December 16, 2022

Mr. Jeff Tibbs
Tennessee Department of Environment and Conservation
Division of Solid Waste Management
Nashville Environmental Field Office
711 R.S. Gass Blvd
Nashville, TN 37216

Dear Mr. Tibbs:

Subject: 2nd 2022 Semiannual Groundwater Monitoring Report
Middle Point Landfill, Murfreesboro, Tennessee
Permit# SNL 75-0219
CEC Project 160-238

Civil & Environmental Consultants, Inc. (CEC) has prepared this report for the Second Semiannual Sampling Event of 2022 for the Middle Point Landfill in accordance with the site's Groundwater Monitoring Plan dated March 2006. CEC performed the Detection Monitoring of Appendix I constituents on October 18, 2022. Pace Analytical performed the analysis and reported the results on November 7, 2022.

The groundwater-monitoring network for the site consists of locations identified in the following table:

Upgradient Monitoring Points	Downgradient Monitoring Points
MW-5, MW-6, MW-9B, MW-10, Buford Spring	MW-1, MW-3, MW-4B, MW-7, MW-11, MW-12, Bubba Spring

Note: Underlined text indicates locations that are not currently required to be sampled for analysis during routine monitoring events as reflected in the revised March 2006 Groundwater Monitoring Plan.

The current monitoring program is considered adequate to monitor groundwater quality at the facility based on a review of well locations, flow direction, and availability of groundwater for sampling purposes. Samples were collected from monitoring wells MW-4B, MW-5, MW-7, MW-11, MW-12, and the Buford Spring. The Bubba Spring location was flooded/inundated by the Stones River at the time of the sampling event and was not sampled. A leachate sample was also collected for analysis from incoming piping from the lift station. The collected samples were analyzed for the Appendix I list of parameters, alkalinity, bromide, chloride, fluoride, sulfate, and ammonia as nitrogen. The leachate sample is collected as part of the routine groundwater-monitoring program.

In addition to the points sampled under the groundwater monitoring program, quarterly sampling of the Rutherford Run-on and Rutherford Run-off sample locations began in July of 2009, as outlined in the operations manual. A study of the site during the hydrogeological investigation indicated a preferential pathway where surface water drained across the site. Rock blasting was performed at the site during cell construction to enhance the natural drainage flow path and a defined channel was developed crossing under landfill cells 10, 11 and 13. The channel was backfilled with graded gravel-size rock up to boulder-size rock, with a filter fabric placed over the top to prevent soil fines from entering the trench as part of landfill construction before the overlay liner systems were constructed. The flow path moves underneath the landfill liners and geologic buffer and provides a location for monitoring liquids that flow through the channel. The Rutherford Run-on sample has historically been collected upgradient of the landfill and the Rutherford Run-off sample has been historically collected downgradient of the landfill. A new permitted road was constructed in the area of the Rutherford Run-on in 2016. After construction activities were completed, the Rutherford Run-on sample location became buried and can no longer be sampled. The Run-off discharge point has frequently been under water during routine quarterly sampling efforts, which allows no access for discrete sampling of the liquids exiting the pipe prior to comingling with other surface water drainage. Therefore, in the spring of 2021, an accessible sampling port was installed in the discharge pipe at a location directly above the surface water drainage pathway to allow for collection of a discrete sample from the Run-off location. The Rutherford Run-off location shown in Figure 1 was sampled during the current event and sampled for the same parameter list as described in the previous paragraph for the groundwater samples. The data are provided for informational purposes.

The first consolidate geologic unit encountered beneath the Middle Point Landfill property is the Ordovician age Ridley Limestone. Information gathered from rock core samples obtained during previous hydrogeologic studies at the property indicates that the bedrock formations dip to the north and northwest at one to four degrees. Three core holes advanced during the 1990 hydrogeologic investigation (PZ-1, PZ-2, and XW-1) penetrated the lower Ridley Limestone, the full thickness of the Pierce Limestone, and were terminated in the Murfreesboro Limestone. These data were supplemented by a fourth core hole (CH-14/PZ-14) advanced in 1999 at the northern limits of the 2006 landfill extension area. This core serves as a reference type section core for the Pierce Limestone and overlying and underlying adjacent limestone formations.

The thickness of the Ridley Formation has been estimated to range from 131 to 153 feet from the study described in the U.S. Geological Survey *Report of Investigations 47*, published in 1999. The Pierce Limestone was encountered in PZ-14 at approximately 500 feet mean sea level at the north margin of the proposed expansion area. The top of the Pierce Limestone was encountered at an elevation of approximately 501 feet (MSL) in the western part of the proposed expansion (in core hole PZ-2, drilled in 1990). The Pierce Limestone was encountered with an up dip at the south margins of the expansion area at an elevation of approximately 527 feet (MSL). Core logs indicate that the Pierce Limestone approximates 30 feet in thickness and the upper contact exhibits approximately 27 feet of relief across the expansion area at a depth between 20 and 35 feet below the ground surface. The thickness of the

Pierce Limestone may actually vary between 29 and 32 feet locally, with most of the noted variance dependent on massive beds that can exist at the top and bottom of the Pierce Limestone.

Appendix A provides a potentiometric surface map utilizing groundwater level data collected during the current event. Groundwater elevation data was also collected from MW-1, MW-3, MW-6, MW-9B and MW-10 for inclusion in the potentiometric interpretation. A field data summary for the event is included as Table 1 in Appendix A. Groundwater flow at the landfill appears to mimic the surface topography, with groundwater flowing in a radial pattern away from topographic highs to topographic lows. This is consistent with historical events. Groundwater flow near the Class I Landfill appears to flow from a topographic high southeast to the west-northwest where monitoring wells MW-1, MW-3, MW-4B, MW-7, MW-11, and MW-12 are situated in proper downgradient positions between the landfill and the river. The average groundwater flow velocity for Middle Point was estimated to be 0.00135 ft./day and is consistent with historical data.

Groundwater velocity for the site was determined using the following equation:

$$V=[(k)(i)]/(n)$$

Where: "V" is the average linear velocity,
"k" is the estimated hydraulic conductivity (1.0×10^{-2} ft./day),
"i"is the average gradient at site using the October 2022 potentiometric surface map (0.027 ft./ft.),
"n" is Effective Porosity (assumed to be 0.20).

Note: Estimated hydraulic conductivity and effective porosity values referenced from *Basic ground-water hydrology: U.S. Geological Survey Water-Supply Paper 2220, Heath, Ralph C., (1983).*

Statistical analysis was performed on the October 2022 Appendix I data using the Sanitas™ Statistical Analysis Software. Interwell non-parametric prediction limit analysis (NPPL) was used to identify statistically significant increases (SSIs) over background concentrations for the detected Appendix I parameters. All historical data from upgradient monitoring points MW-5 and the Buford Spring were used to calculate background limits for the current reporting period. The results of the current analysis are summarized as follows:

- The Appendix I inorganic parameters detected during the event were limited to barium and fluoride. The results of the analysis are generally consistent with previous events and are summarized in Table 2 of Appendix B. No SSIs were calculated for the Appendix I inorganic parameters detected during the event and none of the detected parameters exceeded their respective MCL/GWPS.

- No VOCs were detected at any monitoring well or spring sampled during the event.

- The Rutherford Run-off location was sampled during the current event. Low-level barium and fluoride were the only Appendix I parameters detected during the event. The detected parameters and reported concentrations are generally consistent with historical data and are well below their respective GWPSs.

The analytical data summary, interwell non-parametric prediction limit analysis and inorganic time series graphs for the event are included as Appendix B. The laboratory analytical data reports and associated field information logs are included as Appendix C.

Should you have any questions or concerns, please do not hesitate to contact us at our office at (615) 333-7797 or Michael Johnson at (615) 577-9328.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Michael Johnson
Project Manager

Kevin Wolfe
Vice President

Appendices:
A Potentiometric Surface Map & Field Data Summary
B Analytical Data Summary, Statistical Evaluations & Time Series Plots
C Laboratory Reports & Field Information Logs

cc: William McWhorter, Env. Manager, BFI Waste Systems of Tennessee, LLC (Hard Copy)
Joe Montello, Senior Manager, Hydrogeology, Republic Services (Electronic)

Civil & Environmental Consultants, Inc.

2nd Semiannual 2022 Groundwater Monitoring Report
Middle Point Landfill
Murfreesboro, TN
Permit No. SNL 75-0219

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.

December 16, 2022
Date

APPENDIX A
POTENTIOMETRIC SURFACE MAP & FIELD DATA SUMMARY

Table 1
Field Data Summary
BFI Waste Systems of TN, LLC Middle Point Landfill SNL 75-0219
2nd Semiannual 2022 Groundwater Event (October 2022)

Well	Gradient Status	Top of Casing Elevation (fmsl)[1]	Depth to Water (ft)[2]	Groundwater Elevation (fmsl)	Temperature (°C)	pH (std units)	Specific Conductivity (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (ntu)
MW-1	downgradient	551.02	38.43	512.59	N/A	N/A	N/A	N/A	N/A	N/A
MW-3	downgradient	533.62	22.02	511.60	12.6	7.09	625.1	5.04	225.6	6
MW-4B	downgradient	536.63	17.30	519.33	19.4	7.23	609.0	0.28	-126.4	2.33
MW-5	upgradient	723.90	119.80	604.10	11.3	7.58	414.3	1.30	-56.8	0.80
MW-6	upgradient	724.03	73.70	650.33	N/A	N/A	N/A	N/A	N/A	N/A
MW-7	downgradient	560.26	48.00	512.26	16.2	6.29	603.0	1.70	193.5	0.18
MW-9B	upgradient	654.20	65.31	588.89	N/A	N/A	N/A	N/A	N/A	N/A
MW-10	upgradient	645.97	93.10	552.87	N/A	N/A	N/A	N/A	N/A	N/A
MW-11	downgradient	535.77	21.60	514.17	16.2	7.33	574.0	0.47	-126.9	1.55
MW-12	downgradient	530.66	18.50	512.16	18.7	7.13	904.0	1.88	98.8	6.93
BUBBA SPRING	downgradient	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BUFORD SPRING	upgradient	N/A	N/A	N/A	16.4	6.91	561.1	1.28	199.0	8.33
LEACHATE	downgradient	N/A	N/A	N/A	19.6	7.74	30,372	0.19	-345.5	>800
RUTHERFORD RUN OFF	downgradient	N/A	N/A	N/A	19.4	6.73	885	0.82	-110.9	8.45

Note 1: Top of PVC Casing Elevations from Groundwater Monitoring Report by Civil & Environmental Consultants, Inc., June 2012.
Note 2: Depth to Water elevations collected by Civil & Environmental Consultants, Inc. on October 18, 2022.
N/A = Not Analyzed
fmsl = feet mean sea level
ft bgs = feet below ground surface
ft = feet
std units = standard units
µS/cm = microsiemens per centimeter
ntu = nephelometric turbidity units
°C = degrees Celsius

NORTH

NOTE:

Hydraulic gradient calculation between groundwater elevations MW-5 & MW-3:

$$i = \frac{MW\text{-}5\ (ft) - MW\text{-}3\ (ft)}{Distance\ (ft)} \quad \frac{604.10 - 511.60}{3{,}450} = 0.027\ ft/ft$$

LEGEND:

- SPRING OR SURFACE WATER
- PZ-13 — ABANDONED PIEZOMETER
- MW-7 — GROUNDWATER MONITORING WELL
- 517.05 — GROUNDWATER ELEVATION (fmsl)
- 580 — POTENTIOMETRIC SURFACE CONTOUR (fmsl)
- GROUNDWATER FLOW DIRECTION
- ROCK DRAINAGE CHANNEL
- AREA PERMITTED FOR DISPOSAL
- SECTION BOUNDARIES
- 700 — EXISTING CONTOURS

BUBBA SPRING
BUFORD SPRING
RUTHERFORD RUN OFF
100 YEAR FLOODPLAIN
MAINTENANCE FACILITY
PROPERTY BOUNDARY LINE
REMAINING SECTION 9B
MW-4B 519.33
MW-3 511.60
MW-12 512.16
MW-7 512.26
MW-11 514.17
MW-1 512.59
MW-10 552.87
MW-6 650.33
MW-5 604.10
MW-9B 588.89
EXISTING SECTION 13A
EXISTING SECTION 13B
EXISTING SECTION 11A
EXISTING SECTION 12A
EXISTING SECTION 11B
EXISTING SECTION 12B
EXISTING SECTION 11C
EXISTING SECTION 9
SECTION 10A
SECTION 10B PHASE 1
SECTION 10B PHASE 2
RUTHERFORD RUN ON
PZ-13 (ABANDONED)
EXISTING SECTION 2
EXISTING SECTION 8
EXISTING SECTION 7
EXISTING SECTION 6
EXISTING SECTION 5
PRE-SUBTITLE D WASTE AREA
EXISTING SECTION 3
EXISTING SECTION 1
EXISTING SECTION 4
REMAINING SECTION 6B
REMAINING SECTION 4B

NOTE:

2020 TOPOGRAPHIC INFORMATION DEPICTED ON THIS PLAN IS FROM AN AERIAL SURVEY BY COOPER AERIAL FLOWN ON 2/15/20.

* HAND SIGNATURE ON FILE

SCALE IN FEET

0 600' 1200'

Civil & Environmental Consultants, Inc.
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www.cecinc.com

BFI WASTE SYSTEMS OF TENNESSEE, LLC
MIDDLE POINT LANDFILL
MURFREESBORO, TENNESSEE

OCTOBER 2022
POTENTIOMETRIC MAP

DRAWN BY:	KLU	CHECKED BY:	KBW	APPROVED BY:	*MJJ	FIGURE NO.:	1
DATE:	DECEMBER 2022	DWG SCALE:	1"=600'	PROJECT NO:	160-238		

APPENDIX B

ANALYTICAL DATA SUMMARY, STATISTICAL EVALUATIONS & TIME SERIES PLOTS

Table 2
Summary of Analytical Results (mg/L)
BFI Waste Systems of TN, LLC Middle Point Landfill SNL 75-0219
2nd Semiannual 2022 Groundwater Event (October 2022)
(Page 1 of 2)

		MW-4B	MW-5	MW-7	MW-11	MW-12	Bubba Spring	Buford Spring	Rutherford Run-off	Leachate
Parameter	**GWPS**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity	-	**317**	**223**	**279**	**226**	**229**	NS	**260**	**364**	**7850**
Ammonia Nitrogen	-	<0.25	<0.25	<0.25	**1.9**	<0.25	NS	<0.25	**2.4**	**1850**
Bromide	-	**3.42**	<1	<1	**1.8**	**2.04**	NS	**1.96**	**2.29**	**122**
Calcium	-	**58.7**	**62.6**	**70.3**	**72**	**124**	NS	**97.2**	**127**	**36.3**
Chloride	250 [6]	**3.27**	**1.46**	**5.78**	**38.3**	**131**	NS	**11.4**	**42.1**	**4410**
Iron	0.3 [6]	<0.1	**0.17**	<0.1	**4.98**	**0.952**	NS	**0.142**	**4.77**	**5.06**
Magnesium	-	**41.8**	**11.2**	**33.3**	**5.85**	**7.05**	NS	**5.55**	**14.8**	**20.5**
Manganese	0.05 [6]	**0.0328**	**0.389**	<0.01	**1.49**	**0.155**	NS	**0.932**	**1.66**	**0.498**
Potassium	-	**2.62**	<2	**4.59**	**9.67**	**5.19**	NS	<2	**4.71**	**131**
Sodium	-	**3.03**	**8.36**	**3.24**	**23.6**	**45.6**	NS	**6.7**	**25.2**	**384**
Sulfate	250 [6]	**6.29**	<5	**37.4**	<5	**31.1**	NS	**11.5**	**28.3**	**<500**
Antimony	0.006	<0.004	<0.004	<0.004	<0.004	<0.004	NS	<0.004	<0.004	**0.043**
Arsenic	0.01	<0.002	<0.002	<0.002	<0.002	<0.002	NS	<0.002	<0.002	**0.299**
Barium	2	**0.207**	**0.0423**	**0.0389**	**0.0864**	**0.0525**	NS	**0.0395**	**0.228**	**0.0574**
Beryllium	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	NS	<0.002	<0.002	<0.018
Cadmium	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<0.009
Chromium	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	**0.0393**
Cobalt	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<0.01
Copper	1.3 [1]	<0.005	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	**<0.045**
Fluoride	4	**0.529**	**0.177**	**0.425**	<0.15	<0.15	NS	<0.15	**0.273**	<15
Lead	0.015 [1]	<0.006	<0.006	<0.006	<0.006	<0.006	NS	<0.006	<0.006	<0.006
Mercury	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NS	<0.0002	<0.0002	<0.002
Nickel	0.10 [2]	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	**0.0376**
Selenium	0.05	<0.002	<0.002	<0.002	<0.002	<0.002	NS	<0.002	<0.002	<0.018
Silver	0.10 [3]	<0.005	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<0.005
Thallium	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	NS	<0.002	<0.002	<0.018
Vanadium	-	<0.02	<0.02	<0.02	<0.02	<0.02	NS	<0.02	<0.02	<0.02
Zinc	5.0 [6]	<0.025	<0.025	<0.025	<0.025	<0.025	NS	<0.025	<0.025	**0.266**
Acetone	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	NS	<0.0500	<0.0500	<50
Acrylonitrile	-	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	NS	<0.0100	<0.0100	<10
Benzene	0.005	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Bromochloromethane	-	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Bromodichloromethane	0.08 [5]	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Bromoform	0.08 [5]	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Bromomethane	-	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS	<0.00500	<0.00500	<5
Carbon disulfide	-	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Carbon tetrachloride	0.005	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Chlorobenzene	-	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Dibromochloromethane	0.08 [5]	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
Chloroethane	-	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS	<0.00500	<0.00500	<5
Chloroform	0.08 [5]	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	NS	<0.00500	<0.00500	<5
Chloromethane	-	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250	NS	<0.00250	<0.00250	<2.5
Dibromomethane	-	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1
1,2-Dichlorobenzene	0.6	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	NS	<0.00100	<0.00100	<1

NOTES:

GWPS=Groundwater Protection Standard

[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 is the EPA Tapwater RSL obtained from the current Summary Table (TR=1E-06 THQ=1.0).

[5] -MCL value referenced is for total trihalomethanes

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

Bold Text indicates constituent detected above reporting limit of the laboratory

NS - Not Sampled

Table 2
Summary of Analytical Results (mg/L)
BFI Waste Systems of TN, LLC Middle Point Landfill SNL 75-0219
2nd Semiannual 2022 Groundwater Event (October 2022)

		MW-4B	MW-5	MW-7	MW-11	MW-12	Bubba Spring	Buford Spring	Rutherford Run-off	Leachate
Parameter	**GWPS**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
1,4-Dichlorobenzene	0.075	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
trans-1,4-Dichloro-2-butene	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	NS	<0.0025	<0.0025	<2.5
1,1-Dichloroethane	0.0028 [4]	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,2-Dichloroethane	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,1-Dichloroethene	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
cis-1,2-Dichloroethene	0.07	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
trans-1,2-Dichloroethene	0.1	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,2-Dichloropropane	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
cis-1,3-Dichloropropene	-	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
trans-1,3-Dichloropropene	-	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Ethylbenzene	0.7	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
2-Hexanone	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<10
Iodomethane	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<10
2-Butanone (MEK)	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<10
Methylene Chloride	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<5
4-Methyl-2-pentanone(MIBK)	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<10
Styrene	0.1	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,1,1,2-Tetrachloroethane	-	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,1,2,2-Tetrachloroethane	-	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Tetrachloroethene	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Toluene	1	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,1,1-Trichloroethane	0.2	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
1,1,2-Trichloroethane	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Trichloroethene	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Trichlorofluoromethane	-	<0.005	<0.005	<0.005	<0.005	<0.005	NS	<0.005	<0.005	<5
1,2,3-Trichloropropane	-	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	NS	<0.0025	<0.0025	<2.5
Vinyl acetate	-	<0.01	<0.01	<0.01	<0.01	<0.01	NS	<0.01	<0.01	<10
Vinyl chloride	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	NS	<0.001	<0.001	<1
Xylenes, Total	10	<0.003	<0.003	<0.003	<0.003	<0.003	NS	<0.003	<0.003	<3
Ethylene Dibromide	0.00005	<0.0000208	<0.00002	<0.0000204	<0.0000206	<0.0000216	NS	<0.000021	<0.00002	<0.00002
1,2-Dibromo-3-Chloropropane	0.0002	<0.0000208	<0.00002	<0.0000204	<0.0000206	<0.0000216	NS	<0.000021	<0.00002	<0.00002

NOTES:

MCL=Maximum Contaminant Level

[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 is the EPA Tapwater RSL obtained from the current Summary Table (TR=1E-06 THQ=1.0).

[5] -MCL value referenced is for total trihalomethanes

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

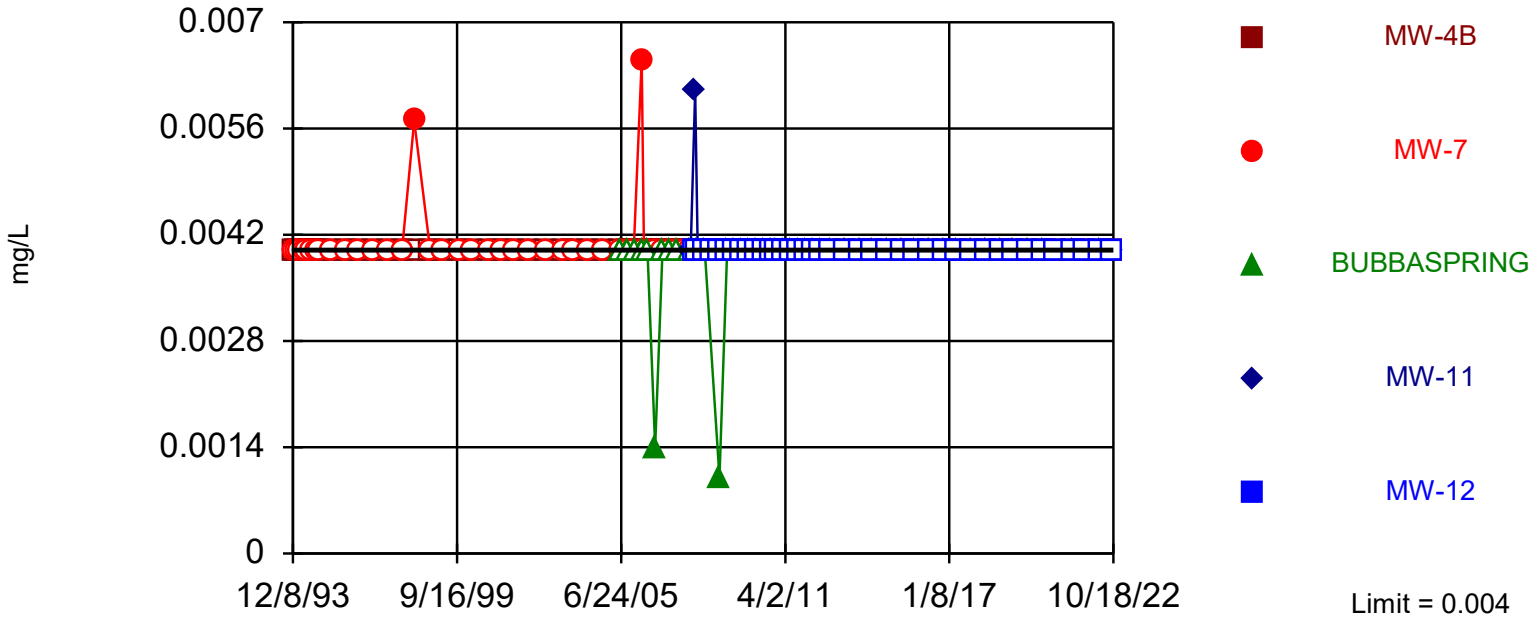
Bold Text indicates constituent detected above reporting limit of the laboratory

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 99.15% NDs. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Antimony, Total Analysis Run 11/29/2022 4:07 PM

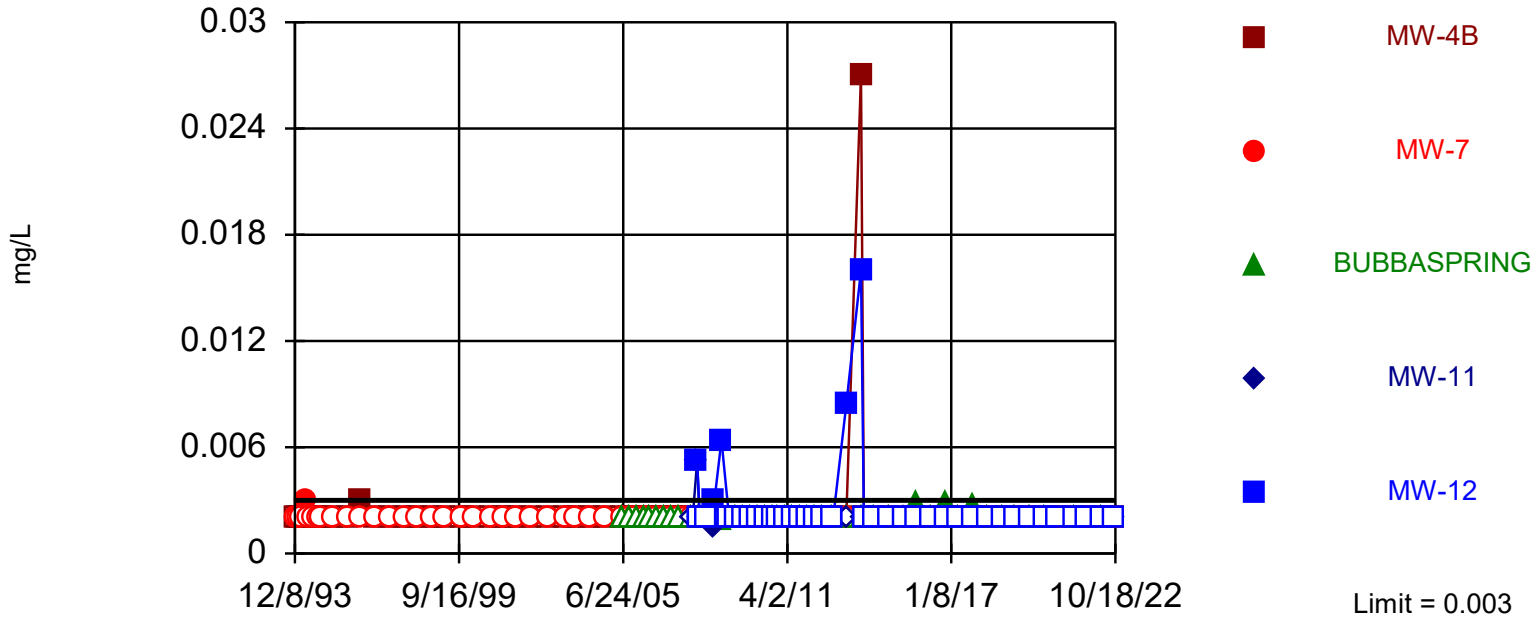
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 119 background values. 97.48% NDs. Annual per-constituent alpha = 0.001379. Individual comparison alpha = 0.000138 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

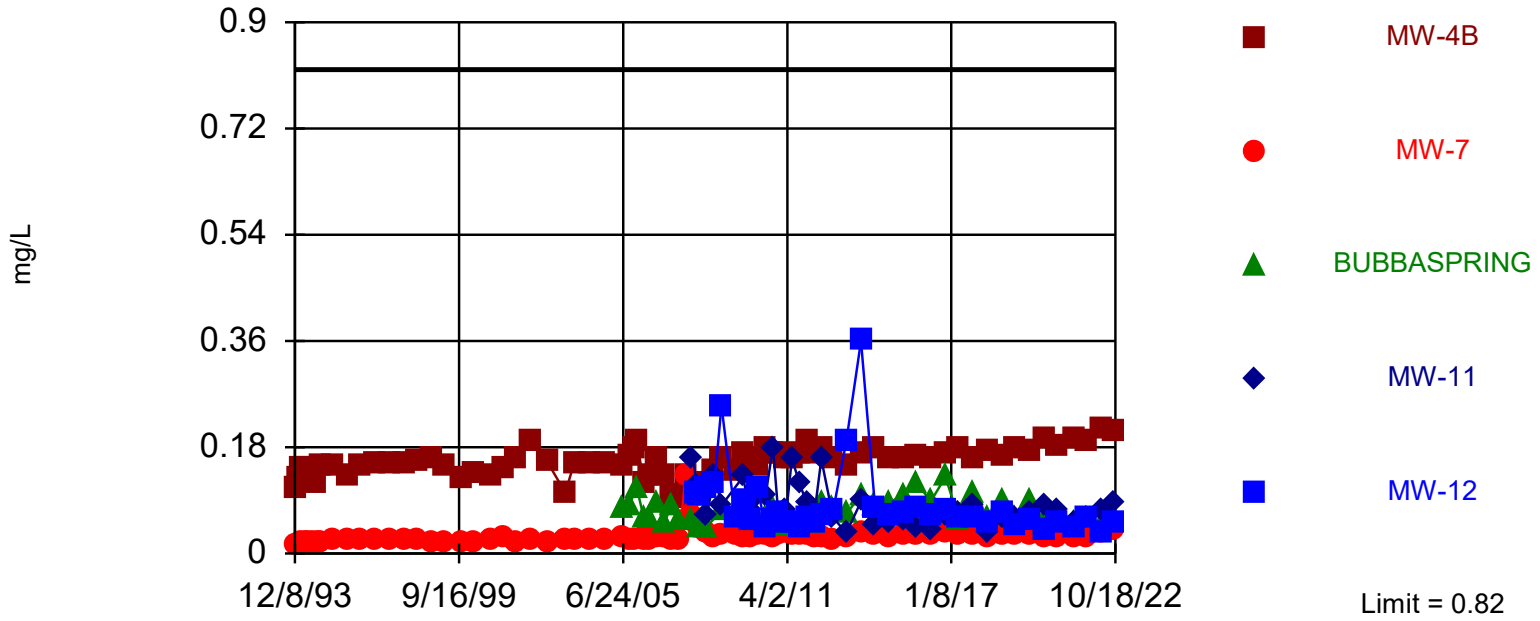
Constituent: Arsenic, Total Analysis Run 11/29/2022 4:07 PM

Middle Point LF Client: CEC Data: MPLF Database File

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 117 background values. 0.8547% NDs. Annual per-constituent alpha = 0.001437. Individual comparison alpha = 0.0001438 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Barium, Total Analysis Run 11/29/2022 4:07 PM

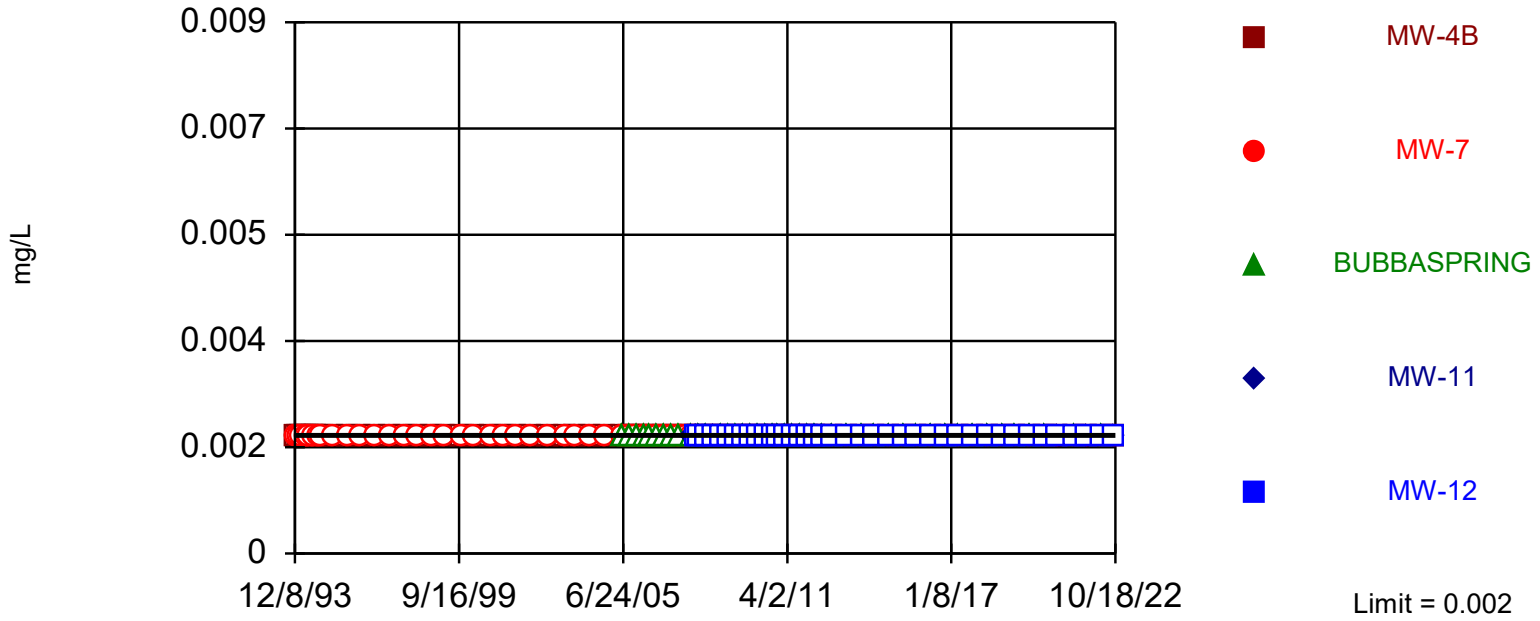
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 118) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Beryllium, Total Analysis Run 11/29/2022 4:07 PM

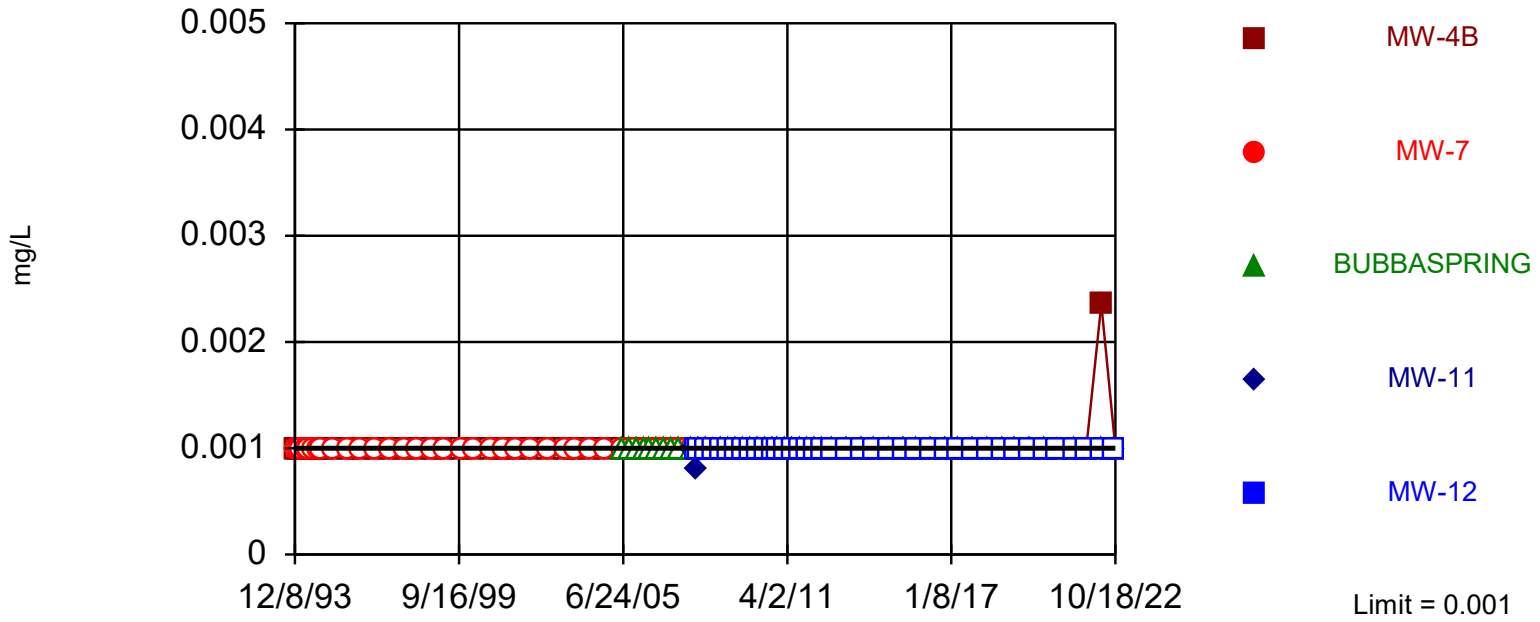
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 119) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.001379. Individual comparison alpha = 0.000138 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Cadmium, Total Analysis Run 11/29/2022 4:07 PM

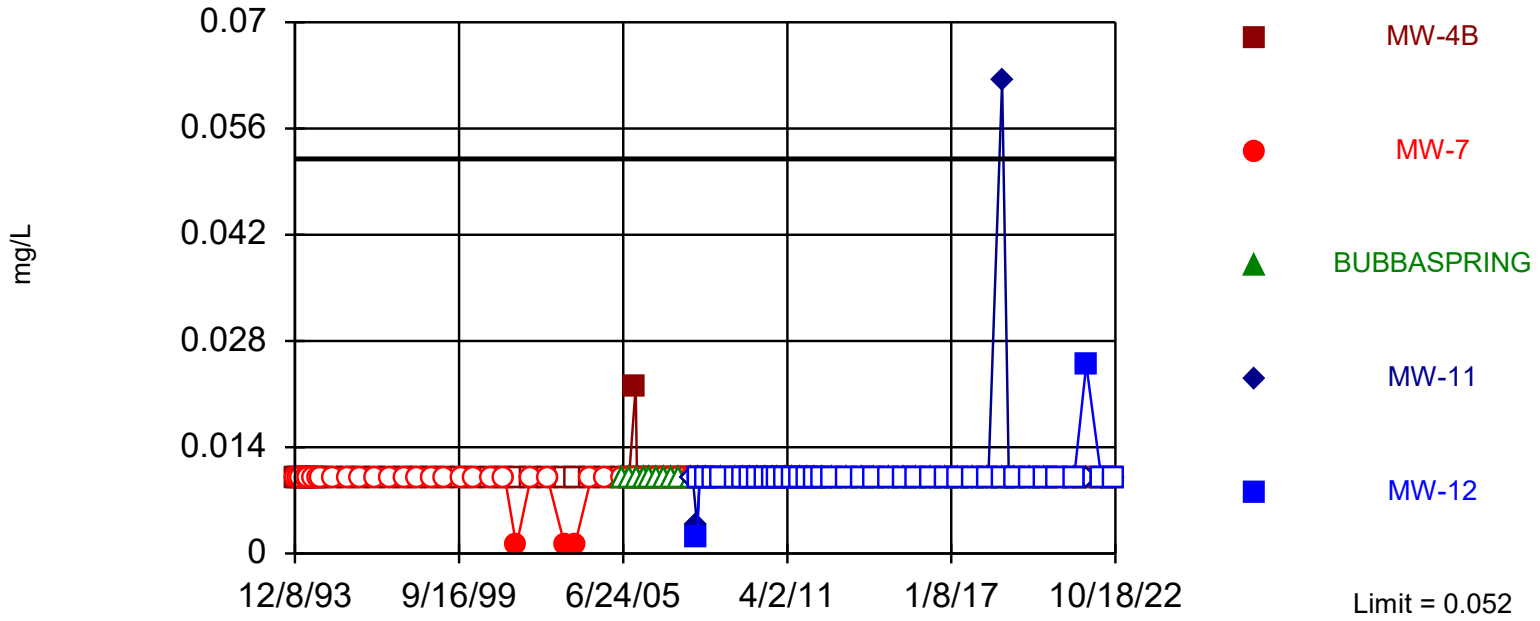
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 117 background values. 88.89% NDs. Annual per-constituent alpha = 0.001437. Individual comparison alpha = 0.0001438 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Chromium, Total Analysis Run 11/29/2022 4:07 PM

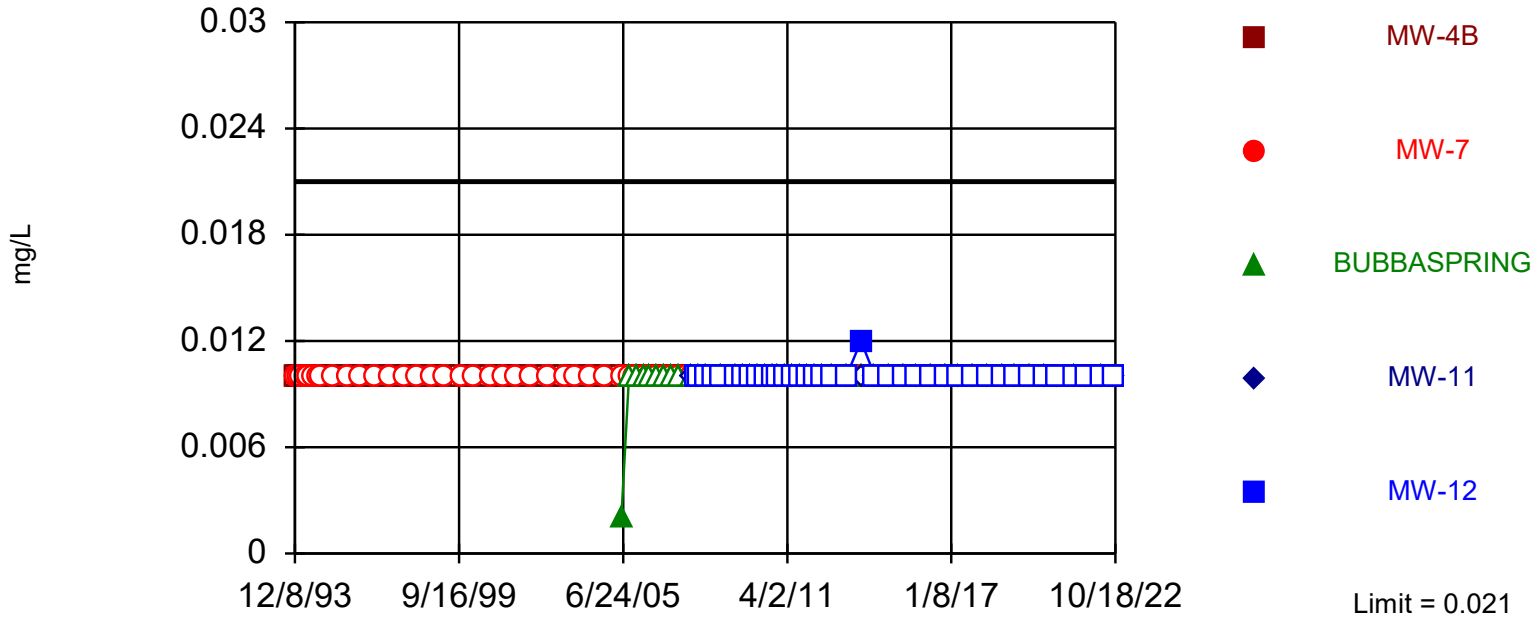
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 116 background values. 97.41% NDs. Annual per-constituent alpha = 0.001466. Individual comparison alpha = 0.0001467 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Cobalt, Total Analysis Run 11/29/2022 4:07 PM

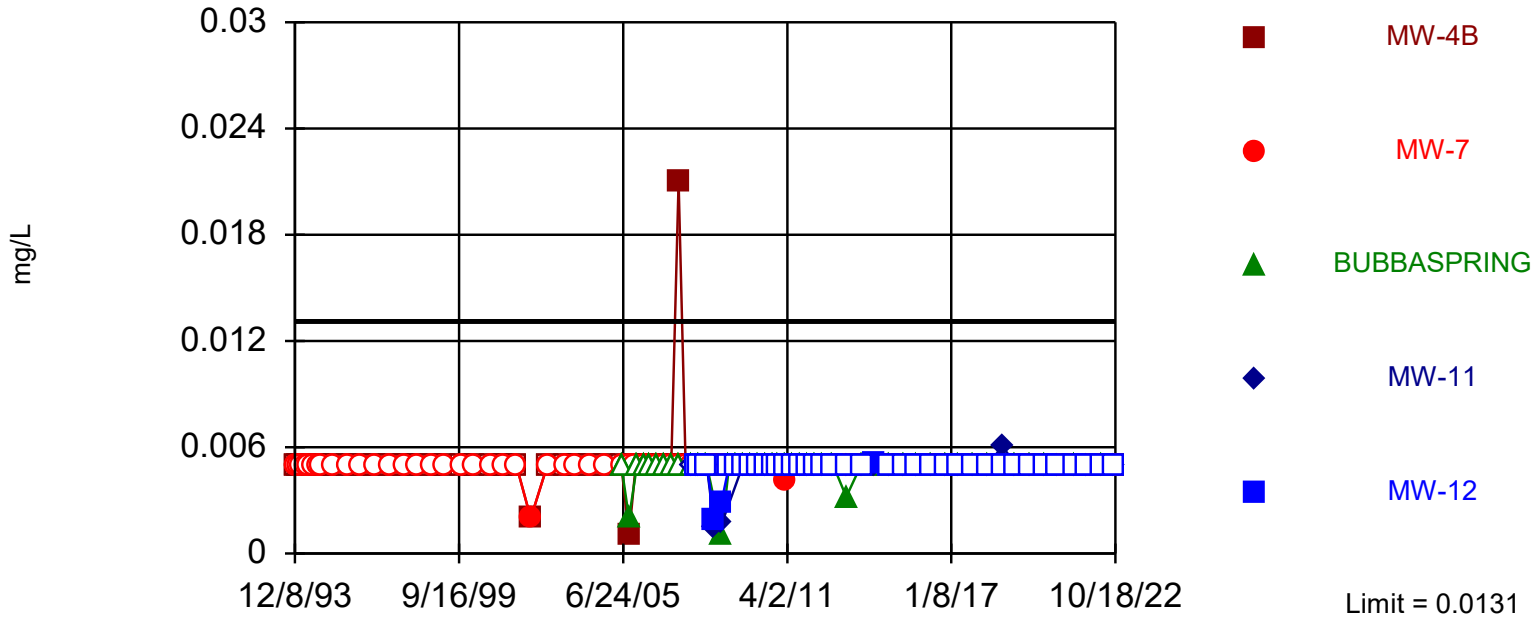
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 86.44% NDs. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Copper, Total Analysis Run 11/29/2022 4:07 PM

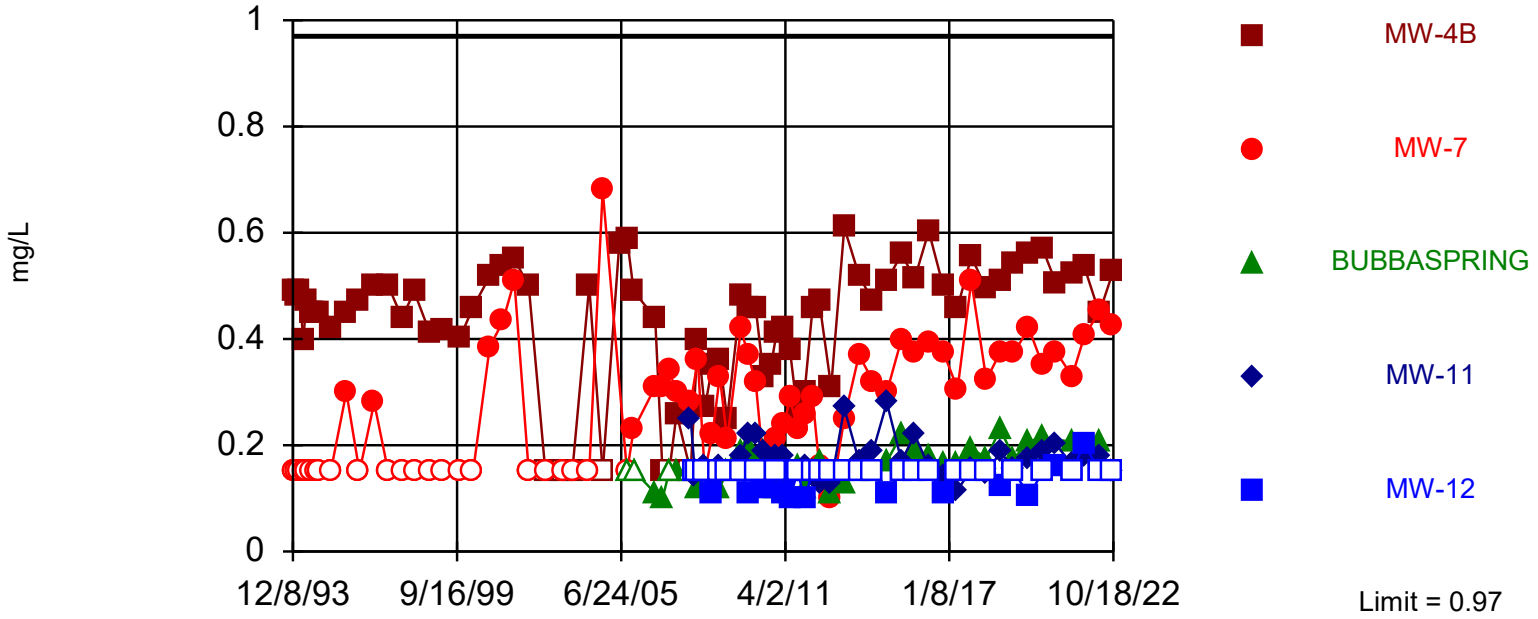
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 114 background values. 84.21% NDs. Annual per-constituent alpha = 0.001525. Individual comparison alpha = 0.0001526 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride, Total Analysis Run 11/29/2022 4:07 PM

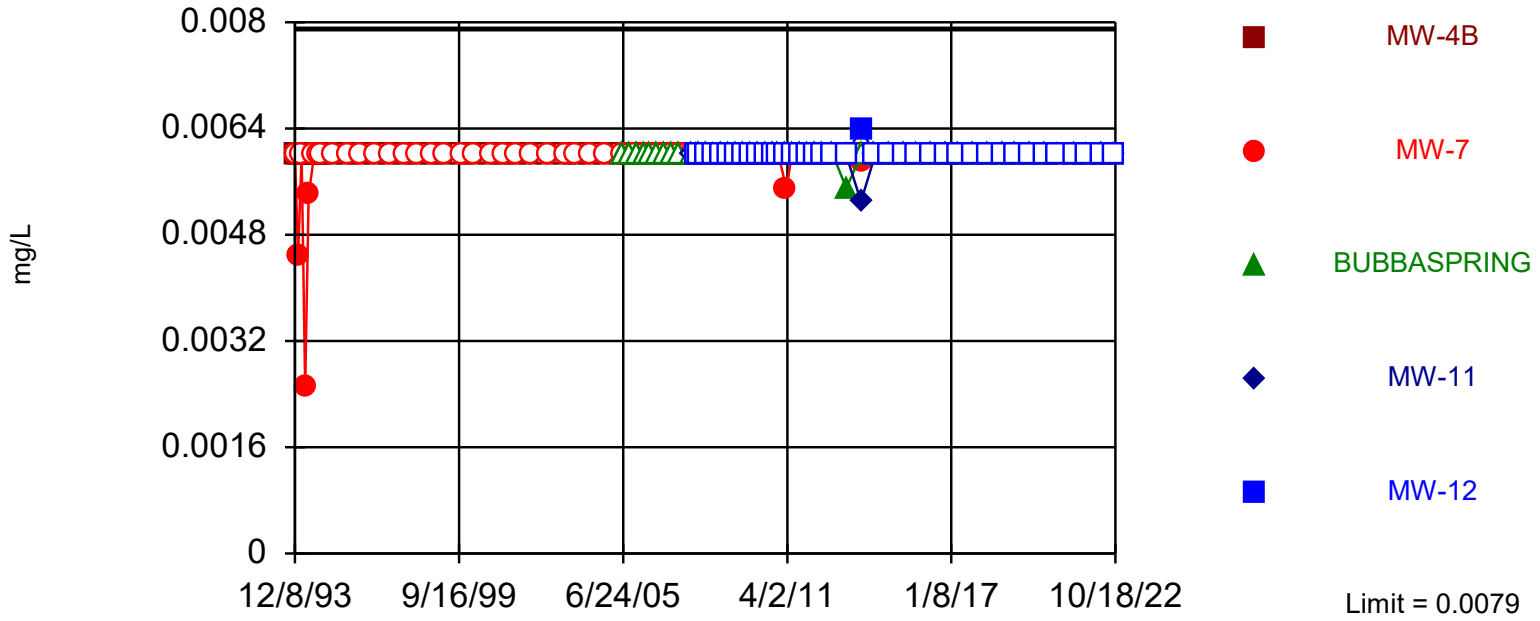
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 93.22% NDs. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Lead, Total Analysis Run 11/29/2022 4:07 PM

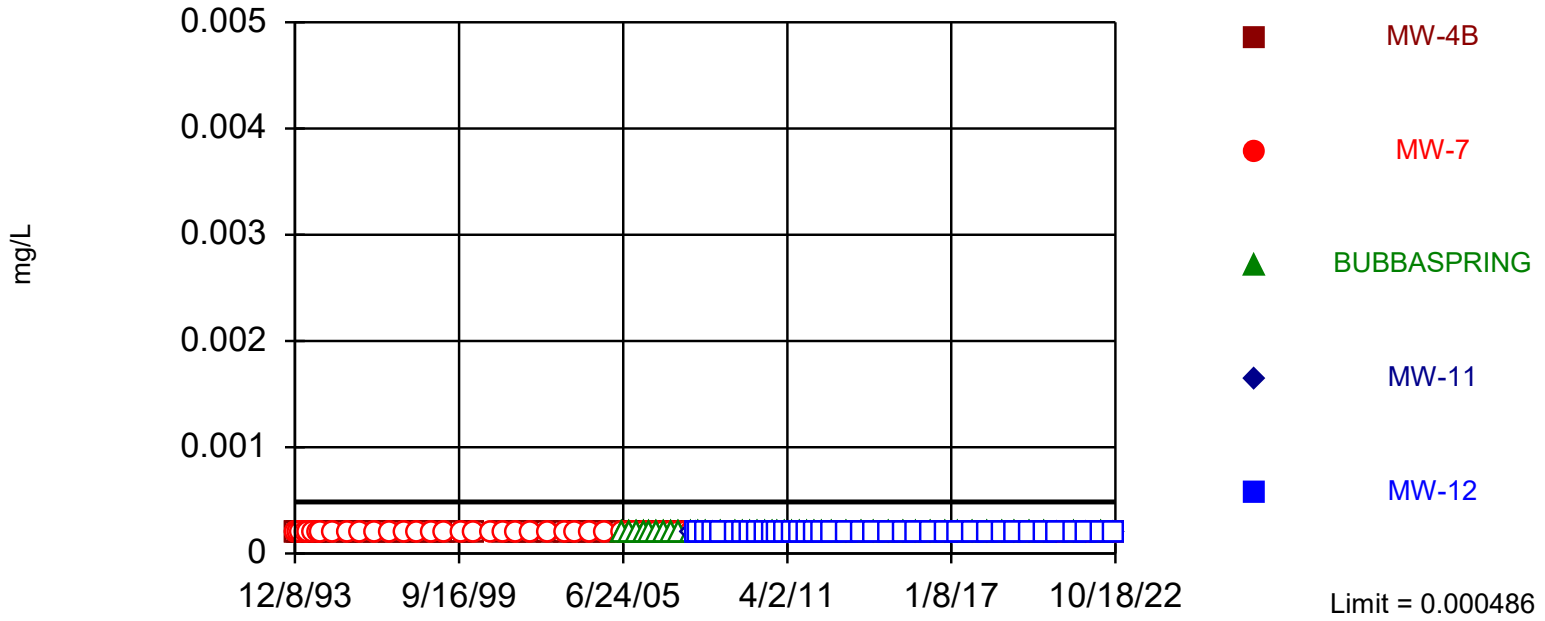
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 121 background values. 99.17% NDs. Annual per-constituent alpha = 0.001332. Individual comparison alpha = 0.0001333 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Mercury, Total Analysis Run 11/29/2022 4:07 PM

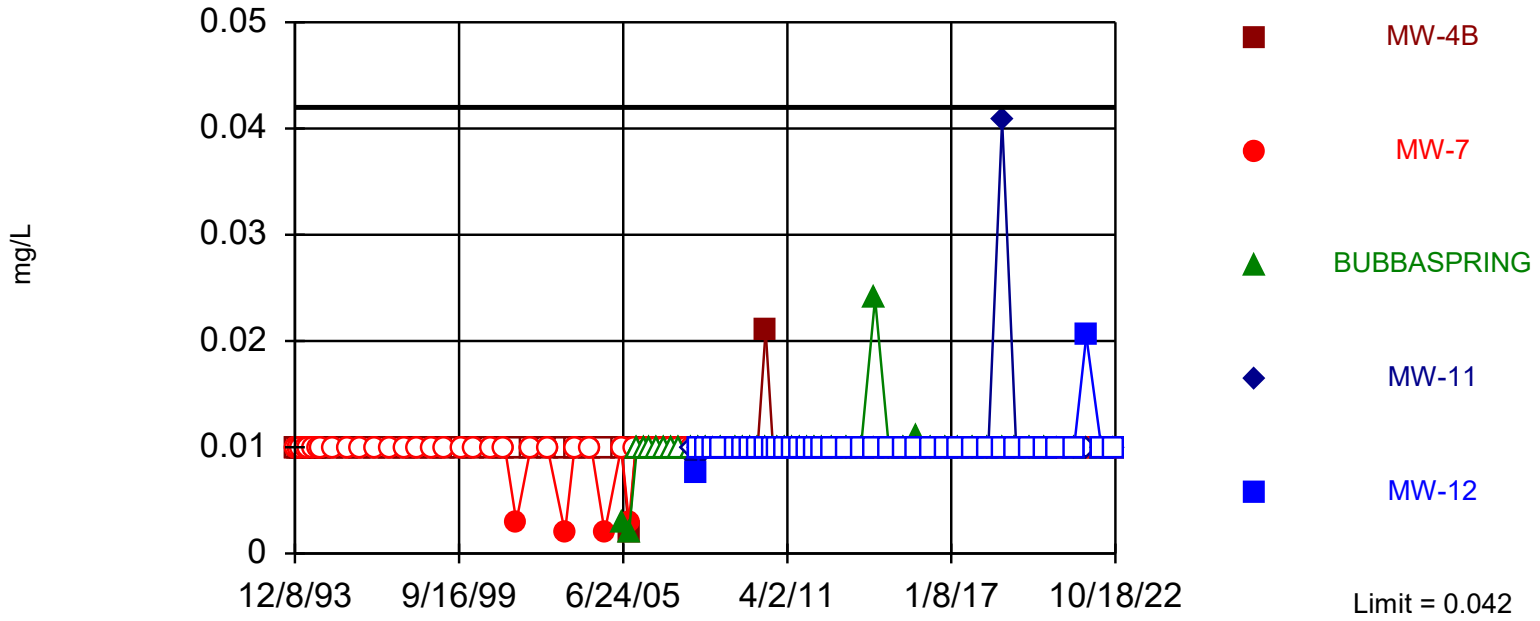
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 116 background values. 93.97% NDs. Annual per-constituent alpha = 0.001466. Individual comparison alpha = 0.0001467 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Nickel, Total Analysis Run 11/29/2022 4:07 PM

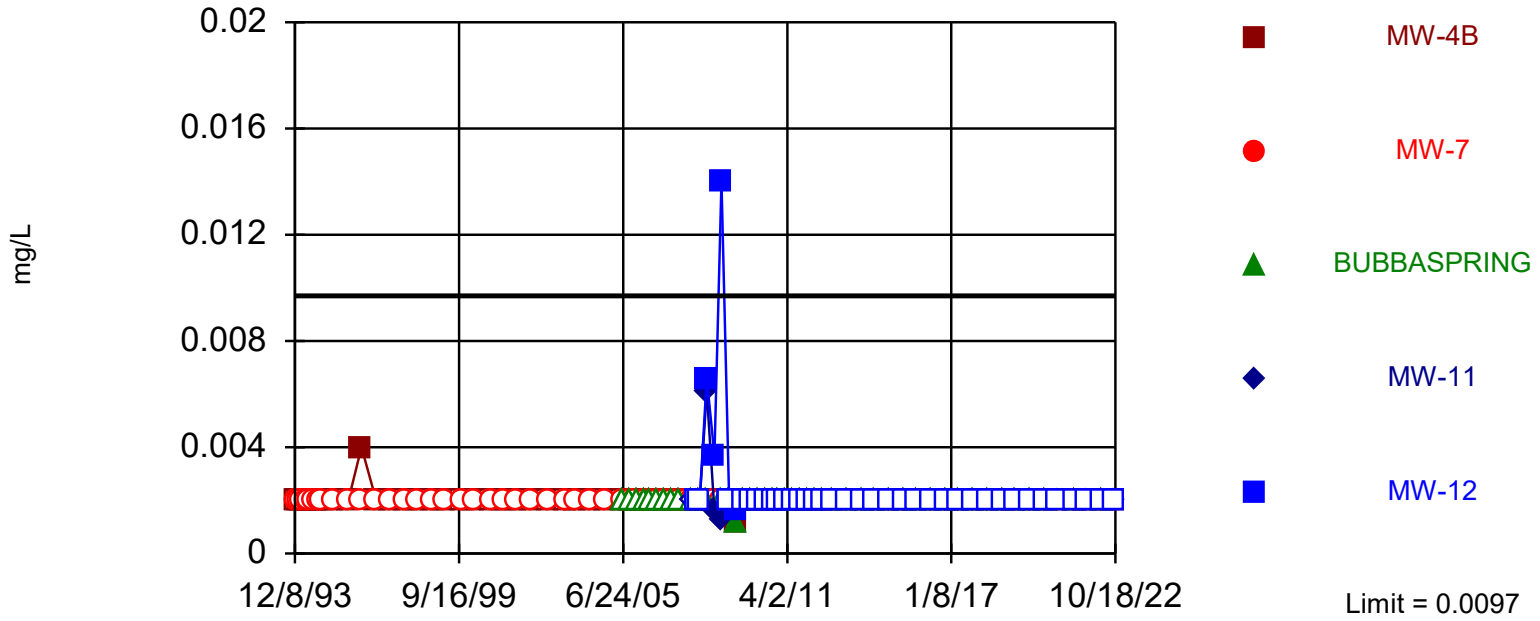
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 119 background values. 99.16% NDs. Annual per-constituent alpha = 0.001379. Individual comparison alpha = 0.000138 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Selenium, Total Analysis Run 11/29/2022 4:07 PM

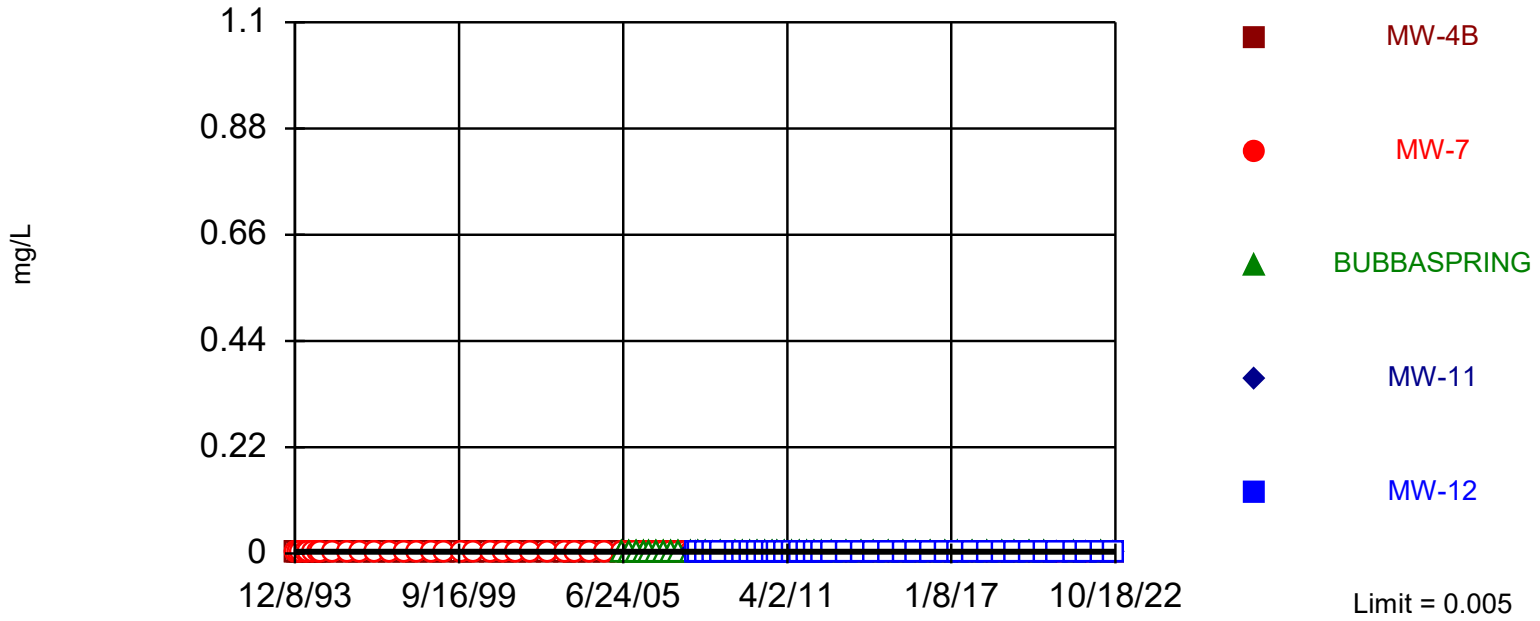
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 117) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.001437. Individual comparison alpha = 0.0001438 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Silver, Total Analysis Run 11/29/2022 4:07 PM

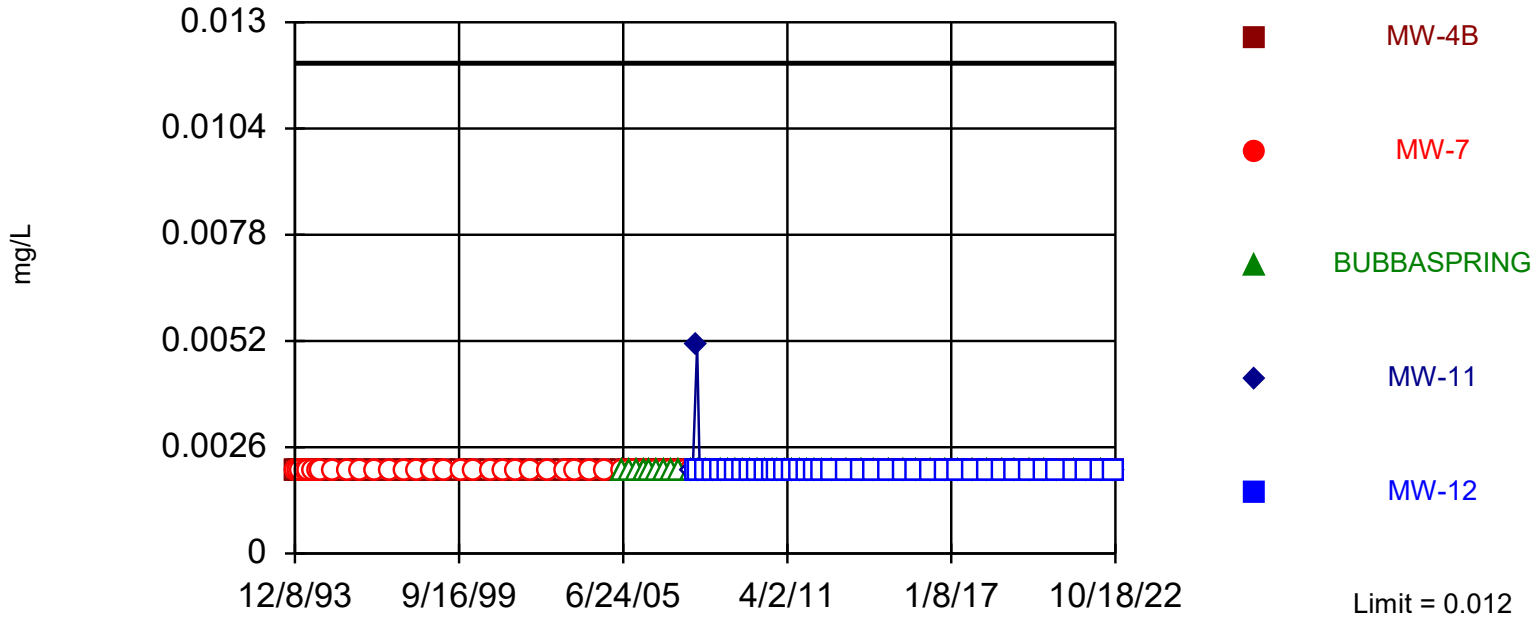
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 98.31% NDs. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Thallium, Total Analysis Run 11/29/2022 4:07 PM

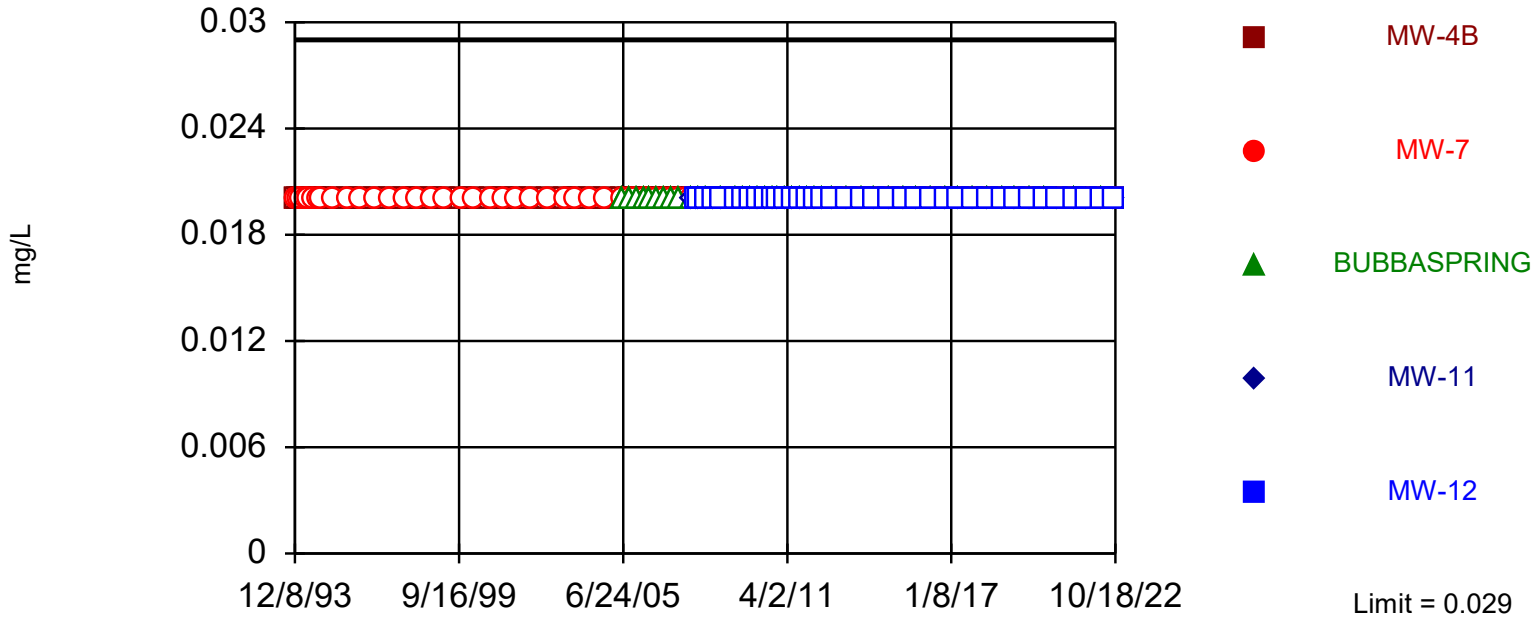
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 116 background values. 98.28% NDs. Annual per-constituent alpha = 0.001466. Individual comparison alpha = 0.0001467 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Vanadium, Total Analysis Run 11/29/2022 4:07 PM

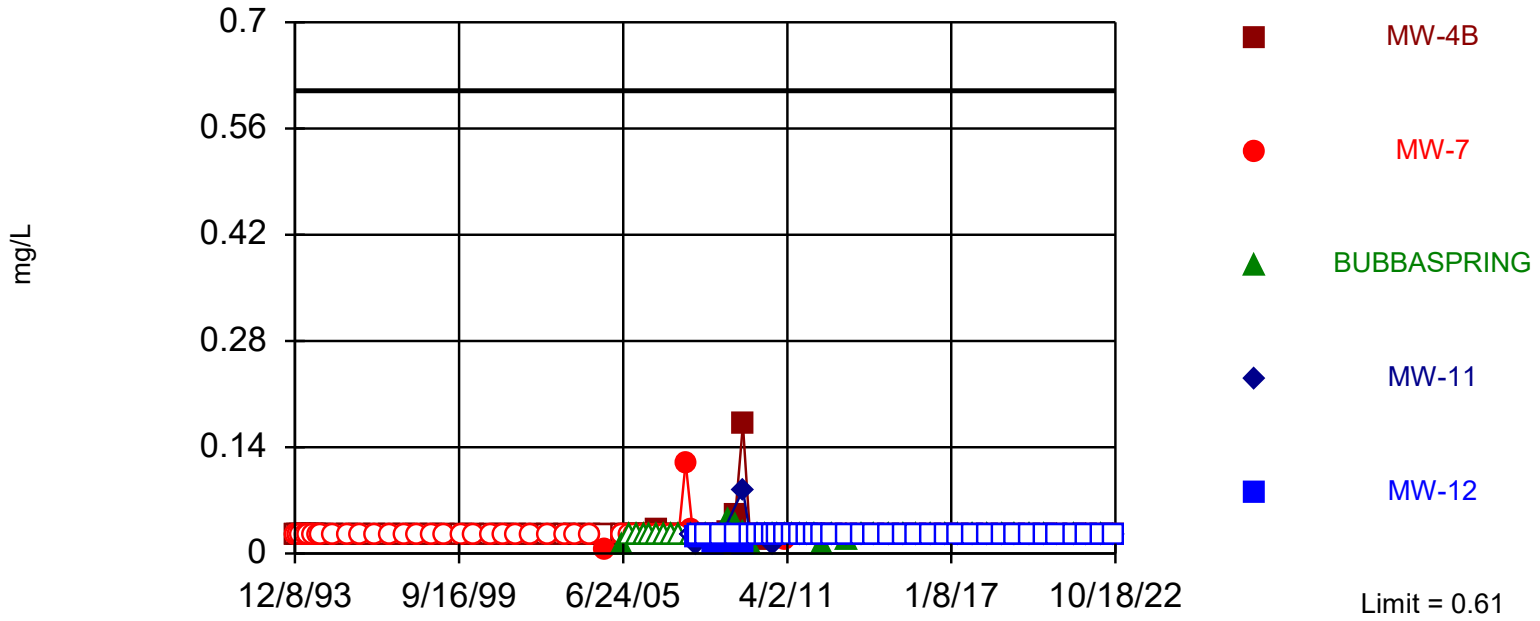
Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 118 background values. 85.59% NDs. Annual per-constituent alpha = 0.001408. Individual comparison alpha = 0.0001409 (1 of 2). Comparing 5 points to limit. Seasonality was not detected with 95% confidence.

Constituent: Zinc, Total Analysis Run 11/29/2022 4:07 PM

Middle Point LF Client: CEC Data: MPLF Database File

Prediction Limit

Middle Point LF Client: CEC Data: MPLF Database File Printed 11/29/2022, 4:08 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony, Total (mg/L)	MW-4B	0.004	n/a	10/18/2022	0.004ND	No	118	99.15	n/a	0.000...	NP Inter (NDs) 1 of 2
Antimony, Total (mg/L)	MW-7	0.004	n/a	10/18/2022	0.004ND	No	118	99.15	n/a	0.000...	NP Inter (NDs) 1 of 2
Antimony, Total (mg/L)	BUBBASPRING	0.004	n/a	4/20/2022	0.004ND	No	118	99.15	n/a	0.000...	NP Inter (NDs) 1 of 2
Antimony, Total (mg/L)	MW-11	0.004	n/a	10/18/2022	0.004ND	No	118	99.15	n/a	0.000...	NP Inter (NDs) 1 of 2
Antimony, Total (mg/L)	MW-12	0.004	n/a	10/18/2022	0.004ND	No	118	99.15	n/a	0.000...	NP Inter (NDs) 1 of 2
Arsenic, Total (mg/L)	MW-4B	0.003	n/a	10/18/2022	0.002ND	No	119	97.48	n/a	0.000138	NP Inter (NDs) 1 of 2
Arsenic, Total (mg/L)	MW-7	0.003	n/a	10/18/2022	0.002ND	No	119	97.48	n/a	0.000138	NP Inter (NDs) 1 of 2
Arsenic, Total (mg/L)	BUBBASPRING	0.003	n/a	4/20/2022	0.002ND	No	119	97.48	n/a	0.000138	NP Inter (NDs) 1 of 2
Arsenic, Total (mg/L)	MW-11	0.003	n/a	10/18/2022	0.002ND	No	119	97.48	n/a	0.000138	NP Inter (NDs) 1 of 2
Arsenic, Total (mg/L)	MW-12	0.003	n/a	10/18/2022	0.002ND	No	119	97.48	n/a	0.000138	NP Inter (NDs) 1 of 2
Barium, Total (mg/L)	MW-4B	0.82	n/a	10/18/2022	0.207	No	117	0.8547	n/a	0.000...	NP Inter (normality) ...
Barium, Total (mg/L)	MW-7	0.82	n/a	10/18/2022	0.0389	No	117	0.8547	n/a	0.000...	NP Inter (normality) ...
Barium, Total (mg/L)	BUBBASPRING	0.82	n/a	4/20/2022	0.0472	No	117	0.8547	n/a	0.000...	NP Inter (normality) ...
Barium, Total (mg/L)	MW-11	0.82	n/a	10/18/2022	0.0864	No	117	0.8547	n/a	0.000...	NP Inter (normality) ...
Barium, Total (mg/L)	MW-12	0.82	n/a	10/18/2022	0.0525	No	117	0.8547	n/a	0.000...	NP Inter (normality) ...
Beryllium, Total (mg/L)	MW-4B	0.002	n/a	10/18/2022	0.002ND	No	118	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Beryllium, Total (mg/L)	MW-7	0.002	n/a	10/18/2022	0.002ND	No	118	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Beryllium, Total (mg/L)	BUBBASPRING	0.002	n/a	4/20/2022	0.002ND	No	118	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Beryllium, Total (mg/L)	MW-11	0.002	n/a	10/18/2022	0.002ND	No	118	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Beryllium, Total (mg/L)	MW-12	0.002	n/a	10/18/2022	0.002ND	No	118	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Cadmium, Total (mg/L)	MW-4B	0.001	n/a	10/18/2022	0.001ND	No	119	100	n/a	0.000138	NP Inter (NDs) 1 of 2
Cadmium, Total (mg/L)	MW-7	0.001	n/a	10/18/2022	0.001ND	No	119	100	n/a	0.000138	NP Inter (NDs) 1 of 2
Cadmium, Total (mg/L)	BUBBASPRING	0.001	n/a	4/20/2022	0.001ND	No	119	100	n/a	0.000138	NP Inter (NDs) 1 of 2
Cadmium, Total (mg/L)	MW-11	0.001	n/a	10/18/2022	0.001ND	No	119	100	n/a	0.000138	NP Inter (NDs) 1 of 2
Cadmium, Total (mg/L)	MW-12	0.001	n/a	10/18/2022	0.001ND	No	119	100	n/a	0.000138	NP Inter (NDs) 1 of 2
Chromium, Total (mg/L)	MW-4B	0.052	n/a	10/18/2022	0.01ND	No	117	88.89	n/a	0.000...	NP Inter (NDs) 1 of 2
Chromium, Total (mg/L)	MW-7	0.052	n/a	10/18/2022	0.01ND	No	117	88.89	n/a	0.000...	NP Inter (NDs) 1 of 2
Chromium, Total (mg/L)	BUBBASPRING	0.052	n/a	4/20/2022	0.01ND	No	117	88.89	n/a	0.000...	NP Inter (NDs) 1 of 2
Chromium, Total (mg/L)	MW-11	0.052	n/a	10/18/2022	0.01ND	No	117	88.89	n/a	0.000...	NP Inter (NDs) 1 of 2
Chromium, Total (mg/L)	MW-12	0.052	n/a	10/18/2022	0.01ND	No	117	88.89	n/a	0.000...	NP Inter (NDs) 1 of 2
Cobalt, Total (mg/L)	MW-4B	0.021	n/a	10/18/2022	0.01ND	No	116	97.41	n/a	0.000...	NP Inter (NDs) 1 of 2
Cobalt, Total (mg/L)	MW-7	0.021	n/a	10/18/2022	0.01ND	No	116	97.41	n/a	0.000...	NP Inter (NDs) 1 of 2
Cobalt, Total (mg/L)	BUBBASPRING	0.021	n/a	4/20/2022	0.01ND	No	116	97.41	n/a	0.000...	NP Inter (NDs) 1 of 2
Cobalt, Total (mg/L)	MW-11	0.021	n/a	10/18/2022	0.01ND	No	116	97.41	n/a	0.000...	NP Inter (NDs) 1 of 2
Cobalt, Total (mg/L)	MW-12	0.021	n/a	10/18/2022	0.01ND	No	116	97.41	n/a	0.000...	NP Inter (NDs) 1 of 2
Copper, Total (mg/L)	MW-4B	0.0131	n/a	10/18/2022	0.005ND	No	118	86.44	n/a	0.000...	NP Inter (NDs) 1 of 2
Copper, Total (mg/L)	MW-7	0.0131	n/a	10/18/2022	0.005ND	No	118	86.44	n/a	0.000...	NP Inter (NDs) 1 of 2
Copper, Total (mg/L)	BUBBASPRING	0.0131	n/a	4/20/2022	0.005ND	No	118	86.44	n/a	0.000...	NP Inter (NDs) 1 of 2
Copper, Total (mg/L)	MW-11	0.0131	n/a	10/18/2022	0.005ND	No	118	86.44	n/a	0.000...	NP Inter (NDs) 1 of 2
Copper, Total (mg/L)	MW-12	0.0131	n/a	10/18/2022	0.005ND	No	118	86.44	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride, Total (mg/L)	MW-4B	0.97	n/a	10/18/2022	0.529	No	114	84.21	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride, Total (mg/L)	MW-7	0.97	n/a	10/18/2022	0.425	No	114	84.21	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride, Total (mg/L)	BUBBASPRING	0.97	n/a	4/20/2022	0.206	No	114	84.21	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride, Total (mg/L)	MW-11	0.97	n/a	10/18/2022	0.15ND	No	114	84.21	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride, Total (mg/L)	MW-12	0.97	n/a	10/18/2022	0.15ND	No	114	84.21	n/a	0.000...	NP Inter (NDs) 1 of 2
Lead, Total (mg/L)	MW-4B	0.0079	n/a	10/18/2022	0.006ND	No	118	93.22	n/a	0.000...	NP Inter (NDs) 1 of 2
Lead, Total (mg/L)	MW-7	0.0079	n/a	10/18/2022	0.006ND	No	118	93.22	n/a	0.000...	NP Inter (NDs) 1 of 2
Lead, Total (mg/L)	BUBBASPRING	0.0079	n/a	4/20/2022	0.006ND	No	118	93.22	n/a	0.000...	NP Inter (NDs) 1 of 2
Lead, Total (mg/L)	MW-11	0.0079	n/a	10/18/2022	0.006ND	No	118	93.22	n/a	0.000...	NP Inter (NDs) 1 of 2
Lead, Total (mg/L)	MW-12	0.0079	n/a	10/18/2022	0.006ND	No	118	93.22	n/a	0.000...	NP Inter (NDs) 1 of 2

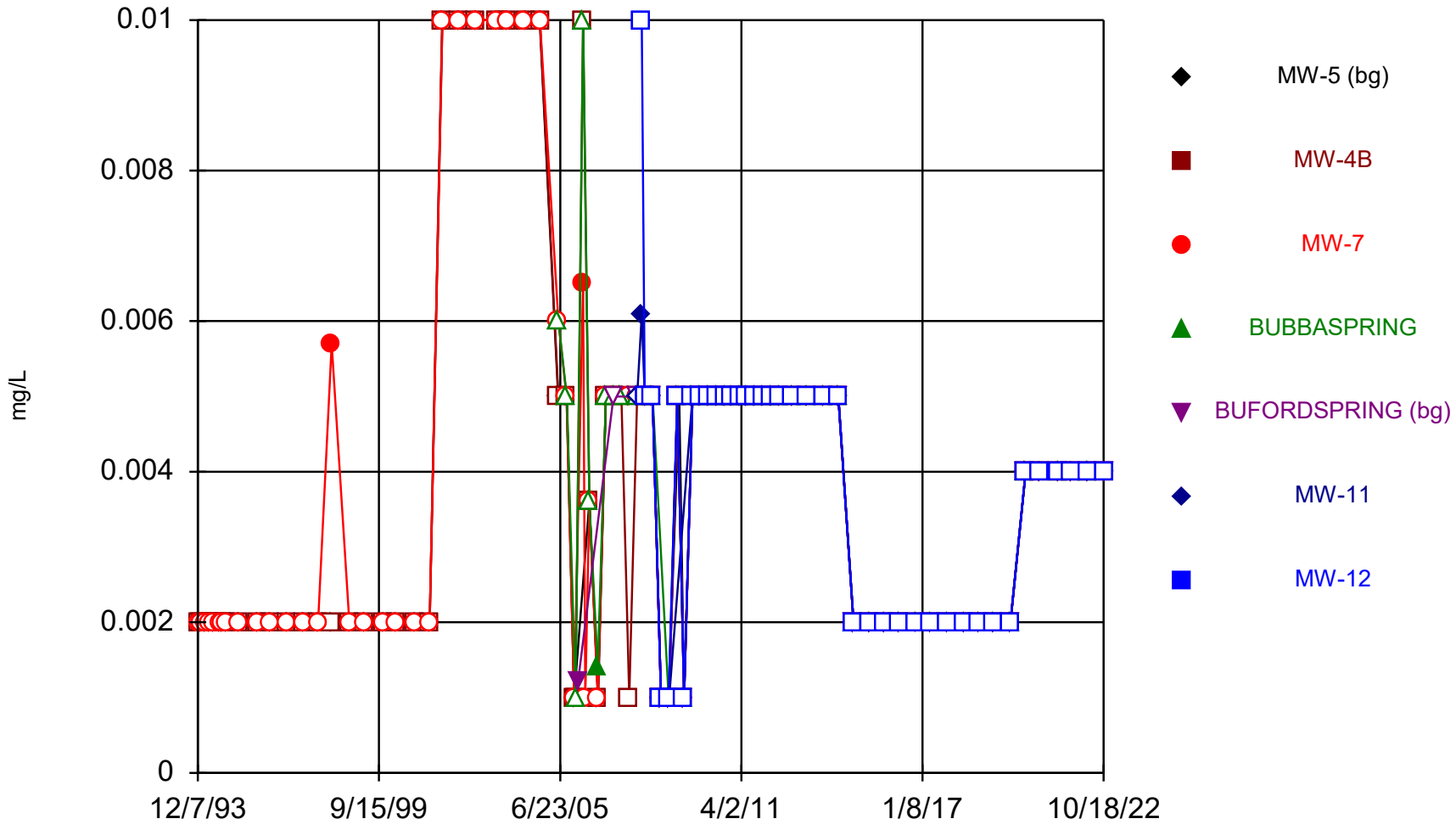
Prediction Limit

Middle Point LF Client: CEC Data: MPLF Database File Printed 11/29/2022, 4:08 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Mercury, Total (mg/L)	MW-4B	0.000486	n/a	10/18/2022	0.0002ND	No	121	99.17	n/a	0.000...	NP Inter (NDs) 1 of 2
Mercury, Total (mg/L)	MW-7	0.000486	n/a	10/18/2022	0.0002ND	No	121	99.17	n/a	0.000...	NP Inter (NDs) 1 of 2
Mercury, Total (mg/L)	BUBBASPRING	0.000486	n/a	4/20/2022	0.0002ND	No	121	99.17	n/a	0.000...	NP Inter (NDs) 1 of 2
Mercury, Total (mg/L)	MW-11	0.000486	n/a	10/18/2022	0.0002ND	No	121	99.17	n/a	0.000...	NP Inter (NDs) 1 of 2
Mercury, Total (mg/L)	MW-12	0.000486	n/a	10/18/2022	0.0002ND	No	121	99.17	n/a	0.000...	NP Inter (NDs) 1 of 2
Nickel, Total (mg/L)	MW-4B	0.042	n/a	10/18/2022	0.01ND	No	116	93.97	n/a	0.000...	NP Inter (NDs) 1 of 2
Nickel, Total (mg/L)	MW-7	0.042	n/a	10/18/2022	0.01ND	No	116	93.97	n/a	0.000...	NP Inter (NDs) 1 of 2
Nickel, Total (mg/L)	BUBBASPRING	0.042	n/a	4/20/2022	0.01ND	No	116	93.97	n/a	0.000...	NP Inter (NDs) 1 of 2
Nickel, Total (mg/L)	MW-11	0.042	n/a	10/18/2022	0.01ND	No	116	93.97	n/a	0.000...	NP Inter (NDs) 1 of 2
Nickel, Total (mg/L)	MW-12	0.042	n/a	10/18/2022	0.01ND	No	116	93.97	n/a	0.000...	NP Inter (NDs) 1 of 2
Selenium, Total (mg/L)	MW-4B	0.0097	n/a	10/18/2022	0.002ND	No	119	99.16	n/a	0.000138	NP Inter (NDs) 1 of 2
Selenium, Total (mg/L)	MW-7	0.0097	n/a	10/18/2022	0.002ND	No	119	99.16	n/a	0.000138	NP Inter (NDs) 1 of 2
Selenium, Total (mg/L)	BUBBASPRING	0.0097	n/a	4/20/2022	0.002ND	No	119	99.16	n/a	0.000138	NP Inter (NDs) 1 of 2
Selenium, Total (mg/L)	MW-11	0.0097	n/a	10/18/2022	0.002ND	No	119	99.16	n/a	0.000138	NP Inter (NDs) 1 of 2
Selenium, Total (mg/L)	MW-12	0.0097	n/a	10/18/2022	0.002ND	No	119	99.16	n/a	0.000138	NP Inter (NDs) 1 of 2
Silver, Total (mg/L)	MW-4B	0.005	n/a	10/18/2022	0.005ND	No	117	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Silver, Total (mg/L)	MW-7	0.005	n/a	10/18/2022	0.005ND	No	117	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Silver, Total (mg/L)	BUBBASPRING	0.005	n/a	4/20/2022	0.005ND	No	117	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Silver, Total (mg/L)	MW-11	0.005	n/a	10/18/2022	0.005ND	No	117	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Silver, Total (mg/L)	MW-12	0.005	n/a	10/18/2022	0.005ND	No	117	100	n/a	0.000...	NP Inter (NDs) 1 of 2
Thallium, Total (mg/L)	MW-4B	0.012	n/a	10/18/2022	0.002ND	No	118	98.31	n/a	0.000...	NP Inter (NDs) 1 of 2
Thallium, Total (mg/L)	MW-7	0.012	n/a	10/18/2022	0.002ND	No	118	98.31	n/a	0.000...	NP Inter (NDs) 1 of 2
Thallium, Total (mg/L)	BUBBASPRING	0.012	n/a	4/20/2022	0.002ND	No	118	98.31	n/a	0.000...	NP Inter (NDs) 1 of 2
Thallium, Total (mg/L)	MW-11	0.012	n/a	10/18/2022	0.002ND	No	118	98.31	n/a	0.000...	NP Inter (NDs) 1 of 2
Thallium, Total (mg/L)	MW-12	0.012	n/a	10/18/2022	0.002ND	No	118	98.31	n/a	0.000...	NP Inter (NDs) 1 of 2
Vanadium, Total (mg/L)	MW-4B	0.029	n/a	10/18/2022	0.02ND	No	116	98.28	n/a	0.000...	NP Inter (NDs) 1 of 2
Vanadium, Total (mg/L)	MW-7	0.029	n/a	10/18/2022	0.02ND	No	116	98.28	n/a	0.000...	NP Inter (NDs) 1 of 2
Vanadium, Total (mg/L)	BUBBASPRING	0.029	n/a	4/20/2022	0.02ND	No	116	98.28	n/a	0.000...	NP Inter (NDs) 1 of 2
Vanadium, Total (mg/L)	MW-11	0.029	n/a	10/18/2022	0.02ND	No	116	98.28	n/a	0.000...	NP Inter (NDs) 1 of 2
Vanadium, Total (mg/L)	MW-12	0.029	n/a	10/18/2022	0.02ND	No	116	98.28	n/a	0.000...	NP Inter (NDs) 1 of 2
Zinc, Total (mg/L)	MW-4B	0.61	n/a	10/18/2022	0.025ND	No	118	85.59	n/a	0.000...	NP Inter (NDs) 1 of 2
Zinc, Total (mg/L)	MW-7	0.61	n/a	10/18/2022	0.025ND	No	118	85.59	n/a	0.000...	NP Inter (NDs) 1 of 2
Zinc, Total (mg/L)	BUBBASPRING	0.61	n/a	4/20/2022	0.025ND	No	118	85.59	n/a	0.000...	NP Inter (NDs) 1 of 2
Zinc, Total (mg/L)	MW-11	0.61	n/a	10/18/2022	0.025ND	No	118	85.59	n/a	0.000...	NP Inter (NDs) 1 of 2
Zinc, Total (mg/L)	MW-12	0.61	n/a	10/18/2022	0.025ND	No	118	85.59	n/a	0.000...	NP Inter (NDs) 1 of 2

Hollow symbols indicate censored values.

Time Series

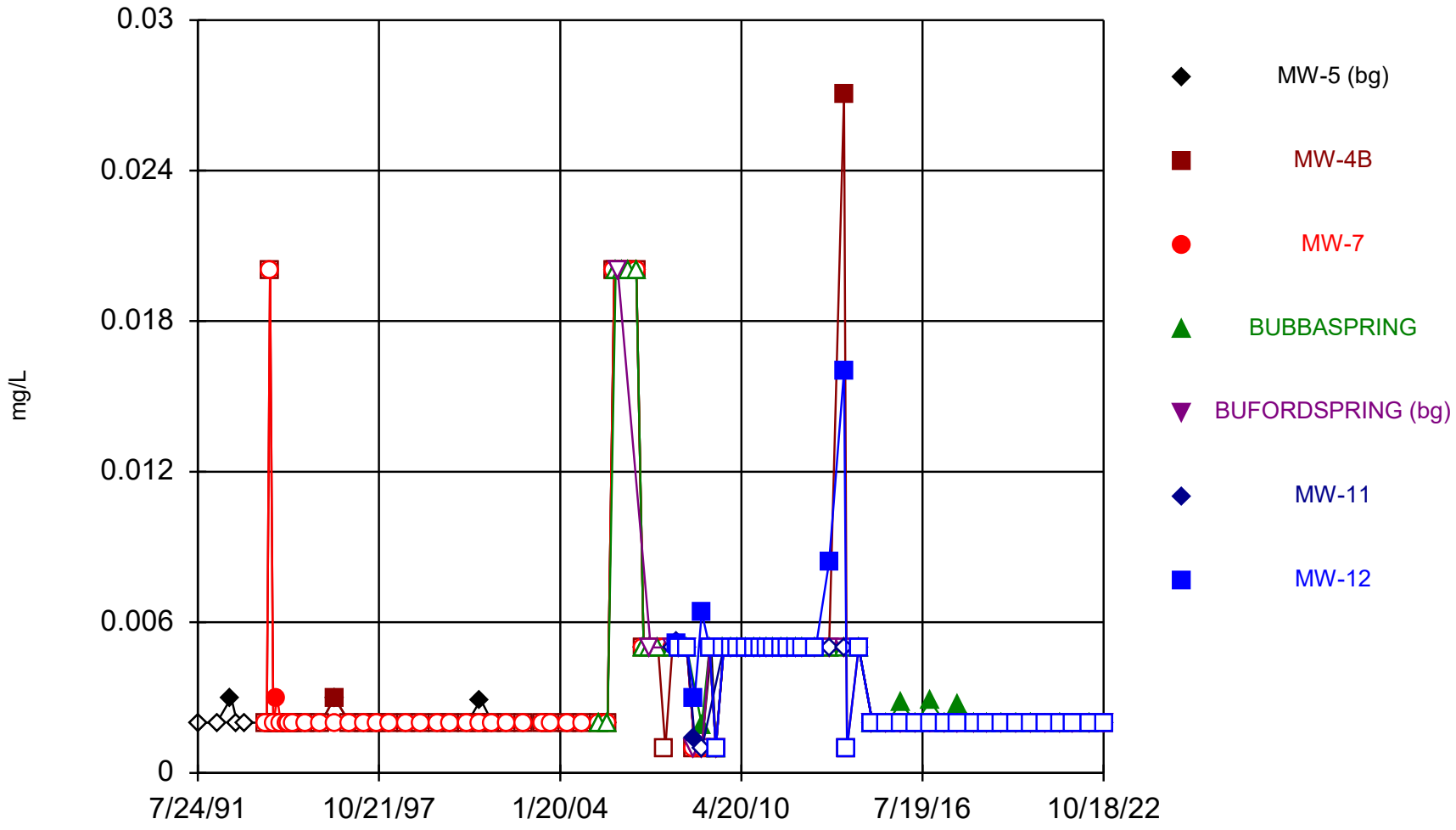


Constituent: Antimony, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Time Series



Constituent: Arsenic, Total Analysis Run 11/29/2022 4:02 PM

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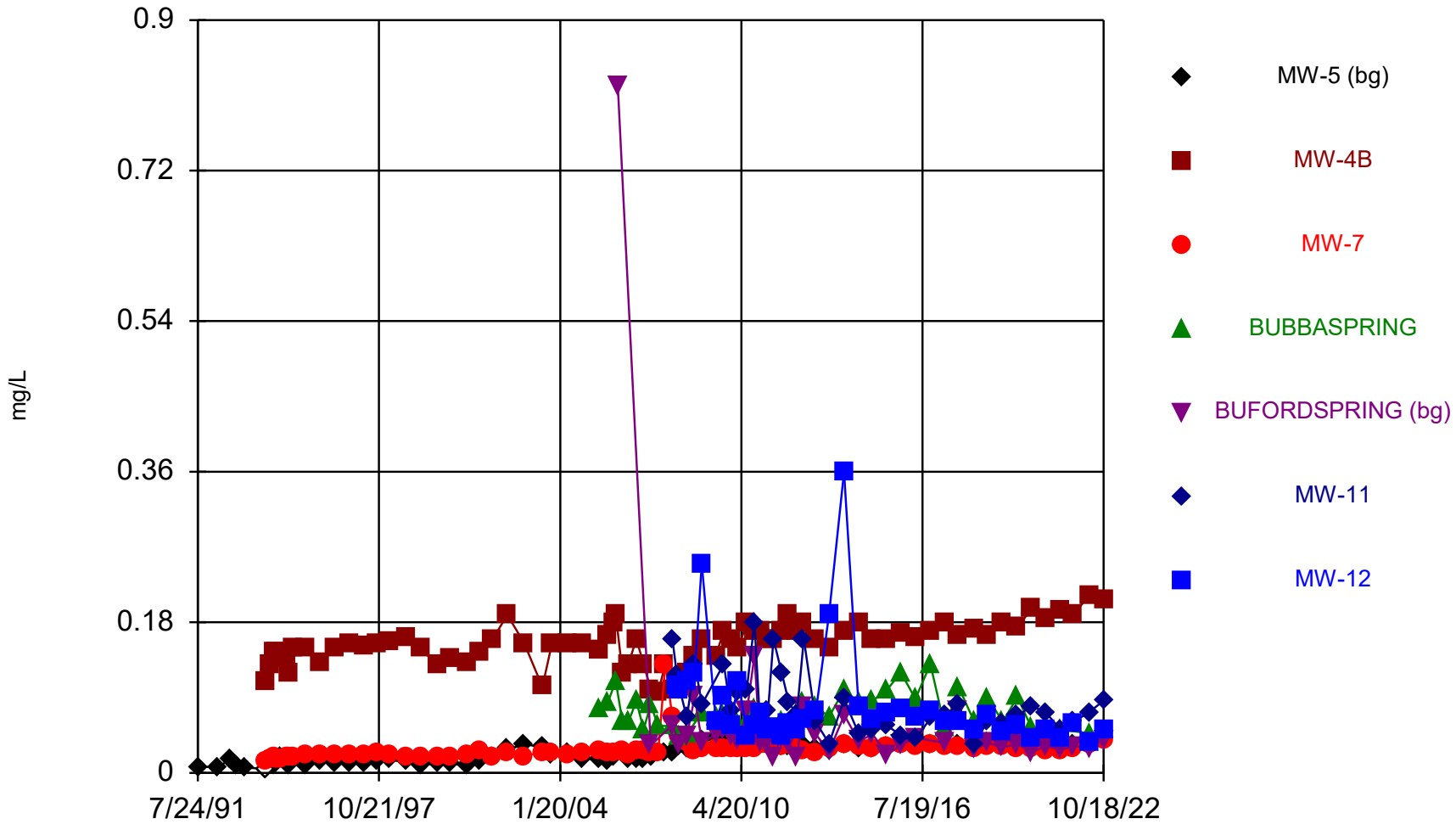

Constituent: Barium, Total Analysis Run 11/29/2022 4:02 PM

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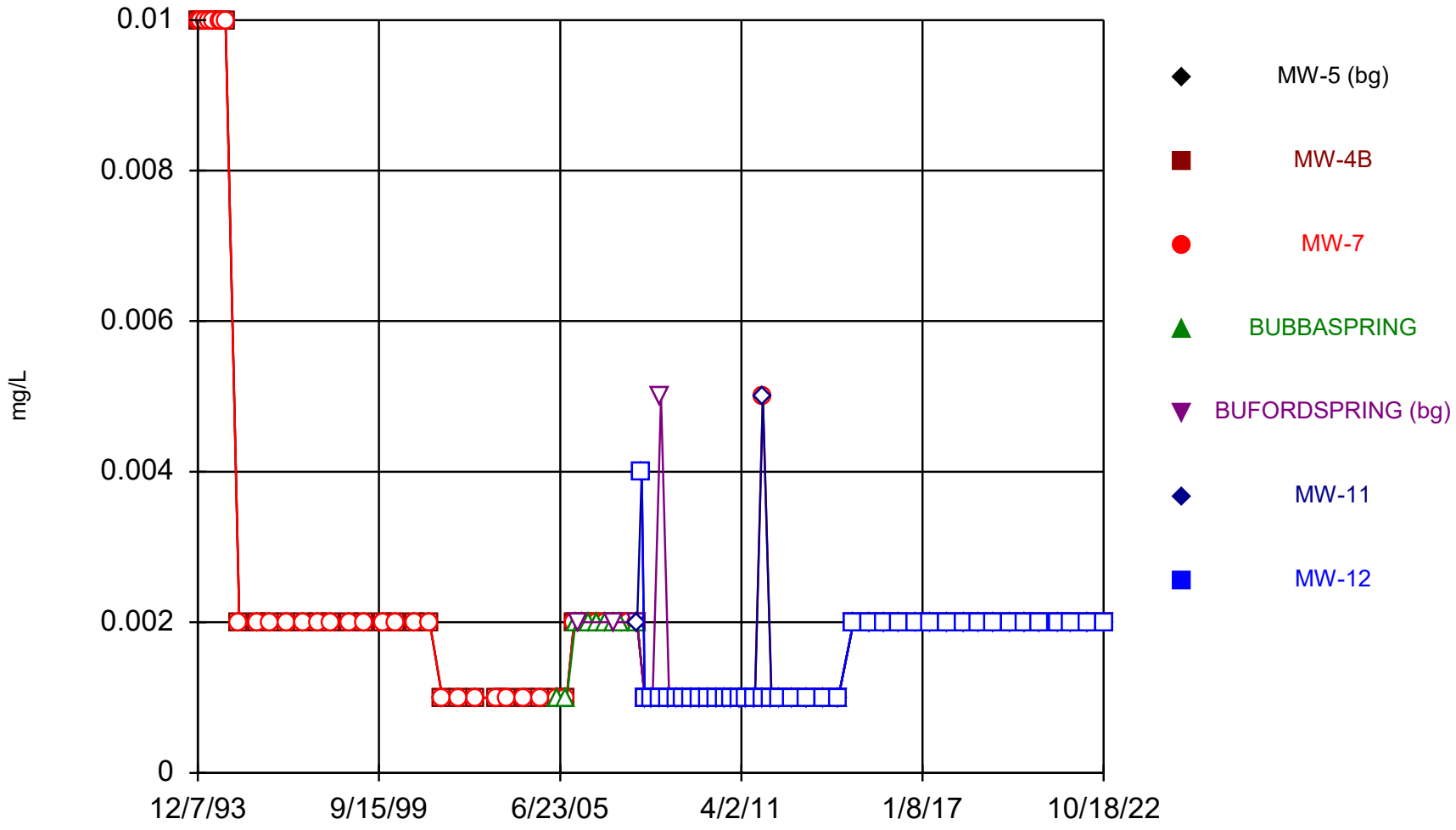

Constituent: Beryllium, Total Analysis Run 11/29/2022 4:02 PM

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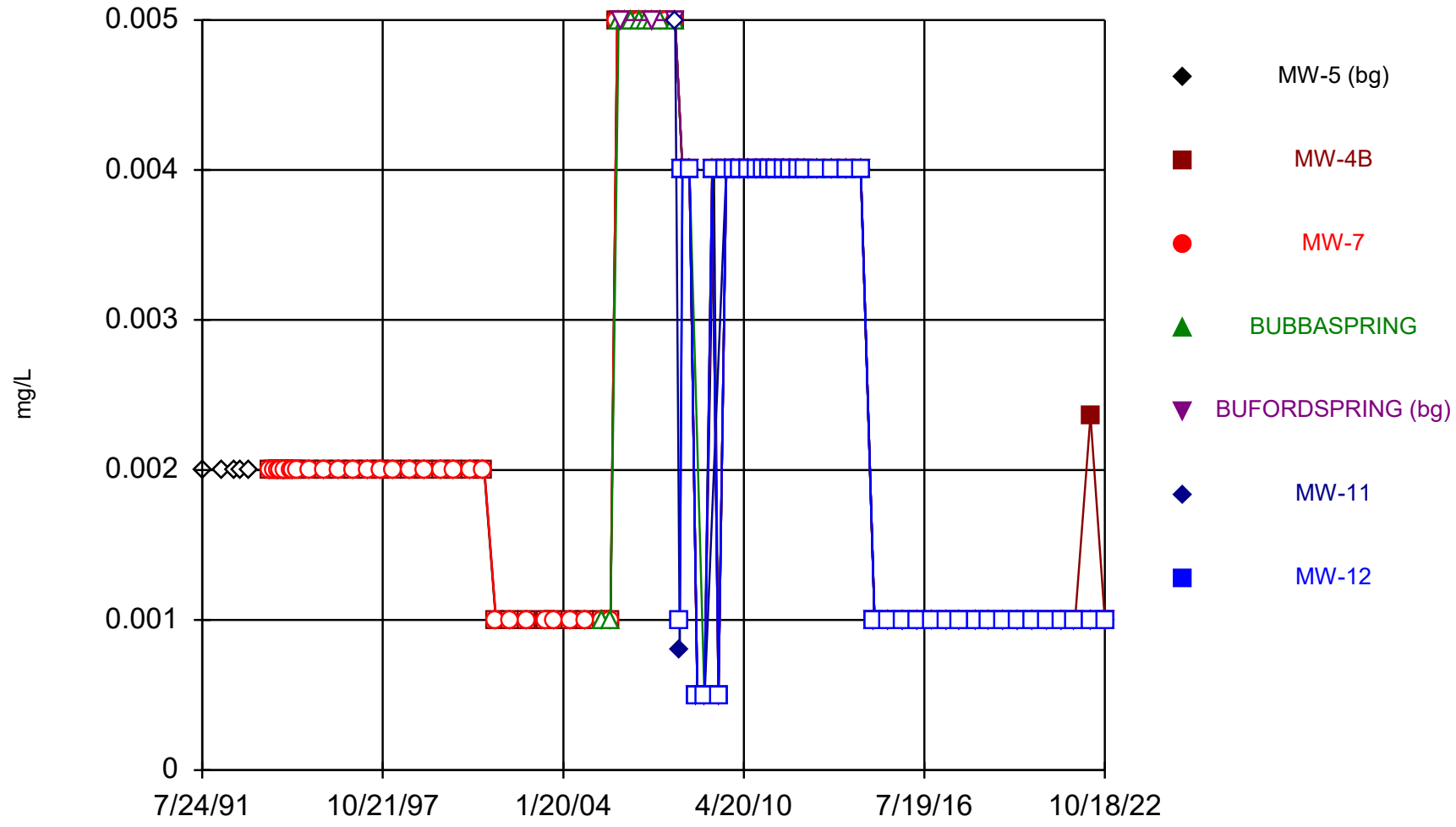
Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium, Total Analysis Run 11/29/2022 4:02 PM

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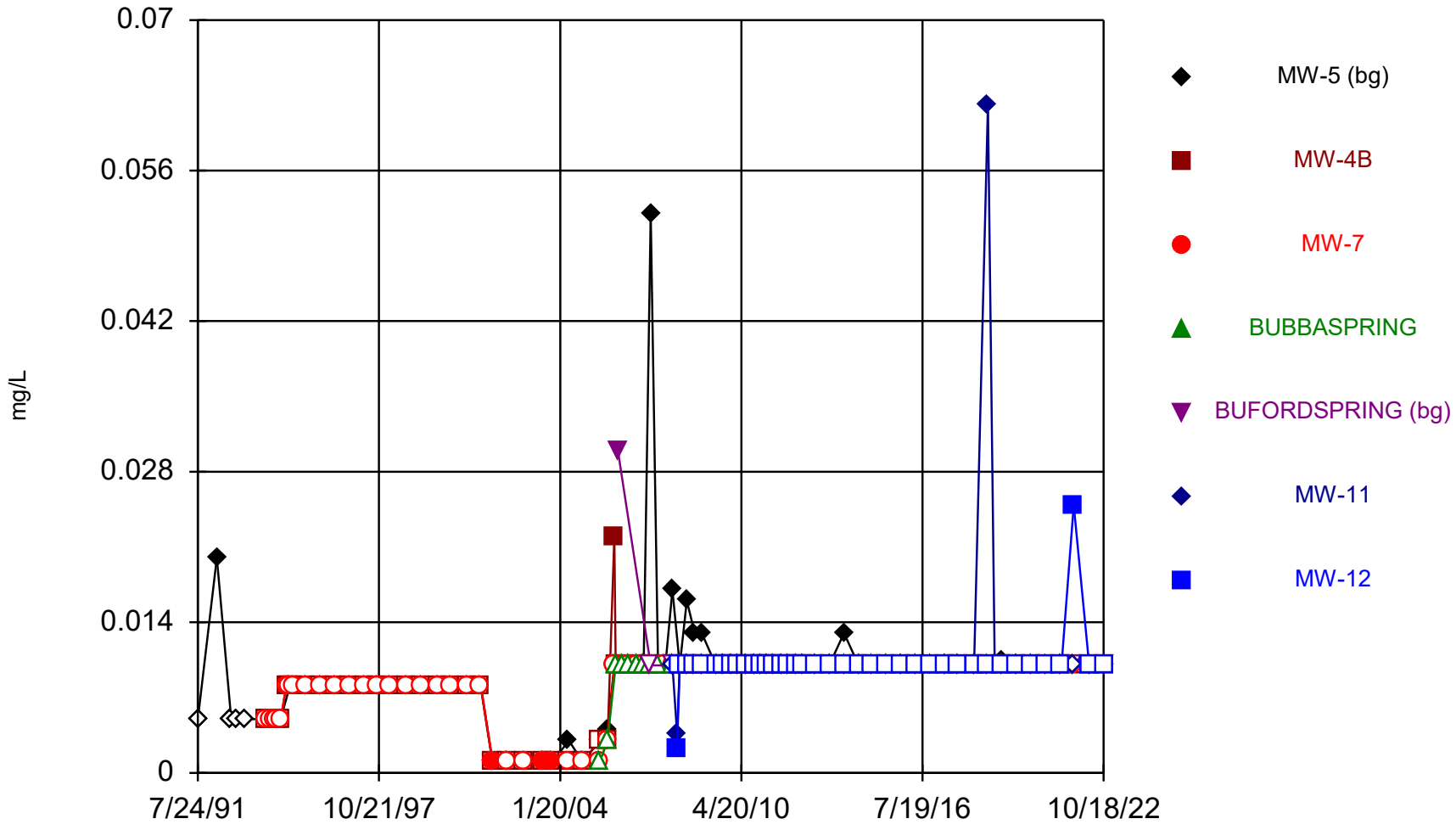

Constituent: Chromium, Total Analysis Run 11/29/2022 4:02 PM

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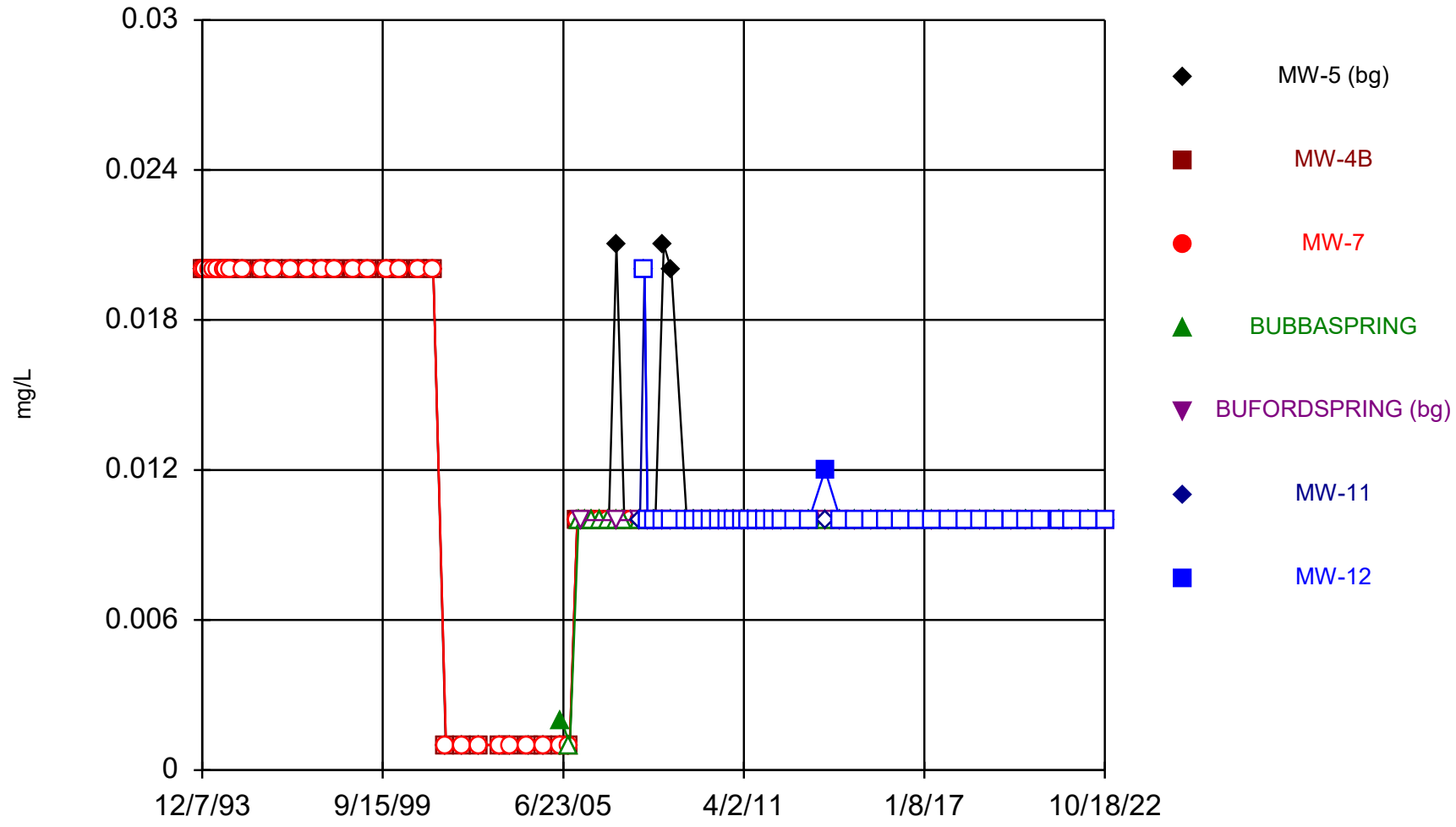

Constituent: Cobalt, Total Analysis Run 11/29/2022 4:02 PM

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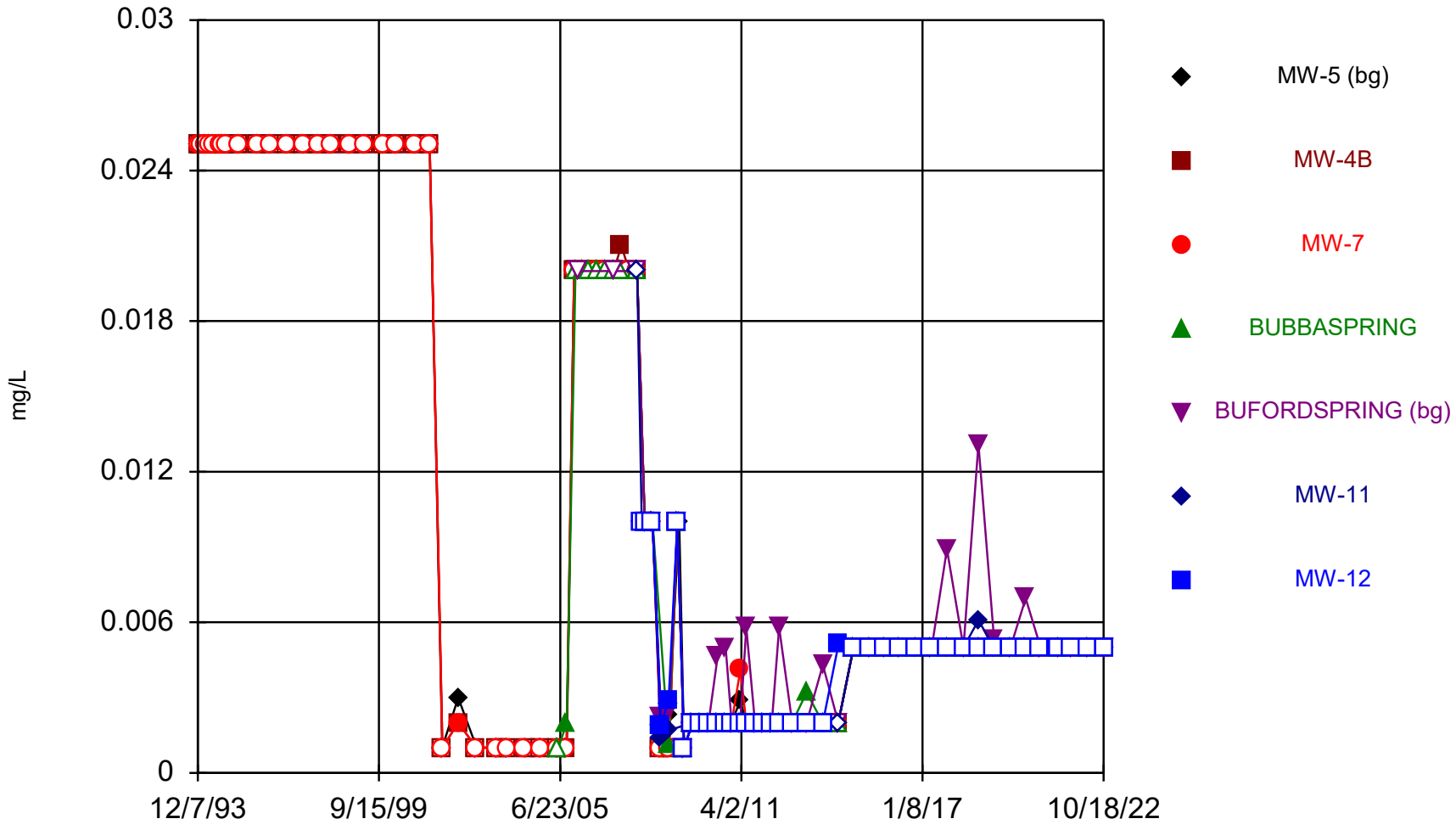

Constituent: Copper, Total Analysis Run 11/29/2022 4:02 PM

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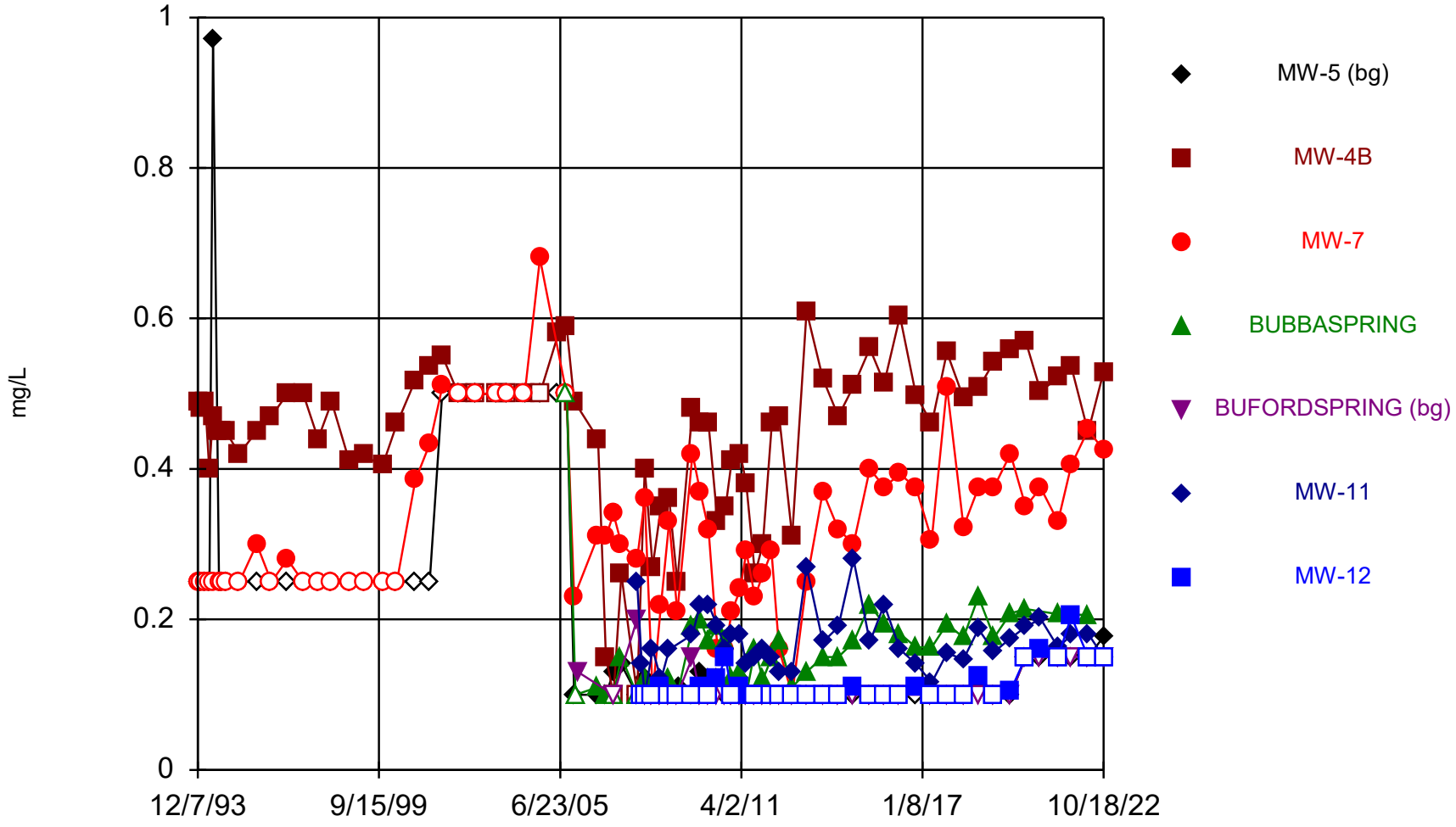
Time Series



Constituent: Fluoride, Total Analysis Run 11/29/2022 4:02 PM

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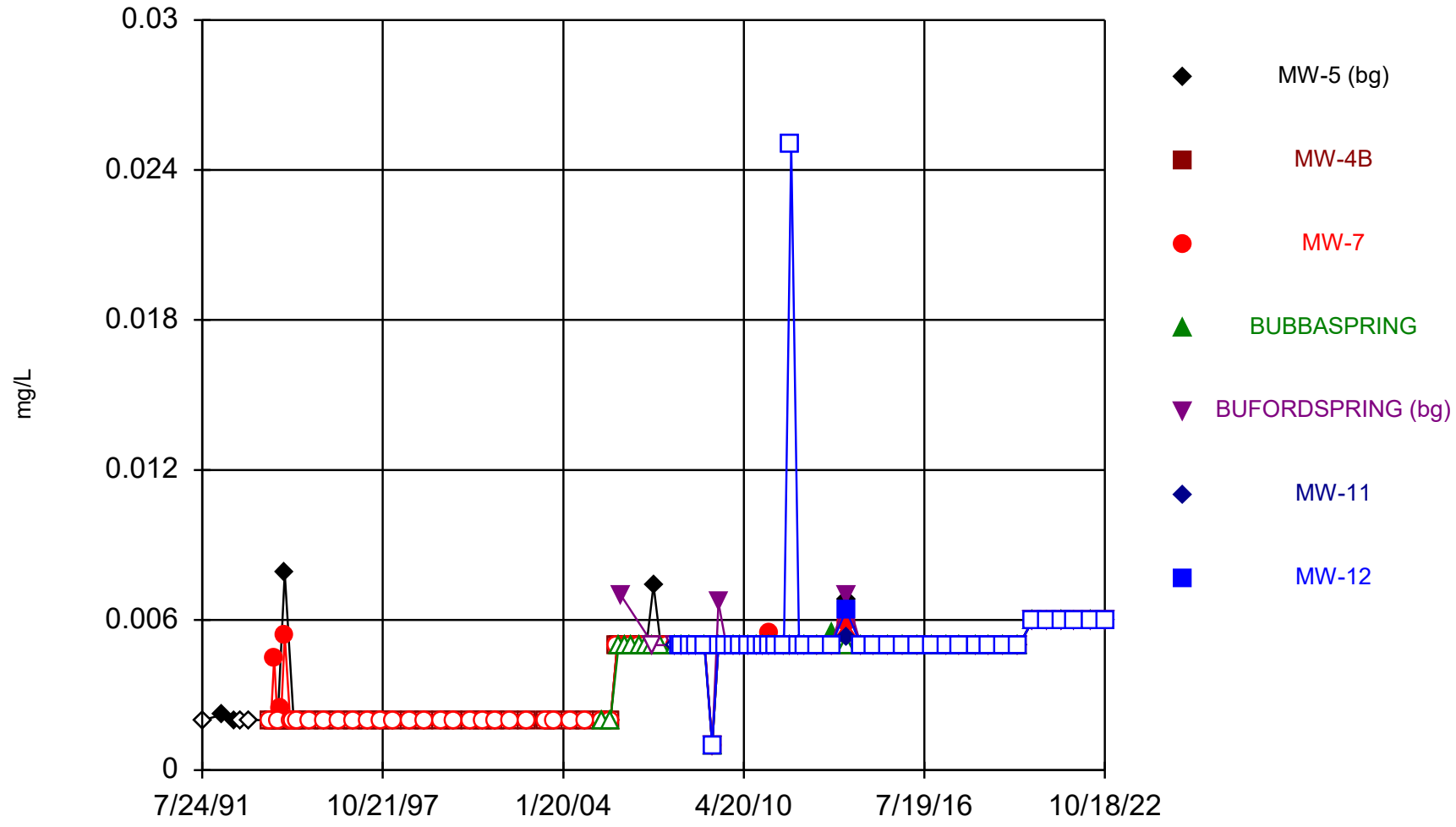

Constituent: Lead, Total Analysis Run 11/29/2022 4:02 PM

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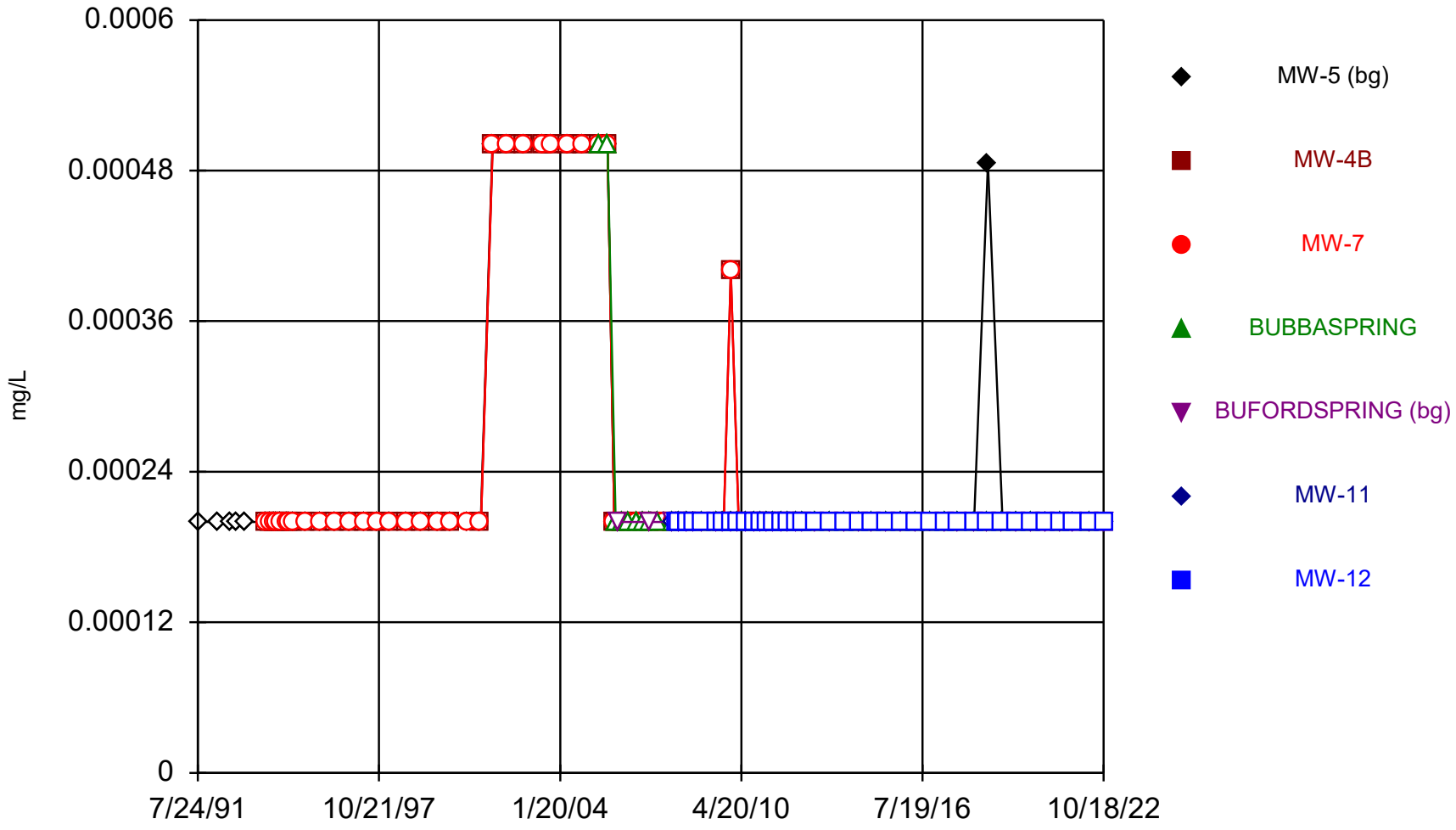

Constituent: Mercury, Total Analysis Run 11/29/2022 4:02 PM

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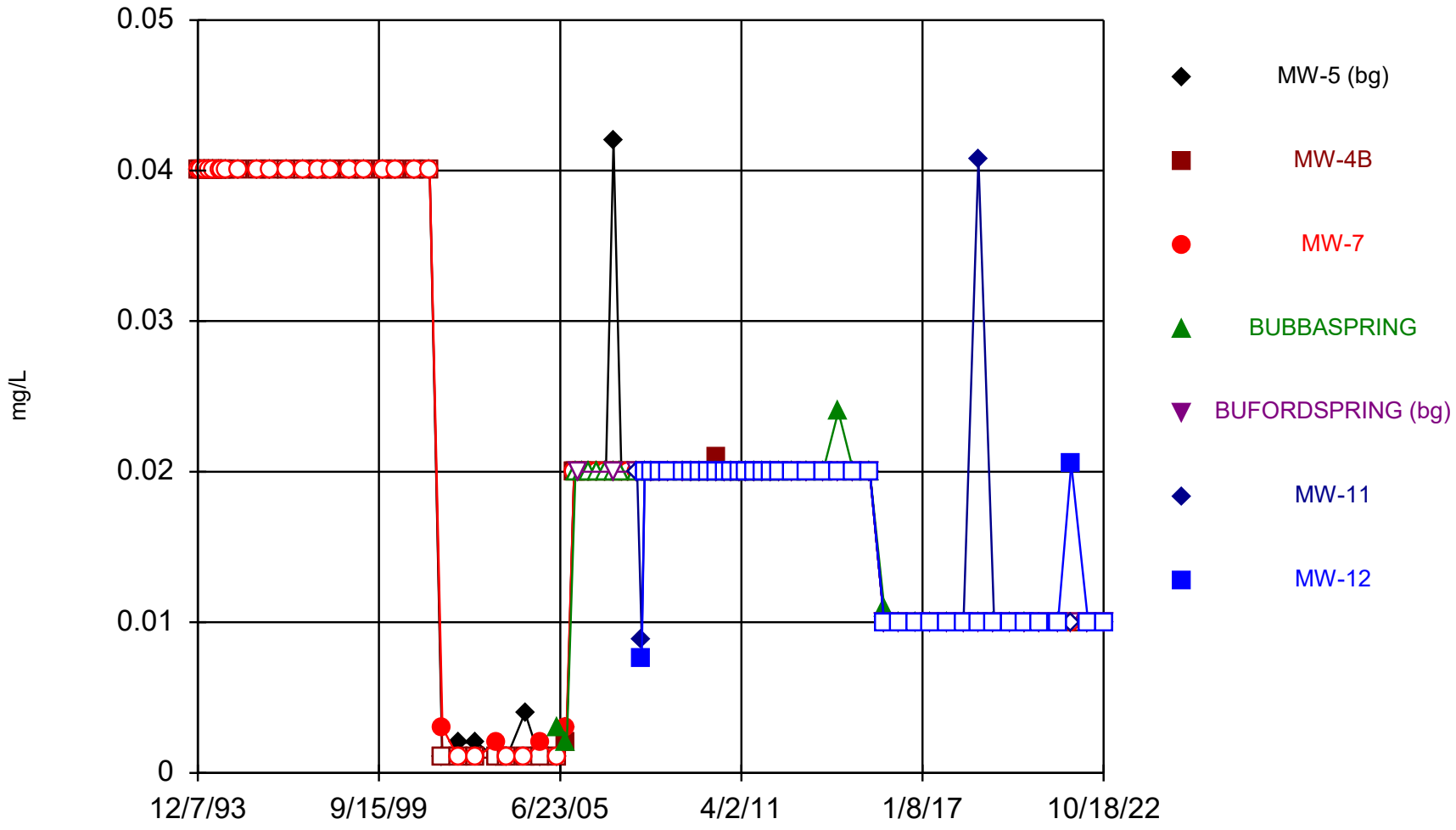
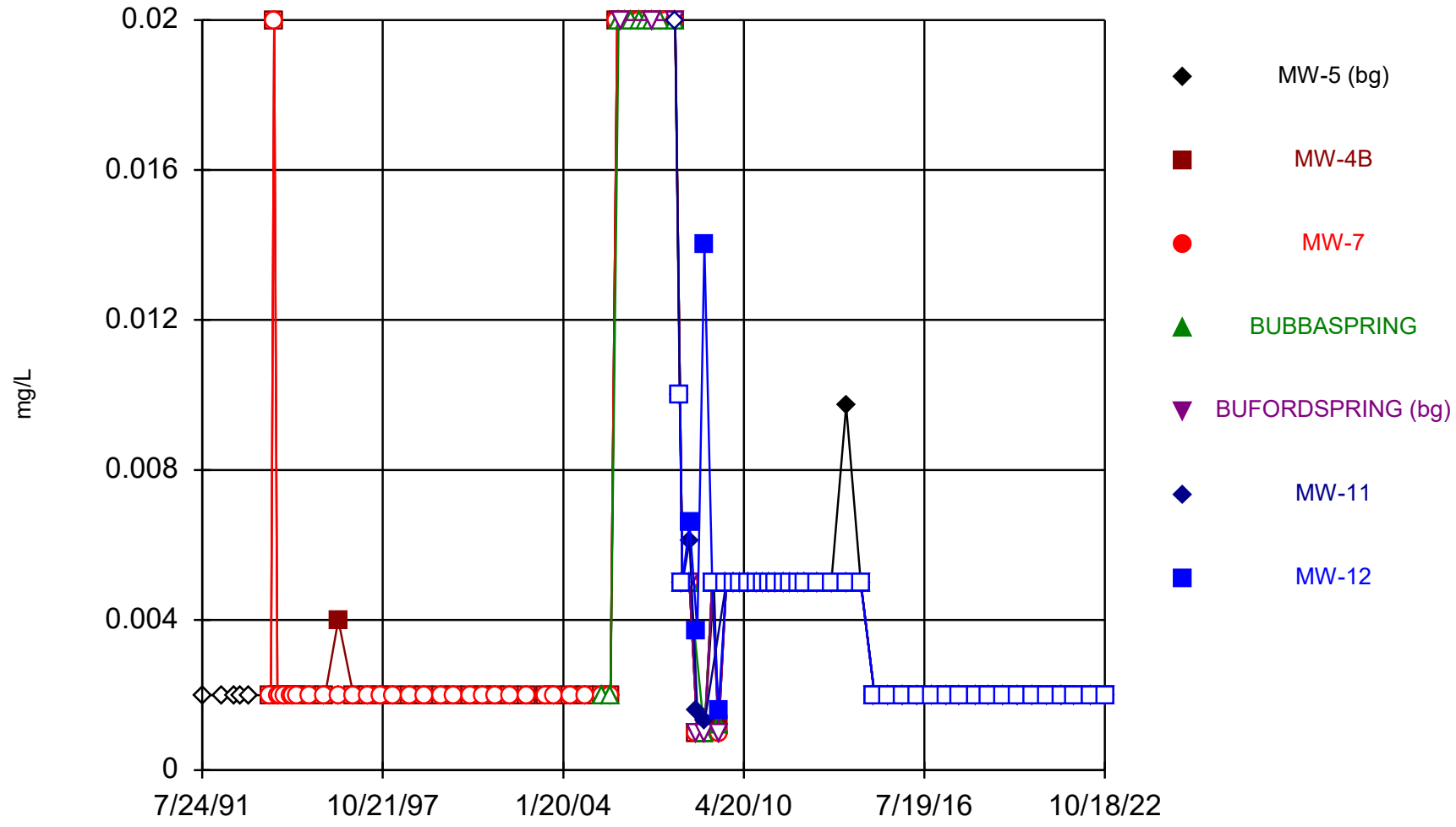


Constituent: Nickel, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Time Series

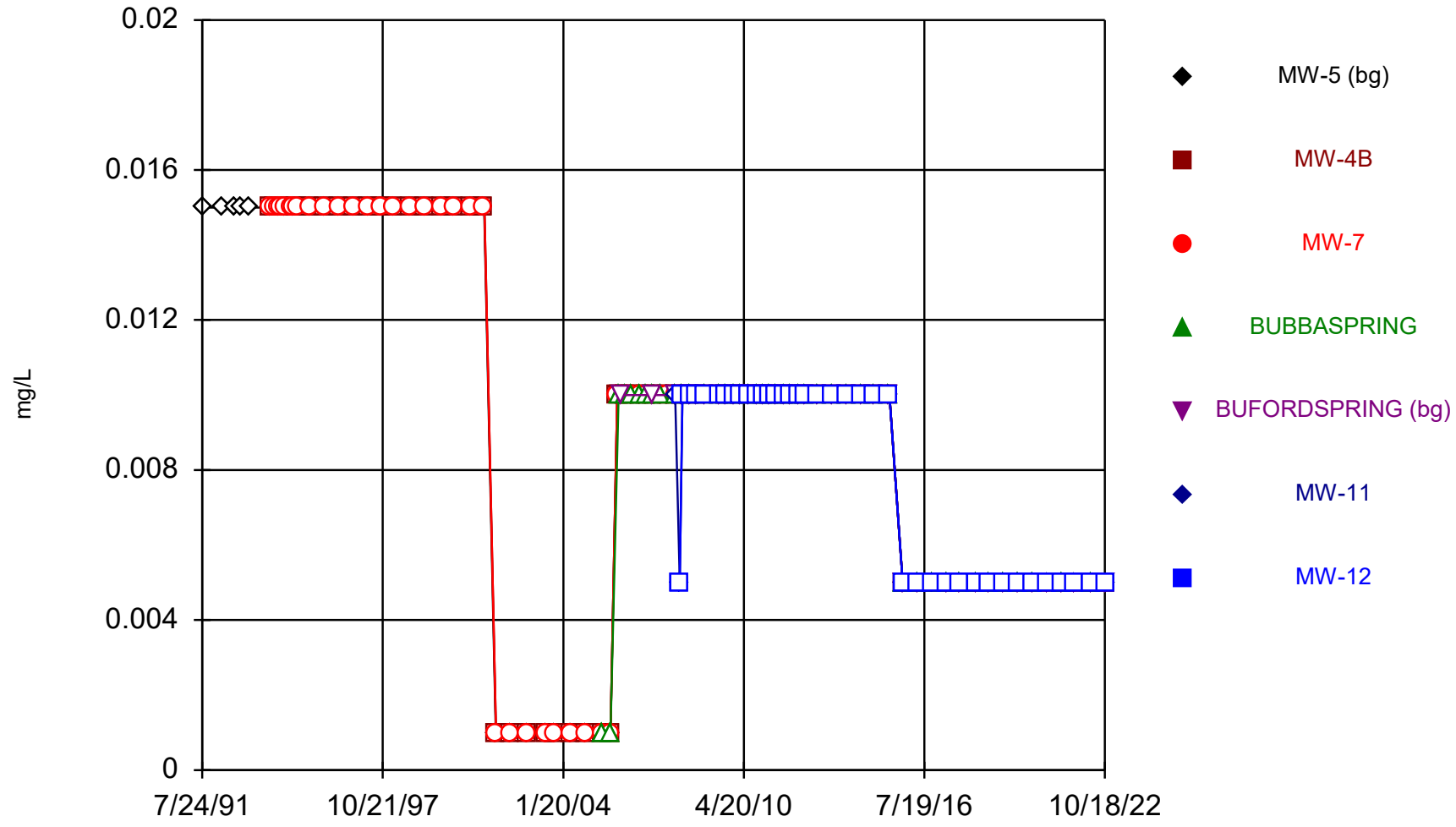


Constituent: Selenium, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Time Series



Constituent: Silver, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

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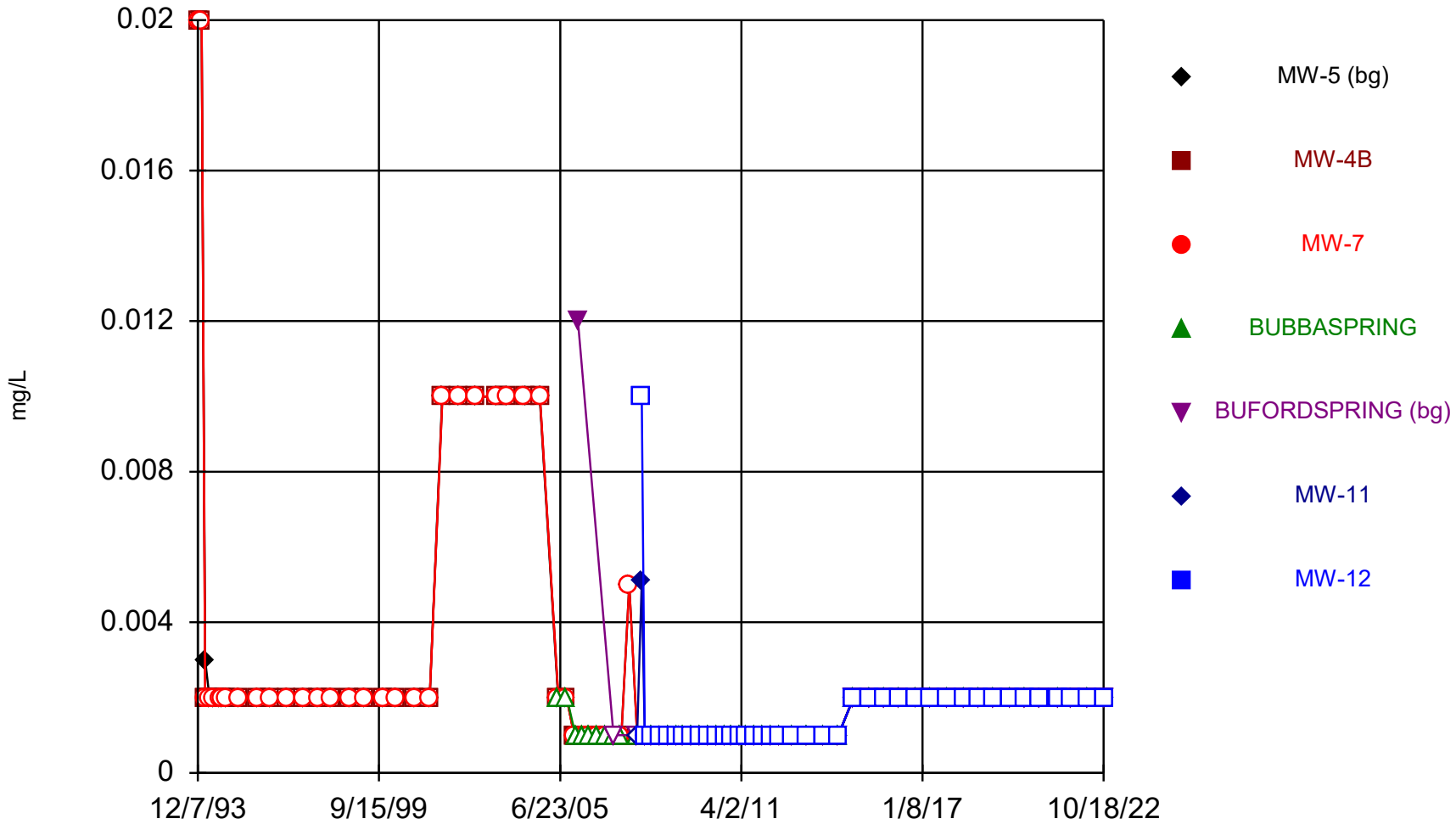
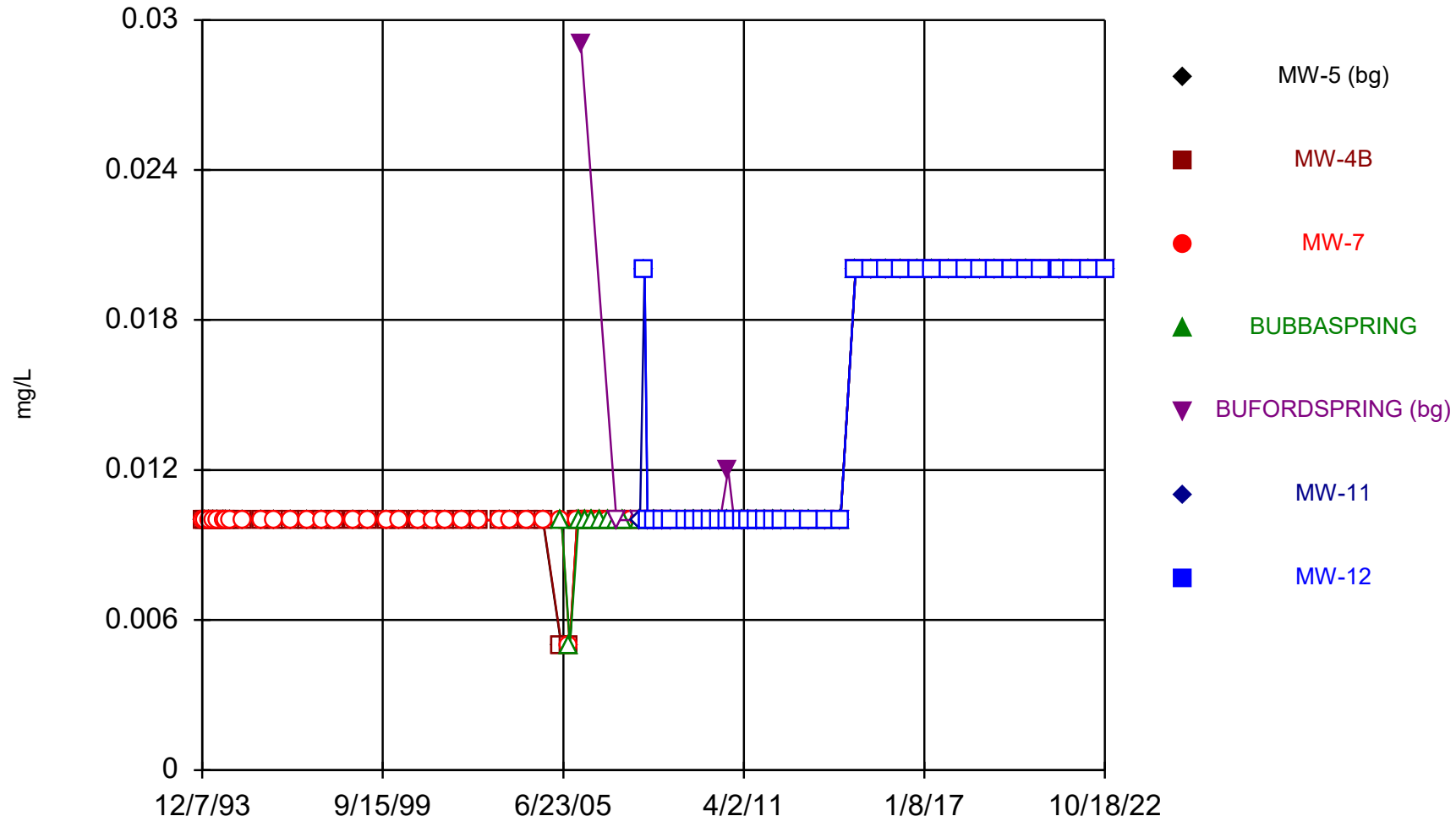


Constituent: Thallium, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Time Series

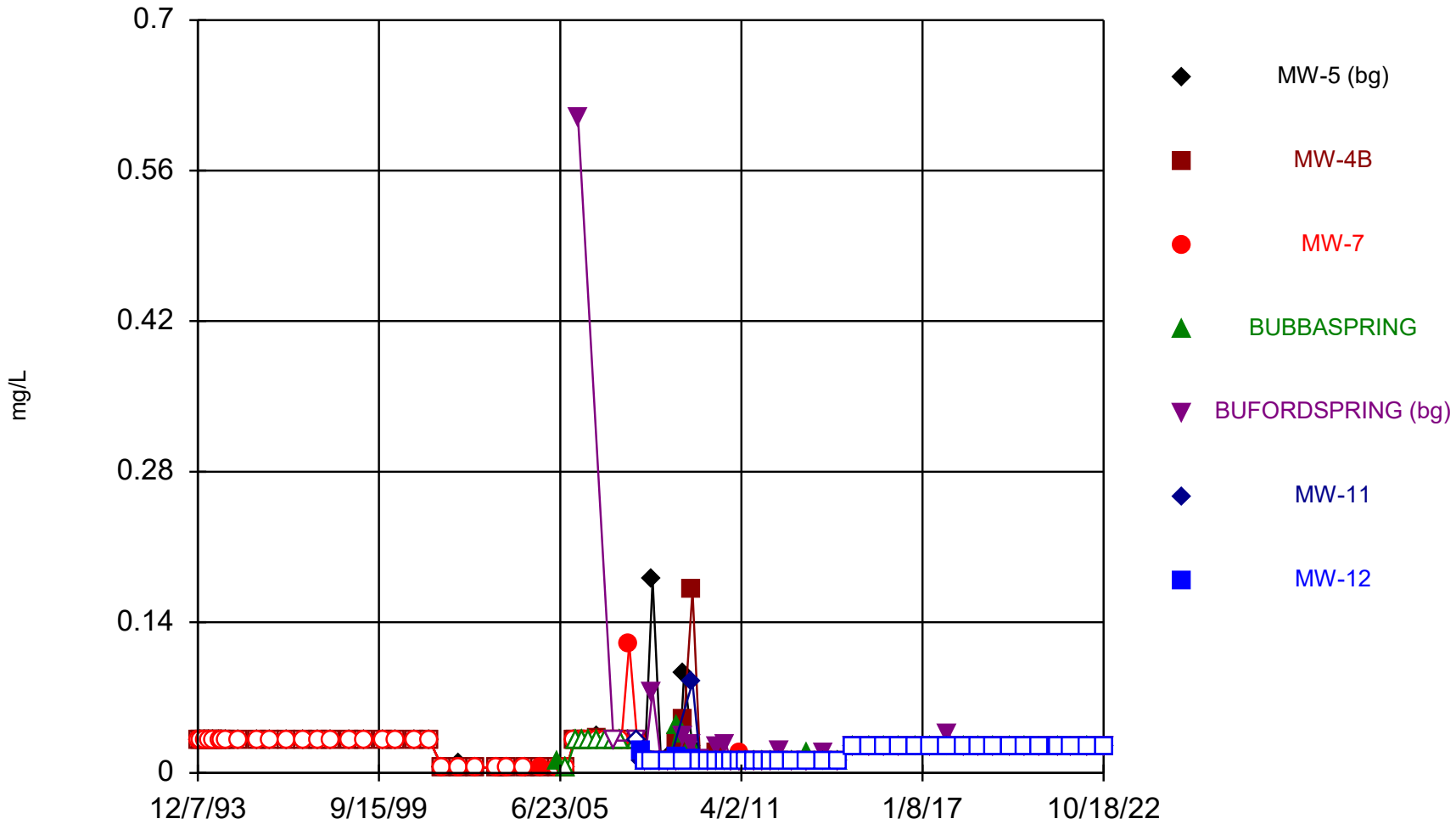


Constituent: Vanadium, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

Hollow symbols indicate censored values.

Time Series



Constituent: Zinc, Total Analysis Run 11/29/2022 4:02 PM

Middle Point LF Client: CEC Data: MPLF Database File

APPENDIX C
LABORATORY REPORTS & FIELD INFORMATION LOGS

ANALYTICAL REPORT

November 07, 2022

BFI-Middle Point Landfill

Sample Delivery Group:	L1548197
Samples Received:	10/19/2022
Project Number:	160-238
Description:	Middlepoint LF - Groundwater

Report To:

Philip Campbell
117 Seaboard Lane
Suite E100
Franklin, TN 37067

Entire Report Reviewed By:

John Hawkins
Project Manager

TABLE OF CONTENTS

DUPLICATE L1548197-01 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 00:00 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:17	10/28/22 14:17	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:19	10/23/22 10:19	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	1	10/25/22 19:18	10/25/22 19:18	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:38	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:41	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:09	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/21/22 23:32	10/21/22 23:32	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.03	10/24/22 12:28	10/25/22 00:12	JDJ	Mt. Juliet, TN

FIELD BLANK L1548197-02 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 13:40 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:26	10/28/22 14:26	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:20	10/23/22 10:20	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	1	10/26/22 14:33	10/26/22 14:33	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:44	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:44	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/21/22 21:21	10/21/22 21:21	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.04	10/24/22 12:28	10/25/22 00:24	JDJ	Mt. Juliet, TN

TRIP BLANK L1548197-03 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 00:00 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/21/22 20:59	10/21/22 20:59	MGF	Mt. Juliet, TN

MW-4B L1548197-04 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 14:05 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:29	10/28/22 14:29	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:22	10/23/22 10:22	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	1	10/25/22 19:53	10/25/22 19:53	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:46	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:47	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/21/22 23:54	10/21/22 23:54	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.04	10/24/22 12:28	10/25/22 00:35	JDJ	Mt. Juliet, TN

MW-5 L1548197-05 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 08:50 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:34	10/28/22 14:34	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:23	10/23/22 10:23	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	1	10/25/22 20:11	10/25/22 20:11	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:48	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:50	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:45	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 00:16	10/22/22 00:16	MGF	Mt. Juliet, TN

MW-5 L1548197-05 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 08:50 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
EDB / DBCP by Method 8011	WG1947868	1	10/24/22 12:28	10/25/22 00:47	JDJ	Mt. Juliet, TN

MW-7 L1548197-06 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 10:05 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:39	10/28/22 14:39	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:25	10/23/22 10:25	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	1	10/25/22 20:29	10/25/22 20:29	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:51	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:52	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 00:38	10/22/22 00:38	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.02	10/24/22 12:28	10/25/22 00:59	JDJ	Mt. Juliet, TN

MW-11 L1548197-07 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 11:05 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:44	10/28/22 14:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:28	10/23/22 10:28	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946267	1	10/25/22 01:30	10/25/22 01:30	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:57	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 18:55	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:53	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 00:59	10/22/22 00:59	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.03	10/24/22 12:28	10/25/22 01:11	JDJ	Mt. Juliet, TN

MW-12 L1548197-08 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 12:24 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 14:49	10/28/22 14:49	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:35	10/23/22 10:35	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946267	1	10/25/22 01:43	10/25/22 01:43	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 08:59	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 19:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:56	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 01:22	10/22/22 01:22	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1.08	10/24/22 12:28	10/25/22 01:22	JDJ	Mt. Juliet, TN

BUFORD SPRING L1548197-09 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 12:20 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 15:04	10/28/22 15:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:37	10/23/22 10:37	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946267	1	10/25/22 01:57	10/25/22 01:57	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 09:01	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 19:06	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 15:59	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 01:44	10/22/22 01:44	MGF	Mt. Juliet, TN

BUFORD SPRING L1548197-09 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 12:20 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
EDB / DBCP by Method 8011	WG1947868	1.05	10/24/22 12:28	10/25/22 01:34	JDJ	Mt. Juliet, TN

LEACHATE L1548197-10 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 14:35 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 15:08	10/28/22 15:08	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	200	10/23/22 10:38	10/23/22 10:38	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946081	100	10/25/22 21:23	10/25/22 21:23	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1949666	10	10/27/22 11:14	10/30/22 09:36	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 19:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1953022	9	11/02/22 21:59	11/03/22 12:10	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1000	10/22/22 03:33	10/22/22 03:33	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1947868	1	10/24/22 12:28	10/25/22 01:46	JDJ	Mt. Juliet, TN

RUNOFF L1548197-11 GW

Collected by: Adrian Baugh | Collected date/time: 10/18/22 13:20 | Received date/time: 10/19/22 16:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1949652	1	10/28/22 15:15	10/28/22 15:15	ARD	Mt. Juliet, TN
Wet Chemistry by Method 350.1	WG1945786	1	10/23/22 10:40	10/23/22 10:40	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1946267	1	10/25/22 02:10	10/25/22 02:10	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG1946242	1	10/26/22 11:26	10/27/22 09:03	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1947679	1	11/04/22 22:59	11/06/22 19:12	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1948509	1	10/26/22 10:20	10/26/22 16:03	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1947152	1	10/22/22 02:06	10/22/22 02:06	MGF	Mt. Juliet, TN
EDB / DBCP by Method 8011	WG1948387	1	10/25/22 11:28	10/25/22 18:48	JDJ	Mt. Juliet, TN

CASE NARRATIVE

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.

John Hawkins
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1548197-10	LEACHATE	6020, 6010B, 350.1, 7470A

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	227		20.0	1	10/28/2022 14:17	WG1949652

Sample Narrative:
L1548197-01 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:19	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	3.28		1.00	1	10/25/2022 19:18	WG1946081
Chloride	133		1.00	1	10/25/2022 19:18	WG1946081
Fluoride	0.152		0.150	1	10/25/2022 19:18	WG1946081
Sulfate	27.8		5.00	1	10/25/2022 19:18	WG1946081

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:38	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0561		0.00500	1	11/06/2022 18:41	WG1947679
Calcium	124		1.00	1	11/06/2022 18:41	WG1947679
Chromium	0.0144	B	0.0100	1	11/06/2022 18:41	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:41	WG1947679
Iron	1.72		0.100	1	11/06/2022 18:41	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:41	WG1947679
Magnesium	7.08		1.00	1	11/06/2022 18:41	WG1947679
Manganese	0.357		0.0100	1	11/06/2022 18:41	WG1947679
Nickel	0.0131		0.0100	1	11/06/2022 18:41	WG1947679
Potassium	5.13		2.00	1	11/06/2022 18:41	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:41	WG1947679
Sodium	44.2		3.00	1	11/06/2022 18:41	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:41	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:09	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:09	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:09	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:09	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:09	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:09	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:09	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:09	WG1948509

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	10/21/2022 23:32	WG1947152
Acrylonitrile	ND		0.0100	1	10/21/2022 23:32	WG1947152
Benzene	ND		0.00100	1	10/21/2022 23:32	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/21/2022 23:32	WG1947152
Bromodichloromethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
Bromoform	ND		0.00100	1	10/21/2022 23:32	WG1947152
Bromomethane	ND		0.00500	1	10/21/2022 23:32	WG1947152
Carbon disulfide	ND		0.00100	1	10/21/2022 23:32	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/21/2022 23:32	WG1947152
Chlorobenzene	ND		0.00100	1	10/21/2022 23:32	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
Chloroethane	ND		0.00500	1	10/21/2022 23:32	WG1947152
Chloroform	ND	J4	0.00500	1	10/21/2022 23:32	WG1947152
Chloromethane	ND		0.00250	1	10/21/2022 23:32	WG1947152
Dibromomethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/21/2022 23:32	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/21/2022 23:32	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/21/2022 23:32	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 23:32	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/21/2022 23:32	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 23:32	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 23:32	WG1947152
Ethylbenzene	ND		0.00100	1	10/21/2022 23:32	WG1947152
2-Hexanone	ND		0.0100	1	10/21/2022 23:32	WG1947152
Iodomethane	ND		0.0100	1	10/21/2022 23:32	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/21/2022 23:32	WG1947152
Methylene Chloride	ND		0.00500	1	10/21/2022 23:32	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/21/2022 23:32	WG1947152
Styrene	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
Tetrachloroethene	ND		0.00100	1	10/21/2022 23:32	WG1947152
Toluene	ND		0.00100	1	10/21/2022 23:32	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/21/2022 23:32	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/21/2022 23:32	WG1947152
Trichloroethene	ND		0.00100	1	10/21/2022 23:32	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/21/2022 23:32	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/21/2022 23:32	WG1947152
Vinyl acetate	ND		0.0100	1	10/21/2022 23:32	WG1947152
Vinyl chloride	ND		0.00100	1	10/21/2022 23:32	WG1947152
Xylenes, Total	ND		0.00300	1	10/21/2022 23:32	WG1947152
(S) Toluene-d8	*101*		*80.0-120*		*10/21/2022 23:32*	WG1947152
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*10/21/2022 23:32*	WG1947152
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*10/21/2022 23:32*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000206	1.03	10/25/2022 00:12	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000206	1.03	10/25/2022 00:12	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20.0	1	10/28/2022 14:26	WG1949652

Sample Narrative:
L1548197-02 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:20	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	10/26/2022 14:33	WG1946081
Chloride	ND		1.00	1	10/26/2022 14:33	WG1946081
Fluoride	ND		0.150	1	10/26/2022 14:33	WG1946081
Sulfate	ND		5.00	1	10/26/2022 14:33	WG1946081

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:44	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	ND		0.00500	1	11/06/2022 18:44	WG1947679
Calcium	ND		1.00	1	11/06/2022 18:44	WG1947679
Chromium	ND		0.0100	1	11/06/2022 18:44	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:44	WG1947679
Iron	ND		0.100	1	11/06/2022 18:44	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:44	WG1947679
Magnesium	ND		1.00	1	11/06/2022 18:44	WG1947679
Manganese	ND		0.0100	1	11/06/2022 18:44	WG1947679
Nickel	ND		0.0100	1	11/06/2022 18:44	WG1947679
Potassium	ND		2.00	1	11/06/2022 18:44	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:44	WG1947679
Sodium	ND		3.00	1	11/06/2022 18:44	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:44	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:39	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:39	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:39	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:39	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:39	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:39	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:39	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:39	WG1948509

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	10/21/2022 21:21	WG1947152
Acrylonitrile	ND		0.0100	1	10/21/2022 21:21	WG1947152
Benzene	ND		0.00100	1	10/21/2022 21:21	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/21/2022 21:21	WG1947152
Bromodichloromethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
Bromoform	ND		0.00100	1	10/21/2022 21:21	WG1947152
Bromomethane	ND		0.00500	1	10/21/2022 21:21	WG1947152
Carbon disulfide	ND		0.00100	1	10/21/2022 21:21	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/21/2022 21:21	WG1947152
Chlorobenzene	ND		0.00100	1	10/21/2022 21:21	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
Chloroethane	ND		0.00500	1	10/21/2022 21:21	WG1947152
Chloroform	ND	J4	0.00500	1	10/21/2022 21:21	WG1947152
Chloromethane	ND		0.00250	1	10/21/2022 21:21	WG1947152
Dibromomethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/21/2022 21:21	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/21/2022 21:21	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/21/2022 21:21	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 21:21	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/21/2022 21:21	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 21:21	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 21:21	WG1947152
Ethylbenzene	ND		0.00100	1	10/21/2022 21:21	WG1947152
2-Hexanone	ND		0.0100	1	10/21/2022 21:21	WG1947152
Iodomethane	ND		0.0100	1	10/21/2022 21:21	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/21/2022 21:21	WG1947152
Methylene Chloride	ND		0.00500	1	10/21/2022 21:21	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/21/2022 21:21	WG1947152
Styrene	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
Tetrachloroethene	ND		0.00100	1	10/21/2022 21:21	WG1947152
Toluene	ND		0.00100	1	10/21/2022 21:21	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/21/2022 21:21	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/21/2022 21:21	WG1947152
Trichloroethene	ND		0.00100	1	10/21/2022 21:21	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/21/2022 21:21	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/21/2022 21:21	WG1947152
Vinyl acetate	ND		0.0100	1	10/21/2022 21:21	WG1947152
Vinyl chloride	ND		0.00100	1	10/21/2022 21:21	WG1947152
Xylenes, Total	ND		0.00300	1	10/21/2022 21:21	WG1947152
(S) Toluene-d8	*99.5*		*80.0-120*		*10/21/2022 21:21*	WG1947152
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*10/21/2022 21:21*	WG1947152
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*10/21/2022 21:21*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000208	1.04	10/25/2022 00:24	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000208	1.04	10/25/2022 00:24	WG1947868

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	10/21/2022 20:59	WG1947152
Acrylonitrile	ND		0.0100	1	10/21/2022 20:59	WG1947152
Benzene	ND		0.00100	1	10/21/2022 20:59	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/21/2022 20:59	WG1947152
Bromodichloromethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
Bromoform	ND		0.00100	1	10/21/2022 20:59	WG1947152
Bromomethane	ND		0.00500	1	10/21/2022 20:59	WG1947152
Carbon disulfide	ND		0.00100	1	10/21/2022 20:59	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/21/2022 20:59	WG1947152
Chlorobenzene	ND		0.00100	1	10/21/2022 20:59	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
Chloroethane	ND		0.00500	1	10/21/2022 20:59	WG1947152
Chloroform	ND	J4	0.00500	1	10/21/2022 20:59	WG1947152
Chloromethane	ND		0.00250	1	10/21/2022 20:59	WG1947152
Dibromomethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/21/2022 20:59	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/21/2022 20:59	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/21/2022 20:59	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 20:59	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/21/2022 20:59	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 20:59	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 20:59	WG1947152
Ethylbenzene	ND		0.00100	1	10/21/2022 20:59	WG1947152
2-Hexanone	ND		0.0100	1	10/21/2022 20:59	WG1947152
Iodomethane	ND		0.0100	1	10/21/2022 20:59	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/21/2022 20:59	WG1947152
Methylene Chloride	ND		0.00500	1	10/21/2022 20:59	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/21/2022 20:59	WG1947152
Styrene	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
Tetrachloroethene	ND		0.00100	1	10/21/2022 20:59	WG1947152
Toluene	ND		0.00100	1	10/21/2022 20:59	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/21/2022 20:59	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/21/2022 20:59	WG1947152
Trichloroethene	ND		0.00100	1	10/21/2022 20:59	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/21/2022 20:59	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/21/2022 20:59	WG1947152
Vinyl acetate	ND		0.0100	1	10/21/2022 20:59	WG1947152
Vinyl chloride	ND		0.00100	1	10/21/2022 20:59	WG1947152
Xylenes, Total	ND		0.00300	1	10/21/2022 20:59	WG1947152
(S) Toluene-d8	*104*		*80.0-120*		*10/21/2022 20:59*	WG1947152
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*10/21/2022 20:59*	WG1947152
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*10/21/2022 20:59*	WG1947152

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	317		20.0	1	10/28/2022 14:29	WG1949652

Sample Narrative:
L1548197-04 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:22	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	3.42		1.00	1	10/25/2022 19:53	WG1946081
Chloride	3.27		1.00	1	10/25/2022 19:53	WG1946081
Fluoride	0.529		0.150	1	10/25/2022 19:53	WG1946081
Sulfate	6.29		5.00	1	10/25/2022 19:53	WG1946081

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:46	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.207		0.00500	1	11/06/2022 18:47	WG1947679
Calcium	58.7		1.00	1	11/06/2022 18:47	WG1947679
Chromium	ND		0.0100	1	11/06/2022 18:47	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:47	WG1947679
Iron	ND		0.100	1	11/06/2022 18:47	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:47	WG1947679
Magnesium	41.8		1.00	1	11/06/2022 18:47	WG1947679
Manganese	0.0328		0.0100	1	11/06/2022 18:47	WG1947679
Nickel	ND		0.0100	1	11/06/2022 18:47	WG1947679
Potassium	2.62		2.00	1	11/06/2022 18:47	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:47	WG1947679
Sodium	3.03		3.00	1	11/06/2022 18:47	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:47	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:42	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:42	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:42	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:42	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:42	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:42	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:42	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:42	WG1948509

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	10/21/2022 23:54	WG1947152
Acrylonitrile	ND		0.0100	1	10/21/2022 23:54	WG1947152
Benzene	ND		0.00100	1	10/21/2022 23:54	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/21/2022 23:54	WG1947152
Bromodichloromethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
Bromoform	ND		0.00100	1	10/21/2022 23:54	WG1947152
Bromomethane	ND		0.00500	1	10/21/2022 23:54	WG1947152
Carbon disulfide	ND		0.00100	1	10/21/2022 23:54	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/21/2022 23:54	WG1947152
Chlorobenzene	ND		0.00100	1	10/21/2022 23:54	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
Chloroethane	ND		0.00500	1	10/21/2022 23:54	WG1947152
Chloroform	ND	J4	0.00500	1	10/21/2022 23:54	WG1947152
Chloromethane	ND		0.00250	1	10/21/2022 23:54	WG1947152
Dibromomethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/21/2022 23:54	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/21/2022 23:54	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/21/2022 23:54	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 23:54	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/21/2022 23:54	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 23:54	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/21/2022 23:54	WG1947152
Ethylbenzene	ND		0.00100	1	10/21/2022 23:54	WG1947152
2-Hexanone	ND		0.0100	1	10/21/2022 23:54	WG1947152
Iodomethane	ND		0.0100	1	10/21/2022 23:54	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/21/2022 23:54	WG1947152
Methylene Chloride	ND		0.00500	1	10/21/2022 23:54	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/21/2022 23:54	WG1947152
Styrene	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
Tetrachloroethene	ND		0.00100	1	10/21/2022 23:54	WG1947152
Toluene	ND		0.00100	1	10/21/2022 23:54	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/21/2022 23:54	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/21/2022 23:54	WG1947152
Trichloroethene	ND		0.00100	1	10/21/2022 23:54	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/21/2022 23:54	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/21/2022 23:54	WG1947152
Vinyl acetate	ND		0.0100	1	10/21/2022 23:54	WG1947152
Vinyl chloride	ND		0.00100	1	10/21/2022 23:54	WG1947152
Xylenes, Total	ND		0.00300	1	10/21/2022 23:54	WG1947152
(S) Toluene-d8	*98.9*		*80.0-120*		*10/21/2022 23:54*	WG1947152
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*10/21/2022 23:54*	WG1947152
(S) 1,2-Dichloroethane-d4	*112*		*70.0-130*		*10/21/2022 23:54*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000208	1.04	10/25/2022 00:35	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000208	1.04	10/25/2022 00:35	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	223		20.0	1	10/28/2022 14:34	WG1949652

Sample Narrative:
L1548197-05 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:23	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	10/25/2022 20:11	WG1946081
Chloride	1.46		1.00	1	10/25/2022 20:11	WG1946081
Fluoride	0.177		0.150	1	10/25/2022 20:11	WG1946081
Sulfate	ND		5.00	1	10/25/2022 20:11	WG1946081

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:48	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0423		0.00500	1	11/06/2022 18:50	WG1947679
Calcium	62.6		1.00	1	11/06/2022 18:50	WG1947679
Chromium	ND		0.0100	1	11/06/2022 18:50	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:50	WG1947679
Iron	0.170		0.100	1	11/06/2022 18:50	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:50	WG1947679
Magnesium	11.2		1.00	1	11/06/2022 18:50	WG1947679
Manganese	0.389		0.0100	1	11/06/2022 18:50	WG1947679
Nickel	ND		0.0100	1	11/06/2022 18:50	WG1947679
Potassium	ND		2.00	1	11/06/2022 18:50	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:50	WG1947679
Sodium	8.36		3.00	1	11/06/2022 18:50	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:50	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:45	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:45	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:45	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:45	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:45	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:45	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:45	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:45	WG1948509

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	10/22/2022 00:16	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 00:16	WG1947152
Benzene	ND		0.00100	1	10/22/2022 00:16	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 00:16	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 00:16	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 00:16	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 00:16	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 00:16	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 00:16	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 00:16	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 00:16	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 00:16	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:16	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 00:16	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 00:16	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:16	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 00:16	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:16	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:16	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 00:16	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 00:16	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 00:16	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 00:16	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 00:16	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 00:16	WG1947152
Styrene	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 00:16	WG1947152
Toluene	ND		0.00100	1	10/22/2022 00:16	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 00:16	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 00:16	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 00:16	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 00:16	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 00:16	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 00:16	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 00:16	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 00:16	WG1947152
(S) Toluene-d8	*102*		*80.0-120*		*10/22/2022 00:16*	WG1947152
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*10/22/2022 00:16*	WG1947152
(S) 1,2-Dichloroethane-d4	*118*		*70.0-130*		*10/22/2022 00:16*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000200	1	10/25/2022 00:47	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000200	1	10/25/2022 00:47	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	279		20.0	1	10/28/2022 14:39	WG1949652

Sample Narrative:
L1548197-06 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:25	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	ND		1.00	1	10/25/2022 20:29	WG1946081
Chloride	5.78		1.00	1	10/25/2022 20:29	WG1946081
Fluoride	0.425		0.150	1	10/25/2022 20:29	WG1946081
Sulfate	37.4		5.00	1	10/25/2022 20:29	WG1946081

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:51	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0389		0.00500	1	11/06/2022 18:52	WG1947679
Calcium	70.3		1.00	1	11/06/2022 18:52	WG1947679
Chromium	ND		0.0100	1	11/06/2022 18:52	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:52	WG1947679
Iron	ND		0.100	1	11/06/2022 18:52	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:52	WG1947679
Magnesium	33.3		1.00	1	11/06/2022 18:52	WG1947679
Manganese	ND		0.0100	1	11/06/2022 18:52	WG1947679
Nickel	ND		0.0100	1	11/06/2022 18:52	WG1947679
Potassium	4.59		2.00	1	11/06/2022 18:52	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:52	WG1947679
Sodium	3.24		3.00	1	11/06/2022 18:52	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:52	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:49	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:49	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:49	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:49	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:49	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:49	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:49	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:49	WG1948509

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	10/22/2022 00:38	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 00:38	WG1947152
Benzene	ND		0.00100	1	10/22/2022 00:38	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 00:38	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 00:38	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 00:38	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 00:38	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 00:38	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 00:38	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 00:38	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 00:38	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 00:38	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:38	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 00:38	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 00:38	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:38	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 00:38	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:38	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:38	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 00:38	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 00:38	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 00:38	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 00:38	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 00:38	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 00:38	WG1947152
Styrene	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 00:38	WG1947152
Toluene	ND		0.00100	1	10/22/2022 00:38	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 00:38	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 00:38	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 00:38	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 00:38	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 00:38	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 00:38	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 00:38	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 00:38	WG1947152
(S) Toluene-d8	*99.1*		*80.0-120*		*10/22/2022 00:38*	WG1947152
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*10/22/2022 00:38*	WG1947152
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*10/22/2022 00:38*	WG1947152

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	10/25/2022 00:59	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000204	1.02	10/25/2022 00:59	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Alkalinity	226		20.0	1	10/28/2022 14:44	WG1949652

Sample Narrative:

L1548197-07 WG1949652: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 350.1

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Ammonia Nitrogen	1.90		0.250	1	10/23/2022 10:28	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Bromide	1.80		1.00	1	10/25/2022 01:30	WG1946267
Chloride	38.3		1.00	1	10/25/2022 01:30	WG1946267
Fluoride	ND		0.150	1	10/25/2022 01:30	WG1946267
Sulfate	ND		5.00	1	10/25/2022 01:30	WG1946267

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	10/27/2022 08:57	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Barium	0.0864		0.00500	1	11/06/2022 18:55	WG1947679
Calcium	72.0		1.00	1	11/06/2022 18:55	WG1947679
Chromium	ND		0.0100	1	11/06/2022 18:55	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 18:55	WG1947679
Iron	4.98		0.100	1	11/06/2022 18:55	WG1947679
Lead	ND		0.00600	1	11/06/2022 18:55	WG1947679
Magnesium	5.85		1.00	1	11/06/2022 18:55	WG1947679
Manganese	1.49		0.0100	1	11/06/2022 18:55	WG1947679
Nickel	ND		0.0100	1	11/06/2022 18:55	WG1947679
Potassium	9.67		2.00	1	11/06/2022 18:55	WG1947679
Silver	ND		0.00500	1	11/06/2022 18:55	WG1947679
Sodium	23.6		3.00	1	11/06/2022 18:55	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 18:55	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	10/26/2022 15:53	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:53	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:53	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:53	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:53	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:53	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:53	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:53	WG1948509

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	10/22/2022 00:59	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 00:59	WG1947152
Benzene	ND		0.00100	1	10/22/2022 00:59	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 00:59	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 00:59	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 00:59	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 00:59	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 00:59	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 00:59	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 00:59	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 00:59	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 00:59	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 00:59	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 00:59	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 00:59	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:59	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 00:59	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:59	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 00:59	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 00:59	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 00:59	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 00:59	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 00:59	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 00:59	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 00:59	WG1947152
Styrene	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 00:59	WG1947152
Toluene	ND		0.00100	1	10/22/2022 00:59	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 00:59	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 00:59	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 00:59	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 00:59	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 00:59	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 00:59	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 00:59	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 00:59	WG1947152
(S) Toluene-d8	*97.6*		*80.0-120*		*10/22/2022 00:59*	WG1947152
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*10/22/2022 00:59*	WG1947152
(S) 1,2-Dichloroethane-d4	*115*		*70.0-130*		*10/22/2022 00:59*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000206	1.03	10/25/2022 01:11	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000206	1.03	10/25/2022 01:11	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	229		20.0	1	10/28/2022 14:49	WG1949652

Sample Narrative:
L1548197-08 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:35	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	2.04		1.00	1	10/25/2022 01:43	WG1946267
Chloride	131		1.00	1	10/25/2022 01:43	WG1946267
Fluoride	ND		0.150	1	10/25/2022 01:43	WG1946267
Sulfate	31.1		5.00	1	10/25/2022 01:43	WG1946267

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 08:59	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0525		0.00500	1	11/06/2022 19:03	WG1947679
Calcium	124		1.00	1	11/06/2022 19:03	WG1947679
Chromium	ND		0.0100	1	11/06/2022 19:03	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 19:03	WG1947679
Iron	0.952		0.100	1	11/06/2022 19:03	WG1947679
Lead	ND		0.00600	1	11/06/2022 19:03	WG1947679
Magnesium	7.05		1.00	1	11/06/2022 19:03	WG1947679
Manganese	0.155		0.0100	1	11/06/2022 19:03	WG1947679
Nickel	ND		0.0100	1	11/06/2022 19:03	WG1947679
Potassium	5.19		2.00	1	11/06/2022 19:03	WG1947679
Silver	ND		0.00500	1	11/06/2022 19:03	WG1947679
Sodium	45.6		3.00	1	11/06/2022 19:03	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 19:03	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:56	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:56	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:56	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:56	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:56	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:56	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:56	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:56	WG1948509

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	10/22/2022 01:22	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 01:22	WG1947152
Benzene	ND		0.00100	1	10/22/2022 01:22	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 01:22	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 01:22	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 01:22	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 01:22	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 01:22	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 01:22	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 01:22	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 01:22	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 01:22	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 01:22	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 01:22	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 01:22	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 01:22	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 01:22	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 01:22	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 01:22	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 01:22	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 01:22	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 01:22	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 01:22	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 01:22	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 01:22	WG1947152
Styrene	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 01:22	WG1947152
Toluene	ND		0.00100	1	10/22/2022 01:22	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 01:22	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 01:22	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 01:22	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 01:22	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 01:22	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 01:22	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 01:22	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 01:22	WG1947152
(S) Toluene-d8	*101*		*80.0-120*		*10/22/2022 01:22*	WG1947152
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*10/22/2022 01:22*	WG1947152
(S) 1,2-Dichloroethane-d4	*117*		*70.0-130*		*10/22/2022 01:22*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000216	1.08	10/25/2022 01:22	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000216	1.08	10/25/2022 01:22	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	260		20.0	1	10/28/2022 15:04	WG1949652

Sample Narrative:
L1548197-09 WG1949652: Endpoint pH 4.5 Headspace

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	10/23/2022 10:37	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	1.96		1.00	1	10/25/2022 01:57	WG1946267
Chloride	11.4		1.00	1	10/25/2022 01:57	WG1946267
Fluoride	ND		0.150	1	10/25/2022 01:57	WG1946267
Sulfate	11.5		5.00	1	10/25/2022 01:57	WG1946267

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 09:01	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0395		0.00500	1	11/06/2022 19:06	WG1947679
Calcium	97.2		1.00	1	11/06/2022 19:06	WG1947679
Chromium	ND		0.0100	1	11/06/2022 19:06	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 19:06	WG1947679
Iron	0.142		0.100	1	11/06/2022 19:06	WG1947679
Lead	ND		0.00600	1	11/06/2022 19:06	WG1947679
Magnesium	5.55		1.00	1	11/06/2022 19:06	WG1947679
Manganese	0.932		0.0100	1	11/06/2022 19:06	WG1947679
Nickel	ND		0.0100	1	11/06/2022 19:06	WG1947679
Potassium	ND		2.00	1	11/06/2022 19:06	WG1947679
Silver	ND		0.00500	1	11/06/2022 19:06	WG1947679
Sodium	6.70		3.00	1	11/06/2022 19:06	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 19:06	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 15:59	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 15:59	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 15:59	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 15:59	WG1948509
Copper	ND		0.00500	1	10/26/2022 15:59	WG1948509
Selenium	ND		0.00200	1	10/26/2022 15:59	WG1948509
Thallium	ND		0.00200	1	10/26/2022 15:59	WG1948509
Zinc	ND		0.0250	1	10/26/2022 15:59	WG1948509

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	10/22/2022 01:44	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 01:44	WG1947152
Benzene	ND		0.00100	1	10/22/2022 01:44	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 01:44	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 01:44	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 01:44	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 01:44	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 01:44	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 01:44	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 01:44	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 01:44	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 01:44	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 01:44	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 01:44	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 01:44	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 01:44	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 01:44	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 01:44	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 01:44	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 01:44	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 01:44	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 01:44	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 01:44	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 01:44	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 01:44	WG1947152
Styrene	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 01:44	WG1947152
Toluene	ND		0.00100	1	10/22/2022 01:44	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 01:44	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 01:44	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 01:44	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 01:44	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 01:44	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 01:44	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 01:44	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 01:44	WG1947152
(S) Toluene-d8	*97.8*		*80.0-120*		*10/22/2022 01:44*	WG1947152
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*10/22/2022 01:44*	WG1947152
(S) 1,2-Dichloroethane-d4	*113*		*70.0-130*		*10/22/2022 01:44*	WG1947152

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	10/25/2022 01:34	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000210	1.05	10/25/2022 01:34	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	7850		100	1	10/28/2022 15:08	WG1949652

Sample Narrative:
L1548197-10 WG1949652: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	1850		50.0	200	10/23/2022 10:38	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	122		100	100	10/25/2022 21:23	WG1946081
Chloride	4410		100	100	10/25/2022 21:23	WG1946081
Fluoride	ND		15.0	100	10/25/2022 21:23	WG1946081
Sulfate	ND		500	100	10/25/2022 21:23	WG1946081

Sample Narrative:
L1548197-10 WG1946081: Dilution due to matrix.

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.00200	10	10/30/2022 09:36	WG1949666

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.0574		0.00500	1	11/06/2022 19:09	WG1947679
Calcium	36.3		1.00	1	11/06/2022 19:09	WG1947679
Chromium	0.0393		0.0100	1	11/06/2022 19:09	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 19:09	WG1947679
Iron	5.06		0.100	1	11/06/2022 19:09	WG1947679
Lead	ND		0.00600	1	11/06/2022 19:09	WG1947679
Magnesium	20.5		1.00	1	11/06/2022 19:09	WG1947679
Manganese	0.498		0.0100	1	11/06/2022 19:09	WG1947679
Nickel	0.0376		0.0100	1	11/06/2022 19:09	WG1947679
Potassium	131		2.00	1	11/06/2022 19:09	WG1947679
Silver	ND		0.00500	1	11/06/2022 19:09	WG1947679
Sodium	384		3.00	1	11/06/2022 19:09	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 19:09	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	0.0430		0.0360	9	11/03/2022 12:10	WG1953022
Arsenic	0.299		0.0180	9	11/03/2022 12:10	WG1953022
Beryllium	ND		0.0180	9	11/03/2022 12:10	WG1953022
Cadmium	ND		0.00900	9	11/03/2022 12:10	WG1953022
Copper	ND		0.0450	9	11/03/2022 12:10	WG1953022
Selenium	ND		0.0180	9	11/03/2022 12:10	WG1953022
Thallium	ND		0.0180	9	11/03/2022 12:10	WG1953022

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Zinc	0.266		0.225	9	11/03/2022 12:10	WG1953022

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1000	10/22/2022 03:33	WG1947152
Acrylonitrile	ND		10.0	1000	10/22/2022 03:33	WG1947152
Benzene	ND		1.00	1000	10/22/2022 03:33	WG1947152
Bromochloromethane	ND	J4	1.00	1000	10/22/2022 03:33	WG1947152
Bromodichloromethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
Bromoform	ND		1.00	1000	10/22/2022 03:33	WG1947152
Bromomethane	ND		5.00	1000	10/22/2022 03:33	WG1947152
Carbon disulfide	ND		1.00	1000	10/22/2022 03:33	WG1947152
Carbon tetrachloride	ND		1.00	1000	10/22/2022 03:33	WG1947152
Chlorobenzene	ND		1.00	1000	10/22/2022 03:33	WG1947152
Chlorodibromomethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
Chloroethane	ND		5.00	1000	10/22/2022 03:33	WG1947152
Chloroform	ND	J4	5.00	1000	10/22/2022 03:33	WG1947152
Chloromethane	ND		2.50	1000	10/22/2022 03:33	WG1947152
Dibromomethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,2-Dichlorobenzene	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,4-Dichlorobenzene	ND		1.00	1000	10/22/2022 03:33	WG1947152
trans-1,4-Dichloro-2-butene	ND		2.50	1000	10/22/2022 03:33	WG1947152
1,1-Dichloroethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,2-Dichloroethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,1-Dichloroethene	ND		1.00	1000	10/22/2022 03:33	WG1947152
cis-1,2-Dichloroethene	ND		1.00	1000	10/22/2022 03:33	WG1947152
trans-1,2-Dichloroethene	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,2-Dichloropropane	ND		1.00	1000	10/22/2022 03:33	WG1947152
cis-1,3-Dichloropropene	ND		1.00	1000	10/22/2022 03:33	WG1947152
trans-1,3-Dichloropropene	ND		1.00	1000	10/22/2022 03:33	WG1947152
Ethylbenzene	ND		1.00	1000	10/22/2022 03:33	WG1947152
2-Hexanone	ND		10.0	1000	10/22/2022 03:33	WG1947152
Iodomethane	ND		10.0	1000	10/22/2022 03:33	WG1947152
2-Butanone (MEK)	ND		10.0	1000	10/22/2022 03:33	WG1947152
Methylene Chloride	ND		5.00	1000	10/22/2022 03:33	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		10.0	1000	10/22/2022 03:33	WG1947152
Styrene	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,1,1,2-Tetrachloroethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,1,2,2-Tetrachloroethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
Tetrachloroethene	ND		1.00	1000	10/22/2022 03:33	WG1947152
Toluene	ND		1.00	1000	10/22/2022 03:33	WG1947152
1,1,1-Trichloroethane	ND	J4	1.00	1000	10/22/2022 03:33	WG1947152
1,1,2-Trichloroethane	ND		1.00	1000	10/22/2022 03:33	WG1947152
Trichloroethene	ND		1.00	1000	10/22/2022 03:33	WG1947152
Trichlorofluoromethane	ND		5.00	1000	10/22/2022 03:33	WG1947152
1,2,3-Trichloropropane	ND		2.50	1000	10/22/2022 03:33	WG1947152
Vinyl acetate	ND		10.0	1000	10/22/2022 03:33	WG1947152
Vinyl chloride	ND		1.00	1000	10/22/2022 03:33	WG1947152
Xylenes, Total	ND		3.00	1000	10/22/2022 03:33	WG1947152
(S) Toluene-d8	*101*		*80.0-120*		*10/22/2022 03:33*	WG1947152
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*10/22/2022 03:33*	WG1947152
(S) 1,2-Dichloroethane-d4	*120*		*70.0-130*		*10/22/2022 03:33*	WG1947152

Sample Narrative:

L1548197-10 WG1947152: Lowest possible dilution due to sample matrix.

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000200	1	10/25/2022 01:46	WG1947868
1,2-Dibromo-3-Chloropropane	ND		0.0000200	1	10/25/2022 01:46	WG1947868

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	364		20.0	1	10/28/2022 15:15	WG1949652

Sample Narrative:
L1548197-11 WG1949652: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	2.40		0.250	1	10/23/2022 10:40	WG1945786

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Bromide	2.29		1.00	1	10/25/2022 02:10	WG1946267
Chloride	42.1		1.00	1	10/25/2022 02:10	WG1946267
Fluoride	0.273		0.150	1	10/25/2022 02:10	WG1946267
Sulfate	28.3		5.00	1	10/25/2022 02:10	WG1946267

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	10/27/2022 09:03	WG1946242

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	0.228		0.00500	1	11/06/2022 19:12	WG1947679
Calcium	127		1.00	1	11/06/2022 19:12	WG1947679
Chromium	ND		0.0100	1	11/06/2022 19:12	WG1947679
Cobalt	ND		0.0100	1	11/06/2022 19:12	WG1947679
Iron	4.77		0.100	1	11/06/2022 19:12	WG1947679
Lead	ND		0.00600	1	11/06/2022 19:12	WG1947679
Magnesium	14.8		1.00	1	11/06/2022 19:12	WG1947679
Manganese	1.66		0.0100	1	11/06/2022 19:12	WG1947679
Nickel	ND		0.0100	1	11/06/2022 19:12	WG1947679
Potassium	4.71		2.00	1	11/06/2022 19:12	WG1947679
Silver	ND		0.00500	1	11/06/2022 19:12	WG1947679
Sodium	25.2		3.00	1	11/06/2022 19:12	WG1947679
Vanadium	ND		0.0200	1	11/06/2022 19:12	WG1947679

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	10/26/2022 16:03	WG1948509
Arsenic	ND		0.00200	1	10/26/2022 16:03	WG1948509
Beryllium	ND		0.00200	1	10/26/2022 16:03	WG1948509
Cadmium	ND		0.00100	1	10/26/2022 16:03	WG1948509
Copper	ND		0.00500	1	10/26/2022 16:03	WG1948509
Selenium	ND		0.00200	1	10/26/2022 16:03	WG1948509
Thallium	ND		0.00200	1	10/26/2022 16:03	WG1948509
Zinc	ND		0.0250	1	10/26/2022 16:03	WG1948509

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	10/22/2022 02:06	WG1947152
Acrylonitrile	ND		0.0100	1	10/22/2022 02:06	WG1947152
Benzene	ND		0.00100	1	10/22/2022 02:06	WG1947152
Bromochloromethane	ND	J4	0.00100	1	10/22/2022 02:06	WG1947152
Bromodichloromethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
Bromoform	ND		0.00100	1	10/22/2022 02:06	WG1947152
Bromomethane	ND		0.00500	1	10/22/2022 02:06	WG1947152
Carbon disulfide	ND		0.00100	1	10/22/2022 02:06	WG1947152
Carbon tetrachloride	ND		0.00100	1	10/22/2022 02:06	WG1947152
Chlorobenzene	ND		0.00100	1	10/22/2022 02:06	WG1947152
Chlorodibromomethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
Chloroethane	ND		0.00500	1	10/22/2022 02:06	WG1947152
Chloroform	ND	J4	0.00500	1	10/22/2022 02:06	WG1947152
Chloromethane	ND		0.00250	1	10/22/2022 02:06	WG1947152
Dibromomethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,2-Dichlorobenzene	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,4-Dichlorobenzene	ND		0.00100	1	10/22/2022 02:06	WG1947152
trans-1,4-Dichloro-2-butene	ND		0.00250	1	10/22/2022 02:06	WG1947152
1,1-Dichloroethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,2-Dichloroethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,1-Dichloroethene	ND		0.00100	1	10/22/2022 02:06	WG1947152
cis-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 02:06	WG1947152
trans-1,2-Dichloroethene	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,2-Dichloropropane	ND		0.00100	1	10/22/2022 02:06	WG1947152
cis-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 02:06	WG1947152
trans-1,3-Dichloropropene	ND		0.00100	1	10/22/2022 02:06	WG1947152
Ethylbenzene	ND		0.00100	1	10/22/2022 02:06	WG1947152
2-Hexanone	ND		0.0100	1	10/22/2022 02:06	WG1947152
Iodomethane	ND		0.0100	1	10/22/2022 02:06	WG1947152
2-Butanone (MEK)	ND		0.0100	1	10/22/2022 02:06	WG1947152
Methylene Chloride	ND		0.00500	1	10/22/2022 02:06	WG1947152
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	10/22/2022 02:06	WG1947152
Styrene	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,1,1,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,1,2,2-Tetrachloroethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
Tetrachloroethene	ND		0.00100	1	10/22/2022 02:06	WG1947152
Toluene	ND		0.00100	1	10/22/2022 02:06	WG1947152
1,1,1-Trichloroethane	ND	J4	0.00100	1	10/22/2022 02:06	WG1947152
1,1,2-Trichloroethane	ND		0.00100	1	10/22/2022 02:06	WG1947152
Trichloroethene	ND		0.00100	1	10/22/2022 02:06	WG1947152
Trichlorofluoromethane	ND		0.00500	1	10/22/2022 02:06	WG1947152
1,2,3-Trichloropropane	ND		0.00250	1	10/22/2022 02:06	WG1947152
Vinyl acetate	ND		0.0100	1	10/22/2022 02:06	WG1947152
Vinyl chloride	ND		0.00100	1	10/22/2022 02:06	WG1947152
Xylenes, Total	ND		0.00300	1	10/22/2022 02:06	WG1947152
(S) Toluene-d8	*101*		*80.0-120*		*10/22/2022 02:06*	WG1947152
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*10/22/2022 02:06*	WG1947152
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*		*10/22/2022 02:06*	WG1947152

EDB / DBCP by Method 8011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ethylene Dibromide	ND		0.0000200	1	10/25/2022 18:48	WG1948387
1,2-Dibromo-3-Chloropropane	ND		0.0000200	1	10/25/2022 18:48	WG1948387

Method Blank (MB)

(MB) R3854792-2 10/28/22 13:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1548197-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1548197-01 10/28/22 14:17 • (DUP) R3854792-3 10/28/22 14:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	227	229	1	0.584		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1548197-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1548197-11 10/28/22 15:15 • (DUP) R3854792-4 10/28/22 15:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	364	365	1	0.219		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3854792-1 10/28/22 13:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	100	100	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3851909-1 10/23/22 09:50

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

L1548122-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1548122-09 10/23/22 10:07 • (DUP) R3851909-5 10/23/22 10:08

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

L1548197-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1548197-07 10/23/22 10:28 • (DUP) R3851909-7 10/23/22 10:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ammonia Nitrogen	1.90	1.90	1	0.0526		10

Laboratory Control Sample (LCS)

(LCS) R3851909-2 10/23/22 09:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ammonia Nitrogen	7.50	7.20	96.0	90.0-110	

L1548122-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548122-08 10/23/22 10:02 • (MS) R3851909-3 10/23/22 10:04 • (MSD) R3851909-4 10/23/22 10:05

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	ND	4.87	4.83	94.8	94.0	1	90.0-110			0.762	10

L1548197-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1548197-06 10/23/22 10:25 • (MS) R3851909-6 10/23/22 10:26

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	4.59	91.8	1	90.0-110	

Method Blank (MB)

(MB) R3853314-1 10/25/22 14:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1548001-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1548001-01 10/25/22 15:44 • (DUP) R3853314-3 10/25/22 16:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	ND	1	0.000		15
Chloride	5.42	5.47	1	0.949		15
Fluoride	ND	ND	1	7.60		15
Sulfate	23.1	23.1	1	0.0916		15

L1548197-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1548197-06 10/25/22 20:29 • (DUP) R3853314-6 10/25/22 20:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	ND	1	0.000		15
Chloride	5.78	5.77	1	0.310		15
Fluoride	0.425	0.472	1	10.5		15
Sulfate	37.4	37.2	1	0.531		15

Laboratory Control Sample (LCS)

(LCS) R3853314-2 10/25/22 14:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	38.3	95.7	80.0-120	
Chloride	40.0	39.2	98.0	80.0-120	
Fluoride	8.00	8.32	104	80.0-120	
Sulfate	40.0	37.0	92.6	80.0-120	

L1548001-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548001-01 10/25/22 15:44 • (MS) R3853314-4 10/25/22 16:19 • (MSD) R3853314-5 10/25/22 16:37

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 %
Bromide	50.0	ND	50.5	50.3	101	101	1	80.0-120			0.389	15
Chloride	50.0	5.42	56.4	56.4	102	102	1	80.0-120			0.0284	15
Fluoride	5.00	ND	5.19	5.21	101	102	1	80.0-120			0.373	15
Sulfate	50.0	23.1	72.9	72.7	99.5	99.2	1	80.0-120			0.185	15

L1548197-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1548197-06 10/25/22 20:29 • (MS) R3853314-7 10/25/22 21:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	50.6	101	1	80.0-120	
Chloride	50.0	5.78	55.9	100	1	80.0-120	
Fluoride	5.00	0.425	5.47	101	1	80.0-120	
Sulfate	50.0	37.4	86.1	97.4	1	80.0-120	

Method Blank (MB)

(MB) R3852608-1 10/25/22 00:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1548229-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1548229-01 10/25/22 02:24 • (DUP) R3852608-3 10/25/22 02:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	ND	ND	1	0.000		15
Chloride	1.29	1.14	1	12.1		15
Fluoride	0.179	0.182	1	1.61		15
Sulfate	6.69	6.77	1	1.26		15

L1548540-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1548540-01 10/25/22 06:37 • (DUP) R3852608-5 10/25/22 06:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	3.02	2.84	1	6.16		15
Chloride	133	134	1	0.701		15
Fluoride	0.363	0.375	1	3.23		15
Sulfate	31.9	32.1	1	0.824		15

Laboratory Control Sample (LCS)

(LCS) R3852608-2 10/25/22 00:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromide	40.0	39.4	98.6	80.0-120	
Chloride	40.0	39.7	99.2	80.0-120	
Fluoride	8.00	8.31	104	80.0-120	
Sulfate	40.0	40.9	102	80.0-120	

L1548229-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1548229-01 10/25/22 02:24 • (MS) R3852608-4 10/25/22 02:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Bromide	50.0	ND	50.8	102	1	80.0-120	
Chloride	50.0	1.29	51.6	101	1	80.0-120	
Fluoride	5.00	0.179	4.96	95.6	1	80.0-120	
Sulfate	50.0	6.69	57.7	102	1	80.0-120	

L1548540-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548540-01 10/25/22 06:37 • (MS) R3852608-6 10/25/22 07:03 • (MSD) R3852608-7 10/25/22 07:16

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 %
Bromide	50.0	3.02	51.7	51.7	97.3	97.3	1	80.0-120			0.0617	15
Chloride	50.0	133	176	178	86.5	91.0	1	80.0-120			1.25	15
Fluoride	5.00	0.363	5.52	5.60	103	105	1	80.0-120			1.51	15
Sulfate	50.0	31.9	81.7	83.0	99.8	102	1	80.0-120			1.56	15

QUALITY CONTROL SUMMARY

L1548197-01,02,04,05,06,07,08,09,11

Method Blank (MB)

(MB) R3853640-1 10/27/22 08:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3853640-2 10/27/22 08:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00320	107	80.0-120	

L1548197-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548197-01 10/27/22 08:38 • (MS) R3853640-3 10/27/22 08:40 • (MSD) R3853640-4 10/27/22 08:42

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	0.00300	ND	0.00318	0.00298	106	99.3	1	75.0-125			6.45	20

Method Blank (MB)

(MB) R3854687-1 10/30/22 09:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3854687-2 10/30/22 09:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00331	110	80.0-120	

L1550484-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1550484-02 10/30/22 09:28 • (MS) R3854687-3 10/30/22 09:30 • (MSD) R3854687-4 10/30/22 09:32

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	0.00300	ND	0.00325	0.00333	108	111	1	75.0-125			2.63	20

Method Blank (MB)

(MB) R3857582-1 11/06/22 17:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.000736	0.00500
Calcium	U		0.0793	1.00
Chromium	0.00196	J	0.00140	0.0100
Cobalt	U		0.000840	0.0100
Iron	U		0.0180	0.100
Lead	U		0.00299	0.00600
Magnesium	U		0.0853	1.00
Manganese	U		0.000934	0.0100
Nickel	U		0.00161	0.0100
Potassium	U		0.261	2.00
Silver	U		0.00154	0.00500
Sodium	U		0.504	3.00
Vanadium	U		0.00499	0.0200

Laboratory Control Sample (LCS)

(LCS) R3857582-2 11/06/22 17:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	1.00	0.999	99.9	80.0-120	
Calcium	10.0	9.77	97.7	80.0-120	
Chromium	1.00	0.964	96.4	80.0-120	
Cobalt	1.00	0.973	97.3	80.0-120	
Iron	10.0	9.75	97.5	80.0-120	
Lead	1.00	0.975	97.5	80.0-120	
Magnesium	10.0	9.88	98.8	80.0-120	
Manganese	1.00	0.908	90.8	80.0-120	
Nickel	1.00	0.974	97.4	80.0-120	
Potassium	10.0	9.43	94.3	80.0-120	
Silver	0.200	0.186	93.1	80.0-120	
Sodium	10.0	9.72	97.2	80.0-120	
Vanadium	1.00	0.986	98.6	80.0-120	

L1548240-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548240-02 11/06/22 18:02 • (MS) R3857582-4 11/06/22 18:08 • (MSD) R3857582-5 11/06/22 18:10

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 %
Barium	1.00	0.0631	1.05	1.05	98.8	98.5	1	75.0-125			0.291	20
Calcium	10.0	ND	10.1	10.1	96.9	96.7	1	75.0-125			0.197	20
Chromium	1.00	ND	0.955	0.947	95.3	94.4	1	75.0-125			0.887	20
Cobalt	1.00	0.0315	1.01	1.01	97.5	97.9	1	75.0-125			0.428	20
Iron	10.0	0.249	9.95	9.96	97.1	97.1	1	75.0-125			0.0868	20
Lead	1.00	ND	0.961	0.957	96.1	95.7	1	75.0-125			0.355	20
Magnesium	10.0	2.01	11.9	11.8	98.4	98.0	1	75.0-125			0.324	20
Manganese	1.00	1.66	2.52	2.51	86.6	85.4	1	75.0-125			0.477	20
Nickel	1.00	0.0161	0.976	0.972	96.0	95.6	1	75.0-125			0.440	20
Potassium	10.0	ND	10.3	10.3	91.3	90.7	1	75.0-125			0.532	20
Silver	0.200	ND	0.186	0.184	92.8	92.2	1	75.0-125			0.636	20
Sodium	10.0	11.9	21.2	21.3	93.2	93.7	1	75.0-125			0.246	20
Vanadium	1.00	ND	0.977	0.977	97.7	97.7	1	75.0-125			0.00519	20

QUALITY CONTROL SUMMARY

L1548197-01,02,04,05,06,07,08,09,11

Method Blank (MB)

(MB) R3853323-1 10/26/22 14:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00103	0.00400
Arsenic	U		0.000180	0.00200
Beryllium	U		0.000190	0.00200
Cadmium	U		0.000150	0.00100
Copper	U		0.00151	0.00500
Selenium	U		0.000300	0.00200
Thallium	U		0.000121	0.00200
Zinc	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3853323-2 10/26/22 14:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0470	94.1	80.0-120	
Arsenic	0.0500	0.0494	98.8	80.0-120	
Beryllium	0.0500	0.0442	88.3	80.0-120	
Cadmium	0.0500	0.0514	103	80.0-120	
Copper	0.0500	0.0504	101	80.0-120	
Selenium	0.0500	0.0503	101	80.0-120	
Thallium	0.0500	0.0489	97.8	80.0-120	
Zinc	0.500	0.485	97.1	80.0-120	

L1548166-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1548166-06 10/26/22 14:39 • (MS) R3853323-4 10/26/22 14:46 • (MSD) R3853323-5 10/26/22 14:49

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	0.0482	0.0493	96.5	98.6	1	75.0-125			2.16	20
Arsenic	0.0500	ND	0.0497	0.0504	98.8	100	1	75.0-125			1.38	20
Beryllium	0.0500	ND	0.0439	0.0440	87.7	87.9	1	75.0-125			0.242	20
Cadmium	0.0500	ND	0.0512	0.0518	102	104	1	75.0-125			1.26	20
Copper	0.0500	0.00505	0.0541	0.0544	98.1	98.8	1	75.0-125			0.652	20
Selenium	0.0500	0.00509	0.0558	0.0563	101	102	1	75.0-125			1.03	20
Thallium	0.0500	ND	0.0487	0.0485	97.3	97.1	1	75.0-125			0.268	20
Zinc	0.500	ND	0.482	0.490	94.4	95.9	1	75.0-125			1.58	20

Method Blank (MB)

(MB) R3856514-1 11/03/22 10:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00103	0.00400
Arsenic	U		0.000180	0.00200
Beryllium	U		0.000190	0.00200
Cadmium	U		0.000150	0.00100
Copper	U		0.00151	0.00500
Selenium	U		0.000300	0.00200
Thallium	U		0.000121	0.00200
Zinc	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3856514-2 11/03/22 10:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0467	93.3	80.0-120	
Arsenic	0.0500	0.0505	101	80.0-120	
Beryllium	0.0500	0.0499	99.8	80.0-120	
Cadmium	0.0500	0.0508	102	80.0-120	
Copper	0.0500	0.0488	97.6	80.0-120	
Selenium	0.0500	0.0516	103	80.0-120	
Thallium	0.0500	0.0499	99.7	80.0-120	
Zinc	0.500	0.490	98.1	80.0-120	

L1550232-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1550232-01 11/03/22 10:17 • (MS) R3856514-4 11/03/22 10:24 • (MSD) R3856514-5 11/03/22 10:27

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	0.0475	0.0473	95.1	94.7	1	75.0-125			0.425	20
Arsenic	0.0500	ND	0.0511	0.0523	99.3	102	1	75.0-125			2.23	20
Beryllium	0.0500	ND	0.0474	0.0482	94.9	96.4	1	75.0-125			1.64	20
Cadmium	0.0500	ND	0.0508	0.0518	102	104	1	75.0-125			1.84	20
Copper	0.0500	0.00658	0.0534	0.0545	93.7	95.9	1	75.0-125			2.01	20
Selenium	0.0500	0.0111	0.0628	0.0642	103	106	1	75.0-125			2.12	20
Thallium	0.0500	ND	0.0492	0.0499	98.4	99.8	1	75.0-125			1.42	20
Zinc	0.500	ND	0.469	0.488	93.2	97.0	1	75.0-125			4.03	20

Method Blank (MB)

(MB) R3853567-2 10/21/22 20:26

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)	U		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) R3853567-2 10/21/22 20:26

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	*99.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*111*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3853567-1 10/21/22 19:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0274	110	19.0-160	
Acrylonitrile	0.0250	0.0265	106	55.0-149	
Benzene	0.00500	0.00533	107	70.0-123	
Bromochloromethane	0.00500	0.00659	132	76.0-122	J4
Bromodichloromethane	0.00500	0.00572	114	75.0-120	
Bromoform	0.00500	0.00412	82.4	68.0-132	
Bromomethane	0.00500	0.00178	35.6	10.0-160	
Carbon disulfide	0.00500	0.00507	101	61.0-128	
Carbon tetrachloride	0.00500	0.00582	116	68.0-126	
Chlorobenzene	0.00500	0.00500	100	80.0-121	
Chlorodibromomethane	0.00500	0.00447	89.4	77.0-125	
Chloroethane	0.00500	0.00554	111	47.0-150	
Chloroform	0.00500	0.00619	124	73.0-120	J4
Chloromethane	0.00500	0.00419	83.8	41.0-142	
Dibromomethane	0.00500	0.00566	113	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00447	89.4	79.0-121	
1,4-Dichlorobenzene	0.00500	0.00444	88.8	79.0-120	
trans-1,4-Dichloro-2-butene	0.00500	0.00217	43.4	33.0-144	
1,1-Dichloroethane	0.00500	0.00582	116	70.0-126	
1,2-Dichloroethane	0.00500	0.00560	112	70.0-128	
1,1-Dichloroethene	0.00500	0.00573	115	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00559	112	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00562	112	73.0-120	
1,2-Dichloropropane	0.00500	0.00613	123	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00514	103	80.0-123	

Laboratory Control Sample (LCS)

(LCS) R3853567-1 10/21/22 19:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
trans-1,3-Dichloropropene	0.00500	0.00442	88.4	78.0-124	
Ethylbenzene	0.00500	0.00485	97.0	79.0-123	
2-Hexanone	0.0250	0.0214	85.6	67.0-149	
Iodomethane	0.0250	0.0117	46.8	33.0-147	
2-Butanone (MEK)	0.0250	0.0248	99.2	44.0-160	
Methylene Chloride	0.00500	0.00542	108	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0214	85.6	68.0-142	
Styrene	0.00500	0.00468	93.6	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00487	97.4	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00429	85.8	65.0-130	
Tetrachloroethene	0.00500	0.00489	97.8	72.0-132	
Toluene	0.00500	0.00481	96.2	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00651	130	73.0-124	J4
1,1,2-Trichloroethane	0.00500	0.00507	101	80.0-120	
Trichloroethene	0.00500	0.00588	118	78.0-124	
Trichlorofluoromethane	0.00500	0.00710	142	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00532	106	73.0-130	
Vinyl acetate	0.0250	0.0294	118	11.0-160	
Vinyl chloride	0.00500	0.00547	109	67.0-131	
Xylenes, Total	0.0150	0.0140	93.3	79.0-123	
(S) Toluene-d8			*96.4*	*80.0-120*	
(S) 4-Bromofluorobenzene			*113*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*123*	*70.0-130*	

QUALITY CONTROL SUMMARY

L1548197-01,02,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3852514-1 10/24/22 20:51

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

L1547976-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1547976-06 10/24/22 21:38 • (DUP) R3852514-3 10/24/22 21:26

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) R3852514-4 10/24/22 23:36 • (LCSD) R3852514-5 10/25/22 02:10

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	0.000320	0.000326	128	130	60.0-140			1.86	20
1,2-Dibromo-3-Chloropropane	0.000250	0.000248	0.000258	99.2	103	60.0-140			3.95	20

L1547976-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1547976-10 10/24/22 21:14 • (MS) R3852514-2 10/24/22 21:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Ethylene Dibromide	0.0000998	ND	0.0000998	100	1	64.0-159	
1,2-Dibromo-3-Chloropropane	0.0000998	ND	0.000109	109	1	72.0-148	

Method Blank (MB)

(MB) R3853011-1 10/25/22 17:41

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

L1548435-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1548435-02 10/25/22 18:35 • (DUP) R3853011-3 10/25/22 18:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ethylene Dibromide	ND	ND	1.02	0.000		20
1,2-Dibromo-3-Chloropropane	ND	ND	1.02	0.000		20

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

(LCS) R3853011-4 10/25/22 21:12 • (LCSD) R3853011-5 10/26/22 00:04

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	0.000302	0.000310	121	124	60.0-140			2.61	20
1,2-Dibromo-3-Chloropropane	0.000250	0.000233	0.000241	93.2	96.4	60.0-140			3.38	20

L1548435-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1548435-03 10/25/22 18:08 • (MS) R3853011-2 10/25/22 17:55

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	0.000106	107	1	64.0-159	
1,2-Dibromo-3-Chloropropane	0.0000995	ND	0.000101	102	1	72.0-148	

GLOSSARY OF TERMS

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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

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:
BFI-Middle Point Landfill

117 Seaboard Lane
Suite E100
Franklin. TN 37067

Billing Information:
Accounts
621 Hill Ave
Nashville, TN 37210

Report to: **Philip Campbell**

Email To: ~~ahblack@cecinc.com~~;abaugh@cecinc.com;labda

Project Description: **Middlepoint LF - Groundwater**

City/State Collected: Murfreesboro, TN

Please Circle: PT MT CT ET

Phone:

Client Project # 160-238

Lab Project # **BFI-MPL-GW**

Collected by (print): Adrian Baugh

Site/Facility ID #

P.O. # **8007866**

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 500mlHDPE-NoPres	BROMIDE 250mlHDPE-NoPres	Cl, Fl, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	NH3 250mlHDPE-H2SO4	SV8011 40mlClr-NaThio	V8260AP1 40mlAmb-HCl	V8260AP1 40mlAmb-HCl-Blk			Remarks	Sample # (lab only)
~~MW-3~~ Duplicate	Grab	GW		10/18/22	—	10	X	X	X	X	X	X	X					-02
FIELD BLANK		GW			1340	10	X	X	X	X	X	X	X					-03
TRIP BLANK		GW			—	12								X				-04
MW-4B		GW			1405	10	X	X	X	X	X	X	X					-05
MW-5		GW			0850	10	X	X	X	X	X	X	X					-06
MW-7		GW			1005	10	X	X	X	X	X	X	X					-07
MW-11		GW			1105	10	X	X	X	X	X	X	X					-08
MW-12		GW			1224	10	X	X	X	X	X	X	X					
~~BUBBA SPRING~~		~~GW~~				~~10~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~				NS	
BUFORD SPRING		GW			1220	10	X	X	X	X	X	X	X					-09

Chain of Custody Page ___ of ___

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 # L1548197

D018

Acctnum: **BFI-MPL**
Template: **T218198**
Prelogin: **P957321**
PM: **341 - John Hawkins**
PB: 10/14/22
Shipped Via: **Courier**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: API + ions (Ca, Mg, Mn, Fe, K, Cl, Na, SO4, F, Br, Ammonia, and Alkalinity)

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier ✓

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	If preservation required by Login: Date/Time
	10-19-22	1400		2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
	10-19-22	16:00		100	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
			O. Ramsey	10-19-22 1600	

Company Name/Address:
BFI-Middle Point Landfill

117 Seaboard Lane
Suite E100
Franklin. TN 37067

Billing Information:
Accounts
621 Hill Ave
Nashville, TN 37210

Report to:
Philip Campbell

Email To:
~~[illegible]~~@cecinc.com;abaugh@cecinc.com;labda[illegible]

Project Description:
Middlepoint LF - Groundwater

City/State Collected: Murfreesboro, TN

Please Circle: PT MT CT ET

Client Project #: 160-238

Lab Project #: **BFI-MPL-GW**

Collected by (print): Adrian Baugh

Site/Facility ID #:

P.O. #: 8007866

Collected by (signature): A Baugh

Immediately Packed on Ice N ___ Y X

Quote #:

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK 500mlHDPE-NoPres	BROMIDE 250mlHDPE-NoPres	Cl, Fl, SO4 125mlHDPE-NoPres	Metals 250mlHDPE-HNO3	NH3 250mlHDPE-H2SO4	SV8011 40mlClr-NaThio	V8260AP1 40mlAmb-HCl	V8260AP1 40mlAmb-HCl-Blk			
LEACHATE	Grab	GW		10/18/22	1435	10	X	X	X	X	X	X	X				-10
Run off	↓			10/18/22	1320	10	X	X	X	X	X	X	X				-11

Chain of Custody Page ___ of ___

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 # L548197

Table #

Acctnum: **BFI-MPL**

Template: **T218198**

Prelogin: **P957321**

PM: **341 - John Hawkins**

PB: CS 10/14/22

Shipped Via: **Courier**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:API + ions (Ca, Mg, Mn, Fe, K, Cl, Na, SO4, F, Br, Ammonia, and Alkalinity)

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier ✓

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

	Date:	Time:		
Relinquished by : (Signature) A Baugh	10-19-22	14:00	Received by: (Signature)	Trip Blank Received: Yes / No (HCl) / MeoH TBR
Relinquished by : (Signature)	10-19-22	16:00	Received by: (Signature)	Temp: °C Bottles Received: 100
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) D.Ramsey	Date: 10-19-22 Time: 1600

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

L1548197

Tracking Numbers	Temperature
	RRA7 0.7+0=0.7
	RRA7 3.5+0=3.5

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	Middlepoint LF	**CEC PROJECT NUMBER**	160-238
LOCATION	Murfreesboro, TN	**TEMPERATURE & WEATHER**	
DATE	10/18/22	**EVENT FREQUENCY**	Semi-Annual
EQUIPMENT	SOLINST DEPTH METER	**FIELD REPRESENTATIVE**	

DEPTH INFORMATION

LOCATION	TIME SAMPLED	TOTAL DEPTH	WATER LEVEL	LOCATION	TIME SAMPLED	TOTAL DEPTH	WATER LEVEL
MW-1	—	95.40	38.43	MW-7	NDS	62.75	46.0
MW-3	—	61.00	22.02	MW-9B	—	110.50	65.31
MW-4B	1405	48.70		MW-10	—	180.50	93.1
MW-5	850	201.67	119.8	MW-11	1105	35.00	21.0
MW-6	—	109.47	73.7	MW-12	1224	50.25	16.05
LEACHATE	1435	-	-	BUBBA SPRING	NS	-	-
RUN-OFF	1320	-	-	BUFORD SPRING	1220	-	-

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	Middlepoint Landfill	**MONITORING WELL I.D.**	MW-3
LOCATION	Murfreesboro, TN	**TEMPERATURE & WEATHER**	40s
DATE & TIME	10/18/22 1055	**EVENT FREQUENCY**	Semi-Annual (parameters only)
PURGE METHOD	Bailer	**FIELD REPRESENTATIVE**	Baugh
TOTAL WELL DEPTH (feet)	61.00	**SAMPLING EQUIPMENT**	Bailer
DEPTH TO WATER (feet)	27.02	**IS SAMPLE EQUIPMENT DEDICATED?**	NA
CASING DIAMETER (inches)	4	**DUPLICATE COLLECTED?**	NO
WATER COLUMN (feet)		**FIELD BLANK COLLECTED?**	NO
PURGE VOLUME (gallons)		**EQUIPMENT BLANK COLLECTED?**	NO

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
—	27.02	—	17.6	7.09	625.1	476.8	5.04	225.6	5.86

Preservatives Used	NA	**Sample Charateristics (Odor, Color)**	N/A
Number of Containers	NA	**Sampler Signature**	ABaugh

WELL DATA

Number of Baffles	3	**Well Cap Dedicated/In Place?**	N/A
Lock Condition	OK	**Fittings/Well Head Condition**	N/A
Pad/Casing Quality	OK	**Well Clear of Weeds/Accessible?**	Y

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	MONITORING WELL I.D.	MW-4B
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	40's clear & windy
DATE & TIME	10/18/2022 1330	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow RF-II	FIELD REPRESENTATIVE	Rowan, Miller
TOTAL WELL DEPTH (feet)	48.70	SAMPLING EQUIPMENT	RF-II
DEPTH TO WATER (feet)	17.30	IS SAMPLE EQUIPMENT DEDICATED?	Yes
CASING DIAMETER (inches)	4	DUPLICATE COLLECTED?	No
WATER COLUMN (feet)	31.4	FIELD BLANK COLLECTED?	~~no~~ yes 13:40
PURGE VOLUME (gallons)	.75	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Changed YSI out

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	17.3	13:40	16.7	6.51	612	512	1.68	58.0	4.03
.50	19.1	13:48	18.0	7.26	617	503	.87	-106.6	2.35
.55	19.2	13:52	16.3	7.22	613	510	.67	-112.7	2.29
.60	19.3	13:56	15.8	7.23	610	503	.32	-120.9	2.31
.70	19.4	14:00	16.0	7.22	609	504	.30	-124.9	2.03
.75	19.4	14:04	15.8	7.23	609	500	.28	-126.4	2.33
		14:05							

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.75	19.4	1405	15.8	7.23	609	500	.28	-126.4	2.33

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	none
Number of Containers	10	Sampler Signature	

WELL DATA

Number of Baffles	3	Well Cap Dedicated/In Place?	yes
Lock Condition	Good	Fittings/Well Head Condition	yes
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	Middlepoint Landfill	MONITORING WELL I.D.	MW-5
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	30s°F WINDY / CLEAR SKY
DATE & TIME	10/18/2022 815	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow RF-II	FIELD REPRESENTATIVE	BAUGH, MILLER
TOTAL WELL DEPTH (feet)	201.67	SAMPLING EQUIPMENT	RF-II
DEPTH TO WATER (feet)	119.8	IS SAMPLE EQUIPMENT DEDICATED?	Yes
CASING DIAMETER (inches)	4	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	81.87	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	1.0	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	119.8	8:30	14.4	7.57	~~321.7~~ 422	328	1.65	-30.9	.45
.35	122.3	8:34	13.5	7.57	410.2	323.3	1.21	-24.9	.68
~~.55~~ .65	122.5	8:38	13.0	7.57	416.0	322.2	1.29	-36.8	1.18
.80	122.6	8:42	12.4	7.58	419.2	311.2	1.56	-46.8	.82
.90	122.6	8:46	11.8	7.58	417.4	307.3	1.27	-54.1	1.55
1.00	122.8	8:50	11.3	7.58	414.3	308.3	1.30	-56.8	.80

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.0	122.6	850	11.3	7.58	414.3	308.3	1.30	-56.8	.80
Preservatives Used	See COC			Sample Charateristics (Odor, Color)			clear		
Number of Containers	10			Sampler Signature			[signature]		

WELL DATA

Number of Baffles	3	Well Cap Dedicated/In Place?	YES
Lock Condition	GOOD	Fittings/Well Head Condition	yes
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	Middlepoint Landfill	MONITORING WELL I.D.	MW-7
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	30s - Windy / clear skys
DATE & TIME	10/18/2022 9:40	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow RF-II	FIELD REPRESENTATIVE	Brough, Miller
TOTAL WELL DEPTH (feet)	62.75	SAMPLING EQUIPMENT	RF-II
DEPTH TO WATER (feet)	48.0	IS SAMPLE EQUIPMENT DEDICATED?	Yes
CASING DIAMETER (inches)	4	DUPLICATE COLLECTED?	NO
WATER COLUMN (feet)	14.75	FIELD BLANK COLLECTED?	No
PURGE VOLUME (gallons)	.90	EQUIPMENT BLANK COLLECTED?	No

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	48.0	9:40	16.1	6.53	588.2	488.7	1.64	214.3	.44
.15	48.6	9:44	16.4	6.39	601	583	1.43	192.0	.27
.60	48.6	9:48	16.8	6.35	602	507	1.33	187.0	.20
.75	48.9	9:52	16.6	6.30	604	507	1.41	187.0	.21
.90	48.9	9:56	16.7	6.29	602	507	1.49	188.7	.45
.90	49.0	10:00	16.2	6.29	603	507	1.70	193.5	.18

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.90	49.0	1005	16.2	6.29	603	507	1.70	193.5	.18

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	No, clear
Number of Containers	10	Sampler Signature	

WELL DATA

Number of Baffles	3	Well Cap Dedicated/In Place?	Yes
Lock Condition	Good	Fittings/Well Head Condition	Yes
Pad/Casing Quality	Good	Well Clear of Weeds/Accessible?	Yes

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	MONITORING WELL I.D.	MW-11
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	30s cloudy with light snow
DATE & TIME	10/14/22 1040	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow RF-II	FIELD REPRESENTATIVE	Stuart Miller, Addam Bauer
TOTAL WELL DEPTH (feet)	35.00	SAMPLING EQUIPMENT	RF-II
DEPTH TO WATER (feet)	21.6	IS SAMPLE EQUIPMENT DEDICATED?	Yes
CASING DIAMETER (inches)	4	DUPLICATE COLLECTED?	No
WATER COLUMN (feet)	13.4	FIELD BLANK COLLECTED?	No
PURGE VOLUME (gallons)	1.80	EQUIPMENT BLANK COLLECTED?	No

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	21.6	10:44	16.0	7.34	558	460	.49	-106.2	9.0
.35	23.5	10:50	15.9	7.33	594	492	.50	-122.6	9.02
.50	23.25	10:54	15.7	7.32	608	502	.43	-126.1	2.11
.65	23.1	10:58	15.4	7.32	596	491	.46	-125.9	1.80
.80	23.0	11:02	16.2	.733	574	480	.47	-126.4	1.55

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
.80	23.0	11:06	16.2	.733	574	480	.47	-126.4	1.55

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	none
Number of Containers	10	Sampler Signature	

WELL DATA

Number of Baffles	0	Well Cap Dedicated/In Place?	Yes
Lock Condition	Good	Fittings/Well Head Condition	Yes
Pad/Casing Quality	Good	Well Clear of Weeds/Accessible?	*

* Platform for well #11 needs to be Replaced, very unsafe

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	MONITORING WELL I.D.	MW-12
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	40's sunny + cool
DATE & TIME	10/18/22 11:56	EVENT FREQUENCY	Semi-Annual
PURGE METHOD	Low-Flow RF-II	FIELD REPRESENTATIVE	Keough + Miller
TOTAL WELL DEPTH (feet)	46.00	SAMPLING EQUIPMENT	RF-II
DEPTH TO WATER (feet)	18.5	IS SAMPLE EQUIPMENT DEDICATED?	Yes
CASING DIAMETER (inches)	4	DUPLICATE COLLECTED?	YES
WATER COLUMN (feet)	27.5	FIELD BLANK COLLECTED?	NO
PURGE VOLUME (gallons)	1.00	EQUIPMENT BLANK COLLECTED?	NO

PURGE INFORMATION

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
0	18.5	12:04	15.6	7.14	831	684	.96	159.9	22.2
.35	18.7	12:08	13.9	7.17	908	708	2.24	112.9	12.4
.65	18.7	12:12	14.9	7.15	904	751	1.57	117.8	7.51
.80	18.7	12:16	15.1	7.14	910	738	1.38	105.1	6.70
1.00	18.7	12:20	15.8	7.13	904	744	1.08	98.8	6.93
none									

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.00	18.7	12:24	15.8	7.13	904	744	1.08	98.8	6.93
Preservatives Used	See COC			Sample Charateristics (Odor, Color)			none		
Number of Containers	20			Sampler Signature					

WELL DATA

Number of Baffles	3	Well Cap Dedicated/In Place?	yes
Lock Condition	Good	Fittings/Well Head Condition	yes
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	Middlepoint Landfill	**MONITORING WELL I.D.**	Buford Spring
LOCATION	Murfreesboro, TN	**TEMPERATURE & WEATHER**	50,
DATE & TIME	10/18/22 1210	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Grab	**FIELD REPRESENTATIVE**	Baugh
TOTAL WELL DEPTH (feet)	-	**SAMPLING EQUIPMENT**	Grab
DEPTH TO WATER (feet)	-	**IS SAMPLE EQUIPMENT DEDICATED?**	NA
CASING DIAMETER (inches)	-	**DUPLICATE COLLECTED?**	NO
WATER COLUMN (feet)	-	**FIELD BLANK COLLECTED?**	NO
PURGE VOLUME (gallons)		**EQUIPMENT BLANK COLLECTED?**	NO

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
—	-	1220	16.4	6.91	561.1	469.7	1.78	199.0	8.35

Preservatives Used	See COC	**Sample Charateristics (Odor, Color)**	mostly Clear
Number of Containers	10	**Sampler Signature**	A Baugh

WELL DATA

Number of Baffles	3	**Well Cap Dedicated/In Place?**	Y
Lock Condition	good	**Fittings/Well Head Condition**	N/A
Pad/Casing Quality	ok	**Well Clear of Weeds/Accessible?**	Y

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	**MONITORING WELL I.D.**	Bubba Spring
LOCATION	Murfreesboro, TN	**TEMPERATURE & WEATHER**	40s P.C. windy
DATE & TIME	10/18/22 1140	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Grab	**FIELD REPRESENTATIVE**	Baugh
TOTAL WELL DEPTH (feet)	-	**SAMPLING EQUIPMENT**	Grab
DEPTH TO WATER (feet)	-	**IS SAMPLE EQUIPMENT DEDICATED?**	NA
CASING DIAMETER (inches)	-	**DUPLICATE COLLECTED?**	NO
WATER COLUMN (feet)	-	**FIELD BLANK COLLECTED?**	NO
PURGE VOLUME (gallons)		**EQUIPMENT BLANK COLLECTED?**	NO

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
	-								

Preservatives Used	See COC	**Sample Charateristics (Odor, Color)**	
Number of Containers		**Sampler Signature**	ABaugh

WELL DATA

Number of Baffles		**Well Cap Dedicated/In Place?**	
Lock Condition		**Fittings/Well Head Condition**	
Pad/Casing Quality		**Well Clear of Weeds/Accessible?**	

No Sample; Bubba Spring inundated by near by river. Unable to Collect representative Sample.

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	MONITORING WELL I.D.	Run-Off
LOCATION	Murfreesboro, TN	TEMPERATURE & WEATHER	50s, P.C.
DATE & TIME	12/18/22 1245	EVENT FREQUENCY	Quarterly
PURGE METHOD	Grab	FIELD REPRESENTATIVE	Baugh
TOTAL WELL DEPTH (feet)	NA	SAMPLING EQUIPMENT	Peristaltic Pump
DEPTH TO WATER (feet)	NA	IS SAMPLE EQUIPMENT DEDICATED?	No
CASING DIAMETER (inches)	NA	DUPLICATE COLLECTED?	N
WATER COLUMN (feet)	NA	FIELD BLANK COLLECTED?	N
PURGE VOLUME (gallons)	1.5	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
Ø	\	1308	14.7	6.74	880	775	1.52	-112.4	72.0
.5		1312	19.0	6.74	887	785	1.00	-112.3	20.7
1		1316	19.2	6.73	886	787	.94	-111.0	15.2
1.5		1320	19.4	6.73	885	791	.82	-110.9	14.8

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
1.5	\	1320	19.4	6.73	885	791	.82	-110.9	8.45 @ metals

Preservatives Used	See COC	Sample Charateristics (Odor, Color)	Clear
Number of Containers	10	Sampler Signature	Baugh

WELL DATA

Number of Baffles	0	Well Cap Dedicated/In Place?	n/a
Lock Condition	NO	Fittings/Well Head Condition	n/a
Pad/Casing Quality	PVC ok	Well Clear of Weeds/Accessible?	Y

GROUNDWATER MONITORING FIELD INFORMATION LOG

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SITE AND MONITORING WELL DATA

FACILITY NAME	Middlepoint Landfill	**MONITORING WELL I.D.**	Leachate
LOCATION	Murfreesboro, TN	**TEMPERATURE & WEATHER**	50's
DATE & TIME	10/18/22 1425	**EVENT FREQUENCY**	Semi-Annual
PURGE METHOD	Grab	**FIELD REPRESENTATIVE**	Baugh, Miller
TOTAL WELL DEPTH (feet)	-	**SAMPLING EQUIPMENT**	Grab // Sample Port
DEPTH TO WATER (feet)	-	**IS SAMPLE EQUIPMENT DEDICATED?**	NA
CASING DIAMETER (inches)	-	**DUPLICATE COLLECTED?**	NO
WATER COLUMN (feet)	-	**FIELD BLANK COLLECTED?**	NO
PURGE VOLUME (gallons)		**EQUIPMENT BLANK COLLECTED?**	NO

SAMPLE DATA

Gallons Purged	DTW (ft)	Time (00:00)	°C	pH	Specific Cond (µs/cm)	Conductivity (µs/cm)	DO (mg/L)	ORP	NTU
	-	1435	19.6	7.74	30 372	27224	.19	-345.5	OR
Preservatives Used	See COC			**Sample Charateristics (Odor, Color)**			Black Trash Smell		
Number of Containers	See COC			**Sampler Signature**					

WELL DATA

Number of Baffles		**Well Cap Dedicated/In Place?**	
Lock Condition		**Fittings/Well Head Condition**	
Pad/Casing Quality		**Well Clear of Weeds/Accessible?**	

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	Miller
LOCATION	MPLF
DATE AND TIME	
Equipment and Model # (ex. YSI Pro Plus 556)	YSI Probplus / Hach 2100 Q
Equipment Serial #	YSI #1 Hach 1

(2) 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	5/24	4.02	170.1	160 to 180	yes ☑	4.00	yes
7	5/24	7.14	-5.3	+/-50	yes ☑	7.01	yes
10	5/24	10.10	-171.5	-160 to -180	yes ☑	10.03	yes

(5) Temperature Calibration Check

Cert. Thermometer Value (deg C)	Meter Value (deg C)
22.5	22.6

(4) DO Calibration

Actual Barometric Pressure	Barometric Pressure (mm Hg)	D.O. Value (% Saturated)	Unit reading (%)	% DO accepted?
766.4	766.4	100	98.8	yes

(1) Specific Conductivity Calibration

Sp. Conductivity Calibration Standard buffer solution	Buffer solution exp. date	Pre Cal Reading (umhos)	Post Cal Reading (umhos)
~~March 2023~~ 1360	March 2023	1357	1361

(3) ORP Calibration

ORP Calibration (mV)	Buffer solution exp. date	Pre Cal Reading (mV)	Post Cal Reading (mV)
235	May 2023	206.1	235.1

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				

EQUIPMENT CALIBRATION LOG

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EQUIPMENT CALIBRATION FORM

NAME OF REPRESENTATIVE	Bayn
LOCATION	MPLT
DATE AND TIME	10/17/22
Equipment and Model # (ex. YSI Pro Plus 556)	YSI Pro plus / Hach 2100Q
Equipment Serial #	YSI #3 Hach 3

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	April 2024	3.99	166.8	160 to 180	Y	4.00	
7	May 2024	7.03	-7.4	+/-50	Y	7.01	Y
10	May 2024	9.88	-166.3	-160 to -180	Y	10.02	Y

Temperature Calibration Check

Cert. Thermometer Value (deg C)	Meter Value (deg C)
22.7	22.8

DO Calibration

Actual Barometric Pressure	Barometric Pressure (mm Hg)	D.O. Value (% Saturated)	Unit reading (%)	% DO accepted?
~~759.7~~	759.7	100.0	87.7	Y

Specific Conductivity Calibration

Sp. Conductivity Calibration Standard buffer solution	Buffer solution exp. date	Pre Cal Reading (umhos)	Post Cal Reading (umhos)
1350	March 2023	1354	1349

ORP Calibration

ORP Calibration (mV)	Buffer solution exp. date	Pre Cal Reading (mV)	Post Cal Reading (mV)
235.3	May 2023	216.0	235.3

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				