(S) Tetrachloro-m-xylene					*58.5*	*62.2*		*10.0-127*				

Method Blank (MB)

(MB) R3932761-1 06/03/23 12:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aldrin	U		0.0000198	0.0000500
Alpha BHC	U		0.0000172	0.0000500
Beta BHC	U		0.0000208	0.0000500
Delta BHC	U		0.0000150	0.0000500
Gamma BHC	U		0.0000209	0.0000500
Chlordane	U		0.0000198	0.00500
4,4-DDD	U		0.0000177	0.0000500
4,4-DDE	U		0.0000154	0.0000500
4,4-DDT	U		0.0000198	0.0000500
Dieldrin	U		0.0000162	0.0000500
Endosulfan I	U		0.0000160	0.0000500
Endosulfan II	U		0.0000164	0.0000500
Endosulfan sulfate	U		0.0000217	0.0000500
Endrin	U		0.0000161	0.0000500
Endrin aldehyde	U		0.0000237	0.0000500
Endrin ketone	U		0.0000219	0.0000500
Heptachlor	U		0.0000148	0.0000500
Heptachlor epoxide	U		0.0000183	0.0000500
Hexachlorobenzene	U		0.0000176	0.0000500
Methoxychlor	U		0.0000193	0.0000500
Toxaphene	U		0.000168	0.000500
(S) Decachlorobiphenyl	*74.6*			*10.0-128*
(S) Tetrachloro-m-xylene	*68.3*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3932761-2 06/03/23 12:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.00100	0.000774	77.4	22.0-124	
Alpha BHC	0.00100	0.000850	85.0	54.0-130	
Beta BHC	0.00100	0.000936	93.6	53.0-136	
Delta BHC	0.00100	0.000833	83.3	54.0-133	
Gamma BHC	0.00100	0.000849	84.9	55.0-129	
4,4-DDD	0.00100	0.000983	98.3	56.0-140	
4,4-DDE	0.00100	0.000909	90.9	52.0-128	
4,4-DDT	0.00100	0.00108	108	50.0-141	
Dieldrin	0.00100	0.000898	89.8	59.0-133	
Endosulfan I	0.00100	0.000928	92.8	57.0-131	

QUALITY CONTROL SUMMARY

L1621404-03

Laboratory Control Sample (LCS)

(LCS) R3932761-2 06/03/23 12:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.00100	0.000937	93.7	58.0-133	
Endosulfan sulfate	0.00100	0.000939	93.9	58.0-133	
Endrin	0.00100	0.000958	95.8	57.0-134	
Endrin aldehyde	0.00100	0.000926	92.6	53.0-129	
Endrin ketone	0.00100	0.000934	93.4	60.0-145	
Heptachlor	0.00100	0.000868	86.8	27.0-132	
Heptachlor epoxide	0.00100	0.000925	92.5	57.0-130	
Hexachlorobenzene	0.00100	0.000832	83.2	30.0-114	
Methoxychlor	0.00100	0.00120	120	54.0-155	
(S) Decachlorobiphenyl			*64.5*	*10.0-128*	
(S) Tetrachloro-m-xylene			*65.5*	*10.0-127*	

L1621481-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621481-03 06/03/23 14:17 • (MS) R3932761-3 06/03/23 14:26 • (MSD) R3932761-4 06/03/23 14:35

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.000952	ND	0.000551	0.000677	57.9	60.4	1	10.0-141			20.5	40
Alpha BHC	0.000952	ND	0.000723	0.000839	75.9	74.9	1	10.0-145			14.9	40
Beta BHC	0.000952	ND	0.000793	0.000920	83.3	82.1	1	14.0-146			14.8	35
Delta BHC	0.000952	ND	0.000799	0.000915	83.9	81.7	1	17.0-143			13.5	38
Gamma BHC	0.000952	ND	0.000737	0.000862	77.4	77.0	1	14.0-141			15.6	40
4,4-DDD	0.000952	ND	0.000747	0.000885	78.5	79.0	1	10.0-160			16.9	38
4,4-DDE	0.000952	ND	0.000559	0.000718	58.7	64.1	1	10.0-159			24.9	35
4,4-DDT	0.000952	ND	0.000684	0.000883	71.8	78.8	1	10.0-160			25.4	38
Dieldrin	0.000952	ND	0.000672	0.000796	70.6	71.1	1	10.0-158			16.9	38
Endosulfan I	0.000952	ND	0.000704	0.000835	73.9	74.6	1	10.0-153			17.0	36
Endosulfan II	0.000952	ND	0.000766	0.000859	80.5	76.7	1	10.0-159			11.4	39
Endosulfan sulfate	0.000952	ND	0.000813	0.000881	85.4	78.7	1	23.0-147			8.03	35
Endrin	0.000952	ND	0.000742	0.000878	77.9	78.4	1	10.0-160			16.8	39
Endrin aldehyde	0.000952	ND	0.000747	0.000853	78.5	76.2	1	10.0-148			13.2	38
Endrin ketone	0.000952	ND	0.000799	0.000853	83.9	76.2	1	10.0-160			6.54	40
Heptachlor	0.000952	ND	0.000590	0.000723	62.0	64.6	1	16.0-136			20.3	40
Heptachlor epoxide	0.000952	ND	0.000724	0.000851	76.1	76.0	1	10.0-160			16.1	36
Hexachlorobenzene	0.000952	ND	0.000679	0.000796	71.3	71.1	1	10.0-130			15.9	40
Methoxychlor	0.000952	ND	0.000912	0.00108	95.8	96.4	1	10.0-160			16.9	34
(S) Decachlorobiphenyl					*56.3*	*54.1*		*10.0-128*				
(S) Tetrachloro-m-xylene					*62.2*	*61.0*		*10.0-127*				

Method Blank (MB)

(MB) R3932290-1 06/01/23 14:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*67.5*			*10.0-128*
(S) Tetrachloro-m-xylene	*71.0*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3932290-2 06/01/23 14:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00199	79.6	36.0-135	P
PCB 1260	0.00250	0.00203	81.2	42.0-131	P
(S) Decachlorobiphenyl			*69.2*	*10.0-128*	
(S) Tetrachloro-m-xylene			*65.3*	*10.0-127*	

L1621347-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621347-01 06/01/23 17:18 • (MS) R3932290-3 06/01/23 17:47 • (MSD) R3932290-4 06/01/23 17:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00250	ND	0.00220	0.00212	88.0	84.8	1	11.0-160	P	P	3.70	38
PCB 1260	0.00250	ND	0.00239	0.00234	95.6	93.6	1	20.0-142	P	P	2.11	27
(S) Decachlorobiphenyl					*36.3*	*31.4*		*10.0-128*				
(S) Tetrachloro-m-xylene					*63.3*	*55.3*		*10.0-127*				

Method Blank (MB)

(MB) R3932761-1 06/03/23 12:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
PCB 1016	U		0.000270	0.000500
PCB 1221	U		0.000270	0.000500
PCB 1232	U		0.000270	0.000500
PCB 1242	U		0.000270	0.000500
PCB 1248	U		0.000173	0.000500
PCB 1254	U		0.000173	0.000500
PCB 1260	U		0.000173	0.000500
Total PCBs	U		0.000173	0.000500
(S) Decachlorobiphenyl	*72.8*			*10.0-128*
(S) Tetrachloro-m-xylene	*68.5*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3932761-5 06/03/23 12:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	0.00250	0.00247	98.8	36.0-135	
PCB 1260	0.00250	0.00253	101	42.0-131	
(S) Decachlorobiphenyl			*77.0*	*10.0-128*	
(S) Tetrachloro-m-xylene			*75.5*	*10.0-127*	

L1621481-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621481-03 06/03/23 14:17 • (MS) R3932761-6 06/03/23 14:45 • (MSD) R3932761-7 06/03/23 14:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	0.00309	ND	0.00216	0.00188	69.9	64.6	1.23	11.0-160			13.9	38
PCB 1260	0.00309	ND	0.00201	0.00192	65.0	66.0	1.23	20.0-142			4.58	27
(S) Decachlorobiphenyl					*64.4*	*60.2*		*10.0-128*				
(S) Tetrachloro-m-xylene					*63.9*	*62.8*		*10.0-127*				

Method Blank (MB)

(MB) R3932937-2 06/02/23 05:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Anthracene	U		0.0000804	0.00100
Benzo(a)anthracene	U		0.000199	0.00100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.00100
Benzyl alcohol	U		0.000563	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
4-Chloroaniline	U		0.000234	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.00100
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	0.000668	J	0.000143	0.0100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
2-Nitroaniline	U		0.000102	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Nitroaniline	U		0.0000910	0.0100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300

Method Blank (MB)

(MB) R3932937-2 06/02/23 05:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
Acetophenone	U		0.000208	0.0100
n-Nitrosodimethylamine	U		0.000998	0.0100
Diphenylamine	U		0.00237	0.0100
1,2,4,5-Tetrachlorobenzene	U		0.0000647	0.0100
2,3,4,6-Tetrachlorophenol	U		0.000231	0.0100
(S) 2-Fluorophenol	*39.0*			*10.0-120*
(S) Phenol-d5	*23.5*			*10.0-120*
(S) Nitrobenzene-d5	*58.6*			*10.0-127*
(S) 2-Fluorobiphenyl	*54.7*			*10.0-130*
(S) 2,4,6-Tribromophenol	*55.0*			*10.0-155*
(S) p-Terphenyl-d14	*75.6*			*10.0-128*

Method Blank (MB)

(MB) R3933829-2 06/02/23 17:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
2-Acetylaminofluorene	U		0.000253	0.0100
4-Aminobiphenyl	U		0.000461	0.0100
Chlorobenzilate	U		0.00384	0.0500
Diallate	U		0.000524	0.0100
Dinoseb	U		0.00801	0.0500
Ethyl methanesulfonate	U		0.000326	0.0100
Famphur	U		0.00392	0.0200
Hexachloropropene	U		0.000149	0.0500
Isodrin	U		0.00411	0.0100
Isosafrole	U		0.00388	0.0100
Kepone	U		0.00266	0.0200
Methapyrilene	U		0.0100	0.0500
3-Methylcholanthrene	U		0.000164	0.0100
Methyl methanesulfonate	U		0.00340	0.0500
Methyl parathion	U		0.000213	0.0100
1,4-Naphthoquinone	U		0.00556	0.0500
1-Naphthylamine	U		0.000289	0.0100
2-Naphthylamine	U		0.00448	0.0100
n-Nitrosodi-n-butylamine	U		0.00391	0.0100
n-Nitrosodiethylamine	U		0.00357	0.0100
n-Nitrosomethylethylamine	U		0.00325	0.0100
N-Nitrosomorpholine	U		0.00325	0.0100
n-Nitrosopiperidine	U		0.00372	0.0100
n-Nitrosopyrrolidine	U		0.00339	0.0100
5-Nitro-o-toluidine	U		0.00199	0.0100
Ethyl Parathion	U		0.000379	0.0100
Pentachlorobenzene	U		0.00415	0.0100
Pentachloronitrobenzene	U		0.00415	0.0100
Phenacetin	U		0.00466	0.0100
p-Phenylenediamine	U		0.387	6.90
Phorate	U		0.00486	0.0500
Pronamide	U		0.00421	0.0100
Dimethoate	U		0.00505	0.0500
P-(Dimethylamino) Azobenzene	U		0.00369	0.0100
Dimethylbenz (A) Anthracene	U		0.00171	0.0100
3,3-Dimethylbenzidine	U		0.00339	0.0100
1,3-Dinitrobenzene	U		0.000359	0.0100
Diphenylamine	U		0.00237	0.0100
Disulfoton	U		0.000267	0.0100
Safrole	U		0.00368	0.0100

Method Blank (MB)

(MB) R3933829-2 06/02/23 17:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Thionazin	U		0.00407	0.0100
o-Toluidine	U		0.00353	0.0100
O,O,O-Triethyl phosphorothioate	U		0.00293	0.0100
1,3,5-Trinitrobenzene	U		0.00132	0.0100
2,6-Dichlorophenol	U		0.000102	0.0100

Laboratory Control Sample (LCS)

(LCS) R3932937-1 06/02/23 05:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0391	78.2	41.0-120	
Acenaphthylene	0.0500	0.0403	80.6	43.0-120	
Anthracene	0.0500	0.0420	84.0	45.0-120	
Benzo(a)anthracene	0.0500	0.0474	94.8	47.0-120	
Benzo(b)fluoranthene	0.0500	0.0478	95.6	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0468	93.6	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0419	83.8	48.0-121	
Benzo(a)pyrene	0.0500	0.0483	96.6	47.0-120	
Benzyl alcohol	0.0500	0.0302	60.4	25.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0354	70.8	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0368	73.6	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0353	70.6	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0411	82.2	45.0-120	
4-Chloroaniline	0.0500	0.0313	62.6	25.0-120	
2-Chloronaphthalene	0.0500	0.0363	72.6	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0424	84.8	44.0-120	
Chrysene	0.0500	0.0441	88.2	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0423	84.6	47.0-120	
Dibenzofuran	0.0500	0.0410	82.0	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0833	83.3	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0494	98.8	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0433	86.6	46.0-120	
Fluoranthene	0.0500	0.0442	88.4	51.0-120	
Fluorene	0.0500	0.0435	87.0	47.0-120	
Hexachlorobenzene	0.0500	0.0392	78.4	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0295	59.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0285	57.0	15.0-120	
Hexachloroethane	0.0500	0.0298	59.6	15.0-120	

Laboratory Control Sample (LCS)

(LCS) R3932937-1 06/02/23 05:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Indeno(1,2,3-cd)pyrene	0.0500	0.0373	74.6	49.0-122	
Isophorone	0.0500	0.0335	67.0	36.0-120	
2-Methylnaphthalene	0.0500	0.0328	65.6	33.0-120	
Naphthalene	0.0500	0.0314	62.8	27.0-120	
2-Nitroaniline	0.0500	0.0465	93.0	43.0-120	
3-Nitroaniline	0.0500	0.0418	83.6	38.0-120	
4-Nitroaniline	0.0500	0.0459	91.8	18.0-160	
Nitrobenzene	0.0500	0.0290	58.0	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0372	74.4	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0374	74.8	31.0-120	
Phenanthrene	0.0500	0.0418	83.6	46.0-120	
Benzylbutyl phthalate	0.0500	0.0457	91.4	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0437	87.4	43.0-122	
Di-n-butyl phthalate	0.0500	0.0462	92.4	49.0-121	
Diethyl phthalate	0.0500	0.0463	92.6	48.0-122	
Dimethyl phthalate	0.0500	0.0430	86.0	48.0-120	
Di-n-octyl phthalate	0.0500	0.0400	80.0	42.0-125	
Pyrene	0.0500	0.0445	89.0	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0298	59.6	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0340	68.0	40.0-120	
2-Chlorophenol	0.0500	0.0314	62.8	25.0-120	
2-Methylphenol	0.0500	0.0287	57.4	28.0-120	
3&4-Methyl Phenol	0.0500	0.0329	65.8	31.0-120	
2,4-Dichlorophenol	0.0500	0.0314	62.8	36.0-120	
2,4-Dimethylphenol	0.0500	0.0309	61.8	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0522	104	38.0-138	
2,4-Dinitrophenol	0.0500	0.0577	115	10.0-120	
2-Nitrophenol	0.0500	0.0335	67.0	31.0-120	
4-Nitrophenol	0.0500	0.0203	40.6	10.0-120	
Pentachlorophenol	0.0500	0.0404	80.8	23.0-120	
Phenol	0.0500	0.0162	32.4	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0417	83.4	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0398	79.6	42.0-120	
Acetophenone	0.0500	0.0393	78.6	29.0-120	
n-Nitrosodimethylamine	0.0500	0.0391	78.2	10.0-120	
Diphenylamine	0.0500	0.0372	74.4	35.0-120	
1,2,4,5-Tetrachlorobenzene	0.0500	0.0387	77.4	31.0-121	
2,3,4,6-Tetrachlorophenol	0.0500	0.0433	86.6	42.0-132	
(S) 2-Fluorophenol			*44.8*	*10.0-120*	
(S) Phenol-d5			*31.4*	*10.0-120*	

Laboratory Control Sample (LCS)

(LCS) R3932937-1 06/02/23 05:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) Nitrobenzene-d5			*58.5*	*10.0-127*	
(S) 2-Fluorobiphenyl			*67.5*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*74.0*	*10.0-155*	
(S) p-Terphenyl-d14			*90.4*	*10.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3933829-1 06/02/23 16:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Acetylaminofluorene	0.0500	0.0443	88.6	32.0-120	
4-Aminobiphenyl	0.0500	0.0298	59.6	20.0-120	
Chlorobenzilate	0.0500	0.0364	72.8	29.0-128	
Diallate	0.0500	0.0357	71.4	30.0-120	
Dinoseb	0.0500	0.0389	77.8	39.0-120	
Ethyl methanesulfonate	0.0500	0.0266	53.2	10.0-120	
Famphur	0.0500	0.0429	85.8	32.0-120	
Hexachloropropene	0.0500	0.0297	59.4	10.0-120	
Isodrin	0.0500	0.0386	77.2	22.0-157	
Isosafrole	0.0500	0.0343	68.6	25.0-133	
Kepone	0.0500	0.0338	67.6	10.0-120	
Methapyrilene	0.0500	0.00657	13.1	10.0-120	
3-Methylcholanthrene	0.0500	0.0427	85.4	30.0-160	
Methyl methanesulfonate	0.0500	0.0232	46.4	10.0-120	
Methyl parathion	0.0500	0.0454	90.8	42.0-120	
1,4-Naphthoquinone	0.0500	0.00588	11.8	50.0-150	J4
1-Naphthylamine	0.0500	0.0227	45.4	19.0-120	
2-Naphthylamine	0.0500	0.0127	25.4	10.0-120	
n-Nitrosodi-n-butylamine	0.0500	0.0398	79.6	13.0-143	
n-Nitrosodiethylamine	0.0500	0.0283	56.6	10.0-120	
n-Nitrosomethylethylamine	0.0500	0.0247	49.4	10.0-120	
N-Nitrosomorpholine	0.0500	0.0289	57.8	10.0-120	
n-Nitrosopiperidine	0.0500	0.0341	68.2	10.0-160	
n-Nitrosopyrrolidine	0.0500	0.0288	57.6	10.0-124	
5-Nitro-o-toluidine	0.0500	0.0357	71.4	34.0-120	
Ethyl Parathion	0.0500	0.0417	83.4	46.0-130	
Pentachlorobenzene	0.0500	0.0278	55.6	25.0-120	
Pentachloronitrobenzene	0.0500	0.0450	90.0	34.0-132	
Phenacetin	0.0500	0.0395	79.0	34.0-127	

Laboratory Control Sample (LCS)

(LCS) R3933829-1 06/02/23 16:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
p-Phenylenediamine	0.0500	0.000135	0.270	50.0-150	J4
Phorate	0.0500	0.0397	79.4	13.0-160	
Pronamide	0.0500	0.0411	82.2	38.0-130	
Dimethoate	0.0500	0.0339	67.8	11.0-134	
P-(Dimethylamino) Azobenzene	0.0500	0.0403	80.6	27.0-120	
Dimethylbenz (A) Anthracene	0.0500	0.0397	79.4	14.0-124	
3,3-Dimethylbenzidine	0.0500	0.0124	24.8	13.0-120	
1,3-Dinitrobenzene	0.0500	0.0357	71.4	34.0-120	
Diphenylamine	0.0500	0.0334	66.8	35.0-120	
Disulfoton	0.0500	0.0287	57.4	32.0-120	
Safrole	0.0500	0.0343	68.6	21.0-120	
Thionazin	0.0500	0.0429	85.8	38.0-121	
o-Toluidine	0.0500	0.0198	39.6	10.0-120	
O,O,O-Triethyl phosphorothioate	0.0500	0.0316	63.2	11.0-135	
1,3,5-Trinitrobenzene	0.0500	0.0475	95.0	37.0-147	
2,6-Dichlorophenol	0.0500	0.0360	72.0	19.0-136	

L1621341-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621341-01 06/06/23 14:26 • (MS) R3933728-1 06/06/23 14:48 • (MSD) R3933728-2 06/06/23 15:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0476	ND	0.0265	0.0281	55.7	59.0	1	28.0-120			5.86	25
Acenaphthylene	0.0476	ND	0.0274	0.0288	57.6	60.5	1	31.0-121			4.98	25
Anthracene	0.0476	ND	0.0257	0.0267	54.0	56.1	1	36.0-120			3.82	23
Benzo(a)anthracene	0.0476	ND	0.0295	0.0300	62.0	63.0	1	39.0-120			1.68	23
Benzo(b)fluoranthene	0.0476	ND	0.0291	0.0295	61.1	62.0	1	37.0-120			1.37	23
Benzo(k)fluoranthene	0.0476	ND	0.0278	0.0295	58.4	62.0	1	37.0-120			5.93	26
Benzo(g,h,i)perylene	0.0476	ND	0.0268	0.0272	56.3	57.1	1	37.0-123			1.48	25
Benzo(a)pyrene	0.0476	ND	0.0300	0.0296	63.0	62.2	1	37.0-120			1.34	24
Benzyl alcohol	0.0476	ND	0.0194	0.0194	40.8	40.8	1	14.0-120			0.000	38
Bis(2-chlorethoxy)methane	0.0476	ND	0.0262	0.0279	55.0	58.6	1	17.0-120			6.28	31
Bis(2-chloroethyl)ether	0.0476	ND	0.0298	0.0299	62.6	62.8	1	14.0-120			0.335	33
2,2-Oxybis(1-Chloropropane)	0.0476	ND	0.0261	0.0270	54.8	56.7	1	18.0-120			3.39	34
4-Bromophenyl-phenylether	0.0476	ND	0.0306	0.0330	64.3	69.3	1	37.0-120			7.55	24
4-Chloroaniline	0.0476	ND	0.0161	0.0146	33.8	30.7	1	10.0-120			9.77	31
2-Chloronaphthalene	0.0476	ND	0.0257	0.0270	54.0	56.7	1	29.0-120			4.93	28
4-Chlorophenyl-phenylether	0.0476	ND	0.0294	0.0313	61.8	65.8	1	36.0-120			6.26	23
Chrysene	0.0476	ND	0.0288	0.0296	60.5	62.2	1	38.0-120			2.74	23

L1621341-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621341-01 06/06/23 14:26 • (MS) R3933728-1 06/06/23 14:48 • (MSD) R3933728-2 06/06/23 15:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Dibenz(a,h)anthracene	0.0476	ND	0.0287	0.0291	60.3	61.1	1	36.0-121			1.38	24
Dibenzofuran	0.0476	ND	0.0276	0.0297	58.0	62.4	1	32.0-120			7.33	26
3,3-Dichlorobenzidine	0.0952	ND	0.0477	0.0451	50.1	47.4	1	10.0-134			5.60	30
2,4-Dinitrotoluene	0.0476	ND	0.0314	0.0343	66.0	72.1	1	39.0-125			8.83	25
2,6-Dinitrotoluene	0.0476	ND	0.0288	0.0311	60.5	65.3	1	36.0-120			7.68	27
Fluoranthene	0.0476	ND	0.0272	0.0287	57.1	60.3	1	41.0-121			5.37	22
Fluorene	0.0476	ND	0.0275	0.0295	57.8	62.0	1	37.0-120			7.02	24
Hexachlorobenzene	0.0476	ND	0.0310	0.0320	65.1	67.2	1	35.0-122			3.17	24
Hexachloro-1,3-butadiene	0.0476	ND	0.0260	0.0259	54.6	54.4	1	12.0-120			0.385	34
Hexachlorocyclopentadiene	0.0476	ND	0.0235	0.0182	49.4	38.2	1	10.0-120			25.4	33
Hexachloroethane	0.0476	ND	0.0237	0.0230	49.8	48.3	1	10.0-120			3.00	40
Indeno(1,2,3-cd)pyrene	0.0476	ND	0.0243	0.0246	51.1	51.7	1	38.0-125			1.23	24
Isophorone	0.0476	ND	0.0247	0.0265	51.9	55.7	1	21.0-120			7.03	27
2-Methylnaphthalene	0.0476	ND	0.0244	0.0259	51.3	54.4	1	17.0-120			5.96	28
Naphthalene	0.0476	ND	0.0237	0.0249	49.8	52.3	1	10.0-120			4.94	31
2-Nitroaniline	0.0476	ND	0.0295	0.0315	62.0	66.2	1	33.0-120			6.56	27
3-Nitroaniline	0.0476	ND	0.0219	0.0216	46.0	45.4	1	20.0-120			1.38	27
4-Nitroaniline	0.0476	ND	0.0267	0.0273	56.1	57.4	1	10.0-160			2.22	26
Nitrobenzene	0.0476	ND	0.0267	0.0280	56.1	58.8	1	12.0-120			4.75	30
n-Nitrosodiphenylamine	0.0476	ND	0.0238	0.0226	50.0	47.5	1	37.0-120			5.17	24
n-Nitrosodi-n-propylamine	0.0476	ND	0.0268	0.0288	56.3	60.5	1	16.0-120			7.19	30
Phenanthrene	0.0476	ND	0.0259	0.0277	54.4	58.2	1	33.0-120			6.72	22
Benzylbutyl phthalate	0.0476	ND	0.0250	0.0268	52.5	56.3	1	34.0-126			6.95	24
Bis(2-ethylhexyl)phthalate	0.0476	ND	0.0239	0.0240	50.2	50.4	1	33.0-126			0.418	25
Di-n-butyl phthalate	0.0476	ND	0.0259	0.0272	54.4	57.1	1	35.0-128			4.90	23
Diethyl phthalate	0.0476	ND	0.0268	0.0285	56.3	59.9	1	39.0-125			6.15	24
Dimethyl phthalate	0.0476	ND	0.0284	0.0306	59.7	64.3	1	37.0-120			7.46	24
Di-n-octyl phthalate	0.0476	ND	0.0229	0.0231	48.1	48.5	1	25.0-135			0.870	26
Pyrene	0.0476	ND	0.0286	0.0292	60.1	61.3	1	39.0-120			2.08	22
1,2,4-Trichlorobenzene	0.0476	ND	0.0254	0.0261	53.4	54.8	1	15.0-120			2.72	31
4-Chloro-3-methylphenol	0.0476	ND	0.0189	0.0192	39.7	40.3	1	26.0-120			1.57	27
2-Chlorophenol	0.0476	ND	0.0198	0.0186	41.6	39.1	1	18.0-120			6.25	34
2-Methylphenol	0.0476	ND	0.0170	0.0166	35.7	34.9	1	10.0-120			2.38	30
3&4-Methyl Phenol	0.0476	ND	0.0173	0.0172	36.3	36.1	1	10.0-120			0.580	36
2,4-Dichlorophenol	0.0476	ND	0.0212	0.0210	44.5	44.1	1	19.0-120			0.948	27
2,4-Dimethylphenol	0.0476	ND	0.0177	0.0166	37.2	34.9	1	15.0-120			6.41	28
4,6-Dinitro-2-methylphenol	0.0476	ND	0.0340	0.0359	71.4	75.4	1	10.0-144			5.44	39
2,4-Dinitrophenol	0.0476	ND	0.0324	0.0302	68.1	63.4	1	10.0-120			7.03	40
2-Nitrophenol	0.0476	ND	0.0267	0.0276	56.1	58.0	1	20.0-120			3.31	30
4-Nitrophenol	0.0476	ND	ND	ND	18.6	14.7	1	10.0-120			23.1	40

L1621341-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621341-01 06/06/23 14:26 • (MS) R3933728-1 06/06/23 14:48 • (MSD) R3933728-2 06/06/23 15:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Pentachlorophenol	0.0476	ND	0.0227	0.0219	47.7	46.0	1	10.0-128			3.59	37
Phenol	0.0476	ND	0.0100	ND	21.0	20.5	1	10.0-120			2.33	40
2,4,5-Trichlorophenol	0.0476	ND	0.0283	0.0289	59.5	60.7	1	33.0-120			2.10	31
2,4,6-Trichlorophenol	0.0476	ND	0.0262	0.0267	55.0	56.1	1	26.0-120			1.89	31
Acetophenone	0.0476	ND	0.0277	0.0293	58.2	61.6	1	20.0-120			5.61	35
n-Nitrosodimethylamine	0.0476	ND	0.0170	0.0163	35.7	34.2	1	10.0-120			4.20	40
Diphenylamine	0.0476	ND	0.0238	0.0226	50.0	47.5	1	35.0-120			5.17	30
1,2,4,5-Tetrachlorobenzene	0.0476	ND	0.0328	0.0333	68.9	70.0	1	19.0-122			1.51	32
2,3,4,6-Tetrachlorophenol	0.0476	ND	0.0280	0.0281	58.8	59.0	1	17.0-142			0.357	34
(S) 2-Fluorophenol					*28.0*	*26.0*		*10.0-120*				
(S) Phenol-d5					*19.5*	*19.1*		*10.0-120*				
(S) Nitrobenzene-d5					*53.3*	*54.2*		*10.0-127*				
(S) 2-Fluorobiphenyl					*57.6*	*58.7*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*63.7*	*63.2*		*10.0-155*				
(S) p-Terphenyl-d14					*59.5*	*58.9*		*10.0-128*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

Qualifier	Description
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-22-37
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Republic Services - CEC
117 Seaboard Ln.
Suite E100
Franklin. TN 37067

Billing Information:
Accounts Payable
621 Hill Ave
Nashville, TN 37210

Pres Chk

Report to: Michael Johnson

Email To: mjohnson@cecinc.com;lcunningham3@republic

Project Description: Matlock Bend LF - Loudon, TN

City/State Collected:

Please Circle: PT MT CT ET

Phone: 615-333-7797

Client Project # 313-710

Lab Project # REPCECTN-MATLOCK

Collected by (print): Stuart Miller

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed:

Immediately Packed on Ice N ___ Y ✓

Analysis / Container / Preservative

PH-10BDH4321 TRC-2144141
CR6-220221V

Chain of Custody Page 1 of 2

Pace — PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1621404
D071

Acctnum: REPCECTN
Template: T231091
Prelogin: P1001359
PM: 526 - Chris McCord
PB: 5/24/23 TS
Shipped Via: Courier

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8081/8082 100ml Amb-NoPres	8270AP2 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	COD,NH3 250mlHDPE-H2SO4	FLUORIDE 125mlHDPE-NoPres	MNDG 250mlHDPE-NoPres	SULFIDE 250mlAmb-S-NaOH+ZnAc	SV8011 40mlClr-NaThio	SV8151AP2 1L-Amb NoPres	Remarks	Sample # (lab only)
MW-1	Grab	GW		5-30-23	17:08	17	X	X	X	X	X		X	X		X	*All Samples	-01
MW-1A	Grab	GW		5-30-23	15:38	17	X	X	X	X	X			X		X	were labeled	-02
MW-2	Grab	GW		5-30-23	19:03	17	X	X	X	X	X			X		X	with	-03
MW-3	Grab	GW		5-30-23	10:45	13	X			X	X				X		central	-04
MW-4R	Grab	GW		5-30-23	14:29	13	X			X	X				X		time	-05
MW-5	Grab	GW		5-30-23	13:33	8						X			X			-06
LEACHATE	Grab	GW		5-30-23	17:38	8						X			X			-07
DUPLICATE	Grab	GW		5-30-23	—	13	X			X	X		X		X			-08
FIELD BLANK	Grab	GW		5-30-23	14:32	8						X			X			-09
TRIP BLANK	Grab	GW		5-30-23	10:45	3												-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: **WetChem-48hr HT** = NITRATE,CHLORIDE,FLUORIDE,SULFATE
Total AP1/AP2 Metals include Ca,Fe,K,Mg,Na except for MW-5,Leachate, and Field Blank.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier Clt

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	5-31-23	10:40		3
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				111
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				5/31/23 1039

If preservation required by Login: Date/Time

Hold:

Conditions: NCF / OK

Company Name/Address:
Republic Services - CEC
117 Seaboard Ln.
Suite E100
Franklin. TN 37067

Billing Information:
Accounts Payable
621 Hill Ave
Nashville, TN 37210

Report to: Michael Johnson

Email To: mjohnson@cecinc.com;lcunningham3@republic

Project Description: Matlock Bend LF - Loudon, TN

City/State Collected: Lavon, TN

Please Circle: PT MT CT ET

Phone: 615-333-7797

Client Project # 313-710

Lab Project # REPCECTN-MATLOCK

Collected by (print): Stuart Miller

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1621404

Table #

Acctnum: REPCECTN

Template: T231091

Prelogin: P1001359

PM: 526 - Chris McCord

PB: 5/24/23 TS

Shipped Via: Courier

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TDS 1L-HDPE NoPres	TOC 250mlAmb-HCl	Total AP1 Metals 250mlHDPE-HNO3	Total AP2 Metals 250mlHDPE HNO3	V8260AP1 40mlAmb-HCl	V8260AP1 40mlAmb-HCl-Blk	V8260AP2 40mlAml HCl				Remarks	Sample # (lab only)
MW-1	Grab	GW				17	X	X		X			X				* All	-01
MW-1A	Grab	GW		5-30-23	15:38	~~17~~ 16	X	X		X			X				Samples	-02
MW-2	Grab	GW		5-30-23	19:03	~~17~~ 15	X	X		X			X				were labeled	-03
MW-3	Grab	GW		5-30-23	10:45	~~13~~ 12	X	X	X		X						with	-04
MW-4R	Grab	GW		5-30-23	14:29	~~13~~ 11	X	X	X		X						Central	-05
MW-5	Grab	GW		5-30-23	13:33	~~8~~ 9			X		X						Time	-06
LEACHATE	Grab	GW		5-30-23	17:38	8			X		X							-07
DUPLICATE	Grab	GW		5-30-23	-	13	X	X	X		X							-08
FIELD BLANK	Grab	GW		5-30-23	14:32	8			X		X							-09
TRIP BLANK	Grab	GW		5-30-23	10:45	~~13~~ 3						X						-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:**WetChem-48hr HT** = NITRATE,CHLORIDE,FLUORIDE,SULFATE
Total AP1/AP2 Metals include Ca,Fe,K,Mg,Na except for MW-5,Leachate, and Field Blank.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier CH

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N
once

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
[signature]	5-31-23	10:41		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 111
			[signature]	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			[signature]	5/31/23 1039

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

L1621404

Tracking Numbers	Temperature
Courier	NSA7 2.7+0=2.7
↓	NSA7 0.5+0=0.5
	NSA7 0.8+0=0.8
	NSA7 5.3+0=5.3

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

June 28, 2023

Sub Out Team
Pace National
12065 Lebanon Rd
Mt. Juliet, TN 37122

RE: Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Dear Sub Team:

Enclosed are the analytical results for sample(s) received by the laboratory on June 16, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Erick Hanna
erick.hanna@pacelabs.com
(704)875-9092
Project Manager

Enclosures

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project:	L1621404 MATLOCK BEND LF
Pace Project No.:	92673137

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92673137001	**MW-1**	SM 5310B-2014	MJP	1	PASI-A
92673137002	**MW-1A**	SM 5310B-2014	MJP	1	PASI-A
92673137003	**MW-2**	SM 5310B-2014	MJP	1	PASI-A
92673137004	**MW-3**	SM 5310B-2014	MJP	1	PASI-A
92673137005	**MW-4R**	SM 5310B-2014	MJP	1	PASI-A
92673137006	**DUPLICATE**	SM 5310B-2014	MJP	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: MW-1 **Lab ID: 92673137001** Collected: 05/30/23 17:08 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	ND	mg/L	1.0	1		06/26/23 18:02	7440-44-0	

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ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: MW-1A **Lab ID: 92673137002** Collected: 05/30/23 15:38 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	ND	mg/L	1.0	1		06/26/23 18:22	7440-44-0	

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ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: MW-2 **Lab ID: 92673137003** Collected: 05/30/23 19:03 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	ND	mg/L	1.0	1		06/26/23 18:41	7440-44-0	

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ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: MW-3 **Lab ID: 92673137004** Collected: 05/30/23 10:45 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	**3.7**	mg/L	1.0	1		06/26/23 19:02	7440-44-0	

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: MW-4R **Lab ID: 92673137005** Collected: 05/30/23 14:29 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	ND	mg/L	1.0	1		06/26/23 19:21	7440-44-0	

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Sample: DUPLICATE **Lab ID: 92673137006** Collected: 05/30/23 00:01 Received: 06/16/23 10:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B-2014 Pace Analytical Services - Asheville							
Total Organic Carbon	**2.8**	mg/L	1.0	1		06/26/23 20:18	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

QC Batch: 783064
QC Batch Method: SM 5310B-2014
Analysis Method: SM 5310B-2014
Analysis Description: 5310B TOC
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92673137001, 92673137002, 92673137003, 92673137004, 92673137005, 92673137006

METHOD BLANK: 4061523
Matrix: Water
Associated Lab Samples: 92673137001, 92673137002, 92673137003, 92673137004, 92673137005, 92673137006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	06/26/23 16:34	

LABORATORY CONTROL SAMPLE: 4061524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	23.7	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4061525 4061526

Parameter	Units	92673135002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	9.0	25	25	32.6	32.9	95	96	90-110	1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4061527 4061528

Parameter	Units	92673144001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	145	25	25	169	168	99	94	90-110	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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Huntersville, NC 28078
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QUALIFIERS

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: L1621404 MATLOCK BEND LF
Pace Project No.: 92673137

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92673137001	**MW-1**	SM 5310B-2014	783064		
92673137002	**MW-1A**	SM 5310B-2014	783064		
92673137003	**MW-2**	SM 5310B-2014	783064		
92673137004	**MW-3**	SM 5310B-2014	783064		
92673137005	**MW-4R**	SM 5310B-2014	783064		
92673137006	**DUPLICATE**	SM 5310B-2014	783064		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

WO#: 92673137

92673137

Client Name: Pall Not

Project #:

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Other:____

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Date/Initials Person Examining Contents: 3/8/23

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer: ☑ IR Gun ID: 12070

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Cooler Temp: 3.3 **Correction Factor:** Add/Subtract (°C) 0 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp Corrected (°C): 3.3

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: Date/Time:

Project Manager SCURF Review: **Date:**

Project Manager SRF Review: **Date:**

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt
	Effective Date: 11/14/2022

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottles**

*****Check all unpreserved Nitrates for chlorine**

Project

WO#: 92673137

PM: EJH **Due Date: 06/27/23**

CLIENT: 92-ESC LAB

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	AG3H	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1																								1				
2																								1				
3																								1				
4																								1				
5																								1				
6																								1				
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Pace Analytical
Address:	12065 Lebanon Rd.
Mt. Juliet, TN 37122	
Email:	MTJLSuboutTeam@pacelabs.com
Phone:	(615) 773-9756 Fax (615) 758-5859
Requested Due Date:	7-Jun

Section B
Required Project Information:

Report To:	Pace Analytical Subout Team
Copy To:	
Purchase Order #:	L1621404
Project Name:	Matlock Bend LF - Loudon, TN
Project #:	313-710

Section C
Invoice Information:

Attention:	Michael Johnson
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Erick Hanna
Pace Profile #:	38076

Regulatory Agency
State / Location
TN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test: TOC	Residual Chlorine (Y/N)	3267337
1	MW-1	WT				30-May	17:08		1								1	X		001
2	MW-1A	WT				30-May	15:38		1								1	X		002
3	MW-2	WT				30-May	19:03		1								1	X		003
4	MW-3	WT				30-May	10:45		1								1	X		004
5	MW-4R	WT				30-May	14:29		1								1	X		005
6	DUPLICATE	WT				30-May	0:01		1								1	X		006
7																				
8																				
9																				
10																				
11																				
12																				

Requested Analysis Filtered (Y/N): Y/N

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	James C Huckaba	14-Jun	17:02	MD Upchurch	6-16-23	1005	3.3	Y	N	Y
Pace Analytical Batch: WG2077707										
Pace Analytical SDGs: L1621404										
Location: Huntersville, NC 28078										

	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: **DATE Signed:**

ANALYTICAL REPORT

July 24, 2023

Republic Services - CEC

Sample Delivery Group:	L1635058
Samples Received:	07/13/2023
Project Number:	313-710
Description:	Matlock Bend LF - Loudon, TN
Report To:	Michael Johnson 117 Seaboard Ln. Suite E100 Franklin, TN 37067

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-1A L1635058-01 GW

Collected by: Stuart Miller | Collected date/time: 07/13/23 12:09 | Received date/time: 07/13/23 15:07

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2094586	1	07/14/23 19:25	07/17/23 18:29	ZSA	Mt. Juliet, TN

MW-02 L1635058-02 GW

Collected by: Stuart Miller | Collected date/time: 07/13/23 12:58 | Received date/time: 07/13/23 15:07

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2094586	1	07/14/23 19:25	07/17/23 18:31	ZSA	Mt. Juliet, TN

MW-03 L1635058-03 GW

Collected by: Stuart Miller | Collected date/time: 07/13/23 10:21 | Received date/time: 07/13/23 15:07

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2094586	1	07/14/23 19:25	07/17/23 18:34	ZSA	Mt. Juliet, TN

MW-4R L1635058-04 GW

Collected by: Stuart Miller | Collected date/time: 07/13/23 11:28 | Received date/time: 07/13/23 15:07

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2094586	1	07/14/23 19:25	07/17/23 18:37	ZSA	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	0.0483		0.0100	1	07/17/2023 18:29	WG2094586

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	0.180		0.0100	1	07/17/2023 18:31	WG2094586

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	9.33		0.0100	1	07/17/2023 18:34	WG2094586

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Manganese,Dissolved	3.79		0.0100	1	07/17/2023 18:37	WG2094586

QUALITY CONTROL SUMMARY

L1635058-01,02,03,04

Method Blank (MB)

(MB) R3949567-1 07/17/23 18:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Manganese,Dissolved	U		0.000934	0.0100

Laboratory Control Sample (LCS)

(LCS) R3949567-2 07/17/23 18:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Manganese,Dissolved	1.00	0.955	95.5	80.0-120	

L1634798-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1634798-01 07/17/23 18:59 • (MS) R3949567-4 07/17/23 19:04 • (MSD) R3949567-5 07/17/23 19:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	1.00	ND	0.968	0.972	96.8	97.2	1	75.0-125			0.349	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Civil & Environmental Consultants - TN
117 SEABOARD LN
SUITE E100
Franklin TN 37067

Billing Information:
Accounts Payable
117 Seaboard Ln.
Suite E100
Franklin, TN 37067

Report to: Michael Johnson

Email To: mjohnson@cecinc.com

Project Description: Matlock Bend LF

City/State Collected: London, TN

Please Circle: PT MT CT ET

Phone: 615-333-7797

Client Project #

Lab Project # CEC-MATLOCK

Collected by (print): Stuart Miller

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day ✓ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace® PEOPLE ADVANCING SCIENCE

12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1635058

D160

Acctnum: CEC

Template:

Prelogin:

PM:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Dissolved Manganese only (KF)	Remarks	Sample # (lab only)
MW-1A	Grab	GW		7-13-23	12:09	1	X		-01
MW-02	Grab	GW		7-13-23	12:58	1	X		-02
MW-03	Grab	GW		7-13-23	10:21	1	X		-03
MW-4R	Grab	GW		7-13-23	11:28	1	X		-04

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier Clt

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP __Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	7-13-23	15:07			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature) Susan Rach	Temp: GUBAG °C 0.9+0=0.9 Bottles Received: 4	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Kayla	Date: 7/13/23 Time: 1507	Hold: Condition: NCF / OK

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-01
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	70's Clear Sky
DATE & TIME	5-30-23 16:00	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	45.00	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	9.00	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	36.00	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	2.50	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	9.00	16:15	16.7	6.80	456.6	375.3	4.52	87	24.15
.25	9.55	16:20	16.0	6.27	447.5	370.9	3.86	106.4	13.47
.50	9.40	16:25	16.7	6.23	439.6	370.2	2.95	104.0	11.83
.75	9.40	16:30	16.1	6.22	429.2	355.7	2.63	98.8	14.99
1.00	9.40	16:35	15.0	6.21	418.4	337.9	2.27	96.2	21.12
1.25	9.40	16:40	14.9	6.20	416.9	336.9	2.05	93.4	28.99
1.50	9.40	16:45	15.0	6.19	415.6	336.3	1.87	92.5	33.50
1.75	9.40	16:50	15.0	6.19	415.6	336.2	1.88	92.7	50.01
2.00	9.40	16:55	15.0	6.19	415.6	336.2	1.86	92.7	43.00
2.25	9.40	17:00	15.0	6.19	415.7	336.2	1.86	92.8	42.57
2.50	9.40	17:05	15.0	6.18	415.7	336.2	1.86	92.7	41.80

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
2.50	9.40	17:05	15.0	6.18	415.7	336.2	1.86	92.7	41.80

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	None - cloudy
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-1A
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	80's clear. Stay
DATE & TIME	5-30-23 15:00	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	38.00	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	12.40	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	N
WATER COLUMN (feet)	25.60	FIELD BLANK COLLECTED?	N
PURGE VOLUME (gallons)	.55	EQUIPMENT BLANK COLLECTED?	N

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	12.40	15:10	16.7	6.70	1829	1548	1.14	96	2.36
.15	12.88	15:15	17.9	6.65	1824	1583	.85	95.6	2.38
.25	12.50	15:20	19.2	6.63	1833	1631	.87	88.8	2.98
.35	12.50	15:25	19.3	6.62	1839	1638	.86	83.4	3.22
.45	12.50	15:30	19.4	6.60	1825	1681	.88	78.5	3.68
.55	12.50	15:35	19.4	6.59	1818	1637	.87	76.5	4.51

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.55	12.50	15:38	19.4	6.59	1818	1637	.87	76.5	4.51

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	none - clear
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-02
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	70F - 80S clear sky
DATE & TIME	18:30 5-30-23	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	M.Iw
TOTAL WELL DEPTH (feet)	43.10	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	17.4	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	25.70	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	.45	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	17.40	18:46	16.5	4.71	82.9	69.6	3.01	183.5	4.03
.15	18.00	18:45	16.5	4.59	82.0	72.8	2.48	194.7	6.87
.25	18.10	18:50	16.4	4.57	85.5	69.9	4.00	198.7	7.80
.35	18.10	18:55	16.3	4.56	83.6	69.6	4.14	198.6	3.40
.45	18.10	19:00	16.1	4.56	80.5	66.7	4.44	198.6	3.26

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.45	18.10	19:03	16.1	4.56	80.5	76.7	4.44	198.2	3.27

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	None clear
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-03
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	70s-80s clear sky
DATE & TIME	10:55 5-30-23	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	41.60	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	15.48	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	y
WATER COLUMN (feet)	26.12	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	1.05	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

(cr)

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	15.48	10:00	17.0	7.11	286.3	239.2	3.80	79.1	2.71
.5	17.70	10:15	15.6	6.06	395.9	325.5	2.48	79.6	42.77
.65	18.40	10:20	16.2	6.07	405.4	337.3	2.57	88.9	26.41
.75	18.52	10:25	16.7	6.03	408.1	343.6	3.28	87.8	15.93
.85	18.75	10:30	17.0	6.01	402.2	341.0	3.39	90.8	13.49
.95	18.75	10:35	17.2	6.02	399.4	340.4	3.61	93.8	10.11
1.05	18.75	10:40	17.2	5.98	394.3	335.7	3.57	93.1	7.85

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.05	18.75	10:40	17.2	5.98	394.3	335.7	3.57	93.1	7.85

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	none - clear/orange chunks
Number of Containers	see COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good/needs new hasp on back	Fittings/Well Head Condition	good needs hasp on back/hinge
Pad/Casing Quality	none	Well Clear of Weeds/Accessible?	yes, needs better path to well

hard to access have to carry heavy equipment down hill in woods.

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-4R
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	80's - clear sky
DATE & TIME	13:50 5-30-23	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	104.20	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	99	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	5.20	FIELD BLANK COLLECTED?	y
PURGE VOLUME (gallons)	.65	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	99.0	13:56	21.7	6.37	177.0	161.8	4.86	103.1	3.56
.15	99.4	14:01	19.0	6.41	207.3	183.8	2.76	96.1	2.60
.25	99.1	14:06	18.6	6.41	213.3	187.0	1.39	86.6	2.38
.35	99.2	14:11	18.5	6.38	206.9	181.3	.98	76.8	2.66
.45	99.3	14:16	18.3	6.34	200.0	174.9	1.03	69.2	2.94
.55	99.4	14:21	18.4	6.33	198.8	174.1	1.03	67.4	2.83
~~.65~~	~~99.5~~	~~14:~~							

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.65	99.5	14:29	18.4	6.33	198.8	174.1	1.03	67.4	2.83

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	None-clear / Smells like garbage
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	3	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-5
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	80's - clear sky
DATE & TIME	12:20 5-30-23	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Grab	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	169.50	SAMPLING EQUIPMENT	Grab
DEPTH TO WATER (feet)	92.44	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	~~157.06~~ 77.06	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	2.75	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	92.44	12:36	20.5	7.80	287.5	255	9.28	66.1	35.50
.25	92.44	12:41	17.2	7.40	280.3	237.6	8.47	86.8	36.50
.50	92.44	12:46	16.3	7.45	279.6	232.8	9.08	95.1	44.00
.75	92.44	12:51	16.1	7.47	277.8	230.7	9.29	99.1	45.00
1.00	92.44	12:56	16.2	7.49	279.7	233.1	9.30	102.8	48.00
1.25	92.44	13:01	16.7	7.50	280.7	236.2	9.36	103.3	55.00
1.50	92.44	13:06	16.9	7.50	280.6	237.0	9.30	103.7	60.00
1.75	92.44	13:11	16.9	7.51	280.6	237.3	9.67	103.4	35.00
2.00	92.44	13:16	17.0	7.51	280.7	237.2	9.69	101.9	28.50
2.25	92.44	13:21	16.9	7.51	280.6	236.8	9.96	101.8	19.25
2.50	92.44	13:26	16.9	7.51	280.7	237.4	10.00	99.5	19.10
2.75	92.44	13:31	16.9	7.51	280.9	237.2	10.10	96.9	19.00

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
2.75	92.44	13:33	16.9	7.51	280.9	237.2	10.10	96.9	19.00

Dissolved metals

Preservatives Used	see COC	Sample Charateristics (Odor, Color)	none
Number of Containers	see COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	0	Well Cap Dedicated/In Place?	yes - wasps
Lock Condition	new new lock	Fittings/Well Head Condition	good - wasps
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes, no very hard to get equipment up to well.

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	**MONITORING WELL I.D.**	SPRING
LOCATION	Loudon, TN	**TEMPERATURE & WEATHER**	70's - 80's clear sky
DATE & TIME	18:30 5:30	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Grab	**FIELD REPRESENTATIVE**	Miller
TOTAL WELL DEPTH (feet)	-	**SAMPLING EQUIPMENT**	Grab
DEPTH TO WATER (feet)	-	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	-	**DUPLICATE COLLECTED?**	n
WATER COLUMN (feet)	-	**FIELD BLANK COLLECTED?**	n
PURGE VOLUME (gallons)	–	**EQUIPMENT BLANK COLLECTED?**	n

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
–	–	18:30	19.7	6.68	1334	1200	1.49	117.4	6.20

Preservatives Used	See COC	**Sample Charateristics (Odor, Color)**	None - clear
Number of Containers	See COC	**Sampler Signature**	[illegible]

DATA

Sample port/Casing Quality	–	**Clear of Weeds/Accessible?**	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	**MONITORING WELL I.D.**	LEACHATE
LOCATION	Loudon, TN	**TEMPERATURE & WEATHER**	70-80's clear sky
DATE & TIME	5-30-23 17:38	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Grab	**FIELD REPRESENTATIVE**	Miller
TOTAL WELL DEPTH (feet)	-	**SAMPLING EQUIPMENT**	Grab
DEPTH TO WATER (feet)	-	**IS SAMPLE EQUIPMENT DEDICATED?**	No
CASING DIAMETER (inches)	-	**DUPLICATE COLLECTED?**	n
WATER COLUMN (feet)	-	**FIELD BLANK COLLECTED?**	n
PURGE VOLUME (gallons)	-	**EQUIPMENT BLANK COLLECTED?**	n

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
-	-	17:38	24.8	7.06	276.8	275.7	4.88	129.3	1.65

Preservatives Used	See COC	**Sample Charateristics (Odor, Color)**	None - clear
Number of Containers	see COC	**Sampler Signature**	[signature]

DATA

Sample port/Casing Quality	good	**Clear of Weeds/Accessible?**	yes

EQUIPMENT CALIBRATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

EQUIPMENT CALIBRATION FORM

NAME OF REPRESENTATIVE	Stuart Miller
LOCATION	CEC
DATE AND TIME	5/29/23
Equipment and Model # (ex. YSI Pro Plus 556)	YSI PRO PLUS, Hach #3
Equipment Serial #	Pro plus

pH Calibration

pH buffer Calibration Standard	Buffer solution exp. date	Pre-Cal Reading (S.U.)	ph mV Value	Accepted Range mV	Within Range? (Yes or No)	Post-Cal Reading (S.U.)	Calibrated? (yes/no)
4	6/21/24	3.76	145.90	160 to 180	yes	4.00	yes
7	1-24-25	7.03	-32.15	+/-50	yes	7.01	yes
10	12/22/24	10.13	-200.8	-160 to -180	yes	10.02	yes

Temperature Calibration Check

Cert. Thermometer Value (deg C)	Meter Value (deg C)
26.4	26.5

DO Calibration

Actual Barometric Pressure	Barometric Pressure (mm Hg)	D.O. Value (% Saturated)	Unit reading (%)	% DO accepted?
741	741	100	97.0	97.5

Specific Conductivity Calibration

Conductivity Calibration Standard buffer solution	Buffer solution exp. date	Pre Cal Reading (umhos)	Post Cal Reading (umhos)
1409	3/30/23	1465	1409

ORP Calibration

ORP Calibration (mV)	Buffer solution exp. date	Pre Cal Reading (mV)	Post Cal Reading (mV)
220	NOV/23	219.3	225.3

Hach Model 2100P Turbidimeter Calibration

Calibration verification Test performed and passed?	NTU Standard	Within Range? (Yes/No)	Measured Value	Stored?	Final Verification test passed? (Yes/No)
Yes	20				
No	100				
Note: if verification passed, calibration not required	800				

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-1A
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	80-90s clear sky
DATE & TIME	7-13-23 11:38	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	38.00	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	12.30	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	25.70	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	1.25	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	12.30	11:42	17.0	6.71	1489	1265	4.79	123.1	3.03
.25	12.70	11:47	16.9	6.77	1673	1416	3.09	124.3	5.41
.50	12.50	11:52	18.1	6.75	1678	1459	2.81	126.6	6.95
.75	12.50	11:57	18.6	6.73	1694	1487	2.88	129.9	5th ~~10.60~~ 1.65
1.00	12.50	12:02	18.7	6.69	1683	1467	2.93	138.4	1.54
1.25	12.50	12:07	18.7	6.67	1680	1461	2.97	138.1	1.23

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.25	12.50	12:09	18.7	6.67	1680	1461	2.97	138.1	1.23

Preservatives Used	see COC	Sample Charateristics (Odor, Color)	None - clear
Number of Containers	see COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-02
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	90's - clear sky
DATE & TIME	7-13-23 12:25	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	43.10	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	19.60	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	N
WATER COLUMN (feet)	23.50	FIELD BLANK COLLECTED?	N
PURGE VOLUME (gallons)	1.50	EQUIPMENT BLANK COLLECTED?	N

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	19.60	12:30	16.7	5.38	86.0	71.7	4.14	193.1	1.68
.25	20.20	12:35	16.7	4.78	83.1	69.9	2.57	261.1	1.74
.75	22.1	12:40	17.9	4.70	85.2	73.6	4.70	280.2	1.64
1.00	22.2	12:45	18.4	4.70	84.2	73.2	3.82	282.4	2.56
1.25	22.2	12:50	19.1	4.72	83.6	74.7	3.86	284.6	2.34
1.50	22.2	12:55	19.3	4.71	84.2	75.9	3.87	286.2	2.89

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.50	22.2	12:58	19.3	4.71	84.2	75.9	3.87	286.2	2.89

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	None - clear
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-03
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	80's Clear Sky
DATE & TIME	9:30 7-13-23	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	MMW
TOTAL WELL DEPTH (feet)	41.60	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	15.30	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	:	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	2.25	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	15.30	9:38	18.9	6.57	384.4	340	6.43	96.2	21.52
.50	17.30	9:43	16.7	6.12	408.7	337.1	2.20	77.4	50.81
.75	17.80	9:48	16.6	6.06	416.4	350.7	1.89	71.5	42.75
1.00	18.20	9:53	17.0	6.05	418.7	354.8	2.10	77.8	36.50
1.25	18.55	9:58	18.8	6.06	412.5	339.9	1.91	81.0	30.00
1.50	18.90	10:03	18.7	6.06	415.6	342.0	1.94	81.2	26.50
1.75	19.10	10:08	18.0	6.07	418.1	355.4	2.00	83.3	28.10
2.00	19.20	10:13	18.0	6.07	420.2	363.9	2.03	85.6	28.00
2.25	19.25	10:18	18.3	6.08	424.1	369.9	2.04	87.1	28.50

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
2.25	19.28	10:18	18.3	6.08	424.1	369.9	2.04	87.1	28.50

Preservatives Used	see COC	Sample Charateristics (Odor, Color)	none - clear
Number of Containers	see COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	2	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

Civil & Environmental Consultants, Inc. 117 Seaboard Lane Suite E100 Franklin, Tennessee 37067 - 800-763-2326 - www.cecinc.com

SITE AND MONITORING WELL DATA

FACILITY NAME	Matlock Bend Landfill	MONITORING WELL I.D.	MW-4R
LOCATION	Loudon, TN	TEMPERATURE & WEATHER	90's - clear sky
DATE & TIME	7-13-23 10:40	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow	FIELD REPRESENTATIVE	Miller
TOTAL WELL DEPTH (feet)	104.20	SAMPLING EQUIPMENT	RF-II Pump
DEPTH TO WATER (feet)	101.00	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	2	DUPLICATE COLLECTED?	n
WATER COLUMN (feet)	3.20	FIELD BLANK COLLECTED?	n
PURGE VOLUME (gallons)	2.00	EQUIPMENT BLANK COLLECTED?	n

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	101.00	10:50	19.0	6.81	241.3	213.3	6.95	107.2	2.55
.25	101.30	10:55	18.6	6.67	263.3	231.9	2.75	104.8	4.23
.50	101.40	11:00	18.4	6.67	274.9	240.3	1.81	102.0	3.45
.75	101.50	11:05	18.3	6.67	281.9	245.7	1.47	100.8	2.48
1.00	101.65	11:10	18.0	6.68	288.3	249.8	1.21	100.2	2.27
1.25	101.75	11:15	18.1	6.69	291.4	252.9	1.07	99.2	5.97
1.50	101.77	11:20	18.4	6.69	290.1	253.3	.99	99.1	6.95
2.00	101.79	11:25	18.3	6.69	289.8	253.1	.98	99.2	6.90

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
2.00	101.79	11:28	18.3	6.69	289.8	253.1	.98	99.2	6.90

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	none - clear
Number of Containers	See COC	Sampler Signature	[signature]

WELL DATA

Number of Baffles	4	Well Cap Dedicated/In Place?	yes
Lock Condition	good	Fittings/Well Head Condition	good
Pad/Casing Quality	good	Well Clear of Weeds/Accessible?	yes

REPUBLIC SERVICES

Monthly Operations Report
Matlock Bend Landfill
August 17, 2023

Presented by:

Republic Services, Inc.

Loudon Landfill Monthly Tonnages
Month Ending July 2023

Matlock Bend Landfill

Month	2022	2023	2022 to 2023
Jan	12,023	**10,967**	(1,056)
Feb	12,084	**10,899**	(1,185)
Mar	14,656	**13,080**	(1,576)
Apr	13,413	**12,504**	(909)
May	13,597	**13,954**	357
Jun	13,486	**13,528**	42
Jul	12,979	**12,094**	(885)
Aug	13,293	**0**	
Sep	11,350	**0**	
Oct	11,310	**0**	
Nov	11,426	**0**	
Dec	10,354	**0**	
Total	149,971	**87,027**	(5,211)
% of Total Tonnage		**100%**	

Daily Avg. for any Running 30 Day Period **403**

Loudon County

Month	2022	2023	2022 to 2023
Jan	546	**458**	(88)
Feb	447	**462**	15
Mar	553	**568**	15
Apr	552	**522**	(30)
May	531	**604**	73
Jun	563	**583**	20
Jul	557	**598**	41
Aug	585	**0**	
Sep	557	**0**	
Oct	502	**0**	
Nov	561	**0**	
Dec	513	**0**	
Total	6,468	**3,794**	45
% of Total Tonnage		**4%**	

Daily Avg. for any Running 22.5 Day Period **538**

Lenoir City

Month	2022	2023	2022 to 2023
Jan	498	**450**	(48)
Feb	458	**444**	(14)
Mar	623	**547**	(76)
Apr	527	**510**	(17)
May	568	**554**	(14)
Jun	506	**518**	12
Jul	464	**521**	57
Aug	555	**0**	
Sep	467	**0**	
Oct	431	**0**	
Nov	452	**0**	
Dec	442	**0**	
Total	5,990	**3,544**	(100)
% of Total Tonnage		**4%**	

Loudon, City of

Month	2022	2023	2022 to 2023
Jan	462	**509**	47
Feb	451	**446**	(5)
Mar	532	**581**	49
Apr	540	**479**	(61)
May	537	**574**	37
Jun	498	**549**	51
Jul	483	**549**	66
Aug	536	**0**	
Sep	465	**0**	
Oct	492	**0**	
Nov	460	**0**	
Dec	430	**0**	
Total	5,886	**3,686**	183
% of Total Tonnage		**4%**	

Republic Services, Inc.

Month	2022	2023	2022 to 2023
Jan	2,906	**2,786**	(120)
Feb	2,831	**2,607**	(224)
Mar	3,355	**3,114**	(241)
Apr	2,982	**2,797**	(185)
May	3,097	**3,066**	(31)
Jun	2,992	**3,202**	210
Jul	2,910	**3,000**	90
Aug	3,097	**0**	
Sep	2,765	**0**	
Oct	2,750	**0**	
Nov	2,841	**0**	
Dec	2,813	**0**	
Total	35,340	20,574	(499)
% of Total Tonnage		**24%**	

Waste Management

Month	2022	2023	2022 to 2023
Jan	**2,564**	**1,920**	(644)
Feb	**2,617**	**2,044**	(573)
Mar	**2,639**	**2,347**	(292)
Apr	**2,427**	**2,175**	(252)
May	**2,399**	**2,292**	(107)
Jun	**2,352**	**2,447**	95
Jul	**1,830**	**1,861**	31
Aug	**2,268**	**0**	
Sep	**1,908**	**0**	
Oct	**1,978**	**0**	
Nov	**2,094**	**0**	
Dec	**1,739**	**0**	
Total	26,816	**15,087**	(1,741)
% of Total Tonnage		**17%**	

Liberty Tire

Month	2022	2023	2022 to 2023
Jan	**0**	**0**	0
Feb	**0**	**0**	0
Mar	**0**	**246**	246
Apr	**0**	**862**	862
May	**0**	**910**	910
Jun	**0**	**910**	910
Jul	**0**	**870**	870
Aug	**0**	**0**	
Sep	**0**	**0**	
Oct	**0**	**0**	
Nov	**0**	**0**	
Dec	**0**	**0**	
Total	0	**3,797**	3,797
% of Total Tonnage		**4%**	

All Other Tons

Month	2022	2023	2022 to 2023
Jan	5,047	**4,844**	(203)
Feb	5,280	**4,896**	(384)
Mar	6,954	**5,676**	(1,278)
Apr	6,385	**5,158**	(1,227)
May	6,465	**5,955**	(510)
Jun	6,575	**5,320**	(1,255)
Jul	6,735	**5,565**	(1,170)
Aug	6,252	**0**	
Sep	5,188	**0**	
Oct	5,156	**0**	
Nov	5,018	**0**	
Dec	4,417	**0**	
Total	69,472	**37,415**	(6,026)
% of Total Tonnage		**43%**	

Materials Classification Report

Matlock Bend Landfill

Monthly Tonnage Summary July 2023

Material	Tonnage
MSW	
MSW	**9,833**
Special Waste	
Other	1,753
Ash	0
Sludge	508
Total Special Waste	**2,261**
Total MSW & SW	**12,094**
Tires	
Total Material	**12,094**
% MSW	81%
% Special Waste	19%
% Sludge *	4%

* Sludge % is stand alone,
% Special Waste includes "Sludge"

2020 Sludge %		2021 Sludge %	
January	5%	January	3%
February	4%	February	5%
March	4%	March	5%
April	4%	April	6%
May	4%	May	6%
June	5%	June	5%
July	5%	July	7%
August	6%	August	4%
September	5%	September	6%
October	3%	October	5%
November	5%	November	3%
December	7%	December	7%

2022 Sludge %		2023 Sludge %	
January	7%	January	6%
February	6%	February	9%
March	6%	March	7%
April	5%	April	7%
May	5%	May	4%
June	2%	June	6%
July	10%	July	4%
August	4%	August	
September	7%	September	
October	5%	October	
November	5%	November	
December	7%	December	

2023 Loudon MSW and Special Waste Analysis

Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
MSW	9,020	8,687	10,534	9,547	11,179	10,590	9,833						**69,390**
Special Waste	1,947	2,212	2,546	2,957	2,775	2,938	2,261						**17,636**
Tires	0	0	0	0	0	0	0						**0**
Total	10,967	10,899	13,080	12,504	13,954	13,528	12,094	0	0	0	0	0	**87,026**
%													
MSW	82%	80%	81%	76%	80%	78%	81%						**80%**
Special Waste	18%	20%	19%	24%	20%	22%	19%						**20%**
Total	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	**100%**

2023-2024 Matlock Bend Landfill Tire Report

Month	Tons (OB)	Each (IB)
Jul-23	74.40	2,653
Aug-23	0.00	
Sep-23	0.00	0
Oct-23	0.00	0
Nov-23	0.00	0
Dec-23	0.00	0
Jan-24	0.00	0
Feb-24	0.00	0
Mar-24	0.00	0
Apr-24	0.00	0
May-24	0.00	0
Jun-24	0.00	0
Total	**74.40**	**2,653**

REPUBLIC SERVICES

August 2, 2023

Loudon County Solid Waste Disposal Commission
Attn: Chief Deputy Clerk
101 Mulberry Street Suite 203
Loudon, TN 37774

Dear Trustee:

Pursuant to Section 10.6 and 10.7 of the Sanitary Landfill Operation Agreement between Loudon and Santek as of July 1, 2007, Second Amendment Section 10.6 dated July 12, 2022, Santek agreed to pay the Commission a host fee and security fee as defined in the agreement. The following recap reflects the calculation for the period of July 2023:

Host Fees (Greater of below)

Total Tip Fees Billed	$414,251.75	Total Tonnage Received	12,094.34
Host Fee Percentage	5.5%	Rate per Ton	$1.00
	$22,783.85		$12,094.34
Minimum Fee	$10,572.50		

==========

Security Fees

Total Tip Fees Billed	$414,251.75
Security Fee Percentage	5%
	$20,712.59

=========

Minutes Payment

Loudon County Minutes	$100.00

=========

Total amount to be received	$43,596.44

=========

Our checks in payment of the above fees have been remitted to the above address for the Commission. Should you have any questions or need additional information, please let me know.

Sincerely,

David L. Hollinshead
Manager Municipal Sales
Republic Services

Matlock Bend Landfill
2023 Airspace Projection / Construction Schedule

DATE	SURVEYOR	DURATION (DAYS)	TONNAGE (DEPLETE TONS)	ACTUAL / PROJECTED[1]	PERIOD DENSITY (LBS/CY)[2]	VOLUME CONSUMED (CY)[3]	PERMITTED REMAINING AIRSPACE (CY)[4]
25-May-2020	Southern Resources		-	-	-	-	975,684
2-Apr-2021	Southern Resources	312	112,343	A	1,310	171,519	826,035
8-Nov-2021	Firmatek	220	83,430	A	1,469	113,617	736,497
19-Jan-2022	Firmatek	72	27,835	A	1,684	33,054	728,208
4-Apr-2022	Firmatek	75	32,651	A	1,510	43,236	695,111
23-Jun-2022	Firmatek	80	36,536	A	1,394	52,401	660,950
6-Jan-2023	Firmatek	197	75,537	A	1,498	100,824	434,800
22-Mar-2023	Firmatek	75	29,813	A	1,110	53,738	381,062
29-Jun-2023	Firmatek	99	42,245	A	1,287	65,648	315,414
30-Sep-2023	-	93	40,739	P	1,445	56,386	259,027
31-Dec-2023	-	92	40,301	P	1,445	55,780	203,247
30-Mar-2024	-	90	39,425	P	1,445	54,568	148,679
30-Jun-2024	-	92	40,301	P	1,445	55,780	92,899
30-Sep-2024	-	92	40,301	P	1,445	55,780	37,119
31-Dec-2024	-	92	40,301	P	1,445	55,780	**FULL**

Budgeted Tons/Calendar Day	**438**	Budgeted Density (LBS/CY)	**1445**	Full Date[5]	**December-2024**

[1] = Projected tonnages is based on previous quarter tonnage rate. Density is historic composite density used in Republic models.

[2] = Operational Density calculated from volume consumed within active area only and does not include settlement across entire site.

[3] = Actual Volume Consumed data only accounts for active/operational area and does not count settlement. Projected volume consumed uses budgeted long-term density and accounts for anticipated settlement across the entire site

[4] = Permitted remaining airspace accounts for remaining fill volume (includes Module J construction and overfills are subtracted out).

[5] = Full Date of the landfill is calculated based on estimated future values and will vary due to tonnage or compaction increases/decreases.

Initial Inspection

TENNESSEE DIVISION OF SOLID WASTE MANAGEMENT
CLASS I FACILITY INSPECTION DOCUMENT

CLASS I FACILITY

SITE	DATE	TIME	WEATHER
Loudon County Landfill SNL530000203 21712 Highway 72 North Loudon	7/25/2023	13:00	90F Sunny

EFO: KNOX

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
**	**BUFFER ZONE STANDARDS FOR SITING LANDFILLS**					
8310	**BUFFER ZONE STANDARD VIOLATED**	0400-11-01-.04(3)(a) ?	☒	☐	☐	☐
COMMENTS						
**	**COLLECTED LEACHATE**					
8330	**LEACHATE IMPROPERLY MANAGED**	0400-11-01-.04(4)(a)8(i-iii) ?	☒	☐	☐	☐
COMMENTS	Leachate management plan was submitted to TDEC on May 24, 2023. Issues of leachate on site seem to have been brought under control. It is recommended that the pump system installed to curtail issue be left in place until issue is resolved. The leachate flow volume of said pump, the riser sump and the gravity drain should be reported to the KEFO weekly to ensure that issue has been resolved.					
8340	**INADEQUATE LEACHATE COLLECTION SYSTEM**	0400-11-01-.04(4)(a)7 ?	☒	☐	☐	☐
COMMENTS						
	COMMUNICATIONS					
8130	**NO COMMUNICATION DEVICES**	0400-11-01-.04(2)(f) ?	☒	☐	☐	☐
COMMENTS						
	COVER MATERIAL					
8160	**UNAVAILABILITY OF COVER MATERIAL.**	0400-11-01-.04(2)(h) ?	☒	☐	☐	☐
COMMENTS						
**	**DEAD ANIMALS**					
8250	**DEAD ANIMALS IMPROPERLY HANDLED**	0400-11-01-.04(2)(k)5.(ii) (I-III) ?	☒	☐	☐	☐
COMMENTS						
	DUST CONTROL					
8190	**INADEQUATE DUST CONTROL**	0400-11-01-.04(2)(j) ?	☒	☐	☐	☐
COMMENTS						
**	**DUTY TO PROVIDE INFORMATION**					

VERSION DATE 11/8/2022

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
※	**DUTY TO PROVIDE INFORMATION**					
8530	**UNSATISFACTORY RECORDS OR REPORTS**	SEE CITATION LIST LAST PAGE ?	☒	☐	☐	☐
COMMENTS						
8590	**PERMITS, PLANS, OPERATING MANUAL NOT AVAILABLE**	0400-11-01-.02(5)(a)(7) ?	☒	☐	☐	☐
COMMENTS						
	FIRE SAFETY					
8080	**EVIDENCE OF OPEN BURNING**	0400-11-01-.04(2)(c)1 ?	☒	☐	☐	☐
COMMENTS						
8090	**INADEQUATE FIRE PROTECTION**	0400-11-01-.04(2)(c)2 ?	☒	☐	☐	☐
COMMENTS						
※	**GAS MIGRATION CONTROL STANDARDS**					
8380	**INADEQUATE GAS MIGRATION CONTROL SYSTEM**	0400-11-01-.04(5)(a) ?	☒	☐	☐	☐
COMMENTS						
8390	**INADEQUATE MAINTENANCE OF GAS MIGRATION CONTROL SYSTEM**	0400-11-01-.04(5)(a) ?	☒	☐	☐	☐
COMMENTS						
	GENERAL FACILITY STANDARDS					
8010	**INADEQUATE VECTOR CONTROL**	0400-11-01-.04(2)(a)1 ?	☒	☐	☐	☐
COMMENTS						
8020	**ACCESS NOT LIMITED TO OPERATING HOURS**	0400-11-01-.04(2)(a)4 ?	☒	☐	☐	☐
COMMENTS						
8030	**INADEQUATE ARTIFICIAL OR NATURAL BARRIER**	0400-11-01-.04(2)(b)1 ?	☒	☐	☐	☐
COMMENTS						

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
	GENERAL FACILITY STANDARDS					
8040	**INADEQUATE INFORMATION SIGNS**	0400-11-01-.04(2)(b)2 ? TCA 68-211-703(h)	☒	☐	☐	☐
COMMENTS						
8050	**UNSATISFACTORY ACCESS ROAD(S)/PARKING AREA(S)**	0400-11-01-.04(2)(b)3 ?	☒	☐	☐	☐
COMMENTS						
8060	**CERTIFIED PERSONNEL NOT PRESENT DURING OPERATING HOURS**	0400-11-01-.04(2)(b)5 ?	☒	☐	☐	☐
COMMENTS						
8070	**UNAPPROVED SALVAGING OF WASTE**	0400-11-01-.04(2)(b)6 ?	☒	☐	☐	☐
COMMENTS						
	LITTER CONTROL					
8110	**UNSATISFACTORY LITTER CONTROL**	0400-11-01-.04(2)(d) ?	☐	☒	☐	☐
COMMENTS	Flagging litter is being addressed on site, efforts need to be continued to completion.					
	OPERATING EQUIPMENT					
8140	**INADEQUATE OPERATING EQUIPMENT**	0400-11-01-.04(2)(g) ?	☒	☐	☐	☐
COMMENTS	Equipment was on site and operating on June 5, 2023. Violation has been removed.					
8150	**UNAVAILABILITY OF BACKUP EQUIPMENT**	0400-11-01-.04(2)(g) ?	☒	☐	☐	☐
COMMENTS	Equipment was on site and operating on June 5, 2023. Violation has been removed.					
**	**OVERALL PERFORMANCE STANDARD**					
8270	**EXPOSED SOLID WASTE**	0400-11-01-.04(2)(a)(3) ?	☒	☐	☐	☐
COMMENTS						
8320	**INADEQUATE MAINTENANCE OF LEACHATE MANAGEMENT SYSTEM (INSPECTOR TO CHECK AND RECORD LEACHATE LEVELS AT EVERY LANDFILL SUMP)**	0400-11-01-.04(2)(a)(3) ? 0400-11-01-.04(4)(a)7	☒	☐	☐	☐
COMMENTS	Sump: 16.7"					

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
**	**OVERALL PERFORMANCE STANDARD**					
8350	**LEACHATE OBSERVED AT THE SITE**	0400-11-01-.04(2)(a)(3) 0400-11-01-.04(4)(a)6, ?	☒	☐	☐	☐
COMMENTS						
8360	**LEACHATE ENTERING RUN-OFF**	0400-11-01-.04(2)(a)(3) 0400-11-01-.04(4)(a)6 ?	☒	☐	☐	☐
COMMENTS						
8370	**LEACHATE ENTERING A WATER COURSE**	0400-11-01-.04(2)(a)(3) 0400-11-01-.04(4)(a)6 ?	☒	☐	☐	☐
COMMENTS						
8420	**POTENTIAL FOR EXPLOSIONS OR UNCONTROLLED FIRES**	0400-11-01-.04(2)(a)2 0400-11-01-.04(5)(a) ?	☒	☐	☐	☐
COMMENTS						
8490	**EXCESSIVE POOLING OF WATER**	(CLOSURE/POST)0400-11-01-.04(2)(a)3 0400-11-01-.04(8)(c)4(iii) (ACTIVE) 0400-11-01-04(9)(b)1(ix) ?	☒	☐	☐	☐
COMMENTS						
8520	**DUMPING OF WASTE INTO WATER**	0400-11-01-.04 (2)(a)3 ?	☒	☐	☐	☐
COMMENTS						
**	**PERMANENT BENCHMARK**					
8280	**NO PERMANENT BENCHMARK**	0400-11-01-.04(2)(o) ?	☒	☐	☐	☐
COMMENTS						
	PERSONNEL SERVICES					
8120	**INADEQUATE EMPLOYEE FACILITIES**	0400-11-01-.04(2)(e) ?	☒	☐	☐	☐
COMMENTS						
**	**PROPER OPERATION AND MAINTENANCE**					
8540	**GROUNDWATER MONITORING SYSTEM IMPROPERLY MAINTAINED**	0400-11-01-.02(5)(a)4 ?	☒	☐	☐	☐
COMMENTS						

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
※	**RANDOM INSPECTION PROGRAM**					
8290	**INADEQUATE RANDOM INSPECTION PROGRAM**	0400-11-01-.04(2)(s) ?	☒	☐	☐	☐
COMMENTS						
※	**RECORDS OF ORIGIN AND AMOUNT OF SOLID WASTE**					
8610	**NO OPERATING SCALES AND/OR FAILURE TO MAINTAIN WASTE RECORDS**	TCA 68-211-862(a)(b)(1)(2) ?	☒	☐	☐	☐
COMMENTS						
	RUN-ON, RUN-OFF, AND EROSION CONTROL					
8170	**INADEQUATE MAINTENANCE OF RUN-ON/ RUN-OFF SYSTEM(S)**	0400-11-01-.04(2)(i)1-5 0400-11-01-.04(8)(c)4(i) ?	☒	☐	☐	☐
COMMENTS						
8180	**INADEQUATE EROSION CONTROL**	0400-11-01-.04(2)(i)6 0400-11-01-.04(8)(c)4(ii) ?	☐	☒	☐	☐
COMMENTS	Several locations showed visible erosion damage that needs to be addressed immediately. Tack on berms and other measures are recommended for western slope of landfill.					
※	**SPECIAL WASTE APPROVAL PROCESS**					
8300	**MISHANDLING OF SPECIAL WASTE**	0400-11-01-.01(4)(d)1 ?	☒	☐	☐	☐
COMMENTS						
※	**UNLAWFUL METHODS OF DISPOSAL**					
8570	**OPERATION DOES NOT CORRESPOND WITH ENGINEERING PLANS (EVALUATE AND RECORD THE APPROXIMATE INTERIOR AND EXTERIOR SLOPE OF THE LANDFILL)**	TCA68-211-104(3) TCA 68-211-105(b) ?	☒	☐	☐	☐
COMMENTS						
8580	**OPERATION DOES NOT CORRESPOND WITH PERMIT CONDITIONS**	TCA 68-211-104(3) 0400-11-01-.02(5)(a)(1) ?	☒	☐	☐	☐
COMMENTS						
※	**WASTE HANDLING AND COVER STANDARDS**					
8430	**WASTE NOT CONFINED TO A MANAGEABLE AREA**	0400-11-01-.04(6)(a)1 ?	☒	☐	☐	☐
COMMENTS						

*SEE DISCLAIMER ON LAST PAGE

	VIOLATION	REGULATION	OBSERVATION NVO	AOC	V1	V2
	WASTE HANDLING AND COVER STANDARDS					
8440	**IMPROPER SPREADING OF WASTE**	0400-11-01-.04(6)(a)2 ?	☒	☐	☐	☐
COMMENTS						
8450	**IMPROPER COMPACTING OF WASTE**	0400-11-01-.04(6)(a)2 ?	☒	☐	☐	☐
COMMENTS						
8460	**UNSATISFACTORY INITIAL COVER**	0400-11-01-.04(6)(a)3 0400-11-01-.04(6)(a)5 ?	☒	☐	☐	☐
COMMENTS						
8470	**UNSATISFACTORY INTERMEDIATE COVER**	0400-11-01-.04(6)(a)4 0400-11-01-.04(6)(a)5 ?	☐	☒	☐	☐
COMMENTS	Flagging litter is being addressed on site, efforts need to be continued to completion.					
8480	**UNSATISFACTORY FINAL COVER**	0400-11-01-.04(6)(a)6 0400-11-01-.04(8(c)3(i) ?	☒	☐	☐	☐
COMMENTS						
8510	**UNSATISFACTORY STABILIZATION OF COVER**	0400-11-01-.04(6)(a)5,6 ?	☒	☐	☐	☐
COMMENTS						
	WASTE RESTRICTIONS					
8210	**UNAUTHORIZED WASTE ACCEPTED**	0400-11-01-.04(2)(k)1 0400-11-01-.04(2)(k)6 ?	☒	☐	☐	☐
COMMENTS						
8220	**UNAPPROVED SPECIAL WASTE ACCEPTED**	0400-11-01-.01(4)(b) 0400-11-01-.01(4)(c)5 ?	☒	☐	☐	☐
COMMENTS						

*SEE DISCLAIMER ON LAST PAGE			
VIOLATION		REGULATION	OBSERVATION NVO AOC V1 V2
WASTE RESTRICTIONS			
8230	TIRES IMPROPERLY HANDLED	0400-11-01-.04(2)(k)3(i) ?	☐ ☒ ☐ ☐
COMMENTS	Tire pieces being used around site, need to be either managed as construction materials or interred.		
8240	MEDICAL WASTE IMPROPERLY HANDLED	0400-11-01-.04(2)(k)4(i-iv) ?	☒ ☐ ☐ ☐
COMMENTS			

LEACHATE LEVELS

**Disclaimer: The information contained in these documents (checklists/notes, etc.) is not intended to be all inclusive and is subject to change. These documents are intended solely for use by DSWM staff. These documents are not a substitute for evaluation of compliance in accordance with applicable laws and regulations. These documents are not intended for, nor can they be relied upon, to create any rights, substantive or procedural, enforceable or useable by any party in litigation with the State of Tennessee or its employees.*

SAVE FORM

Follow-Up Inspection Date

Inspector Name Lewis L Haynes IV Digitally signed by Lewis L Haynes IV Date: 2023.07.26 11:45:33 -04'00'

ADDITIONAL COMMENTS

Unsatisfactory records or reports

BACK TO TOP

Citation Reference: 0400-11-01-.02(5)(a)7 CITATION

Citation Reference: TCA 68-211-862(a) CITATION

Citation Reference: 0400-11-01-.04(7)(a)4(vii) CITATION

Citation Reference: 0400-11-01-.04(2)(k)3(i)(II)VI CITATION

Citation Reference: 0400-11-01-.04(2)(s) CITATION

Citation Reference: 0400-11-01-.01(4)(d)2 CITATION

Citation Reference: 0400-11-01-.02(3)(a)4 CITATION

Citation Reference: 0400-11-01-.02(5)(a)9 CITATION

Citation Reference: 0400-11-01-.08(3) CITATION

Loudon County Department of Accounts and Budgets
Solid Waste Disposal Fund 207
Monthly Cash Report
July 2023

June 2023 Combined Ending Cash Balance per Monthly Report		5,245,204.60	
Adjustments:			
Trustee's Commission (June 2023)	(283.08)		
	0.00		
Total Adjustments		(283.08)	
Adjusted June 2023 Combined Ending Balance per Loudon Co Trustee			**5,244,921.52**

Solid Waste Disposal Commission Operating Fund

Operating Fund Ending Balance June 2023		**5,217,030.21**	
Cash Receipts:			
Surcharge - Security Fees *(June 2023 In-Transit)*	22,554.49		
Surcharge - Host Fees *(June 2023 In-Transit)*	24,809.93		
Investment Income *(May 2023 In-Transit)*	(12.97)		
Investment Income *(June 2023 In-Transit)*	2,405.03		
Total Monthly Revenue		49,756.48	
Cash Disbursements:			
Board & Committee Members Fees *(June Payable)*	(725.00)		
Board & Committee Members Fees	(675.00)		
Social Security *(June Payable)*	(4.65)		
Employer Medicare *(June Payable)*	(2.16)		
Audit Services (Mitchell Emert & Hill)			
Engineering Services			
Legal Services *(E. Murphy - June Payable)*	(12,960.00)		
Contracted Services			
Building & Content Insurance			
Trustee's Commission (Corr May23 Rept)	37.04		
Total Cash Disbursements		(14,329.77)	
Expenditure Credit:			
Trustee Commission Adjustment		1.37	
Operating Fund Ending Balance July 2023			**5,252,458.29**

Poplar Springs Subfund

Poplar Springs Subfund Balance June 2023		**27,891.31**	
Cash Receipts:			
Investment Income *(May 2023)*	12.97		
Investment Income *(June 2022 In-Transit)*			
Total Monthly Revenue		12.97	
Cash Disbursements:			
Engineering Services	0.00		
Trustee's Commission (May 2023)	(1.37)		
Trustee's Commission (Corr May23 Rept)	(37.04)		
Total Cash Disbursements		(38.41)	
Poplar Springs Subfund Balance July 2023			**27,865.87**
TOTAL COMBINED OPERATING AND POPLAR SPRINGS JULY 2023 BALANCE			**5,280,324.16**

Combined Summary - July 2023	
Beginning Balance	**5,244,921.52**
Plus Operating Revenue	**49,769.45**
Less Operating and Poplar Springs Disbursements	**(14,366.81)**
TOTAL COMBINED BALANCE - JULY 2023	**5,280,324.16**

NOTE: Accounting Dept did not have Trustee's Jul report at the time of preparation.

Sustainability in Action

August 10, 2023

Mr. David Hollinshead
Commission Liaison, Matlock Bend Landfill
Delivered Electronically to: dhollinshead@republicservices.com

Re: Matlock Bend Landfill – Status of the Corrective Action Plan (CAP) Submitted to the Tennessee Department of Environment and Conservation (TDEC) on March 15, 2023
Loudon County, Tennessee

Dear Mr. Hollinshead:

Santek Environmental, LLC (Santek) has prepared this letter to provide an update to the CAP action items submitted to TDEC on March 15, 2023. The CAP identified action items and a schedule for reducing sediment track-out onto Highway 72, establish the appropriate stream buffer, and install and maintain effective erosion prevention and sediment control measures on-site to minimize the potential for sediment discharge to the unnamed tributary of Watts Bar Reservoir. Below details the corrective actions taken and completed for the items during the month of July per the CAP. Action items per the CAP completed during the months of March, April, May, and June were communicated in a separate memo delivered on July 12, 2023, which is also attached. As of July, all outstanding items from CAP have been completed by the Facility per the schedule.

July:
Pond #2 Sediment Removal

- Santek contracted Promus Engineering, LLC (Promus) to complete an engineering evaluation of Sediment Pond #2 which was provided to Santek on March 31, 2023, in accordance with the CAP schedule. The evaluation is attached below. The purpose of the evaluation was to determine what repairs/improvements could be implemented. Recommended structural modifications were completed by June 18, 2023, in advance of the June 30, 2023, timeline from the CAP.
- The pond is adequately constructed to safely route larger storm events through the existing riser and emergency spillway. Per the CAP, the Facility needed to remove sediment from the pond by July 31, 2023. The Facility performed this work in-house during the month of July. The pond was slightly dewatered using a 6-inch pump and an excavator and dump truck were utilized to remove accumulated sediment from the outside edges and basin of the pond. The removed sediment was taken to the active waste working face for disposal or utilized for daily/intermediate cover. This work has been completed by July 31, 2023, matching the timeline from the CAP.

Sincerely,

Ben Haney

Ben Haney, E.I.T.
Environmental Manager
Matlock Bend Landfill

cc: Mike Classen, P.E. – General Manager – Matlock Bend Landfill
Teresa Fox – Operations Manager – Matlock Bend Landfill

Enclosure – Attachment

Sustainability in Action

July 12, 2023

Mr. David Hollinshead
Commission Liaison, Matlock Bend Landfill
Delivered Electronically to: dhollinshead@republicservices.com

Re: Matlock Bend Landfill – Status of the Corrective Action Plan (CAP) Submitted to the Tennessee Department of Environment and Conservation (TDEC) on March 15, 2023
Loudon County, Tennessee

Dear Mr. Hollinshead:

Santek Environmental, LLC (Santek) has prepared this letter to provide an update to the CAP action items submitted to TDEC on March 15, 2023. The CAP identified action items and a schedule for reducing sediment track-out onto Highway 72, establish the appropriate stream buffer, and install and maintain effective erosion prevention and sediment control measures on-site to minimize the potential for sediment discharge to the unnamed tributary of Watts Bar Reservoir. Below details the corrective actions taken and completed for the items during the months of June, ongoing into July per the CAP. Action items per the CAP completed during the months of March, April, and May were communicated in a separate memo delivered on June 15, 2023, which is also attached.

June:
Sediment Pond Improvements

- Santek contracted Hunt Environmental Specialists (Hunt) to perform services in relation to the improvements for Sediment Pond #2 as detailed in the CAP. Work related to this began on Tuesday, 6/14, and was completed by Saturday, 6/18, which is in advance of the June 30, 2023, timeline detailed in the CAP. Services included the following below:
    - Cutting a path down to the pond on the culvert side.
    - Locate and remove sediment from the compromised culvert section.
    - Remove enough sediment and debris to install a sheet metal repair.
    - Use the sediment around the culvert to make a berm to pour the concrete into to incase the culvert and the riser.
    - Once the culvert and riser are repaired, cut and weld a nipple to the existing riser.
    - Build per the design specifications, a floating skimmer.
    - Attach the floating skimmer to the riser pipe using the nipple and flex hose.
    - Install a galvanized pipe surrounded by rip rap to guide the skimmer.
    - Cut and clear a path on the going away side of the culvert for inspection.

July:

Pond #2 Sediment Removal

- Santek contracted Promus Engineering, LLC (Promus) to complete an engineering evaluation of Sediment Pond #2 which was provided to Santek on March 31, 2023, in accordance with the CAP schedule. The evaluation is attached below. The purpose of the evaluation was to determine what repairs/improvements could be implemented. Recommended structural modifications were completed by June 18, 2023, in advance of the June 30, 2023, timeline from the CAP.
- From analysis, the pond appears to be adequately constructed to safely route larger storm events through the existing riser and emergency spillway. Per the CAP, the Facility needs to remove sediment from the pond by July 31, 2023. The Facility is planning to perform this work in-house during the month of July. The pond will be dewatered using a 6-inch pump and an excavator and dump truck will be utilized to remove approximately 2-4 feet of accumulated sediment from the outside edges and basin of the pond. The removed sediment will either be taken to the active waste working face for disposal or utilized for daily/intermediate cover. This work is expected to be completed by July 28, 2023, in advance of the July 31, 2023, timeline from the CAP.

Sincerely,

Ben Haney

Ben Haney, E.I.T.
Environmental Manager
Matlock Bend Landfill

cc: Mike Classen, P.E. – General Manager – Matlock Bend Landfill
Teresa Fox – Operations Manager – Matlock Bend Landfill

Enclosure – Attachment

Sustainability in Action

June 15, 2023

Mr. David Hollinshead
Commission Liaison, Matlock Bend Landfill
Delivered Electronically to: dhollinshead@republicservices.com

Re: Matlock Bend Landfill – Status of the Corrective Action Plan (CAP) Submitted to the Tennessee Department of Environment and Conservation (TDEC) on March 15, 2023
Loudon County, Tennessee

Dear Mr. Hollinshead:

Santek Environmental, LLC (Santek) has prepared this letter to provide an update to the CAP action items submitted to TDEC on March 15, 2023. The CAP identified action items and a schedule for reducing sediment track-out onto Highway 72, establish the appropriate stream buffer, and install and maintain effective erosion prevention and sediment control measures on-site to minimize the potential for sediment discharge to the unnamed tributary of Watts Bar Reservoir. Below details the corrective actions taken and completed for the items during the months of May, ongoing in June, and into July per the CAP. Action items per the CAP completed during the months of March, April, and May were communicated in a separate memo delivered on May 18, 2023, which is also attached.

May:

Install Sediment Controls on the East Slope

- A stormwater diversion berm and two 24-inch down drainpipes have been installed on the Eastern slope of the Facility as of May 4, 2023. Seeding and temporary stabilization of the slope have been implemented per our stormwater management plan as of May 31, 2023. The timeline for completion of these items per the CAP is June 30, 2023, so the Facility has done so well in advance.

June:

Sediment Pond Improvements

- Santek has contracted Hunt Environmental Specialists (Hunt) to perform services in relation to the improvements for Sediment Pond #2 as detailed in the CAP. Work related to this began on Tuesday, 6/14, and is expected to be completed by Saturday, 6/18, which is in advance of the June 30, 2023, timeline detailed in the CAP. Hunt is providing updates and communicating daily to make sure that the work is completed expeditiously. Services include the following below:
    - Cutting a path down to the pond on the culvert side.
    - Setting up a pump to lower the water level.
    - Locate and remove sediment from the compromised culvert section.
    - Remove enough sediment and debris to install a sheet metal repair.
    - Construct a concrete chute to get the mix down to the pond.

- Use the sediment around the culvert to make a berm to pour the concrete into to incase the culvert and the riser.
- Once the culvert and riser are repaired, cut and weld a nipple to the existing riser.
- Build per the design specifications, a floating skimmer.
- Attach the floating skimmer to the riser pipe using the nipple and flex hose.
- Install a galvanized pipe surrounded by rip rap to guide the skimmer.
- Cut and clear a path on the going away side of the culvert for inspection.

July:

Pond #2 Sediment Removal

- Santek contracted Promus Engineering, LLC (Promus) to complete an engineering evaluation of Sediment Pond #2 which was provided to Santek on March 31, 2023, in accordance with the CAP schedule. The evaluation is attached below. The purpose of the evaluation was to determine what repairs/improvements could be implemented. Recommended structural modifications are being implemented as mentioned above and are anticipated to completed by June 18, 2023, in advance of the June 30, 2023, timeline from the CAP.
- From analysis, the pond appears to be adequately constructed to safely route larger storm events through the existing riser and emergency spillway. Per the CAP, the Facility needs to remove sediment from the pond by July 31, 2023. The Facility is working with Promus to determine the extents of sediment removal needed and is working with third-party companies to develop quotes/scope of work to complete this work. The Facility expects to have these decisions finalized and contractor selected to implement this work by the end of the week of June 26th.

Sincerely,

Ben Haney

Ben Haney, E.I.T.
Environmental Manager
Matlock Bend Landfill

cc: Mike Classen, P.E. – General Manager – Matlock Bend Landfill
Teresa Fox – Operations Manager – Matlock Bend Landfill

Enclosure – Attachment

Sustainability in Action

May 18, 2023

Mr. David Hollinshead
Commission Liaison, Matlock Bend Landfill
Delivered Electronically to: dhollinshead@republicservices.com

Re: Matlock Bend Landfill – Status of the Corrective Action Plan (CAP) Submitted to the Tennessee Department of Environment and Conservation (TDEC) on March 15, 2023
Loudon County, Tennessee

Dear Mr. Hollinshead:

Santek Environmental, LLC (Santek) has prepared this letter to provide an update to the CAP action items submitted to TDEC on March 15, 2023. The CAP identified action items and a schedule for reducing sediment track-out onto Highway 72, establish the appropriate stream buffer, and install and maintain effective erosion prevention and sediment control measures on-site to minimize the potential for sediment discharge to the unnamed tributary of Watts Bar Reservoir. Below details the corrective actions taken and completed for the items during the months of March, April, and ongoing in May per the CAP.

March:

Install Rock Checks Downgradient of the Tire Wash

- Santek installed the rock checks downgradient of the tire wash prior to March 31st in accordance with the CAP schedule. The rock checks are inspected after each rain event to confirm proper functionality.

Sediment Pond Engineering Evaluation

- Santek contracted Promus Engineering, LLC to complete an engineering evaluation of Sediment Pond #2 which was provided to Santek on March 31, 2023, in accordance with the CAP schedule. The evaluation is attached below. The purpose of the evaluation was to determine what repairs/improvements could be implemented. Below is a summary of the evaluation and recommended modifications which are scheduled to be completed by June 30, 2023.
    - Plug the opening in the bottom of the riser to enable the pond to retain a greater volume of stormwater.
    - Install a floating skimmer to provide extended detention to increase hydraulic residence time.
    - Install a sediment gauge in the pond that will mark the sediment.
    - Continue regular pond maintenance to include, but not be limited to, mowing the slopes, removing trees and brush from the inside slopes and outer berm, regularly removing sediment from the pond, and removing blockages in the skimmer.

From analysis, the pond appears to be adequately constructed to safely route larger storm events through the existing riser and emergency spillway.

April:

Construct New Access Road to Active Area

- A new landfill access road has been constructed as of April 30, 2023, following the placement of the initial lift of waste across the active cell in accordance with the CAP schedule. The access road was installed in accordance with the operational waste fill plan for the Facility.
    - In addition, stone is regularly refreshed along the roads leading to and from the active filling areas to help prevent mud/sediment tracking prior to the tire wash and traffic controls are actively enforced to restrict vehicle to stabilized areas.

Evaluation of Tire Wash by Manufacturer

- Santek reached out to the tire wash manufacturer, Moby Dick, to perform an evaluation of the functionality and sediment removal issues of the tire wash. Moby Dick conducted a site visit and provided their evaluation on April 28, 2023, in accordance with the CAP schedule.
    - From calculations based on the trucks received per day, Moby Dick evaluated that there is adequate water capacity for the tire wash but that it needs to be regularly cleaned and maintained. Moby Dick provided a maintenance agreement to Santek on May 1, 2023, and the tire wash has since been cleaned out with a vacuum truck and floc system maintenance on May 5, 2023. Santek will continue cleaning and maintaining the tire wash monthly and will likely utilize Moby Dick for the services following processing of the maintenance agreement.

Stabilize Disturbed Area near the Tire Wash

- The stabilization of the disturbed areas around the tire wash was completed before May 1, 2023, in accordance with the CAP schedule. Santek placed seed and strawing in the affected areas to help minimize erosion and sedimentation in the area.

Remove Sediment and Install Sediment Controls Downgrade of the Scale House

- Accumulated sediment had been removed and straw wattles were installed downgrade of the scale house as of April 10, 2023, in accordance with the CAP schedule. The straw wattles help trap sediment and minimize migration to the outfall point, SO-2.
    - In addition, regular sweeping either by hand or with the pavement sweeper occurs daily in this area to help minimize sediment accumulation.

May:

Install Sediment Controls on the East Slope

- A stormwater diversion berm and two 24-inch down drainpipes have been installed on the Eastern slope of the Facility as of May 4, 2023. Seeding and temporary stabilization of the slope is currently underway per our stormwater management plan. The timeline for completion of these items is the end of May 2023 which should meet the CAP timeline of June 30, 2023, required well in advance.

Sincerely,

Ben Haney

Ben Haney, E.I.T.
Environmental Manager
Matlock Bend Landfill

cc: Mike Classen, P.E. – General Manager – Matlock Bend Landfill
Teresa Fox – Operations Manager – Matlock Bend Landfill

Enclosure – Attachment

PROMUS ENGINEERING
1200 Mountain Creek Road, Suite 102
Chattanooga, Tennessee 37405
T. (888) 811-9066
www.promusengineering.com

March 31, 2023

Mr. Ben Haney
Environmental Manager - Matlock Bend Landfill
21712 TN-72
Loudon, TN 37774
Email: bhaney@republicservices.com
Phone: (423) 994-3133

Subject: Sediment Pond #2 Evaluation
Matlock Bend Landfill
NPDES Permit Tracking No. TNR051889

Dear Mr. Haney:

In response to the Notice of Violation (NOV) dated February 16, 2023, and in accordance with the corresponding Corrective Action Plan (CAP) prepared by Promus Engineering, LLC (Promus) dated March 15, 2023, we have conducted an evaluation of existing Sediment Pond #2 at the above-refenced facility. The purpose of the evaluation was to determine what repairs/ improvements can be implemented to improve sediment removal efficiency.

EXISTING POND CONDITIONS

At the time of our March 3, 2023 site visit, which was subsequent to approximately 2 inches of precipitation over the previous 36 hours, the water elevation in the pond appeared to be relatively low. The bottom portion of the riser was submerged at the time of the site visit. As noted in the CAP, Sediment Pond #2 does not appear to be detaining influent stormwater for a time period that is adequate to promote settlement of the suspended solids. Design guidelines for sediment removal require that ponds slowly release a specific volume of water to allow time for suspended solids to settle to the bottom of the pond. Following is a summary of the observations of the as-built pond condition:

- The bottom of the pond was submerged at the time of the site visit, but it appears there is an orifice near the bottom of the riser that is causing short-circuiting in the pond.
- The pond appears to have been constructed to provide an adequate storage capacity to provide extended detention time for smaller, more frequent storm events. The current riser configuration does not appear to allow the pond to make use of this volume. To the extent possible, the proposed modifications in the following summary

items will maximize the storage capacity used and will provide extended detention time. These modifications should result in improved sediment removal efficiency.

RECOMMENDED MODIFICATIONS

We conducted an evaluation of the pond using Hydraflow Hydrographs, which is a software that uses various industry-standard and government agency design methodologies to analyze surface water hydrology, stormwater conveyance features, and sediment/detention ponds. The purpose of the evaluation was to determine what repairs/improvements can be implemented. Following is a summary of our evaluation and recommended modifications:

- We recommend plugging the opening in the bottom of the riser to enable the pond to retain a greater volume of stormwater.
- We recommend installing a floating skimmer to provide extended detention to increase hydraulic residence time.
- We recommend installing a sediment gauge in the pond that will mark the sediment depth at which pond cleaning should occur.
- We recommend continued regular pond maintenance to include, but not be limited to, mowing the slopes, removing trees and brush from the inside slopes and outer berm, regularly removing sediment from the pond, and removing blockages in the skimmer and riser as necessary.

Based on our preliminary analysis, the pond appears to be adequately constructed to safely route larger storm events through the existing riser and emergency spillway, therefore we will likely not recommend modifications to the spillway. We have included drawings of the proposed outfall structure modifications as Figures 1 & 2.

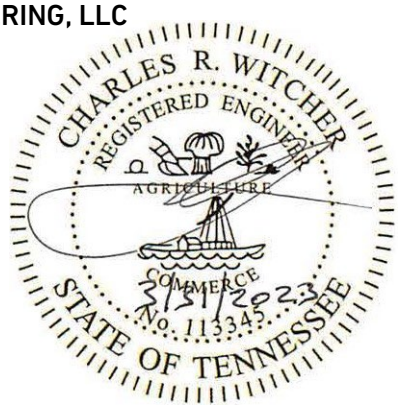
LIMITATIONS

This evaluation is based only on the aerial topography from December 15, 2022 and visual observation of the outfall structure. Republic should notify Promus prior to beginning work on the pond modifications so that we can verify existing pond conditions and modify our design if necessary. We recommend contracting with a surveyor to prepare a survey of the current pond conditions. The survey should include, at a minimum, existing pond grades, outfall structure detail with pertinent elevations and inverts, and emergency spillway geometry.

Should you require additional information or have any questions or comments, please contact me via email at RWitcher@PromusEngineering.com or by phone at (423) 580-6763.

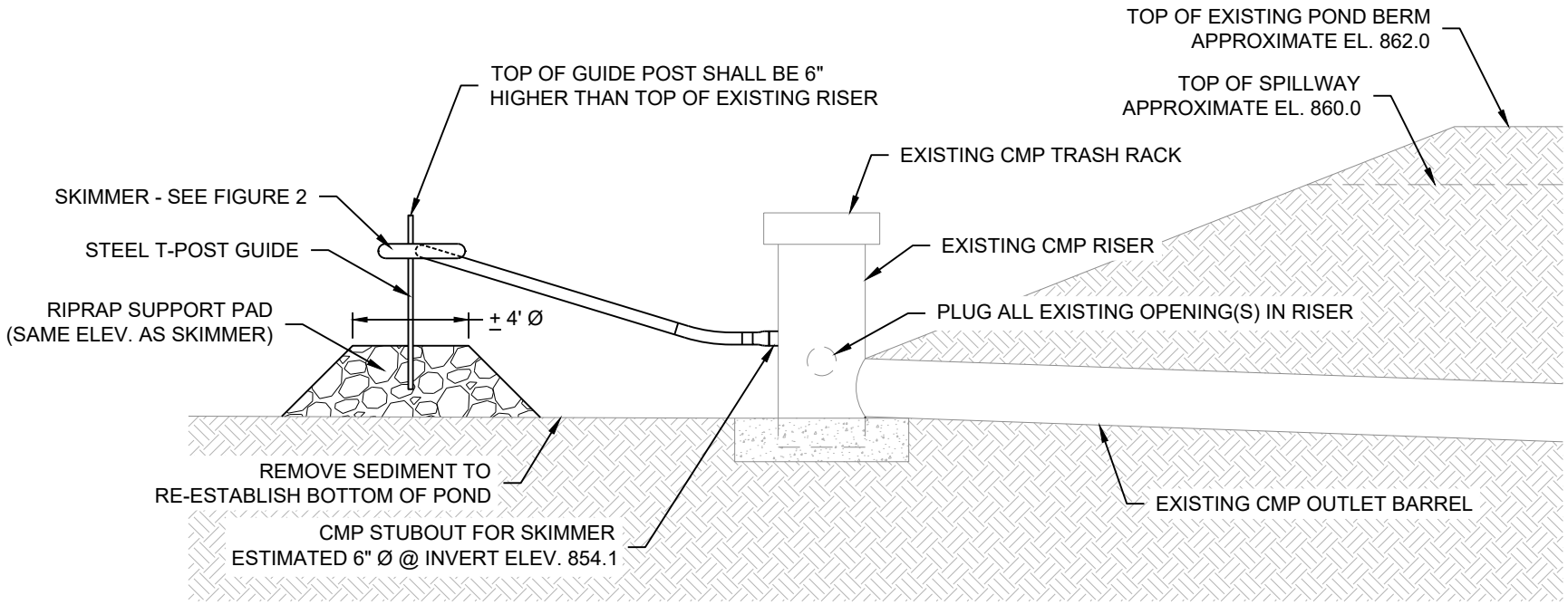
Sincerely,

PROMUS ENGINEERING, LLC



C. Rob Witcher, PE
Principal Engineer

Encl.: Figure 1 – Pond #2 Riser Retrofit
Figure 2 – Pond #2 Skimmer



REV	DATE	DRA. BY	APPR. BY	DESCRIPTION
0	03/31/23	CRW	CRW	DRAFT

PREPARED FOR:

REPUBLIC SERVICES

MATLOCK BEND LANDFILL
21712 TN-72
LOUDON, TENNESSEE 37774

PREPARED BY:

PROMUS ENGINEERING

www.promusengineering.com

POND #2 RISER RETROFIT

SEDIMENT POND #2 EVALUATION
MATLOCK BEND LANDFILL

PROJECT NO.:
230035

1

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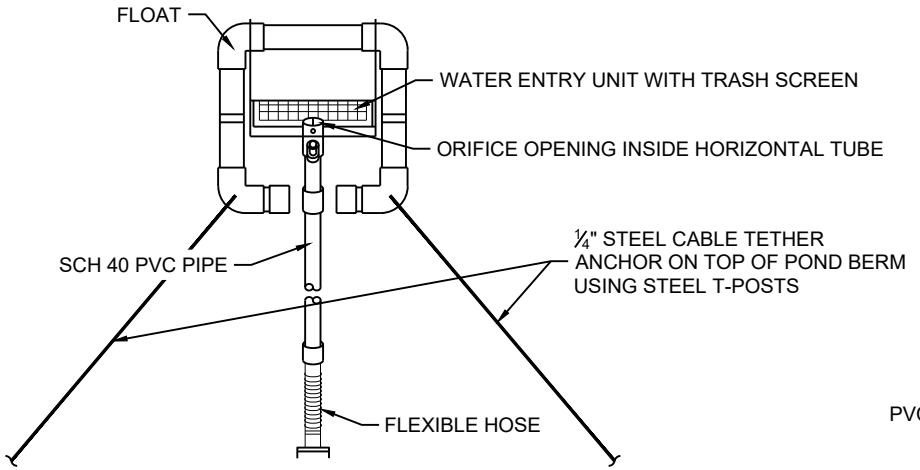
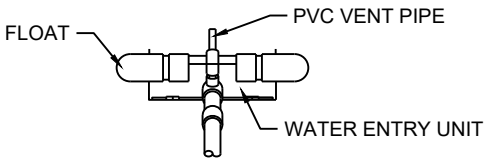
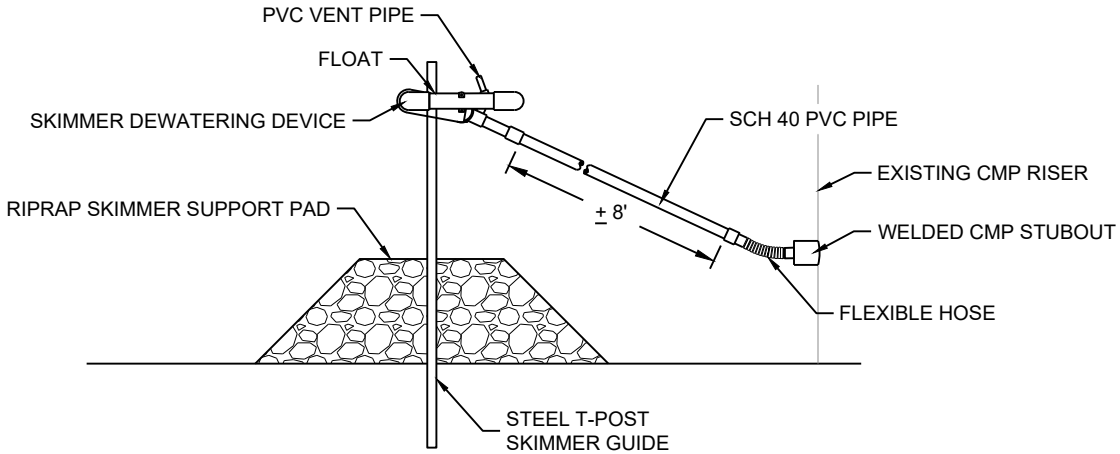


TOP VIEW



END VIEW



REV	DATE	DRA. BY	APPR. BY	DESCRIPTION
0	03/31/23	CRW	CRW	DRAFT

PREPARED FOR:

REPUBLIC SERVICES

MATLOCK BEND LANDFILL
21712 TN-72
LOUDON, TENNESSEE 37774

PREPARED BY:

PROMUS ENGINEERING

www.promusengineering.com

POND #2 SKIMMER

SEDIMENT POND #2 EVALUATION
MATLOCK BEND LANDFILL

PROJECT NO.:
230035

2

Last Saved By:RCBW1 Date: 3/27/2023 4:01 PM File Path: C:\USERS\RCBW1\DROPBOX (PROMUS ENGINEERING)\PROJECTS-ACTIVE\230035-RSMB-OPSENGNO\4-RESPONSE\POND-EVALUATION\DRAWINGS\MAIN.DWG